

PFL/OGRA/2018- 256-BH  
August 20, 2018

The Registrar  
Oil and Gas Regulatory Authority (OGRA)  
1st Floor, 54-B, Fazal-e-Haq Road  
Islamabad

**Subject: APPLICATION FOR TRANSMISSION LICENSE REQUIRED FROM OGRA UNDER NATURAL GAS REGULATORY AUTHORITY (NGRA) (LICENSING) RULES 2002 FOR CONSTRUCTION & OPERATION OF PIPELINE ALONG WITH ANCILLARY/CONNECTED FACILITIES FOR TRANSMISSION OF NATURAL GAS**

Dear Sir,

Being cognizant of the hardship being faced by the farming community in the form of price hike due to short supply of fertilizers and to meet minimum gas requirement of PFL plant, the ECC of the Cabinet in its meeting held on May 17, 2018 approved allocation of 75 mmcf/d gas along with supporting dedication of reserves from Mari Gas Fields to PFL. Restart of operations at PFL will add approximately half a million MT of Urea equivalent fertilizers, ensuring food security of the country by timely availability of the much needed fertilizers for the farming community at affordable prices. It will also revenue to the exchequer as well as keep the highly skilled human capital.

As per ECC decision, SNGPL will transport the gas to PFL plant at Multan under a mutually agreed gas transportation agreement. Subsequent to the ECC decision, the following steps have been taken by PFL:

- Term Sheet for supply of gas executed with MPCL on June 20, 2018
- Pipeline (25 km) and associated hardware ordered
- Land acquired for installation of Processing Facilities
- Processing and compression facility locked
- Survey and land lease for ROW at advance stage
- Negotiations with SNGPL are in process to undertake construction services of the pipeline.

We are pleased to enclose here with a duly filled application in the format specified in Schedule-I, all supporting documents specified in sub rule (3) and (4) of Rule 4 of NGRA (Licensing) Rules 2002 and PO No. 00018760 dated 16.08.18 for Rs. 750,000 (Rupees Seven Hundred Fifty Thousands only) issued by Summit Bank F-6, Super Market Branch Islamabad in favour of Oil and Gas Regulatory Authority as application fee for Transmission License.

We would request OGRA to process and review our application for the issuance of above referred Transmission License exclusively for self use attracting no annual turnover on account of natural gas sale as defined under rule 2(a) of the licensing rules enabling us to proceed further on fast track basis.

We are available to meet and provide additional information or clarification if required.

Thanking you,

Yours faithfully,  
For PAKARAB FERTILIZERS LIMITED

  
SAQIB AZIZ  
(Department Manager Business Development)



**IMMEDIATE**

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No. NG (I)-7(158)/18-F-Pt  
Government of Pakistan  
Ministry of Energy - - Petroleum Division  
(Policy Wing)  
Directorate General of Gas  
First Floor, Petroleum House, Ataturk Avenue G-5/2

Islamabad, the 31<sup>st</sup> May, 2018

01. **The Managing Director,**  
M/s Mari Petroleum Company Ltd,  
Islamabad

✓ 02. **The Chief Executive Officer,**  
Pak Arab Fertilizers Ltd,  
Lahore

03. **The Managing Director,**  
M/s Sui Northern Gas Pipelines Ltd,  
Lahore

Subject: **ALLOCATION OF ADDITIONAL GAS PRODUCTION FROM MPCL'S EXISTING RESERVOIRS TO PAKARAB FERTILIZERS LTD**

Dear Sir (s),

I am directed to inform that ECC of the Cabinet in its meeting held on 17.05.2018 vide case No. ECC-43/10/2018 dated 17.05.2018 while considering a summary submitted by Petroleum Division on the subject approved the proposals contained in para-6 of the summary as under:

- (i) 35 MMCFD Mari shallow gas along with supporting reserves may be allocated to M/s Pakarab Fertilizers Ltd (PFL) which will require dehydration and transportation by PFL at its own cost for injection into M/s SNGPL's system and M/s SNGPL would be required to induct this gas into its system soon after completion of the required infrastructure.
- (ii) 40 MMCFD of Mari Deep gas along with supporting reserves may be allocated to M/s Pakarab Fertilizers Ltd which will be processed by PFL at its own cost for injection into SNGPL's system as a comingled stream along with shallow gas.
- (iii) MPCL will be required to have necessary regulatory approvals for production of these gases from its existing reservoirs.
- (iv) Subject to availability of adequate system gas volumes, M/s SNGPL would supply the minimum gas required along with Mari shallow gas to M/s PFL enabling the plant to operate. This arrangement would be for the interim period i.e. till full flow of comingled processed Mari gases.
- (v) The allocated gases are to be transported by M/s SNGPL through its system for supply to M/s PFL plant at Multan under a mutually agreed gas transportation arrangements and M/s PFL would be required to pay a tolling fee to M/s SNGPL against transportation of these gases.

2. You are requested to take further necessary action in the implementation of above ECC decision under intimation to this office at the earliest.

Yours truly,

  
(Abdul Rasheed Jokhio)  
Director (Tech.)

**C.C:**

- (i) PS to Secretary Petroleum Division
- (ii) PS to Additional Secretary (P) Petroleum Division
- (iii) PA to DG(Gas) Petroleum Division
- (iv) PA to DG (PC) Petroleum Division

# SCHEDULE – I

[see rule 4 (2)]

## NATURAL GAS REGULATORY AUTHORITY

### Application Form

Ref. No. \_\_\_\_\_

Date: 20 / 08 / 2018



1. Name of the Company (Applicant): Pakarab Fertilizers Limited
2. Company's full address along with telephone, fax, e-mail and web details:
 

Address: E-110, Khayaban-e-Jinnah, Lahore Cantt., Pakistan.  
 UAN: (111-328-462) Fax: 042-36621389  
 E-mail: mail@fatima-group.com  
 Website: www.fatima-group.com
3. Name, title and authorized signature of the Company's Chief Executive:
 

Mr. Fawad Ahmed Mukhtar  
 Chief Executive Officer
4. Names and addresses of current Directors of the Applicant:
 

Enclosed as Annexure "A" (P-6/c)
5. Name and address of any person or corporate body with a holding of more than one percent (1%) or more in the Applicant:
 

Enclosed as Annexure "B" (P-7/c)

**Applicant:**

1. Regulated Activity for which a licence is sought:

- (a) Transmission Licence Yes  
(b) Distribution Licence \_\_\_\_\_  
(c) Sale Licence \_\_\_\_\_  
(d) Integrated Licence \_\_\_\_\_  
(e) Project Licence \_\_\_\_\_

2. Nature of licence applied for (if exclusive, please provide detailed justifications):

Exclusive \_\_\_\_\_

Non-Exclusive Yes \_\_\_\_\_

3. Period for which the licence is sought:

From: Date / Month / Year 15/10/2018

To: Date / Month / Year 14/10/2048

4. Details of any licence held, applied for, or applied for and refused under the Rules, by the Applicant, or any of the interested parties, or any of their affiliated or related undertakings:

Fatima Fertilizer Company Limited a related undertaking of Pakarab Fertilizers Limited holds a Transmission License No. NG-011/2007 for construction and operation of pipelines along with ancillary/connected facilities for the purpose of transmission of natural gas from Mari gas field gate to Fatima Fertilizer Plant at Mukhtar Garh, Sadiqabad, Punjab Pakistan.

Rule R: Description		Remarks
<b>Schedule-I Form</b>		
	Names and address of the Current Directors of the Applicant	Enclosed as Annexure "A" (06)
	Name and address of any person or corporate body with a holding of more than one percent (1%) or more in the Applicant	Enclosed as Annexure "B" (07)
<b>Rule 4 Sub Rule (3)</b>		
(a)	attested copies of the memorandum and articles of association of the applicant;	Enclosed as Annexure "C" (08-45)
(b)	attested copy of the applicant's certificate of commencement of business;	Enclosed as Annexure "D" (49-50)
(c)	attested copy of the latest yearly submission to the Registrar of Companies;	Enclosed as Annexure "E" (49-50)
(d)	attested copy of the latest audited annual and unaudited half yearly financial statements of the applicant;	Enclosed as Annexure "F" (55-116)
(e)	attested copy of the corporate authorization allowing the submission of the application;	Enclosed as Annexure "G" (117)
(f)	in the case of an applicant being a subsidiary company, the documents specified in clauses (a) to (d) of this sub-rule, pertaining to its holding company;	Not Applicable
(g)	details of the consents required under applicable laws, from persons other than the Authority, for carrying on the relevant regulated activities and the status of such consents;	If Required, details will be provided from time to time.
(h)	details of the technical and financial expertise and resources available for carrying on the relevant regulated activities;	Enclosed as Annexure "H" (118)
(i)	details of the resources and expertise available to handle emergency situations arising out of natural calamities, accidental or criminal acts or omissions, specifying which such resources are available and which are to be procured;	Enclosed as Annexure "I" (119)
(j)	a list of the names and business addresses of the applicant's senior management, including without limitation, departmental and/or divisional heads;	Enclosed as Annexure "J" (120-122)
(k)	if the applicant or any of its officers or directors, directly or indirectly, owns, controls, or holds ten percent or more of the voting interest in any other person engaged in the production, transmission, distribution, or sale of natural gas, or in any person engaged in the financing, construction, maintenance or operation of such facilities, a detailed explanation of each such relationship, including the percentage of voting interest owned, held or controlled;	Not Applicable
(l)	a list of all other applications, petitions or filings filed by the applicant which are pending before the Authority at the time of the filing of this application and which directly and significantly affect this application, including an explanation of any material effect the grant or denial of those other applications, petitions or filings will have on this application and of any material effect the grant or denial of this application will have on those other applications, petitions or filings;	Not Applicable
(m)	details of the following market data:	Enclosed as Annexure "K" (123-124)
	(i) an estimate of the volume of natural gas to be transmitted, distributed or sold;	
	(ii) number and consumption details of consumers;	
	(iii) the applicant's total annual peak day natural gas requirement;	
	(iv) total past (if applicable) and expected curtailments of service by the applicant; and	
(n)	such other information or documentation as the Authority may, from time to time, require, including without limitation, supplementary information or documentation required by the Authority to clarify the information contained in the application.	If Required, details will be provided from time to time.
<b>Rule 4 Sub Rule (4)</b>		Enclosed as Annexure "L"
(a)	maps issued or certified by the Survey of Pakistan, drawn to an appropriate scale showing details of areas where the transmission facilities are or are proposed to be located and the principal geographical features of the said areas, including without limitation, details of mountains, rivers, streams, roads, buildings or construction and habitation;	
(b)	details of the sources and quality of supply of natural gas including forecasts of the available quantity from such sources;	
(c)	details of how the applicant proposes to meet the safety and service obligations prescribed by the Authority;	
(d)	details of the capacity and estimated throughput, of the transmission facilities, per annum for ten years following the proposed grant of the licence; and	
(e)	technical specifications of the transmission facilities (existing and proposed), including without limitation, specifications for the design, construction, operation and maintenance of the facilities	

**Pakarab Fertilizers Limited**  
Names and Addresses of the Directors

Name in full	Father's / husband's Name	Address	CNIC No or passport No. in case of Foreign National
Mr. Arif Habib	Mr. Habib Haji Shakoor	86/2, 10th Street, Khyaban-i-Sehr, Phase VI, DHA Karachi.	42301-1015651-1
Mr. Fawad Ahmed Mukhtar	Mr. Mukhtar Ahmed Sheikh	43-A Qasim Road, Multan Cantt.	36302-2741274-7
Mr. Fazal Ahmed Sheikh	Mr. Mukhtar Ahmed Sheikh	43-A Qasim Road, Multan Cantt.	36302-0543241-9
Mr. Faisal Ahmed Mukhtar	Mr. Mukhtar Ahmed Sheikh	43-A Qasim Road, Multan Cantt.	36302-6343724-9
Mr. Rehman Naseem	Mr. Sheikh Naseem Ahmed	59-C, Abdali Road, Multan.	36302-5348796-1
Mr. Nasim Beg	Mr. Mohammad Safdar Beg	F-61/6, Block IV, Clifton Karachi.	42301-5558488-3
Mr. Abdus Samad	Mr. Arif Habib	86/2, 10 <sup>th</sup> Street, Khayaban-e-Sehr, Phase VI, DHA, Karachi.	42000-0548037-1
Mr. Muhammad Kashif Habib	Mr. Arif Habib	86/2, 10th Street, Khyaban-i-Sehr, Phase VI, DHA Karachi.	42000-0548038-3

Pakarab Fertilizers Limited  
List of Shareholders as at June 30, 2018

DESCRIPTION	Current Holding	%age	Address
M/S Arif Habib Corporation limited	135,000,000	30	2nd Floor, Arif Habib Centre, 23 M.T. Khan Road, Karachi.
Mr. Arif Habib	50,624,877	11	86/2, 10th Street, Khyaban-i-Sehr, Phase VI, DHA Karachi.
Mrs. Zetun Arif	39,375,120	9	86/2, 10th Street, Khyaban-i-Sehr, Phase VI, DHA Karachi.
Mr. Abdus Samad	1	0	
Mr. Muhammad Kashif	1	0	
Mr. Nasim Beg	1	0	
Mr. Fawad Ahmed Mukhtar	12,499,995	3	43-A Qasim Road, Multan Cantt.
Mrs. Ambreen Fawad	3,577,410	1	
Mr. Fahd Mukhtar	4,030,431	1	
Mr. Ali Mukhtar	4,030,431	1	
Mr. Abbas Mukhtar	4,030,431	1	
Miss Meraj Fatima	4,030,431	1	
Mr. Fazal Ahmed Shekih	30,943,236	7	43-A Qasim Road, Multan Cantt.
Mr. Faisal Ahmed Mukhtar	30,943,236	7	43-A Qasim Road, Multan Cantt.
M/s Fatima Holding Limited	91,282,485	20	E-110, Khayaban-e-Jinnah, Lahore Cantt.
Mr. Rehman Naseem	13,820,522	3	59-C, Abdali Road, Multan.
Mr. Muhammad Yousuf Amir	6,458,048	1	
Mr. Abdullah Amir Fazal	6,458,048	1	
M/s Fazal Holdings (Pvt) Limited	12,895,296	3	129/1, Old Bahawalpur Road, Multan.
	450,000,000	100	

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MEMORANDUM OF ASSOCIATION  
OF  
PAKARAB FERTILIZERS LIMITED

The name of the company is M/S PAKARAB FERTILIZERS LIMITED.

The Registered Office of the Company will be situated in the Province of Punjab.

The objects for which the company is established are:

1. To enter into and carry on the business of manufacturing, producing, buying, selling, importing and exporting or otherwise dealing in or with chemicals and fertilizers of any and all kinds, including, but without limiting the generality of the foregoing, artificial or natural fertilizers, compound, complex, nitrogenous, phosphatic and potassium fertilizers, nitro phosphates, calcium, ammonium nitrate, urea, nitric acid, hydrochloric acid, sulphuric and other acids, all chemicals produced with the help of sulphuric acid, ammonia and other derived products of sulphuric acid and ammonia, ammonium, ammonium sulphate and other compounds of ammonia, oxygen, carbon dioxide and super phosphate, soil amendments, micronutrients, super-phosphates, phosphoric acid, intermediates, dips, sprays, vermiculites, fungicides, insecticides, herbicides, pesticides, medicines, animal feed supplements of any and all kinds and any products and by-products which may be derived, produced, prepared, developed, compounded, or manufactured there from and any substance obtained by mixing any of the foregoing with other substances and to preserve, pack and transport the said products; to own, purchase or otherwise acquire and to sell or otherwise dispose of any mines, manufactories, plant, machinery, appliances, tools, supplies, materials, and any other property of any nature whatsoever, suitable, convenient or necessary for any of the purposes aforesaid or which may lawfully be used in connection therewith and to establish agencies and warehouses for the storage, sale and distribution of said products as incidental to the carrying on of any such business and in connection therewith or as a part thereof, to carry on any business, trade, or occupation necessary, convenient or useful therein or thereto, or which is or may be customarily carried on by others engaged in conducting a chemical or fertilizer business.

2. To purchase, manufacture, produce, refine, prepare, import, export, sell and generally to deal in heavy chemicals, fertilizers and all products and by products thereof and to acquire, construct and operate or otherwise deal in such things as may furnish materials for the manufacture of all kinds of fertilizers and to deal in such other chemicals and fertilizers as, can be conveniently manufactured and calculated directly or indirectly to contribute to the general economy of the process and will aid in the economy of the operations or otherwise enhance the profits of the Company and to do all things as may be proper or necessary in connection with the above or any of them.

3. To purchase or otherwise acquire, sell, supply, market, distribute, exchange, or otherwise dispose of, import, export, store, hold, package, transport, use, experiment with, handle, trade, display and generally deal in substances used in the manufacture and treatment of chemicals, fertilizers and other products and agricultural products and equipment and perform services and operations connected thereto, and so far as may be conducive to the attainment of the said objects or as is convenient or useful in connection therewith.

4. To carry on all or any of the business of chemists, druggists, chemical manufacturers, importers and exporters, manufacturers of and dealers in pharmaceutical and medicinal preparations.

5. To carry on business in Pakistan or elsewhere as dealers, wholesalers, and retailers in drugs, chemicals patent medicines, dyes, dye-ware, colours, oils, paints, pigments, varnishes, lacquers, sizing material and all other articles and things the business of which in the opinion of the directors may be conveniently carried on and for that purpose to buy, sell, resell, import, export, order out and obtain indents for and to act as agents and representatives for dealing in all or any of the above and things.

6. To carry on the business of manufacturers, exporters and importers and dealers in Pakistan and Heavy Chemicals, alkalis, drugs, essences, cordials, acids, pharmaceuticals, medicinal, chemical.

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Company Secretary

Industrial and other preparations and articles of any kind whatsoever such as Urea Formidhide, Polyethylene, Polystyrene, Polyester Fiber, Man-Made Fiber such as Nylon, Rayon and Glass Fibers, Mineral and other waters, cement, oils, paints, Pigments and varnishes, paint and colour, grinders, wholesale and retail chemists and druggists, analytical chemists, dry-salter, oil and colourmen, makers of and dealers in proprietary articles of all kind and of electrical, chemical, photographic, surgical and scientific appliances, apparatus and materials and any similar or allied business and either in connection with the said business or as distinct or separate business.

7. To acquire and take over from National Fertilizer Corporation (NFC), the fertilizer factory, godowns and other buildings and erections already built or now being built by the said Corporation under the name of PAKARAB FERTILIZERS LIMITED with the land appertaining thereto and all the stock in trade, book debts, goodwill and all other assets and liabilities in respect thereof and all the benefits of all subsisting contracts and orders together with the rights and privileges relating to the said Fertilizer Factory through Privatization process

8. To carry on the business of manufacturers and producers of fats, fertilizers, manures, dips, sprays, vermifuges fungicides, medicines and remedies of all kinds of agricultural, Fruit growing or other purposes or as remedies for men or animals and whether produced from vegetable or animal matter or by any chemical process.

9. To carry on business as manufacturers of manure, paper, pulp, paper glass, bricks, pottery, terra cotta and sanitary and disinfecting preparations, aluminum, aluminum products, coke, cement and

10. To establish, take or on lease all sorts of fertilizer factories to carry on all or any of the business of manufacturing and sellers of and dealers and workers in fertilizer of all kinds of packing and other materials including polythene, polypropylene, jute, Hessian cloth, gunny bags, paper bags and conveniences of all kinds.

11. To purchase, take on lease, or tenancy or in exchange or allotment or hire, or otherwise acquire, erect, maintain, equip, construct, reconstruct, repair, renovate, or adopt moveable or immoveable property including buildings, work, residential bungalow, labour lines, quarters, offices, places of worship, schools, institutions, hospitals, dispensaries, canteens, recreation rooms, clubs, warehouses, godowns, workshops, mill structures, erections, foundries, engines, tools, electric and telephone installations, accessories, implements, appliances, apparatuses, articles and other things found necessary or convenient for the purposes of the company or for the welfare of the employees of the company and also to expand the business of the company by purchasing, acquiring, getting transferred, adding to, altering, enlarging all or any of the buildings, mills, factories, premises, places, being the property of the company, or on all or any of the lands for the time being the property of the company or in possession of the company and by spending from time to time such sum or sums of money as may be necessary or expedient for improving, adding to, altering, repairing and maintaining the buildings, structures, machinery plant and property for the time being of the company and to sell or mortgage or let out on hire or otherwise dispose of all or any portion of the same as may be thought desirable.

12. To purchase, construct, improve maintain, develop, work, manage, carry out, control and superintend any huts, markets, roadways, tramways, railways, branches or shunters, bridges, reservoirs, canals, water courses, ferries, piers, hydraulic works, electric works, and telephone, works, factories, labour quarters and houses, bustees, villages, wharves, jetties, manufactories, warehouses, shops, stores and other works and conveniences which may seem calculated directly or indirectly to advance the Company's interest, and to contribute, subsidise, or otherwise assist or take part in construction, improvement, maintenance, working, management, carrying out, or control thereof.

13. To invest surplus money as permitted by the Companies Ordinance, 1934-

To purchase and hold in fee, or on lease, or otherwise and to make advances on any land or lands; and to make, purchase, acquire, hire, hold, alter, manage, sell, let, exchange, lease mortgage, barter, and dispose of lands, leases, buildings, warehouses, works, railways, sidings, tramways and other ways, ferries, piers, engines, machinery, plant, raw materials, apparatus, and any other property whatsoever, for the purposes of the said business or any extension thereof.

15. To buy, sell, manufacture, store, repair, alter, improve, exchange, hire, import, export and deal in all factories, works, plant, machinery, tools, utensils, aircraft, vehicles, appliances, apparatus, products, materials, substances, articles and things capable of being used in any business which the Company is competent to carry on or required by any customers of or persons dealing with the Company or commonly dealt with by persons engaged in any such business or which may seem capable of being profitably dealt with in connection therewith and to manufacture, experiment with, render marketable and deal in all products of residue and by-products incidental to or obtained in any of the business carried on by the Company.

16. To carry on and operate air-transport services or an flight by aircraft for transport of passengers, goods of all kinds land cargo for commercial or other purposes and to carry out all forms of aerial work, operations, aerial photography by air land or water, and other allied services both domestic and internationally with the prior approval of relevant authorities, within to or from or outside Pakistan. To purchase or obtain on hire, hire purchase, lease purchase or in any other manner aircraft, sea craft, and / or land transport to carry persons, passengers, tourists, mail, parcels, goods or cargo on payment or otherwise or to operate as a carrier/ transport company. The term aircraft includes airplanes, helicopters, hovercraft and / or any other type of flying machine, subject to the permission of relevant department.

17. To institute, participate in, or promote commercial and industrial enterprises and operation

18. To supply any cities, towns, villages, communities, counties, and the inhabitants, their corporations, partnerships, individuals, places of amusement or exhibition, or any two or more of either the same, with water, light, heat, gas, and/or electric power, and to do any and all things incidental necessary, and/or proper in furtherance of and/or in connection with the foregoing objects and purposes.

19. To purchase natural gas, coal, diesel oil, petrol timber, salt, kerosene oil, foods, grains, cereals, cereal, edible oil, plant, machinery, stores, goods and merchandise, and to deal with and dispose of the same by sale or otherwise

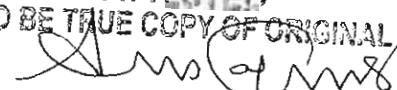
20. To purchase, import or otherwise deal with any raw material and machinery whether in Pakistan or any part of the world

21. To acquire by purchase or otherwise, own, hold, buy, sell, convey, lease, mortgage, real estate and other property, at any place or places in Pakistan, or anywhere in the world, personal or mixed, and to survey, subdivide, plan, improve and develop lands for business purposes, and to do and perform all things needful and lawful for the development and improvement of the same, trade or business.

22. To buy, lease, sell, exchange or otherwise acquire and to construct, lay, maintain and operate pipelines and other conveyors for the transportation of gases, liquids, minerals and chemicals and other substances.

23. To purchase, take on lease, or otherwise acquire any mines, mining rights and mineraliferous land, in Pakistan or elsewhere and any interest therein, and to explore, work, exercise, develop and turn to account the same.

24. To construct, erect and build structures and buildings including, but without prejudice to the generality of the foregoing, factories, warehouses, workshops, offices, sheds, wellings, stores and any

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Company Secretary

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...works or convenience which may result directly or indirectly from the conduct of any of the objects of the Company.

25. To manage, improve, farm, cultivate, maintain, lease, underlet, exchange, sell and dispose of all or any part of the lands and buildings or other real property of the Company not required for the purposes of the Company, with prior approval of SECP/related department.

26. To sell, exchange, mortgage or let on lease or royalty all or any of the property of the Company and to grant licenses, easements, options or other rights over the same and to accept such consideration as may be thought fit for the same.

27. To construct and provide or otherwise acquire, whether by purchase, lease or otherwise, residential accommodation for persons engaged in the business of the Company.

28. To enter into partnership or into any arrangement for sharing profits, union of interest, cooperation, joint adventure, reciprocal concession or amalgamation with any person or Company carrying on or engaged in, or about to carry on or engaged in any business or transaction which this Company is authorized to carry on or engaged in, or any business or transaction capable of being conducted which may, directly or indirectly, benefit this company, and to lend money to, guarantee the contracts of, or otherwise assist, any such person or company, and to take or otherwise acquire shares and securities of any such company, and to sell, hold, re-issue with or without guarantee, or otherwise deal with the same.

29. To apply for, purchase, or otherwise acquire, any patents, brevets d'invention, licence, concession and the like conferring any exclusive or non-exclusive or limited right to use, or any secret or other information as to any invention which may seem capable of being used for any other purposes of the Company, or the acquisition of which may seem calculated directly or indirectly to benefit the Company, and to use, exercise, develop or grant licences in respect of, or otherwise turn to account the property, rights or information so acquired.

30. To remunerate any person or company in any manner it shall think fit for services rendered or to be rendered in obtaining subscriptions for or placing or assisting to place or to obtain subscription for or guaranteeing the subscription of or the placing of any share in the capital of the Company or any bonds, debentures, obligations or securities of any other company held or owned by the Company or in which the Company may have an interest or the promotion or formation of any other company in which the Company may have an interest subject to prior permission of the Federal Government subject to the provision of the prospectus, transfer agents and under writer rules, 2001.

31. To borrow or raise and secure the payment of money in particular, by the issue of bonds, debentures, debenture-stock perpetual or otherwise, by mortgage or any other security, charged upon the undertaking of the Company or all or any of its property (both present and future, including its uncalled capital), on the rights of the Company or without any such security, and upon such terms as to priority or otherwise, and generally to borrow money in such manner as may be agreed upon between the lender and the Company, and to apply the same or any part thereof for all or any purpose of the Company.

32. To form, incorporate or promote any company or companies whether in Pakistan or in any foreign country having amongst its or their objects the acquisition of all or any of the assets or control, management or development of the Company or any other object or objects which in the opinion of the Company would or might directly or indirectly assist the Company in the management of its business.

33. To purchase, take on lease or tenancy or in exchange, and take up bills over or otherwise acquire for any estate or interest whatsoever and to hold, develop, cultivate, deal with, dispose of and turn to account concessions, grants, decrees, decrees, privileges, rights, options, leases, property, moveable or immovable, or rights or powers of any kind which may appear to be necessary or convenient for any business of the Company or for purposes of investment and to purchase, charter, hire, build or otherwise acquire vehicles of any or every sort or description and to use the same for the carriage of merchandise on

... of all kinds and to carry on the business of owners of trucks, lorries, motor-cars and air-craft in ... of their respective branches.

34. To invest surplus money in purchase of shares or securities or to undertake any other lawful investment but not to act as an investment company.

35. To draw, make, accept, discount, endorse, execute or negotiate and issue cheques, promissory notes, bills of exchange, hundies, bills of lading and other negotiable or transferable securities and to advance money to such persons, firm or company and on such terms with or without security, as the Company deems fit, but not to operate as a banking and/or investment company.

36. To dispose of and deal with any shares and securities of the companies which may be acquired by this Company and in such manner as may, from time to time, be determined.

37. To establish at any place in and outside Pakistan such branch, agency and local board for managing any affairs of the Company as may be decided by the Directors, and to undertake the management supervision or control of the business affairs, or operation of any company, concern or corporation, having objects altogether or in part similar to those of this Company.

38. To apply for and obtain any provisional orders of any Government department or Ministry for any of the purposes within the objects of this Company.

39. To support and subscribe to any charitable or public object, and any institution, society or club which may be for the benefit of the Company or its employees or may be connected with any town or place where the Company carries on business; to give pensions, gratuities or charitable aid to any persons who may have been Directors of or may have served the Company, or to the wives, children, or other relatives or dependents of such persons; to make payments towards insurance, and to form and contribute to provide and benefit funds for the benefit of any such persons, or of their wives, children, or other relatives or dependents.

40. To establish, run and support, research institutions, laboratories, technical training centres and schools; and grant stipends and scholarships for training abroad; and to do all such other things which may be calculated to benefit the Company; in particular and the chemical fertilizer industry in general.

41. To establish, provide, maintain and conduct or otherwise subsidize research laboratories and experimental workshops for scientific and technical research and experiments and undertake and carry on all scientific and technical researches, and tests of all kinds, to promote studies and research both scientific and technical investigation and invention by providing or assisting laboratories, workshops, libraries, lectures, meetings and conferences and by providing the remuneration of scientific or technical teachers, and for providing for the award of scholarships, prizes, grants and bursaries to students or independent students or otherwise and generally to encourage, promote and reward studies, research, investigations, experiments, tests and inventions of any kind that may be considered likely to assist any of the business which the Company is authorized to carry on.

42. To appropriate any part or parts of the property of the Company for the purposes of, and to build and let, shops, offices and other places of business if permissible by law.

43. To purchase or otherwise acquire and undertake the whole or any part of the business, property, assets and liabilities of any person, firm, body or company carrying on any business which the company is authorized to carry on, or possessed of property suitable for the purpose of this Company.

44. To enter into any arrangement and to take all necessary or proper steps with the Government of Pakistan, and, with the approval of the Government of Pakistan, with any provincial government or foreign government or public authority, local, municipal or otherwise or with any corporation or private persons or all or any of these for the purposes of directly or indirectly carrying out the objects of the

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*[Signature]*  
Company Secretary

43. To carry or effecting any modification in the constitution of the Company or furthering the interests of the Company and to oppose any such steps taken by any other authority, firm or person which the Company considers likely, directly or indirectly, to prejudice its interests, and to obtain from any such governmental or other public authority any charters, contracts, decrees, rights, grants, loans, subsidies, privileges, concessions, indemnities, sanctions or consents as the Company may think proper.

45. To advertise all or any of the manufactures or goods of the Company in any way that may be thought advisable, including the posting of bills in relation thereto, and the issue of books, pamphlets and price lists, and the conducting of competitions and the giving of prizes therefor.

46. To procure the Company to be registered or recognized in any foreign country or place and to take all steps which may be necessary or expedient to enable it to carry on business there.

47. To expend money in experimenting on and testing and in improving or seeking to improve any patents, rights, inventions, discoveries, processes or information of the Company or which the Company may acquire or propose to acquire.

48. To take or otherwise acquire and hold shares, stock, debentures, debenture stock and other securities whether convertible into shares to acquire and undertake the whole or any part of the shares, business, property or liabilities of any other company having objects altogether or in part similar to those of the Company or carrying on any business capable of being conducted so as directly or indirectly to benefit the Company.

49. To grant pensions, allowances and bonuses to employees (including Directors) or ex-employees of the Company including payment of premiums on life policies on employees or their dependents, to establish and operate Provident Funds for the same and to establish and support or aid any schools and any educational, scientific, literary, religious or charitable institutions or trade societies whether such societies be solely connected with the trade carried on by the Company or not, or any club or other establishment calculated to advance the interests of the Company or its employees.

50. To pay any premiums or salaries and to pay for any property rights or privilege acquired by the Company or for services rendered in connection with the promotion of the objects or the business of the Company or in connection with the acquisition of any property, rights or privileges for the Company or otherwise, howsoever, either wholly or partially in cash or in shares, bonds, debentures or other securities of the Company and to issue any shares, bonds, debentures or other securities, and to charge any such bonds, debentures or any part of the property of the Company, subject to the provision of Section 195 of the Companies Ordinance, 1934.

51. To subscribe or guarantee money for any national, charitable, benevolent, public, general or useful undertaking or for any exhibition.

52. To aid, pecuniarily or otherwise, any association, body or movement having for an object the solution, settlement or surmounting of industrial or labour problems or troubles or the promotion of industry or trade.

53. To pay all costs, charges and expenses which the Company may lawfully pay with respect to the formation and registration of the Company.

54. To do all or any of the things herein in any part of the world either as principals, agents, trustees, partners or otherwise, and either alone or in conjunction with others.


55. To do all and everything necessary, suitable or proper or incidental or conducive to the accomplishment of any of the purposes or the attainment of any of the objects or the furtherance of any of the powers hereinbefore set forth either alone or in conjunction with any and corporate bodies, firms or

to do every other act or thing incidental or dependent to carrying out of or in connection with the business of any of the Company or part thereof, provided the same is lawful.

It is declared that notwithstanding anything contained in the foregoing object clauses of this Memorandum of Association nothing contained therein shall be construed to empower the Company to carry on or to engage in business of banking, leasing, investment, lottery, schemes, insurance, sale, management sales scheme, managing agency, or insurance business directly or indirectly as restricted under the law or any unlawful operation.

The Capital of the Company is Rs. 10,000,000,000 (Rupees ten billion) divided into 1,000,000,000 (One billion) shares of Rs. 10/- each with the rights, privileges and conditions attaching thereto as provided by the regulations of the Company for the time being, with power to increase and reduce the Capital and to divide the shares in the capital for the time being into several classes and to attach thereto respectively such preferential, deferred, qualified or special right, privileges or conditions as may be determined by or in accordance with the regulations of the Company and to vary, modify or abrogate any such rights, privileges or conditions in such manner as may for the time being be provided by the regulations of the Company.

We, the several persons whose names and addresses are subscribed below, desire to form a company in pursuance of these Memorandum of Association, and we respectively agree to take the number of shares in the capital of the Company set before our respective names:

Name address and description of subscribers	No. of Shares taken by each subscriber	Signature of subscribers	Name address and description of witness
1. MR. A.R. FARIDI Chairman, West Pakistan Industrial Development Corporation, PIDC House Karachi.	One		Dr. Aziz Bar-at-Law, F.L.W. Downtown Building, Karachi.
2. MR. T.G. NASIR KHAN Financial Director, West Pakistan Industrial Development Corporation, PIDC House Karachi.	One	T.G. NASIR KHAN	
3. MR. NOOR AHMED General Manager, Corporate Affairs Division West Pakistan Industrial Development Corporation, PIDC House Karachi.	One	NOOR AHMED	

Joint Registrar of Companies  
Company Registration Office  
Securities and Exchange  
Commission of Pakistan  
Karachi

Certified to be True Copy

Deputy Registrar of Companies,  
Securities and Exchange  
Commission of Pakistan  
Company Registration Office  
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Company Secretary



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ARTICLES OF ASSOCIATION  
OF  
PAKARAB FERTILIZERS LIMITED

I. PRELIMINARY

TABLE 'A' NOT TO APPLY

The regulations contained in Table 'A' in the First Schedule to the Companies Ordinance, 1984, shall not apply to the Company except as may be reproduced herein

COMPANY TO BE GOVERNED BY THESE ARTICLES

The Regulations for the management of the Company, and for the observance of the members thereof and their representatives shall (subject to any exercise of the statutory powers of the Company in reference to the repeal or alteration of or addition to its regulations by special resolution, as prescribed by the Companies Ordinance, 1984) be such as are contained in these Articles.

INTERPRETATION

In these Articles, unless the context or the subject matter otherwise requires:

- I. "Articles" mean the Articles of Association of the Company as originally framed or as from time to time altered in accordance with law.
- II. "Board" means a meeting of the Directors duly called and constituted or in the case may be the Directors assembled at such a meeting and includes a meeting by means of video conference or telephone-conference or other facility whereby all the participants of the meeting can hear and/or see each other, unless expressly stated otherwise by the Directors.
- III. "Buy-back of Shares Rules" mean the Companies (Buy-Back of shares) Rules 1999.
- IV. "Central Depository" means a central depository as defined in sub-section (ca) of section 2 of the Securities and Exchange Ordinance, 1969 and registered with the Commission under section 32 A of the said Ordinance.
- V. "Central Depositories Act" means the Central Depositories Act, 1997.
- VI. "Central Depository Regulations" mean the Central Depository Company (Pakistan) Limited Regulations made pursuant to section 35 (1) of the Central Depositories Act.
- VII. "Central Depository Register" means a computerized electronic register maintained by a Central Depository in respect of book-entry securities, as such term is defined in the Central Depositories Act.
- VIII. "Chairman" means the Chairman elected by the Directors under Article 95.
- IX. "Chief Executive Officer" means the Chief Executive Officer of the Company appointed by the Directors under Article 100.
- X. "Code" means the Code of Corporate Governance under the Listing Regulations as directed by the Commission in accordance with section 14 (1) of the Securities and Exchange Ordinance, 1969.
- XI. "Commission" means the Securities and Exchange Commission of Pakistan established under section 3 of the Securities and Exchange Commission of Pakistan Act, 1997.
- XII. "Company" means Pakarab Fertilizers Limited.
- XIII. "Debenture Director" means a Director appointed and for the time being holding office under Article 76.
- XIV. "Directors" mean the Directors for the time being of the Company, whether or not maybe, the Directors assembled at a Board, and shall include alternate Directors.
- XV. "Electronic" includes electrical, digital, magnetic, optical, bio-technological, chemical, wireless or electromagnetic technology.
- XVI. "Electronic Transactions Ordinance" means the Electronic Transactions Ordinance, 2002.

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Company Secretary

- XX. "Financial Year" means the accounting year of the Company commencing each year on 1 July and ending on 30 June or such other accounting year as may be determined by the Directors from time to time.
- XXI. "In Person" includes attendance and/or voting at a Board meeting or a meeting of a Committee of the Directors, personally or by video or telephonic conference or other facility whereby all the participants of the meeting can hear and see each other, unless expressly stated otherwise by the Directors.
- XXII. "Instrument of Transfer" includes transfer deeds and any record of transfer of book-entry securities in the Central Depository Register.
- XXIII. "Issue of Capital Rules" means Companies (Issue of Capital) Rules, 1996.
- XXIV. "Listing Requirements" mean the listing regulations of the Stock Exchanges.
- XXV. "Members" means the subscribers to the Memorandum and such other persons as the Directors shall admit to membership, and whose name(s) have entered in the Register, including but not limited to the account or sub-account holders of a Central Depository.
- XXVI. "Memorandum" means the Memorandum of Association of the Company as originally framed or as from time to time altered in accordance with law.
- XXVII. "Month" means calendar month according to the English calendar.
- XXVIII. "Office" means the registered office for the time being of the Company.
- XXIX. "Ordinance" means the Companies Ordinance, 1984.
- XXX. "Policies" means the policies of the Company made by the Directors from time to time.
- XXXI. "Record" includes, in addition to a written or printed form, any disc, tape, sound-track, film or other device in which sounds and/or other data is or is embodied so as to be capable (with or without the aid of some other instrument or machine) of being reproduced in audible, legible or visual form.
- XXXII. "Register" means, unless the context otherwise requires, both the register of members to be kept pursuant to section 147 and the Central Depository Register.
- XXXIII. "Registrar" means a registrar, defined in Section 2 (1) (31), performing the duty of registration of Companies under the Ordinance.
- XXXIV. "Seal" means the common or official seal of the Company.
- XXXV. "Secretary" means the secretary of the Company for the time being.
- XXXVI. "Section" means section of the Ordinance.
- XXXVII. "Share Capital Rules" mean the Companies Share Capital (Variation in Rights and Privileges) Rules, 2000.
- XXXVIII. "Sign and Signature" unless otherwise provided in these Articles, include any graphic printing, facsimile, advanced electronic signature which is capable of establishing the integrity of an electronic document, as defined by section 2 (a) of the Electronic Transactions Ordinance, and marks impressed with an India-Rubber or other kind of stamp.
- XXXIX. "Special Resolution" means the special resolution of the Company as defined in Section 2 (1) (36).
- XL. "Stock Exchange" means the Karachi Stock Exchange and such other Stock Exchange(s) on which the securities of Company may be listed.
- XLI. Expression(s) referring to writing shall, unless the contrary intention appears, be considered as including references to printing, lithography, photography and other modes of representing or reproducing words in a visible form including but not limited to electronic transmission, such as telex, fax and of domestic mail or any other electronic process, as prescribed by section 2 of the Electronic Transactions Ordinance.
- XLII. References in these Articles to any law, Act, Ordinance, Rules or Code the Listing Requirements and the Policies, shall include any amendment, re-enactments or modifications thereof for the time being in force.
- XLIII. Words importing the masculine gender include the feminine gender.
- XLIV. Words importing singular number include the plural number and vice versa.



11. The following persons shall include bodies corporate.
12. The articles are inserted for convenience and shall not affect the construction of these articles.
13. Unless the context otherwise requires, words or expressions contained in these articles shall bear the same meaning as in the Ordinance.
14. "Ordinary Shares" means all ordinary shares of the Company.

#### DISCLOSURE OF INFORMATION RESTRICTED

15. No shareholder or other person except to the extent expressly permitted by the Ordinance or these regulations or any covenants made by the Company, shall be entitled to enter the property of the Company or to inspect or examine the Company's books of account or to get the permission of the Directors for the time being or to require disclosure of any information respecting any detail of the Company's business or any matter which is or may be in the nature of a trade secret, mystery of trade or secret process or of any matter whatsoever which may relate to the conduct of the business of the Company and which in the opinion of the Directors it might be expedient in the interest of the Members of the Company not to communicate.

### II. BUSINESS

#### BUSINESS AND MANAGEMENT

16. The business of the Company is expressed in the Memorandum of Association or those which are within its scope and meaning and all incidental matters taken or to be taken in hand, as the Directors in their discretion shall think fit, and all matters which may appear to the Directors to be expedient for attaining the object. The business shall be carried on by or under the management of Directors, subject to such control of General Meeting as is provided for by these Articles and the Ordinance.

#### COMMENCEMENT OF BUSINESS

17. The Directors shall have regard to the restrictions on the commencement of business imposed by section 146 in and so far as those restrictions are binding upon the Company.

### III. CAPITAL

#### (A) SHARES

#### SHARE CAPITAL

18. The authorized share capital of the Company is Rs. 10,000,000,000 (Ten billion) divided into 1,000,000,000 (One billion) Shares of Rs. 10 each.

#### RIGHTS, PRIVILEGES AND CONDITION ATTACHED TO SHARES

19. Shares to be issued by the Company

I. Company can issue Ordinary Shares, Right Shares, Bonus Shares, Cumulative Preference Shares, Non Cumulative Preference Shares, Participating Preference Shares, Non Participating Preference Shares.

II. For raising funds Company can issue Term Finance Certificates (TFC & PPTFC), Bonds (Local & International), Debentures etc.

9. 1) Subject to section 86 of the Ordinance and the Rules thereunder, the offer of further share capital shall be made to each existing shareholder proportionately without any discrimination.

2) If any of the existing shareholders declines to accept the offer made under sub article (1), the shares so declined shall be disposed of by the directors in such manner as may be

provided in the Articles or in accordance with the special resolution passed by the shareholders.

21. On the basis of Special Resolution, Company can apply Federal Government for obtaining permission to raise further capital without issue of Right shares.

## 10. CUMULATIVE PREFERENCE SHARES

The following rights, benefits and provisions shall apply to cumulative preference shares:

### 10.1 RIGHTS AND BENEFITS OF CUMULATIVE PREFERENCE SHARES

The directors of the company may at any time & from time to time, adopt & issue one or more classes of cumulative preference shares conferring on the holders thereof the following one or more rights and subject to such terms and conditions which will be approved by the shareholders by a special resolution for the issuance of the cumulative preference shares:

#### 10.2 As to Income:

The right of a cumulative preference dividend on the paid up or credited as paid up capital in respect of cumulative preference shares of the company (to the extent of and from such profits as are available for distribution and are declared by the company in General Meeting and after deduction such amount therefrom as have been carried to reserves or otherwise set aside as the company may by law be required) in respect of the relevant period at such rates as may be determined by the shareholders. It is clarified that the rights of the holders of cumulative preference shares to receive cumulative preference dividend shall be in priority to any payment of dividend to the holder of any other shares in the capital of the company.

10.3 For any year, if the dividend has been declared & distributed to the holders of the Ordinary shares, the company in General Meeting may declare (but shall not be bound to do so) further non cumulative dividend in addition to Article 10.2 above of the capital for the year being paid or credited as paid up thereon in respect of cumulative preference shares (to the extent of and from such profit as are available for distribution and are declared by the company in general meeting and after distribution for the holders of ordinary shares of the dividend thereon and such other amount as have been carried to reserve or otherwise set aside as the company may by law be required to do or the Directors may deem appropriate), and if such further dividend is so recommended and declared, then the same shall be payable on the cumulative preference shares accordingly.

#### 10.4 As to Capital

The right on a winding up or other return of capital, to participate in priority to any payment to the holders of any other shares in the capital of the company, of any return or addition of dividend payable on the cumulative preference shares under Articles 10.2 above, which is declared or credited, or set aside and Article 10.3 above, calculated at the time of or before winding up.

#### 10.5 As to Voting

The holders of cumulative preference shares shall not be entitled to vote (either or to attend any meeting of the company or vote on any resolution of the company (whether in General Meeting or otherwise).

#### 10.6 As to Redemption

The company shall have a right of redemption of the cumulative preference shares in terms of Articles (11) below "Call Option".

### 11. REDEMPTION OF CUMULATIVE PREFERENCE SHARES UPON EXERCISE OF CALL OPTION BY THE COMPANY

The company may subject to the terms & conditions approved by the shareholders and the provisions of the section 85 of the Companies ordinance, 1984 redeem the cumulative preference shares upon and subject to the following terms and conditions:-

11.1 The company shall have the right to redeem the cumulative preference shares at all the times and in the case of partial redemption proportionally in respect of each holding of cumulative preference shares subject to such approval from the competent authority as may be required at the time of such redemption.

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FOR THE COMPANY  
*[Signature]*  
Company Secretary

11.1 Cumulative preference shares subject to such approval from the competent authority as may be required at the time of such redemption.

11.2 The company shall give the notice of its intention to redeem the cumulative preference shares. The notice shall be in writing and shall fix the time and place for such redemption. At the time and place so fixed the registered holder of the cumulative preference shares to be redeemed shall be bound to deliver up to the company the relative certificate(s) for cancellation, and the company shall pay to them the paid-up money in respect of such cumulative preference shares together with any arrears or accruals of the cumulative preferential dividend (Whether declared or not) calculated down to the date fixed for payment and after deducting such amount (including any amount by way of stamp duty or other such charges), if any, as may be required by or under any law for the time being in force.

11.3 At the time fixed for redemption of any of cumulative preference shares dividend shall cease to accrue on such shares except in respect of any cumulative preference share(s) in respect of which, on due presentation of the certificate or certificates, Payment is at such redemption was refused.

11.4 If any holder of Cumulative Preference Shares shall fail or refuse to surrender the certificates for such cumulative preference shares or shall fail or refuse to accept the redemption money payable (as described in clause 11.2) in respect of them, such money shall be retained and held by the company but without interest or further obligation whatever.

11.5 No cumulative preference shares will be redeemed otherwise than out of such funds as are specified in the aforesaid section 85 or in such manners as may otherwise be made permissible by law.

11.6 No holder for the time being of any cumulative preference shares shall have the right to require the company to redeem the same pursuant to this Article, nor shall the company be bound to exercise the power conferred by this article save and except at the time, in the manner and to the extent decided upon by the directors.

12 STATEMENT OF RIGHTS OF CUMULATIVE PREFERENCE SHARES NOT ENTITLED TO VOTE  
The provisions of Article 10 are not exhaustive as to the terms & conditions in respect of the rights of and on the Cumulative Preference Shares and of the holders thereof and the granting of such one or more rights to the Cumulative Preference Shares shall be subject to the approval of the shareholders and shall be subject to such terms & conditions, including any additional rights and benefits or modified benefits & rights as may be approved by the shareholders for issuance of Cumulative Preference Shares.

#### RESTRICTION ON ALLOTMENT

The Directors shall observe the restrictions as to allotment contained in Section 68 of the Companies Ordinance.

#### ALLOTMENT OF SHARES

14 Subject to the provisions of these Articles relating to new shares, the shares shall be at the disposal of the Directors, and they may, subject to the provisions of the Ordinance, allot, grant options over or otherwise dispose of these to such persons on such terms and conditions, and at such times as they think fit, including at par, premium or discount, but so that no share shall be issued at a discount except in accordance with the provisions of the Ordinance, particularly Section 84. The Directors shall, as regards any allotment of shares, duly comply with such of the provisions of sections 68 to 73, and other provisions of law, as may be applicable to the Company.

#### SHARES FOR CONSIDERATION OTHER THAN CASH

15 The Directors may allot and issue shares in payment or part payment:

for any property sold or transferred, goods or machinery supplied or for services) rendered to the Company in the conduct of its business in accordance with Rule 8 of the Code of Capital Rules; or

16. In lieu of outstanding balance of any loans, advances, credit or other non-interest bearing securities and obligations outstanding or having a term of not less than three (3) years in the manner provided in any contract with any scheduled bank or financial institute, subject to section 87, to the extent of twenty percent (20%) of such balance, as fully paid up shares and, if so issued, such shares shall be deemed to be fully paid-up.

#### COMPANY NOT TO FINANCE PURCHASE OF ITS SHARES

16. The Company shall not give, whether directly or indirectly, and whether by means of a loan, guarantee, provisions of security or otherwise, any financial assistance for the purpose of or in connection with a purchase made by any person of any shares in the Company, nor shall the Company make a loan for any purpose whatsoever on the security of its shares provided that nothing in the Articles shall prohibit any transaction which may be permitted by section 95 and 95A and the Buy-Back of Shares Rules.

#### ISSUE OF NEW SHARES

17. Any of the shares for the time being un-issued and any new shares from time to time to be created may be issued in accordance with the provisions of section 81 of the Companies Ordinance, 1984.

#### REGISTERED OWNER RECOGNIZED AS ABSOLUTE OWNER

18. Except as required by law, no person shall be recognized by the Company as holding any share upon any trust and the Company shall not be bound by or be compelled in any way to recognize (even when having notice thereof) any equitable, contingent, future or partial interest, or in any fractional part of a share or (except only as in these Articles or by law otherwise provided) any other rights in respect of any share except an absolute right to the entirety thereof in the registered holder.

#### PREFERENTIAL RIGHT TO FINANCIAL INSTITUTIONS

19. (a) The financial institution to which the Company may apply for financial assistance may have a right to take up a fixed percentage of shares at its option if entitled by terms of agreement. The participation term certificates may include option to financial institutions to convert them into ordinary shares if entitled by terms of the agreement.

(b) The Company may raise and secure payment of any sum by issue of term finance certificates. The term finance certificates may be issued at a discount, premium or otherwise with special privileges as to redemption, conversion into shares with voting rights and their subsequent re-conversion into term finance certificates.

#### REGISTER OF MEMBERS OPEN TO INSPECTION

20. The Company shall cause to be kept a register of Members and index of Members in accordance with section 147. The register of members and the index of Members shall be open to inspection of Members.

#### (10) CERTIFICATES

#### SHARES CERTIFICATES

21. Every person whose name is entered as a Member in the Register shall, without payment, be entitled to receive within ninety days after allotment or within a forty-five days of the application for registration of transfer, a certificate which shall bear the seal of the Company, and bear the autographic signatures of the chief executive and a Director or the secretary and shall specify the number and class and distinguishing numbers (if any) of the shares to which it relates and the amount paid-up thereon. The Director may by resolution

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*[Signature]*  
Company Secretary

that, either generally or in any particular case, that the signature may be affixed by any mechanical means to be specified in such resolution.

#### REGISTRATION OF JOINT HOLDERS

22. The Company shall not be bound to register more than four persons as the joint holders of any share (except in the case of executors or trustees of a deceased member). The Company shall not be bound to issue more than one certificate therefor. And the delivery of a certificate for a share to any one of the several joint holders shall be sufficient delivery to all.

#### ISSUE OF NEW CERTIFICATES IN PLACE OF DEFACED OR LOST CERTIFICATES

23. In accordance with section 75, if a share certificate is defaced or destroyed, it may be renewed/re-issued on payment of such fee, if any, and on such terms, if any, as to evidence and indemnity and payment of expenses incurred by the Company in investigating title as the Directors may think fit.

#### DIRECTORS MAY ISSUE NEW CERTIFICATES

24. Where under the power in that behalf herein contained any shares are sold by the Directors and a certificate thereof has not been delivered to the Company by the former holder of the said share, the Directors may issue a new certificate for such shares distinguishing it in such manner as they may think fit for the certificate not so delivered up.

#### (C) TRANSFER OF SHARES

##### INSTRUMENT OF TRANSFER

25. 1) Subject to sub-article (2), shares in the Company shall be transferred in accordance with the Central Depositories Act and the Central Depository Regulations.

2) If all or part of the shares of the company are not registered in the Central Depository, the same may be transferred in either of the following manners:

Pursuant to a transfer deed executed by both the transferor and the transferee in the following form or the usual common form used for the purpose.

#### TRANSFER DEED PAKARAB FERTILIZERS LIMITED

\_\_\_\_\_ in consideration of the sum of \_\_\_\_\_ paid to \_\_\_\_\_ of \_\_\_\_\_

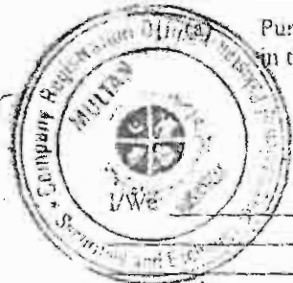
hereinafter called the transferee, do hereby transfer unto the said transferee \_\_\_\_\_ share (or shares) numbered \_\_\_\_\_ standing in my/our name in the books of PAKARAB FERTILIZERS LIMITED to hold unto the said transferee, his/heir/their executors, administrators and assigns, subject to the several conditions on which I/we hold the same at the time of execution hereof and I/we, the said transferees, do hereby agree to take the said share (or shares) subject to the same conditions.

As witness our hands the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Signed by the above named  
transferor in the presence of:

Transferor's signature

Witness:



22

Occupation:

Address:

I/we hereby declare that I am/we are not minors.

Signed by the above named transferee in the presence of:

Transferee's signature:

Father's/Husband's name:

Witness:

Occupation:

Occupation:

Address:

Address:

Entered in the register of Transfer at No.

Purchaser's specimen signature

Approved:

Director

On \_\_\_\_\_

(b) Pursuant to a process approved by the Directors

#### SIGNATURE ON THE TRANSFER DEED

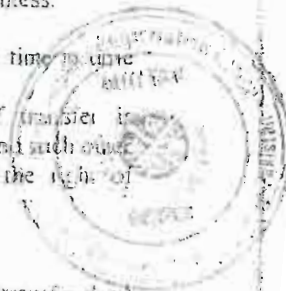
26. The instrument of transfer of any share shall be signed by or on behalf of both the transferor and the transferee, and the transferor shall be deemed to remain the holder of such share until the name of the transferee is entered in the register in respect hereof provided that the Directors may dispense with the signature on the instrument of transfer by or on behalf of the transferee in any case in which they think fit in their discretion to do so.



#### CONDITIONS FOR REGISTRATION OF TRANSFER

27. The Directors may also decline to recognize any instrument of transfer, unless:

- (a) such fee, not exceeding ten rupees, or as the Directors may from time to time require, is paid to the Company in respect thereof; and
- (b) the duly stamped or otherwise authenticated instrument of transfer is accompanied by the certificate of the shares to which it relates, and such other evidence as the Directors may reasonably require to show the right of transferor to make transfer.



#### DIRECTORS MAY NOT REFUSE TO REGISTER TRANSFER

28. The Directors shall not refuse to transfer any fully paid shares unless the transfer deed is defective or invalid. If the Directors refuse to register a transfer of shares, they shall within thirty days, or when the transfer is a Central Depository, within five days, after the date on which the transfer deed was lodged with the Company send to the transferee and transferor notice of the refusal indicating the defect in the transfer deed, and shall, after removal of such defect or invalidity be entitled to re-lodge the transfer deed with the Company.

#### NO TRANSFER TO A PERSON OF UNSOUND MIND

29. No transfer shall be made to a person of unsound mind.

*[Handwritten signature]*

#### REGISTRATION FEE

30. There shall be paid to the Company in respect of the registration of any probate, letters of administration, certificate of marriage or death, power of attorney or other document relating to or affecting the title to any shares such fee, not exceeding ten rupees or as the Directors from time to time require or prescribe.

#### RECOGNITION OF RENUNCIATION OF THE ALLOTMENT

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31. Nothing in these Articles shall preclude the Directors from recognizing a renunciation of the allotment of any share by the allottee in favour of some other person.

#### TRANSFER INSTRUMENT TO BE RETAINED BY THE COMPANY

32. All instruments of transfer which shall be registered shall be retained by the Company, but any instrument of transfer which the Directors may decline to register shall (except in any case of fraud) be returned to the person depositing the same.

#### CLOSURE OF TRANSFER BOOKS

33. On giving seven days previous notice by advertisement in some new paper having circulation in the province in which the Office of the Company is situated and in a Province in which the Stock Exchange on which the Company is listed is situated, the register of the Members may be closed for such period or periods not exceeding in whole for five days in any one year as the Directors from time to time direct, but so that the register shall not be closed for a period longer than thirty days at a time.

#### (D) TRANSMISSION OF SHARES

##### SURVIVOR OR PERSONAL REPRESENTATIVE ONLY RECOGNIZED AS HAVING ANY TITLE

34. A nominee or nominees of a Member under section 80, and in the absence of such nominee(s) persons noted in Article 32, shall, on the death of the Member, be the only person(s) recognized by the Company as having any title to the share of the said Member.

##### TRANSMISSION OF THE REGISTERED SHARES AS TO SURVIVORSHIP

35. Subject to Article 31, the executors, administrators, heirs or nominees, as may be, of a deceased sole holder of a share shall be the only persons recognized by the Company as having any title to such share, provided that they have obtained probate or letters of administration or succession certificate, as the case may be from a duly constituted court in Pakistan. Provided nevertheless that in any case where the Directors in their absolute discretion think fit, it shall be lawful for the Directors to recognize the title of any person claiming to be entitled to the share, whether in a representative capacity or not, and to dispense with the production of probate or letters of administration or succession certificate on the production of such other evidence of title as the Directors may require and upon such terms as to indemnity or otherwise, as they may think fit. In the case of a share registered in the name of a holder of a Central Depository under the Central Depositories Act and the Central Depository Regulations, in the names of two (2) or more holders, the survivor or survivors shall be the only persons recognized by the Company as having any title to the share.

##### ELECTION TO REGISTER A TRANSFER

36. Any person becoming entitled to a share in consequence of the death or insolvency of a Member shall, upon such evidence being produced as may from time to time be required by the Directors, have the right either to be registered as a Member in respect of the share or, instead of being registered himself, to make such transfer of the share as the deceased or insolvent person could have made, but the Directors shall, in either case, have the same right to decline or suspend registration as they would have had in the case of transfer of the share by the deceased or insolvent person before his death or insolvency.

##### METHOD OF EXERCISING OPTION

37. If the person becoming entitled to a share in consequence of the death or insolvency of a Member shall elect to be registered himself, he shall deliver or send to the Company a notice in writing signed by him stating that he so elects. If he shall elect to have another person registered, he shall testify such election by executing to that person a transfer of the share. All the limitations, restrictions and provisions of these articles relating to the right to transfer and the registration of transfers of shares shall be applicable to any such notice of

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transfer as if the death or bankruptcy of a member had not occurred and the notice of transfer was signed by that Member.

#### RIGHTS OF PERSONS ENTITLED BY TRANSMISSION

38. A person becoming entitled to a share by reason of death or insolvency of the holder of such share shall (subject to his complying with the provisions of these Articles) be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share, or the account or sub-account holder of a Central Depository, except that he shall not before being registered as a Member in respect of the share, be entitled in respect of it to exercise any right conferred by membership in relation to a meeting of the Company. Provided always that the Directors may at any time give notice requiring any such person to elect either to be registered himself or to transfer the share. And if the notice is not complied within ninety days, the Directors may thereafter withhold payment of all dividends or other money payable on or in respect of the share until the requirements of the notice have been complied with.

#### PERSONS ENTITLED MAY RECEIVE DIVIDENDS WITHOUT BEING REGISTERED AS MEMBERS

39. A person entitled to a share by transmission shall be entitled to receive and may give a discharge for any dividends or other money payable in respect of the share.

### (E) ALTERATION OF CAPITAL

#### POWER TO INCREASE CAPITAL

40. Subject to the Ordinance, the Company may from time to time, by special resolution increase the share capital by such sum, to be divided into shares of such amount, as the special resolution shall prescribe.

#### OFFER FOR FURTHER CAPITAL

41. All further issue of share capital shall be subject to such of the provisions of section 26, Rule 8 of the Share Capital Rules, the Issue of Capital Rules, the Listing Requirements and section 14 of the Central Depositories Act, as may be applicable to the Company. The offer shall be made by notice specifying the number of shares offered, and limiting a time within which the offer, if not accepted, will be deemed to be declined, and after the expiration of that time, or on the receipt of an intimation from the person to whom the offer is made that he declines to accept the shares offered, the Directors subject to any approval required under the Ordinance, may dispose of the same in such manner as they think most beneficial to the Company.

#### REDUCTION OF CAPITAL

42. The Company may, by special resolution, reduce its share capital in any manner and with, and subject to, any incident authorized, and consent is required, by law.

### (F) CONSOLIDATION AND SUB-DIVISION OF SHARES CHANGE IN CAPITAL

43. Subject to the provisions of sections 92 (1) (i), 92 (5) and 93 and section 13 of the Central Depositories Act, the Company may by ordinary resolution

- (a) consolidate and divide its share capital into shares of a larger denomination than its existing shares;
- (b) sub-divide its existing shares or any of them into shares of smaller amount than is fixed by the Memorandum of Association subject, nevertheless, to the provisions of section 12;
- (c) cancel any shares which, at the date of the passing of the resolution have not been taken or agreed to be taken by any person.

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## (G) MODIFICATION OF RIGHTS

### POWERS TO MODIFY RIGHTS

44. All or any of the rights and privileges attached to each of the class of shares into which the share capital of the Company may at any time be divided may, subject to the provisions of sections 28 and 108, be modified, commuted, effected or abrogated with the written agreement of the holders of three-fourth in nominal value of such class of shares or with the sanction of a special resolution passed at a separate general meeting of the holders of shares of the class by a majority of three-fourth of such of the members of the class for the time being entitled to vote as may be present in person or by proxy or attorney, and all the provisions contained in these Articles as to general meetings and the right to vote thereat shall *mutatis mutandis* apply to every such meeting but so that the quorum thereof shall be three members at least representing in person or by proxy or attorney, three-fourth of the nominal amount of the issued shares of the class.

## (H) COMMISSION AND BROKERAGE

### COMMISSION AND BROKERAGE ON ISSUE OF CAPITAL

45. The Company may at any time pay a commission to any person for subscribing/agreeing to subscribe (whether absolutely or conditionally) for any shares, debentures or debenture-stock in the Company or procuring or agreeing to procure subscriptions (whether absolutely or conditionally) for any shares, debentures or debenture-stock in the Company, but so that if the commission in respect of shares shall be paid or payable out of capital, the statutory requirements and conditions with particular reference to section 82, shall be observed and complied with and the amount or rate of commission shall not exceed such rate as may be fixed by the Commission on the shares, debenture or debenture-stock, in each case subscribed or to be subscribed. The commission may be paid or satisfied, either wholly or partly, in cash or in shares, debentures or debenture-stock. The Company may also, on any issue of shares, pay such brokerage as may be lawful, provided that such brokerage shall not exceed one percent (1%) on the shares, debentures or debenture-stock paid for or such other rate per cent as from time to time may be specified by the Commission generally or in a particular case.

## IV. MEETING AND PROCEEDINGS

### (A) GENERAL MEETINGS

#### STATUTORY MEETING

46. The statutory meeting of the Company shall be held within the period required by section 157 of the Ordinance, if applicable.

#### ANNUAL GENERAL MEETING

47. A general meeting of the Company to be called annual general meeting, shall be held in accordance with the Listing Requirements (if applicable) and the provision of section 158 within eighteen months from the date of incorporation of the Company and thereafter once at least in every year within a period of four months (or any other period determined by the Ordinance) following the close of its Financial Year and not more than fifteen months after the holding of its last preceding annual general meeting, as may be determined by the Directors, provided that the Company may for any special reason and with permission of the Commission extend the time within which any annual general meeting, not being the first such meeting, shall be held.

#### EXTRAORDINARY GENERAL MEETING

18. All general meetings of the Company other than the statutory meeting or any annual general meeting shall be called extraordinary general meetings.

#### CALLING EXTRAORDINARY GENERAL MEETINGS

49. The Directors may whenever they think fit call an extraordinary general meeting and extraordinary general meetings can also be called on such requisition or in default may be called by such requisitioners as is provided by section 139. If at any time there are not within Pakistan sufficient Directors capable of acting to form a quorum, any Director of the Company may call an extraordinary general meeting in the same manner as nearly as possible as that in which meeting may be called by the Directors.

#### (B) PROCEEDINGS AT GENERAL MEETING

##### NOTICE OF MEETING

50. Twenty-one days (or any other period described by the Ordinance) notice at least (exclusive of the day on which the notice is served or deemed to be served, but inclusive of the day for which notice is given) specifying the place, the day and the hour of meeting and in case of special business, the general nature of that business, shall be given in the manner provided by the Ordinance, for the general meeting to such persons as are, under the Ordinance or the Policies of the Company, entitled to receive such notices from the Company.

##### SPECIAL BUSINESS

51. All business shall be deemed special which is transacted at an extraordinary general meeting (other than election of Directors if so required) and at an annual general meeting with the exception of sanctioning a dividend, consideration of the accounts, balance sheet and the reports of the directors and auditors, the election of the Directors, appointment of officers and auditors and fixing their remuneration.

##### NOTICE OF SPECIAL RESOLUTION

52. Where it is proposed to pass a special resolution not less than twenty-one (or any other period described by the Ordinance) days' notice specifying the intention to propose the resolution as a special resolution and specifying the date, place and hour of meeting and nature of the business shall be given.

##### SHORTER NOTICE BY CONSENT

53. The Company may waive the notice period for a general meeting in accordance with section 2(1) (30) or, in the case of an emergency affecting the business of the Company, with permission of the Registrar, an extraordinary general meeting at such shorter notice may be specified.

##### OMISSION TO GIVE NOTICE

54. The accidental omission to give any such notice to, or the non-receipt of any such notice by, any of the Members shall not invalidate the proceedings at any meeting.

##### QUORUM

55. No business shall be transacted at any general meeting unless a quorum of Members is present at any time when the meeting proceeds for business. Save as herein otherwise provided, ten Members for any other period described by the Ordinance present personally who represent not less than twenty-five per cent of the total voting power of the Company, either of their own account or as proxies shall be a quorum.

##### EFFECT OF QUORUM NOT BEING PRESENT

56. If within half an hour from the time appointed the quorum is not present, the meeting, if called upon the requisition of Members, shall be dissolved. In any other case it shall stand adjourned to the same day in the next week at the same time and place, and if at the

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adjourned meeting a quorum is not present, within half an hour from the time appointed for the meeting, the members present personally, being not less than two, shall be a quorum.

#### CHAIRMAN OF THE GENERAL MEETING

57. The chairman of the Directors, if any, shall preside at every general meeting of the Company. If there is no such chairman, or if at any meeting he is not present within fifteen minutes after the time appointed for holding the meeting, or is unwilling to act as chairman, any one of the Directors present personally may be elected to be the chairman. And if none of the Directors is present personally or is willing to act as chairman, the Members present personally shall choose one of them to be chairman of that meeting.

#### ADJOURNMENT OF MEETING

58. The chairman may with the consent of any meeting at which a quorum is present (and shall, if so directed by the meeting), adjourn the meeting from time to time and from place to place but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. When a meeting is adjourned for ten days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. Save as aforesaid, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

#### VENUE(S) OF MEETINGS

59. The Company shall hold its annual general meeting in any city of Pakistan, the city in which the Office is situated, provided that, it may, for any special reason and with permission of the Commission, hold the said meeting at any other place. Save as aforesaid, the Company may hold its general meeting at two or more venues using any technology that gives the Members as a whole a reasonable opportunity to participate in the meetings.

#### RESOLUTION HOW DECIDED

60. At any general meeting a resolution put to the vote of the meeting shall be decided by a show of hands unless a poll is (before or on the declaration of the result of the show of hands) demanded. Unless a poll is so demanded, a declaration by the chairman that a resolution has, on a show of hands, been carried or carried unanimously, or by a particular majority, or lost, and an entry to that effect in the book or electronic record of the proceedings of the Company, shall be conclusive evidence of the fact, without proof of the number or proportion of the votes recorded in favour of or against that resolution.

#### DEMAND FOR POLL

61. A poll may be demanded only in accordance with the provisions of section 167.

#### MANNER OF TAKING POLL

62. If a poll is duly demanded, it shall be taken in writing in accordance with the manner laid down in section 168. The result of the poll shall be deemed to be the resolution of the meeting at which the poll was demanded.

#### TIME OF TAKING POLL

63. A poll demanded on the election of the chairman or on a question of adjournment shall be taken at once, and a poll demanded on any other question shall be taken at such time, not more than fourteen (14) days from the day on which it is demanded, as the chairman may direct.

#### POLL HOW AND WHEN TO BE TAKEN

64. If a poll is duly demanded, it shall be taken in the manner provided in section 168 of the Ordinance, and the result of the poll shall be deemed to be the resolution of the meeting at which the poll was demanded.

### MINUTES OF GENERAL MEETINGS

65. Any minutes of resolutions and proceedings at general meetings made in the minute book of the Company or an electronic record thereof, if signed by any person purporting to be the chairman of the meeting to which it relates or by anyone present personally thereat and appointed by the Directors to sign the same in his place, or by the chairman of the next succeeding meeting, shall be receivable as evidence of the facts therein stated without further proof.

### INSPECTION OF MINUTE BOOKS

66. The books or Electronic Records containing minutes of proceedings of general meetings of the Company shall be kept at the Office and shall, during business hours, subject to such reasonable restrictions as the Directors or the Company in general meeting may from time to time impose, be open to the inspection of any Member without charge, in accordance with section 173 so that not less than two hours each day shall be allowed for such inspection.

### COPIES OF MINUTES

67. Any Member shall, at any time after seven days from a general meeting, be entitled to be furnished, within seven days after he has made a request in that behalf to the Company, with a copy of any minutes of the general meeting as aforesaid at a charge of Rs. 1 (rupee one only) for every one hundred words or a fractional part thereof, subject to a minimum of Rs. 10 (Rupee ten only) for any one copy or extract.

### (C) VOTES OF MEMBERS

#### RIGHT TO VOTE

Subject to section 160 and any rights or restrictions for the time being attached to any class or classes of shares, every member present personally or by proxy, shall have votes proportionate to the paid up value of the shares or other securities carrying voting rights held by him according to the entitlement of the class of such shares or securities, as the case may be, provided that, the provisions of section 173 shall apply in the case of the election of Directors.

#### VOTE OF THE JOINT HOLDERS

69. Where there are joint holders of any share, any one of such person may vote at any meeting either personally or by proxy in respect of such shares as if he was solely entitled thereto. And if more than one of such joint holders be present at any meeting either personally or by proxy, the vote of senior who tenders a vote, whether in person or by proxy, shall be accepted and for this purpose seniority shall be determined by the order in which the names stand in the register of Members.

#### VOTE BY A MEMBER OF UNSOUND MIND

70. A Member of unsound mind, or in respect of whom an order has been made by any court having jurisdiction in lunacy, may vote, whether on a show of hands or on a poll by his committee or other legal guardian, and any such committee or guardian may, on a poll, vote by proxy.

#### VOTE IN RESPECT OF SHARES OF DECEASED OR BANKRUPT MEMBERS

71. Any person entitled under these Articles to transfer of any shares may vote at any general meeting in respect thereof in the same manner as if he were the registered holder of such shares. Provided that 48 hours at least before the time of holding the meeting at which he proposes to vote he shall satisfy the Directors of his right to transfer of such shares, unless the Directors shall have previously admitted his right to vote at such meeting.

#### VOTE OF MEMBER CORPORATE BODIES

72. Any corporation which is a member of the Company may by resolution of its directors or other governing body authorize such person as it shall think fit as its representative at any

meeting of the Company and the person so authorized shall be entitled to exercise the same powers on behalf of such corporation as that corporation could exercise if it were an individual member of the Company

#### PROXIES

73. Subject to the provision of these Articles votes may be given either personally or by proxy. The instrument appointing a proxy shall be in writing in accordance with section 161 and:

- (a) signed by the appointer; or
- (b) signed by the attorney of the appointer, duly authorized in writing or otherwise in accordance with law; or
- (c) If the appointer is a body corporate, be:
  - (i) under its seal; or
  - (ii) signed by an officer; or
  - (iii) signed by an attorney duly authorized by it.
- (d) The instrument of proxy must be signed by a witness.

#### QUALIFICATION OF A PROXY

74. No person shall be appointed proxy who is not a Member of the Company or is not qualified to vote, save that a Member of the Company being a body corporate may appoint any person to act as its proxy provided that a person who is not a Member of the Company may be appointed as attorney for the purpose of signing any proxy under the provisions of Article 73.

#### DEPOSIT OF INSTRUMENT OF PROXY

75. Subject to Article 50, the instrument appointing a proxy and the power of attorney or other authority (if any) under which it is signed or a notarially certified copy of the power or authority, shall be deposited or received (such expression shall hereinafter include, where permitted by law, receipt in accordance with section 15 of the Electronic Transactions Ordinance) at the Office not less than forty-eight hours before the time for holding the meeting at which the person named in the instrument proposes to vote and, in default, the instrument of proxy shall not be treated as valid.

#### REVOCATION OF PROXY

76. A vote given in accordance with the terms of an instrument of proxy shall be valid notwithstanding the previous death of the principal or revocation of the proxy or power of attorney or transfer of the share in respect of which the vote is given unless an intimation in writing of death, revocation or transfer shall have been received at the office of the Company at least twenty four hours before the meeting.

#### FORM OF PROXY

77. An instrument appointing a proxy may be in the following form or in any other form commonly used for the purpose:-

#### PAKARAB FERTILIZERS LIMITED PROXY FORM

FOLIO NO/ CDC A/C NO. \_\_\_\_\_

I/We \_\_\_\_\_ being member/members of PAKARAB FERTILIZERS LIMITED ("Company") holding \_\_\_\_\_ shares of Rs. 10 each, hereby appoint Mr. / Ms. \_\_\_\_\_ of \_\_\_\_\_ a member of the Company, vide registered Folio / CDC A/C No. \_\_\_\_\_ or failing him/ her, \_\_\_\_\_ of \_\_\_\_\_ as my/our proxy to vote for me/us and on my/our behalf at the annual/ extraordinary general meeting of the company to be held on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ and at any adjournment thereof or of any ballot to be taken in consequence thereof.

Signed this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

Signature of member \_\_\_\_\_

## V. MANAGEMENT AND ADMINISTRATION

### (A) BOARD OF DIRECTORS

#### NUMBER OF DIRECTORS

78. 1) Unless otherwise determined by a general meeting the number of Directors shall not be less than as prescribed by law nor more than fifteen.

2) In addition to the Directors elected or deemed to have been elected under these articles the Company may have Directors nominated by the Company's creditors or other special interests by virtue of contractual obligations.

#### DEBENTURE DIRECTORS

79. Any trust deed for securing debentures or term finance certificates may, if so agreed, provide for appointment from time to time by the trustees thereof or by the holders of all the debentures or term finance certificates of some person to be a Director of the Company and may empower such trustee or holder of debentures or term finance certificates from time to time to remove any Director so appointed. A Director appointed under this Article is hereinafter referred to as a "Debenture Director" and the term "Debenture Director" means a Director for the time being in office under this Article. A Debenture Director shall not be bound to hold any qualification shares. The trust deed may contain such ancillary provisions as may be agreed between the Company and the trustees and all such provisions shall have effect notwithstanding any of the provisions herein contained. A Debenture Director shall have the same rights, power and duties as any other Director.

#### ALTERNATE DIRECTORS

80. A Director who is about to leave or is absent from Pakistan may, with the approval of the Directors appoint any person (including another Director) to be an alternate Director during his absence, provided that such absence shall not be for less than a period of three months, and such appointment shall have effect and such appointee whilst he holds office as an alternate Director, shall be entitled, in place of his appointer, to exercise all the functions of his appointer as a Director of the company but he shall cease to exercise office when his appointer returns or vacates office as a Director or removal of the appointer from office. Any appointment or removal under this Article shall be effected by notice in writing under the hand of the Director making the same.

#### CASUAL VACANCY

81. Any casual vacancy occurring among the Directors shall be filled up by the Directors. But the person so chosen shall be subject to retirement at the same time as if he had become a Director on the day on which the Director in whose place he is appointed was last elected as Director.

#### QUALIFICATION OF DIRECTOR

82. Save as provided in section 187, or otherwise required by law or determined by the directors or provided for in Article 16 no person shall be appointed as a Director unless he is a member.

#### DIRECTORS MAY ACT NOTWITHSTANDING VACANCIES

83. The continuing directors may act notwithstanding any vacancy in their body, but when the number is reduced below the minimum number fixed they may then act in emergencies or for the purpose of filling up vacancies in their body or summoning a general

meeting of the Company and they may so act notwithstanding the absence of the necessary quorum under the provisions of Article 93.

#### DISQUALIFICATION OF DIRECTORS

84. The office of the Director shall be vacated ipso facto on the grounds specified in section 188 and in addition if by notice in writing given to the Company he resigns from his office.

#### DIRECTORS MAY CONTRACT WITH THE COMPANY

85. Subject to the restrictions imposed by these Articles and the Ordinance, no Director shall be disqualified from his office by contracting with the Company either as vendor, purchaser, agent, broker or otherwise, nor shall any sub-contract or arrangement entered into, by or on behalf of the Company in which any Director is interested be avoided, nor shall any Director contracting or being so interested be liable to account to the Company for the profit realized from such contract or arrangement by reason only of his holding that office or the fiduciary relationship thereby established, but the nature of his interest must be disclosed by him at the meeting of the Directors at which the contract or arrangement is determined, if his interest then exists, or in any other case at the first meeting of the Directors after the acquisition of his interest.

#### INTERESTED DIRECTOR NOT TO VOTE

86. No Director shall, as a Director, vote in respect of any contract or arrangement in which he is either directly or indirectly concerned nor shall his presence count for the purpose of forming a quorum at the time of such vote, and if he does so his vote shall not be counted provided however that the Directors or any of them may vote on any contract of indemnity against any loss which they or anyone or more of them may suffer by reason of becoming or being sureties or surety for the Company. A general notice that any Director is a member of any particular firm or a Director or member of any specified company and is to be regarded as interested in any subsequent transactions with such firm or company shall be sufficient disclosure under this Article and after such general notice it shall not be necessary to give any special notice relating to any particular transaction with such firm or company.

#### DIRECTORS MAY BE INTERESTED IN OTHER COMPANIES

87. A Director of this Company may become a Director of any company promoted by this Company, or in which it may be interested as a vendor, shareholder or otherwise, and no such Director shall be liable to account for any benefit received as director or member of such company.

#### REGISTER OF DIRECTORS' INTEREST

88. In accordance with section 219, the Company shall maintain at its Office a register of Electronic record of the Directors, Chief Executive Officer, Chief Financial Officer (Chief Accountant), Secretary or head of internal audit and every person holding not less than ten percent (10%) of the beneficial interest in the Company, and the number, description and amount of any shares in or debentures of, the Company or any other body corporate, being the Company's subsidiary or holding company, or a subsidiary of the Company's holding company, which are held by or in trust for him or of which he has a right to become holder, whether on payment or not, and this register or Electronic record shall be open to inspection during business hours subject to sub-sections (5), (6) and (7) of section 220.

#### LOANS TO DIRECTORS

89. Except as permitted by the Ordinance, the Company shall not make any loan or guarantee any loan made to a Director of the Company or of a firm of which such Director is a partner or to a private company of which such Director is a director.

#### ELECTION OF DIRECTORS

90. The Directors shall comply with the provisions of Sections 171, 178, 180 and 181 relating to the election of Directors and matters ancillary thereto.

#### RETIRING DIRECTOR ELIGIBLE FOR RE-ELECTION

91. A retiring Director shall be eligible for re-election.

#### CHANGE IN NUMBER OF DIRECTORS

92. Subject to the provisions of the Ordinance, the Company may from time to time in annual general meeting increase or decrease the number of Directors.

#### REMOVAL OF DIRECTOR

93. The Company may remove a Director but only in accordance with the provisions of the Ordinance.

### (5) PROCEEDING OF DIRECTORS

#### DIRECTORS' MEETING

94. The Directors may meet together for the dispatch of business, adjourn and otherwise regulate their meetings, as they think fit, in accordance with the Ordinance, the Code and the Listing Requirements (if applicable) and subject to such minimum meetings as may be prescribed by law. Questions arising at any meeting shall be decided by a majority of votes. In case of an equality of shares, the Chairman shall not have or exercise a second or casting vote. A Director may and the secretary, on the requisition of a Director, shall, at any time, summon a meeting of a Directors. Such meetings may be held using any technology agreed to by majority of the Directors, including but not limited to telephonic and video conferencing. Notice of Directors' meetings shall be given to all Directors whether or not they are in

95. The quorum at meeting of the Directors shall be such as may be determined by the Directors but unless otherwise determined shall not be less than one third of their numbers or the minimum number prescribed by law whichever is greater.

#### DIRECTORS IN MEETING COMPETENT TO EXERCISE ALL POWERS AND DISCRETIONS

96. The meeting of Directors at which a quorum is present shall be competent to exercise all or any of the authorities, powers and discretions by or under these Articles for the time being vested in or exercisable by the Directors generally.

#### CHAIRMAN OF DIRECTORS MEETING

97. The Directors may elect one of the Director to be the chairman of their meetings, and determine the period for which he is to hold office, but if no such chairman is elected, or if at any meeting the Chairman is not present within fifteen minutes after the time appointed for holding the same, the Directors present shall choose one of the Directors to be chairman of such meeting. The office of the chairman may be filled by any Director.

#### COMMITTEES

98. The Directors may delegate any of their powers to a committee consisting of such member or members, amongst the Board of Directors or otherwise as they think fit. Any Committee so formed shall, in the exercise of the powers so delegated, conform to any restrictions that may be imposed on it by the Directors.

#### CHAIRMAN OF COMMITTEE MEETING

99. Unless a chairman of the committee is designated by the Directors, a committee may elect a chairman of its meetings, but, if no such chairman is elected, or if at any meeting the chairman is not present in person within fifteen minutes after the time appointed for holding

is same or is unwilling to act as Chairman, the members present in person may choose one of their member to be chairman of the meeting.

#### QUORUM AND PROCEDURE FOR COMMITTEE MEETING

100. A committee may meet and adjourn as it thinks proper. Questions arising at any meeting shall be determined by a majority of votes of the members present. The quorum for a meeting of a committee unless otherwise determined by the Directors, shall be a majority of the committee members.

#### VALIDITY OF DIRECTORS' ACTS

101. All acts done by any meeting of the Directors or of a committee of Directors or by any person acting as a Director, shall notwithstanding that it be afterwards discovered that there was some defect in the appointment of such Director(s) or person(s) acting as a Director, or that they or any of them were disqualified, be as valid as if every such person had been duly appointed and was qualified to be a Director.

#### RESOLUTION IN WRITING

102. 1) Subject to the provisions of section 196, a resolution in writing circulated through telex, telegram, facsimile or any other form of Electronic transmission to all of the Directors for the time being entitled to receive notice of a meeting of the Directors, and signed or affirmed by a majority through telex, telegram, facsimile or any other form of Electronic transmission, shall be as valid and effectual as if it had been passed at a meeting of the Directors duly convened and held.

2) The resolution in writing of the Company may consist of:

(a) several copies of a document signed by one or more Director(s), which takes effect at the date and time on which the last Director, necessary for the resolution to be passed, signs a copy of the resolution; or

(b) a record of several signed Electronic messages each indicating the identity of the sender, the text of the resolution and the sender's agreement or disagreement to the resolution, as the case may be, which takes effect on the date on which the last Director's message, necessary for the resolution to be passed, is received.

#### (C) MINUTES

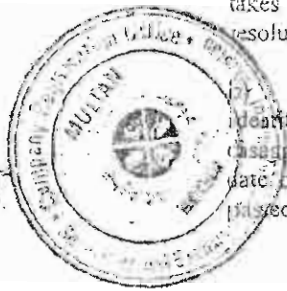
##### MINUTES TO BE RECORDED

103. The Directors shall cause minutes to be made, in book: provided for the purpose or in an Electronic record, of:

- the names of the Directors present at each meeting of the Directors and of any Committee of Directors;
- all orders made by the Directors and Committee of Directors;
- all the resolutions and proceedings at all meetings of the Company and of the Directors and of Committees of Directors, and every Director present in person at any meeting of Directors or Committee of Directors shall sign his name in a book or electronic record to be kept for that purpose.

##### MINUTES AS PRIMA FACIE EVIDENCE

104. All such minutes shall be signed by the chairman of the meeting as recorded or by the person who shall preside as chairman at the next succeeding meeting and all minutes purported to be so signed shall for all purposes whatsoever be prima facie evidence of the actual passing of the resolutions recorded, and the actual and regular transaction or



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occurrence of the proceedings so recorded and of the regularity of the meeting at which the same shall appear to have taken place.

#### (D) REMUNERATION OF DIRECTORS

##### REMUNERATION OF DIRECTORS

105. The remuneration of the Directors shall from time to time be determined by the Directors in accordance with law. The remuneration of a Director for attending the meetings of the Directors or a committee of Directors shall be fixed by the Directors from time to time. No remuneration for attending meetings shall be paid to the regularly and Chief Executive and full time working Directors of the Company.

##### REIMBURSEMENT OF EXPENSES INCURRED BY DIRECTOR

106. The Company may repay to any Director all such reasonable expenses as he may incur in attending and returning from the meetings of the Directors, or committee of Directors, or which he may otherwise incur in or about the business of the Company.

##### REMUNERATION FOR EXTRA SERVICES

107. If any Director, including the Chairman, being willing, shall be called upon to perform extra services or to make any special exertions for the Company, he shall be paid such remuneration as determined by the Directors, from time to time. All such Directors shall be paid travelling or other expenses incurred in connection with the business of the Company as determined by the Directors, from time to time.

#### (E) POWERS AND DUTIES

##### GENERAL POWERS OF COMPANY VESTED IN DIRECTORS

108. The management of the business of the Company shall be vested in the Directors who in addition to the powers and authorities by these Articles or otherwise expressly conferred upon them may exercise all such powers and do all such acts and things as may be exercised or done by the Company and are not hereby or by Act of the legislature expressly directed or required to be exercised or done by the Company in general meeting, but subject nevertheless to the provisions of the Ordinance and of these Articles and to any regulations from time to time made by the Company in general meeting provided that no such regulations shall invalidate any prior act of the Directors which would have been valid if such regulation had not been made.

Without prejudice to the generality of the foregoing, the Directors may from time to time at their discretion raise or borrow such sum or sums of money as they may deem fit and proper for the purposes of the Company from any bank or financial institution and/or corporation and/or other persons and secure the payment or repayment of such sum or sums of money in such manner and upon such terms and conditions as they deem fit particularly by way of mortgage, charge or hypothecation upon the whole or any part of the property of the Company, present and future, or in such other manner as the Directors may deem expedient.

##### SPECIFIC POWERS GIVEN TO DIRECTORS

109. Without prejudice to the general powers conferred by the foregoing Article and to any other powers or authorities conferred or thereupon on the Directors, it is hereby expressly declared that the Directors shall have the following powers:

##### TO ACQUIRE AND DISPOSE OF PROPERTY AND RIGHTS

- (i) To purchase or otherwise acquire for the Company any property, rights or privileges which the Company is authorized to acquire at such price and generally on such terms and conditions as they think fit, and to sell, let, exchange, or otherwise dispose of absolutely or conditionally any part of the

property, privileges and undertaking of the Company upon such terms and conditions, and for such consideration as they think fit.

**TO PAY FOR PROPERTY BY DEBENTURES ETC**

- (ii) At their discretion to pay for any property, rights, privileges acquired by or services rendered to the Company either wholly or partially in cash or in shares (subject to section 86 of the Ordinance), bonds, debentures, or other securities of the Company, and any such shares may be issued as fully paid up and any such bonds, debentures, or other securities may be charged upon all or any part of the property of the Company.

**TO DRAW BILLS ETC**

- (iii) To make, draw, endorse, sign, accept, negotiate and give all cheques, bills of lading, draft, order, bills of exchange, and other promissory notes and negotiable instruments required in the business of the Company.

**TO SECURE CONTRACTS BY MORTGAGE, ETC**

- (iv) To secure the fulfillment of any contracts, agreements or engagements entered into by the Company by mortgage or charge of all or any part of the property of the Company and its uncalled capital for the time being or in such other manner as they may think fit.

**TO APPOINT OFFICERS, ETC**

- (v) To appoint and at their discretion remove or suspend agents, managers, advisers, secretaries, officers, clerks and servants, for permanent, temporary or special services from time to time and fix emoluments and to require security in such instances and of such amount as they think fit.

**TO APPOINT TRUSTEE**

- (vi) To appoint any person or persons whether incorporated or not to accept and hold in trust for the Company any property belonging to the Company or in which it is interested or for any other purposes, and to execute and do all such deeds, documents and things as may be required in relation to any such trust and to provide for the remuneration of such trustee or trustees.

**TO BRING AND DEFEND ACTIONS, ETC.**

- (vii) To institute, conduct, defend compound or abandon any legal proceeding by or against the Company or its officers or otherwise concerning the affairs of the Company and also to compound and allow time for payment or satisfaction of any debts due and of any claims or demands by or against the Company subject to the provisions of the Ordinance.

**TO REFER TO ARBITRATION**

- (viii) To refer any claims or demands by or against the Company to arbitration and observe and perform the award.

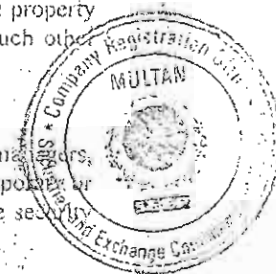
**TO GIVE RECEIPTS**

- (ix) To make and give receipts, releases and other discharges for money payable to the Company and for the claims and demands of the Company.

**TO ACT IN MATTERS OF BANKRUPTS AND INSOLVENTS**

- (x) To act on behalf of the Company in all matters relating to bankrupts and insolvents.

**TO AUTHORIZE ACCEPTANCE ETC.**



- (xi) To determine who shall be entitled to sign on the Company's behalf bills, notes, receipts, endorsements, cheques, releases, acceptances, contracts and documents.

#### TO APPOINT ATTORNEYS

- (xii) From time to time provide for the management of the affairs of the Company either in different parts of Pakistan or elsewhere in such manner as they think fit and in particular to establish branch offices and appoint any persons to be attorneys or agents of the Company with such powers (including power to sub-delegate) and upon such terms as may be thought fit.

#### TO INVEST MONEYS

- (xiii) To invest the moneys of the Company not immediately required for the purposes thereof upon such securities (not being shares in this Company) and in such manner as they think fit - except in associated companies or undertakings where provisions of section 208 of the Ordinance will be observed - and from time to time vary or realize such investments.

#### TO GIVE SECURITY BY WAY OF INDEMNITY

- (xiv) To execute in the name and on behalf of the Company in favour of any director or other person who may incur or be about to incur any personal liability for the benefit of the company such mortgages of the Company's property (present and future) as they think fit, and any such mortgage may contain a power of sale and such other powers, covenants and provisions as shall be agreed upon.

#### TO GIVE PERCENTAGE

- (xv) To give to any person employed by the company a commission on the profits of any particular business or transaction or a share in the general profits of the Company and such commission or share of profits shall be treated as part of the working expenses of the Company.

#### TO MAKE BYE-LAWS AND POLICIES

- (xvi) From time to time make, vary and repeat bye-laws and policies for the regulation of the business of the Company, its officers and servants.

#### TO MAKE CONTRACTS

- (xvii) To enter into all such negotiations and contracts and rescind and vary all such contracts and execute and do all such acts, deeds and things in the name and on behalf of the Company as they may consider expedient for or in relation to any of the matters aforesaid or otherwise for the purposes of the Company.

#### TO GRANT PENSIONS, ETC.

- (xviii) Without in any way limiting or restricting the general powers of the Directors to grant pensions, allowances or other similar payments to officers or ex-officers, employees, or ex-employees of the Company, or the dependents or nominees of any such persons, it is hereby expressly declared that the Directors may, upon any person who was or is for the time being a Director of the Company ceasing for any cause to hold some other office or place of profit (including that of chief executive) previously held by him in the Company, make such grants or pay such pensions or allowances or similar allowances to such person or to his relative, nominee or dependents as the Directors may think fit, and there shall be no objection to any such grant or payments that such person may remain an ordinary Director of the company entitled to participate in the remuneration payable to the Directors. Any such

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grant, pension or other allowance may be made payable for such period, and upon such terms and conditions, as the Directors in their discretion may from time to time determine, but shall only be made in respect of some office, place of profit or services other than service as an ordinary director.

#### TO ESTABLISH AND SUPPORT CHARITABLE OBJECTS

- (xix) To establish, maintain, support and subscribe to any charitable or public object, and any institution, society, or club which may be for the benefit of the Company or its employees, or may be connected with any town or place where the Company carries on business, to give pensions, gratuities, or charitable aid to any person or persons, who have served the Company or to the wives, children or dependents of such person or persons, that may appear to the Directors, just or proper, whether any such person, his widow, children or dependents have or have not a legal claim upon the Company.

#### TO SET ASIDE PROFITS FOR PROVIDENT FUND

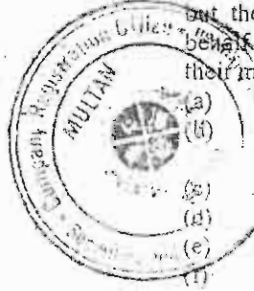

- (xx) Subject to the provisions of section 227 of the Ordinance before recommending any dividends to set aside portions of the profit of the Company to form a fund to provide for such pensions, gratuities, or compensation, or to create any provident or benefit fund in such or any other manner as the directors may deem fit.

#### TO MAKE AND ALTER RULES

- (xxi) To make and alter rules and regulations concerning the time and manner of payment of contribution of the employees and the Company, respectively to any such fund and the accrual, employment, suspension and forfeiture of the benefits of the said fund and the application and disposal thereof, and otherwise in relation to the working and management of the said fund as the Directors shall from time to time think fit.

#### TO DELEGATE POWERS

- (xxii) To delegate all or any of the powers hereby conferred upon them to such managers, officers, person, persons as they may from time to time think fit, but the Directors of the Company shall exercise the following powers on behalf of the Company, and shall do so by means of a resolution passed at their meeting namely:-

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- (a) to issue shares and make calls.
  - (b) to issue shares, debentures, participation term certificates or any finance certificates
  - (c) to borrow moneys otherwise than on debentures
  - (d) to invest the funds of the company
  - (e) to make loans
  - (f) to authorize a director or the firm of which he is a partner or any partner of such firm or a private company of which he is a member or director to enter into any contract with the company or making sale, purchase or supply of goods or rendering services with the company.
  - (g) to approve annual or half yearly or other periodical accounts as are required to be circulated to the members.
  - (h) to approve bonus to employees
  - (i) to acquire or dispose off fixed assets of the value as prescribed by the Ordinance
  - (j) to decide on such other matters as are required by section 95 to be by meeting of the Directors.

#### LIMITATION OF POWERS

110. The Directors of the Company shall not except with the consent of the general meeting either specifically or by way of an authorization, do any of the following things, namely:

- (a) sell, lease or otherwise, dispose of the undertaking or a substantial part thereof, unless the main business of the Company comprises of such selling or leasing; and
- (b) Remit, give any relief or give extension of time for the repayment of any debt outstanding against any person specified in sub-section (1) of section 195.

## VI. CHIEF EXECUTIVE

### POWERS TO APPOINT CHIEF EXECUTIVE

111. The Directors may subject to the provisions of sections 198 to 206 appoint any person including an elected Director to be chief executive of the Company.

### REMUNERATION OF CHIEF EXECUTIVE

112. The remuneration of a chief executive shall from time to time be fixed by the Directors and may be by way of salary or commission or participation in profits or by any or all of these modes, within such limits as may be prescribed by any law or regulation for the time being in force.

### POWERS OF CHIEF EXECUTIVE

113. Subject to the provision of the Ordinance the Directors may from time to time entrust to and confer upon a chief executive for the time being such of the powers exercisable under these presents by the Directors as they think fit and may confer such powers for such time and to be exercised for such objects and purposes and upon such terms and conditions and with such restrictions as they think expedient, and they may confer such powers either collaterally with or to the exclusion of, and in substitution for all or any of the powers of the Directors in this behalf and may from time to time revoke, withdraw, alter or vary all or any of such powers.

## VII. THE SEAL

### COMMON SEAL

114. The Directors shall provide a common seal for the purposes of the Company and shall have powers from time to time to destroy the same and substitute a new seal in lieu thereof and the directors shall provide for the safe custody of the seal which shall not be affixed to any instrument except by the authority of a resolution of the Directors or by a committee of Directors authorized in that behalf by the Directors, and a person as may be authorized by the Directors for the purpose, shall sign every instrument to which the common seal of the Company is so affixed in their presence.

### OFFICIAL SEAL

115. The Directors may provide for the use in any territory, district or place not situated in Pakistan, of an official seal which shall be a facsimile of the common seal of the Company, with the addition on its face of the name of every territory, district or place where it is to be used. The official seal shall not be affixed to any instrument except by the authority of a resolution of the Directors or by a committee of Directors authorized in that behalf by the Directors, and such person as may be authorized by the Directors for the purpose, shall sign every instrument to which the official seal is affixed. The provision of section 213 shall apply to the use of the official seal.

## VIII. DIVIDENDS AND RESERVES

### DIVIDENDS TO BE DECLARED IN GENERAL MEETING

116. The Company in general meeting may declare dividends, but no dividends shall exceed the amount recommended by the Directors.

#### PERIOD OF PAYMENT OF DIVIDENDS

117. The dividend shall be paid within the period laid down in section 251.

#### INTERIM DIVIDEND

118. The Directors may from time to time pay to the members such interim dividends as appear to the Directors to be justified by the profits of the Company.

#### DIVIDENDS OUT OF PROFITS ONLY

119. No dividends shall be paid otherwise than out of profits for the year or any undistributed profit of the Company.

#### DIVIDENDS GENERALLY IN PROPORTION TO AMOUNT PAID UP

120. Subject to the rights of the persons (if any) entitled to shares with special rights as to dividends all dividends shall be declared and paid according to the amounts paid on the shares, but if and so long as nothing is paid upon any of the shares in the Company dividends may be declared and paid according to the amounts of the shares.

#### DIVISION OF PROFITS

121. The Directors may before recommending any dividend, preferential or otherwise, set aside out of the profits of the Company such sums as they think proper as a reserve or reserves which shall at the discretion of the Directors, be applicable for meeting contingencies or for equalizing dividends, or for any other purpose to which the profits of the Company may be properly applied and pending such application may, at the like discretion either be employed in the business of the Company or be invested in such investments (other than shares of the Company) as the Directors from time to time think fit.

#### DIVIDEND PAYMENTS TO JOINT HOLDERS

122. If several persons are registered as joint holders of any shares, any of them may give effectual receipt for any dividend payable on the share but the dividend shall be paid to the person first named in the register of the Company.

#### NOTICE OF DIVIDENDS TO BE GIVEN

123. Notice of any dividend that may have been declared shall be given in the manner hereinafter mentioned to the persons entitled to share therein.

#### DIVIDENDS NOT TO BEAR INTEREST

No dividend shall bear interest against the Company.

#### TRANSFER NOT TO PASS RIGHT TO DIVIDENDS ALREADY DECLARED

124. A transfer of shares shall not pass the right to any dividend declared or declared before the registration of the transfer.

#### DIVIDENDS HOW REMITTED

125. Unless otherwise directed any dividend may, if the Directors so think fit, be paid by cheque or warrant sent by post to the registered address of the member or person entitled or in the case of joint holders to the registered address of that one of them first named in the register. Every such cheque or warrant shall be made payable to the order of the person to whom it is sent. The Company shall not be liable or responsible for any cheque or warrant lost in transmission or for any dividend lost to the member or person entitled thereto by the forged endorsement of any cheque or warrant or the fraudulent recovery thereof by any other means.

#### ADJUSTMENT OF DIVIDEND

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127. The Directors may retain any dividends payable on shares on which the Company has a lien and may apply the same in or towards satisfaction of the debts, liabilities or engagements in respect of which the lien exists.

#### UNCLAIMED DIVIDENDS WHEN TO BE USED BY COMPANY

128. All dividends unclaimed for one year after having been declared may be made use of by the Directors for the benefit of the Company until claimed.

#### FORFEITURE OF DIVIDENDS

129. All dividends unclaimed for three years after having been declared may be invested by the directors for the benefit of the Company.

#### DIVIDENDS IN SPECIE

130. Any general meeting sanctioning or declaring a dividend in terms of these Articles may direct payment of such dividend wholly or in part, by the distribution of specific assets, and in particular by paid up shares, debentures, or debenture-stock of the Company, or of any other company, or in any of such ways and the Directors shall give effect to such direction and where any difficulty arises in regard to the distribution they may settle the same as they think expedient and in particular may issue fractional certificates and may fix the value for distribution of such specific assets or any part thereof and may determine that such payment shall be made to any Member upon the footing of the value so fixed in order to adjust the rights of all parties and may vest any such specific assets upon trust for the persons entitled to the dividend as may seem expedient to the director. Where requisite, a proper contract shall be entered into in accordance with section 73 of the Ordinance and the Directors may appoint any person to sign such contract on behalf of the persons entitled to the dividends and such appointment shall be effective.

#### PROFIT CARRIED FORWARD

131. The Directors may carry forward any profits, which they may think prudent not to distribute, without setting them aside as a reserve.

### IX. CAPITALIZATION

#### CAPITALIZATION

132. The Company in general meeting may upon the recommendation of the Directors resolve to capitalize any part of the amount standing to the credit of any reserve or the profit and loss account or otherwise available for distribution, and accordingly that such sum be set free for distribution amongst Members who would be entitled thereto if the same were distributed by way of dividend and in the same proportions on condition that the same be not paid in cash but be applied in paying up in full unissued shares or debentures of the Company to be alloted and distributed, credited as fully paid up, to and amongst such Members in the proportion aforesaid, and the Directors shall give effect to such resolution.

#### DIRECTORS TO TAKE STEPS FOR CAPITALIZATION

133. Whenever such a resolution as aforesaid shall have been passed the Directors shall make all appropriations and applications of the undivided profits required to be capitalized thereby, and all allotments and issue of fully paid shares or debentures, if any, and generally shall do all acts and things required to give effect thereto, with full power to the Directors to make such provision as they think fit in the case of shares or debentures becoming distributable, and also to authorize any person to enter on behalf of all the Members entitled thereto into an agreement with the Company providing for the allotment to them respectively, credited as fully paid up, of any further shares or debentures which they may be entitled upon such capitalization, and any agreement made by such authority shall be effective and binding on all such Members.

### X. ACCOUNTS

#### INCLUSION OF ELECTRONIC FORMS OF RECORD

134. References to books of account, balance sheets, profit and loss accounts and auditor's reports shall hereinafter mutatis mutandis include all Electronic forms of record or storage of the Company.

#### BOOKS OF ACCOUNTS

135. The Directors shall cause to be kept proper books of accounts as required under section 230 of the Ordinance.

#### BOOKS TO BE KEPT AT THE REGISTERED OFFICE

136. The books of account shall be kept at the registered office of the Company or at such place as the Directors shall think fit and shall be open to inspection by the Directors during business hours.

#### INSPECTION OF ACCOUNTS BY MEMBERS

137. The Directors shall from time to time determine whether and to what extent and at what times and places and under what conditions or regulations the accounts and books of the Company or any of them shall be open to the inspection of Members not being Directors and no Member (not being a Director) shall have any right of inspecting any account book or document of the Company except as conferred by law or authorized by the Directors or by the Company in general meeting.

#### STATEMENT OF ACCOUNTS TO BE MADE BEFORE GENERAL MEETING

138. The Directors shall, as required by section 233 and 236, cause to be prepared and to be laid before the Company in general meeting such profit and loss accounts, income and expenditure accounts, balance sheet and reports as referred to in those sections. The balance sheet shall be made out every year and laid before the company in general meeting made up to a date not more than four months before such meeting. The balance sheet shall be accompanied by the Directors' report and the report of the auditors of the Company.

#### PARTICULARS OF PROFIT & LOSS ACCOUNT

139. The profit and loss account shall in addition to the matters referred to in section 234 show, arranged under the most convenient heads, the amount of gross income distinguishing the several sources from which it has been derived and the amount of gross expenditure distinguishing the expenses of the establishment, salaries and other like matters. All expenses chargeable against the year's income shall be brought into account so that a just balance of profit and loss may be laid before the meeting and in case where any item of expenditure which may be distributed over several years has been incurred in any one year whole amount of such item shall be stated with the addition of the reason why only a portion of such expenditure is charged against the income of the year.

#### CIRCULATION OF ANNUAL ACCOUNTS

140. A copy of the annual accounts together with Directors' and auditors' reports thereon shall not less than twenty one days before the meeting be sent to the persons entitled to receive notice of general meeting in the manner in which notices are to be given as provided hereunder.

#### QUARTERLY ACCOUNTS

141. Subject to the provisions of section 243 and the Listing Requirements, as applicable, the Company shall, within one month of the close of the first, second and third quarter of its accounting year, prepare and transmit to its Members or place it on the website of the Company subject to compliance of prescribed formalities connected therewith and any Stock Exchange(s) on which the Company is listed for the time being, a profit and loss account for, and a balance sheet as at the end of that quarter whether and in or otherwise and

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simultaneously file with the Registrar and the Commission such number of copies thereof as may be prescribed by law.

#### COMPLIANCE WITH THE ORDINANCE, CODE AND LISTING REGULATIONS

142. The Directors shall in all respects comply with the provisions of sections 230 to 236 of the Ordinance, the Code and the Listing Requirements of the Stock Exchange or any modification thereof for the time being in force if applicable to the Company.

#### XI. AUDIT

##### APPOINTMENT OF AUDITORS

143. Auditors shall be appointed at each annual general meeting and their appointment, remuneration, rights and duties shall be regulated in accordance with sections 252 to 255 of the Ordinance and/or the Code or any modification thereof for the time being in force, if applicable to the Company.

#### XII. NOTICES

##### NOTICE OF MEMBERS

144. The Company shall comply with such provisions of the Ordinance, the Central Depositories Act, the Central Depository Regulations and where possible, the Electronic Transactions Ordinance, as may be applicable to the manner in which certain notices are to be issued, served and/or received by the Company.

##### WHEN SERVICE OF NOTICE DEEMED COMPLETE

145. Where a notice is sent by post service of the notice shall be deemed to be effected by properly addressing, prepaying and posting a letter containing the notice and unless the contrary is proved to have been effected at the time at which the letter would have been delivered in ordinary course of post to the shareholder's registered address.

##### NOTICE TO JOINT HOLDERS

146. A notice may be given by the Company to the joint holders of a share by giving the notice to the joint holder named first in the register in respect of the shares.

##### NOTICE TO PERSONS ENTITLED BY TRANSMISSION

147. A notice may be given by the Company to the persons entitled to a share in consequence of the death or insolvency of a Member by sending, through the post in a prepaid letter addressed to them by name or by the title of representatives of the deceased or assignees of the insolvent or by any like description of the address (if any) in Pakistan supplied for the purpose by the persons claiming to be so entitled or (until such an address has been so supplied) by giving the notice in any manner in which the same might have been given if the death or insolvency had not occurred.

##### PUBLICATION OF NOTICES IN NEWSPAPERS

148. The Company shall comply with such provisions of the Ordinance and Listing Requirements, if applicable, as may apply to the manner in which certain notices are required to be published by the Company in Newspaper(s).

##### MEMBERS BOUND BY NOTICE GIVEN TO PREVIOUS HOLDERS

149. Every person who by operation of law, transfer, or other means whatsoever, shall become entitled to any share, shall be bound by every notice in respect of such share which prior to his name and address being entered on the register, shall have been duly given to the person from whom he derived his title to such shares.

#### INDEMNITY

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*[Signature]*  
Company Secretary

150. Subject to the provisions of the Ordinance, every Director, manager, auditor and other officer or servant of the Company shall be indemnified by the Company against and it shall be the duty of the Directors out of the funds of the Company to pay all costs, losses and expenses, which any such officer or servant incurs in any way in the discharge of his duties including traveling expenses and in particular, as not to limit the generality of the foregoing provisions, against all liabilities incurred by him as such Director, manager, auditor, officer, or servant in defending any proceedings whether civil or criminal, in which judgment is given in his favour or he is acquitted or in connection with any application under section 488 of the Ordinance in which relief is granted by the court and the amount for which such indemnity is provided shall immediately attach as a lien on the property of the Company and have priority as between the Members over all other claims

#### NEGLECT OR DEFAULT OF ANY OTHER DIRECTOR OR OFFICER

151. Subject to the provisions of the Ordinance, no Director, manager, auditor, or other officer of the Company shall be liable for any act or for joining in any order or act or for any loss or expense happening to the Company through the insufficiency or deficiency of the title to any property acquired by order of the Directors for or on behalf of the Company or for the insufficiency or deficiency of any security in or upon which any of the money of the Company shall be invested or for loss or damage arising from the bankruptcy, insolvency or tortious act of any person with whom any moneys, securities or effects shall be deposited or for loss occasioned by any error of judgment or oversight on his part or for any other loss, damage or misfortune whatever, which shall happen in the execution of the duties of his office or in relation thereto unless the same happens through his own dishonesty.

#### XIV. AMALGAMATION, DIVISION AND RECONSTRUCTION

##### AMALGAMATION, DIVISION AND RECONSTRUCTION

152. Subject to and in accordance with the provisions of section 257 of the Ordinance, the Company may, and may be authorized to, reconstruct, amalgamate into another company or divide into two or more companies, in the process of which the whole or any part of the undertaking, property or business of the Company or any other company may be transferred to any other company or companies, respectively, as the case may be, provided that on any sale of the assets of the Company, the Directors, or the liquidators on a winding up, may, if authorized by special resolution accept fully paid shares, debentures or securities of any other company or companies existing or to be formed for the purchase in whole or in a part of the property of the Company, and the Directors (if the profits of the Company permit), or the liquidators (in a winding up), may distribute such shares or securities, or any other properties of the Company amongst the Members without realization, or vest the same in trustees for them, and any special resolution may provide for the distribution or appropriation of the cash, shares or other securities, benefits or property, otherwise than in accordance with the strict legal rights of the members or contributors of the Company, and for the evaluation of any such securities or property at such price and in such manner as the meeting may approve, and the holders of shares shall be bound to accept and shall be bound by any evaluation or distribution so authorized, and waive all rights in relation thereto save only such statutory rights (if any) as are, in case the Company is proposed to be or is in the course of being wound up, incapable of being varied or excluded by these Articles.

#### XV. WINDING UP

##### DISTRIBUTION OF ASSETS

153. Without prejudice to the rights of the holders of shares subject to special terms and conditions if, on the winding up the assets available for distribution among the Members as such shall be insufficient to repay the whole of the paid up capital, such asset shall be distributed so that as nearly may be the losses shall be borne by the Members in proportion to the capital paid up or which ought to have been paid up at the commencement of the winding up on the shares held by them respectively, and if in winding up the assets available for

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Company Secretary

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distribution among the Members shall be more than sufficient to repay in whole of the paid up capital at the commencement of the winding up, the excess shall be distributed among the Members who are holders of ordinary shares in proportion to the ordinary shares held by them respectively at the commencement of the winding up.

#### DISTRIBUTION IN SPECIE OR KIND

154. If the Company shall be wound up, whether voluntarily or otherwise, the Liquidators may with the sanction of special resolution divide amongst the contributories in specie or kind any part of the assets of the Company and may with the like sanction vest any part of the assets of the Company in trustees upon such trusts for the benefit of the contributories or any of them as the Liquidators, with the like sanction, shall think fit.

#### XV. SECRECY

##### SECRECY CLAUSE

155. Every Director, manager, auditor, trustee, member of committee, officer, agent, accountant, or other persons employed in the business of the Company, shall, unless authorized by the Directors, observe strict secrecy respecting all transactions of the Company with customers and the State and with individuals concerning the accounts and matters relating thereto, and shall not reveal any of the matters relating thereto, and shall not reveal any of the matters which may come to his knowledge in the discharge of his duties except as authorized so to do by the Directors or by law or by the person to whom such matters relate, and except so far as may be necessary in order to comply with any of the provisions in these presents, contained.

#### XVII. ARBITRATION

##### DISPUTE TO BE REFERRED TO ARBITRATION

156. Any difference arises between the Company on the one hand and any of the Directors, officers, managers, auditors, trustees, members of committee, or assigns on the other, touching the true intent or construction or the incidence or consequence of these presents or of the clauses or touching anything then or thereafter done, executed, omitted, or suffered in pursuance of these presents, or otherwise relating to the premises or to these presents, or to any statute affecting the Company, or to any of the affairs of the Company, every such difference shall be referred to the decision of the arbitrator to be appointed by the parties in difference, or if they cannot agree upon a single arbitrator such arbitrator to be appointed by court.

157. The cost of, and incidental to, arbitration shall be in the discretion of the arbitrator who may determine the amount thereof to be taxed between attorney and client or otherwise and in what manner the same shall be borne and paid.

We, the several persons whose names and addresses are subscribed below, desire to form a company in pursuance of these Articles of Association, and we respectively agree to take the number of shares in the capital of the Company subscribed for our respective

**Certified to be True Copy**

Name address and description of subscribers	No. of Shares taken by each subscriber	Signature of subscribers	Name address and description of witness
1. MR. A.R. FARIDI Chairman, West Pakistan Industrial Development Corporation, PIDC House Karachi.	One	A.R. FARIDI	Mr. Aziz N. Kurba Deputy Registrar, Floor 10, 10 Building Karachi.
2. MR. T.G. NASIR KHAN Financial Director, West Pakistan Industrial Development Corporation, PIDC House Karachi.		T.G. NASIR KHAN	Deputy Registrar of Companies, Securities and Exchange Commission of Pakistan Economic Affairs Office, Karachi.
3. MR. NOOR AHMED, General Manager, Corporate Affairs Division, West Pakistan Industrial Development Corporation, PIDC House Karachi.		NOOR AHMED	

**TO BE TRUE COPY OF ORIGINAL**

Company Secretary

# Certificate of Incorporation

KAR. No. 3809 of 1973-1974

I hereby certify that PAK-ARAB

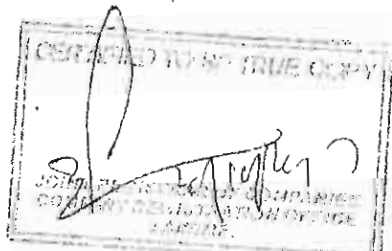
FERTILIZERS LIMITED

is this day incorporated under the Companies Act VII of  
1913, and that the Company is Limited.

Given under my hand at KARACHI

this TWELFTH day of NOVEMBER

One thousand nine hundred and SEVENTY-THREE



Sd/-

M. R. SHAIKH

Assistant Registrar of Joint Stock Companies,

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Company Secretary



**Company Secretary**

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THIRD SCHEDULE  
(See section 150)

FORM A - ANNUAL RETURN OF COMPANY HAVING SHARE CAPITAL

1. Registration No.	0001235		
2. Name of the Company	PAK ARAB FERTILIZERS LIMITED		
3. Form made upto (Day/Month/Year)	30/05/2017		
4. Date of AGM (Day/Month/Year)	30/05/2017		
PART - A			
5. Registered Office Address	E-110, KHAYABAN-E-JINNAH, LAHORE CANTT Lahore Punjab		
6. Email Address	info@fertilizer-group.com		
7. Office Tel No.	9242111-320-462		
8. Office Fax No.	924236021169		
9. Nature of Business	FERTILIZER		
10. Authorized Share Capital			
Type of Shares	No. of Shares	Amount	Face Value
Ordinary Shares		10,000,000,000.00	
11. Paid up share Capital			
Type of shares	No. of Shares	Amount	Issue Price
Ordinary Shares		4,500,000,000.00	
12. Amount of indebtedness on the date upto which Form A is made in respect of all Mortgages/Charges	37,000,000,000.00		
13. Particulars of the holding company			
Name			
Registration No.	% Shares Held		
14. Chief Executive			
Name	FAWAD AHMED MUCHTAR	NIC	3630227412747
Address	43-A, GASIM ROAD, SULTAN CANTT		
	Next Page		

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Company Secretary

## 15 Chief Accountant

Name \_\_\_\_\_

359120424799

## Address

U NO 351-AA MOHALLAH PHASE IV, DEFENCE HOUSING AUTHORITY, AMORE

## 16. Secretary

Naive

70235210605#1

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NO 8, JINNAH LANE, SARFRAZ RAUF QUI ROAD, LAHORE CANTT

### 17. Legal Advisor

Name \_\_\_\_\_

CHAMA AND IBRAHIM

Address

1-A/245 TUFAIL ROAD LAHORE CANTT

### 18. Auditors

Name \_\_\_\_\_

A. F. FERGUSON AND CO. CA

Adams

120-C AZIZ AVENUE CANAL BANK GULBERG V P O BOX 99 LAHORE

19. List of Directors on the date of Form-A

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ATTESTED  
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Company Secretary

19. List of Directors on the date of Form-A

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\_\_\_\_\_  
Company Secretary

PART-B

20. List of members & debenture holders on the date upto which this Form A is made

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01/05/2017

(FAZAL AH'WEI) SHEIKH

Chief Executive

☐ Secretary

Director

Previous Page

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Company Secretary



Form A, Page 1

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Page 6 of 6

Previous Page

**AUDITORS' REPORT TO THE MEMBERS**

We have audited the annexed balance sheet of Pakarab Fertilizers Limited (the 'company') as at December 31, 2017, and the related profit and loss account, statement of comprehensive income, cash flow statement and statement of changes in equity together with the notes forming part thereof, for the year then ended and we state that we have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit.

It is the responsibility of the company's management to establish and maintain a system of internal control, and prepare and present the above said statements in conformity with the approved accounting standards and the requirements of the Companies Ordinance, 1984. Our responsibility is to express an opinion on these statements based on our audit.

We conducted our audit in accordance with the auditing standards as applicable in Pakistan. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the above said statements are free of any material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the above said statements. An audit also includes assessing the accounting policies and significant estimates made by management, as well as, evaluating the overall presentation of the above said statements. We believe that our audit provides a reasonable basis for our opinion and, after due verification, we report that:

- (a) in our opinion, proper books of account have been kept by the company as required by the Companies Ordinance, 1984;
- (b) in our opinion:
  - (i) the balance sheet and profit and loss account together with the notes thereon have been drawn up in conformity with the Companies Ordinance, 1984, and are in agreement with the books of account and are further in accordance with accounting policies consistently applied;
  - (ii) the expenditure incurred during the year was for the purpose of the company's business; and
  - (iii) the business conducted, investments made and the expenditure incurred during the year were in accordance with the objects of the company;

A. F. FERGUSON & CO., Chartered Accountants, a member firm of the PwC network  
23-C, Aziz Avenue, Canal Bank, Gulberg-V, P.O.Box 39, Lahore-54660, Pakistan  
Tel: +92 (42) 3571 5868-71 / 3577 5747-50 Fax: +92 (42) 3577 5754 www.pwc.com/pk

- (c) in our opinion and to the best of our information and according to the explanations given to us, the balance sheet, profit and loss account, statement of comprehensive income, cash flow statement and statement of changes in equity, together with the notes forming part thereof conform with approved accounting standards as applicable in Pakistan, and, give the information required by the Companies Ordinance, 1984, in the manner so required and respectively give a true and fair view of the state of the company's affairs as at December 31, 2017 and of the loss, total comprehensive loss, its cash flows and changes in equity for the year then ended; and
- (d) in our opinion, no Zakat was deductible at source under the Zakat and Ushr Ordinance, 1980 (XVIII of 1980).

  
**Chartered Accountants**

**Lahore, July 3, 2018**

**Engagement Partner: Khurram Akbar Khan**

# PAKARAB FERTILIZERS LIMITED

## BALANCE SHEET AS AT DECEMBER 31, 2017

Note	2017 (Rupees in thousand)	2016
<b>EQUITY AND LIABILITIES</b>		
<b>SHARE CAPITAL AND RESERVES</b>		
	10,000,000	10,000,000
Authorized share capital		
1,000,000,000 (2016: 1,000,000,000)		
ordinary shares of Rs 10 each		
Issued, subscribed and paid up share capital		
450,000,000 (2016: 450,000,000)	4,500,000	4,500,000
ordinary shares of Rs 10 each	(1,097,116)	2,630,612
Reserves	3,402,884	7,130,612
<b>SURPLUS ON REVALUATION</b>		
<b>OF OPERATING FIXED ASSETS</b>		
7	16,299,030	14,876,727
<b>NON-CURRENT LIABILITIES</b>		
Long term finances - secured	5,508,320	5,671,920
Long term loans from related parties - unsecured	3,873,693	2,918,722
Long term loan from related party - secured	2,999,000	2,999,000
Long term deposits	46,734	36,580
Deferred liabilities	116,400	113,951
Deferred taxation	7,450,485	6,747,060
	19,994,632	18,487,233
<b>CURRENT LIABILITIES</b>		
Current portion of long term finances	1,891,665	1,081,747
Short term borrowings - secured	10,778,789	9,173,126
Payable to Privatization Commission of Pakistan	2,197,901	2,197,901
Trade and other payables	6,074,034	6,974,443
Accrued mark up	844,360	638,792
	21,786,749	20,066,009
<b>CONTINGENCIES AND COMMITMENTS</b>		
	61,483,295	60,560,581
<b>ASSETS</b>		
<b>NON-CURRENT ASSETS</b>		
Property, plant and equipment	40,632,995	38,748,690
Intangible assets	37,569	62,754
Goodwill	3,305,163	3,305,163
Long term investments	555,578	466,862
Security deposits	41,892	36,785
	44,573,197	42,620,254
<b>CURRENT ASSETS</b>		
Stores and spare parts	2,847,685	2,501,855
Stock-in-trade	4,128,951	4,070,067
Trade debts	2,068,524	2,898,256
Advances, deposits, prepayments and other receivables	7,761,775	8,076,248
Cash and bank balances	16,910,098	393,901
	29,716,933	17,940,327
	61,483,295	60,560,581

The appended notes form an integral part of these financial statements.



Chief Executive

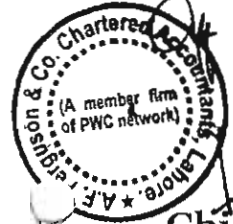
Director

# PAKARAB FERTILIZERS LIMITED

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED DECEMBER 31, 2017

	Note	2017 (Rupees in thousand)	2016 (Rupees in thousand)
Sales	28	16,531,429	16,175,964
Cost of sales	29	<u>(16,159,804)</u>	<u>(16,206,087)</u>
<b>Gross profit/(loss)</b>		371,625	(30,123)
Administrative expenses	30	(736,091)	(693,769)
Selling and distribution expenses	31	<u>(1,083,039)</u>	<u>(829,851)</u>
		(1,447,505)	(1,553,743)
Finance cost	32	(2,164,270)	(1,801,837)
Other expenses	33	<u>(12,539)</u>	<u>(15,681)</u>
		(3,624,314)	(3,371,261)
Other income	34	<u>108,234</u>	<u>351,867</u>
<b>Loss before taxation</b>		(3,516,080)	(3,019,394)
Taxation	35	(425,807)	1,092,307
<b>Loss for the year</b>		<u><u>(3,941,887)</u></u>	<u><u>(1,927,087)</u></u>

The annexed notes 1 to 46 form an integral part of these financial statements.



Chief Executive

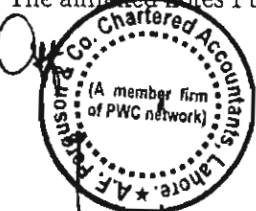
Director

# PAKARAB FERTILIZERS LIMITED

## STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED DECEMBER 31, 2017

	2017 (Rupees in thousand)	2016 (Rupees in thousand)
Loss for the year	(3,941,887)	(1,927,087)
<b>Other comprehensive income/(loss):</b>		
<i>Items that may be reclassified subsequently to profit or loss:</i>		
Surplus on remeasurement of fair value of available-for-sale investment	82,818	55,505
Deferred tax charge relating to remeasurement of available-for-sale investment to fair value	(18,634)	(12,489)
	64,184	43,016
<i>Items that will not be reclassified subsequently to profit or loss:</i>		
Surplus on revaluation of operating fixed assets realised through incremental depreciation charged on related assets for the year	162,075	146,104
Remeasurement of post retirement benefit obligation	(12,100)	(19,931)
	149,975	126,173
<b>Other comprehensive income - net of tax</b>	214,159	169,189
<b>Total comprehensive loss for the year - net of tax</b>	<b>(3,727,728)</b>	<b>(1,757,898)</b>

The annexed notes 1 to 46 form an integral part of these financial statements.



Chief Executive

Director

# PAKARAB FERTILIZERS LIMITED

## CASH FLOW STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2017

	Note	2017 (Rupees in thousand)	2016
<b>Cash flows from operating activities</b>			
Cash (used in)/generated from operations	36	(493,203)	2,990,399
Finance cost paid		(1,936,571)	(1,607,773)
Taxes paid		(531,674)	(509,054)
Retirement benefits paid		(47,680)	(44,405)
Security deposits - net		5,047	(16,510)
<b>Net cash (outflow)/inflow from operating activities</b>		<b>(3,004,081)</b>	<b>812,657</b>
<b>Cash flows from investing activities</b>			
Purchase of property, plant and equipment		(479,172)	(220,233)
Purchase of intangible assets		(553)	-
Sale proceeds of property, plant and equipment disposed		2,352	9,746
Investments made		-	(1,470)
Profit on bank deposits received		5,895	5,452
<b>Net cash outflow from investing activities</b>		<b>(471,478)</b>	<b>(206,505)</b>
<b>Cash flows from financing activities</b>			
Proceeds from long term finances acquired		1,943,000	5,007,000
Proceeds from long term loans acquired from related parties		954,972	1,285,768
Proceeds from short term borrowing acquired from related party		-	799,000
Repayment of long term finances		(1,235,659)	(1,238,689)
Repayment of long term loans from related parties		-	(600,000)
Payment of initial transaction cost on long term finances acquired		(83,155)	(4,300)
<b>Net cash inflow from financing activities</b>		<b>1,579,158</b>	<b>5,248,779</b>
<b>Net (decrease)/increase in cash and cash equivalents</b>		<b>(1,896,401)</b>	<b>5,854,931</b>
<b>Cash and cash equivalents at the beginning of the year</b>		<b>(8,779,225)</b>	<b>(14,634,156)</b>
<b>Cash and cash equivalents at the end of the year</b>	37	<b>(10,675,626)</b>	<b>(8,779,225)</b>

The annexed notes 1 to 46 form an integral part of these financial statements.



Chief Executive

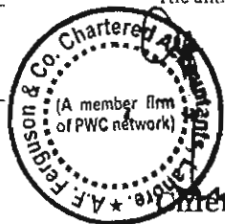
Director

# PAKARAB FERTILIZERS LIMITED

STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED DECEMBER 31, 2017

	(Rupees in thousand)				
		Capital reserve	Revenue reserves		
	Share capital	Fair value reserve	General reserve	(Accumulated loss)/un-appropriated profit	Total
Balance as on January 1, 2016	4,500,000	99,577	2,098,313	2,190,620	8,888,510
Loss for the year	-	-	-	(1,927,087)	(1,927,087)
Other comprehensive income for the year - net of tax	-	43,016	-	126,173	169,189
Total comprehensive income/(loss) for the year	-	43,016	-	(1,800,914)	(1,757,898)
Balance as on December 31, 2016	4,500,000	142,593	2,098,313	389,706	7,130,612
Loss for the year	-	-	-	(3,941,887)	(3,941,887)
Other comprehensive income for the year - net of tax	-	64,184	-	149,975	214,159
Total comprehensive income/(loss) for the year	-	64,184	-	(3,791,912)	(3,727,728)
Balance as on December 31, 2017	4,500,000	206,777	2,098,313	(3,402,206)	3,402,884

The annexed notes 1 to 46 form an integral part of these financial statements.



Chief Executive

Director

# PAKARAB FERTILIZERS LIMITED

## NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2017

### 1. The company and its activities

Pakarab Fertilizers Limited (the 'company') was incorporated as a private limited company in Pakistan under the Companies Act, 1913, (now the Companies Act, 2017). The company's status changed to a non-listed public company from June 7, 2007. It is principally engaged in the manufacturing and sale of chemical fertilizers and generation and sale of Certified Emission Reductions ('CERs'). The address of the registered office of the company is E-110, Khayaban-e-Jinnah, Lahore Cantt, while its manufacturing facility is located in Multan.

These financial statements are the separate financial statements of the company. Consolidated financial statements are prepared separately.

### 2. Basis of preparation

2.1 These financial statements have been prepared in accordance with the approved accounting standards as applicable in Pakistan. During the year, the Companies Ordinance, 1984 (hereinafter referred to as the 'Ordinance') has been repealed after the enactment of the Companies Act, 2017. However, as allowed by the Securities and Exchange Commission of Pakistan ('SECP') vide Circular No. 23/2017 dated October 4, 2017 and further clarified by the Institute of Chartered Accountants of Pakistan through its Circular No. 17/2017 dated October 6, 2017, companies whose financial year, closes on or before December 31, 2017, shall prepare financial statements in accordance with the provisions of the repealed Ordinance. Accordingly, these financial statements have been prepared in accordance with the requirements of International Financial Reporting Standards ('IFRSs') issued by the International Accounting Standards Board ('IASB') and Islamic Financial Accounting Standards ('IFASs') issued by the Institute of Chartered Accountants of Pakistan as are notified under the repealed Ordinance, provisions of and directives issued under the repealed Ordinance. Wherever the requirements of the repealed Ordinance or directives issued by the Securities and Exchange Commission of Pakistan ('SECP') differ with the requirements of IFRSs or IFASs, the requirements of the repealed Ordinance or the requirements of the said directives prevail.

2.1.1 In accordance with the requirements of IFRSs, management has carried out a going concern assessment of the company and believes that the going concern assumption used for the preparation of these financial statements is appropriate. This assessment is based on a five years' business plan as referred to in note 21 to these financial statements wherein the company is confident that it will be able to meet its obligations and carry on business without any material curtailment.

### 2.2 Initial application of standards, amendments or an interpretation to existing standards

The following amendments to existing standards have been published that are applicable to the company's financial statements covering annual periods, beginning on or after the following dates:

#### 2.2.1 Standards, amendments and interpretations to approved accounting standards that are effective in current year

Certain standards, amendments and interpretations to approved accounting standards are effective for accounting periods beginning on January 1, 2017 but are considered not to be relevant or to have any significant effect on the company's operations (although they may affect the accounting for future transactions and events) and are, therefore, not detailed in these financial statements, except for the following:

- International Accounting Standard ('IAS') 7, 'Cash flow statements: Disclosure initiative' (effective for periods beginning on or after January 1, 2017). This amendment requires disclosure to explain changes in liabilities for which cash flows have been, or will be classified as financing activities in the statement of cash flows. The amendment only covers balance sheet items for which cash flows are classified as financing activities. In case other items are included within the reconciliation, the changes in liabilities arising from financing activities will be identified separately. A reconciliation of the opening to closing balance is not specifically required but instead the information can be provided in other ways. In the first year of adoption, comparative information need not be provided. The company's current accounting treatment is already in line with the requirements of this standard.



- Amendments to IAS 12, 'Income taxes', on recognition of deferred tax assets for unrealised losses (effective for periods beginning on or after January 1, 2017). These amendments on the recognition of deferred tax assets for unrealised losses clarify how to account for deferred tax assets related to debt instruments measured at fair value. It is unlikely that the amendment will have any significant impact on the company's financial statements.

## 2.2.2 Standards, amendments and interpretations to existing standards that are not yet effective and have not been early adopted by the company

There are certain standards, amendments to the approved accounting standards and interpretations that are mandatory for companies having accounting periods beginning on or after January 1, 2018 but are considered not to be relevant or to have any significant effect on the company's operations and are, therefore, not detailed in these financial statements, except for the following:

- IFRS 9, 'Financial instruments': (effective for periods beginning on or after January 1, 2018). This standard has been notified by the SECP to be effective for annual periods beginning on or after July 1, 2018. This standard replaces the guidance in IAS 39, 'Financial instruments: Recognition and measurement'. It includes requirements on the classification and measurement of financial assets and liabilities; it also includes an expected credit losses model that replaces the current incurred loss impairment model. The company is yet to assess the full impact of the standard.

- IFRS 15, 'Revenue from contracts with customers' (effective for periods beginning on or after January 1, 2018). This standard has been notified by the SECP to be effective for annual periods beginning on or after July 1, 2018. This standard deals with revenue recognition and establishes principles for reporting useful information to users of the financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers. Revenue is recognised when a customer obtains control of a good or service and thus has the ability to direct the use of and obtain the benefits from the good or service. The standard replaces IAS 18, 'Revenue', and IAS 11, 'Construction contracts', and related interpretations. The company is yet to assess the full impact of the standard.

IFRS 16, 'Leases' (effective for periods beginning on or after January 1, 2019). This standard requires lessees to recognize a lease liability reflecting future lease payments and a 'right-of-use asset' for virtually all lease contracts. The IASB has included an optional exemption for certain short-term leases and leases of low-value assets; however, this exemption can only be applied by lessees. For lessors, the accounting stays almost the same. However, as the IASB has updated the guidance on the definition of a lease (as well as the guidance on the combination and separation of contracts), lessors will also be affected by the new standard. The company is yet to assess the full impact of the standard.

- IFRIC 22, 'Foreign currency transactions and advance consideration' (effective for periods beginning on or after January 1, 2018). This IFRIC addresses foreign currency transactions or parts of transactions where there is consideration that is denominated or priced in a foreign currency. The interpretation provides guidance for when a single payment/receipt is made as well as for situations where multiple payments/receipts are made. The guidance aims to reduce diversity in practice. It is unlikely that the interpretation will have any significant impact on the company's financial statements.

- IFRIC 23, 'Uncertainty over income tax treatments': (effective for periods beginning on or after 1 January 2019). This IFRIC clarifies how the recognition and measurement requirements of IAS 12 'Income taxes', are applied where there is uncertainty over income tax treatments. The IFRIC explains how to recognise and measure deferred and current income tax assets and liabilities where there is uncertainty over a tax treatment. An uncertain tax treatment is any tax treatment applied by an entity where there is uncertainty over whether that treatment will be accepted by the tax authority. The IFRIC applies to all aspects of income tax accounting where there is an uncertainty regarding the treatment of an item, including taxable profit or loss, the tax bases of assets and liabilities, tax losses and credits and tax rates. The company is yet to assess the full impact of the interpretation.

### 2.2.3 Changes in accounting and reporting due to promulgation of Companies Act, 2017

For the company's accounting year beginning on January 1, 2018, the accounting and reporting framework as per Companies Act, 2017 would be applicable i.e. IFRSs issued by IASB and as notified by SECP, and the Companies Act, 2017. The significant change from the current accounting and reporting framework is the change in the treatment of 'Surplus on revaluation of property, plant and equipment' (hereinafter referred to as 'revaluation surplus'). Companies Ordinance, 1984 required that revaluation surplus be shown separately after Capital and Reserves on the balance sheet, and allowed the application of surplus arising on revaluation of fixed assets in setting off or in diminution of any deficit arising from the revaluation of any other fixed asset of the company. Such treatment differed with the requirements of IAS 16 'Property, Plant and Equipment' that does not allow the gain on an asset to be set off against the loss of another asset. However, the requirements of the Companies Act, 2017 are in line with the requirements of IAS 16 regarding treatment of revaluation surplus. Resultantly, the company would be required to change its accounting policy in its financial statements for the period beginning on January 01, 2018 and account for the change in accordance with IAS 8 - 'Accounting Policies, Changes in Accounting Estimates and Errors'. Further, the revaluation surplus has to be shown separately on the face of the balance sheet as part of Equity. Further, the company shall not be able to offset deficit arising from the revaluation of an asset with the surplus of another asset. The above change is not expected to have any material impact on the company's financial statements. Moreover, Companies Act, 2017 requires certain additional disclosure and presentation requirements.

### 3. Basis of measurement

3.1 These financial statements have been prepared under the historical cost convention as modified by recognition of certain operating fixed assets, available-for-sale financial assets and plan assets of defined benefit gratuity fund at fair value and recognition of certain employee retirement benefit obligations at present value.

### 3.2 Critical accounting estimates and judgments

The company's significant accounting policies are stated in note 4 to these financial statements. Not all of these significant accounting policies require the management to make difficult, subjective or complex judgment or estimates. The following is intended to provide an understanding of the policies the management considers critical because of their complexity, judgment of estimation involved in their application and their impact on these financial statements. Estimates and judgments are continually evaluated and are based on historical experience, including expectations of future events that are believed to be reasonable under the circumstances. These judgments involve assumptions or estimates in respect of future events and the actual results may differ from these estimates which have been explained as follows:

#### a) Employee retirement benefits

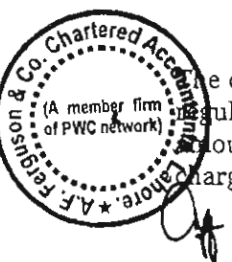
The company uses the valuation performed by an independent actuary as the present value of its retirement benefit obligations. The valuation is based on assumptions as mentioned in note 4.2 to these financial statements.

#### b) Provision for taxation

The company takes into account the current income tax law and the decisions taken by appellate authorities. Instances where the company's view differs from the view taken by the income tax department at the assessment stage and where the company considers that its view on items of material nature is in accordance with law, the amounts are shown as contingent liabilities. The recognition of deferred taxes is made taking into account these judgments and the best estimates of future results of operations of the company.

#### c) Useful lives, residual values and depreciation methods of property, plant and equipment

The company reviews the useful lives, residual values and depreciation methods of property, plant and equipment on regular basis, at least at each year end. Any material change in estimates in future years might affect the carrying amounts of the respective items of property, plant and equipment with a corresponding effect on the depreciation charge and impairment.



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**d) Estimated impairment of goodwill**

The company tests annually whether goodwill has suffered any impairment, in accordance with the accounting policy stated in note 4.5 to these financial statements. The recoverable amounts of cash-generating units have been determined based on value-in-use calculations. These calculations require the use of estimates and assumptions as fully explained in note 21 to these financial statements.

**e) Revaluation surplus on operating fixed assets**

Certain operating fixed assets are carried under the revaluation model as per IAS 16, 'Property, plant and equipment' as stated in note 4.3.1 to these financial statements. Revaluation is carried out after an interval of three years by an independent professional valuer as fully explained in note 7 to these financial statements.

**f) Fair value of investment in subsidiary**

The fair value of investment in subsidiary is determined by using valuation techniques. The company uses its judgment to select an appropriate method and make assumptions that are mainly based on market conditions existing at the end of each reporting period. The company has used discounted cash flow analysis for this purpose as fully explained in note 22.1 to these financial statements.

**4. Significant accounting policies**

The significant accounting policies adopted in the preparation of these financial statements are set out below. These policies have been consistently applied to all years presented.

**4.1 Taxation**

Income tax comprises current and deferred tax. Income tax is recognized in the profit and loss account except to the extent that it relates to items recognized directly in equity or other comprehensive income, in which case it is recognized directly in equity or other comprehensive income.

**Current**

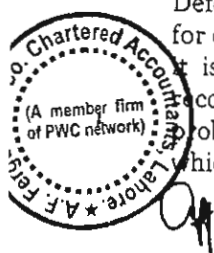
Provision for current tax is based on the taxable income for the year determined in accordance with the prevailing law for taxation of income. The charge for current tax is calculated using prevailing tax rates or tax rates expected to apply to the profit for the year if enacted. The charge for current tax also includes adjustments, where considered necessary, to provision for tax made in previous years arising from assessments framed during the year for such years.

The company and its subsidiary, Fatima Packaging Limited (formerly 'Reliance Sacks Limited'), together the ('Group') have opted for Group taxation under section 59AA of the Income Tax Ordinance, 2001.

**Deferred**

Deferred tax is accounted for using the balance sheet liability method in respect of all temporary differences arising from differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of the taxable profit. However, the deferred tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of transaction neither affects accounting nor taxable profit or loss. Deferred tax liabilities are generally recognized for all taxable temporary differences and deferred tax assets are recognized to the extent that it is probable that taxable profits will be available against which the deductible temporary differences, unused tax losses and tax credits can be utilised.

Deferred tax liabilities are provided on taxable temporary differences arising from investments in subsidiary, except for deferred tax liability where the timing of the reversal of the temporary difference is controlled by the company and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets are recognised on deductible temporary differences arising from investments in subsidiaries only to the extent that it is probable the temporary difference will reverse in the future and there is sufficient taxable profit available against which the temporary difference can be utilised.



Deferred tax is calculated at the rates that are expected to apply to the period when the differences reverse based on tax rates that have been enacted or substantively enacted by the balance sheet date. Deferred tax is charged or credited in the profit and loss account, except in the case of items credited or charged to other comprehensive income or equity in which case it is included in other comprehensive income or equity.

#### 4.2 Employee retirement benefits

The main features of the schemes operated by the company for its employees are as follows:

##### (a) Defined benefit plan - Gratuity

The company operates an approved funded defined benefit gratuity plan for all permanent employees having a service period of more than three years for executives and six months for workers and other staff. Provisions are made in the financial statements to cover obligations on the basis of actuarial valuations carried out annually. The most recent valuation was carried out as at December 31, 2017 using the "Projected Unit Credit Method".

The actual return on plan assets represents the difference between the fair value of plan assets at the beginning of the year and as at the end of the year after adjustments for contributions made by the company as reduced by benefits paid during the year.

The amount recognized in balance sheet represents the present value of the defined benefit obligation as reduced by the fair value of the plan assets.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the year in which they arise. Past service costs are recognized immediately in the profit and loss account.

The future contribution rate of the plan includes allowances for deficit and surplus. Projected Unit Credit Method, using the following significant assumptions, is used for valuation of this scheme:

	2017	2016
Discount rate per annum	8.25%	8%
Expected rate of increase in salary level per annum	7.25%	7%
Duration of plan (years)	9	9
Expected mortality rate	SLIC (2001-2005) mortality table (setback 1 year)	SLIC (2001-2005) mortality table (setback 1 year)

##### (b) Defined contribution plan - Provident Fund

There is an approved defined contributory provident fund for all permanent employees. Equal monthly contributions are made both by the company and employees to the fund at the rate of 8.33 percent of basic salary for the executives and 10 percent of basic salary for the workers.

### (c) Accumulating compensated absences

The company provides for accumulating compensated absences, when the employees render services that increase their entitlement to future compensated absences. Under the service rules, workers and normal staff members are entitled to 18 days leave per year. The leave policy for management employees is as follows:

Service in the company	Annual Leaves
Less than 5 Years	18
Less than 5 Years (Working on Shift Duties)	22
More than 5 Years	25
More than 5 Years (Working on Shift Duties)	29

The unutilized Annual Leaves can be accumulated up to a maximum of 2 years of Annual Leaves. An employee will be entitled to encash the accumulated Annual Leaves at the time of leaving company service.

Provisions are made annually to cover the obligation for accumulating compensated absences based on actuarial valuation and are charged to profit and loss account. The most recent valuation was carried out as at December 31, 2017 using the "Projected Unit Credit Method".

The amount recognised in the balance sheet represents the present value of the defined benefit obligation. Actuarial gains and losses are charged to the profit and loss account immediately in the period when these occur.

Projected Unit Credit Method, using the following significant assumptions, is used for valuation of accumulating compensated absences:

	2017	2016
Discount rate per annum	8.25%	8%
Expected rate of increase in salary level per annum	7.25%	7%
Expected mortality rate	SLIC (2001-2005) mortality table (setback 1 year)	SLIC (2001-2005) mortality table (setback 1 year)

## 4.3 Property, plant and equipment

### 4.3.1 Operating fixed assets

Operating fixed assets except freehold land, buildings on freehold land, building on leasehold land, railway siding, plant and machinery and tools and other equipment are stated at cost less accumulated depreciation and any identified impairment loss. Freehold land is stated at revalued amount less any identified impairment loss while buildings on freehold land, buildings on leasehold land, railway siding, plant and machinery and tools and other equipment are stated at revalued amount less accumulated depreciation and any identified impairment loss. Revaluation is carried out with sufficient regularity to ensure that the carrying amount of the asset does not differ materially from its fair value. Revalued amount has been determined by an independent professional valuer. Any accumulated depreciation at the date of revaluation is eliminated against the gross carrying amount of the asset, and the net amount is restated to the revalued amount of the asset.



Increases in the carrying amounts arising on revaluation of operating fixed assets are credited to surplus on revaluation of operating fixed assets. Decreases that offset previous increases of the same assets are charged against this surplus, all other decreases are charged to profit or loss. Each year the difference between depreciation based on revalued carrying amounts of the assets (the depreciation charged to the profit or loss) and depreciation based on the original costs of the assets is transferred from surplus on revaluation of operating fixed assets to other comprehensive income. All transfers to/from surplus on revaluation of operating fixed assets are net of applicable deferred taxation.

Depreciation on operating fixed assets is charged to profit or loss on the following methods and rates so as to write off the depreciable amounts of the assets over their estimated useful lives after taking into account their residual values:

Asset category	Depreciation method	Annual depreciation rate
Buildings on freehold land	Straight line	4.11% to 7.84%
Buildings on leasehold land	- do -	13.64%
Aircraft	- do -	10% to 20%
Furniture and fixtures	- do -	10% to 40%
Tools and other equipment (other than factory equipment)	- do -	11% to 63%
Vehicles	- do -	20%
Plant and machinery (items related to old power generation system)	- do -	7.27% to 7.77%
Plant and machinery (other than items related to old power generation system)	Units of production	
Tools and other equipment (factory equipment)	- do -	
Catalyst	- do -	

The assets' residual values and useful lives are reviewed, at each financial year end, and adjusted if impact on depreciation is significant.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount as fully explained in note 4.5 to these financial statements.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the company and the cost of the item can be measured reliably. All other repair and maintenance costs are charged to profit and loss account during the period in which they are incurred.

The gain or loss on disposal or retirement of an asset represented by the difference between the sale proceeds and the carrying amount of the asset is recognised as an income or expense.

#### 4.3.2 Capital work-in-progress

Capital work-in-progress is stated at cost less any identified impairment loss. All expenditure connected with specific assets incurred during installation and construction period are carried under capital work-in-progress. These are transferred to operating fixed assets as and when these are available for use.



### 4.3.3 Major spare parts and stand-by equipment

Major spare parts and stand-by equipment qualify as property, plant and equipment when an entity expects to use them during more than one year. Transfers are made to operating assets category as and when such items are available for use.

### 4.4 Intangible assets

#### 4.4.1 Computer software

Expenditure incurred to acquire computer software is capitalised as intangible asset and stated at cost less accumulated amortisation and any identified impairment loss. Computer software is amortised using the straight line method over a period of four years.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount as fully explained in note 4.5 to these financial statements.

#### 4.4.2 Mining rights

Expenditure incurred to acquire mining rights is capitalised as intangible asset and stated at cost less accumulated amortisation and any identified impairment loss. Mining rights are amortised using the straight line method over a period of ten years.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (as explained in note 4.5 to these financial statements).

### 4.5 Impairment of non-financial assets

Goodwill and intangible assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. Other assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash inflows which are largely independent of the cash inflows from other assets or groups of assets (cash-generating units). Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

### 4.6 Leases

The company is the lessee.

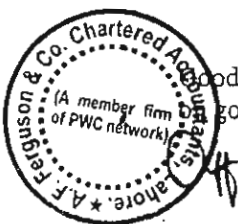
#### 4.6.1 Operating leases

Leases where a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the lease term.

### 4.7 Goodwill

Goodwill represents the excess of the cost of acquisition over the fair value of the identifiable assets and liabilities of the company, paid by Reliance Exports (Private) Limited at the date of acquisition i.e. July 14, 2005.

Goodwill is carried at its carrying value as at June 30, 2007 less any identified impairment losses. Impairment losses on goodwill are not reversed.



#### 4.8 Investments

Investments intended to be held for less than twelve months from the balance sheet date or to be sold to raise operating capital, are included in current assets, all other investments are classified as non-current assets. Management determines the appropriate classification of its investments at the time of the purchase and re-evaluates such designation on a regular basis.

##### 4.8.1 Investment in equity instruments of subsidiary

Investments in equity instruments of subsidiary are designated upon initial recognition as 'financial assets at fair value through profit or loss' or 'available-for-sale financial assets'. In case of financial assets at fair value through profit or loss, these are initially recognised at fair value while in case of available-for-sale financial assets, these are initially recognised at fair value and associated directly attributable acquisition costs. Subsequently, these are measured at fair value unless in case of available-for-sale financial assets whose fair value cannot be measured reliably, these are carried at cost. For investments having quoted price in active market, the quoted price represents the fair value. In other cases, fair value is measured using appropriate valuation methodology.

Gains and losses on subsequent re-measurements of financial assets at fair value through profit or loss are included in the profit and loss account while those on re-measurement of available-for-sale financial assets are included in other comprehensive income. When investments classified as available-for-sale are sold or impaired, the accumulated fair value adjustments recognised in equity are included in the profit and loss account.

At each balance sheet date, the company reviews the carrying amounts of the investments in subsidiaries to assess whether there is any indication that such investments have suffered an impairment loss. If any such indication exists, the recoverable amount is estimated in order to determine the extent of the impairment loss, if any. In making an estimate of recoverable amount of these investments, the management considers future dividend stream and an estimate of the terminal value of these investments. Impairment losses are recognised as expense in the profit and loss account.

Investments in subsidiaries, that suffered an impairment, are reviewed for possible reversal of impairment at each reporting date.

The company is required to issue consolidated financial statements along with its separate financial statements in accordance with the requirements of IFRS 10, 'Consolidated financial statements' and IAS 27, 'Separate financial statements'.

##### 4.8.2 Investments in equity instruments of associate

Investments in associates where the company has significant influence are measured at cost in the company's separate financial statements.

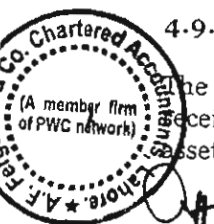
The company is required to issue consolidated financial statements along with its separate financial statements, in accordance with the requirements of IFRS 10, 'Consolidated financial statements' and IAS 27, 'Separate financial statements'. Investments in associates, in the consolidated financial statements, are being accounted for using the equity method.

At each balance sheet date, the company reviews the carrying amounts of the investments in associates to assess whether there is any indication that such investments have suffered an impairment loss. If any such indication exists, the recoverable amount is estimated in order to determine the extent of the impairment loss, if any. In making an estimate of recoverable amount of these investments, the management considers future stream of cash flows and an estimate of the terminal value of these investments. Impairment losses are recognised as expense in the profit and loss account.

#### 4.9 Financial assets

##### 4.9.1 Classification

The company classifies its financial assets in the following categories: at fair value through profit or loss, loans and receivables, available-for-sale and held to maturity. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of its financial assets at the time of initial recognition.



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a) **Financial assets at fair value through profit or loss**

Financial assets at fair value through profit or loss are financial assets held for trading and financial assets designated upon initial recognition as at fair value through profit or loss. Derivatives are also categorised as held for trading unless they are designated as hedges. A financial asset is classified as held for trading if acquired principally for the purpose of selling in the short term. Assets in this category are classified as current assets if expected to be settled within twelve months, otherwise, they are classified as non-current assets.

b) **Loans and receivables**

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for maturities greater than twelve months after the balance sheet date, which are classified as non-current assets. Loans and receivables comprise security deposits, trade debts, loans and other receivables and cash and cash equivalents in the balance sheet.

c) **Available-for-sale financial assets**

Available-for-sale financial assets are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in non-current assets unless management intends to dispose of the investments within twelve months from the balance sheet date.

d) **Held to maturity**

Financial assets with fixed or determinable payments and fixed maturity, where management has the intention and ability to hold till maturity are classified as held to maturity and are stated at amortised cost.

**4.9.2 Recognition and measurement**

All financial assets are recognised at the time when the company becomes a party to the contractual provisions of the instrument. Regular purchases and sales of investments are recognised on trade-date – the date on which the company commits to purchase or sell the asset. Financial assets are initially recognised at fair value plus transaction costs for all financial assets not carried at fair value through profit or loss. Financial assets carried at fair value through profit or loss are initially recognised at fair value and transaction costs are expensed in the profit and loss account. Financial assets are derecognised when the rights to receive cash flows from the assets have expired or have been transferred and the company has transferred substantially all the risks and rewards of ownership. Available-for-sale financial assets and financial assets at fair value through profit or loss are subsequently carried at fair value. Available-for-sale financial assets are carried at cost in case fair value cannot be measured reliably. Loans and receivables and held-to-maturity investments are carried at amortised cost using the effective interest method.

Gains or losses arising from changes in the fair value of the 'financial assets at fair value through profit or loss' category are presented in the profit and loss account in the period in which they arise. Dividend income from financial assets at fair value through profit or loss is recognised in the profit and loss account as part of other income when the company's right to receive payments is established.

Changes in the fair value of securities classified as available-for-sale are recognised in other comprehensive income. When securities classified as available-for-sale are sold or impaired, the accumulated fair value adjustments recognised in equity are included in the profit and loss account as gains and losses from investment securities. Interest on available-for-sale securities calculated using the effective interest method is recognised in the profit and loss account. Dividends on available-for-sale equity instruments are recognised in the profit and loss account when the company's right to receive payments is established.

The company assesses at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets is impaired. If any such evidence exists for available-for-sale financial assets, the cumulative loss is removed from equity and recognised in the profit and loss account. Impairment losses recognised in the profit and loss account on equity instruments are not reversed through the profit and loss account. Impairment testing of trade debts and other receivables is described in note 4.14 to these financial statements.

#### 4.10 Financial liabilities

All financial liabilities are recognised at the time when the company becomes a party to the contractual provisions of the instrument.

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expired. Where an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in respective carrying amounts is recognised in the profit and loss account.

#### 4.11 Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is reported in the financial statements only when there is a legally enforceable right to set off the recognised amount and the company intends either to settle on a net basis or to realize the assets and to settle the liabilities simultaneously.

#### 4.12 Stores and spare parts

These are valued at weighted average cost except for items in transit which are stated at invoice value plus other charges paid thereon till the balance sheet date. For items which are slow moving and/or identified as obsolete, adequate provision is made for any excess book value over estimated realisable value. The company reviews the carrying amount of stores and spares on a regular basis and provision is made for obsolescence.

#### 4.13 Stock-in-trade

All stocks are valued at the lower of cost and Net Realizable Value ('NRV'). Cost in relation to raw and packing materials and goods purchased for resale, except for those in transit, signifies weighted average cost and that relating to mid products and own manufactured finished goods, annual average cost comprising cost of direct materials, labour and appropriate manufacturing overheads.

Materials in transit are stated at cost comprising invoice value plus other charges incurred thereon.

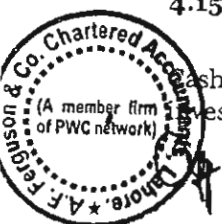
NRV is determined on the basis of estimated selling price of the product in the ordinary course of business less estimated costs of completion and the estimated costs necessary to make the sale. Provision is made in the financial statements for obsolete and slow moving stock-in-trade based on management estimate.

#### 4.14 Trade debts and other receivables

Trade debts and other receivables are recognised initially at invoice value, which approximates fair value, and subsequently measured at amortised cost using the effective interest method, less provision for doubtful debts. A provision for doubtful debts is established when there is objective evidence that the company will not be able to collect all the amount due according to the original terms of the receivable. Significant financial difficulties of the debtors, probability that the debtor will enter bankruptcy or financial reorganisation, and default or delinquency in payments are considered indicators that the trade debt is impaired. The provision is recognised in the profit and loss account. When a trade debt is uncollectible, it is written off against the provision. Subsequent recoveries of amounts previously written off are credited to the profit and loss account.

#### 4.15 Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less, and bank overdrafts/short term borrowings.



#### 4.16 Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortised cost, any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the profit and loss account over the period of the borrowings using the effective interest method. Finance costs are accounted for on an accrual basis and are reported as accrued finance markup to the extent of the amount remaining unpaid.

Borrowings are classified as current liabilities unless the company has an unconditional right to defer settlement of the liability for at least twelve months after the balance sheet date.

#### 4.17 Trade and other payables

Trade and other payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Trade and other payables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method.

#### 4.18 Provisions

Provisions are recognized when the company has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate of the amount can be made. Provisions are not recognised for future operating losses.

Where there are a number of similar obligations, the likelihood that an outflow shall be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognised as interest expense.

Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimate.

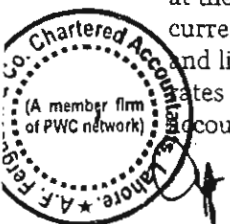
#### 4.19 Foreign currency transactions and translation

##### a) Functional and presentation currency

Items included in the financial statements of the company are measured using the currency of the primary economic environment in which the company operates (the functional currency). The financial statements are presented in Pak Rupees, which is the company's functional and presentation currency.

##### b) Transactions and balances

All monetary assets and liabilities in foreign currencies are translated into Pak Rupees at exchange rates prevailing at the balance sheet date. Transactions in foreign currencies are translated into Pak Rupees at exchange rates prevailing at the date of transaction. Non-monetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated into Pak Rupees at exchange rates prevailing at the date of transaction. Non-monetary assets and liabilities denominated in foreign currency that are stated at fair value are translated into Pak Rupees at exchange rates prevailing at the date when fair values are determined. Exchange gains and losses are included in profit and loss account.



#### 4.20 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation. All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

#### 4.21 Revenue recognition

Revenue is recognised when it is probable that the economic benefits will flow to the company and the revenue can be measured reliably. Revenue is measured at the fair value of the consideration received or receivable on the following basis:

- Revenue from sale of fertilizer products is recognized on dispatch to customers.
- Revenue from sale of CERs is recognised on the generation of the Emission Reductions when a firm commitment for sale of CERs exists with a buyer.
- Return on deposits is accrued on a time proportion basis by reference to the principal outstanding and the applicable rate of return.
- Dividend income and entitlement of bonus shares are recognised when the right to receive such dividend and bonus shares is established.
- Government subsidy on sale of fertilizer is recognised when the right to receive such subsidy has been established and the underlying conditions are met.

#### 4.22 Share capital

Ordinary shares are classified as equity and recognised at their face value. Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax.

#### 4.23 Dividend

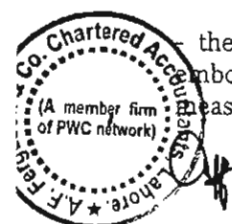
Dividend distribution to the company's members is recognised as a liability in the period in which the dividends are approved.

#### 4.24 Contingent liabilities

Contingent liability is disclosed when:

- there is a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the company; or

there is a present obligation that arises from past events but it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation or the amount of the obligation cannot be measured with sufficient reliability.



## 5. Issued, subscribed and paid up share capital

2017 (Number of shares)	2016 (Number of shares)		2017 (Rupees in thousand)	2016 (Rupees in thousand)
2,791,260	2,791,260	Ordinary shares of Rs 10 each fully paid in cash	27,913	27,913
447,208,740	447,208,740	Ordinary shares of Rs 10 each issued as fully paid bonus shares	4,472,087	4,472,087
<u>450,000,000</u>	<u>450,000,000</u>		<u>4,500,000</u>	<u>4,500,000</u>

	2017 (Number of shares)	2016 (Number of shares)
Ordinary shares of the company held by associated undertakings as at year end are as follows:		
Reliance Commodities (Private) Limited	7,136,613	7,136,613
✓ Fatima Holding Limited	84,145,872	84,145,872
✓ Arif Habib Corporation Limited	135,000,000	135,000,000
Amir Fine Exports (Private) Limited	12,895,296	12,895,296
	<u>239,177,781</u>	<u>239,177,781</u>

5.1 In accordance with the terms of agreements with certain lenders of long term finances, there are certain restrictions on the distribution of dividends by the company.

## 6. Reserves

	2017 (Rupees in thousand)	2016 (Rupees in thousand)
Capital:		
- Fair value reserve	206,777	142,593
Revenue:		
- General reserve	2,098,313	2,098,313
- Un-appropriated (loss)/profit	(3,402,206)	389,706
	<u>(1,303,893)</u>	<u>2,488,019</u>
	<u>(1,097,116)</u>	<u>2,630,612</u>

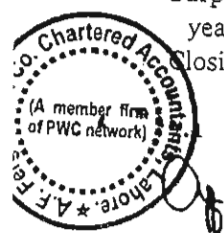
## 7. Surplus on revaluation of operating fixed assets

This represents surplus over book value resulting from the revaluation of freehold land, buildings on freehold land, buildings on leasehold land, plant and machinery, railway siding and tools and other equipment, adjusted by incremental depreciation arising out of revaluation of above mentioned assets except for freehold land. The valuation was carried out by an independent professional valuer, M/s Oceanic Surveyors (Private) Limited, on August 31, 2017.

The revaluation surplus relating to above mentioned operating fixed assets excluding freehold land is net of applicable deferred income taxes. Incremental depreciation represents the difference between the actual depreciation on the above mentioned assets excluding freehold land and the equivalent depreciation based on the historical cost of these assets. The movement in revaluation surplus is as follows:

	2017 (Rupees in thousand)	2016 (Rupees in thousand)
Opening balance - net of tax	14,876,727	15,022,831
Revaluation surplus during the year	2,098,414	-
Deferred tax on revaluation surplus - note 13	(514,036)	-
Surplus transferred to other comprehensive income for the year on account of incremental depreciation - net of tax	(162,075)	(146,104)
Closing balance - net of tax - note 7.1	<u>16,299,030</u>	<u>14,876,727</u>

Includes surplus on revaluation of freehold land amounting to Rs 6,176.16 million (2016: Rs 5,865.66 million).



2017                      2016  
(Rupees in thousand)

## 8. Long term finances - secured

Redeemable capital - Privately Placed Term			
Finance Certificates	- note 8.1	450,000	407,000
Long term loans	- note 8.2	1,686,550	2,308,100
Syndicate term finance	- note 8.3	5,263,436	4,038,567
		<u>7,399,986</u>	<u>6,753,667</u>
Current portion shown under current liabilities	- notes 8.1-8.3	(1,891,665)	(1,081,747)
		<u>5,508,321</u>	<u>5,671,920</u>

### 8.1 Privately Placed Term Finance Certificates ('PPTFCs')

Opening balance	407,000	-
Receipt against issuance of PPTFCs	<u>43,000</u>	<u>407,000</u>
Closing balance	450,000	407,000
Current portion shown under current liabilities	<u>(75,000)</u>	<u>-</u>
	<u>375,000</u>	<u>407,000</u>

This represents long term finance facility of Rs 450 million obtained from PAIR Investment Company Limited (hereinafter referred to as 'PAIR') to finance company's capital expenditure and allied expenses together with the requirement pertaining to the stores and spares. This facility is available by way of subscribing to the company's PPTFCs. Company's PPTFCs have a face value of Rs 1 million each. Of the total facility of Rs 450 million, entire amount has been availed by the company as of the balance sheet date.

### Terms of redemption

The tenure of company's PPTFCs is from June 30, 2017 to June 30, 2021. As of the balance sheet date, the principal amount is redeemable in six equal semi annual installments commencing on December 31, 2018.

### Rate of return

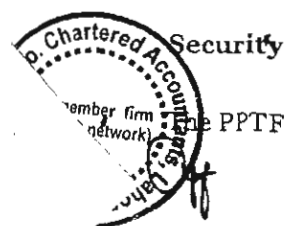
The return on PPTFCs is payable semi-annually and is calculated on the outstanding balance at the rate of six months Karachi Inter Bank Offered Rate ('KIBOR') plus 1.90% per annum. The mark up rate charged during the year on the outstanding balance is 8.05% per annum.

### Trustee

In order to protect the interest of the holder of PPTFCs, Pak Oman Investment Company Limited (hereinafter referred to as 'POICL') has been appointed as Trustee under a trust deed dated June 21, 2016. The Trustee is paid a fee of Rs 0.2 million per annum.

In case the company defaults on any of its obligations, the Trustee may enforce the company's obligation accordance with the terms of the trust deed. The proceeds of any such enforcements shall be distributed to the holder of PPTFCs at the time on a pari passu basis in proportion to the amounts owed to it pursuant to the PPTFCs.

The PPTFCs are secured by a first pari passu charge over the company's present and future fixed asset



2017 2016  
(Rupees in thousand)

## 8.2 Long term loans

These have been obtained from the following financial institutions:

Faysal Bank Limited	- note 8.2.1	-	83,333
PAIR	- note 8.2.2	-	142,857
Allied Bank Limited	- note 8.2.3	1,186,550	1,581,910
POICL	- note 8.2.4	500,000	500,000
		<u>1,686,550</u>	<u>2,308,100</u>
Current portion shown under current liabilities		(483,333)	(626,190)
		<u>1,203,217</u>	<u>1,681,910</u>

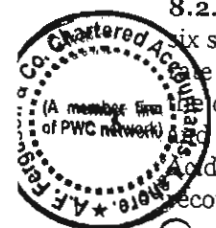
**8.2.1** This has been repaid during the year. The mark up rate charged during the year on the outstanding balance ranges from 7.84% to 7.85% per annum.

**8.2.2** This has been repaid during the year. The mark up rate charged during the year on the outstanding balance ranges from 8.29% to 8.40% per annum.

**8.2.3** This represents term finance facility to meet company's payment of import bill payable. It is repayable in six semi-annual installments of Rs 200 million each ending on November 24, 2020 and carries mark up at the rate of six months KIBOR plus 2% per annum, payable semi-annually. The mark up rate charged during the year on the outstanding balance ranges from 8.11% to 8.18% per annum. It is secured by a first pari passu charge over all present and future plant and machinery of the company excluding assets comprising of Ammonia Converter Basket, the Lamont boiler for Nitric Acid, the assets comprising of the CDM project, the complete carbon dioxide recovery plant/liquefaction plant along with carbon dioxide static storage tank and an exclusive charge over the Bombardier Challenger aircraft. Furthermore, long term loans from related parties (as referred to in note 9 to these financial statements) will remain sub-ordinated in favour of Allied Bank Limited till complete repayment of this loan. The reconciliation of the carrying amount of loan is as follows:

	2017	2016
	(Rupees in thousand)	
Receipt	2,000,000	2,000,000
Initial transaction cost	(23,200)	(23,200)
	<u>1,976,800</u>	<u>1,976,800</u>
Amortization of initial transaction cost	9,750	5,110
	<u>1,986,550</u>	<u>1,981,910</u>
Repaid	(800,000)	(400,000)
	<u>1,186,550</u>	<u>1,581,910</u>
Current maturity	(400,000)	(400,000)
	<u>786,550</u>	<u>1,181,910</u>

**8.2.4** This represents a term finance facility to meet company's capital expenditure requirements. It is repayable in six semi-annual installments of Rs 83.333 million each commencing on November 9, 2018 and carries mark up at the rate of six months KIBOR plus 1.95% per annum, payable semi-annually. The mark up rate charged during the year on the outstanding balance ranges from 8.01% to 8.11% per annum. It is secured by a pari passu charge over all present and future fixed assets excluding the assets comprising of Ammonia Converter Basket, the Lamont Boiler for Nitric Acid, the Bombardier Challenger aircraft, the assets comprising of the CDM project, the complete carbon dioxide recovery plant/liquefaction plant.



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### 8.3 Syndicate term finance

2017  
(Rupees in thousand)

This has been obtained from a consortium of the following financial institutions:

#### Receipts from lenders:

National Bank of Pakistan	1,500,000	1,500,000
MCB Bank Limited	500,000	500,000
Soneri Bank Limited	400,000	-
Allied Bank Limited	500,000	-
United Bank Limited	1,000,000	-
Bank Islami Limited	600,000	600,000
Standard Chartered Bank (Pakistan) Limited	1,500,000	1,500,000
	<u>6,000,000</u>	<u>4,100,000</u>
Initial transaction cost	(87,455)	(61,500)
	<u>5,912,545</u>	<u>4,038,500</u>
Amortization of initial transaction cost	17,558	67
	<u>5,930,103</u>	<u>4,038,567</u>
Repaid	(666,667)	-
	<u>5,263,436</u>	<u>4,038,567</u>
Current portion shown under current liabilities	(1,333,332)	(455,557)
	<u>3,930,104</u>	<u>3,583,010</u>

- note 8.3.1

**8.3.1** This represents long term finance facility of Rs 6 billion obtained from a consortium of banks led by Standard Chartered Bank (Pakistan) Limited (the 'Lead Arranger'). The overall financing is secured by way of charge over company's land having an area of 2,399 Kanals 7 Marlas together with all building, structure, fitting & fixture permanently fasted to land and erection building and over all present and future fixed assets excluding the assets comprising of Ammonia Converter Basket, the Lamont Boiler for Nitric Acid, the Bombardier Challenger aircraft, the assets comprising of the CDM project, the complete carbon dioxide recovery plant/liquefaction plant. Of the total facility of Rs 6 billion, entire amount has been availed by the company as of the balance sheet date. As of the balance sheet date, the principal amount is repayable in eight equal semi-annual installments of Rs 666.667 million ending on December 30, 2021 and carries mark up at the rate of six months KIBOR plus 1.25% per annum, payable semi-annually. The mark up rate charged during the year on the outstanding balance ranges from 7.40% to 7.46% per annum. Furthermore, long term loans from related parties (as referred to in note 9 to these financial statements) will remain sub-ordinated in favour of Syndicate Term Finance till complete repayment of this loan.

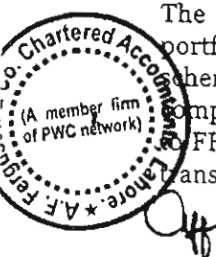
### 9. Long term loans from related parties - unsecured

2017  
(Rupees in thousand)

These have been obtained from the following related parties:

Reliance Commodities (Private) Limited (due to common directorship)	- note 9.1	-	1,208,693
International Complex Projects Limited (due to common directorship)	- note 9.2	-	500,000
Fatima Holding Limited (due to common directorship)	- note 9.1	1,602,057	-
Arif Habib Equity (Private) Limited (due to common directorship)	- note 9.2	500,000	-
Member and Chairman's spouse		438,660	397,326
Chairman's children		257,705	168,581
Directors		<u>1,075,271</u>	<u>644,122</u>
	- note 9.3	<u>3,873,693</u>	<u>2,918,722</u>

**9.1** In the year ended 2015, a scheme of arrangement was entered into by Reliance Commodities (Private) Limited (RCPL) and Fatima Holding Limited (FHL) which was sanctioned by the Lahore High Court on September 17, 2016. The scheme involved RCPL to be re-organized by de-merging specific portion of its undertaking (the investment portfolio) and merging the same with and into FHL against issuance of ordinary shares by FHL. Further, as per the scheme, RCPL has become wholly owned subsidiary of FHL. Resultantly, loan originally granted by RCPL to the company, stands vested with FHL i.e. all the risks and rewards, rights and obligations of RCPL have been transferred to FHL. Therefore, as of the balance sheet date, the entire loan amount and its associated accrued markup has been transferred in the name of FHL.



9.2 In the year 2016, a scheme of arrangement was entered into by International Complex Project Limited (ICPL) and Arif Habib Equity (Private) Limited (AHEPL) which was sanctioned by the Lahore High Court on June 21, 2017. The scheme involved a specific portion of the undertaking of ICPL being demerged from it and merged with and into AHEPL. Therefore, the loan originally granted by ICPL to the company stands vested with AHEPL i.e. all risks, rewards, rights and obligations of ICPL have been transferred to AHEPL.

9.3 As per the terms of the agreements of these loans, these were repayable in a period of two years commencing from January 1, 2017 on terms that were to be mutually agreed between the parties. However, as per the terms of loan agreement with Allied Bank Limited (as fully explained in note 8.2.3 to these financial statements) and with Syndicate Term Finance Facility (as fully explained in note 8.3.1 to these financial statements), these loans will remain subordinated in favour of Allied Bank Limited and Syndicate Term Finance Facility till complete repayment of their loans; hence, these loans have been classified as non-current. Mark up is payable semi-annually at a rate of six months KIBOR plus 1.5% per annum. The mark up rate charged during the year on the outstanding balance is 7.65% per annum.

#### 10. Long term loan from related party - secured

This represents a long term finance facility of Rs 3 billion obtained from Fatima Fertilizer Company Limited ('FATIMA'), a related party (due to common directorship). As per the terms of the agreement, the principal amount is repayable in six equal semi-annual installments commencing from June 23, 2019 and carries mark up at the rate of six months KIBOR plus 2.12% per annum, payable semi-annually. The mark up rate charged, during the year, on the outstanding balance is 8.27% per annum. This facility is secured against ranking charge over all present and future fixed assets of the company excluding immovable property i.e. land and buildings, the Lamont boiler for Nitric Acid, the assets comprising of the CDM project and complete carbon dioxide recovery plant.

#### 11. Long term deposits

These represent interest free security deposits from customers and carriage contractors and are repayable on cancellation/withdrawal of the dealership or on cessation of the business with the company respectively.

		2017	2016
		(Rupees in thousand)	
12. Deferred liabilities			
Accumulating compensated absences	- note 12.1	77,656	72,336
Retirement benefits - gratuity fund	- note 12.2	38,744	41,615
		<u>116,400</u>	<u>113,951</u>

#### 12.1 Accumulating compensated absences

Opening liability		72,336	97,166
Charge to profit and loss account	- note 12.1.2	11,384	12,841
		<u>83,720</u>	<u>110,007</u>
Payments made during the year		(6,064)	(8,591)
Provision written back during the year	- note 12.1.3	-	(29,080)
Liability as at year end	- note 12.1.1	<u>77,656</u>	<u>72,336</u>

#### 12.1.1 Movement in liability for accumulating compensated absences

Opening present value of accumulating compensated absences		72,336	97,166
Current service cost		7,000	4,403
Interest cost		5,515	8,325
Benefits paid during the year		(6,064)	(8,591)
Provision written back during the year		-	(29,080)
Measurement during the year		(1,131)	113
Closing present value of accumulating compensated absences		<u>77,656</u>	<u>72,336</u>

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12.1.2	Charge to profit and loss account	2017 (Rupees in thousand)	2016
	Current service cost	7,000	4,403
	Interest cost	5,515	8,325
	Remeasurement during the year	(1,131)	113
	Expense charged to the profit and loss account	<u>11,384</u>	<u>12,841</u>

Amounts for current period and previous four annual periods of accumulating compensated absences are as follows:

As at December 31	2017	2016	2015	2014	2013
	(Rupees in thousand)				
Present value of accumulating compensated absences	<u>77,656</u>	<u>72,336</u>	<u>97,166</u>	<u>80,812</u>	<u>86,320</u>
Experience adjustment arising on obligation	<u>(1,131)</u>	<u>113</u>	<u>1,038</u>	<u>(13,646)</u>	<u>-</u>

The average number of leaves accumulated per annum is ten days for executives and five days for workers and other staff.

12.2	Gratuity fund	2017 (Rupees in thousand)	2016
The amounts recognised in the balance sheet are as follows:			
	Present value of defined benefit obligation	185,571	149,213
	Fair value of plan assets	<u>(146,827)</u>	<u>(107,598)</u>
	Liability as at year end	<u>38,744</u>	<u>41,615</u>
	Opening net liability	41,615	35,814
	Charge to profit and loss account	26,645	20,371
	Charge to related party	-	1,313
	Net remeasurements for the year	12,099	19,931
	Contribution by the company	<u>(41,615)</u>	<u>(35,814)</u>
	Liability as at year end	<u>38,744</u>	<u>41,615</u>

The movement in the present value of defined benefit obligation is as follows:

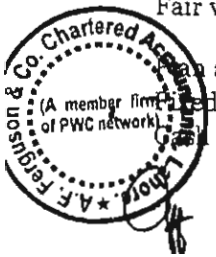
Opening present value of defined benefit obligation	149,213	171,990
Current service cost	24,980	20,127
Interest cost	11,387	14,482
Benefits paid to out-going members during the year	<u>(13,747)</u>	<u>(22,160)</u>
Remeasurements on obligation	13,738	12,388
Liability relating to employees transferred to Fatima Agri Sales and Services (Private) Limited ('FASS')	-	<u>(47,614)</u>
Present value of defined benefit obligation as at year end	<u>185,571</u>	<u>149,213</u>

The movement in fair value of plan assets is as follows:

Opening fair value	107,598	136,176
Contributions	41,615	35,814
Interest income on plan assets	9,722	12,925
Benefits paid	<u>(13,747)</u>	<u>(22,160)</u>
Fair value of plan assets transferred to Fatima Agri Sales and Services (Private) Limited ('FASS')	-	<u>(47,614)</u>
Return on plan assets excluding interest income	<u>1,639</u>	<u>(7,543)</u>
Fair value as at year end	<u>146,827</u>	<u>107,598</u>

Plan assets are comprised as follows:

Fixed income instruments	123,775	80,914
	<u>23,052</u>	<u>26,684</u>
	<u>146,827</u>	<u>107,598</u>



The company faces the following risks on account of gratuity fund:

- Final salary risk (linked to inflation risk) – the risk that the final salary at the time of cessation of service is greater than what we assumed. Since the benefit is calculated on the final salary (which will closely reflect inflation and other macroeconomic factors), the benefit amount increases as salary increases.
- Demographic risks
  - Mortality risk - The risk that the actual mortality experience is different than the assumed mortality. This effect is more pronounced in schemes where the age and service distribution is on the higher side.
  - Withdrawal risk - The risk of actual withdrawals experience is different from assumed withdrawal probability. The significance of the withdrawal risk varies with the age, service and the entitled benefits of the beneficiary.
- Investment risk – the risk of the investment underperforming and being not sufficient to meet the liabilities.

The company is expected to contribute Rs 32.279 million to the gratuity fund in the next year.

The present value of defined benefit obligation, the fair value of plan assets and the surplus or deficit of gratuity fund is as follows:

	2017	2016	2015	2014	2013
	(Rupees in thousand)				
Present value of defined benefit obligation	(185,571)	(149,213)	(171,990)	(149,293)	(129,962)
Fair value of plan assets	146,827	107,598	136,176	114,316	89,810
Loss	<u>(38,744)</u>	<u>(41,615)</u>	<u>(35,814)</u>	<u>(34,977)</u>	<u>(40,152)</u>
Experience adjustment on obligation	7%	8%	-2%	-2%	5%
Experience adjustment on plan assets	1.12%	-7.01%	-4.26%	-3.64%	-1.44%

The sensitivity of the defined benefit obligation to changes in the weighted principal assumptions is:

	Impact on defined benefit obligation		
	Change in assumptions	Increase in assumption	Decrease in assumption
Discount rate	1%	170,997	202,502
Salary growth rate	1%	202,739	170,532



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13. **Deferred taxation** 2017  
(Rupees in thousand) 2016  
(Rupees in thousand)

Liability/(asset) for deferred taxation comprises temporary differences relating to:

Accelerated tax depreciation	9,153,847	8,765,361
Accumulating compensated absences	(23,297)	(21,701)
Provision for doubtful receivable	(2,673)	(2,673)
Post retirement medical benefits and other allowances payable	(3,454)	(3,454)
Interest receivable	10,030	8,261
Unrealised recovery of chemical catalyst	48,821	48,820
Transaction cost on long term loans	25,004	6,697
Investment in subsidiary	60,032	41,398
Goodwill	991,549	991,549
Unused tax losses	(2,809,374)	(2,733,380)
Unused tax credits	-	(353,818)
	<u>7,450,485</u>	<u>6,747,060</u>

Deferred tax asset on tax losses and tax credits available for carry forward are recognized to the extent that the realisation of related tax benefits through future taxable profits is probable. The company has not recognised deferred tax asset in respect of minimum tax available for carry forward under section 113 of the Income Tax Ordinance, 2001, and deferred tax asset on tax losses available for carry forward amounting to Rs 499.818 million (2016: Rs 256.646 million) and Rs 3,427.194 million (2016: Nil) respectively, as sufficient taxable profits would not be available to utilise these in the foreseeable future and would expire as follows:

Accounting year to which minimum tax relates	Amount of minimum tax (Rupees in thousand)	Accounting year in which minimum tax will expire
2015	206,336	2021
2016	147,481	2022
2017	146,001	2023
	<u>499,818</u>	

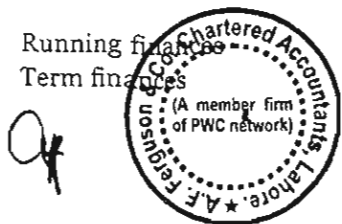
Accounting year to which tax loss relates	Amount of tax loss (Rupees in thousand)	Accounting year in which tax loss will expire
2012	1,612,786	2018
2013	599,210	2019
2016	1,215,198	2022
	<u>3,427,194</u>	

The gross movement in net deferred tax liability during the year is as follows:

	2017 (Rupees in thousand)	2016 (Rupees in thousand)
Opening balance	6,747,061	7,972,085
Deferred tax on revaluation surplus - note 7	514,036	-
Charged to other comprehensive income	18,634	12,489
Charged/(credited) to profit and loss account - note 36	170,754	(1,237,513)
Closing balance	<u>7,450,485</u>	<u>6,747,061</u>

14. **Short term borrowings - secured**

Running finance - note 14.1	8,518,577	7,447,129
Term finance - note 14.2	2,260,212	1,725,997
	<u>10,778,789</u>	<u>9,173,126</u>



#### 14.1 Running finances

Short term running finance facilities available from various commercial banks under mark-up arrangements amount to Rs 8,594 million (2016: Rs 9,433 million). The rates of mark up range from 6.57% to 8.65% on the outstanding balance or part thereof. The aggregate running finances are secured against pledge of stock-in-trade as referred to in note 24.1 to these financial statements and registered hypothecation charge on current and fixed assets of the company including the Lamont Boiler for Nitric Acid, assets comprising the CDM project and the complete carbon dioxide recovery plant/liquefaction plant along with carbon dioxide static storage tank of the company.

#### 14.2 Term finances

Term finance facilities available from various commercial banks under profit arrangements amount to Rs 2,271 million (2016: Rs 2,524 million). The rates of mark up range from 6.98% to 8.16% on the outstanding balance or part thereof. The aggregate term finances are secured against first pari passu charge over all current and fixed assets of the company including the Lamont Boiler, Ammonia Converter Basket, assets comprising the CDM project and the complete carbon dioxide recovery plant/liquefaction plant along with carbon dioxide static storage tank of the company.

#### 14.3 Letters of credit and guarantees

Of the aggregate facilities of Rs 3,116 million (2016: Rs 3,609 million) for opening letters of credit and Rs 1,257 million (2016: Rs 1,247 million) for guarantees, the amount utilised at December 31, 2017 was Rs 882 million (2016: Rs 1,550 million) and Rs 1,257 million (2016: Rs 1,247 million) respectively. The facilities for opening letters of credit are secured against import documents and registered joint pari passu charge over current assets whereas facility for guarantees is secured against registered joint pari passu charge over current assets.

#### 14.4 Guarantees discounted - secured

Of the aggregate facilities of Rs 5,800 million (2016: Rs 3,900 million) for discounting of guarantees given by debtors, the amount utilised at December 31, 2017 was Rs 1,781 million (2016: Rs 3,089 million). Discounting charge is fixed as per mutual agreement at the time of transaction. The outstanding balance of guarantees discounted is secured against the specific guarantees discounted.

#### 15. Payable to Privatization Commission of Pakistan

Reliance Exports (Private) Limited ('REL'), under the terms and conditions stated in the 'Share Purchase Agreement' ('the Agreement'), acquired 100% shares in the company on July 14, 2005 through the process of privatization. Under the terms of the Agreement, the purchase consideration, in addition to lump sum cash payment, included a further payment equivalent to 90% of the company's claim of tax refund aggregating to Rs 2,814.511 million for the assessment years 1993-94, 1995-96 through 2002-2003 and tax years 2003 and 2004. The amount is payable to the Privatization Commission (hereinafter referred to as 'PC') in the event of and at the time of cash receipt of the refund from the concerned tax authorities.

The amount recognized in these financial statements as payable to PC is net off Rs 240.119 million which, according to the management of the company, has already been withdrawn by the Previous Members as part of the dividend distribution for the year ended June 30, 2005. The management of the company feels that the Agreement as presently worded, if executed, would result into double payment of the same amount to PC/Previous Members, firstly, as part of the profits for the year ended June 30, 2005 (computed without recognition of the tax expense for the years for which when the refund is issued, an amount equivalent to 90% would be the right of PC/Previous Members) and secondly, at the time the refund is received from the tax authorities when an amount equivalent to 90% of such refund is paid off to PC, as agreed. The management of the company feels that such double payment is neither the intention nor warranted under the specific provisions of the Agreement.

Upon dissolution of REL and its amalgamation with the company on July 14, 2005, this liability was recognised in the books of the company being the surviving entity upon REL's amalgamation with the company in accordance with the Scheme of Arrangement for Amalgamation.



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16.	Trade and other payables		2017 (Rupees in thousand)	2016
	Trade creditors	- note 16.1	665,909	894,119
	Sui gas bill payable		343,419	309,315
	Security deposits		24,547	36,507
	Accrued liabilities	- note 16.2	2,139,822	1,714,988
	Workers' profit participation fund	- note 16.3	657,867	673,760
	Workers' welfare fund	- note 16.4	20,036	20,036
	Customers' balances		385,712	162,137
	Bank guarantees discounted		1,781,499	3,089,441
	Due to employees' provident fund trust		-	1,238
	Withholding tax payable		9,184	34,112
	Excise duty payable		1,724	1,724
	Electricity duty payable		44,315	37,066
			<u>6,074,034</u>	<u>6,974,443</u>

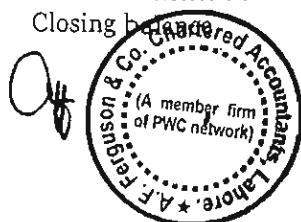
16.1 Includes an amount of Rs 97.238 million (2016: Rs 38.933 million) payable to Fatima Packaging Limited (formerly 'Reliance Sacks Limited'), a related party (subsidiary).

16.2 Accrued liabilities includes bonus of Rs 7.5 million (2016: Rs 7.5 million) payable to the Directors of the company. It further includes Rs 1,617 million (2016: Rs 1,071 million) on account of Gas Infrastructure Development Cess (GIDC). During the prior year, GIDC was struck down by the Sindh High Court, being ultra vires, vide its order dated October 26, 2016, against which the Ministry of Petroleum and Natural Resources obtained a suspension order. However, a stay order against the same suspension order has been passed by Sindh High Court through its order dated February 8, 2017. In a separate case, Peshawar High Court passed a judgment on May 31, 2017 validating the new GIDC Act and the same has been challenged by the petitioners in the Supreme Court of Pakistan. Due to its legal uncertainties, the company continues to carry the provision in this respect.

		2017	2016
		(Rupees in thousand)	
16.3	Workers' profit participation fund		
Opening balance		673,760	717,710
Provision for the year		-	-
		<u>673,760</u>	<u>717,710</u>
Payments made during the year		(15,893)	(43,950)
Closing balance	- note 16.3.1	<u>657,867</u>	<u>673,760</u>

16.3.1 Includes Rs 598.463 million (2016: Rs 614.356 million) that represents the balance amount of Workers' Profit Participation Fund ('WPPF'), remaining after deducting the workers' portion of WPPF, that is required to be deposited in the Workers Welfare Fund ('WWF'). The company has an agreement with the WWF, Ministry of Labour and Manpower, Government of Pakistan whereby such amount would be used for establishing a hospital for the workers as per the mechanism defined in that agreement.

16.4	Workers' welfare fund	2017 (Rupees in thousand)	2016
	Opening balance	20,036	266,787
	Provision written back during the year	-	(246,751)
	Closing balance	<u>20,036</u>	<u>20,036</u>



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17.	Accrued mark up	2017 (Rupees in thousand)	2016
	Accrued mark up on:		
	- PPTFCs - secured	200	15,459
	- long term loans - secured	16,107	23,620
	- syndicate term finance	21,356	1,660
	- long term loans from related parties - unsecured - note 17.1	545,270	281,955
	- borrowing from related party - secured - note 17.2	118,786	117,601
	- short term borrowings - secured	142,099	198,497
	- bank guarantees	542	-
		<u>844,360</u>	<u>638,792</u>

17.1 This amount is payable to the following related parties:

Reliance Commodities (Private) Limited (due to common directorship)	-	108,952
Fatima Holding Limited (due to common directorship)	225,845	7,896
International Complex Projects Limited (due to common directorship)	-	33,768
Arif Habib Equity (Private) Limited (due to common directorship)	72,018	-
Member and Chairman's spouse	77,137	45,000
Chairman's children	30,958	14,307
Directors	139,312	72,032
	<u>545,270</u>	<u>281,955</u>

17.2 This represents amount payable to FATIMA, a related party (due to common directorship).

## 18. Contingencies and commitments

### 18.1 Contingencies

(i) The company has netted off an amount of Rs 240.119 million (2016: Rs 240.119 million) from the amount payable to PC, as part of purchase consideration, at the time and in the event the refund is received from the tax authorities. In case, the company's contention relating to possible double payment is not acceded to by the other party to the Share Purchase Agreement, the company is contingently liable to the aforesaid amount of Rs 240.119 million. In case, the amount becomes payable, the corresponding effect would be reflected in the computation of goodwill. Furthermore, the company has issued a bank guarantee amounting to Rs 240 million (2016: Rs 240 million) in favour of PC in this respect.

(ii) The company has also issued following guarantees in favour of:

- Sui Northern Gas Pipelines Limited (SNGPL) against Regasified Liquefied Natural Gas ('RLNG') and natural gas sale amounting to Rs 1.01 billion (2016: Rs 1 billion).

- Pakistan State Oil Company Limited ('PSO') against fuel for aircraft amounting to Rs 7 million (2016: Rs 7 million).

- Multiple banks as security against finance obtained by its subsidiary, Fatima Packaging Limited (formerly 'Reliance Sacks Limited').

(iii) As at June 30, 2004, the company had investment of 140,000 ordinary shares of Rs 10 each valuing Rs 100,000 in National Fertilizer Marketing Limited, being the associated company on that date. On May 20, 2005, this investment was transferred to National Fertilizer Corporation of Pakistan (Private) Limited by the management of the company. However, the new buyer, REL filed an application before PC challenging this transfer on the grounds that such transfer had been carried out against the terms and conditions of the bid documents. In case of a positive outcome to the application, this investment would be re-instated.



(iv)

An amount of Rs 129.169 million was withdrawn by the previous members of the company as part of dividend for the year ended June 30, 2005 under the Share Purchase Agreement. Out of the aggregate amount, Rs 89.39 million represents the value of certain catalysts recovered in consequence of clean down operations of the plant prior to undertaking the process of privatization, which was accounted for as income in the financial statements for the year ended June 30, 2005 in the light of applicable financial reporting framework.

The management of the company feels that notwithstanding the applicability of the financial reporting framework, on the financial statements for the year ended June 30, 2005, the amount was not distributable as part of dividend for that year in view of the clear understanding behind the execution of the Agreement as categorically confirmed, in writing, by PC prior to signing of the Agreement. Similarly, the balance amount of Rs 39.779 million is considered to be dividend distribution out of the then available reserves which was also not distributable to the previous members in terms of other covenants of the Agreement.

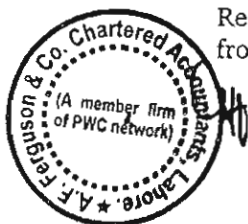
The company has filed a claim for the recovery of the aforesaid aggregate amount on the grounds that in the present form, the distribution has been made out of the accumulated reserves, for the years up to June 30, 2004, which, under the specific provisions of the Agreement were not distributable to the previous members of the company. In case of a positive outcome to the company's claim, the excess dividend withdrawn by the previous members of the company would be recovered.

(v)

Through a show cause notice, the tax department raised the issue of short payment of output sales tax on supplies of the company's fertilizer product, Calcium Ammonium Nitrate ('CAN') for the period from April 18, 2011 to December 31, 2011 involving a principal sales tax demand of Rs 500 million. Such issue was raised on the grounds that notification SRO 15(I)/2006, providing for levy of sales tax on the basis of 'notified price' of CAN, was withdrawn through notification SRO 313(I)/2011 dated April 18, 2011 and hence, the company was legally required to recover output sales tax on supplies of CAN on the basis of actual consideration received there against. The Company had already approached the Federal Board of Revenue ('FBR') on the issue for condonation in terms of section 65 of the Sales Tax Act, 1990, which was not entertained. The Company had assailed such order through institution of a writ petition before the Honourable Lahore High Court ('LHC') on the grounds that relevant powers have been exercised in an arbitrary manner without referring the matter to competent authority as required under the law. Such petition was allowed by the Honourable LHC through its order dated June 21, 2017 and the company was thereby directed to make a fresh application under section 65 of the Sales Tax Act, 1990. In compliance with the directions issued by the Honourable LHC in the aforementioned petition, the Commissioner Inland Revenue examined the fresh application made by the company in accordance with the procedure laid down in Para 50 of the Sales Tax General Order No. 3 of 2004. However, the application was rejected and the same was therefore not referred to the FBR. Being aggrieved, the company filed a writ petition before the Honourable LHC whereby operation of the impugned order shall remain suspended till final decision. Since management considers that the company's stance is based on meritorious grounds and hence, relief would be secured, no provision on this account has been made in these financial statements.

(vi)

For assessment years 1993-94 and 1995-96 through 2002-2003 and for tax years 2003 through 2005, the company, in view of the position taken by the tax authorities that the income of the company is chargeable to tax on the basis of 'net income', had provided for in the financial statements the tax liability on net income basis which aggregated to Rs 5,223.343 million. Tax liabilities admitted in respective returns of total income in respect of these assessment/tax years, however, aggregated to Rs 1,947.671 million being the liabilities leviable under the Presumptive Tax Regime ('PTR'), considered by the management to be applicable in respect of the company's income from sale of own manufactured fertilizer products.



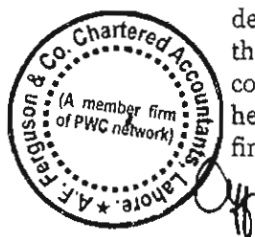
The Appellate Tribunal Inland Revenue ('ATIR') through its separate orders for the assessment years 1993-94, 1995-96 through 2002-03 upheld the company's position as taken in respective returns of total income and consequently, management reversed the excess provisions aggregating to Rs 3,275.673 million on the strength of such judgments. ATIR's decisions in respect of certain assessment years have also been upheld by the Honourable Lahore High Court while disposing departmental appeals against respective orders of ATIR. Income tax department has statedly agitated the issue further before the Honourable Supreme Court of Pakistan, which is pending adjudication.

In view of the favorable disposal of the matter up to the level of High Court, management of the company feels that the decision of the apex court would also be in the favor of the company and hence, in these financial statements, tax liabilities in respect of above referred assessment/tax years have been provided on the basis that the company's income during such years was taxable under PTR. In case, the apex court decides the matter otherwise, amount aggregating to Rs 3,275.673 million will have to be recognized as tax expense in respect of such assessment/tax years.

(vii) Included in trade debts is an amount of Rs 18.877 million (2016: Rs 18.877 million) which has not been acknowledged as debts by its customers due to a dispute regarding the discount on the product's price. The company's customers had collectively filed an appeal regarding the price dispute before the Honourable Civil Court, Multan, which decided the case in favor of the company's customers. The company preferred an appeal before the Honourable District and Sessions Court, Multan which set aside the order of the Civil Court. The company's customers filed a revised petition before the Honourable Lahore High Court against the order of the District and Sessions Court, which is pending for adjudication. Based on the advice of the company's legal counsel, the company's management considers that there are meritorious grounds to defend the company's stance and hence, no provision has been made in these financial statements on this account.

(viii) During the year ended December 31, 2015, through a show cause notice, the tax department had raised the issue of non-payment of output sales tax on stock of fertilizer product transferred to various warehouses of the company involving a principal sales tax demand of Rs 909.125 million (not including default surcharge which will be calculated at the time of deposit) along with a penalty equal to 100% of the principal sales tax demand. Such issue was raised on the grounds that the above mentioned transfers constitute 'supply' in terms of section 2(44) of the Sales Tax Act, 1990, and hence, the same have been made without payment of sales tax. The management had assailed the subject order in usual appellate course before the Commissioner Inland Revenue (Appeals) ['CIR(A)'] and CIR(A) decided the matter in company's favour through its order dated April 14, 2016 whereby the aforementioned demand stood annulled. Being aggrieved, the department has filed an appeal against the aforementioned order of CIR(A) before the ATIR which is pending fixation. Management considers that there are strong grounds to support the company's stance and thus no provision has been made in these financial statements for the above mentioned amount.

(ix) On July 5, 2006, Pakistan National Shipping Corporation ('PNSC') filed a recovery suit for USD 1.5 million against the company before the Civil Court, Lahore claiming that it had suffered losses as the company unilaterally terminated the Charter Party Agreement ('CPA') between the PNSC and the company. As per the terms of the CPA, PNSC was to transport 300,000 metric tons of rock phosphate for the company between February 1, 2005 to May 31, 2006 at a rate of USD 41 per metric ton from Casablanca port to Karachi port. However, PNSC claimed that the company had unilaterally terminated the CPA after its privatization in 2005. The company also filed a counter suit against PNSC claiming that it had violated the terms of the CPA by diverting ships carrying company's cargo to other ports causing the company's cargo to arrive later than expected resulting in loss to the company. The Court referred the matter to the arbitrator who through its award dated April 22, 2010 decided the matter in PNSC's favour and confirmed its claim at USD 1.3 million (equivalent to Rs 80.009 million) and mark up at the rate of 14% to be calculated from the date of award till the time of deposit. The company being aggrieved has filed an application against the award of arbitrator before the Civil Court, Lahore which is pending adjudication. Based on the advice of the company's legal counsel, the management considers that company's stance is based on meritorious grounds and hence relief would be secured from the Court, no provision on this account has been made in these financial statements.



(x) During the year ended December 31, 2015, the company imported Liquefied Natural Gas ('LNG') through PSO under the various directives of Ministry of Petroleum and Natural Resources (MP&NR) Government of Pakistan wherein Sui Southern Gas Company Limited ('SSGC') and SNGPL were part of the arrangement for regasification and transportation. The last LNG cargo imported by the company through PSO was fully consumed by the end of February 2016. SNGPL has issued invoices from April 2015 to February 2016 on the basis of provisional transportation charges at the rate of USD 0.57 per MMBTU against the delivery of RLNG sourced by the company, which according to the company are without any justifiable basis and grounds since SNGPL had to transport the gas under swap arrangements as per Economic Coordination Committee's decision communicated through MP&NR letter dated March 25, 2015. Being aggrieved, the company has instituted a writ petition before the Honourable Lahore High Court during the current year, which is pending adjudication. Meanwhile, in order to resolve the matter amicably, the company has made payment to SNGPL at the rate of USD 0.08 per MMBTU and has recognised such cost during the previous and current years accordingly. Management considers that there are meritorious grounds that the honourable Court would decide that the transportation charges paid at the rate of USD 0.08 per MMBTU are reasonable and hence, relief would be secured from the Court. Consequently, no provision has been made in these financial statements for the differential amount of Rs 1,067.741 million that includes late payment surcharge of Rs 335.620 million (2016: Rs 970.168 million that includes late payment surcharge of Rs 184.166 million).

(xi) During the year, Oil and Gas Regulatory Authority ('OGRA') through its decisions dated June 2, 2017 and June 20, 2017 revised the cost of service element of supply of gas in lieu of LNG from USD 0.41 per MMBTU to over USD 0.81 per MMBTU with retrospective effect from July 1, 2016 to March 31, 2017. Consequently, SNGPL raised demand amounting to Rs 500.069 million in its monthly invoices issued to the company from June 2017 onwards which, according to the company are without any factual or legal basis. The company being aggrieved, instituted a writ petition in the Honourable Lahore High Court ('LHC'). The LHC through its stay order dated July 20, 2017 directed SNGPL to issue revised bills on the basis of OGRA's decision dated March 18, 2016 and ordered suspension of the bills based on the aforementioned decisions of OGRA dated June 2, 2017 and June 20, 2017. Based on LHC's decision, management considers that there are meritorious grounds that the matter will be decided in company's favour. Hence, no provision for the abovementioned demand of Rs 500.069 million has been made in these financial statements.

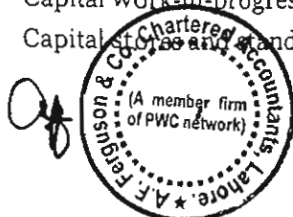
## 18.2 Commitments in respect of

- (i) Letters of credit other than for capital expenditure of Rs 883 million (2016: Rs 1,017 million).
- (ii) The amount of future payments under operating leases and the period in which these payments will become due are as follows:

	2017	2016
	(Rupees in thousand)	
Not later than one year	80,765	66,213
Later than one year and not later than five years	102,878	108,257
	<u>183,643</u>	<u>174,470</u>

## 19. Property, plant and equipment

Operating fixed assets	- note 19.1	40,518,210	38,662,198
Capital work-in-progress	- note 19.2	40,685	54,437
Capital spare parts and stand-by equipment	- note 19.3	74,100	32,055
		<u>40,632,995</u>	<u>38,748,690</u>



## COST/REVALUED AMOUNT

(Rupees in thousand)												
	Freehold land	Buildings on freehold land	Buildings on leasehold land	Railway siding	Plant and machinery	Aircraft	Furniture and fixtures	Tools and other equipment	Vehicles	Catalyst	Total	
COST/REVALUED AMOUNT	Balance as at January 01, 2016	6,777,600	1,801,038	34,919	9,000	28,624,587	2,284,785	40,858	560,165	250,672	236,970	40,626,594
	Additions during the year	71,901	4,361	-	-	22,751	-	164	18,193	-	83,725	201,095
	Disposals during the year	-	(4,288)	-	-	-	-	-	(1,241)	(52,651)	-	(58,180)
	Balance as at December 31, 2016	6,849,501	1,801,111	34,919	9,000	28,647,338	2,284,785	47,022	577,117	198,021	320,695	40,769,509
	Balance as at January 01, 2017	6,849,501	1,801,111	34,919	9,000	28,647,338	2,284,785	47,022	577,117	198,021	320,695	40,769,509
	Additions during the year	360,043	14,315	-	-	3,302	-	78	24,925	-	48,216	450,879
	Revaluation during the year	310,499	479,104	8,212	-	1,298,598	-	-	2,001	-	-	2,098,414
	Disposals during the year	-	-	-	-	-	-	-	(194)	(18,953)	-	(19,147)
	Elimination of accumulated depreciation against cost on revaluation	-	(328,191)	(9,603)	-	(1,140,603)	-	(24,142)	(125,313)	-	-	(1,627,852)
	Balance as at December 31, 2017	7,520,043	1,956,319	33,528	9,000	28,808,535	2,284,785	22,958	478,516	179,068	368,911	41,677,803
DEPRECIATION												
	Balance as at January 01, 2016	-	145,994	3,784	9,000	436,792	486,861	10,840	67,137	247,890	91,564	1,499,862
	Charge for the year - note 19.1.3	-	109,657	3,492	-	366,541	112,480	8,003	37,905	2,747	21,023	661,848
	Charge on disposals	-	(565)	-	-	-	-	-	(1,183)	(53,651)	-	(54,399)
	Balance as at December 31, 2016	-	255,086	7,276	9,000	803,333	599,341	18,843	103,859	197,986	112,587	2,107,311
	Balance as at January 01, 2017	-	255,086	7,276	9,000	803,333	599,341	18,843	103,859	197,986	112,587	2,107,311
	Charge for the year - note 19.1.3	-	121,577	3,869	-	391,822	112,480	7,909	32,330	35	23,166	693,188
	Charge on disposals	-	-	-	-	-	-	-	(101)	(18,953)	-	(19,054)
	Elimination of accumulated depreciation against cost on revaluation	-	(328,191)	(9,603)	-	(1,140,603)	-	(24,142)	(125,313)	-	-	(1,627,852)
	Balance as at December 31, 2017	-	48,472	1,542	9,000	54,552	711,821	2,610	10,775	179,068	135,733	1,153,593
Book value as at December 31, 2016	6,849,501	1,546,025	27,643	-	27,844,005	1,685,444	28,179	473,258	35	208,108	38,662,198	
Book value as at December 31, 2017	7,520,043	1,917,867	31,986	-	28,754,083	1,572,964	20,348	467,761	-	233,158	40,518,210	

19.1.1 Freehold land, buildings on freehold land, railway siding, plant and machinery and tools and other equipment were revalued by an independent professional valuer, Oceanic Surveyors (Private) Limited on August 31, 2017. The revaluation surplus net of deferred tax was credited to surplus on revaluation of operating fixed assets. Had there been no revaluation, the carrying amounts of the following classes of assets would have been as follows:

	2017	2016
(Rupees in thousand)		
Freehold land	1,343,884	983,841
Buildings on freehold land	1,091,312	1,170,866
Buildings on leasehold land	24,037	27,644
Plant and machinery	15,455,895	15,719,644
Tools and other equipment	327,963	326,600
	18,243,091	18,228,595

19.1.2 Freehold land, buildings on freehold land, railway siding, plant and machinery and tools and other equipment were revalued by an independent professional valuer, Oceanic Surveyors (Private) Limited on August 31, 2017. The revaluation surplus net of deferred tax was credited to surplus on revaluation of operating fixed assets. Had there been no revaluation, the carrying amounts of the following classes of assets would have been as follows:



2017  
(Rupees in thousand)

19.1.3 The depreciation charge for the year has been allocated as follows:

Cost of sales	- note 29	564,076	519,832
Administrative expenses	- note 30	128,025	139,732
Selling and distribution expenses	- note 31	1,087	2,284
		<u>693,188</u>	<u>661,848</u>

#### 19.1.4 Fair value estimation

Fair value is the amount for which an asset could be exchanged, or liability settled, between knowledgeable willing parties in an arm's length transaction. Underlying the definition of fair value is the presumption that the company is a going concern without any intention or requirement to curtail materially the scale of its operations or to undertake a transaction on adverse terms. Fair value is determined on the basis of objective evidence at each reporting date.

The tables below analyze the non-financial assets carried at fair value as at December 31, 2017 and December 31, 2016.

The different levels have been defined as follows:

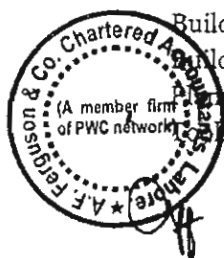
- Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (level 3).

The following table presents the company's non-financial assets that are measured at fair value at December 31, 2017.

(Rupees in thousand)				
	Level 1	Level 2	Level 3	Total
<b><i>Recurring fair value measurements of certain items of operating fixed assets</i></b>				
Freehold land	-	7,520,043	-	7,520,043
Buildings on freehold land	-	-	1,917,867	1,917,867
Buildings on leasehold land	-	-	31,986	31,986
Plant and machinery	-	-	28,754,083	28,754,083
Tools and other equipment	-	-	467,761	467,761
	-	<u>7,520,043</u>	<u>31,171,697</u>	<u>38,691,740</u>

The following table presents the company's non-financial assets that are measured at fair value at December 31, 2016.

(Rupees in thousand)				
	Level 1	Level 2	Level 3	Total
<b><i>Recurring fair value measurements of certain items of operating fixed assets</i></b>				
Freehold land	-	6,849,501	-	6,849,501
Buildings on freehold land	-	-	1,546,025	1,546,025
Buildings on leasehold land	-	-	27,643	27,643
Plant and machinery	-	-	27,844,005	27,844,005
Tools and other equipment	-	-	473,258	473,258
	-	<u>6,849,501</u>	<u>29,890,931</u>	<u>36,740,432</u>



Movements of the above mentioned assets and surplus on revaluation of these assets have been disclosed in note 19.1 and note 7 respectively to these financial statements. The company's policy is to recognise transfers into and transfers out of fair value hierarchy levels as at the end of the reporting period. There were no transfers between Levels 1 and 2 & Levels 2 and 3 during the year and there were no changes in valuation techniques during the years.

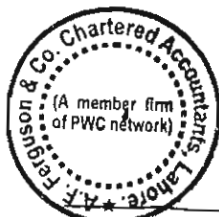
### Valuation techniques used to determine level 2 and level 3 fair values

The company obtains independent valuations for its freehold land, buildings on freehold land, buildings on leasehold land, railway siding, plant and machinery, and tools and equipment (classified as property, plant and equipment) at least every three years. At the end of each reporting period, the management updates its assessment of the fair value of each asset mentioned above, taking into account the most recent independent valuation. The management determines an asset's value within a range of reasonable fair value estimates. Level 2 fair value of freehold land has been derived using a sales comparison approach. Sale prices of comparable land in close proximity are adjusted for differences in key attributes such as location and size of the property. The most significant input into this valuation approach is price per square foot. Level 3 fair value of building on freehold land has been determined using a depreciated replacement cost approach, whereby, current cost of construction of a similar building in a similar location has been adjusted using a suitable depreciation rate to arrive at present market value. Level 3 fair value of railway siding, plant and machinery, and tools and equipment have been determined using a depreciated replacement cost approach, whereby, the current replacement cost of railway siding, plant and machinery, and tools and equipment of similar make/origin, capacity and level of technology has been adjusted using a suitable depreciation rate on account of normal wear and tear.

### Valuation inputs and relationship to fair value

The following table summarises the quantitative and qualitative information about the significant unobservable inputs used in recurring level 3 fair value measurements. See paragraph above for the valuation techniques adopted.

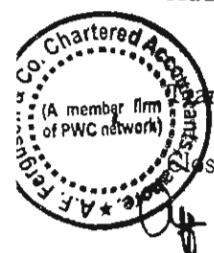
Description	Fair value at		Significant Unobservable inputs	Quantitative Data / Range and relationship to the fair value
	December 31, 2017	December 31, 2016		
Buildings on freehold land	1,917,867	1,546,025	Cost of construction of a new similar building.  Suitable depreciation rate to arrive at depreciated replacement value.	The market value has been determined by using a suitable depreciation factor on cost of constructing a similar new building. Higher, the estimated cost of construction of a new building, higher the fair value. Further, higher the depreciation rate, the lower the fair value of the building.
Buildings on leasehold land	31,986	27,643	Cost of construction of a new similar building.  Suitable depreciation rate to arrive at depreciated replacement value.	The market value has been determined by using a suitable depreciation factor on cost of constructing a similar new building. Higher, the estimated cost of construction of a new building, higher the fair value. Further, higher the depreciation rate, the lower the fair value of the building.



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Plant and machinery	28,754,083	27,844,005	Cost of acquisition of similar plant and machinery with similar technology and applying a level of suitable depreciation factor based on remaining useful lives of plant and machinery. Suitable depreciation rate to arrive at depreciated replacement value	The market value has been determined by using cost of acquisition of similar plant and machinery with similar level of technology and applying a suitable depreciation factor based on remaining useful lives of plant and machinery. Remaining useful lives have been estimated from 10 to 15 years. The higher the cost of acquisition of similar plant and machinery, higher the fair value of plant and machinery. Further, higher the depreciation rate, the lower the fair value of plant and machinery.
Tools and other equipment	467,761	473,258	Cost of acquisition of similar tools and equipment with similar technology and applying a level of suitable depreciation factor based on remaining useful lives of tools and equipment. Suitable depreciation rate to arrive at depreciated replacement value .	The market value has been determined by using cost of acquisition of similar tools and equipment with similar level of technology and applying a suitable depreciation factor based on remaining useful lives of tools and equipment. Remaining useful lives have been estimated from 10 to 15 years. The higher the cost of acquisition of similar tools and equipment, higher the fair value of tools and equipment. Further, higher the depreciation rate, the lower the fair value of tools and equipment.

		2017 (Rupees in thousand)	2016
<b>19.2</b>	<b>Capital work-in-progress</b>		
Plant and machinery		25,947	11,274
Civil works		14,422	14,844
Advances against purchase of:			
- Freehold land		-	25,966
- Plant and machinery		316	2,353
		<u>40,685</u>	<u>54,437</u>
<b>19.2.1</b>	<b>The reconciliation of the carrying amount is as follows:</b>		
Opening balance		54,437	11,588
Additions during the year		<u>391,604</u>	<u>165,700</u>
		446,041	177,288
Transfers during the year		(405,356)	(122,851)
Closing balance		<u>40,685</u>	<u>54,437</u>

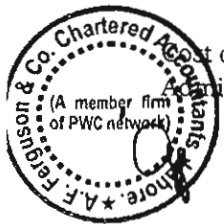


	2017 (Rupees in thousand)	2016
<b>19.3 Capital stores and stand-by equipment</b>		
Opening balance	32,055	55,764
Additions during the year	<u>117,361</u> 149,416	<u>69,070</u> 124,834
Transfers during the year	(75,316)	(92,779)
Closing balance	<u>74,100</u>	<u>32,055</u>

	(Rupees in thousand)		
	Computer software	Mining rights	Total
<b>20. Intangible assets</b>			
<b>COST</b>			
Balance as at January 01, 2016	44,847	210,000	254,847
Additions during the year	-	-	-
Balance as at December 31, 2016	<u>44,847</u>	<u>210,000</u>	<u>254,847</u>
Balance as at January 01, 2017	44,847	210,000	254,847
Additions during the year	553	-	553
Balance as at December 31, 2017	<u>45,400</u>	<u>210,000</u>	<u>255,400</u>
<b>AMORTIZATION</b>			
Balance as at January 01, 2016	27,558	133,000	160,558
Charge for the year - note 20.2	<u>10,535</u>	<u>21,000</u>	<u>31,535</u>
Balance as at December 31, 2016	<u>38,093</u>	<u>154,000</u>	<u>192,093</u>
Balance as at January 01, 2017	38,093	154,000	192,093
Charge for the year - note 20.2	<u>4,738</u>	<u>21,000</u>	<u>25,738</u>
Balance as at December 31, 2017	<u>42,831</u>	<u>175,000</u>	<u>217,831</u>
Book value as at December 31, 2016	<u>6,754</u>	<u>56,000</u>	<u>62,754</u>
Book value as at December 31, 2017	<u>2,569</u>	<u>35,000</u>	<u>37,569</u>
Annual amortization rate %	<u>25</u>	<u>10</u>	

**20.1** Mining rights represent rights acquired for extraction of rock phosphate from a block of area in District Abbottabad for a ten years period ending on August 11, 2019. The aforesaid area is in the possession and control of Pakistan Mining Company Limited ('PMCL'), which provides rock phosphate extraction services to the company as per the Services Agreement.

	2017 (Rupees in thousand)	2016
<b>20.2</b> The amortization charge for the year has been allocated as follows:		
Cost of sales	- note 29	21,000
Administrative expenses	- note 30	4,738
		<u>25,738</u>
		<u>31,535</u>

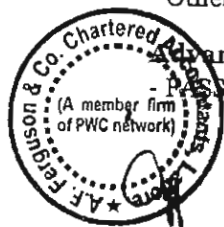


This represents goodwill on amalgamation of REL and the company.

Impairment testing of goodwill has been carried out by allocating the amount of goodwill to respective assets on which it arose. The recoverable amount of the Cash Generating Unit has been determined based on a value in use calculation. This calculation uses cash flow projections based on financial plans approved by management covering a five-year period that have been discounted using a discount rate of 13.77%. The cash flows beyond the five-year period are extrapolated using an estimated growth rate of 3% which is consistent with the long-term average growth rate for the fertilizer industry. A long term/terminal growth rate of 2.59% or a rise in discount rate to 14.05% would, all changes taken in isolation, result in the recoverable amount being equal to the carrying amount.

The above cash flow projections are principally based on the assumption that gas supply would continue to the company's plant in accordance with the arrangement with SNGPL wherein the gas that will be supplied to the company's plant will be a mix of domestic natural gas and imported RLNG. Further, subsequent to the year end on February 28, 2018, through a Memorandum of Understanding signed with Mari Petroleum Company Limited ('MPCL'), the company and MPCL have formalized the intention to enter into an agreement for sale and purchase of natural gas from MPCL's Mari gas fields for a period of seven years, extendable based on gas availability. The Economic Coordination Committee of the Federal Cabinet in its meeting dated May 17, 2018 has also approved the proposal to allocate the gas of Mari gas fields to the company. These measures would contribute to better profit margins since domestic natural gas from SNGPL and Mari gas fields is cheaper than imported RLNG. Also, during the current year, company's sales volumes improved as compared to previous years, however, macro-economic factors such as downward trend in fertilizer prices resulted in loss for the year. However, management is confident that the situation will improve as fertilizer prices have started to recover. In view of the above, management feels that the above measures would result in increased production and better profit margins as compared to previous and current years thereby leading to future profits.

		2017	2016
		(Rupees in thousand)	
<b>22. Long term investments</b>			
<b>Subsidiary - unquoted - available for sale (not intended to be sold within next twelve months):</b>			
Fatima Packaging Limited ('FPL') (formerly 'Reliance Sacks Limited')			
16,863,273 (2016: 16,863,273) fully paid ordinary shares of Rs 10 each			
Equity held 100% (2016: 100%)			
Book value per share Rs 42.86 (2016: Rs 33.91)	- note 22.1	435,442	352,624
<b>Associate - unquoted - at cost:</b>			
Multan Real Estate Company (Private) Limited			
642,321 (2016: 642,321) fully paid ordinary shares of Rs 100 each			
Equity held 29.55% (2016: 29.55%)			
Book value per share Rs 100.04 (2016: Rs 100.05)	- note 22.2	64,232	64,232
<b>Associate - unquoted - at cost:</b>			
Fatima Electric Company Limited			
7,000 (2016: 7,000) fully paid ordinary shares of Rs 10 each			
Equity held 20% (2016: 20%)			
Book value per share Rs 8.39 (2016: Rs 10)	- note 22.3	70	70
<b>Held to maturity (not due to mature within next twelve months):</b>			
- Other	- note 22.4	54,434	48,536
<b>Advance against purchase of shares in:</b>			
- Related party (group company)		1,400	1,400
		<u>555,578</u>	<u>466,862</u>



2017                      2016  
(Rupees in thousand)

**22.1 Investment in FPL - at fair value**

At cost	168,633	168,633
Cumulative fair value gain recognised	266,809	183,992
- note 22.1.1	<u>435,442</u>	<u>352,624</u>

This represents investment in the ordinary shares of FPL which is principally engaged in the manufacturing and sale of polypropylene sacks, polypropylene cloth and liners to be used in packing of fertilizers. Since FPL's ordinary shares are not listed, an investment advisor engaged by the company has estimated a fair value of Rs 25.82 per ordinary share as at December 31, 2017 through a valuation technique based on discounted cash flow analysis of FPL, hence, has been classified under level 3 of fair value hierarchy as further explained in note 42.2 to these financial statements.

The main level 3 inputs used by the company are derived and evaluated as follows:

- Discount rate is determined using a capital asset pricing model to calculate a post-tax rate that reflects current market assessments of the time value of money and the risk specific to FPL.
- Long term growth rate is estimated based on historical performance of FPL and current market information for similar type of companies.

The significant assumptions used in this valuation technique are as follows:

- Average discount rate of 14.36%.
- Long term growth rate of 2% for computation of terminal value.
- Annual growth in sales price of 7% per annum.
- Annual growth in variable cost of inputs of 7% per annum.
- Annual increment in salaries of 9% per annum.

**Sensitivity analysis**

Sensitivity analysis of the significant assumptions used in the valuation technique are as follows:

If the discount rate increases by 1% with all other variables held constant, the impact on fair value as at December 31, 2017 would be Rs 54.345 million lower.

If the long term growth rate decreases by 1% with all other variables held constant, the impact on fair value as at December 31, 2017 would be Rs 35.716 million lower.

If annual growth in sales prices decreases by 1% with all other variables held constant, the impact on fair value as at December 31, 2017 would be Rs 511.603 million lower.

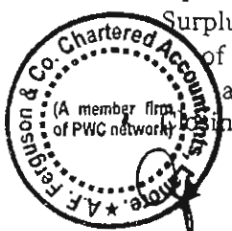
If annual growth in variable cost of inputs increases by 1% with all other variables held constant, the impact on fair value as at December 31, 2017 would be Rs 148.988 million lower.

If increment in salaries increases by 1% with all other variables held constant, the impact on fair value as at December 31, 2017 would be Rs 33.499 million lower.

2017                      2016  
(Rupees in thousand)

**22.1.1 The reconciliation of the carrying amount is as follows:**

Opening balance	352,624	297,120
Surplus on remeasurement of fair value of available-for-sale investment recognized as other comprehensive income	82,818	55,504
Closing balance	<u>435,442</u>	<u>352,624</u>



**22.2 Multan Real Estate Company (Private) Limited - associate - unquoted - at cost**

This represents investment in the ordinary shares of Multan Real Estate Company (Private) Limited ('MREC'). The main business of MREC is establishing and designing housing and commercial schemes, to carry on business of civil engineers for construction of private and governmental buildings and infrastructure and provision of labor and building material.

**22.3 Fatima Electric Company Limited - associate - unquoted - at cost**

This represents investment in the ordinary shares of Fatima Electric Company Limited ('FECL'). The main business of FECL is transmitting, manufacturing, supplying, generating, distributing and dealing in electricity and all forms of energy and power.

**22.4 Investment - Other**

This represents Defence Saving Certificates issued for a period of ten years, which will mature on September 11, 2019. Yield to maturity on these certificates is 12.15%. These certificates have been pledged as security with the Director General, Mines & Minerals, Government of Khyber Pakhtunkhwa as per the terms of the mining agreement.

		2017	2016
		(Rupees in thousand)	
<b>23.</b>	<b>Stores and spare parts</b>		
Chemicals and catalysts [including in transit: Nil (2016: Rs 4.147 million)]	- note 23.1	1,061,234	795,358
Stores		111,394	109,436
Spare parts [including in transit: Rs 23.276 million (2016: Rs 42.514 million)]		1,751,281	1,673,285
		<u>2,923,909</u>	<u>2,578,079</u>
Provision for obsolete items		(76,224)	(76,224)
		<u>2,847,685</u>	<u>2,501,855</u>

**23.1** Included in chemicals and catalysts is platinum, rhodium and palladium of Rs 390.574 million (2016: Rs 234.684 million) and Rs 10.297 million (2016: Nil) held by M/s Johnson Matthey Public Limited Company, United Kingdom and M/s Umicore AG & Co. KG Company, Germany on behalf of the company for refining and manufacturing purposes respectively.

		2017	2016
		(Rupees in thousand)	
<b>24.</b>	<b>Stock-in-trade</b>		
Raw materials	- notes 24.1 & 24.2	795,477	191,092
Packing materials		61,575	27,199
Mid products		60,274	173,586
Finished goods:			
- Own manufactured:	- notes 24.1, 24.3 & 24.4	2,664,794	3,556,004
Fertilizers		-	-
Emission reductions	- note 24.5	2,664,794	3,556,004
		546,831	122,186
		<u>4,128,951</u>	<u>4,070,067</u>

Fertilizer purchased for resale



24.1 Raw materials and finished goods amounting to Rs 3,460.271 million (2016: Rs 3,763.472 million) are pledged with lenders as security against short term borrowings as referred to in note 14.1 to these financial statements.

24.2 Includes rock phosphate costing Rs 144.117 million (2016: Nil) carried at its NRV amounting to Rs 76.371 million which is in the possession of PMCL. The NRV write down expense of Rs 67.747 million has been charged to cost of sales. The rock phosphate in possession of PMCL is due to the reason explained in note 20.1 to these financial statements.

24.3 This includes stock of CAN and Urea costing Rs 2,295 million and Rs 141 million (2016: Rs 3,543 million and Rs 285 million) carried at their NRV amounting to Rs 2,231 million and Rs 119 million (2016: Rs 3,099 million and Rs 229 million) respectively. The NRV write down expense of Rs 86 million has been charged to cost of sales.

24.4 Includes company's fertilizer product, Single Super Phosphate ('SSP'), amounting to Nil (2016: Rs 3.89 million) which is in possession of M/s Faras Fertilizer Limited ('FARAS') for storage purpose as the production of SSP has been outsourced to FARAS.

24.5 This represents emission reductions costing Rs 37.137 million (2016: Rs 37.137 million) carried at their NRV amounting to Nil (2016: Nil).

25.	Trade debts		2017 (Rupees in thousand)	2016
	Considered good:			
	- Secured (by way of bank guarantees and security deposits)	- note 25.1	1,562,254	2,482,285
	- Unsecured		506,270	415,971
			<u>2,068,524</u>	<u>2,898,256</u>

25.1 These are in the normal course of business and certain debts carry interest ranging from 8.23% to 8.72% per annum.

26.	Advances, deposits, prepayments and other receivables		2017 (Rupees in thousand)	2016
	Advances - considered good:			
	- To employees	- note 26.1	6,876	5,685
	- To suppliers		132,013	102,338
	Prepayments		145,607	181,481
	Balances with statutory authorities:			
	- Sales tax			
	- considered good	- note 26.2	2,545,120	2,617,682
	- considered doubtful		8,911	8,911
			2,554,031	2,626,593
	- Income tax recoverable		4,406,044	4,129,422
	- Custom duty recoverable		9,812	9,812
	Security deposits and margins		9,812	10,195
	Receivable from Government of Pakistan	- note 26.3	248,359	812,388
	Other receivables - considered good		258,132	207,241
			<u>7,770,686</u>	<u>8,085,306</u>
	Provision for doubtful receivable		(8,911)	
			<u>7,761,775</u>	



**26.1** Included in advances to employees are amounts due from executives of Rs 5.760 million (2016: Rs 4.469 million).

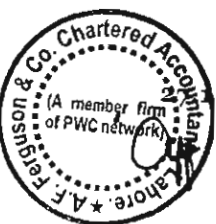
**26.2** Includes Rs 134.022 million which primarily represents the input sales tax paid by the company in respect of raw materials acquired before June 11, 2008 on which date fertilizer products manufactured by the company were exempted from levy of sales tax through notification SRO 535(I)/2008. The amount stood refundable to the company there being no output sales tax liability remaining payable on fertilizer products manufactured by the company against which such input sales tax was adjustable. The company's claim of refund on this account was not entertained by FBR on the premise that since subject raw materials were subsequently consumed in manufacture of a product exempt from levy of sales tax, claim was not in accordance with the relevant provisions of the Sales Tax Act, 1990.

Company's management being aggrieved with the interpretation advanced by FBR on the issue had preferred a writ petition before the Honorable Lahore High Court, which through its order dated January 31, 2017 has decided the matter in favour of the company. Based on the above order, management considers that the receivable amount is unimpaired at the balance sheet date.

**26.3** During the last year, a scheme was introduced by Government of Pakistan which remained effective from June 25, 2016 to June 30, 2017. Through this scheme, GoP had notified payment of subsidy on sold product at the rate of Rs 156 per 50 kg bag of Urea, Rs 300 per 50 kg bag of DAP, Rs 130 per 50 kg bag of NP and Rs 88 per 50 kg bag of CAN sold. The amount of subsidy was payable upon verification by FBR.

During the year, another scheme was announced by GoP which was effective from July 01, 2017. Through this scheme, GoP has notified payment of subsidy on sold product at the rate of Rs 100 per 50 kg bag of Urea sold. The amount of subsidy was payable upon verification by FBR.

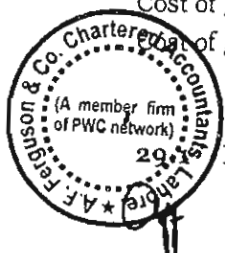
		2017	2016
		(Rupees in thousand)	
<b>27.</b>	<b>Cash and bank balances</b>		
	At banks on:		
- Saving accounts	- notes 27.1	57,119	114,877
- Current accounts		42,833	26,097
- Term deposit		-	250,000
		<u>99,952</u>	<u>390,974</u>
In hand		3,211	2,927
		<u>103,163</u>	<u>393,901</u>



Profit on balances in saving accounts ranges from 5% to 5.25% (2016: 5.25% to 5.75%) per annum.

		2017	2016
		(Rupees in thousand)	
<b>28.</b>	<b>Sales</b>		
Fertilizer products:			
- Own manufactured		13,026,714	12,379,024
- Purchased for resale		3,863,620	3,798,627
		16,890,334	16,177,651
Subsidy from Government of Pakistan	- note 26.4	939,962	1,444,211
Mid products		627,407	553,608
		18,457,703	18,175,470
Less:			
Sales tax		1,239,808	1,383,650
Sales incentive		686,466	615,856
		1,926,274	1,999,506
		16,531,429	16,175,964
<b>29.</b>	<b>Cost of sales</b>		
Raw material consumed	- note 29.1	7,701,249	7,395,842
Packing material consumed		262,462	219,534
		7,963,711	7,615,376
Salaries, wages and other benefits	- note 29.2	838,803	791,289
Fuel and power		2,002,898	1,905,332
Chemicals and catalysts consumed		229,414	260,642
Spare parts consumed		232,077	267,816
Stores consumed		80,331	97,450
Repairs and maintenance		124,618	141,812
Insurance		75,352	85,043
Depreciation on operating fixed assets	- note 19.1.3	564,076	519,832
Amortization on intangible assets	- note 20.2	21,000	21,000
Toll manufacturing charges and freight		-	16,467
Others	- note 29.3	62,222	69,142
		12,194,502	11,791,201
Opening stock of mid products		173,586	180,135
Closing stock of mid products		(60,274)	(173,586)
		113,312	6,549
Cost of goods manufactured		12,307,814	11,797,750
Opening stock of finished goods		3,556,004	4,707,754
Closing stock of finished goods		(2,664,794)	(3,556,004)
		891,210	1,151,750
Cost of goods sold - own manufactured		13,199,024	12,949,500
Cost of goods sold - purchased for resale		2,960,780	3,256,587
		16,159,804	16,206,087

Includes NRV write down expense of Rs 67.747 million (2016: Nil) relating to rock phosphate.



**29.2 Salaries, wages and other benefits**

**2017 2016**  
**(Rupees in thousand)**

Salaries, wages and other benefits include the following in respect of retirement benefits:

**Gratuity fund**

Current service cost	19,090	15,217
Interest cost for the year	8,702	10,949
Return on plan assets	(7,430)	(9,772)
	<u>20,362</u>	<u>16,394</u>

**Accumulating compensated absences**

Current service cost	5,417	3,050
Interest cost for the year	4,268	5,767
Remeasurements	(875)	79
	<u>8,810</u>	<u>8,896</u>

In addition to the above, salaries, wages and other benefits include Rs 17.012 million (2016: Rs 15.581 million) in respect of provident fund contribution by the company.

**29.3** Includes operating lease rentals amounting to Rs 19.258 million (2016: Rs 32.350 million).

**30. Administrative expenses**

**2017 2016**  
**(Rupees in thousand)**

Salaries, wages and other benefits	- note 30.1	291,821	250,335
Travelling and conveyance		15,409	12,878
Telephone, telex and postage		9,674	8,147
Stationery, printing and periodicals		5,404	5,715
Rent, rates and taxes	- note 30.2	40,960	34,180
Repairs and maintenance		18,595	24,163
Aircraft operating expenses	- note 30.3	145,606	120,806
Insurance		7,363	8,883
Legal and professional charges		21,679	45,317
Vehicle running expenses		3,221	712
Entertainment		4,708	3,304
Advertisement		36	443
Depreciation on operating fixed assets	- note 19.1.3	128,025	139,732
Amortization on intangible assets	- note 20.2	4,738	10,535
Others		38,852	28,619
	- note 30.4	<u>736,091</u>	<u>693,769</u>

**30.1 Salaries, wages and other benefits**

Salaries, wages and other benefits include the following in respect of retirement benefits:

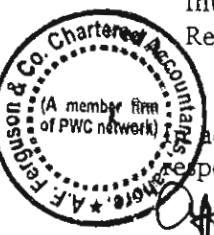
**Gratuity fund**

Current service cost	5,890	4,910
Interest cost for the year	2,685	3,533
Expected return on plan assets	(2,292)	(3,153)
Amount charged to FASS, a related party (group company)	-	(1,313)
	<u>6,283</u>	<u>3,977</u>

**Accumulating compensated absences**

Current service cost	1,582	1,352
Interest cost for the year	1,247	2,558
Remeasurements	(256)	35
	<u>2,573</u>	<u>3,945</u>

In addition to the above, salaries, wages and other benefits include Rs 5.695 million (2016: Rs 4.865 million) in respect of provident fund contribution by the company.



**30.2** Includes operating lease rentals amounting to Rs 16.380 million (2016: Rs 14.502 million).

**30.3** Includes expenses of Rs 48.949 million (2016: Rs 38.516 million) for flying and maintenance services of the company's aircraft by Air One (Private) Limited, a related party (due to common directorship) as per the Service Agreement.

**30.4** Includes amount aggregating Rs 174.063 million (2016: Rs 145.460 million) and Rs 40.146 million (2016: Rs 33.807 million) which represent common costs charged to the company by FATIMA and Fatimafert Limited ('FFL') related parties respectively (due to common directorship). Also, the amount is net of Rs 83.284 million (2016: Rs 77.775 million) and Rs 24.047 million (2016: Rs 25.484 million) which represent common costs charged by the company to FATIMA and FFL, related parties (due to common directorship) respectively.

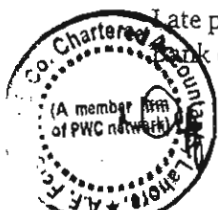
<b>31. Selling and distribution expenses</b>	<b>2017 (Rupees in thousand)</b>	<b>2016</b>
Salaries, wages and other benefits	38,048	30,225
Travelling and conveyance	3	1,144
Telephone, telex and postage	3,623	723
Stationery, printing and periodicals	1,464	2,328
Rent, rates and taxes	- note 31.1	96,283
Repairs and maintenance	9,155	2,132
Insurance	9,533	4,095
Vehicle running expenses	-	206
Entertainment	-	547
Advertisement and sale promotion	111,091	41,296
Depreciation on operating fixed assets	- note 19.1.3	1,087
Transportation and freight	661,204	564,557
Utilities	-	230
Marketing and distribution services fee	- note 31.2	143,312
Others	8,236	5,490
	- note 31.3	<u>1,083,039</u>
		<u>829,851</u>

**31.1** Includes operating lease rentals amounting to Rs 0.187 million (2016: Rs 39.508 million).

**31.2** This represents expense against marketing and distribution services provided by FASS, a related party (group company) as per the Services Agreement.

**31.3** Includes amounts aggregating Rs 240.160 million (2016: Rs 102.908 million) which represents common costs charged to the company by FATIMA, a related party (due to common directorship). Also, the amount is net of Rs 80.967 million (2016: Rs 162.693 million) and Nil (2016: Rs 22.178 million) which represents common costs charged by the company to FATIMA, a related party (due to common directorship) and FASS, a related party (group company).

<b>32. Finance cost</b>	<b>2017 (Rupees in thousand)</b>	<b>2016</b>
Interest/mark up on:		
- PPTFCs - secured	35,654	15,459
- Long term loans - secured	166,756	236,920
- Syndicate term finance - secured	407,679	1,660
- Long term loans from related parties - unsecured	- note 32.1	263,316
- Long term loan from related party - secured	- note 32.2	247,859
- Short term borrowing from related party - secured	- note 32.2	-
- Short term borrowings - secured	722,683	972,710
Loan arrangement fees and other charges	2,325	803
Amortisation of transaction cost	- notes 8.2.3 and 8.3	22,131
Discounting charges on bank guarantees discounted	179,541	104,923
Late payment surcharge	59,340	10,839
Bank charges	56,986	43,565
	<u>2,164,270</u>	<u>1,801,837</u>



2017 2016  
(Rupees in thousand)

32.1 This relates to the following related parties:

Fatima Holding Limited (due to common directorship)	62,790	7,890
Reliance Commodities (Private) Limited (due to common directorship)	46,208	69,800
International Complex Projects Limited (due to common directorship)	30,495	33,770
Arif Habib Equity (Private) Limited (due to common directorship)	7,755	-
Member and Chairman's spouse	32,137	28,980
Chairman's children	16,651	9,240
Directors	67,280	34,546
	<u>263,316</u>	<u>184,243</u>

32.2 These relate to FATIMA, a related party (due to common directorship).

2017 2016  
(Rupees in thousand)

33. Other expenses

Donations	- note 33.1	5,379	15,681
Exchange loss		7,160	-
		<u>12,539</u>	<u>15,681</u>

33.1 Includes an amount of Rs 2.779 million (2016: Rs 13.281 million) donated to Mukhtar A. Sheikh Trust, a related party (due to common directorship).

2017 2016  
(Rupees in thousand)

34. Other income

Income from financial assets:

Income on bank deposits		5,895	4,460
Unrealised gain on investment held to maturity	- note 22.4	5,897	5,258
Mark up on credit sale of fertilizers		3,791	1,823
Exchange gain		-	827
		<u>15,583</u>	<u>12,368</u>

Income from non-financial assets:

Rental income	- note 34.1	15,927	15,517
Profit on disposal of operating fixed assets		2,352	5,965
Scrap sales and sundry income		12,971	11,979
Provisions and unclaimed balances written back		33,645	294,447
Income from biological laboratory		-	4,406
Excess insurance premium refunded		1,265	7,185
Others		26,491	-
		<u>92,651</u>	<u>339,499</u>
		<u>108,234</u>	<u>351,867</u>

34.1 Includes rental income for accommodation provided to the employees of the following related parties:

	2017	2016
	(Rupees in thousand)	
FATIMA (due to common directorship)	479	392
Fatima Energy Limited (due to common directorship)	1,252	1,374
Reliance Weaving Mills Limited (due to common directorship)	636	694
FASS (due to common directorship)	90	459
Fatima Sugar Mills Limited (due to common directorship)	-	18
	<u>2,457</u>	<u>2,937</u>

### 35. Taxation

Current tax - For the year		255,053	145,206
Deferred tax	- note 13	170,754	(1,237,513)
		<u>425,807</u>	<u>(1,092,307)</u>

35.1 As explained in note 4.1 to these financial statements, the company's provision for taxation (current and deferred) is based on the consolidated results of the Group.

	2017 % age	2016 % age
35.2 Tax charge reconciliation		
Numerical reconciliation between the average effective tax rate and the applicable tax rate		
Applicable tax rate	30.00	31.00

Tax effect of:

- Amounts that are not deductible for tax purposes
- Amounts that are not chargeable for tax purposes
- Allowable as tax credit
- Deferred tax asset not recognized on tax losses
- Deferred tax asset not recognized on minimum tax available for carry forward
- Group taxation as explained in note 4.1
- Change in tax rate
- Change in prior years' tax
- Chargeable as a separate block of income
- Income chargeable under final tax regime

(0.59)	(0.82)
8.02	17.59
0.01	0.08
(29.24)	-
(14.22)	(8.50)
(0.86)	(1.02)
-	(1.50)
(0.07)	(0.65)
0.14	-
(5.30)	-
<u>(42.11)</u>	<u>5.18</u>
<u>(12.11)</u>	<u>36.18</u>

Average effective tax rate

2017 2016  
(Rupees in thousand)

36. Cash (used in)/generated from operations

Loss before taxation	(3,516,080)	(3,019,394)
Adjustments for non-cash charges and other items:		
- Depreciation on operating fixed assets	693,188	661,848
- Amortization on intangible assets	25,738	31,535
- Retirement benefits accrued	38,029	34,525
- Profit on disposal of operating fixed assets	(2,352)	(5,965)
- Provisions and unclaimed balances written back	(33,645)	(294,447)
- Finance cost	2,164,270	1,801,837
- Income on bank deposits	(5,895)	(4,460)
- Unrealised gain on investment held to maturity	(5,898)	(5,258)
- Exchange loss/(gain)	7,160	(827)
- NRV write down	153,746	500,000
Loss before working capital changes	(481,739)	(300,606)
Effect on cash flow due to working capital changes		
- (Increase)/decrease in stores and spare parts	(345,830)	59,108
- (Increase)/decrease in stock-in-trade	(212,630)	3,090,678
- Decrease/(increase) in trade debts	829,732	(274,056)
- Decrease in advances, deposits prepayments and other receivables	591,095	1,576,961
- Decrease in trade and other payables	(873,831)	(1,161,686)
	(11,464)	3,291,005
	(493,203)	2,990,399

37. Cash and cash equivalents

Short term borrowings	- note 14	(10,778,789)	(9,173,126)
Cash and bank balances	- note 27	103,163	393,901
		(10,675,626)	(8,779,225)

38. Transactions with related parties

The related parties include subsidiaries, group companies, related parties on the basis of common directorship, key management personnel and post employment benefit plans. The company in the normal course of business carries out transactions with various related parties. Amounts due from and due to related parties are shown under receivables and payables and remuneration of the key management personnel is disclosed in note 39 to these financial statements. Significant related party transactions have been disclosed in respective notes in these financial statements except for the following:

Relationship with the company	Nature of transactions	2017 (Rupees in thousand)	2016
i. Subsidiary	Purchase of goods	291,741	214,095
ii. Other related parties	Sale of goods	-	32,312
	Purchase of goods	-	138,226
Post employment benefit plans	Expense charged in respect of retirement benefit plans	49,351	42,017



39.1 The aggregate amounts charged during the year in respect of remuneration, including certain benefits, to the Chief Executive, Directors and Executives of the company are given below:

	Chief Executive		Executive Directors		Non-Executive Directors		Executives	
	2017	2016	2017	2016	2017	2016	2017	2016
	(Rupees in thousand)							
Short term employee benefits								
Managerial remuneration	-	-	-	-	5,673	5,673	258,069	236,329
Housing rent	-	-	-	-	-	-	84,117	72,729
Utilities	-	-	-	-	-	-	18,693	16,162
Conveyance	-	-	-	-	-	-	18,693	16,162
Incentive/bonus	-	-	-	-	-	-	13,468	22,164
Medical expenses	-	-	-	-	567	567	12,877	7,505
Leave passage	-	-	-	-	945	945	30,348	26,437
Others	-	-	-	-	-	-	14,131	10,041
	-	-	-	-	7,185	7,185	450,396	407,529
Post employment benefits								
Contribution to provident and gratuity funds	-	-	-	-	-	-	32,809	29,051
Other long term benefits								
Accumulating compensated absences	-	-	-	-	-	-	9,229	10,496
	-	-	-	-	7,185	7,185	492,434	447,076
Number of persons	1	1	1	1	6	6	157	147

The company also provides the chief executive, directors and some of its executives with company maintained cars, travel facilities and club membership.



		2017	2016
<b>40.</b>	<b>Capacity and production</b>		
	<b>Urea</b>		
	Rated production capacity	M. Tons 92,400	92,400
	Actual Urea produced	M. Tons 39,608	49,283

The low production of Urea is due to shortage of feed gas and periodical maintenance.

	<b>NP</b>		
	Rated production capacity	M. Tons 304,500	304,500
	Actual NP produced	M. Tons 209,687	179,124

The low production of NP is due to shortage of feed gas and periodical maintenance.

	<b>CAN</b>		
	Rated production capacity	M. Tons 450,000	450,000
	Actual CAN produced	M. Tons 168,101	157,071

The low production of CAN is due to shortage of feed gas and periodical maintenance.

#### 41. Disclosures relating to Provident Fund

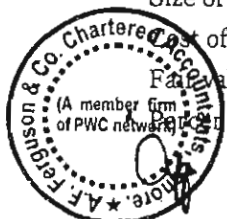
The company operates two provident funds:

- (i) Employees' Provident Fund Trust, Lahore ('Provident Fund Lahore')
- (ii) Employees' Provident Fund Trust, Multan ('Provident Fund Multan')

The following information is based on the audited financial statements of the Funds as at June 30, 2017 and audited financial statements of the Funds as at June 30, 2016:

	2017	2016
<b>Provident Fund Lahore</b>	<b>(Rupees in thousand)</b>	
Size of the Fund - total assets	327,043	293,170
Cost of investments out of the Fund	279,331	236,198
Fair value of investments out of the Fund	287,574	244,686
Percentage of investments out of the Fund	88%	83%

	2017	2016
<b>Provident Fund Multan</b>	<b>(Rupees in thousand)</b>	
Size of the Fund - total assets	94,325	80,173
Cost of investments out of the Fund	85,665	66,323
Fair value of investments out of the Fund	87,271	67,662
Percentage of investments out of the Fund	93%	84%



## Break up of fair value of investments out of the Funds

Provident Fund Lahore	2017		2016	
	(Rupees in thousand)	% of size of fund	(Rupees in thousand)	% of size of fund
Mutual funds - listed	134,745	41%	55,839	19%
Term deposits - scheduled banks	72,498	22%	127,436	43%
Saving accounts in scheduled banks	80,331	25%	61,411	21%
	<b>287,574</b>	<b>88%</b>	<b>244,686</b>	<b>83%</b>

Provident Fund Multan	2017		2016	
	(Rupees in thousand)	% of size of fund	(Rupees in thousand)	% of size of fund
Mutual funds - listed	10,040	11%	12,770	16%
Term deposits - scheduled banks	27,785	29%	39,297	49%
Saving accounts in scheduled banks	49,446	52%	15,595	19%
	<b>87,271</b>	<b>93%</b>	<b>67,662</b>	<b>84%</b>

The investments out of the Funds have been made in accordance with the provisions of section 218 of the Companies Act, 2017 and the Employees' Provident Fund (Investment in Listed Securities) Rules, 2016 ('Rules') formulated for this purpose except for:

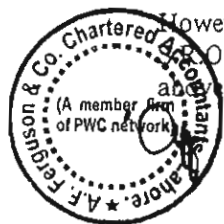
### Provident Fund Lahore

- Aggregate investment in money market listed collective investment schemes managed by UBL Fund Managers Limited exceeds 20% of size of the fund.
- Investments in UBL Al-Ameen Aggressive Islamic Income Fund and NAFA Islamic Income Fund in excess of 10% of size of the fund.
- Investments made in money market listed collective investment schemes do not have a minimum rating of 'AA' by a credit rating company.

### Provident Fund Multan

- Investment in UBL Al-Ameen Islamic Principal Preservation Fund in excess of 10% of size of the fund.

However, as per S.R.O 770(1)/2016 dated August 17, 2016, a transition period of two years from the date of the said S.R.O has been granted to bring all the investments of the provident fund in conformity with the provisions of the Rules.



## 42. Financial risk management

### 42.1 Financial risk factors

The company is exposed to a variety of financial risks: market risk (including currency risk, other price risk and interest rate risk), credit risk and liquidity risk. The company's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the financial performance.

Risk management is carried out by the company's Board of Directors (the 'Board'). The company's finance department evaluates and hedges financial risks. The Board provides written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity.

The company's overall risk management procedures that minimize potential adverse effects of financial market on the company are as follows:

#### a) Market risk

##### i) Currency risk

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. Currency risk arises mainly from future commercial transactions or receivables and payables that exist due to transactions in foreign currencies.

The company is exposed to currency risk arising from various currency exposures, primarily with respect to the United States Dollar (USD) and Euro. Currently, the company's foreign exchange risk exposure is restricted to bank balances.

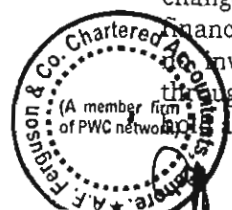
	2017	2016
Amount payable - USD	-	4,822,026
Cash and bank balances - USD	(11,661)	(11,644)
Net (asset)/liability exposure - USD	<u>(11,661)</u>	<u>4,810,382</u>
Cash and bank balances - Euro	(4,295)	(4,295)
Net asset exposure - Euro	<u>(4,295)</u>	<u>(4,295)</u>

At December 31, 2017 if the Rupee had weakened/strengthened by 5% against the USD with all other variables held constant, the impact on pre tax loss for the year would have been Rs 0.064 million (2016: Rs 25.156 million) higher/lower, mainly as a result of exchange losses/gains on translation of USD denominated financial instruments.

At December 31, 2017 if the Rupee had weakened/strengthened by 5% against the Euro with all other variables held constant, the impact on pre tax loss for the year would not have been material.

##### ii) Other price risk

Other price risk represents the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk), whether those changes are caused by factors specific to the individual financial instrument or its issuer, or factors affecting all similar financial instruments traded in the market. The company is not materially exposed to equity price risk since there are no investments in equity instruments traded in the market either classified as available-for-sale or at fair value through profit or loss at the reporting date. The company is also not exposed to commodity price risk since it does not hold any financial instrument based on commodity prices.



### iii) Interest rate risk

Interest rate risk represents the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

The company's interest rate risk arises from long term finances/loans and short term borrowings. Borrowings obtained and loans provided at variable rates expose the company to cash flow interest rate risk.

At the balance sheet date, the interest rate profile of the company's significant interest bearing financial instruments was:

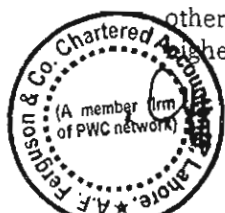
	2017	2016
	(Rupees in thousand)	
<b>Fixed rate instruments:</b>		
<b>Financial assets</b>		
Investment (Defence Saving Certificates)	54,434	48,536
Trade debts	1,980,473	2,779,594
Bank balances - saving accounts and term deposit	57,119	364,877
	<u>2,092,026</u>	<u>3,193,007</u>
<b>Financial liabilities</b>	-	-
<b>Net exposure</b>	<u>2,092,026</u>	<u>3,193,007</u>
<b>Floating rate instruments:</b>		
<b>Financial assets</b>	-	-
<b>Financial liabilities</b>		
Long term loans from related parties	6,872,693	5,917,722
Long term finances	7,399,985	6,753,667
Short term borrowings	10,778,789	9,173,126
	<u>25,051,467</u>	<u>21,844,515</u>
<b>Net exposure</b>	<u>(25,051,467)</u>	<u>(21,844,515)</u>

### Fair value sensitivity analysis for fixed rate instruments

The company does not account for any fixed rate financial assets and liabilities at fair value through profit or loss. Therefore, a change in interest rate at the balance sheet date would not affect profit or loss of the company.

### Cash flow sensitivity analysis for variable rate instruments

If interest rates on variable rate financial instruments, at the year end date, fluctuates by 1% higher/lower with all other variables held constant, pre tax loss for the year would have been Rs 247.943 million (2016: Rs 218.540 million) higher/lower, mainly as a result of higher/lower interest expense on floating rate instruments.



## b) Credit risk

Credit risk represents the risk of financial loss being caused if counter party fails to discharge an obligation.

Credit risk of the company arises from cash and cash equivalents and deposits with banks and financial institutions, as well as credit exposures to customers, including outstanding receivables and committed transactions. The management assesses the credit quality of the customers, taking into account their financial position, past experience and other factors. Individual risk limits are set based on internal or external ratings in accordance with limits set by the Board. The utilisation of credit limits is regularly monitored and major sales to customers are settled in cash. For banks and financial institutions, only independently rated parties with a strong credit rating are accepted.

The company monitors the credit quality of its financial assets with reference to historical performance of such assets and available external credit ratings. The carrying values of financial assets which are neither past due nor impaired are as under:

	2017	2016
	(Rupees in thousand)	
Long term investments	54,434	48,536
Security deposits	41,892	36,785
Trade debts	1,512,650	2,126,227
Advances, deposits and other receivables	267,944	217,440
Cash and bank balances	99,952	390,974
	<u>1,976,872</u>	<u>2,819,962</u>

The company's exposure to credit risk is limited to the carrying amount of unsecured trade receivables and bank balances. The ageing analysis of trade receivable balances is as follows:

	2017	2016
	(Rupees in thousand)	
Neither past due nor impaired	1,512,650	2,126,227
Past due but not impaired:		
1 to 90 days	176,048	246,100
91 to 180 days	138,200	184,575
181 to 270 days	158,885	212,371
above 270 days	82,741	128,983
	555,874	772,029
	<u>2,068,524</u>	<u>2,898,256</u>

The management estimates the recoverability of trade receivables on the basis of financial position and past history of its customers based on the objective evidence that it will not receive the amount due from the particular customer. A provision for doubtful debts is established when there is objective evidence that the company will not be able to collect all the amount due according to the original terms of the receivable. Significant financial difficulties of the debtors, are considered indicators that the trade debt is impaired. The provision is recognised in the profit and loss account. The provision is written off by the company when it expects that it cannot recover the balance due. Any subsequent recoveries in relation to amount written off, are credited directly to profit and loss account.



The credit quality of company's financial assets (majorly bank balances) that are neither past due nor impaired can be assessed by reference to external credit ratings as follows:

	Rating		Rating Agency	2017	2016
	Short term	Long term		(Rupees in thousand)	(Rupees in thousand)
Al Baraka Bank (Pakistan) Limited	A1	A	PACRA	4,744	3,372
Allied Bank Limited	A1+	AA+	PACRA	-	100
Summit Bank Limited	A-1	A-	JCR-VIS	5,968	100,230
Bank Alfalah Limited	A1+	AA+	PACRA	39	38
Dubai Islamic Bank Limited	A-1	AA-	JCR-VIS	2	2
Faysal Bank Limited	A1+	AA	PACRA	2,328	3,271
Habib Bank Limited	A-1+	AAA	JCR-VIS	1,922	254,508
Habib Metropolitan Bank Limited	A1+	AA+	PACRA	22	12
MCB Bank Limited	A1+	AAA	PACRA	18,527	9,626
Meezan Bank Limited	A-1+	AA+	JCR-VIS	5,190	7,971
National Bank of Pakistan	A1+	AAA	PACRA	1,706	1,706
Standard Chartered Bank (Pakistan) Limited	A1+	AAA	PACRA	3,045	2,029
United Bank Limited	A-1+	AAA	JCR-VIS	40,881	4,865
Zarai Taraqati Bank Limited	A-1+	AAA	JCR-VIS	61	60
BankIslami Pakistan Limited	A1	A+	PACRA	6,845	3,135
Sindh Bank Limited	A-1+	AA	JCR-VIS	391	42
The Bank of Khyber	A1	A	PACRA	7	7
Soneri Bank Limited	A1+	AA-	PACRA	552	-
Bank Al Habib Limited	A1+	AA+	PACRA	7,723	-
				<u>99,952</u>	<u>390,974</u>

Due to the company's long standing business relationships with these counterparties and after giving due consideration to their strong financial standing, management does not expect non-performance by these counterparties on their obligations to the company. Accordingly, the credit risk is minimal.

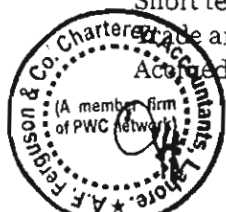
### c) Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities.

The company's approach to managing liquidity is to ensure that, as far as possible, it always has sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable loss or risking damage to the company's reputation.

The following are the contractual maturities of financial liabilities as at December 31, 2017 and December 31, 2016:

	(Rupees in thousand)			
	Carrying amount	Less than one year	One to five years	More than five years
<b>At December 31, 2017</b>				
Long term finances	7,399,985	1,891,665	5,508,320	-
Long term loan from related parties	6,872,693	-	6,872,693	-
Long term deposits	46,734	-	-	46,734
Short term borrowings	10,778,789	10,778,789	-	-
Trade and other payables	5,340,908	5,340,908	-	-
Accrued mark up	844,360	844,360	-	-
	<u>31,283,469</u>	<u>18,855,722</u>	<u>12,381,013</u>	<u>46,734</u>



At December 31, 2016

(Rupees in thousand)				
	Carrying amount	Less than one year	One to five years	More than five years
Long term finances	6,753,667	1,081,747	5,671,920	-
Long term loan from related parties	5,917,722	-	5,917,722	-
Long term deposits	36,580	-	-	36,580
Short term borrowings	9,173,126	9,173,126	-	-
Trade and other payables	6,206,507	6,206,507	-	-
Accrued mark up	638,792	638,792	-	-
	<u>28,726,394</u>	<u>17,100,172</u>	<u>11,589,642</u>	<u>36,580</u>

#### 42.2 Fair value estimation

Fair value is the amount for which an asset could be exchanged, or liability settled, between knowledgeable willing parties in an arm's length transaction. Underlying the definition of fair value is the presumption that the company is a going concern without any intention or requirement to curtail materially the scale of its operations or to undertake a transaction on adverse terms. The carrying values of all financial assets and liabilities reflected in these financial statements approximate their fair values. Fair value is determined on the basis of objective evidence at each reporting date. The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

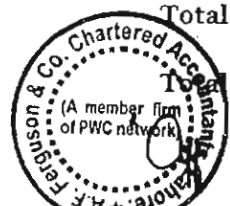
- Quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2).
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (level 3).

The following table presents the company's assets and liabilities that are measured at fair value at December 31, 2017.

(Rupees in thousand)				
	Level 1	Level 2	Level 3	Total
<b><i>Recurring fair value measurements</i></b>				
<b>Available-for-sale</b>				
Ordinary shares of FPL	-	-	435,442	435,442
<b>Total assets</b>	<u>-</u>	<u>-</u>	<u>435,442</u>	<u>435,442</u>
<b>Total liabilities</b>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

The following table presents the company's assets and liabilities that are measured at fair value at December 31, 2016.

(Rupees in thousand)				
	Level 1	Level 2	Level 3	Total
<b><i>Recurring fair value measurements</i></b>				
<b>Available-for-sale</b>				
Ordinary shares of FPL	-	-	352,625	352,625
<b>Total assets</b>	<u>-</u>	<u>-</u>	<u>352,625</u>	<u>352,625</u>
<b>Total liabilities</b>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>



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Movement in the above mentioned assets has been disclosed in note 22.1.1 to these financial statements and movement in fair value reserve has been disclosed in the statement of changes in equity. There were no transfers between Levels 1 and 2 & Levels 2 and 3 during the year and there were no changes in valuation techniques during the years. Since FPL's ordinary shares are not listed, an investment advisor engaged by the company has estimated a fair value of Rs 25.82 per ordinary share as at December 31, 2017 through a valuation technique based on discounted cash flow analysis of FPL. The company's policy is to recognise transfers into and transfers out of fair value hierarchy levels as at the end of the reporting period. Changes in level 2 and 3 fair values are analysed at the end of each reporting period during the annual valuation discussion between the Chief Financial Officer and the investment advisor. As part of this discussion, the investment advisor presents a report that explains the reason for the fair value movements.

The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by the company is the current bid price. These instruments are included in Level 1.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximise the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3.

Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments.
- The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows based on observable yield curves.
- Other techniques, such as discounted cash flow analysis, are used to determine fair value for the remaining financial instruments.

The carrying value less impairment provision of trade and other receivables, and payables are assumed to approximate their fair values. The fair value of financial liabilities for disclosure purposes is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the company for similar financial instruments. The carrying values of all financial assets and liabilities reflected in the financial statements approximate their fair values.

#### 42.3 Financial instruments by categories

	Available-for-sale	Assets at fair value through profit or loss	Held to maturity	Loans and receivables	Total
	(Rupees in thousand)				
As at December 31, 2017					
Assets as per balance sheet					
Security deposits	-	-	-	41,892	41,892
Trade debts	-	-	-	2,068,524	2,068,524
Advances, deposits, prepayments and other receivables	-	-	-	267,944	267,944
Investments	435,442	-	54,434	-	489,876
and bank balances	-	-	-	103,163	103,163
	435,442	-	54,434	2,481,523	2,971,399



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**Financial liabilities at  
amortized cost  
(Rupees in thousand)**

**As at December 31, 2017**

**Liabilities as per balance sheet**

Long term finances	7,399,985
Long term loans from related parties	6,872,693
Long term deposits	46,734
Short term borrowings	10,778,789
Trade and other payables	5,340,908
Accrued mark up	844,360
	<u>31,283,469</u>

Available-for- sale	Assets at fair value through profit or loss	Held to maturity	Loans and receivables	Total
(Rupees in thousand)				

**As at December 31, 2016**

**Assets as per balance sheet**

Security deposits	-	-	-	36,784	36,784
Trade debts	-	-	-	2,898,256	2,898,256
Advances, deposits and other receivables	-	-	-	217,440	217,440
Investments	352,625	-	48,536	-	401,161
Cash and bank balances	-	-	-	393,901	393,901
	<u>352,625</u>	<u>-</u>	<u>48,536</u>	<u>3,546,381</u>	<u>3,947,542</u>

**Financial liabilities at  
amortized cost  
(Rupees in thousand)**

**As at December 31, 2016**

**Liabilities as per balance sheet**

Long term finances	6,753,667
Long term loan from related parties	5,917,722
Long term deposits	36,580
Short term borrowings	9,173,126
Trade and other payables	6,206,507
Accrued mark up	638,792
	<u>28,726,394</u>

42.4

**Offsetting financial assets and financial liabilities**

There are no significant financial assets and financial liabilities that are subject to offsetting, enforceable master netting arrangements and similar agreements.



The company's objectives when managing capital are to safeguard the company's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the company may adjust the amount of dividends paid to shareholders, return capital to shareholders through repurchase of shares, issue new shares or sell assets to reduce debt. Consistent with others in the industry and the requirements of the lenders, the company monitors the capital structure on the basis of gearing ratio. This ratio is calculated as net debt divided by total capital employed. Net debt is calculated as total borrowings (including current and non-current borrowings) less cash and cash equivalents. Total capital employed includes equity as shown in the balance sheet plus net debt.

The gearing ratios as at December 31, 2017 and 2016 were as follows:

	2017	2016
	(Rupees in thousand)	
Borrowings - notes 8, 9 & 10	14,272,678	12,671,389
Less: Cash and cash equivalents - note 37	(10,675,626)	(8,779,225)
Net debt	<u>24,948,304</u>	<u>21,450,614</u>
Total equity (includes surplus on revaluation of operating fixed assets)	19,701,914	22,007,339
Gearing ratio	Percentage	
	56%	49%

In accordance with the terms of agreements with certain lenders of long term finances, the company is required to comply with certain financial covenants. The company has complied with these covenants throughout the reporting period except for certain covenants for which the lenders have not raised any objection to the company.

	2017	2016
43. Number of employees		
Total number of employees as at December 31	<u>677</u>	<u>677</u>
Average number of employees during the year	<u>661</u>	<u>661</u>

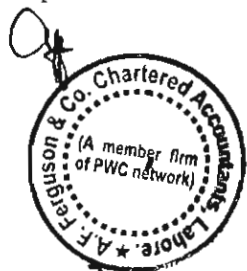
#### 44. Corresponding figures

Corresponding figures have been reclassified wherever necessary to reflect more appropriate presentation of events and transactions for the purpose of comparison. However, no significant reclassification has been made.

46. Events after the balance sheet date

46.1 As referred to in note 21, through a Memorandum of Understanding signed with MPCL dated February 2, 2018, the company and MPCL have formalized the intention to enter into an agreement for sale and purchase of natural gas from MPCL's Mari gas fields for a period of seven years, extendable based on gas availability.

46.2 The company's Board of Directors has approved the sale of Bombardier Aircraft Challenger 605 and related building and equipment to FATIMA, a related party (due to common directorship) having carrying amounts of Rs 1,572.964 million and Rs 31.986 million respectively as at the balance sheet date, for a price of Rs 1,600 million and upon such terms and conditions as the company's Board of Directors deem fit.



Chief Executive

Director



**RESOLUTION THROUGH CIRCULATION PASSED BY THE BOARD OF DIRECTORS  
OF M/S PAKARAB FERTILIZERS LIMITED (THE "COMPANY") ON JULY 20, 2018.**

**Resolved,** that Company be and is hereby authorized to apply to Oil and Gas Regulatory Authority ("OGRA") for grant of licence to carry out regulated activity of transmission of natural gas from Mari Gas Field to Pakarab Fertilizers Limited at Khanewal Road Multan.

**Resolved further,** that Mr. Fawad Ahmed Mukhtar, Chief Executive Officer, Mr. Fazal Ahmed Sheikh, Director, Mr. Iftikhar Mahmood Baig, Director Business Development and Mr. Saqib Aziz, Manager Business Development be and are hereby individually/singly authorized to submit the application and the required supporting documentation in the form and manner prescribed by OGRA, to represent the Company at OGRA and its registration office to sign off various forms/documents, to submit all documents, papers, evidence and information, as may be required by OGRA, to issue requisite certificates, undertakings and documents to provide necessary information, feed-back and supplementary documents and to submit his opinion as to accuracy and completion of any information and documents and other papers on behalf of the Company and to do any and all ancillary acts, deeds, matters and things that he considers appropriate or advisable in connection with the application and the representation of the interests of the Company in connection therewith.

**CERTIFIED TO BE A TRUE COPY**

I hereby certify that the above resolution was duly passed through circulation by the Board of Directors on July 20, 2018.

  
Ausaf Ali Qureshi  
Company Secretary 

#### Rule 4 Sub Rule (3)

(h) Details of the technical and financial expertise and resources available for carrying on the relevant regulated activities;

Fatima Group (FG) is a business conglomerate with substantial operations in Fertilizer (Fatima Fertilizer Company Limited, Pakarab Fertilizers Limited and FatimaFert Limited (formerly Dawood Hercules Fertilizer), Power, Textile, Mining, Sugar, Commodities, Packaging etc. and has vast experience in:

- (a) Operation and maintenance of 48 km Pipeline from MPCL to FFL facility and associated compression facility
- (b) Engineering, Procurement, Construction and Commissioning of large scale, state of the art Chemical Plants
- (c) Successful and Safe Operations and Maintenance of plants and pipeline
- (d) Large scale Plants relocation and refurbishment

With an annual turnover of ~USD 950 Million and over 10,000 employees, the group holds all the required Technical & Financial expertise for execution of relevant regulated activities including but not limited to:

- (a) **Exceptional Technical Team:** A multi-disciplinary team of engineers capable of undertaking any state of the art project from implementation to operations. The team has successfully self-managed many projects of worth > 1 Billion PKR.
- (b) **Project & Business Management:** Establishment of a world scale processing plant from conceptualization to construction / erection and then to startup of successful operations.
- (c) **Operation and Maintenance:** Strong O&M Experience of large processing facilities. International liaising with world renowned EP+C contractors e.g. Kawasaki Heavy Industries, Sojitz, KBR, TKIS, CNCEC, etc.
- (d) **Financial Capability:** A group with a Total Asset base of USD 2.3 Billion having excellent relationships with Local & International Banks.
- (e) **Business Management Capability:** Proven experience of management of large and complex industrial /Commercial Organizations across industries like Fertilizers, Energy, Sugar, Chemicals, Textiles, Packaging, Mining etc.
- (f) **Technology Skill & Expertise:** Highly experienced operations and engineering teams with ability to pre-commission, commission, startup and operate world scale process plants.

#### Rule 4 Sub Rule (3)

(i) Details of the resources and expertise available to handle emergency situations arising out of natural calamities, accidental or criminal acts or omissions, specifying which such resources are available and which are to be procured;

Fatima group is successfully managing ~48 km pipeline of 20" dia since past 10 years. The pipeline and other facilities are designed in accordance with international standards and to withstand natural calamities including earthquake and flood protection etc. The major portion of pipeline is underground and inherently safe from natural calamities. Similar design is being proposed for the new pipeline. Fatima has put in place various security regimes and collaborated with multiple security contractors to ensure safety and security of its installations. Hiring of influential locals for security purposes is part of our security policy.

Fatima Group management is committed to maintain a high state of emergency preparedness by educating employees and surrounding communities to their roles and responsibilities, conducting regular vulnerability assessments, regular reviewing and revising policies and procedures, providing prepositioned emergency response resources and routinely testing and evaluating emergency response procedure.

In responding to major emergencies priority will always be placed on preventing or minimizing harm or injury to individuals and minimizing adverse effects of emergency to company personnel, contractors, the environment, surrounding communities and assets and restoring normal operations in the safe and shortest possible time frame.

Fatima Group maintains following resources as minimum at all of its facilities to proactively handle any emergency situation and same is planned for the proposed facility:

1. Plant Emergency trip systems with remote emergency shutdown capability
2. Site Emergency Siren
3. Hotline/ Emergency Communication System
4. Onsite Emergency Response Team (ERT) consisting of trained operational, HSE & maintenance staff
5. Emergency & Safety Equipment
6. Onsite Firefighting System
7. Onsite Medical Facility
8. Fatima's Integral Security – well armed, highly trained ex- Army servicemen.
9. Mutual Assistance from neighboring companies/ government agencies.
10. Emergency Management Plan - This procedure is intended to reflect the basic response of individuals should be taken in the most common emergencies (fire, explosions, etc.) likely to be experienced at the plants and to define the management model to be employed when company employees must respond to major emergencies of all types.

PARTICULARS OF DIRECTORS AND OFFICERS, INCLUDING THE CHIEF EXECUTIVE, MANAGING AGENT, SECRETARY, CHIEF ACCOUNTANT, AUDITORS AND LEGAL ADVISERS, OR OF ANY CHANGE THEREIN

THE COMPANIES ORDINANCE, 1984

FORM 29

[SECTION 205]

1. Incorporation Number: 0004235

2. Name of Company: ☒ PAK-ARAB FERTILIZERS LIMITED

3. Fee Paid (Rs.): 600.0 Name and Branch of Bank: LAHORE, MCB - Cavalry Ground [1508]

4. Receipt No.: E-2016-110774 14/01/2016

5. Mode of Payment (Indicate): Bank Challan

6. Particulars\*:

6.1 New Appointment/Election

Present Name in Full (a)	NIC No. or Passport No. in case of Foreign National (b)	Father / Husband Name (c)	Usual Residential Address (d)	Designation (e)	Nationality (f)	Business Occupation (g)	Date of Present Appointment or Change (h)	Mode of Appointment / change / any other remarks (i)
FAWAD AHMED MUKHTAR	3630227412747	MIAN MUKHTAR AHMED SH	43-A, QASIM ROAD, MULTAN CANTT.	Chief Executive	Pakistan		31/12/2015	Re-Appointment
NASIM BEG	4230155584683	SAFDAR BEG	F-61/6 BLOCK IV CLIFTON, KARACHI	Director	Pakistan		31/12/2015	Re-Elected
FAISAL AHMED MUKHTAR	3630263437249	MIAN MUKHTAR AHMED SH.	43-A, QASIM ROAD, MULTAN CANTT.	Director	Pakistan		31/12/2015	Re-Elected
REHMAN NASEEM	3630253487981	MIAN NASEEM AHMAD SH	59-C, ABDALI ROAD, MULTAN	Director	Pakistan		31/12/2015	Re-Elected
FAZAL AHMED SHEIKH	3630205432419	MIAN MUKHTAR AHMED SH.	43-A, QASIM ROAD, MULTAN CANTT.	Director	Pakistan		31/12/2015	Re-Elected
ABDUS SAMAD	4200005480371	ARIF HABIB	86/2 10 TH STREET KHAYBAN-E-BEHR, PHASE VI, D.H.A. KARACHI.	Director	Pakistan		31/12/2015	Re-Elected
ARIF HABIB	42301101565	HABIB HAJI	86/2, 10 TH STREET	Director	Pakistan		31/12/2015	Re-Elected

ATTESTED  
TO BE TRUE COPY OF ORIGINAL

*[Signature]*  
Company Secretary

ARIF HABIB	42000-0548030-3	RABIA FARU SHAKEER	86/2, 10TH STREET, KHAYBAN-E-SHR, PHASE VI, D.H.A. KARACHI.	Director	Pakistan	31/12/2015	Re-Elected
PAWAD AHMED MUKHTAR	3630227412747	MIAN MUKHTAR AHMED SH.	43-A, OASIM ROAD, MULTAN CANTT.	Director	Pakistan	31/12/2015	Re-Elected
MUHAMMAD KASHIF HABIB	42000-0548030-3	MUHAMMAD ARIF HABIB	86/2, 10TH STREET, KHAYBAN-E-SHR, PHASE VI, D.H.A. KARACHI	Director	Pakistan	31/12/2015	Re-Elected

## 5.2. Ceasing of Officer/Retirement/Resignation

Present Name in Full (a)	NIC No. or Passport No. in case of Foreign National (b)	Father / Husband Name (c)	Usual Residential Address (d)	Designation (e)	Nationality (f)	Business Occupation (if any) (g)	Date of Present Appointment or Change (h)	Mode of Appointment / change / any other remarks (i)

## 6.3. Any other change in particulars relating to columns (a) to (g) above

Present Name in Full (a)	NIC No. or Passport No. in case of Foreign National (b)	Father / Husband Name (c)	Usual Residential Address (d)	Designation (e)	Nationality (f)	Business Occupation (if any) (g)	Date of Present Appointment or Change (h)	Mode of Appointment / change / any other remarks (i)

Name of Signatory

AUSAF ALI QURESHI

Designation

Secretary

Signature of Chief Executive/Secretary

Date (DD/MM/YYYY)

14/01/2016

ATTESTED  
TO BE TRUE COPY OF ORIGINAL  
*Ausaf Ali Qureshi*  
Company Secretary

## List of Senior Management and Departmental/Divisional Heads

### Senior Management

Mr. Arif Habib	Chairman	2nd Floor, Arif Habib Centre 23 M.T. Khan Road, Karachi
Mr. Fawad Ahmed Mukhtar	CEO	E-110, Khayaban-e-Jinnah, Lahore Cantt., Lahore
Mr. Fazal Ahmed Sheikh	Executive Director	E-110, Khayaban-e-Jinnah, Lahore Cantt., Lahore
Mr. Faisal Ahmed Mukhtar	Non-Executive Director	E-110, Khayaban-e-Jinnah, Lahore Cantt., Lahore
Mr. Rehman Naseem	Non-Executive Director	59/3 Abdali Road, Multan
Mr. Nasim Beg	Non-Executive Director	2nd Floor, Arif Habib Centre 23 M.T. Khan Road, Karachi
Mr. Abdus Samad	Non-Executive Director	2nd Floor, Arif Habib Centre 23 M.T. Khan Road, Karachi
Mr. Muhammad Kashif Habib	Non-Executive Director	2nd Floor, Arif Habib Centre 23 M.T. Khan Road, Karachi

### Departmental/ Divisional Heads

Mr. M. Abad Khan	Advisor to CEO	E-110, Khayaban-e-Jinnah, Lahore Cantt., Lahore
Mr. Arif-ur-Rehman	Chief Manufacturing Officer	35-A, Empress Road, Lahore
Mr. Qadeer Ahmed Khan	Director Special Projects	35-A, Empress Road, Lahore
Mr. Ahsen-ud-Din	Director Technology Division	55-Z Block, DHA, Phase-III, Lahore
Sardar Naufil Mahmud	Chief Information Officer	E-110, Khayaban-e-Jinnah, Lahore Cantt., Lahore
Mr. Iftikhar Mahmood Baig	Director Business Development	E-110, Khayaban-e-Jinnah, Lahore Cantt., Lahore
Mr. Aftab Ahmed Khan	Chief Supply Chain Officer	35-A, Empress Road, Lahore
Mr. Salman Ahmad	Head of Internal Audit	E-110, Khayaban-e-Jinnah, Lahore Cantt., Lahore
Brig. (Retd) Adeeb Azam	General Manager Administration	Plant Site, Khanewal Road, Multan
Mr. Ausaf Ali Qureshi	Company Secretary	E-110, Khayaban-e-Jinnah, Lahore Cantt., Lahore

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**Rule 4 Sub Rule (3)**

**(m) Details of the following market data:**

**(i) An estimate of the volume of natural gas to be transmitted, distributed or sold;**

MPCL (Mari Petroleum Company Limited) will deliver the Raw Natural Gas at MPCL Central Manifold-2 at Mari, Daharki, Sindh. Accordingly, raw gas transmission from Custody Transfer Point (CTP) to processing facility located at a distance of ~1 KM & then treated gas transmission from processing facility to SNGPL Muhammadpur valve assembly located at a distance of ~24 KM would be Fatima's responsibility. Summary of phase-wise volume of natural gas to be transmitted are as follows:

**Phase-1 (Oct-2018-March-2019):** Transmission of 35 MMSCFD raw SML (Sui Main Limestone) / SUL (Sui Upper Limestone) gas and intermittent transmission of swing volumes of raw HRL (Habib Rahi Limestone) gas upto ~15 MMSCFD. There is a likelihood of transmission of 15-20 MMSCFD Raw TIPU gas during this phase subject to agreement between SNGPL and PFL.

**Phase-2 (March.2019- onwards):** Transmission of 35 MMSCFD raw SML / SUL gas + treated gas from Tipu and intermittent transmission of swing volumes of HRL gas.

**Phase-3 (Subject to future discoveries, Pipeline has been designed to handle phase-3):** Transmission of additional gas as per below table to allow operation of both PFL and other plants subject to possible additional discoveries at Mari and their allocation and fulfillment of all necessary legal requirement.

Sr. No.	Transmission Pipeline	Description	Gas Streams	Flowrates, MMSCFD		
				Phase-1	Phase-2	Phase-3
1	Shallow Feeder Pipeline	Mari CMF-2 to Fatima's Processing Facility (~1 Km)	Raw Mari SML/SUL	35	35	35
2	Deep Feeder Pipeline		Raw Mari TIPU (Goru-B)	15-20(*)	40	110
3	HRL Feeder Pipeline		Raw Mari HRL	15	37	44
4	Main Gas Pipeline	Fatima's Processing Facility to SNGPL Muhammadpur Valve Assembly (~24 Km)	Final Gas with/without treatment @ 800 - 850 BTU/SCF	50	87	126

(\*). Raw gas transmission subject to agreement between Shipper and Transporter.

**(ii) Number and consumption details of consumers;**

Fatima Group currently intends to consume treated gas volumes at its following Fertilizer plants with possibility to include other consumers in future:

Sr No.	Plant	Natural Gas Requirement , MMSCFD @ 930 BTU/SCF
1	Pakarab Fertilizers Limited (PFL), Multan	54
2	Fatimafert Limited (FF), Sheikhpura	48

**(iii) The applicant's total annual peak day natural gas requirement;**

Annual peak day natural gas requirement is as follows:

Sr No.	Plant	Natural Gas Requirement , MMSCFD @ 930 BTU/SCF
1	Pakarab Fertilizers Limited (PFL), Multan	54
2	Fatimafert Limited (FF), Sheikhpura	48

**(iv) Total past (if applicable) and expected curtailments of service by the applicant;**

Expected curtailment period is circa 25 days per year for scheduled maintenance of respective facilities and any unplanned outages caused by plant trippings / malfunctions.

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**Rule 4 Sub Rule (4)**

(a) Maps issued or certified by the Survey of Pakistan, drawn to an appropriate scale showing details of areas where the transmission facilities are or are proposed to be located and the principal geographical features of the said areas, including without limitation, details of mountains, rivers, streams, roads, buildings or construction and habitation;

Pipeline Routes and detailed drawings are attached as Annexure-1 and 2.

(b) Details of the sources and quality of supply of natural gas including forecasts of the available quantity from such sources;

MPCL will deliver the Raw Natural Gas from following three (03) sources:

Sr No.	Reservoir	Quality (Gross Heating Value ) BTU/SCF	Forecasts of the Available Quantity
1	SML/SUL	≥ 800	>7 Years
2	TIPU (Goru-B)	≥ 430	>7 Years
3	HRL	≥ 700	>7 Years

(c) Details of how the applicant proposes to meet the safety and service obligations prescribed by the Authority;

Applicant not only follows all applicable local regulations for all its projects but has also adopted OSHA compliant international Dupont standards of Process Safety management (PSM). Applicant has achieved excellence level (level-4) in PWM which has been certified by Dupont, USA. Applicant has also acquired various internationally recognized certifications and awards including Gold RoSPA Health and Safety Award (UK) & British Safety Council Award.

Process safety management is about recognizing hazards and the associated risks. We believe that Process safety principles and systems not only help manage risks, but they effectively increase the safety of our operation while also improving productivity, cost efficiency and quality.

Based on decades of experience of managing hazardous substances in our own facilities, our expert employees have a thorough understanding of the means through which a process safety management system can be built, and sustained. Based on this vast operational experience, we have refined our system and procedures and adopted world best practices and achieved Excellence level in the Process Safety management. Our approach to managing operational risk and preventing process-related injuries and incidents addresses both the cultural and technical aspects of our organization.

Our employees have a proven ability to prevent major process-related disaster incidents, while also preserving business continuity, capitalization, right to operation, and – most importantly – to protect precious lives.

The DuPont process safety management systems are designed to bring about a cultural transformation within the company to achieve excellence in process safety.

DuPont's safety management system consists of globally recognized HSE Best Practices comprised of the following 22 elements:

- Management Commitment
- Policies & Principles
- Integrated Organization Structure
- Line Management
- Accountability & Responsibility
- Goals, Objectives, & Plans
- Safety Personnel
- Procedures & Performance Standards
- Training & Development
- Effective Communication
- Motivation & Awareness
- Audits & Observations
- Incident Investigation
- Management of Change – Personnel
- Contractor Safety Management
- Quality Assurance
- Pre-start-up Safety Reviews
- Mechanical Integrity
- Management of Change – Facilities
- Process Safety Information
- Management of Change -Technology
- Risk Assessment and Process Hazards Analysis
- Emergency Preparedness and Contingency Planning

(d) Details of the capacity and estimated throughput, of the transmission facilities, per annum for ten years following the proposed grant of the license;

[illegible]

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(e) Technical specifications of the transmission facilities (existing and proposed), including without limitation, specifications for the design, construction, operation and maintenance of the facilities

Summary of Pipeline Design Specifications is as follows:

Sr. No.	Description	Shallow Feeder Pipeline	Deep Feeder Pipeline	HRL Feeder Pipeline	Main Gas Pipeline
1	Design Pressure, psig	1100	1375	330	1375
2	Design Temperature, °F	175	175	175	175
3	Pipeline Material	API 5L	API 5L	API 5L	API 5L
4	Material Grade	Grade B	Grade B	Grade B	X46 & X70
5	Size, inch	NPS 12	NPS 12	NPS 12	NPS 16
6	Length, meters	870	870	870	22,800
7	Thickness	API 5L Grade B, Location Class 3: 15 MM	API 5L Grade B, Location Class 3: 15 MM	API 5L Grade B, Locations Class 3: 8.74 MM	i. API 5L Grade X70, Location Class 1: 7.92MM ii. API 5L Grade X70, Location Class 2: 8.74MM iii. API 5L Grade X46, Location Class 2: 12.95MM iv. API 5L Grade X46, Location Class 3: 17.65MM

Detailed Technical Specifications of Transmission facilities are provided in following attached documents:

- (a) Annexure-1: Main Gas Pipeline Design Package
- (b) Annexure-2: Feeder Pipeline Design Package
- (c) Annexure-3: Existing 48 km FFL pipeline Package



# PAK ARAB FERTILIZER LIMITED

## 3109 INSTALLATION OF GAS PROCESSING FACILITY

(FEEDER PIPELINE DESIGN PACKAGE)

CONSULTANTS:

July, 2018



### Petrochemical Engineering Consultants

C-2, Block No. 17, Gulshan-E-Iqbal, Karachi-75300, Pakistan.  
Telephones: +92 (21) 34827780, 34961088, Fax: +92 (21) 34961089  
E-Mail: [contact@pcec.com.pk](mailto:contact@pcec.com.pk) web: [www.pcec.com.pk](http://www.pcec.com.pk)

### Disclaimer

*This Design package has been prepared on behalf of PAK ARAB FERTILIZER LTD. and for the exclusive use of PAK ARAB FERTILIZER LTD. and is subject to and issued in accordance with the agreement between Petrochemical Engineering Consultants "PEC" & PAK ARAB FERTILIZER LTD. PEC accept no liability or responsibility whatsoever for it in respect of any use of or reliance upon this report by any third party.*

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REV	DESCRIPTION	ORIG	REVIEW	PEC APPROVAL	DATE	CLIENT APPROVAL	DATE
0	Issued for Review	AHK	SAR	Adeel	June, 12 ,2018		
1	Issued for Review	AHK	SAR	Adeel	July, 20 ,2018		

JULY2018



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	I. PIPELINE ALIGNMENT DRAWINGS
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# **BILL OF QUANTITIES FOR PROCUREMENT**

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p><b>PAK ARAB FERTILIZER LIMITED</b></p> <p><b>INSTALLATION OF GAS PROCESSING FACILITY</b></p> <p><b>BILL OF QUANTITIES</b></p> <p><b>FOR</b></p> <p><b>PROCUREMENT</b></p> </div> <div style="text-align: right;"> <p>DOC. NO. : 3109-PI-BM-0001</p> <p>PREP. : SAR</p> <p>REV. : 1</p> <p>DATE : 20-08-2018</p> </div> </div>						
SR#	ITEM DESCRIPTION	MATERIAL SPECIFICATION	UNIT	TOTAL	TOTAL (Pak. Rs.)	REMARKS
1.0	<b>PIPE:</b>					
1.1	Pipe, Seamless, Double Random Length, API 5L Gr. B					
i	Dia. 12", WALL THICKNESS 15 mm	D3AC	m	900		
ii	Dia. 8", Sch. 80	D3AC	m	12		
2.0	<b>INDUCTION BENDS:</b>					
2.1	45° 5D Bend, Bevelled ends to match pipe wall, ASTM A-234 Gr. WPB					
i	Dia. 12", WALL THICKNESS 15 mm	D3AC	Nos	4		
3.0	<b>COLD BENDS:</b>					
3.1	Cold Bend, Bevelled ends to match pipe wall, API 5L Gr. B					
i	Dia. 12", WALL THICKNESS 15 mm	D3AC	Nos	3		Reff Dwg: 3109-PI-DT-0001
4.0	<b>ANCHOR FLANGES:</b>					
4.1	Anchor Flange, BW,					
i	Dia. 12", WALL THICKNESS 15 mm 800#	-	Nos.	2		Reff Dwg: 3109-PI-DT-0010
5.0	<b>INSULATION JOINT:</b>					
5.1	Insulation joint, ASTM A105					
i	Dia. 12", WALL THICKNESS 15 mm	-	Sets.	2		
6.0	<b>FLANGE:</b>					
6.1	Flange, W N, R.F, BW, ASTM A-105, bore to match pipe					
i	Dia. 12", WALL THICKNESS 15 mm	D3AC	Nos.	2		
	Dia. 8", Sch. 80	D3AC	Nos.	2		
6.2	Blind Flange, R.F., ASTM A-105					
i	Dia. 12", 600#	D3AC	Nos.	2		
7.0	<b>RED.BAREED TEE:</b>					
7.1	Barred Tee, ASTM A-234 Gr. WPB, Beveled ends to match pipe wall					
i	Dia. 12"x8" Thk. 15 mm x Sch. 80	D3AC	Nos.	2		

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<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  <p><b>PAK ARAB FERTILIZER LIMITED</b></p> <p><b>INSTALLATION OF GAS PROCESSING FACILITY</b></p> <p><b>BILL OF QUANTITIES</b></p> <p><b>FOR</b></p> <p><b>PROCUREMENT</b></p> </div> <div style="text-align: right;"> <p>DOC. NO : 3109-FI-BM-0001</p> <p>PREP: SAR</p> <p>REV : 1</p> <p>DATE : 20-08-2018</p> </div> </div>						
SR#	ITEM DESCRIPTION	MATERIAL SPECIFICATION	UNIT	TOTAL	TOTAL (Pak. Rs.)	REMARKS
8.0	<b>BALL VALVE:</b>					
8.1	Ball Valve, RF, Flanged end, Full Bore, 600#, ends as per ASME B 16.10, Tag No. BA 314					
i	Dia. 12", 600#	D3AC	Nos.	2		
9.0	<b>GASKETS:</b>					
9.1	Gasket, Spiral Wound 4.5mm Thick, 3mm inner/outer rings, Outer ring: Carbon Steel, Inner ring/windings: Type 316L S.S					
i	Dia. 12", 600#	D3AC	Nos.	4		
10.0	<b>STUDS/NUTS:</b>					
10.1	Studs with 2 Nuts, Stud Material : A 193 Gr. B7M and Nuts Material : A 194 Gr. 2HM					
i	1 1/4" x 250mm Long	D3AC	Nos.	80		
<b>TOTAL(Pak. Rs.)</b>						
<p><b>NOTE:</b></p> <p>1 The Quantities taken in this BOQ are actual.</p>						

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# **BILL OF QUANTITIES FOR MECHANICAL**

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**PAK ARAB FERTILIZER LIMITED**  
**INSTALLATION OF GAS PROCESSING FACILITY**  
**BOQ PIPELINE WORKS**



DOC. NO. : 3109-PI-8M-0002  
 PREP. : SAR  
 REV. : 0  
 DATE : 12-06-2018



SR#	ITEM DESCRIPTION	UNIT	QTY.	UNIT RATE (PKR)	TOTAL (PKR)	REMARKS
1.0	PIPELINE WORKS					
	Fabrication, internal cleaning & welding of pipeline Dia. 12" W/T 15mm, Works includes but not limited to the followings:	R.M	900			All welding to be done in accordance with API 1104 standard Note 6 & 7
	i) Receiving, Loading, transportation, unloading of pipes, bends and allied material at site.					
	ii) Stringing of Pipeline along with ROW					
	iii) Lowering in trench with proper arrangement as per standard.					
	iv) Installation of Anchor Flanges & Insulation joints					
	v) Installation of factory bends as per requirement.					
	vi) Fabrication, installation and testing of Field-cold bends as per site requirement & drawings					
	vii) Supply and placing of sand bags					
	viii) Holiday testing and repair of damage coating					
	ix) 100% Radiography					
	x) Line locating of already laid different pipelines					
	xi) Excavation of Test Pits where required for identification of any underground pipe / structure (Distance should be 25m).					
	xii) All Consumables and any work required for completion					
	xiii) Area must be cleared and re-instated after completion of work					
1.1	JOINTS/ DIA INCHES					
i	The estimated number of joints for 900 meters pipeline.	DI	1236			
ii	The estimated number of joints for 12 meters pipeline.	DI	32			
iii	Installation of Anchor Flanges	Nos.	2			
1.2	INSULATION & FABRICATION OF 8" PIPE					
	Installation & Fabrication, Internal cleaning & welding of pipeline.					
i	Dia. 8", Sch.80	m	12			
1.3	INSULATION JOINT					
	Installation of Insulation joint includes the placing of I.J., welding. Work also includes Lifting and Transportation from store and unloading at work site.					
i	Dia. 12" W/T 15mm	Nos.	2			
1.4	SAND BAGS FOR PIPELINE PLACEMENT					
	Placement and procurement of sand bags, for pipeline placement adjacent to pipe trench including lifting and placement at site complete in all respect as specified by the client.					Sand bags to be re-utilized at overall pipeline section as per project specification.
i	(1 ft x 2 ft) wide 4" thick sand bag	Bags	-			
1.5	INSTALLATION OF BENDS					
	Installation of Induction 45° SD bends , includes the placing of all kinds of bends between pipes and weld as per specification. Work also includes Lifting and Transportation from store and unloading at work site.					
i	Dia. 12" W/T 15mm	Nos.	4			
1.6	INSTALLATION OF COLD BENDS					
	Installation of Cold bends , includes the placing of all kinds of bends between pipes and weld as per specification. Work also includes Lifting and Transportation from store and unloading at work site and operation of pipe bending machine.					See Drawing # 3109-PI-DT-0001
i	Dia. 12" W/T 15mm	Nos.	3			
1.7	RED.BAREED TEE					
	Installation of Reducing Barred Tee, includes the placing, alignment and weld as per specification. Work also includes Lifting and Transportation from store and unloading at work site and operation of pipe bending machine.					
i	Dia. 12"x8" W/T 15mm x Sch.80	Nos.	2			
1.8	INSTALLATION OF VALVES					
	Installation of valves includes the placing of valve between flanges and bolting up with gasket. Work also includes Lifting and Transportation from store and unloading at work site.					
i	Dia. 12" W/T 15mm	Nos.	2			





# BILL OF QUANTITIES FOR CIVIL

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<div>  <div> <b>PAK ARAB FERTILIZER LIMITED</b>  <b>INSTALLATION OF GAS</b>  <b>PROCESSING FACILITY</b>  <b>BOQ</b>  <b>CIVIL WORKS RELATED TO PIPELINE</b> </div> <div>  </div> </div> <div> DOC NO : 3109-CV-BM-0001  PREP. : SAR  REV : 0  DATE : 11-06-2018 </div>						
SR#	ITEM DESCRIPTION	UNIT	QTY.	UNIT RATE (PKR)	TOTAL (PKR)	REMARKS
1.0	<b>SITE CLEARANCE and ROW</b>					
	Marking of ROW, cleaning, grading and leveling of site, including removal of top soil and cut/fill as required including removal of bush cutting, debris, vegetation, trees, plants, crops, any other undesired material within specified ROW as per approval of client's Engineer Incharge.					
i	For 40 ft wide Temporary ROW	R.M	880			Refer drawing 3109-PI-DT-0009
2.0	<b>EXCAVATION &amp; BACKFILLING FOR PIPELINE</b>					
	Excavation in all kinds of soil, dry or wet, hard or soft, including all operations, site clearing, removing of gravel and all debris material upto required depth to attain the profile of pipeline. Backfilling shall be completed with excavated material as per drawing and approval of Engineer Incharge.					Refer drawing 3109-PI-DT-0008 & Note 2
	Pipeline Trench	R.M	880			
4.0	<b>PIPELINE MARKER</b>					
	Supply of material, construction and installation of pipeline marker during backfilling as per instruction by Engineer Incharge.	Nos	4			Refer drawing 3109-PI-DT-0006
5.0	<b>ANCHOR BLOCKS</b>					Refer drawing 3109-PI-DT-0007
5.1	<b>EXCAVATION FOR FOUNDATION</b>					
	Excavation for foundations in all kinds of soil, dry or wet, hard or soft, including all operation, complete with breaking clods, levelling, dressing, dewatering, shoring & compacting. Also include backfilling of excavated earth in plinth and under floors i/c breaking clods, dressing, watering and consolidating by ramming in layers not exceeding 8" depth to obtain 95% modified AASHTO density for foundations and suitable compaction for flowline including lifting, shifting or disposing of surplus earth outside the premises or as per approval of Client (Site Engineer).	m <sup>3</sup>	35			
5.2	<b>PLAIN CEMENT CONCRETE</b>					
	Providing and laying Plain cement concrete of specified strength using approved quality 3/4" max. size graded crushed aggregate & fine aggregate including approved Steel formwork & its removal, all operations of vibrating, levelling, compacting and curing etc. complete as per approval of Client. PCC 1:4:8 (1 Cement 4 Sand and 8 coarse aggregate) Note: 1. OPC cement should be used for all works. 2. Mix design for each type of sample will be provided by the Contractor	m <sup>3</sup>	1.1			
5.3	<b>REINFORCED CEMENT CONCRETE</b>					
	Providing and laying Reinforced cement concrete shall be developed 28 days cylindrical strength of 3000psi specified, using approved quality 3/4" max. size graded crushed aggregate & fine aggregate including approved form work & its removal, all operations of vibrating, levelling, compacting and curing etc. complete with placing of markers and Road barriers. Works also includes Lifting and Transportation from store and unloading at work site. Note: 1. SR cement should be used for all sub-structure works. 2. Mix design for each type of sample will be provided by the Contractor	m <sup>3</sup>	18			
5.4	<b>STEEL REINFORCEMENT</b>					
	Providing and laying hot rolled grade 460 deformed steel reinforcement bars complying with BS-4449 including the cost of straightening, cutting, bending, binding, wastage and such overlaps as are not shown in drawings, placing in position on cement concrete 1:2:4 precast spacer block or M.S chairs, tying with binding wire (GI wire of 18 gauge), including cost of chairs and wires etc. in all kinds of RCC works.	Tons	1.44			
<b>TOTAL (PKR)</b>						



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## DRAWING LIST

142



PAK ARAB FERTILIZER LIMITED

DOC. NO. 3109-PI-LT-0001

PREP. : SAR

REV. : 1

DATE. : 20-07-2018

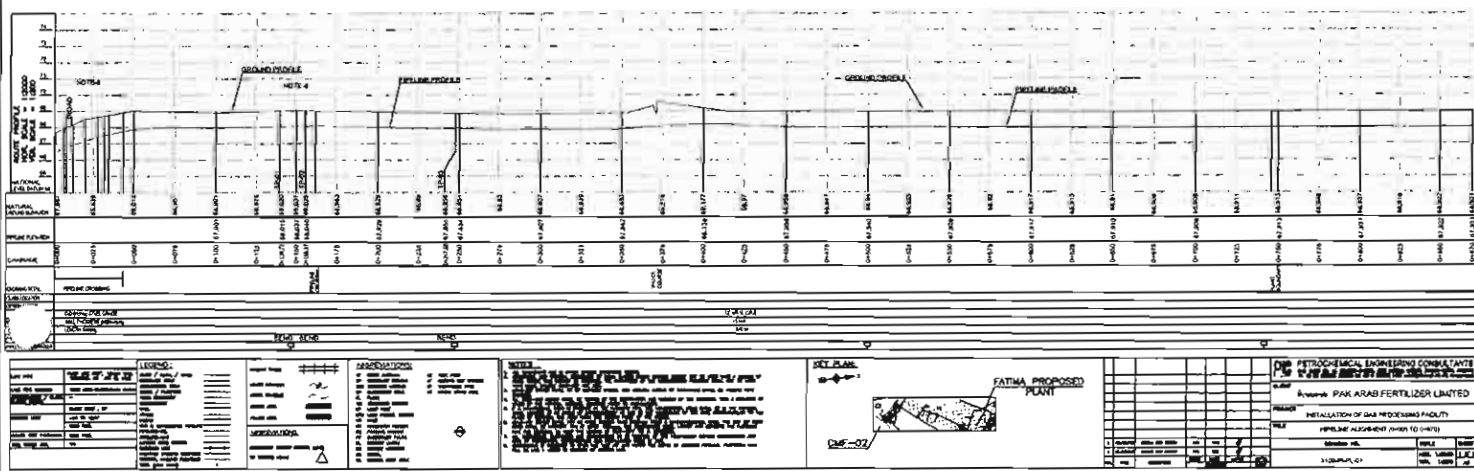
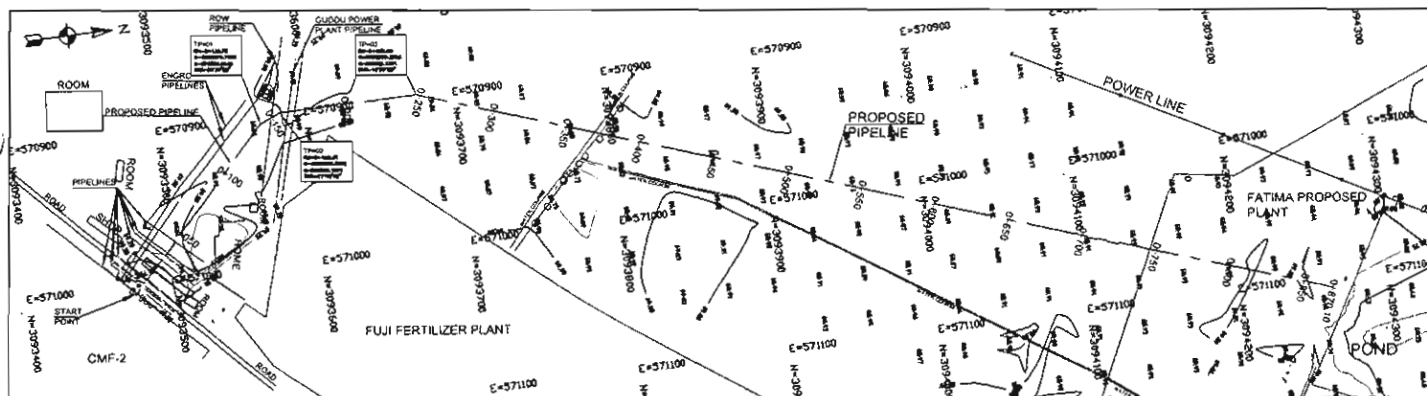


INSTALLATION OF GAS  
PROCESSING FACILITY  
Drawing List

S.NO	DESCRIPTION	DRAWING NO.	REVISION	REMARKS
<b>1.1 PIPELINE ALIGNMENT</b>				
1.1.1	PIPELINE ALIGNMENT DRAWING (0+000 TO 0+870)	3109-PI-PL-0001	1	ISSUED FOR REVIEW
<b>1.2 DETAIL DRAWINGS</b>				
1.2.1	Dia 6" COLD BEND DETAIL DRAWING	3109-PI-DT-0001	1	ISSUED FOR REVIEW
1.2.2	Dia 6" PIPELINE RISER	3109-PI-DT-0002	1	ISSUED FOR REVIEW
1.2.3	Dia 6" PIPELINE RISER	3109-PI-DT-0003	1	ISSUED FOR REVIEW
1.2.4	TYPICAL ROAD CROSSING	3109-PI-DT-0004	1	ISSUED FOR REVIEW
1.2.5	EXISTING PIPELINE CROSSING	3109-PI-DT-0005	1	ISSUED FOR REVIEW
1.2.6	TYPICAL MARKER DETAIL	3109-PI-DT-0006	0	ISSUED FOR REVIEW
1.2.7	ANCHOR BLOCK	3109-PI-DT-0007	0	ISSUED FOR REVIEW
1.2.8	TYPICAL DITCH DIMENSION	3109-PI-DT-0008	0	ISSUED FOR REVIEW
1.2.9	R.O.W DIMENSIONS FOR PIPELINE	3109-PI-DT-0009	0	ISSUED FOR REVIEW
1.2.10	ANCHOR FLANGE DETAIL	3109-PI-DT-0010	0	ISSUED FOR REVIEW



## PIPELINE ALIGNMENT DRAWINGS

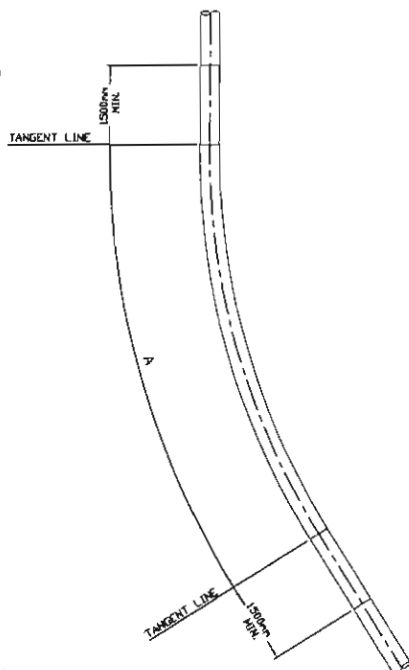


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## DETAIL DRAWING

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BENDS	ANGLE	QUANTITY	LOCATION	PIPE LENGTH (mm)	A (mm)
TP-Q1	24°34'56"	1	0+139.72	8260	5230
TP-Q2	21°48'52"	1	0+133.61	7840	4640
TP-Q3	19°33'36"	1	0+247.88	7183	4163

40D COLD BEND

FLOW LINE Ø12", 15 mm WALL THICKNESS. CS, API 5L GR.B

LINE PIPE	FLOW LINE Ø12", 15mm WALL THICKNESS. CS, API 5L GR.B
LINE PIPE COATING	THREE LAYER POLYETHYLENE COATED
SPECIFICATION / CLASS	-
FLANGE RATING	CLASS 900# . RF
SERVICE LIMIT	-25 TO 132°F
	1000 PSIG
HYDRO TEST PRESSURE	1350 PSIG

#### NOTE:

1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE STATED.
2. COLD-SET BENDS SHALL BE OF UNIFORM RADIUS, AND MINIMUM RADIUS OF CURVATURE SHALL BE 40X LINE PIPE DIAMETER.
3. ALL COLD-SET BENDS SHALL BE TESTED BY THE CONTRACTOR AND WITNESS BY THE COMPANY, WITH A CALLUP OF 97.5% OF THE NOMINAL INTERNAL DIAMETER PRIOR TO INSTALLATION.
4. COLD-SET BENDS SHALL NOT BE MADE CLOSER THAN 1500mm FROM A CIRCUMFERENTIAL WELD. THE END OF EACH BEND SHALL BE STRAIGHT FOR AT LEAST 1500mm. THE CONTRACTOR SHALL LAYOUT AND MEASURE THE FLOWLINE PIPE FOR BENDING TO KEEP THE LENGTH OF CUT-OFF TO A MINIMUM.
5. ALL DIMENSIONS, CLEARINGS AND ORIFICATIONS TO BE NOTIFIED BY THE CONTRACTOR BEFORE UNDERTAKING ANY KIND OF FABRICATION, CONSTRUCTION AND INSTALLATION WORK AT SITE.

#### REFERENCE DRAWINGS

S.NO	DESCRIPTION	DWG. NO
1	FLOWLINE ALIGNMENT DRAWING	3109-PI-PI-0001

REV.	DATE	DESCRIPTION	DRAWN	CHECK'D	APPROV'D	APPROV'D
1	20-07-18	ISSUED FOR REVIEW	AHC	SWR		
0	09-06-18	ISSUED FOR REVIEW	AHC	SWR		
					CONSULTANT	CLIENT

**PC PETROCHEMICAL ENGINEERING CONSULTANTS**  
 C-14, PHASE NO. 17, KALAMATI-CHINA, 40TH HIGHWAY, DONGJIA, WENZHOU-CITY, ZHEJIANG, P.R. CHINA (305100), CHINA. TEL: +86 577 83677000, FAX: +86 577 83677001, E-MAIL: petrochemical@pc-engineering.com

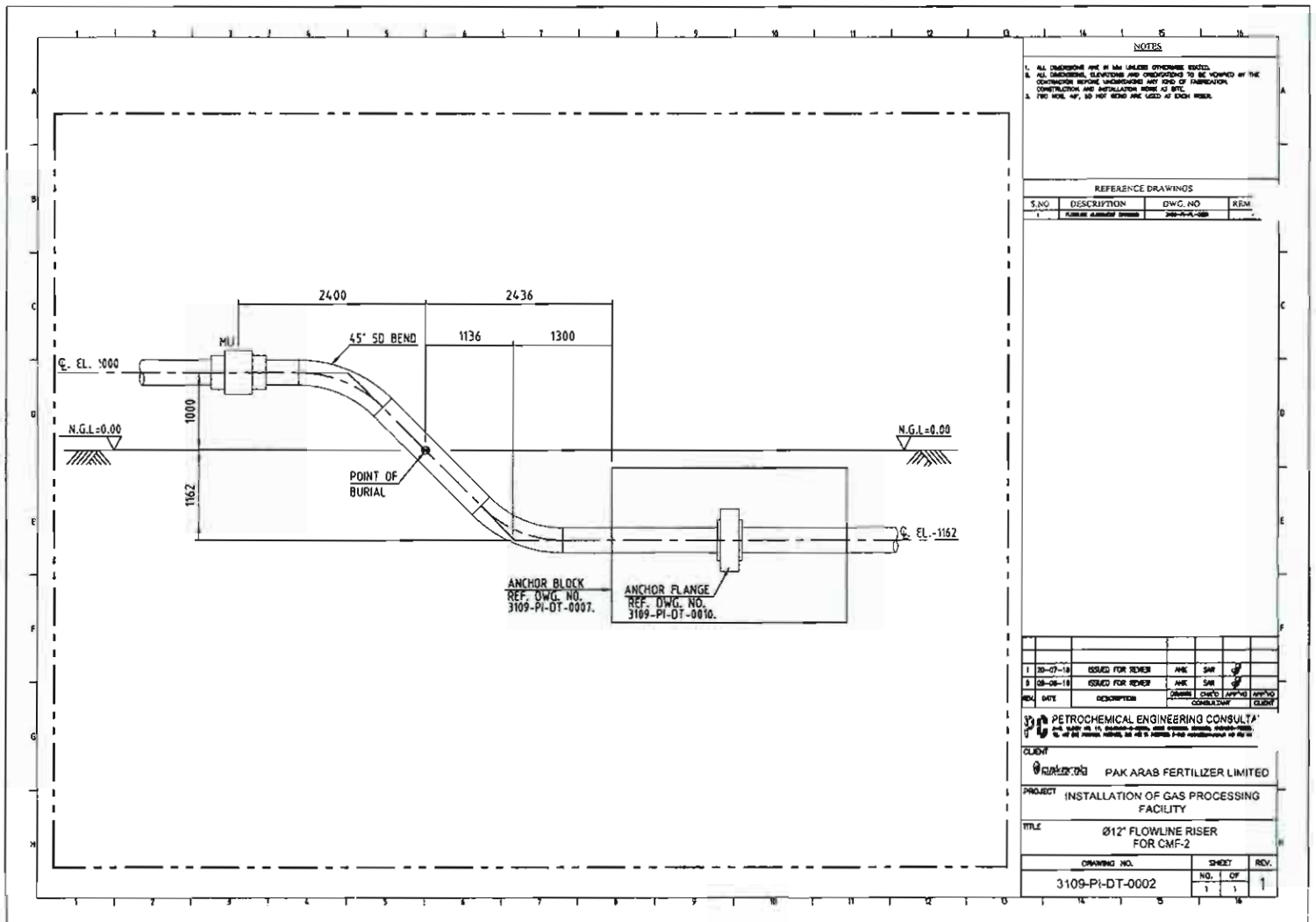
CLIENT: **PAK ARAB FERTILIZER LIMITED**

PROJECT: **INSTALLATION OF GAS PROCESSING FACILITY**

TITLE: **Ø12" FLOWLINE COLD BENDS**

DRAWING NO.	SHEET	REV.
3109-PI-DT-0001	NO. OF	
	1 1	1

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**NOTES**

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONAL TOLERANCES AND PRECISIONS TO BE NOTED BY THE CONTRACTOR BEFORE UNDERTAKING ANY KIND OF FABRICATION, CONSTRUCTION AND INSTALLATION WORK AS SPEC.
3. TWO NO. 16 WP, 30 HOT BEND ARE USED AT EACH BEND.

**REFERENCE DRAWINGS**

S.NO	DESCRIPTION	DWG. NO.	REV.
1	ANCHOR BLOCK	3109-PI-DT-0007	

REV.	DATE	DESCRIPTION	DESIGN	CHECK	APP'D	BY	NO.	CLIENT
1	20-07-18	ISSUED FOR REVIEW	AWK	SWR				
2	08-08-18	ISSUED FOR REVIEW	AWK	SWR				

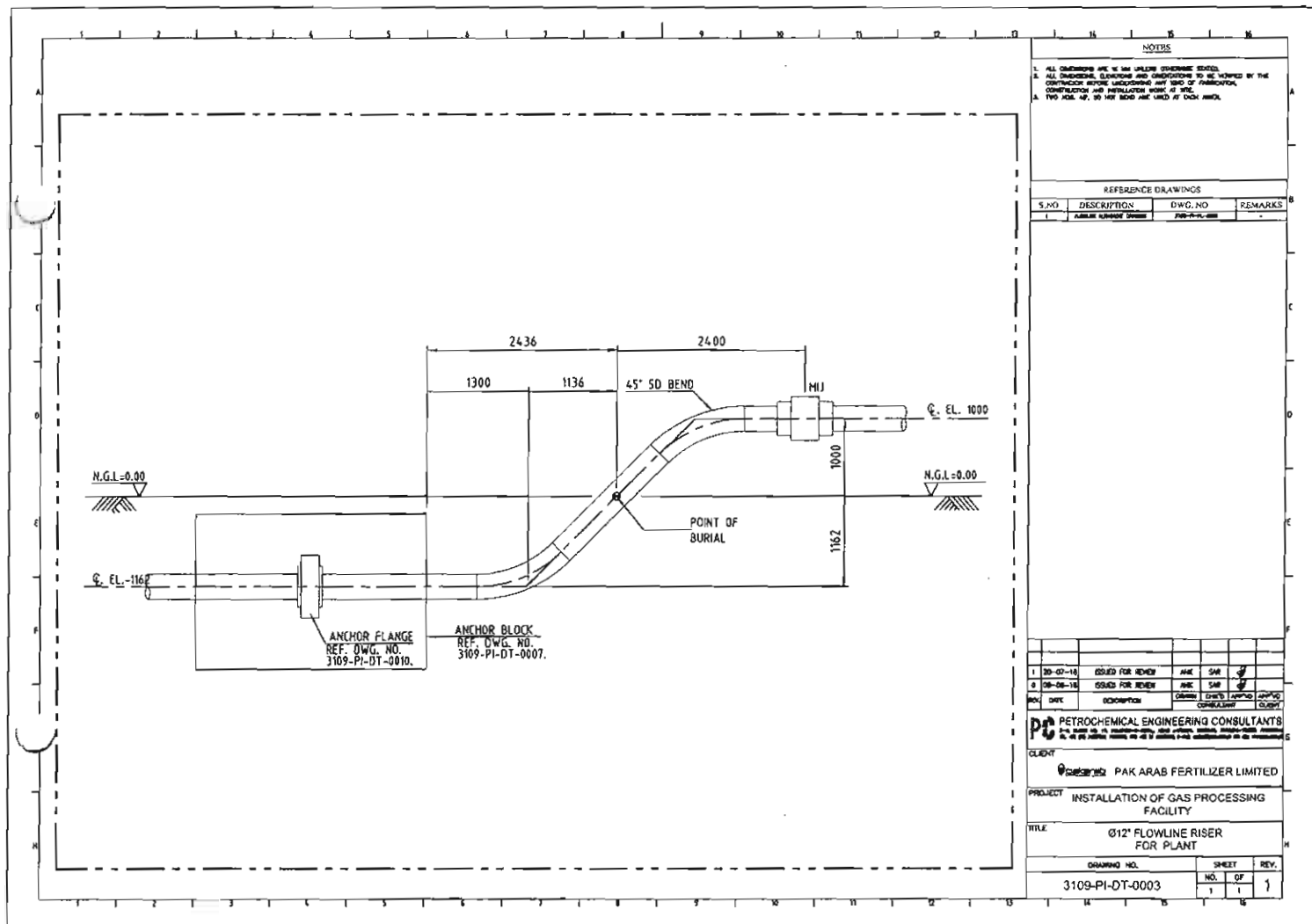
**3D PETROCHEMICAL ENGINEERING CONSULTA**  
 3D PETROCHEMICAL ENGINEERING CONSULTA  
 3D PETROCHEMICAL ENGINEERING CONSULTA  
 3D PETROCHEMICAL ENGINEERING CONSULTA

**CLIENT**  
 PAK ARAS FERTILIZER LIMITED

**PROJECT**  
 INSTALLATION OF GAS PROCESSING FACILITY

**TITLE**  
 Ø12" FLOWLINE RISER FOR CMF-2

DRAWING NO.	SHEET	REV.
3109-PI-DT-0002	1	1



**NOTES**

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
2. ALL DIMENSIONS, ELEVATIONS AND COORDINATES TO BE CHECKED BY THE CONTRACTOR BEFORE UNDERTAKING ANY WORK OF FABRICATION, CONSTRUCTION AND INSTALLATION WORK AT SITE.
3. TWO X 0.6 MM, 30 MM BEND ARE USED AT EACH ANGLE.

REFERENCE DRAWINGS			
S.NO	DESCRIPTION	DWG. NO	REMARKS
1	AS PER PROJECT DRAWING	3109-PI-DT-0003	

NO.	DATE	DESCRIPTION	DESIGNED	CHECKED	APPROVED
1	20-07-18	ISSUED FOR REVIEW	AKC	SAR	
2	28-08-18	ISSUED FOR REVIEW	AKC	SAR	

**PT PETROCHEMICAL ENGINEERING CONSULTANTS**  
 10-A, SECTOR-10, INDUSTRIAL AREA, PHASE-1, GATE NO. 1, F-7/3, CHANDIGARH-160015

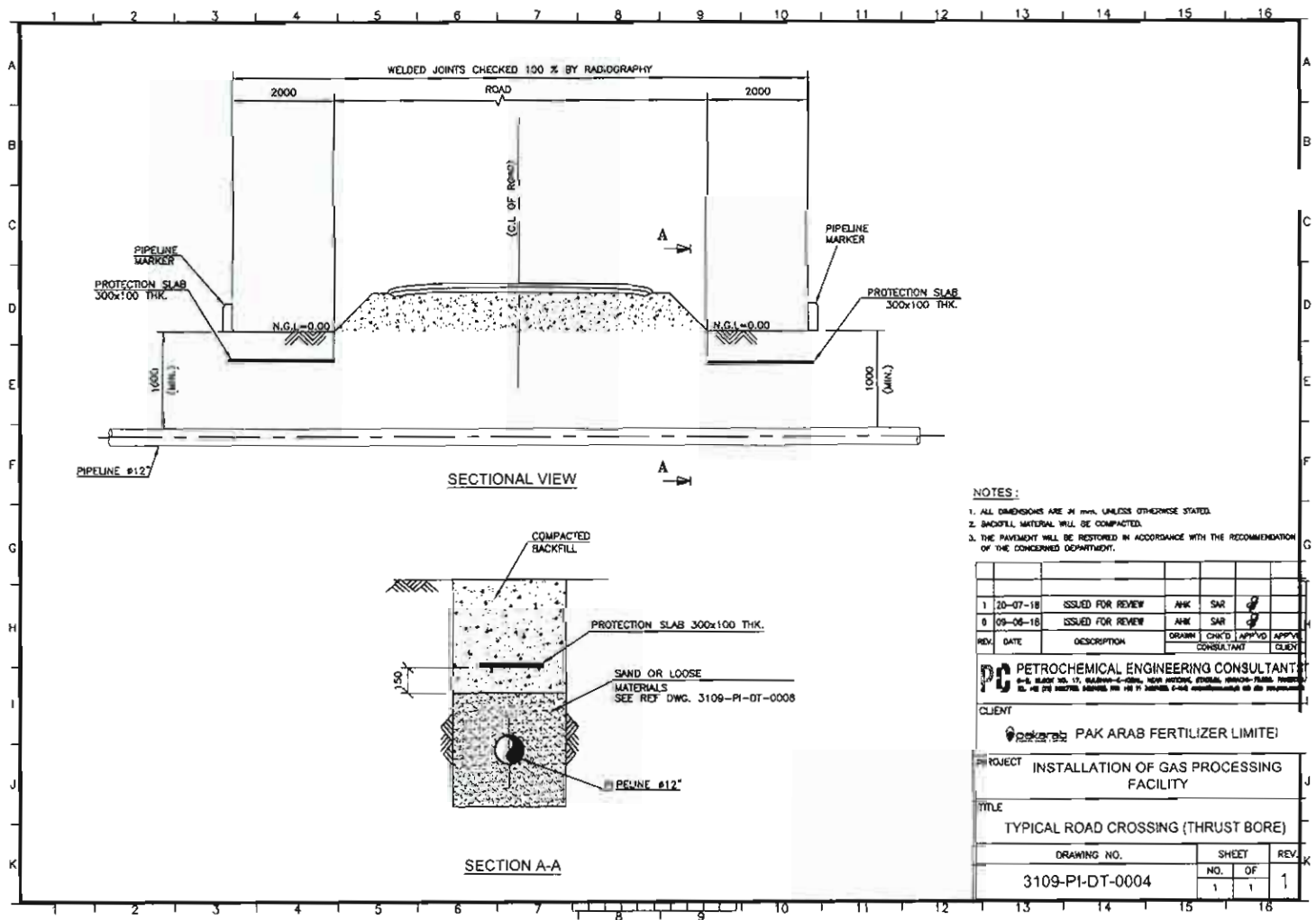
**CLIENT**  
**PAK ARAB FERTILIZER LIMITED**

**PROJECT**  
 INSTALLATION OF GAS PROCESSING FACILITY

**TITLE**  
 Ø12" FLOWLINE RISER FOR PLANT

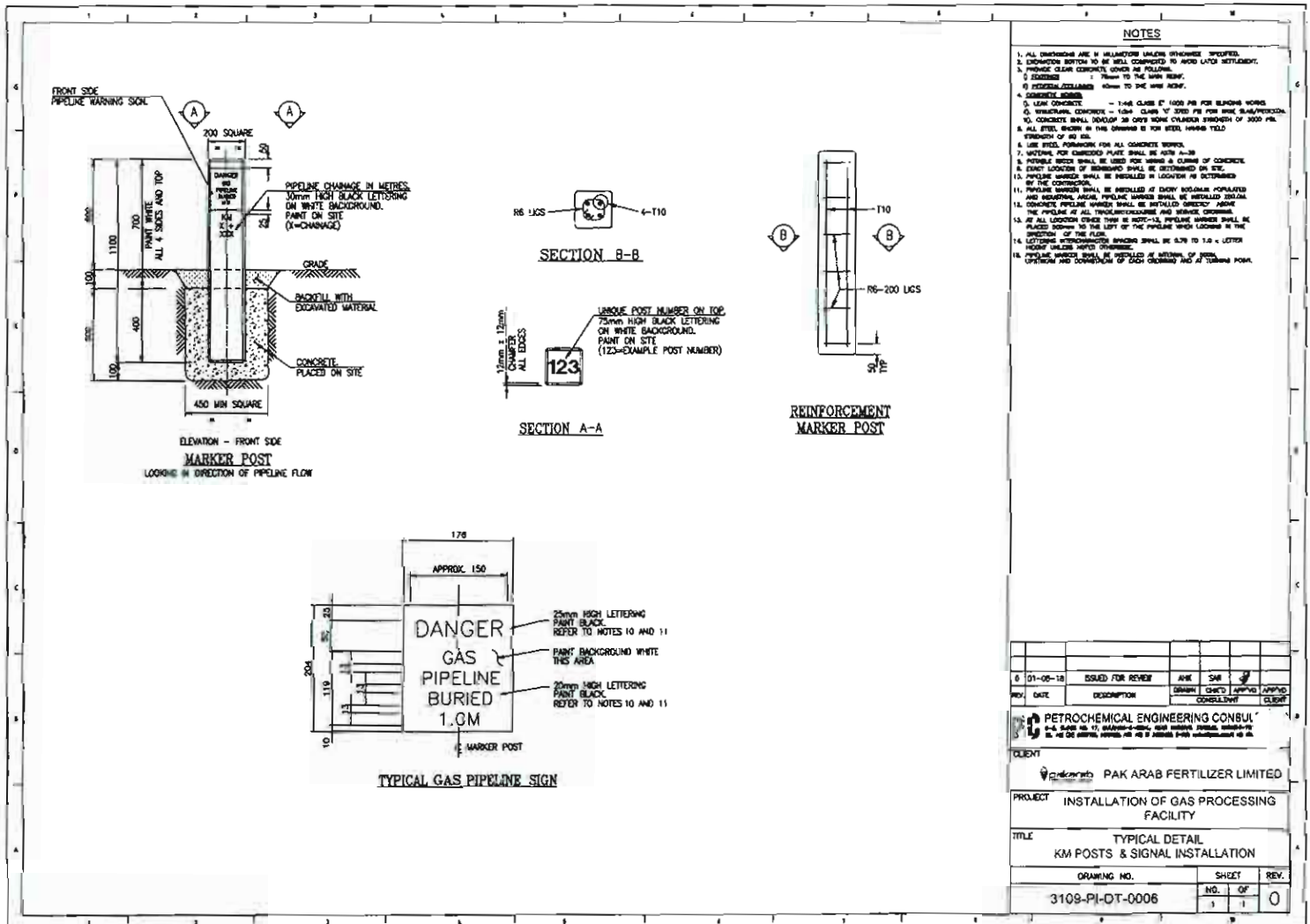
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3109-PI-DT-0003	NO. 1 OF 1	1

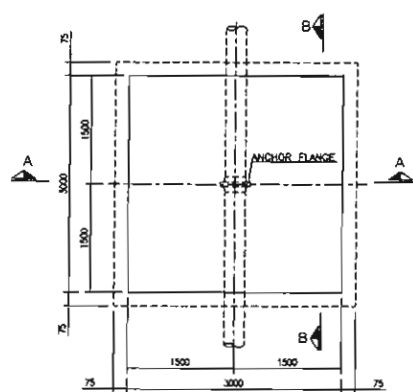
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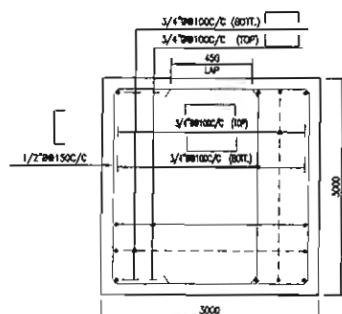


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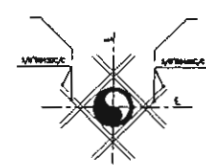




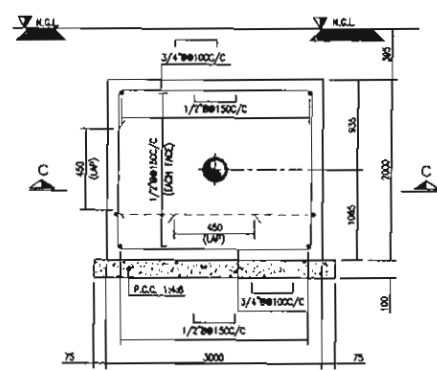
PLAN  
(SCALE - 1:30)



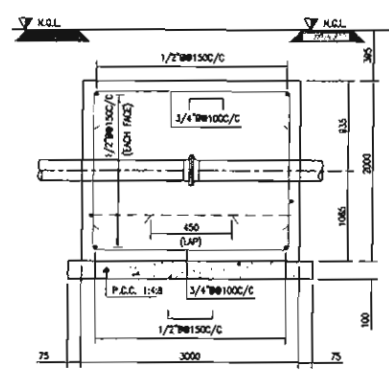
SECTION C-C  
(SCALE - 1:30)



REINFORCEMENT DETAIL  
AROUND PIPE  
(SCALE - 1:30)



SECTION A-A  
(SCALE - 1:30)

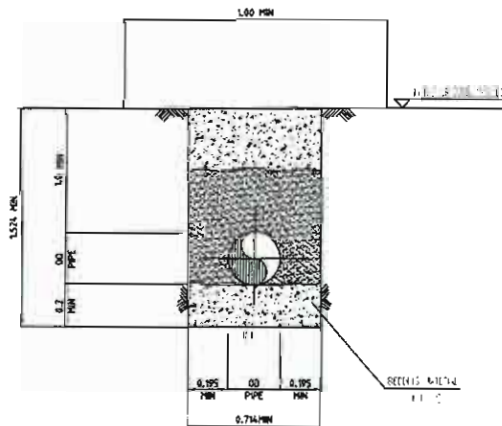


SECTION B-B  
(SCALE - 1:30)

- NOTES:
1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
  2. ALL REINFORCEMENT SHALL BE USED FOR THE 12" PIPE, REINFORCEMENT.
  3. PROTECT REINFORCEMENT SHALL BE USED FOR THE 12" PIPE, REINFORCEMENT.
  4. DIMENSIONED REINFORCEMENT SHALL BE USED FOR THE 12" PIPE, REINFORCEMENT.
  5. CONCRETE FOR BLOCKS TO BE 1:4:8 AND USE IN ALL CASES.
  6. REINFORCEMENT SHALL BE USED FOR THE 12" PIPE, REINFORCEMENT.
  7. ALL DIMENSIONS OF THE BLOCKS IS BASED ON THE 12" PIPE, REINFORCEMENT.
  8. CONCRETE FOR BLOCKS TO BE 1:4:8 AND USE IN ALL CASES.
  9. DIMENSIONED REINFORCEMENT SHALL BE USED FOR THE 12" PIPE, REINFORCEMENT.
  10. CONCRETE FOR BLOCKS TO BE 1:4:8 AND USE IN ALL CASES.
  11. DIMENSIONED REINFORCEMENT SHALL BE USED FOR THE 12" PIPE, REINFORCEMENT.
  12. CONCRETE FOR BLOCKS TO BE 1:4:8 AND USE IN ALL CASES.
  13. DIMENSIONED REINFORCEMENT SHALL BE USED FOR THE 12" PIPE, REINFORCEMENT.
  14. CONCRETE FOR BLOCKS TO BE 1:4:8 AND USE IN ALL CASES.
  15. DIMENSIONED REINFORCEMENT SHALL BE USED FOR THE 12" PIPE, REINFORCEMENT.
  16. CONCRETE FOR BLOCKS TO BE 1:4:8 AND USE IN ALL CASES.

NO.	DATE	DESCRIPTION	CHKD	APPD	CHKD	APPD	CHKD	APPD
01	08-06-18	ISSUED FOR REVIEW						
02								
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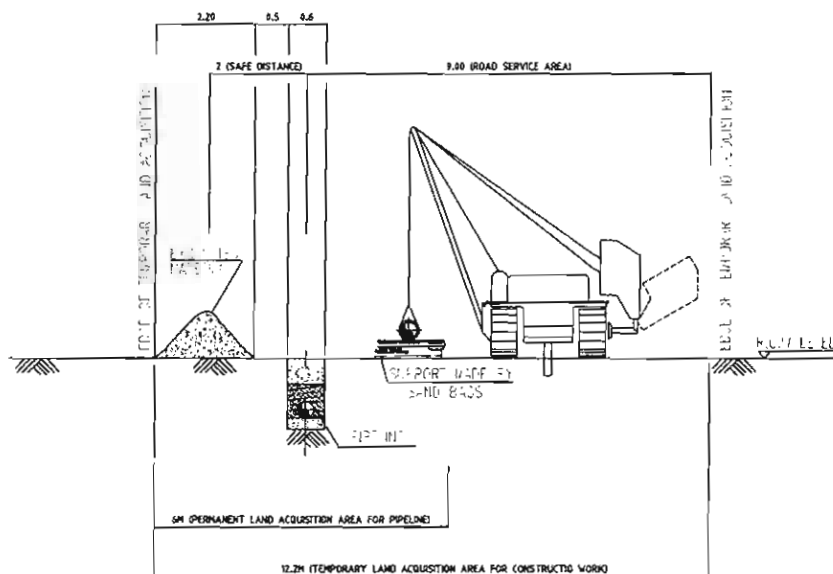
PC PETROCHEMICAL ENGINEERING CONSULTANTS  
 CLIENT: PAK ARAB FERTILIZER LIMITED  
 PROJECT: INSTALLATION OF GAS PROCESSING FACILITY  
 TITLE: ANCHOR BLOCK DETAIL FOR Ø12" PIPELINE  
 DRAWING NO. 3109-PI-DT-0007  
 SHEET 1 OF 1  
 REV. 0



STANDARD DETAIL 12" PIPELINE

<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td>1</td> <td>ISSUED FOR CONSTRUCTION</td> <td>01/01/2008</td> <td>XXX</td> </tr> </table>				NO.	DESCRIPTION	DATE	BY	1	ISSUED FOR CONSTRUCTION	01/01/2008	XXX
NO.	DESCRIPTION	DATE	BY								
1	ISSUED FOR CONSTRUCTION	01/01/2008	XXX								
<p>PROJECT INFORMATION</p> <table border="1"> <tr> <td>PROJECT NO.</td> <td>3109-PI-DT-0008</td> </tr> <tr> <td>PROJECT NAME</td> <td>INSTALLATION OF GAS PROCESSING FACILITY</td> </tr> <tr> <td>CLIENT</td> <td>PAK ARAB FERTILIZER LIMITED</td> </tr> <tr> <td>CONSULTANT</td> <td>PETROCHEMICAL ENGINEERING CONSULTANTS</td> </tr> </table>				PROJECT NO.	3109-PI-DT-0008	PROJECT NAME	INSTALLATION OF GAS PROCESSING FACILITY	CLIENT	PAK ARAB FERTILIZER LIMITED	CONSULTANT	PETROCHEMICAL ENGINEERING CONSULTANTS
PROJECT NO.	3109-PI-DT-0008										
PROJECT NAME	INSTALLATION OF GAS PROCESSING FACILITY										
CLIENT	PAK ARAB FERTILIZER LIMITED										
CONSULTANT	PETROCHEMICAL ENGINEERING CONSULTANTS										
<p>TYPICAL DITCH DIMENSION</p> <table border="1"> <tr> <td>PIPE SIZE</td> <td>12"</td> <td>DEPTH</td> <td>1.00 m</td> </tr> <tr> <td>TRENCH WIDTH</td> <td>1.524 m</td> <td>TRENCH LENGTH</td> <td>1.00 m</td> </tr> </table>				PIPE SIZE	12"	DEPTH	1.00 m	TRENCH WIDTH	1.524 m	TRENCH LENGTH	1.00 m
PIPE SIZE	12"	DEPTH	1.00 m								
TRENCH WIDTH	1.524 m	TRENCH LENGTH	1.00 m								
<p>DRAWING NO. 3109-PI-DT-0008</p>											

# STANDARD R.O.W FOR 12" PIPELINE



NOTES:  
1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED

REVISION	DATE	BY	CHKD

**PC** PETROCHEMICAL ENGINEERING CONSULTANTS  
P.O. BOX 1145, KARACHI-74000, PAKISTAN

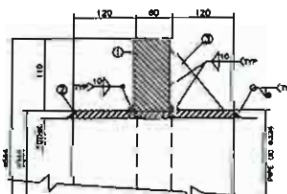
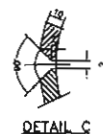
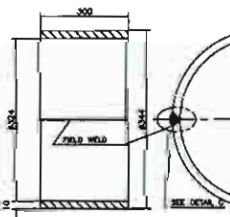
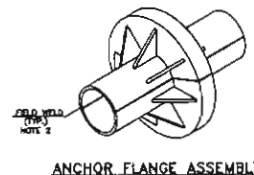
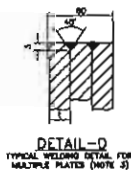
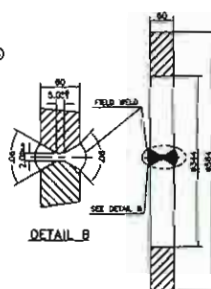
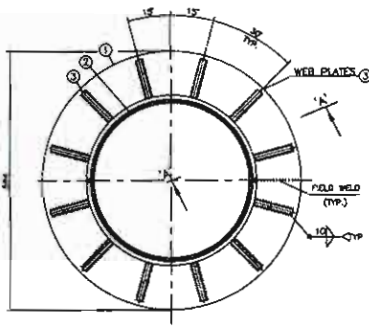
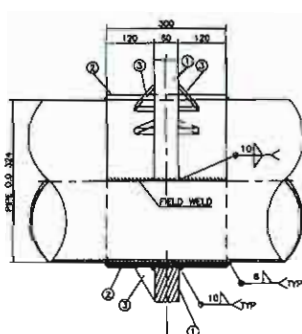
CLIENT: **PAK ARAB FERTILIZER LIMITED**

PROJECT: **INSTALLATION OF GAS PROCESSING FACILITY**

TITLE: **R.O.W DIMENSIONS FOR PIPELINE**

DESIGNED BY:	CHECKED BY:	DATE:
3109-PI-DT-0009		

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# NOTES:-

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
2. ANCHOR FLANGE TO BE MANUFACTURED IN TWO SECTION FOR INSULATION AND WELDING ON SITE.
3. REQUIRED THICKNESS MAY BE ACHIEVED BY USING MULTIPLE PLATES OF DIFFERENT THICKNESS (NOT LESS THAN 30MM THO).
4. 30MM CLEARANCE FOR WELDING.
5. ANCHOR BLOCK DETAILS FOR Ø12" SEE REF. DWG# 3109-PI-DT-0007

ITEM NO.	DESCRIPTION	QTY	MATERIAL	UNIT	NO. OF	TOTAL WT(KG)
3	WEB PLATE 100 X 110 X 10 THK.	24	ASTM-A36	PLD PLATE	11	
3	SLEEVE 10 THK.	1	ASTM-A36	PLD PLATE	23	
5	FLANGE PLATE 304 CLS 304 SSLS 20 THK.	3	ASTM-A36	471 kg/m <sup>2</sup>		

REFERENCE DRAWINGS			
S.NO	DESCRIPTION	DWG. NO	
1	FLOWLINE ALIGNMENT DRAWING	3109-PI-PL-0001	

REV.	DATE	DESCRIPTION	DRAWN	CHECK'D	APPROV	APPROV
0	20-07-18	ISSUED FOR REVIEW	AWK	SH		
1						

**PETROCHEMICAL ENGINEERING CONSULTANTS**  
C-6, BLOCK NO. 17, F-7/3, K-10/4, G-10/4, H-10/4, I-10/4, J-10/4, K-10/4, L-10/4, M-10/4, N-10/4, O-10/4, P-10/4, Q-10/4, R-10/4, S-10/4, T-10/4, U-10/4, V-10/4, W-10/4, X-10/4, Y-10/4, Z-10/4

CLIENT: **PAK ARAB FERTILIZER LIMITED**

PROJECT: **INSTALLATION OF GAS PROCESSING FACILITY**

TITLE: **ANCHOR FLANGE DETAILS FOR Ø12"**

DRAWING NO.	SHEET	REV.
3109-PI-DT-0010	NO. 1 OF 1	0



**PAK ARAB FERTILIZERS LIMITED**

## CONSTRUCTION OF NATURAL GAS PIPELINE



## TENDER DOCUMENTS FOR 16" PIPELINE WORK

Consultant:



**PETROCHEMICAL ENGINEERING CONSULTANTS**

Engineering, Procurement Assistance & Construction Management Services for Process & Petrochemical Industries

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**pakarab**  
FERTILIZERS LIMITED

**PAK ARAB FERTILIZERS LIMITED**

## CONSTRUCTION OF NATURAL GAS PIPELINE

### PIPELINE BILL OF QUANTITY

Consultant:



**PETROCHEMICAL ENGINEERING CONSULTANTS**

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**PAK ARAB FERTILIZERS LIMITED**  
**CONSTRUCTION OF NATURAL GAS PIPELINE**

DOC. NO. : 2805-BOQ-001  
 PREP. : MZK  
 REV. : 1  
 DATE : 02/07/18  
 Job No. : 2805


**BILL OF QUANTITIES**  
**FOR SUPPLY & CONSTRUCTION**

SR#	ITEM DESCRIPTION	UNIT	QTY.	SUPPLY		CONSTRUCTION		REMARKS
				UNIT RATE (PKR)	AMOUNT (PKR)	UNIT RATE (PKR)	AMOUNT (PKR)	
1.0	<b>PIPING</b>							
1.1	Pipe, Ø16" Sch. 40 (Thk 12.95), Single Random Length, API 5L Gr. X-46, Spiral Welded.	m	12					
1.2	Pipe, Ø10" Sch. 40 (Thk 9.27), Single Random Length, API 5L Gr. X-46, Spiral Welded.	m	6					
1.3	Pipe, Ø16" Sch. 20 (Thk 7.92), Single Random Length, API 5L Gr. X-70, Spiral Welded.	m	12					
2.0	<b>BARRED TEES</b>							
2.1	Reducing Barred Tee Ø16" x Ø10" Sch. 40 , Material : ASTM 234 WPB, Bevel Ends to match pipe walls (for X-46 Pipe)	No.	1					
2.2	Equal Barred Tee Ø16" Sch. 20 , Material : MSS SP-75 Gr. WPHY 70, Bevel Ends to match pipe walls (for X-70 Pipe)	No.	1					
3.0	<b>TEES</b>							
3.1	Reducing Tee Ø10" x Ø6" Sch. 40 , Material : ASTM 234 WPB, Bevel Ends to match pipe walls (for X-46 Pipe)	No.	1					
3.2	Reducing Tee Ø16" x Ø6" Sch. 20 x Sch. 40 , Material : MSS SP-75 Gr. WPHY 70, Bevel Ends to match pipe walls (for X-70 Pipe)	No.	1					
3.3	Equal Tee Ø3/4". S.W, 3000#, ASTM A-105 as per ASME B16.11	No.	2					
4.0	<b>FLANGES</b>							
4.1	Weldneck Flange, 600#, RF, as per ASME B 16.5, Material: ASTM A-105							
i)	Ø16" Sch. 40	Nos.	3					
ii)	Ø10" Sch. 40	Nos.	3					
iii)	Ø6" Sch. 40	Nos.	1					
4.2	Weldneck Flange, 600#, RF, as per ASME B 16.5, Material: ASTM A694 Gr.F70							
i)	Ø16" Sch. 20	Nos.	6					
ii)	Ø6" Sch. 40	Nos.	1					

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**PAK ARAB FERTILIZERS LIMITED**  
CONSTRUCTION OF NATURAL GAS PIPELINE





**PEC**  
PERKHAJATI ENGINEERING CONSULTANTS



DOC. NO. : 2805-BOQ-001  
PREP. : MZK  
REV. : 1  
DATE : 02/07/18  
Job No. : 2805


**BILL OF QUANTITIES**  
**FOR SUPPLY & CONSTRUCTION**

SR#	ITEM DESCRIPTION	UNIT	QTY.	SUPPLY		CONSTRUCTION		REMARKS
				UNIT RATE (PKR)	AMOUNT (PKR)	UNIT RATE (PKR)	AMOUNT (PKR)	
4.3	Blind Flange, 600#, RF, as per ASME B 16.5, Material: ASTM A-105							
i)	Ø16" Sch. 40	Nos.	1					
ii)	Ø10" Sch. 40	Nos.	1					
iii)	Ø6" Sch. 40	Nos.	1					
4.4	Blind Flange, 600#, RF, as per ASME B 16.5, Material: ASTM A694 Gr.F70							
i)	Ø16" Sch. 20	Nos.	2					
ii)	Ø6" Sch. 40	Nos.	1					
5.0	<b>PIPELINE VALVES</b>							
5.1	Ø16" Ball Valve Full Bore-600# R.F. as per API 6D, Body Material ASTM A-216 WCB & Trim Material : 13% Cr. S.S.,	Nos.	2					Already provided
5.2	Ø16" Ball Valve-600# R.F. as per API 6D, Body Material ASTM A-216 WCB & Trim Material : 13% Cr. S.S.,	Nos.	1					Already provided
5.3	Ø10" Ball Valve-600# R.F. as per API 6D, Body Material ASTM A-216 WCB & Trim Material : 13% Cr. S.S.,	Nos.	1					Already provided
5.4	Ø6" Ball Valve-600# R.F. as per API 6D, Body Material ASTM A-216 WCB & Trim Material : 13% Cr. S.S.,	Nos.	2					Already provided
5.5	Ø16" Ball Valve Full Bore-600# welded ends. as per API 6D, Body Material ASTM A-216 WCB & Trim Material : 13% Cr. S.S.,	Nos.	2					
5.6	Ø3/4" Ball Valve, S.W.6000#, Body material ASTM A-105	Nos.	6					
6.0	<b>SOCKOLET</b>							
6.1	Socket S.W. 6000# as per ASME B 16.11							
i)	Ø16" x Ø3/4"	Nos.	2					
7.0	<b>SWAGE NIPPLE</b>							
7.1	Swage Nipple of Ø3/4" x Ø1/2" Sch. 80, FNPT as per ASME 16.11	Nos.	2					

<div>  <div> <b>PAK ARAB FERTILIZERS LIMITED</b>  <b>CONSTRUCTION OF NATURAL GAS PIPELINE</b> </div> <div>  </div> </div>								DOC. NO. : 2805-BOQ-001 PREP. : MZK REV. : 1 DATE : 02/07/18 Job No. : 2805
<b>BILL OF QUANTITIES FOR SUPPLY &amp; CONSTRUCTION</b>								
SR#	ITEM DESCRIPTION	UNIT	QTY.	SUPPLY		CONSTRUCTION		REMARKS
				UNIT RATE (PKR)	AMOUNT (PKR)	UNIT RATE (PKR)	AMOUNT (PKR)	
8.0	<b>GASKET</b>							
8.1	Spiral Wound Gasket , 600#, Material 316 S.S Ring							
	i) Ø16"	Nos.	9					
	ii) Ø10"	Nos.	3					
	iii) Ø6"	Nos.	4					
9.0	<b>STUDS / BOLTS</b>							
9.1	Studs with 2 Nuts, Stud Material :ASTM A 193 Gr. B7 and Nuts Material: ASTM A 194 Gr. 2H, as per ASME B 16.5							
	i) M39 x 255 Long	Nos.	180					
	ii) M33 x 215 Long	Nos.	48					
	iii) M27 x 170 Long	Nos.	48					
10.0	<b>PIPE-NIPPLE</b>							
10.1	Pipe Nipple of Ø3/4" Sch. 80, 150 mm long	Nos.	10					
<b>SUB TOTAL</b>								
<b>TOTAL</b>								

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 <b>PAK ARAB FERTILIZERS LIMITED</b> <b>CONSTRUCTION OF NATURAL GAS PIPELINE</b> <b>DIA. 16" - 23 KM LONG</b> <b>BILL OF QUANTITIES</b> <b>CONSTRUCTION</b>						 DOC. NO. : 2805-BOQ-C-002 PREP. : SMS REV. : 0 DATE : 20/04/18 Job No. : 2805
SR#	ITEM DESCRIPTION	UNIT	QTY.	UNIT (PKR)	TOTAL (PKR)	REMARKS
1.0	<b>TIE-INS AT START AND END POINTS</b>					
1.1	Tie-in with Plant Pipeline to Transmission Pipeline at launcher area within Plant battery limit and at SNGPL Valve assembly at Muhammad Pur. The work includes loading, transport, unloading from store, cutting, beveling, welding, 10% radiography, installation of valves, dismantling (if required) testing and painting complete in all respect as per Engineer Instruction.	Lumpsum				
2.0	<b>PIPELINE</b>					
2.1	Works includes the followings					
a)	Excavation of Test Pits with Metal Detector for identification of any underground pipe / structure.					
b)	Marking of RoW and Pipeline route within existing RoW					
c)	Excavation as per drawing and site conditions					
d)	Dewatering as and when required					
e)	Import and laying of fine sand for 150 mm sand layer all around pipeline	m	23000			Minimum soil cover on pipe shall be 1.0 m
f)	Loading, transportation, unloading of pipes at site from store					
g)	Stringing, Lowering in with proper arrangement					
h)	Grinding, cutting, beveling and welding of line pipe, bends, tees, flanges, etc.,					
i)	Grinding, cutting, beveling and welding of Transition Pieces					Transition Pieces shall be provided by Client
j)	Installation of Valves at Railway Crossing					
k)	Backfilling free of stone					
l)	10% Radiography of the weld and 100% at crossings					
m)	100% Holiday Detection of pipeline coating					
n)	Welding and Installation of Insulation Joints					at both ends
o)	Hydrostatic Testing of Pipeline with sweet water					
3.0	<b>HEAT SHRINKABLE SLEEVES</b>					
	Supply of ail material, application, and testing of Heat Shrinkable Sleeves (17" wide) to be applied on welding joints, bends (field and factory) complete in all respect.	Lumpsum				
4.0	<b>ANCHOR BLOCKS</b>					
	Supply of all material including Anchor Flanges, construction of Anchor Block of RCC type, placing at location complete in all respect.					Reference Dwg. Attached 2805-AB-001 2805-AB-002 2805-AF-001
i)	At Plant Site	No.	1			
ii)	At SNGPL Valve assembly	No.	1			




**PAK ARAB FERTILIZERS LIMITED**

**CONSTRUCTION OF NATURAL GAS PIPELINE**

**DIA. 16" - 23 KM LONG**

**BILL OF QUANTITIES**

**CONSTRUCTION**



DOC. NO. : 2805-BOQ-C-002

PREP. : SMS

REV. : 0

DATE : 20/04/18

Job No. : 2805

SR#	ITEM DESCRIPTION	UNIT	QTY	UNIT	TOTAL	REMARKS
5.0	<b>ANTI-BUOYANCY WEIGHTS</b>  Supply of all material, construction of Anti-Buoyancy Weights of RCC type, placing on pipe at 6 m Center to Center complete in all respect.	Nos.	85			Reference Dwg. Attached 2805-ABW-001 Chainage No. 15+050 To 15+550
6.0	<b>PIPELINE RAILROAD CROSSING</b>  Pipeline Rail Road Crossings through Horizontal Directional Drilling method. Works include supply of all material, arrangement of machinery, tools and tackles, complete in all respect. Rail Road Width 50 m	No.	1			Reference Dwg. Attached Chainage No. 11+600
7.0	<b>PIPELINE ROAD CROSSINGS</b>  Pipeline Road Crossings through Horizontal Directional Drilling / Thrust Bored method. Works include supply of all material, arrangement of machinery, tools and tackles, complete in all respect. <div style="margin-left: 20px;">                         i) Road Width 10 m                          ii) Road &amp; Pipeline Width 69 m                          iii) Road &amp; Pipeline Width 45 m                          iv) Road Width 21.3 m                          v) Road Width 15.2 m                          vi) Road Width 13 m                          vii) Road Width 20 m                          viii) Hiway (Double Road) width 98 m                     </div>	Nos.	5			Chainage No. 8+100 Chainage No. 10+250 Chainage No. 11+250 Chainage No. 17+150 Chainage No. 22+550 Chainage No. 22+750 Chainage No. 12+000
8.0	<b>PIPELINE CANAL CROSSINGS</b> <div style="margin-left: 20px;">                         i) Nari Canal Width 56 m                          ii) Dehr Canal Width 64 m                          iii) Naro Canal Width 69 m                          iv) Syed Pur Minor Canal Width 57.5 m                          v) Minor Canal Width 36.8 m                     </div>	Nos	1			Chainage No. 1+425 Chainage No. 7+150 Chainage No. 14+800 Chainage No. 17+750 Chainage No. 20+800
9.0	<b>CATHODIC PROTECTION SYSTEM</b>  Soil Resistivity Survey, Design, supply of all material, installation, testing and commissioning of C.P. System	Job	1			
<b>SUB-TOTAL</b>				(PKR)	-	
<b>TOTAL</b>				(PKR)	-	

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**PAK ARAB FERTILIZERS LIMITED**

## CONSTRUCTION OF NATURAL GAS PIPELINE

### **SPECIFICATION FOR PIPELINE CONSTRUCTION DOCUMENT NO. : SP-150**

Consultant:



**PETROCHEMICAL ENGINEERING CONSULTANTS**



PAK-ARAB FERTILIZERS LIMITED

SPECIFICATION FOR  
PIPELINE CONSTRUCTION  
DOCUMENT NO. : SP-150

Consultant:



**PETROCHEMICAL ENGINEERING CONSULTANTS**

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## 1.0 **GENERAL**

### 1.1 **Scope**

This construction specification outlines the minimum basic Pipeline construction requirements for Ø 16" Gas Pipeline - 23 km long from Pakarab Fertilizer Co. Gas Processing Plant at Dharki to SNGPL Valve Assembly at Muhammadpur.

This specification establish the methods of construction, testing and repair, acceptable constructions tolerances, construction record requirements and such details as ditch dimensions, amount of cover required, allowable change of slope and tie-in temperature limits etc. Installation of mainline valves and Associated Piping, future Scraper Traps assembly and Insulating Joints are also included in the scope.

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## 2.0 CODES, STANDARDS & SPECIFICATIONS

- |                        |   |
|------------------------|---|
| – API specification 5L | Specification for Line pipe, Forty First Edition,<br>April 1 1995                       |
| – API specification 6D | Specification for pipeline valves<br>(Gate, Plug, Ball & Check Valves)                  |
| – API Standard 1104    | Standard for welding pipelines and<br>related facilities                                |
| – API RP 5LW           | Recommended practice for<br>Transportation of line pipe on Barges<br>and Marine vessels |
| – ASME B 31.8          | Gas Transmission and Distribution<br>Piping System                                      |

Certain codes and regulations may have been adopted by the jurisdictional agencies over the locations where the work is to be performed. It shall be the contractor responsibility to determine whether local codes and regulation exist. In the event local codes and regulations exist contractors shall determine their scope and abide by all their provisions on its own cost.

### 3.0 PIPELINE ROUTE

Contractor shall verify survey and prepare/update drawings for the pipeline route and set survey markers and monuments in order to establish the center-line, construction limits of work and to establish the crossing points. The Contractor shall perform all required survey work including the surveying for proper grading of the trench, location and bending of pipe and installation of road/canal crossings. Contractor shall perform all surveying necessary for the installation of pipeline and preparation of as-built drawings.

#### 3.1 Demarcation

The pipeline route drawings (plan/profile) show generally the alignment that is to be followed by the Contractor and pipeline corridor shall be marked accordingly on ground.

Contractor shall at his own expense carryout all necessary survey to locate underground/buried services such as electric cables, telephone line, gas line, pipeline etc. and other permanent structures in order to protect and prevent any accident or damage to other's work.

Owner shall obtain necessary right of way from the concerned Agency/Authorities. However it shall be the Contractors responsibility to liaise/coordinate with these Agencies/Authorities/Individuals in order to ensure systematic and smooth laying of pipeline to the satisfaction of the Owner as well as the Authority/Agency/ Individual concerned.

#### 4.0 **UNLOADING, STOCKPILING, HAULING & STRINGING OF MATERIALS**

- 4.1 Contractor shall receive, load-out, transport and stockpile coated pipes at the designate delivery points, and shall reload and string with equipment of a suitable capacity using Owner approved slings, spreader bars and protected hooks. Coated pipes shall not be handled in any manner, which distorts, scratches, scars, or dents the pipe. Unloading of pipes from trucks shall be done carefully. Pipe shall never be dropped. It shall be handled and transported to prevent any damage. The pipe insulation and, concrete coating, if any, shall be protected from damage. Pipe shall be stockpiled as directed by Owner.

Pipes shall be loaded in truck in a pyramid form and tiers shall be according to ASME B31.8 for 16" dia. Pipe.

Materials other than pipes and which are susceptible to dispersing, deteriorating or suffering from damages, especially due to humidity, exposure to high thermal excursions or other adverse weather conditions shall be suitably stored and protected. In particular, material for protective coatings, heat shrinkable sleeves, rock shields fall within this class.

- 4.2 Pipe strung along the construction right-of-way shall be protected by setting the pipe on padded supports.
- 4.3 Pipe shall not be stung on the construction right-of-way in advance of trenching where blasting will be necessary in rock areas.
- 4.4 Pipe shall be strung in such a manner as to result in the least amount of interference to the normal use of the land and/or other properties crossed, and gaps shall be left at frequent intervals to permit the use to the land and the passage of farm animals equipment, or other normal traffic across the construction right-of-way.
- 4.5 All materials shall be unloaded, stored if such is required, hauled to the site of the work and assembled on the site in such a manner as to prevent damage, theft, etc.

Flammable materials such as paints, primers, volatile substances etc. shall be kept in separate storage having proper ventilation until the final use and both inside and outside of the storage all kind of preventive measures shall be taken against danger of a possible fire.

- 4.6 The Contractor shall be fully responsible for providing and paying for all storage areas.
- 4.7 The Contractor shall prevent entrance of dirt of debris into pipe during stringing.

- 4.8 The piling of coated pipes will be carried out on surfaces previously leveled and coated with a layer of sieved earth or sand having a sufficient thickness to prevent coatings from being damaged or on wood wedges or sand bags.

Carefully lower the pipe to the right of way on to sandbags. Do not roll off or drop from vehicles

- 4.9 Lifting and handling of mainline block valve, structural steel and other materials shall be accomplished without damage of any sort. Contractor shall adhere to all lifting and handling instructions lay down by the Contractor.
- 4.10 The Contractor shall be fully liable for repair or replacement materials or equipment damaged by Contractor.
- 4.11 For handling of coated pipes, equipment shall be selected carefully to avoid any damage to the coating. Pads are recommended on forklifts and a spreader bar shall be used when handling pipe with an overhead crane. These pipes shall be handled with wide belt strips and not with chain or wire.
- 4.12 If the pipe is to be stored for long periods of time, the ends should be covered from the elements to insure cleanliness and to prevent deterioration of the coating. The most common method of protection is to use a polyethylene bag securely taped over the ends of each pipe, carefully stacked in a secured area to prevent damage from other operations incidental to the job.
- 4.13 Pipes shall be suitably secured against falling down and will consist of pipes having the same diameter and thickness. Continuous pipes having different sizes, wall thickness or coating thickness shall be clearly separated.

## 5.0 RIGHT-OF-WAY

### 5.1 General

- 5.1.1 The construction right-of-way shall be cleared and graded to a smooth surface for the full width and prior to the stringing of pipe. In addition, fills and cuts may be indicated on the plan or profile drawings in order to eliminate or lighten over bends or sags in the pipeline.
- 5.1.2 For the purpose of construction temporary ROW (Construction ROW) shall be acquired by the Owner. Width of permanent Row in different section shall be as per alignment drawings. Any requirement of land in addition to this, for construction, storage, access or residential camps shall be arranged by the Contractor at its Own cost.
- 5.1.3 The Contractor shall pay for all damages resulting from operations outside the construction right-of-way.
- 5.1.4 The Contractor, at its own expense, shall verify by suitable means in advance of actual construction, the precise location and actual depth of all existing pipelines, utilities and subsurface structures that either cross or are in close proximity to the proposed pipeline. Contractor shall avoid damages to and shall be liable for all damages to all such structures.
- 5.1.5 Contractor shall restore all damaged property including but not limited to buildings, fences, hedges, roads, bridges, culverts, drainage ditches, terraces, drainage, tile, creeks, levees and rivers occupied or crossed in said construction. Any property damaged in the prosecution of the work shall be put into as good conditions as before damage occurred and upto the satisfaction of concerned local authorities and as agreed to by Owner.
- 5.1.6 In rough or steep terrain the Contractor may be required to grade access roads into the construction right-of-way for use in the moving in of materials, men and equipment. Where such roads are required the Contractor shall obtain the necessary permission from land Purchasers and tenants involved and shall furnish Purchaser with a written copy of such permission. The Contractor shall be responsible for all the damage caused by the construction and use of such roads.
- 5.1.7 Where the construction working area is shared or located on an existing pipeline ROW, extreme caution shall be used at all times to avoid damage to existing facilities.
- 5.1.8 Before any work can begin on shared ROW, the existing pipeline marked by the contractor with red flags, for clear indication. Contractor shall take extreme care not to ply the equipment over the existing pipeline.
- 5.1.9 Contractor shall cross his equipment only at the designated points over the

existing pipeline if deemed necessary. Earthen ramps shall be constructed/maintained at such crossing points till completion of the pipeline construction.

## 5.2 **Site Marking**

The proposed Dia. 16" Gas Pipeline in sharing section of ROW shall be installed at a distance as shown in Pipeline Alignments drawings or as per site requirement. Contractor at its own cost shall locate the existing pipeline and determine the alignment of proposed Dia.16" Gas Pipeline accordingly.

The crossings with roads shall be marked and the Contractor shall warn for special operations.

If the right of way width is reduced, entrance to and exit from the narrow area are clearly marked and stakes are placed if necessary.

Every 250 m along the right of way, a stake is placed on the trench side and should be visible from the working track.

The Contractor shall maintain and possibly correct the marking during the construction operations.

## 5.3 **Preparation of the R.O.W.**

The Contractor, within the area made available to him by the Owner shall at his own cost perform the following:

Make all required arrangements (cleaning, leveling) permitting the delivery and transfer of pipe, moving of vehicles, all operations required for the good performance of work, traffic of vehicles belonging to any agent responsible for the supervision of work, and if necessary installation of culverts, dewatering, back-filling of ditches or reinforcing of certain portions of natural ground which could be in poor condition.

Remove or have removed all power line or telephone line poles; the Contractor shall take all necessary steps to secure, in due time, the corresponding agreement from the governmental agencies concerned.

## 5.4 **Cutting down of Trees**

Within the R.O.W. made available by the Owner, the Contractor shall proceed with cutting down of trees, clearing of tree stumps and large roots.

Cutting down of trees shall be performed so as to avoid damages to other trees, plantings, crops and any construction.

Clearing and Grading operation shall not be more than 5 Km ahead of

completed trench unless advised by engineer.

All cut-down trees shall remain the sole property of the Owner. Trimmed trunks shall either stacked along the R.O.W. or removed to a place specified by the Owner.

The same shall be applied for bushes and branches resulting from the clearing.

#### 5.5 **Maintenance of ROW**

The right of way once prepared shall be kept in good condition for all traffic.

- 5.5.1 In non shared section, Contractor shall grade, raise and compact ROW to make it jeepable in cultivated/water logged area. Grading/raising of ROW in rocky area and deserts is not required.

As a general guideline, the width of Jeepable ROW shall be 10 ft with 9" raised above the NGL

## 6.0 **TRENCHING**

Particular care should be taken to locate all buried installation, crossings, the pipe line route in advance of grading and ditching.

The Contractor shall take center-line of the pipeline as per relevant drawings / site conditions dig and maintain the pipeline trench.

### 6.1 **General**

- 6.1.1 In locations where the trench is cut across roads, paths, walkways, etc., the Contractor shall provide temporary bridges of adequate strength and properly constructed to allow the passage of normal traffic with a minimum of inconvenience and interruption.
- 6.1.2 Proper warning signs shall be placed and maintained while such crossings are open, if the crossings are open at night, the Contractor shall provide and use; Warning Lights or lanterns, all as required by the agency having jurisdiction and/or Owner.
- 6.1.3 The Contractor shall provide at his cost necessary pumps, de-watering equipment, sheet piling, shorting well points, etc. as required to prepare trench in marshy and high water table areas. Contractor shall ensure satisfactory disposal of water pumped through the ground.
- 6.1.4 Where gravel, rock, and/or other hard materials are in the bottom of the trench in non traffic areas and where in Owner's opinion, such conditions will result in injury to the pipe coating, the Contractor shall pad the bottom of the trench with sand to a depth such as to give the pipe, in place, at least 150mm of clearance from the hard materials.

### 6.2 **Depth**

- 6.2.1 Minimum depth of cover shall be measured from the top of the pipe coating, to the top of the undisturbed surface of the soil. Fill material in the construction right-of-way not be considered to add to the depth of cover.
- 6.2.2 The Contractor shall carry out all point of the R.O.W. where a deeper cover is required by the Owner or his Representative, or indicated on drawings near roads, railways, water course crossings and in short sections of cultivated areas where special installations or surface arrangements exist or are foreseen.

If, during performance of work, the minimum cover height cannot be respected, the Contractor shall submit for the Owner's approval all necessary provisions to ensure equivalent protection.

### 6.3 Width

- 6.3.1 The trench shall be wide enough to allow for lowering-in without damage to the pipe, pipe coating and insulation. The trench shall be excavated so as to provide a minimum clearance of 150 mm on either sides of the pipe. Each side of the pipe measured from the outside of any coating at the horizontal centerline of the pipe when is placed in the trench.
- 6.3.2 The Contractor may be required to excavate deeper than shown on the Drawings, or to excavate a trench wider than required by the Specifications and Drawings, in order to properly construct the pipeline at water logged area, road, path, walkway, dike and stream crossings, and other locations of a similar type. It is understood that the Contractor recognizes such possibilities at the time of the submission of the bid and that he has included such possible costs in the bid.

### 6.4 Ditches

Ditching operations, increase in width and depth, supply of back-filling material of the ditch bottom shall be at the Contractor's expense.

When required in locations where ditch walls shall be protected by shielding, the Contractor shall perform the corresponding work at his own cost.

Ditch walls and bottom shall be free of damaging elements (stones, roots, etc.). Ditch walls shall be as vertical as possible.

Ditch shall have 150mm fine sand cushion all around pipeline.

At points where trench is known to cross other pipelines or underground systems, excavation shall be performed manually.

The bottom of the finished trench shall be adjusted in such manner that the bottom of pipe, bent according to the design, will fit on its whole length so that the pipe will not be ovalized.

In rocky areas, the Contractor shall protect the ditch bottom with a padding of sieved sand of 200 mm thick. Pipeline should be provided with the mechanical protection being backfilled in the rocky areas of a minimum of 20-mm thickness.

When ditching is performed in an urban zone, the Contractor shall take all necessary measures in order to prevent disturbing normal activity in the neighborhood and shall quickly restore streets, and other structures, as necessary.

6.5 **Top Soil**

Top soil shall be conserved by removing one layer of top soil to a depth of between 100 mm and 150 mm. Removed top soil shall be stockpiled in a location that will minimize any loss due to erosion or mixing with other materials. Top soil conservation shall be carried out in all areas where excavation or levelling is necessary including the trench line, graded pipeline route, temporary stock piles and camp sites.

The excavated materials shall be stored within the Row.

When required by governmental agencies concerned, the Contractor shall remove all excavate materials and convey them to locations chosen in agreement with the Owner. He shall also supply and perform the necessary back-filling.

6.6 **Crossing of Unstable Areas**

If the zones crossed by the line present any risk of settling and sliding, the Contractor shall, immediately, inform the Owner of such risk.

In steep areas of hillside before starting the work, the Contractor shall provide for suitable dams or other similar protections in order to prevent the material removed from falling down the hill. The foregoing is particularly applicable where lines of communication, houses, water courses and cultivation exist.

6.7 **Temporary Crossings**

6.7.1 Wherever it is permissible to open cut a road with an improved surface to make a road crossing, the Contractor shall remove the surface in accordance with the restrictions and requirements of the national, provincial, municipal or other agency having jurisdiction thereof.

6.7.2 Where possible the Contractor shall arrange to complete the trenching, laying and back-filling of such crossings and to remove the temporary bridging before the end of the regular work day in order to minimize the hazard to night traffic.

6.8 **Water Drainage**

The Contractor shall be responsible for the protection of the site against water of any kind and origin.

He shall be responsible, in any circumstance, for maintaining surface or deep water drainage.

He shall also be responsible for all consequences resulting from troubles he would have caused in surface or deep water drainage and for any damage or

accident likely to occur.

The Contractor shall be responsible for drainage of water of any origin for the site up to the adequate outlets. Such obligations cover the construction and maintenance of water supply connections (drain-pits, drains, etc.), the supply of power and equipment necessary for drainage, operational and supervisory personnel, the restoration of the site etc. so that ditching operations and lowering-in of pipe into the ditch be carried out under good conditions.

When the back-filled trench making a drain effect is liable to cause damages to the pipeline or to the nearby lands, the Contractor shall submit to the Owner adequate measures to prevent damages from occurring.

#### 6.9 **Underground Drainage**

Within drained areas or areas to be drained, the pipe will be laid in order that the distance between the top of pipe and the bottom of each drain is at least 0,3 meter.

The Contractor will take similar measures for separate drain lines which have not been indicated to him and which he is likely to encounter during the performance of work. He will have to immediately inform the Owner of the existence of such drain lines.

As soon as the pipe has been laid down, the Contractor shall restore all drain lines in such a way as to obtain a draining system similar to the initial one.

Drain lines, which would have been damaged by vehicles, shall be replaced under the previous conditions.

Special measures shall also be taken in order to prevent the ditch, after back filling, from being used as drain line.

Within grounds drained by underground systems, the Contractor shall restore any cut network, using a method satisfactory to the land Purchaser and approved by the Owner.

#### 6.10 **Blasting**

When blasting is necessary to grade the ROW, excavation of ditches or performance of any other operation required for laying the pipe, the Contractor shall inform the Owner.

Contractor shall comply with all safety regulations concerning their personnel and take any measures to ensure safety of people, cattle and properties in the site vicinity.

In all cases where blasting is used, the Owner's authorization does not cancel

nor decrease the Contractor's full responsibility for any damage to the existing installations, to the other underground and overhead facilities, to people animals and things.

Any damage caused shall be immediately repaired to full satisfaction of the Owner

The Contractor will notify, sufficiently in advance, all persons living in the neighbourhood and all parties concerned prior to starting operation, in order to protect any livestock in the vicinity. When blasting operations are to be performed close to buildings, systems or forests, the Contractor shall take all necessary measures to prevent damage to nearby structures from occurring.

In any way, the Contractor shall pick up all scraps and fragments ejected beyond this area and bear the cost of damages of any kind resulting from such blasting operation.

#### 6.11 **Bell Holes**

When pipe tie in is to be performed in the ditch, the Contractor shall provide, at his own expense, bell holes having at least the following dimensions:

Depth:	60 (Sixty) cm below the lower part of pipe.
Length:	70 (seventy) cm in excess of the outside diameter of the pipe
Width:	90 (ninety) cm between the outside of the pipe and the bell hole wall on either side of the pipe.

## 7.0 **BENDING**

### 7.1 **Preformed Bends**

Preformed bends shall be installed in the pipelines where the changes in direction are larger than permissible with the elastic bends. Bends may require more cover than the minimum cover at straight run of pipelines.

Preformed bends can be broadly classified into:

- Factory made preformed bends (for angles 23° and above)
- Site bends using bending machine (for angles between 3° and 22°)
- Site bends using bites (for angles less than 3°)

#### 7.1.1 **Factory Made Preformed Bends**

The factory made preformed bends shall be installed where the changes in direction are equal to or greater than 30°. Factory made preformed bends shall be procured in two sizes i.e. 45° and 90°. Any other angle shall be achieved by fabricating the 45° and 90° bend at site. The pipeline diameter shall not be reduced at any point by more than 2.5 % of the nominal diameter.

#### 7.1.2 **Site Bends Using Bending Machine**

Preformed bends less than 22° but greater than 3° shall be made by welding into the correct location of the string a length of pipe which has been bent with a smooth stretch bending machine.

Bends shall not be made closer than 2 ft. from a circumferential weld unless the weld is back welded. The weld shall be X-rayed after the bend is made.

#### 7.1.3 **Site Bends Using Bites**

Horizontal changes of direction, which are larger than permissible with elastic bends, are to be made using preformed bends in 3° (maximum).

More specifically, when horizontal bends are to be made by using pipe bending machine, the maximum permissible bend or 'bite' at one place on the pipe shall be zero degree thirty minutes (0° 30') and the minimum spacing of such bites shall be 3 feet. The limitation of horizontal bend, shall be 3° per 37 feet pipe length. Normally, this means 6 each 1/2° bites spaced 3 feet with 11 feet straight tangent at the ends of each pipe length.

#### 7.1.4 **Linear and Angular Tolerances**

Bends shall be provided with a total angularity tolerance of  $\pm .5$  degrees as determined by the intersection of the tangent centerlines measured by

appropriate equipment.

#### 7.1.5 **Contractor's Responsibility**

Small sag and over-bends can be handled by careful trenching of the pipeline trench and/or field bending the pipe.

Contractor shall submit for approval the procedure for field bending of line pipe and repair of coating of the pipeline in the field.

Miter bends are not allowed.

Fire or wrinkle bends will not be allowed.

The difference between maximum and minimum diameter at the bend may not be more than 2.5% of the nominal diameter. Pipe bends showing evidence of "Ovality" shall be cut out and replaced by Contractor at his expense.

Wall thickness after bending shall not be less than 92% of the nominal wall thickness of the pipe.

## 8.0 CLEANING & INSPECTION OF PIPES & BEVELS

- All pipes shall be internally cleaned prior to assembling.
- The means of cleaning shall be proposed by the Contractor for approval of the Owner's Representative.
- All operations performed later on shall be conducted so as to prevent any foreign body, especially water and earth, from penetrating into the pipes.
- Any assembled section or part shall be carefully obtruded at each interruption of work, by night caps agreed upon by the Owner, so as to prevent water, dirt, animals and any foreign substance from entering the pipe.
- All Site personnel shall be fully aware to comply with the provisions and be informed that equipment, tools or suits shall not be left in the pipe, for no reason.
- If, upon removal of night caps, it appears that some foreign bodies have penetrated into the pipe, the contaminated portion shall be properly cleaned before proceeding with further assembling operation.
- Immediately, prior to proceeding with alignment each pipe end shall be carefully cleaned, using metallic brushes.
- In the event such surfaces show rust mill scales, grooves, burrs, etc. a grinding machine of flexible disk type shall be used.
- Cleaning shall be performed on the inside and outside of the pipe and at least up to ten (10) cm from the edge.
- When cleaning is performed by grinding the bevel root face shall be reconditioned using a file.
- Prior to welding, pipe diameter and thickness will be verified at each pipe end. Bevel design shall comply with type of welding.

## 9.0 WELDING

### 9.1 General

Welding and welding related requirements of the following codes and standards shall be considered part of but subject to the more stringent provision of these specifications:

- API 1104 latest edition (Standard for welding pipelines and related facilities).
- American National Standard Institute ANSI B31.8 (Latest edition).
- ASME Code - Section IX welding / brazing qualification.

- 9.1.1 No circumferential weld shall be located within 150 mm of the centre of a support.
- 9.1.2 All welds shall be marked with waterproof crayon or paint stick by the welders according to numbers assigned to them by Owner at the time they qualify. Should any welder leave, his number will be avoided and not duplicated on the project. No punch or steel stencilling will be permitted.
- 9.1.3 Except as otherwise required herein, all welding shall equal or exceed the requirements of the Standards for Field Welding of Pipe Lines API Standard 1104, latest edition.
- 9.1.4 All welding machines, line-up clamps, machines, cutting torches, and other equipment, tools, and supplies used in connection with the welding work shall be kept in good mechanical condition so as to produce sound welds.
- 9.1.5 All welding electrodes furnished and used by Contractor shall be of an approved type and quality suitable for pipeline welding acceptable to Owner. All welding electrodes found to be deteriorated, defective, or otherwise damaged shall be rejected and prohibited from use on the pipeline.
- 9.1.6 No cutting or welding on the line pipe, other than that required for making the normal circumferential joints, will be allowed without written permission from Owner.

No welding electrode or grounding shall be permitted to are the pipe except in the actual bevel being welded.

## 9.2 Procedure & Qualification

Prior to starting of production welding, a welding procedure shall be established in accordance with API Standard 1104 latest edition, for field welding of pipelines and shall be approved by Owner.

Approved pipe welding procedure shall be recorded in detail as outlined in API Standard 1104 and be adhered to during subsequent construction. The Contractor shall obtain a certificate of qualification from Owner for Welders before any welding is carried out on site.

Welding procedures which have been established approved and qualified shall not be changed. Re-qualification shall be required for any change in welding procedure already established approved and qualified. The entire welding procedure, qualification tests shall be conducted in presence of Owner. Contractor shall organize the test at a fixed plate on site to be intimated to the Owner at least one week before the date fixed for these tests.

Contractor shall, for the execution of welds, designate one or two welders to undergo the procedure qualification tests to meet the code requirement and the welders involved shall qualify for production welding on the qualification of procedure test.

The pipes welded at the time of the test shall be two job size nipples free from dirt, paint, etc. and ends bevelled with machine.

For each procedure test, four specimens shall be removed from the completed joint as per API Standard 1104 for carrying out necessary mechanical tests (destructive) all hardness surveys (if required) shall be witnessed by Owner. The procedure qualification shall be carried out at Contractor's expense.

## 9.3 Welder Qualification

The qualification test of welders shall be conducted strictly in accordance with API Standard 1104 (latest edition). Test shall be conducted in the presence of Owner. The welder(s) who have performed successful procedure qualification test is automatically qualified in that procedure.

This qualification shall in particular enable to distinguish between welders capable of executing any pass, root bead, hot pass, filler bead, capping in mainline, fabrication, tie-ins and repairs.

All the qualified welders shall be given the identification tag consisting of following information:

- Photographs
- Welder identification symbol

- Welder's name
- Contractor's name

### **Reports**

The Contractor shall draw up a report of each qualification procedure, which shall contain the results of all inspections and tests performed on the corresponding welds. This report shall be signed by the Contractor and the Owner's representative and the Inspection Agency. These documents shall be available on Site when the welding is performed.

A form of the API 1104 type or equivalent shall be used for recording test performance conditions and results of the welding procedure qualification test.

#### **9.4 Validity**

The validity of qualification of a welder shall be maintained subject to the following conditions:

Whether the welder has worked on identical parts/procedure for total duration of at least 60 days. Whether the partial or total inspection of welds which he has performed, proved high standard of his work

In case welder leaves the site his identification shall be cancelled.

A qualified welder can be replaced by other welder whose production work is found repeatedly defective. Owner's reserves the right to disqualify such welder.

Any welder who fails the qualification tests or who has lost his qualification during the course of his work, may after a further training of a minimum of 15 days, try another qualification test.

#### **9.5 Electrode Specification**

Welding electrodes shall be sealed in packing and only that number of times opened on each day that are likely to be consumed during the day. The electrodes/rods must be free from any trace of oxidation.

Storage of welding electrodes at the job site during construction and open electrodes overnight shall be in ovens to keep the electrode dry and in good condition.

The size of electrodes shall be established in the welding procedure.

Welding electrodes should be of acceptable makes such as LINCOLN, ESAB, PIPEWELD & PHILLIPS. Contractors would be required to obtain Owner's

approval of the selected make.

## 9.6 **Production Welding**

### 9.6.1 **General**

Weld qualification procedure shall be provided for approval to the Owner.

Production welding shall not begin until all the following qualifications have been performed and found acceptable in accordance with this specification:

- Qualification of welding procedures.
- Qualification of weld repair procedures.
- Qualification of welders and welding operators.
- Qualification of radiographic procedures.
- Qualification of mechanical testing procedure.

The welding conditions that apply to production welding shall be those used for the welding procedure qualification tests.

### 9.6.2 **Preheating & Interpass Temperature**

If preheating is found necessary, the required temperature shall be reached at the joint and over a distance of at least 76 mm (3") in all directions from the joint. This temperature shall be checked regularly (e.g. using temperature indicating crayons). These requirements also apply to tack welds.

The interpass temperature is normally not to exceed the maximum temperature recorded during the Welding Procedure Qualification Test, and restricted to 250 ° C max.

### 9.6.3 **Tack Welds**

Tack welds shall be performed in accordance with a previously approved procedure and by qualified welders. They shall be 75 to 100 mm (3 to 4") long for O.D. > 12 3/4" and minimum of 50 mm (2") or 4 times the W.T. (whichever is less) for O.D. < 12 3/4", to prevent any crack formation at the root of the finished weld.

### 9.6.4 **Welding Sequence**

The second pass (hot pass) shall be made within five minutes (or less) after deposit of the root pass.

Successive passes shall not begin or end at the same point; they shall be staggered by 50 mm least for O.D. > 16".

No pass shall be commenced until the preceding pass is completed.

#### 9.6.5 **Alignment Clamp**

Use of an alignment system inside the pipeline (internal clamp) is preferred.

Internal line up clamp shall not be released until the root bead is 100% complete and pipe has been properly supported.

External line up clamp can only be removed when root bead is 50% completed in equal segments uniformly spaced around the circumference of the pipe.

#### 9.6.6 **Cleaning**

Before welding, the surfaces to be connected shall be cleaned of any trace of mill scale, slag, rust, grease, paint etc.

Upon completion of each welding pass the weld run shall be cleaned of any trace of slag and various deposits.

After completion of the welded joint, the surfaces next to the weld shall be cleaned of any trace of slag, spatters and various deposits.

#### 9.6.7 **Arc Strikes**

No arc strikes shall be permitted outside the bevel area. Any accidental arc strikes shall be ground out then submitted to magnetic particle or liquid penetrant inspections in accordance with ASME SE-138 or ASME SE-165 respectively.

#### 9.6.8 **Post-weld Treatment**

No heat treatment is required on completed production welds provided hardness requirements are respected.

#### 9.6.9 **Protection against Rough Weather**

The Contractor shall take all necessary measures for protecting the welds and welders from bad weather conditions (rain, wind, etc.) for the duration of the work. Adequate protective means and equipment shall be made available on the Site.

#### 9.6.10 **Welding Conditions Control**

The following parameters shall be checked during welding:

- Preheating temperature (when required).
- Minimum and Maximum interpass temperatures.
- Welding current amperage and voltage.
- Travel speed.

The Contractor shall provide all measuring instruments necessary for making these checks to the satisfaction of the Inspector.

As far as possible those instruments shall be the same or same type) as those used for the procedure qualification performance.

#### 9.7 **Identification of Welds**

After execution and before the inspection, the welded joints are numbered by the Contractor and furthermore, in the case of piping of pipeline installations, marked on the assembly drawing.

In line, each welded number shall be written again over the coating material.

Welders are requested to stamp their identification number on the first in line welds they perform and when a modification is brought in the composition of their welding crew.

Marking on pipe shall never be made by punching.

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## 9.8 Weld Inspection

### 9.8.1 General

The Contractor is responsible for performing all weld inspections. He shall provide the personnel, equipment and products necessary on Site to ensure proper performance of these inspections in accordance with this specification.

The Contractor's inspection personnel and equipment shall be submitted for prior approval by the Inspector.

### 9.8.2 Non-Destructive Inspections

NDT inspector shall have certificate of NDT level II or level III from a recognized institute and have adequate experience in the NDT inspection of pipeline laying work.

#### a) Visual Examination

Weld preparations and completed welds shall be visually inspected by the Contractor and the Inspector.

Once the welding is completed, all welds shall have an uniform outside appearance and shall blend progressively and without undercut into the base metal. The adjacent surface shall be cleaned of any spatters or other deposits.

#### b) Radiographic Inspection

Radiographic inspection shall be performed in accordance with standard API 1104 (radiographic procedure specification, qualification test, etc.) taking into account the following special requirements:

- The Image Quality Indicator (IQI) shall be of the wire type as per DIN 54109 Standard or ISO Standard.
- The geometrical un sharpness shall not exceed 0.2 mm,
- The detection sensitivity shall not exceed 2% of the weld thickness.
- The image density shall be between 2.0 and 3.5.

Except otherwise specified by the Owner, all welds of pipeline and associated sections shall be submitted to 100% radiographic inspection in accordance with the previously qualified radiographic inspection procedure.

Each film shall include a weld number as well as figures or letters corresponding to the weld actual external marking.

All radiographs shall be submitted for examination and acceptance by the Inspection Agency.

The Contractor shall submit the radiographic inspection report to the Inspection Agency so that it may be approved as soon as possible.

c) Extent of Radiographic Inspection

The Contractor shall arrange radiographic inspection at his own expense.

The qualification of welding shall be checked by non-destructive methods. Non-destructive inspection shall consist of radiographic examination. Radiographic examination shall meet the requirements under "Radiographic Procedure" in API Standard 1104. Films shall be retained during the construction involved and for six months thereafter.

Lineal Method to Determine Weld Reject Rate

The Lineal method is used to indicate weld reject rate by determining the length of weld repaired out of the total length of welds radiographed in one day. A Lineal method shall be the main way to determine weld reject rate.

Application of Lineal Method to Determine Percent of Radiography

Quality of work shall be checked visually and by destructive or non-destructive method according to API 1104. Minimum 10% of each day's girth weld shall be radiographed, selected at random by the Owner's Representative or his nominee.

Radiograph of crack defect weld, cut out repair, shall be 100%.

Apart from the above, 100% Radiography shall be carried out for the following:

- i) Within populated areas such as residential sub-divisions, shopping centers, and designated commercial and industrial areas.
- ii) River, lake and stream crossing within the area subject to frequent inundation; and river, lake and stream crossing on bridges.
- iii) Railway or public highway rights of way, including tunnels, bridges, and overhead railway and road crossing
- iv) Tie-in girth welds not hydrostatically tested.
- v) If the weld is rejected due to crack interpreted by radiography examination.
- vi) Any weld performed for qualification of procedure.
- vii) Any weld performed for welder qualification.
- viii) Block valve assemblies.

- ix) Insulating flanges.
- x) Anchor Flange.

Standards of acceptability for inadequate penetration and incomplete fusion, burn through, slag inclusions, porosity or gas pockets, cracks accumulation of discontinuities, and undercutting as set for the under "Standards of Acceptability - Non-destructive Testing" in API Standard 1104 shall be applicable to the determination of the size and type of defects located by visual inspection or radiography.

- d) Ultrasonic Inspection

Will not be used for wall thickness below 12 mm.

- e) Magnetic Particle & Liquid Penetrant Inspections

The Contractor shall perform a magnetic particle or liquid penetrant inspection at any time upon the request of the Inspector. These inspections shall be performed according to ASME SE-165 and ASME SE-138 respectively.

#### 9.9 Weld Acceptance Criteria

The weld acceptance standards of API 1104 (1988) shall apply to the visual and non-destructive inspections (radiographic, etc.) for welding procedure qualification tests, welder qualification tests and production welds.

The Inspector on Site shall be sole judge of weld acceptability and his decision is final.

#### 9.10 Repair & Removal of Defects

Welds which do not meet the acceptable standards of this specification shall be cut out at the Contractor's expense by removing a cylinder of pipe containing the weld, or with the prior approval of the Owner.

Cutouts and repairs shall be made by the Contractor as soon as possible.

Repairs may normally be allowed, at Owner discretion, under the following conditions:

- Where there are no cracks in the weld.
- Where the segment of weld to be repaired was not previously repaired.
- Where the weld is inspected after repairs by the method used to originally inspect the weld.

**Defect removal:** Weld defects shall be removed by grinding. The repair cavity shall be of sufficient size to allow adequate access for welding.

**Cleaning:** The requirements for cleaning of weld beads shall also apply for repairs.

Arc burns shall be removed by grinding. Grinding shall have a smooth contour. After grinding, the remaining wall thickness in the area will be verified by the Owner's representative and shall not be less than 90% of the nominal wall thickness.

If the thickness is less than that acceptable, the Contractor shall cutout a cylinder of pipe containing the arc burn and replace it.

#### 10.0 LOWERING IN

- Pipe shall not be lowered into the trench when, in Owner's opinion, the temperature is such that damage to coating may result.
- All skid marks and other possible places of damage to the coating shall be checked with a holiday detector and damaged area properly repaired before the pipe is finally lowered into the trench.
- The coated pipes shall be lifted with non-abrasive nylon belts to prevent the coating damage.
- Coated pipe shall not be placed in the trench until bare field joints have been coated and cave-ins, plugs, hard clods, stones, skids, welding rods, etc., have been removed and padding has been placed. Coated pipe shall not be dragged along the ground. If coating is damaged due to mishandling it shall be repaired as per procedure recommended by coating Contractor.
- If water or mud is found in the ditch, whenever possible, proceed with pumping out of water and cleaning of the ditch before lowering-in takes place.
- In the event, it is not possible to drain water contractor shall submit to the Owner's approved, all necessary measures in order to have the pipe normally rest on the bottom of the ditch.

#### Air Test/Pigging

- All weld segments shall be air pigged and soap tested at 100 psig before lowering into the trench. All weld repairs shall be completed and sections be cleared radiographically before conducting the air test.

## 11.0 TIE-INS

- 11.1 The pipe shall be cut so as to permit a good line-up and weld. Unless pipe has been placed in the ditch and shaded, tie-ins shall not be made at the temperature less than 10°C. Bell hole welding shall be done in bell holes which provide adequate clearance to enable the welder to exercise normal welding skill and ability. The lap of pipe strings at tie-in shall be at least 2 meters.

The weld seams of the adjoining pipes shall offset by 30% or 76 mm (which ever is greater) if not possible, a spool piece of not less than 1.2 meters in length shall be inserted.

- 11.2 The minimum length pup which shall be used is 1 meter. All pups of 1 meter or over shall be moved ahead and welded into the pipeline daily. Pups under 1 meter shall be gathered up and delivered to the Owner's nearest storage area.

## 12.0 BACK-FILLING OF THE TRENCH

The Contractor shall backfill the trench after the pipe is in place as set forth in the following:

- 12.1 The trench shall not be back-filled until Owner has approved the fit and cover of the pipe in place in the trench and has approved starting the back-filling operation.
- 12.2 The trench shall be back-filled to 0.2 meter initially. The backfilling shall be such that initial back-filling shall be performed as soon as possible after the trench is approved for back-filling.
- 12.3 After the initial backfill has been placed in the trench to the level of the surrounding ground the Contractor shall compact the backfill by making as many passes as necessary with a rubber tired compacting device approved by Owner's Representative
- 12.4 After the initial backfill, the remaining material excavated shall be neatly crowned over the trench and lightly compacted. The crown remaining shall be large enough in Owner's opinion to prevent the formation of a depression in the soil when the backfill has settled into its permanent position.  
  
The backfill shall be crowned to a height of not less than 0.4 m, after the settlement. Spoil that can not be used in the backfill shall be considered as surplus and shall be removed from the premises by the Contractor. Contractor shall dispose of the spoil in am manner and at locations satisfactory to Owner.
- 12.5 Where the trench has been dug through driveways walks, roads, dikes, etc. the backfill shall be thoroughly compacted by mechanically tamping the fill material into place in properly wetted layers not thicker than 150mm. the surface of such areas shall be restored to their original condition in a manner satisfactory to Owner and the responsible authorities.
- 12.6 Trenches crossing ditches shall be back-filled with the material excavated from the trench at that location except that in locations where the excavated material in Owner's opinion is not suitable for back-filling, the Contractor shall provide and use suitable material from another source. Ditches with lined or otherwise improved surfaces shall be resurfaced in a manner satisfactory to and approved by Owner and the responsible authorities.
- 12.7 Where the excavated material is rock, gravel or other hard materials which in Owner's opinion, would injure the pipe or pipe insulation the Contractor shall furnished and place sufficient sand or soft earth to give the pipe protective cover before the trench is back-filled with the hard materials. Also Rock shield is provided for the protection.

- 12.8 Rock boulders but not larger than 1 cubic foot. volume may be placed in ditch after the padding is in place; however, in cultivated areas, no rocks shall be placed in the top of the backfill which would interfere with ploughing or cultivating. All surplus rock shall be disposed of the satisfaction of Owner land Purchaser and/or tenant at no additional compensation.
- 12.9 When back-filling across irrigated fields, Contractor shall provide furrows across pipeline right-of-way as required by Owner land Purchaser or tenant to direct the flow of water into normal irrigation furrows. Extra cover is required at vertical, horizontal and composite preformed bend in some cases.

To ensure the retention of sand cover in active sand areas, the backfill must be stabilized, preferably by a 6" layer of marl or other stable material. The width of stabilization shall be ten (10) feet on each side of the pipeline.

Provide diversion ditches and/or culverts for floodwater in order to keep the pipeline from acting as a dam and channel bank.

Spot back-filling is required to tie down, and restrain the pipe in the ditch after it has been lowered in. Spot back-fills shall provide full-specified cover and shall cover all preformed bends a distance of 6 meter to each side of the centers of the bends. The maximum clear distance between spot back-fills shall be 20 meter. Spot back-fills shall cover the pipe for at least 5 meter along the pipe. Completion of back-filling shall follow spot back-filling as closely as practicable.

### 13.0 **SPECIAL MECHANICAL PROTECTION**

The Contractor shall apply, at his own cost, an additional mechanical protection around pipeline in case where there is a danger of damage of pipeline or pipeline coating.

These cases may be originated due to Concrete set-on weights, Pipeline laying in rocky areas and other concrete works regarding pipelines.

Mechanical protection is also used to protect the pipeline coating from accidental abrasion and from subsequent abrasion during lifetime of the pipeline.

#### 13.1 **Characteristics**

- Mechanical protection shall be a flexible padding designed especially for the protection of the corrosion coating on pipeline.
- Mechanical protection shall be flexible to shape and cut easily. It shall remain be flexible at lower temperatures and its application shall not be effected by colder temperature.
- It shall be unaffected by wet or extreme weather conditions.
- Mechanical protection shall provide the padding required for pipe coatings without the concern of blocking out Cathodic protection or it must have zero dielectric properties.
- It shall absorb impact of uneven backfill material and protect pipe from protruding rock in trench. Also shall minimize abrasion of coating from pipe movement in ground.
- Th protection shall be lightweight and shall be available in numerous sizes for optimal match to pipe diameter.
- The protection shall be longer and wider than the set-on weight and any other concrete works.
- In any case, its thickness shall be at least 20 mm.
- The contractor shall specify the following properties of the protection along with the sample, prior to the Owner's approval:
  - a) Weight
  - b) Tensile strength
  - c) Toughness
  - d) Impact resistance
  - e) Roll width and length
  - f) Elongation

#### 14.0 **CROSSINGS**

This section refers to all the details, regarding proposed Dia.16" Gas Pipeline, crossing existing roads, highways, railroad, canals, rivers, distributaries etc. The details primarily reflect the minimum requirements to ensure safe crossings of pipeline through the above-mentioned crossings. Contractor shall use such equipment and procedures that shall not cause damage to any structure or facility intercepted by or adjacent to the crossing.

The trench on either side of the tunnel/bore shall be de-watered and the inside of the tunnel shall be cleaned before the pipe is pulled or pushed into place.

The pipe shall be pulled or pushed into the tunnel/bore in such a manner that the pipe is centered in the tunnel/bore, the pipe coating is not damaged, and the rate of travel into the tunnel/bore is uniform.

Contractor is responsible for obtaining necessary permission from the relevant authorities.

##### 14.1 **Uncased Crossings**

Carrier pipe, under metal roads, crossing rivers and any water stream shall be installed with minimum cover of 1.2 m, as measured from the top of the pipe to the top of the surface.

All uncased crossings shall be as per Pipeline Crossing/ Alignment Drawings.

##### 14.2 **Cased Crossings**

Steel casing if required, provided at main roads, where heavy traffic is expected, and all railroad crossings. The casing pipe shall be of size dia. 20", as indicated in relevant Pipeline Crossing/ Alignment Drawings

Casing pipe under highways shall be installed with a minimum cover of 1.2 m, as measured from top of the pipe to the top of the surface.

Casing pipe under railroads shall be installed with a minimum cover of 1.8 m, as measured from top of the pipe to the top of the surface.

##### 14.3 **Casing Pipe**

Casing Pipe shall be of the material API 5L Gr. X-46 and its wall thickness shall be of 12.95 mm for highway crossings and 17.65 mm for all railroad crossings

The casing pipe shall be free of internal obstructions, shall be as straight as practicable and shall have a uniform bedding for the entire length of the

crossing. Casing pipe shall be internally Epoxy coated, in order to protect it from atmospheric corrosion.

After the cased crossing is installed, a test shall be conducted to determine that the carrier pipe is electrically isolated from the casing pipe.

#### 14.3.1 Electrodes Or Filler Metal

The quality and conditions for use of electrodes and filler metal must comply with the requirements of the weld process as defined in the welding Specifications.

#### 14.3.2 Installation of the Casing

Two methods will be possible, boring machine and open cut. The Contractor shall conform to the approved construction drawings, nevertheless, it shall, prior to starting the work, submit a work proposition which shall be in accordance with the requests of the authority in charge of the crossed item.

#### 14.3.3 Introduction Of The Pipe Into The Casing

The operation shall go on without creating any tension or damage on the pipe. The pipe shall be completely isolated before any back-fill.

#### 14.4 Casing Seals

All casings used at crossings of roads shall be fitted with end seals at both ends to reduce the intrusion of water and fines from the surrounding.

The seal shall be formed with a flexible material that will inhibit the formation of a waterway through the casing.

- 14.5 Coated carrier pipe shall be independently supported and insulated from the casing throughout the cased section. Insulator shall be designed to promote minimal bearing pressure between insulator and carrier coating.

#### 14.6 Plastic Grating

Plastic grating shall be laid 200mm above the pipeline as a signalling device near crossings.

Material of Plastic grating shall be such that it must not cut when unravel and resist rotting. It shall be impervious to water. Material such as Polyethylene Hardware cloth, Polyethylene screening, neoprene mesh or polyethylene fencing are the acceptable alternatives.

Plastic grating shall be furnished in rolls. Mesh shall be of diamond or circle pattern and the size of the opening is not important.

Contractor's scope shall include supply and installation of the Plastic Grating.

15.0 **CANALS, RIVERS, WATER COURSES DISTRIBUTRIES**

15.1 **Underground Crossings**

All underground crossings shall be at least 3 feet below the scar depth or as shown on the relevant drawings. The line shall be laid without any bends in the bed of crossing, and unless banks are protected by concrete mats or walls. The line should be extended well into the bank and brought up to normal grade with a gradual shape and without sags or over bends. The method of crossing could be either boring or trenching an Contractor will notify the relevant Authorities/ Owner s and will obtain necessary permission in this regard. Radiographic inspection of the welds, electric holiday detection for the coating and hydrostatic testing for the line sections will be made prior to lowering or pulling the line into position. Concrete Set-On weights shall be placed on pipeline in rivers, water logged, marshy, fish farm or any other areas as required by Owner, according to relevant drawings. Mechanical protection between concrete set-on weights and pipeline shall be provided of approximately 10 mm thickness.

**16.0 UNDERGROUND PIPES, CABLES ETC.**

Crossing of all underground pipes, cables, etc. shall be contractor's responsibility. Contractor is responsible for obtaining necessary permission, if required, and coordination with relevant authorities during construction.

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## 17.0 **SPECIAL ITEMS**

17.1 Installation of the following equipment shall be included as a special item in pipeline construction:

- Scraper Traps (future)
- Mainline block valves and fitting.
- Insulating Flanges.

They shall be installed in accordance with the Drawings.

## 17.2 **Anchor flanges**

Anchor flanges shall be aligned properly and welded to the pipeline at the burial point.

#### 18.0 **APPURTENANCES**

Appurtenances include mainlines valve foundations, enclosures for valve assemblies, abutment, markers, etc.

The Contractor shall supply the material and install the appurtenances in accordance with the drawings.

In addition the Contractor shall be required to carryout pipeline protective works in terrain liable to erosion which include but are not limited to, stone pitching, abutments, bunds, etc.

## 19.0 PRESSURE TESTING, DEWATERING AND DRYING

### 19.1 General

Contractor shall furnish all necessary equipment, materials and labour to successfully complete the hydrostatic strength and leak test and the cleaning and drying defined herein.

The hydrostatic strength and leak test and the cleaning and drying includes

- Locating and procuring acceptable water to the Owner for testing.
- Preparing pipeline profiles and test procedure for approval by the Owner.
- Filling the test section with water including addition of required chemicals.
- Performing the strength test at the specified pressure.
- Investigating for leaks or breaks, making any necessary repairs and re-testing.
- Displacing and safely disposing of test water.
- Cleaning, drying, treating and capping off the tested pipelines.
- Recording of all test data.

Contractor shall assign and designate a construction crew, with equipment, to the testing operations. The testing operations shall be conducted diligently, thoroughly and in a safe manner in accordance with accepted pipeline testing practices. Any work by Contractor or existing conditions which, in the opinion of Owner are deemed to be unsafe shall be corrected. The testing operations shall not continue until the unsafe conditions have been corrected to the satisfaction of Owner. Contractor may not receive additional compensation for time lost caused by unsafe conditions.

Contractor shall furnish a representative who shall be responsible for supervising all testing operations. Owner will witness and accept all tests.



## 19.2 **Standard**

Contractor shall conduct the testing operations in accordance with ASME B 31.8, Section 841.3, "Testing After Construction".

## 19.3 **Procedure**

At least four (4) weeks prior to the start of testing, Contractor shall submit to Owner a detailed procedure for the hydrostatic tests listing equipment, manpower and program for testing all pipelines. The Contractor must submit a profile of each pipeline indicating the elevation of the pipeline, the test pressure at the low and high points for each test section and the number of test sections required. This procedure shall include the proposed water source, water analysis, proposed chemical additives, water disposal method and water disposal locations.

Also, the procedure shall include field preparations such as placement of pumps, laying of water supply lines, connection to the water source, location and implementation of all equipment and a detailed test procedure. Contractor shall not proceed with testing until Owner has approved the test procedure.

## 19.4 **Materials and Equipment**

Contractor shall furnish and install all test-header pipe, valves, fittings, test instruments, water, chemicals, strainers and filters, fill and pressure pumps, meters, air compressors and all piping incidental to filling, sectionalizing, transferring and disposing water. Contractor shall also furnish adequate materials for capping off both ends of completed test sections.

Contractor shall furnish an enclosed weatherproof, properly lighted, temporary shelter of sufficient size to house the pressure recorders, calibration equipment and test personnel at the data collection site of each test section during the testing operations. Contractor shall also furnish sufficient lighting in the compressor, pump and test header areas during periods of darkness when testing operations are in progress. Calibration of all test instruments shall be performed by the Contractor and witnessed by the Owner.

The equipment furnished by the Contractor shall meet the following requirements:

- The filter shall be of a quality to remove 95 percent of all particles 40 microns in diameter and larger. The filter shall be provided with a means of cleaning either side without disconnecting the piping or interrupting the flow of testing media.

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- The pumping system used for filling the test section shall be capable of filling the pipe test sections at the rates specified in this section.
- The pumping system used for pressurization of the sections shall be capable of attaining the test pressure required at a slow and steady rate of pressure increase. When the pressure in the test segment is 70 percent of the specified test pressure, the pumping rate will be reduced so that the pressure does not increase at a rate greater than approximately 15 psi per minute.
- All required test manifolds will be furnished by Contractor in accordance with these specifications. All fabrication welds and girth welds on each test manifold shall meet the standards of acceptability for non-destructive testing requirements of API Standard 1104. All manifolds used for testing shall be pre-tested by Contractor to a minimum of 105 percent SMYS of the respective pipe sizes for a minimum period of 4 hours. Contractor shall replace or repair, as directed by Owner, all welds found to be defective in manifolds fabricated by Contractor.
- A 24 hour pressure recorder having a minimum 12 inch diameter chart shall be furnished and installed and shall be of sufficient capacity to record the complete test. The pressure recorder shall have a pressure range greater than the highest test pressure required for the pipelines to be tested.
- A certified calibrated 24 hour clock-wound temperature recorder with a range of approximately 0-60 °C shall be provided and shall be installed before filling each test section.
- A high pressure deadweight gauge of 50 - 7000 psi range capable of reading to 1.0 psi intervals. A deadweight gauge of quality comparable to Chandler Engineering of Tulsa, Oklahoma or equal is required. The deadweight gauge shall have a certification of calibration not more than 6 months old.
- A flow meter of sufficient size and accurate to within 0.5 percent to measure water injected into the test sections.
- A yellow-black thermometer with a range of 0-600 °C , ½ °C increments, 300mm long with a string hole at top.
- Pressure gauges with 150mm dials and ranges of 0-1000 psi and 0-7000 psi.
- An air compressor capable of delivering an air supply to propel pigs through the various pipe sizes to be tested at a speed between 3 and 16 kilometers miles per hour.
- An adequate supply of pipeline scrapers for performing the pigging operations described herein. The following types of pipeline scrapers will be required as a minimum:

- sizing pigs
  - fill pigs
  - cleaning pigs
  - dewatering pigs
  - drying pigs
- A corrosion inhibitor pump capable of injecting corrosion inhibitor into the test water stream as the line is being filled with test water.
  - A water dewpoint analyzer with a range of approximately 0 to +10 °C which uses a probe for analysis inserted directly into the pipeline. Analyzer shall be a Panametrics Model 700 or approved equal.

All materials and equipment, especially test instruments, will be subject to Owner approval.

## 19.5 Testing

### 19.5.1 Test Sections

Contractor shall locate and identify all test sections and shall indicate the test sections, water sources and water disposal points on the appropriate alignment sheets for Contractor's approval as described in 19.3.

Contractor shall isolate the test sections by installing hydrostatic test headers and shall install the necessary piping connecting the test sections that will allow transfer of the test water from one section to the next. Where directed by Owner, the test water shall be filtered when transferring it from one section to the next.

### 19.5.2 Cleaning and Sizing Pigs

After a section of pipeline is lowered in and backfilled and just prior to pressure testing, The Contractor shall run a cleaning pig. After a successful cleaning pig run, a sizing pig shall be run. Plate size of the sizing pig shall be 90 percent of the pipeline inside diameter. The pigs may be run using compressed air or water. If water is used, it is required to precede each pig with a quantity of water equivalent to a full pipe column approximately 400m in length.

### 19.5.3 Maintenance of Pigs

The Contractor shall furnish all cleaning pigs and sizing pigs. The Contractor shall furnish extra pig cups and wire brushes for all pigs and shall utilize these to refurbish the pigs, when in Contractor's opinion, the cups or brushes become excessively worn. Sizing plates may also require replacement due to damage.

#### 19.5.4 Acceptable Sizing Pig Runs

Contractor shall notify Owner at least two days prior to pigging operations. A Owner representative shall witness pigging operations and shall be present when Contractor inserts the sizing pig in the pipeline, removes it from opposite end of the pigged operation and any operations resulting from the pigging operation shall be recorded.

Owner representative will inspect sizing plates for damage at completion of each run; authority for acceptance/rejection of the sizing pig runs lies with the Owner representative. In case the sizing pig lodges in the line, Contractor shall cut the line, remove the obstruction, reseal the line and repeat the sizing pig operation, at no additional cost to Owner, until a successful run of the sizing pig has been completed.

Pigging operations shall be completed as soon as possible once a section of pipeline has been laid, but shall not occur until all backfill operations on that section have been completed except those which would be detrimental to accomplishing final tie-ins after the pig run.

#### 19.5.5 Filling the Line

The Contractor shall supply the test water. The water shall be analyzed to determine its suitability for use in the testing operations. Contractor shall present recommendations as to the type of corrosion inhibitor, oxygen scavenger and bactericide to be used in the test water.

Two pigs shall be utilized for water fill of each pipeline section. A quantity of water equivalent to a full pipe column 400m in length shall be pumped ahead of a wire brush cleaning pig and ahead of a fill pig. Water fill for testing follows the fill pig.

Water fill rates shall maintain pig speeds of not less than 1 km/hr and not more than 8km/hr. Pumping shall be continuous throughout each water fill and Contractor shall construct his test headers so as to permit the sequential launching and receipt of the two fill pigs without delaying this operation. The exhausting air shall be throttled to maintain adequate 'back pressure' against the front of the pigs. When it is confirmed that both pigs have been received, maintain water flow until exhausting water is clean and free of suspended matter to the Owner satisfaction.

The intent of the above cleaning and water fill requirements is to ensure the removal of most of the rust, mill scale, sand and dust from the pipelines.

Suspended matter in the fill water shall be removed before injection into the pipeline by use of a filter of the quality as stated earlier in this section.

Before the pressuring operation commences, each valve capacity shall be tested with water by partially closing and opening each valve. Valves shall be tested in the full open position. Discs shall be removed from check valves prior to any testing operations if the testing operations require reverse flow. Contractor shall carefully replace discs after drying operations are complete.

After filling operations are completed and prior to pressure testing, backfilling must be complete on the test section except for a small distance near the test header which shall be backfilled lightly by hand. Test line connections to the recorders and deadweight gauge shall be connected and insulated. The test section shall remain at fill pressure and left for a period of approximately 48 hours for temperature stabilization after backfilling is complete.

Prior to the commencement of the test and during the temperature stabilization period a check shall be made for residual air and a pressure/volume (PV) plot prepared.

#### 19.5.6 Pressure Test

After the temperature stabilization period, the pressure in the test section may be increased to the test pressure. The minimum and maximum test pressures shall be specified by Owner (and in accordance with ANSI B31.8). The test pressure must remain within the range of pressure (between minimum and maximum) during the test period of 24 hours at all points within a given test section.

Each test section shall be pressurized to the specified test pressure by maintaining a constant pumping rate and continuously observing the line pressure. After the minimum test pressure has been reached, the pump shall be stopped, disconnected and the pressure allowed to stabilize. The Contractor shall then adjust the pressure within the test segment, if necessary and begin the test period. The pressure and temperature recorders shall then be started using charts in real time orientation.

During the test period, pressures shall be recorded every quarter hour using a deadweight gauge. The deadweight gauge shall be read to the nearest psi. If a drop in pressure occurs during the test period which cannot be attributed to changes in temperature or if the pressure in the test section falls below the minimum test pressure, the test is unsuccessful and the leak must be located by the Contractor or the line pressure increased to an acceptable level. After the repairs have been made, the pressure test shall be repeated until it has been determined to be successful by the Owner.

Should the test pressure increase due to a change in the ambient temperature, the Contractor shall reduce the pressure in the test section to keep the pressure below the maximum test pressure.

A Owner representative shall witness and certify hydrostatic testing. Authority



for, acceptance/rejection of all hydrostatic test operations lies with the Owner representative.

#### 19.5.7 Failures

Failures in the line disclosed by the loss of pressure not attributable to temperature changes shall be located and repaired by Contractor. If the failure is in the seam of the pipe, the entire joint in which the seam failure exists shall be removed. A minimum of one pipe diameter each side of the failure will be removed on all other failures. The piece(s) removed shall be marked for orientation with respect to the position in the pipeline and with the approximate location of the failure. Contractor shall not cut on or damage the failed edge of the pipe during removal, transit or unloading at the storage location. All portions are to be retained. The failure shall be photographed prior to and after removal from the pipeline, if possible.

Care must be taken to ensure that external coating and backfilling at repair sites is carried out in accordance with these specifications.

All welds in pipe repairs shall be 100 percent inspected by radiography. Upon completion of a pipe repair, Contractor may, at Owner discretion, be required to displace the test section volume with fill water behind a fill pig to remove all entrapped air. After repair of the failure, a retest for an additional 24 hour period is required.

Contractor shall at his expense, repair all defects found resulting from inferior workmanship or defective materials furnished by Contractor.

#### 19.5.8 Test Records

The pipeline pressure and temperature for the 24 hour period shall be continuously recorded with recording instruments. The pressure recording shall serve only as information data and may not be used to determine pressure drop for pipeline leakage. Test sections will not be accepted until a 24 hour period can be recorded without pressure loss unless the loss can be attributed to temperature change. All data and charts shall be clearly marked with the following information:

- Owner name and authorized representative
- Testing Contractor's name and authorized representative
- Description of facilities tested
- Date and time of test
- Test pressure and duration

- Test medium used
- P/V Plot with residual air determination
- Test section key plan complete with line specs, length and instrument locations
- Filling record
- Explanation of any pressure discontinuities that appear on any chart
- Signature of Owner's and Testing Contractor's authorized representatives.

All permanent records shall become property of the Owner.

Fabricated assemblies and piping for tie-ins to existing pipelines shall be tested in accordance with this specification. All data and charts shall be clearly marked in the same manner the pipeline test records are marked.

#### 19.6 **Dewatering**

After Owner's acceptance of the hydrostatic strength and leak test, the pressure shall be released until atmospheric pressure has been reached. Reduction of pressure shall be conducted in a manner to prevent severe vibration. Contractor shall then purge the water from the line by using a series of dewatering pigs propelled by compressed air. Contractor shall continue to run the pigs through the line until all free water is removed.

Contractor shall control the speed of the pigs by release of water or air from the downstream end of the pipeline. The recommended pig speed for dewatering is between 2km and 5km per hour. All free water shall be determined to be removed when no free water is received in the scraper trap after three (3) consecutive pig runs. Water should be drained from any low point drains, mainline block valve body bleeds etc. during the dewatering operation.

Contractor shall be responsible for the proper disposal of test water at locations and at a time satisfactory to Owner. Damage to the pipeline, the right-of-way or adjacent property caused by the disposal operations shall be repaired by contractor at his expense. Contractor shall abide by any Governmental or local jurisdiction regulations governing the method and location of the disposal of test water. Owner may elect to leave the test water in the pipelines until start-up and commissioning.

#### 19.7 **Drying**

The Contractor shall supply all equipment, labour and materials to dry all pipelines. Drying shall be performed immediately following acceptance of the

dewatering operation for each pipeline to prevent any corrosion within the pipeline.

The Contractor shall prepare a procedure and schedule for pipeline drying. These shall be submitted to the Owner for approval at least thirty days prior to the scheduled start of drying.

**19.8 Treating**

On completion of pipeline drying the pipeline and station pipework will be purged with clean dry air having a dew point of -5°C. The system will be left with a positive pressure of 50kPa until gas is received.

## 20.0 PAINTING

All exposed above ground metal surfaces on piping, structure, equipment, or attached appurtenances shall be painted by the Contractor with equipment and labor supplied by the Contractor as per painting specification.

**21.0 CONCRETE**

- 21.1 S.R. cement shall be used.
- 21.2 Water used in making concrete shall be of approved drinkable quality, free of injurious amounts of oil, acid, alkali or organic matter.
- 21.3 Admixtures or setting accelerators will be added to concrete mix.
- 21.4 The proportion of aggregate shall be determined by means of screen tests and shall be approved by Owner.
- 21.5 Concrete shall meet a minimum ultimate compressive strength of 210 kg/cm<sup>2</sup> at an age of 28 days.
- 21.6 Only materials resulting in the specified ultimate compressive strength shall be accepted by Owner. All unsuitable materials shall be replaced by acceptable materials at his own expense by Contractor.
- 21.7 Concrete shall be mixed in an approved batch type mixer either at the site of the work or transit mixed. Adequate equipment and facilities shall be provided for accurate measurements and control of all materials for readily changing proportions as control of all required. The time of mixing each batch in the mixer at the site, will not be less than one minute after all materials are in the mixer. Transit mixed concrete shall be mixed and transported according to Contractor's recommendations and in no case shall water be added to the mixture. All batches shall be dumped which have not been placed within 1.5 hours after water is introduced into the mixture.
- 21.8 Concrete pouring shall be done with the help of pneumatic vibrator.
- 21.9 The Contractor shall provide at least three-test specimen of concrete 6×6×6 and shall pay the charges for obtaining certified test results from the government authorized test laboratory.



## 22.0 FENCING

The work under this section of these Specifications includes the furnishing of all supervision, labor, services, tools, and instruments required for installation of fences and gales as indicated on the Drawings and specified herein, and in accordance with the Contract Documents. Materials will be supplied by the Contractor.

### 23.0 WET AREAS, SWAMPS DITCHES AND AREAS SUBJECT TO FLOODING

- 23.1 Wet areas, swamps, ditches and areas subject to flooding are those areas where weighting or anchoring may be required to hold the pipe down. Wet areas, swamps, ditches and areas subject to flooding will be shown on the drawings when those areas are known at the time of original survey; however, additional or lesser areas may be classified as wet areas, swamps, ditches or areas subject to flooding upon further investigation or as trenches are excavated.
- 23.2 The Contractor shall do all the work necessary to install the pipelines across wet areas, swamps, ditches and areas subject to flooding.
- 23.3 If required, the pipe may be held down by one or any combination of the following methods:
- Weighting by use of continuous concrete coating;
  - Weighting by use of set on weights; or
  - Metal anchors screwed in pairs into the subsoil.
- 23.4 Pipe, insulation, and concrete weighting when submerged in water of sp. gravity of 1.15 or greater if so specified in the drawings.
- 23.5 If set-on weights are used, the pipe coating shall be protected with five wraps of asbestos felt weighting 800 grams/m<sup>2</sup> between the coating and set-on weights. The maximum center-to-center distance between set-on weights shall not exceed that shown on the drawings. Set-on weight shall be provided with suitable lifting lugs.
- 23.6 If screw anchors are used, the pipe coating shall be protected with three layers of asbestos felt weigh 800 grams/m<sup>2</sup> placed between coating and metal hold-down straps. The maximum center-to-center distance between screw anchors shall not exceed that shown on the drawings. Screw anchors shall be installed as shown on the drawings and at locations specified by Owner.

#### 24.0 LINE AND AERIAL MARKERS

- 24.1 In general, line markers and aerial markers shall be constructed and installed as per relevant drawings at contractor's cost.

Water crossing signs will be installed on each side of all river crossings and open water areas such as swamps.



**25.0 FINAL CLEAN-UP OF THE CONSTRUCTION RIGHT-OF-WAY AND PERMANENT JEEPABLE TRACK.**

- 25.1 The Contractor shall restore the construction right-of-way as near as practical to its original condition.
- 25.2 All surplus and defective materials supplied by Owner shall be collected by the Contractor and delivered to the Owner's specified location.
- 25.3 All surplus and defective material supplied by the Contractor and all trash, refuse, and spoiled materials shall be collected and disposed of by the Contractor.
- 25.4 All loose rock exposed by the construction operations, which is scattered over the right-of-way and adjacent property shall be removed and hauled by the Contractor.
- 25.5 The permanent Jeepable track both in shared and non shared section of ROW shall be maintained and restored to Jeepable condition as specified in Section 5.1 of this specification. All water courses, depression, etc. shall be provided with proper crossings and land filling so as to make the entire Row Jeepable in one continuous stretch.

## 26.0 COMMISSIONING AND START-UP

- 26.1 This part of the specification defines the various responsibilities of the Contractor with the commissioning of the complete pipeline system and lists the preparatory work to be performed and the requirements to be met before the pipeline system can be commissioned.

The operations personnel of the Owner shall be involved in pipeline commissioning within the framework of the specified training program

### 26.2 Contractor's Responsibilities

- 26.2.1 The Contractor will prepare a commissioning plan for each part of the pipeline system (i.e. pipeline section, pump station, etc.) in consultation with the Owner. The Contractor will determine the work, services, equipment and personnel required for commissioning and will be responsible both for the co-ordination of commissioning and for liaison with the Owner. The Contractor shall instruct the personnel to be deployed for commissioning in the commissioning procedures to be used and shall cause such personnel to give an undertaking to comply with all safety regulations applicable to commissioning.

- 26.2.2 The Contractor shall provide all personnel and equipment required for the performance of all work required for commissioning in accordance with the commissioning plan. The services to be performed by the Contractor for commissioning shall include without limitation:

- Take an active part in preparing the commissioning plan in accordance with sub-section 26.2.1 above,
- supply and provide any equipment, facilities, etc. which may be required for commissioning, manage and co-ordinate commissioning work and monitor compliance with safety regulations,
- install any additional lines and facilities which may be required for commissioning including such lines and facilities which may be required for the disposal of water or for the treatment of waste products,
- supply transport equipment and mobile lifting equipment with all accessories required,
- supply and install pressure indicators and pressure recorders required for the works hereunder if required,
- operate mechanical and electrical implementation in accordance with the commissioning plan,
- provide personnel required for the works hereunder including personnel for the observation and maintenance of the pipelines and for the recording, evaluation and documentation of meter reading taken during the works hereunder,
- provide a standby crew with suitable specialists and equipment to perform any repairs or additional work which may become necessary during commissioning,
- prior to the commencement of commissioning works, the Contractor shall:
  - Install and level all mechanical equipment cold-aligned, subjected to no-load tests and load tests (if practical), and made ready for

operation. Fresh charges of lubricants, coolants and fuels shall have been installed according to manufacturer's instructions,

- ensure that all certificates required for commissioning are available,
- check which environmental and other regulations must be complied with during commissioning and obtain any necessary approvals by authorities,
- select and name persons to contact for work on the pipelines and work on the stations,
- ensure ease of access to all plans, equipment, etc.,
- ensure that adequate means of communication (telephone, radio) are available for the commissioning work,
- calculate, obtain and remove the methanol or nitrogen required as a safety batch in front of product medium, separated by scrapers in pipelines,
- train personnel for the commissioning operation, patrol the route and check the effectiveness of radio communications,
- provide all fire fighting and other safety equipment required for the commissioning operation,
- provide all explosion-proof equipment required for the commissioning operation.
- supply all protective clothing which may be required for the works hereunder,
- make a final clean-up after work is completed and accepted by the Owner. All remaining scrap, debris, waste, surplus materials, tools and equipment shall be removed from the job site, except for the equipment required for maintenance in the guarantee period, in accordance with the Contract. All surplus materials shall be returned to Owner's warehouse,
- bear all costs of the works hereunder including the costs of the supply, transportation, connection and erection of all equipment required therefore,
- keep complete records of the works hereunder.

26.2.3 Before any pipeline section is commissioned, the following conditions shall be met and the Contractor shall carry out a review to ensure that said conditions have been met: a test of functions shall be made to ensure that all flow paths which may be set on the pipeline including station inlet and outlet lines during commissioning can effectively be set,

- any installation, commissioning and operation instructions issued by the supplier or manufacturer or any equipment or facilities installed in or in the pipeline section shall be available on site and shall be complied with,
- a check shall be made to ensure that all equipment which must be installed in a specific direction with reference to the direction of flow has been installed in the correct direction,
- all relevant installations such as block valves and similar facilities shall be numbered prior to commissioning using the same numbers as those indicated in the commissioning plan,
- Explosion-hazard areas shall be determined and marked with appropriate signs. The Contractor shall ensure that all personnel comply with safety precautions laid down for explosion-hazard areas including areas which are designated as explosion-hazard areas temporarily (e.g. during methanol or any other drying agent filling and disposal),



- an emergency plan shall be prepared detailing all immediate action to be taken in the case of a fire or an environmental pollution incident,
- Functional checks of alarm and shut-down systems shall be completed and accepted by Owner prior to commissioning.

### 26.3 **General Start-up Conditions**

- Contractor shall provide a complete operating team, including necessary vendor representatives capable of starting up and operating the plant under the supervision of Owner's operating personnel. It is required that Owner operations personnel grant prior approval to Contractor before any operating decisions are implemented. It will be Contractor's responsibility to not only prove the operation of the new facility, but also to train Owner operating and maintenance personnel in the proper procedures for safe, reliable facilities operation.
- Pumps, motors, exchangers, vessels and other equipment shall all have operated at or near design conditions without undue care and attention, except initial correction and maintenance by Contractor.
- Instrumentation shall have operated correctly in the manner intended by the project specifications. It shall have maintained the plant operating at the required set points, allowed safe start-up, running and shut-down. It shall have monitored the plant in such a manner that it provided the plant operators with a clear understanding of the plant condition at all times. Emergency shut-down systems shall be tested for proper operation.



**PAK ARAB FERTILIZERS LIMITED**

## CONSTRUCTION OF NATURAL GAS PIPELINE

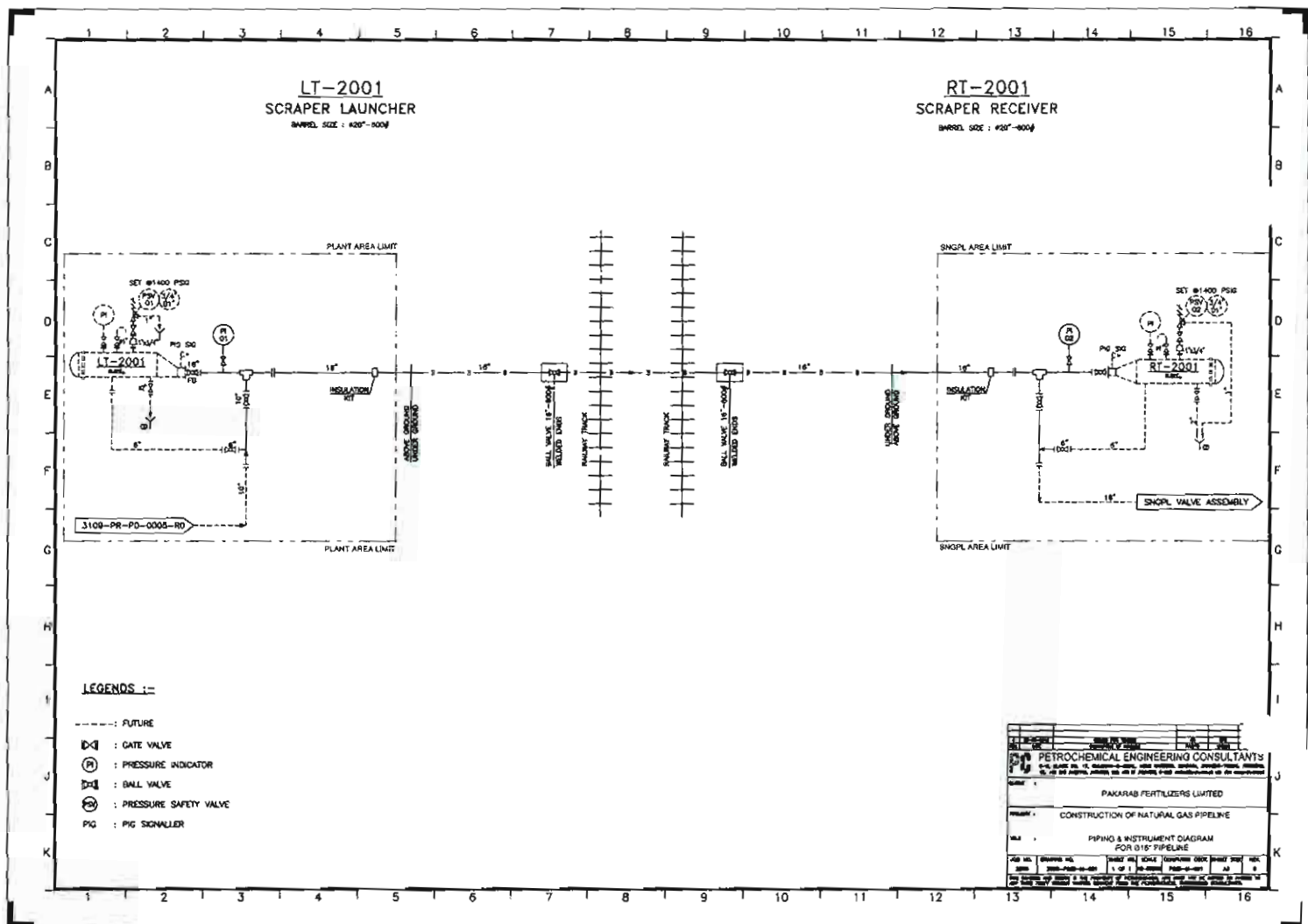
### PIPING & INSTRUMENT DIAGRAM FOR Ø16" PIPELINE

Consultant:



**PETROCHEMICAL ENGINEERING CONSULTANTS**

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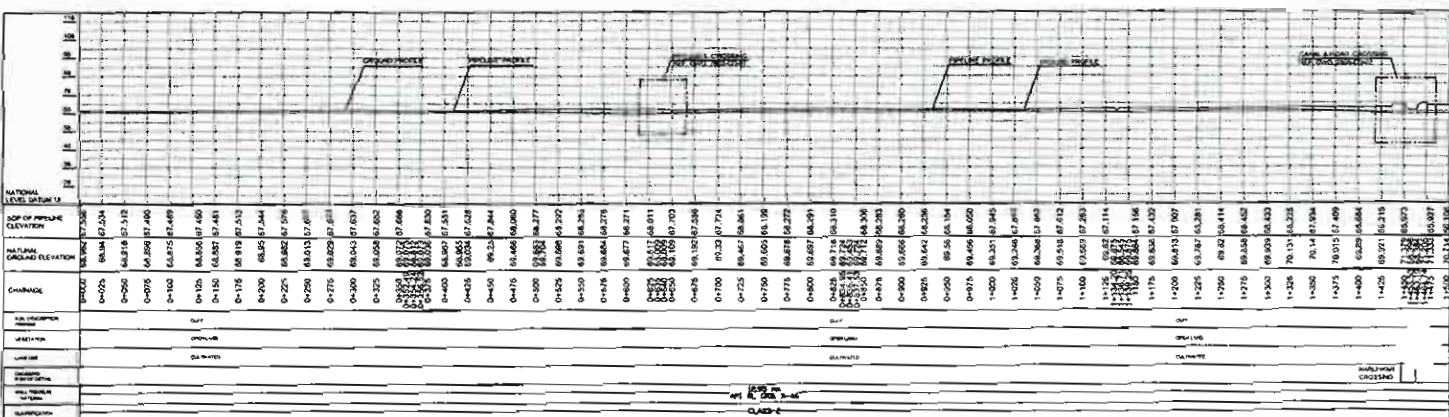
## CONSTRUCTION OF NATURAL GAS PIPELINE

### PIPELINE ALIGNMENT DRAWINGS

Consultant:



**PETROCHEMICAL ENGINEERING CONSULTANTS**



**LEGEND**

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**NEW PLAN**

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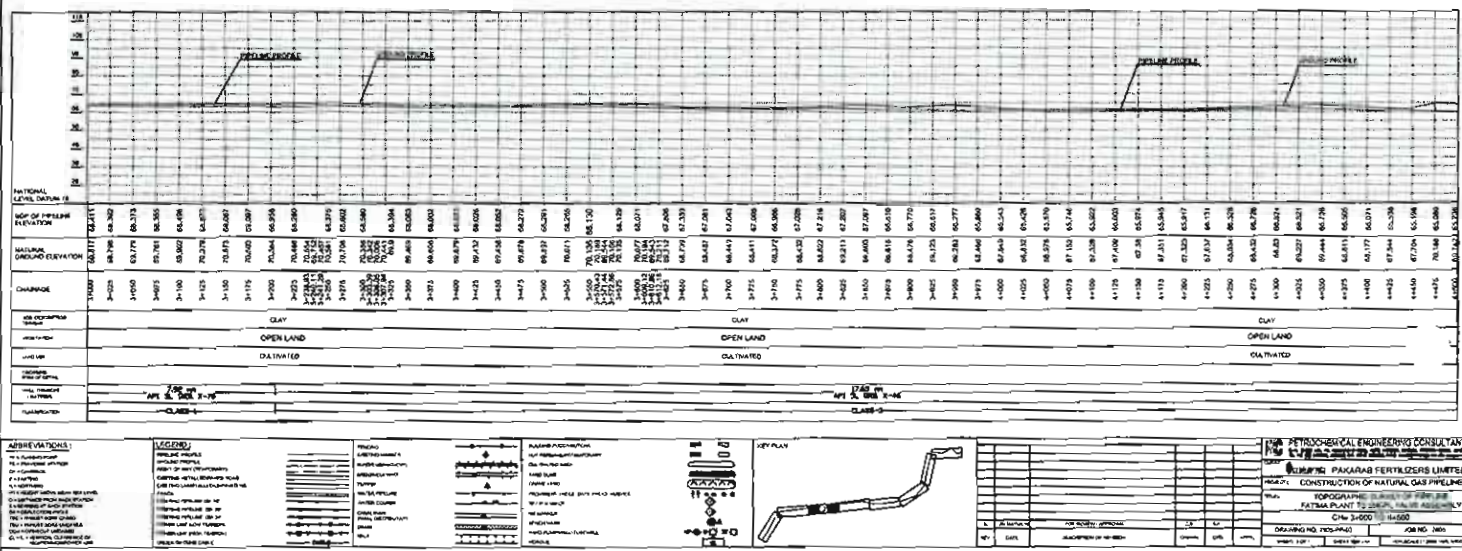
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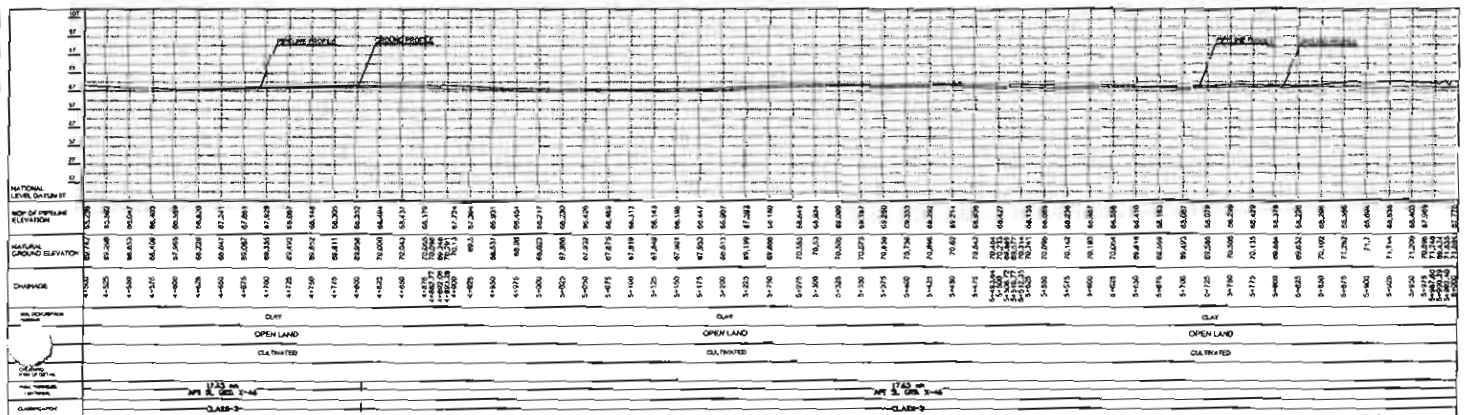
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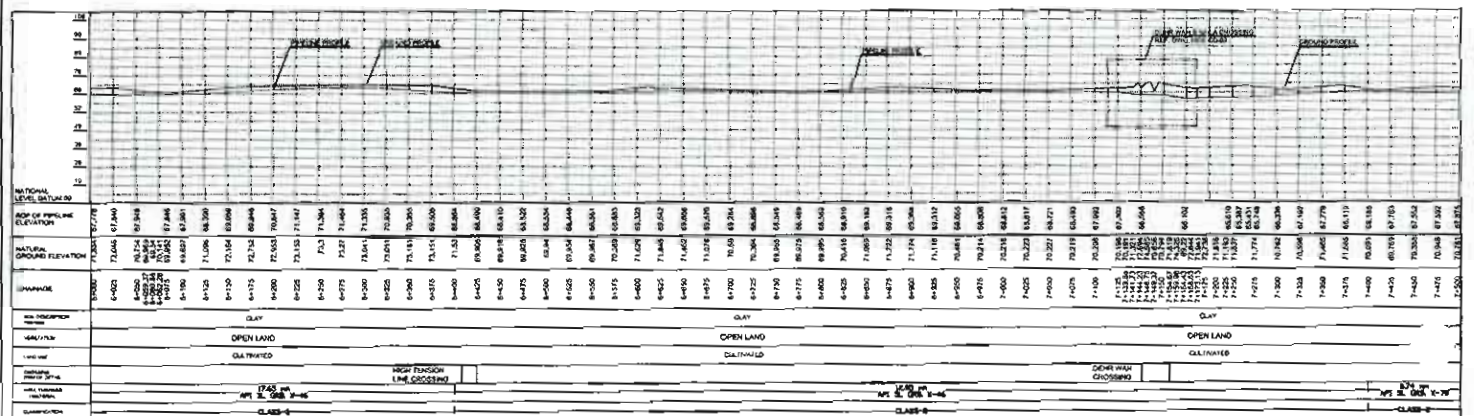
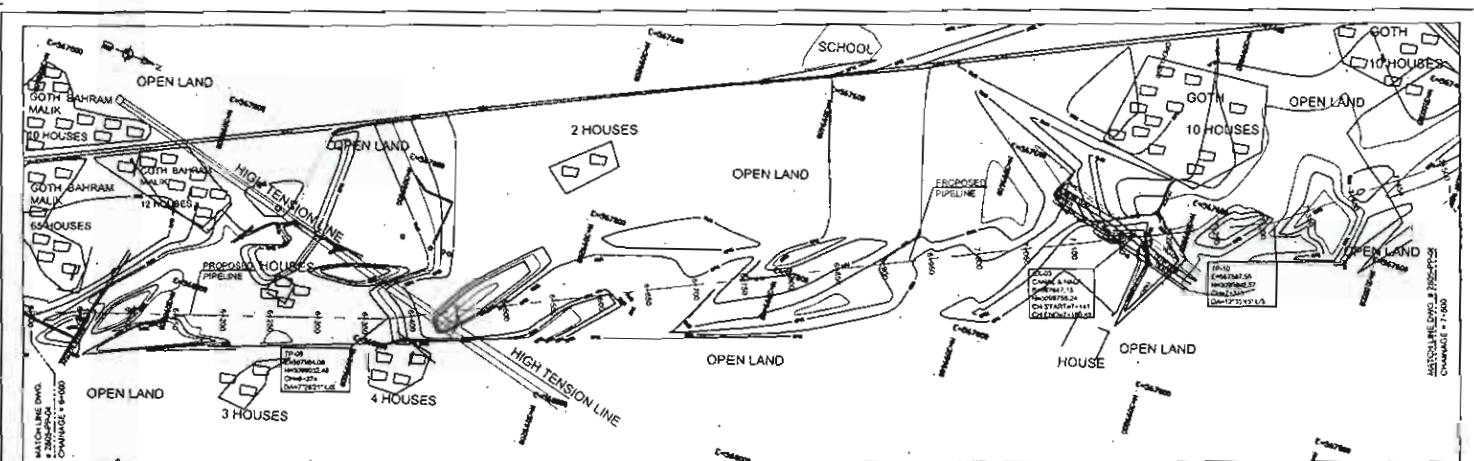
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[illegible]



**ABBREVIATIONS:**

- W - Water
- R - Road
- H - House
- S - School
- L - Land
- P - Pipeline
- T - Trench
- C - Canal
- D - Drain
- E - Embankment
- F - Fence
- G - Gate
- V - Valve
- M - Manhole
- B - Bridge
- U - Utility
- O - Other

**LEGEND:**

- Proposed Pipeline
- Existing Pipeline
- Proposed Right of Way
- Existing Right of Way
- Proposed Access Road
- Existing Access Road
- Proposed Drainage
- Existing Drainage
- Proposed Fencing
- Existing Fencing
- Proposed Survey Line
- Existing Survey Line

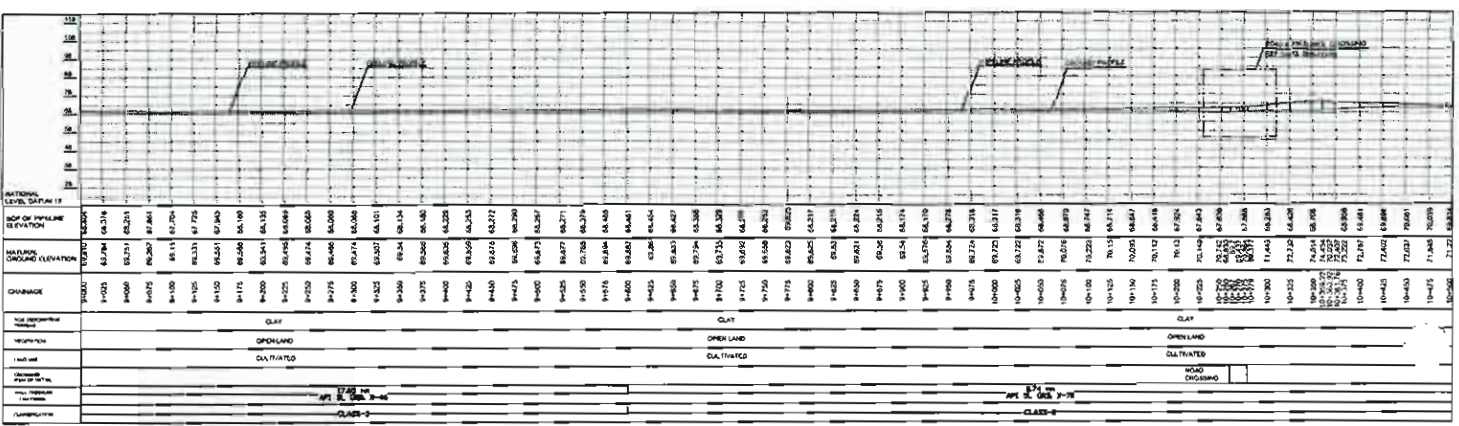
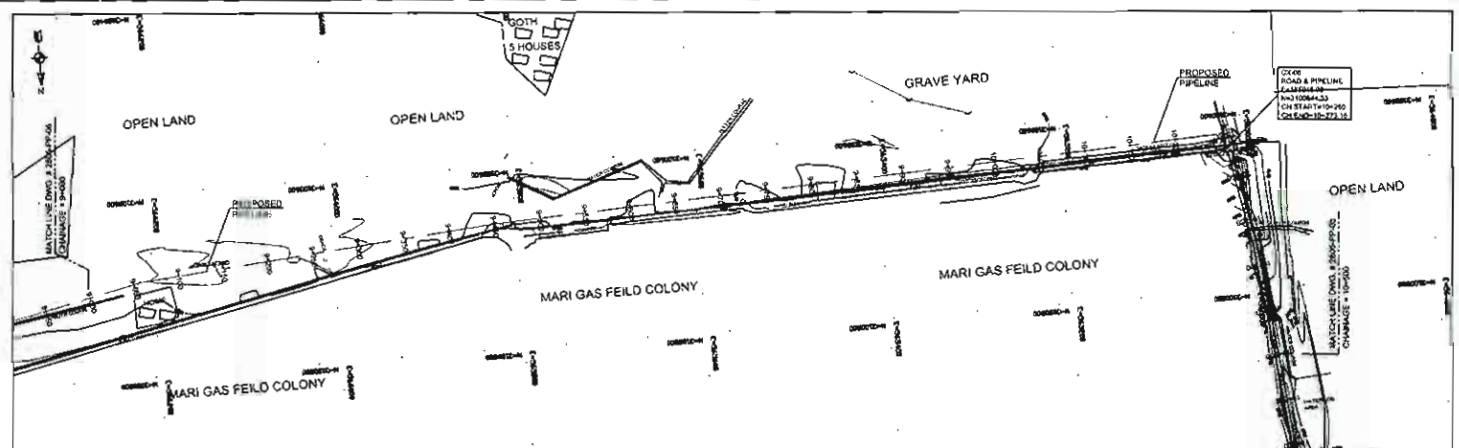
**PROPOSED PIPELINE DATA:**

STATION	ELEVATION	DIAMETER	MATERIAL
0+00	72.00	12"	Steel
0+10	72.10	12"	Steel
0+20	72.20	12"	Steel
0+30	72.30	12"	Steel
0+40	72.40	12"	Steel
0+50	72.50	12"	Steel
0+60	72.60	12"	Steel
0+70	72.70	12"	Steel
0+80	72.80	12"	Steel
0+90	72.90	12"	Steel
1+00	73.00	12"	Steel
1+10	73.10	12"	Steel
1+20	73.20	12"	Steel
1+30	73.30	12"	Steel
1+40	73.40	12"	Steel
1+50	73.50	12"	Steel
1+60	73.60	12"	Steel
1+70	73.70	12"	Steel
1+80	73.80	12"	Steel
1+90	73.90	12"	Steel
2+00	74.00	12"	Steel
2+10	74.10	12"	Steel
2+20	74.20	12"	Steel
2+30	74.30	12"	Steel
2+40	74.40	12"	Steel
2+50	74.50	12"	Steel
2+60	74.60	12"	Steel
2+70	74.70	12"	Steel
2+80	74.80	12"	Steel
2+90	74.90	12"	Steel
3+00	75.00	12"	Steel

**PETROCHEMICAL ENGINEERING CONSULTANTS**  
**PAZARLI FERTILISERS LIMITED**  
**CONSTRUCTION OF NATURAL GAS PIPELINE**  
**FROM FATMA PLANT TO SAGOL VALVE ASSEMBLY**  
**CH. 0+00 TO 3+00**  
**DATE: 10/10/2000**  
**PROJECT NO: 10000000000000000000**



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ASSURANCE NOTES :		LEGEND :		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED PIPELINE		EXISTING PIPELINE		PROPOSED 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**ABBREVIATIONS:**

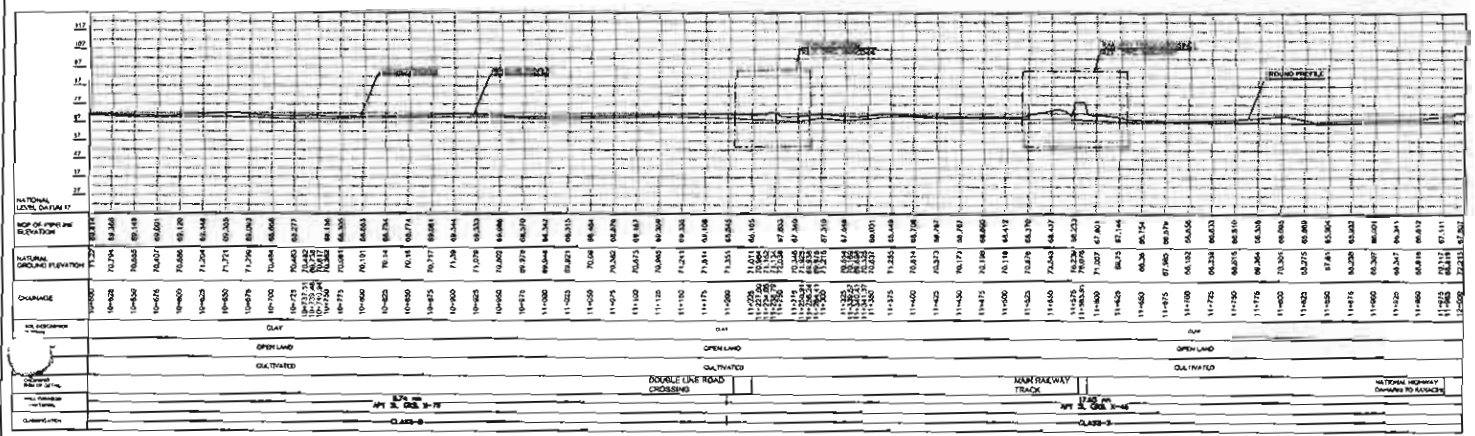
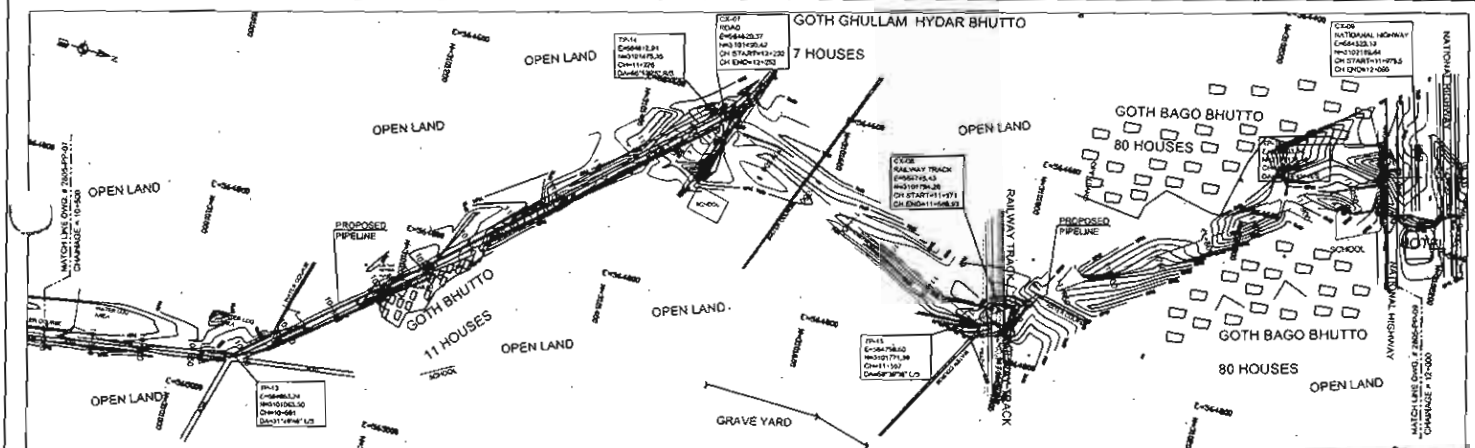
- PROPOSED PIPELINE
- EXISTING GROUND ELEVATION
- CHANGING
- ROAD

**LEGEND:**

- CLAY
- OPEN LAND
- CULTIVATED
- ROAD

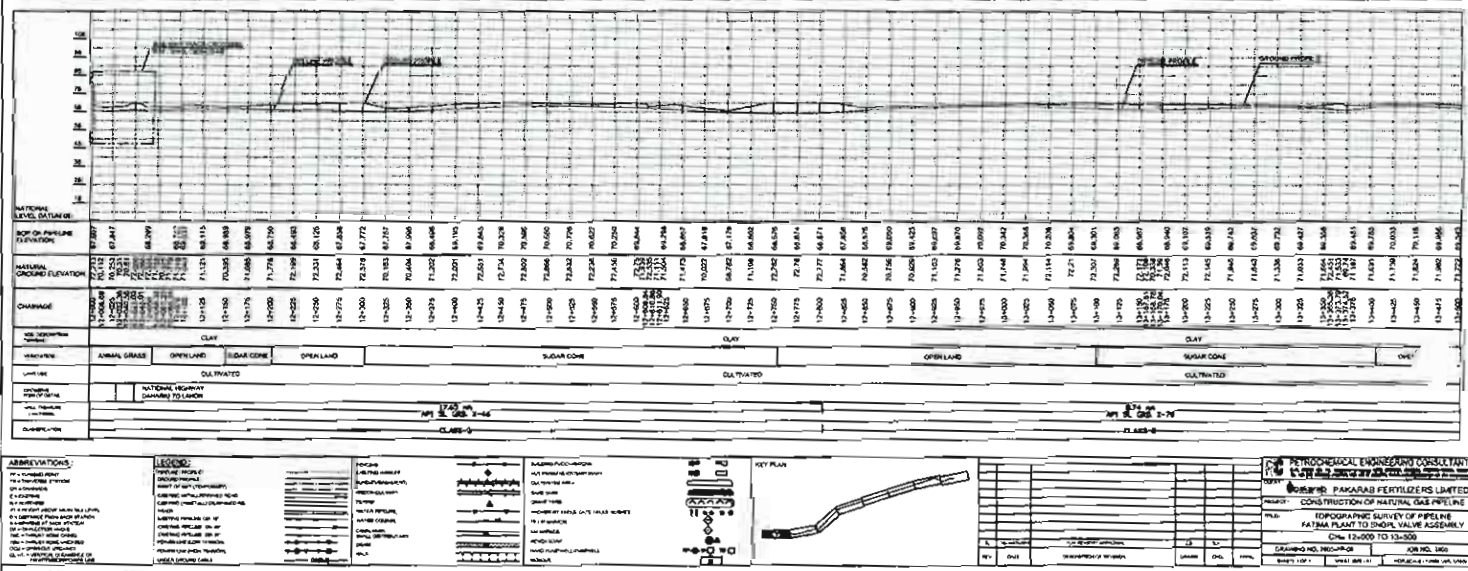
**KEY PLAN:**

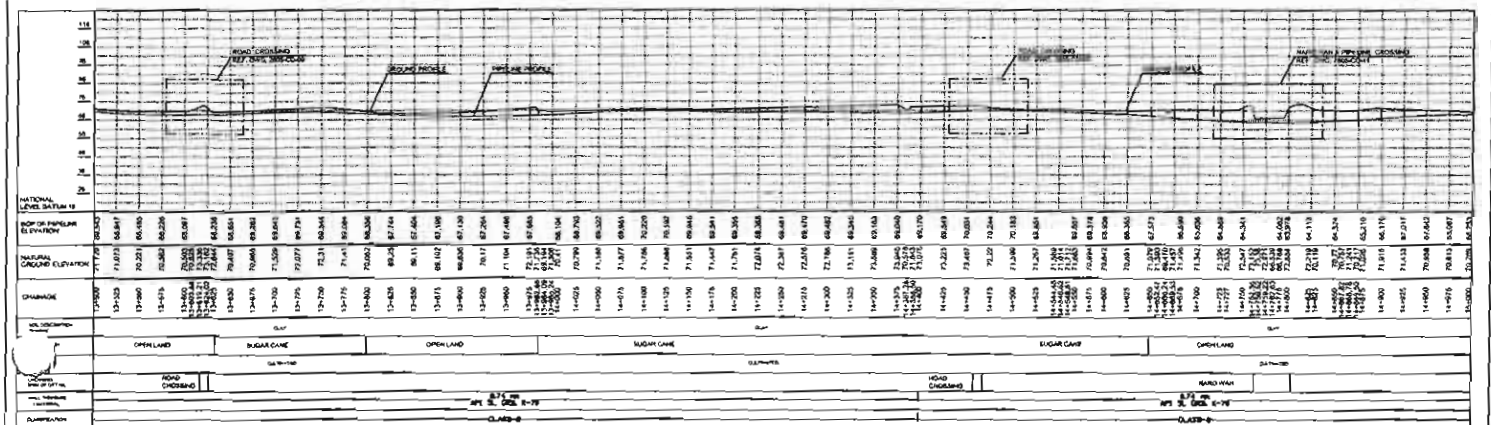
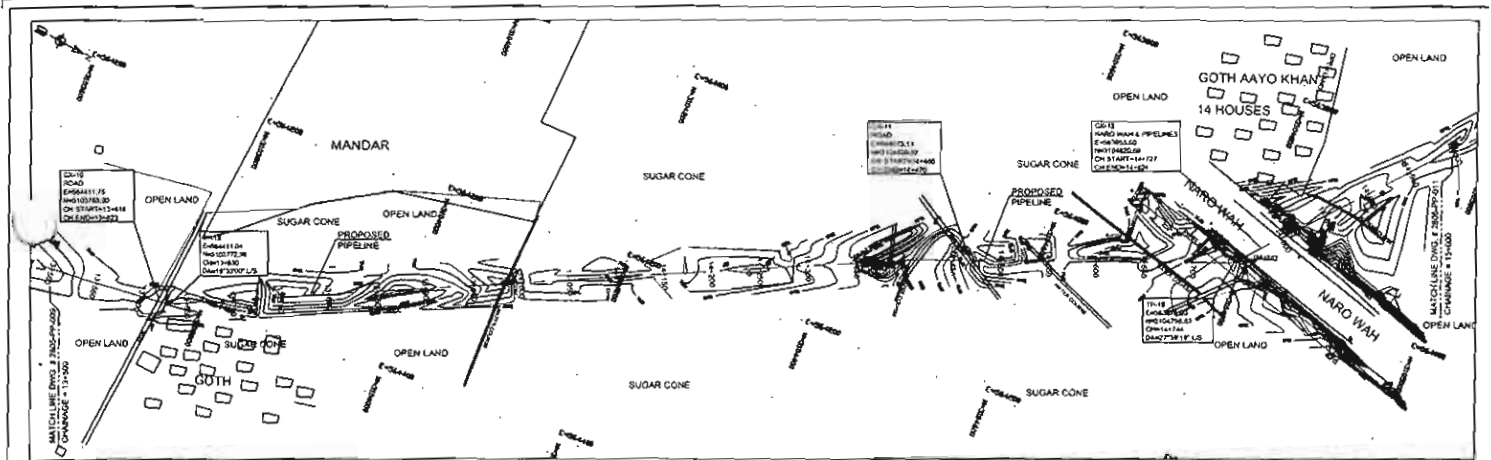
PERIODICAL ENGINEERING CONSULTANTS  
 CHAIRMAN: PAKISTAN FERTILISERS LIMITED  
 MEMBER: CONSTRUCTION OF NATURAL GAS PIPELINE  
 PROJECT: TOPOGRAPHIC SURVEY OF PIPELINE  
 FROM FATAH PLANT TO SINGA VALVE ASSEMBLY  
 CH. 0+000 TO 3+000  
 DRAWN BY: M. H. HANFAT  
 CHECKED BY: M. H. HANFAT  
 DATE: 10/10/77



ABBREVIATIONS	LEGEND	SYMBOLS	KEY PLAN	NOTES
1. Proposed Pipeline	2. Existing Pipeline	3. Right of Way	4. Stationing	5. Elevation
6. Ground Surface	7. Proposed Right of Way	8. Existing Right of Way	9. Stationing	10. Elevation
11. Proposed Pipeline	12. Existing Pipeline	13. Right of Way	14. Stationing	15. Elevation
16. Ground Surface	17. Proposed Right of Way	18. Existing Right of Way	19. Stationing	20. Elevation

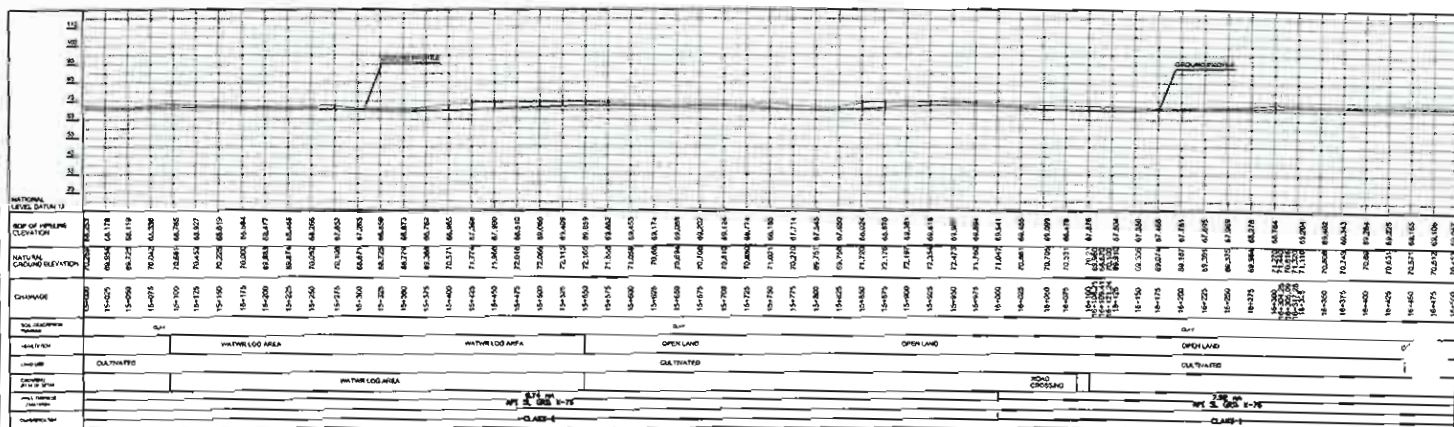
PROJECT INFORMATION	DESIGN INFORMATION	CONSTRUCTION INFORMATION	OPERATION INFORMATION
1. Project Name	2. Project Location	3. Project Description	4. Project Status
5. Project Owner	6. Project Manager	7. Project Engineer	8. Project Date
9. Project Budget	10. Project Schedule	11. Project Risk	12. Project Impact
13. Project Safety	14. Project Quality	15. Project Cost	16. Project Benefit
17. Project Environment	18. Project Social	19. Project Economic	20. Project Cultural





NO.	DESCRIPTION	DATE	BY	CHECKED	APPROVED
1	PREPARED BY				
2	CHECKED BY				
3	APPROVED BY				
4	DATE				

PROJECT: PAKARAB FERTILIZERS LIMITED  
 PHASE: CONSTRUCTION OF NATURAL GAS PIPELINE  
 DRAWING NO: 13-000 TO 13-005  
 SHEET NO: 13-000



**PROJECT INFORMATION**

Project Name: **FAKARA FERTILISER LIMITED**

Client: **FAKARA FERTILISER LIMITED**

Location: **FAKARA FERTILISER LIMITED**

Scale: **1:1000**

Sheet No: **1**

Project Manager: **FAKARA FERTILISER LIMITED**

Design Engineer: **FAKARA FERTILISER LIMITED**

Check Engineer: **FAKARA FERTILISER LIMITED**

Approved: **FAKARA FERTILISER LIMITED**

Date: **FAKARA FERTILISER LIMITED**

**LEGEND**

1. Pipeline (100mm dia)

2. Pipeline (150mm dia)

3. Pipeline (200mm dia)

4. Pipeline (250mm dia)

5. Pipeline (300mm dia)

6. Pipeline (350mm dia)

7. Pipeline (400mm dia)

8. Pipeline (450mm dia)

9. Pipeline (500mm dia)

10. Pipeline (550mm dia)

11. Pipeline (600mm dia)

12. Pipeline (650mm dia)

13. Pipeline (700mm dia)

14. Pipeline (750mm dia)

15. Pipeline (800mm dia)

16. Pipeline (850mm dia)

17. Pipeline (900mm dia)

18. Pipeline (950mm dia)

19. Pipeline (1000mm dia)

20. Pipeline (1050mm dia)

21. Pipeline (1100mm dia)

22. Pipeline (1150mm dia)

23. Pipeline (1200mm dia)

24. Pipeline (1250mm dia)

25. Pipeline (1300mm dia)

26. Pipeline (1350mm dia)

27. Pipeline (1400mm dia)

28. Pipeline (1450mm dia)

29. Pipeline (1500mm dia)

30. Pipeline (1550mm dia)

31. Pipeline (1600mm dia)

32. Pipeline (1650mm dia)

33. Pipeline (1700mm dia)

34. Pipeline (1750mm dia)

35. Pipeline (1800mm dia)

36. Pipeline (1850mm dia)

37. Pipeline (1900mm dia)

38. Pipeline (1950mm dia)

39. Pipeline (2000mm dia)

40. Pipeline (2050mm dia)

41. Pipeline (2100mm dia)

42. Pipeline (2150mm dia)

43. Pipeline (2200mm dia)

44. Pipeline (2250mm dia)

45. Pipeline (2300mm dia)

46. Pipeline (2350mm dia)

47. Pipeline (2400mm dia)

48. Pipeline (2450mm dia)

49. Pipeline (2500mm dia)

50. Pipeline (2550mm dia)

51. Pipeline (2600mm dia)

52. Pipeline (2650mm dia)

53. Pipeline (2700mm dia)

54. Pipeline (2750mm dia)

55. Pipeline (2800mm dia)

56. Pipeline (2850mm dia)

57. Pipeline (2900mm dia)

58. Pipeline (2950mm dia)

59. Pipeline (3000mm dia)

60. Pipeline (3050mm dia)

61. Pipeline (3100mm dia)

62. Pipeline (3150mm dia)

63. Pipeline (3200mm dia)

64. Pipeline (3250mm dia)

65. Pipeline (3300mm dia)

66. Pipeline (3350mm dia)

67. Pipeline (3400mm dia)

68. Pipeline (3450mm dia)

69. Pipeline (3500mm dia)

70. Pipeline (3550mm dia)

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72. Pipeline (3650mm dia)

73. Pipeline (3700mm dia)

74. Pipeline (3750mm dia)

75. Pipeline (3800mm dia)

76. Pipeline (3850mm dia)

77. Pipeline (3900mm dia)

78. Pipeline (3950mm dia)

79. Pipeline (4000mm dia)

80. Pipeline (4050mm dia)

81. Pipeline (4100mm dia)

82. Pipeline (4150mm dia)

83. Pipeline (4200mm dia)

84. Pipeline (4250mm dia)

85. Pipeline (4300mm dia)

86. Pipeline (4350mm dia)

87. Pipeline (4400mm dia)

88. Pipeline (4450mm dia)

89. Pipeline (4500mm dia)

90. Pipeline (4550mm dia)

91. Pipeline (4600mm dia)

92. Pipeline (4650mm dia)

93. Pipeline (4700mm dia)

94. Pipeline (4750mm dia)

95. Pipeline (4800mm dia)

96. Pipeline (4850mm dia)

97. Pipeline (4900mm dia)

98. Pipeline (4950mm dia)

99. Pipeline (5000mm dia)

100. Pipeline (5050mm dia)

101. Pipeline (5100mm dia)

102. Pipeline (5150mm dia)

103. Pipeline (5200mm dia)

104. Pipeline (5250mm dia)

105. Pipeline (5300mm dia)

106. Pipeline (5350mm dia)

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120. Pipeline (6050mm dia)

121. Pipeline (6100mm dia)

122. Pipeline (6150mm dia)

123. Pipeline (6200mm dia)

124. Pipeline (6250mm dia)

125. Pipeline (6300mm dia)

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135. Pipeline (6800mm dia)

136. Pipeline (6850mm dia)

137. Pipeline (6900mm dia)

138. Pipeline (6950mm dia)

139. Pipeline (7000mm dia)

140. Pipeline (7050mm dia)

141. Pipeline (7100mm dia)

142. Pipeline (7150mm dia)

143. Pipeline (7200mm dia)

144. Pipeline (7250mm dia)

145. Pipeline (7300mm dia)

146. Pipeline (7350mm dia)

147. Pipeline (7400mm dia)

148. Pipeline (7450mm dia)

149. Pipeline (7500mm dia)

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151. Pipeline (7600mm dia)

152. Pipeline (7650mm dia)

153. Pipeline (7700mm dia)

154. Pipeline (7750mm dia)

155. Pipeline (7800mm dia)

156. Pipeline (7850mm dia)

157. Pipeline (7900mm dia)

158. Pipeline (7950mm dia)

159. Pipeline (8000mm dia)

160. Pipeline (8050mm dia)

161. Pipeline (8100mm dia)

162. Pipeline (8150mm dia)

163. Pipeline (8200mm dia)

164. Pipeline (8250mm dia)

165. Pipeline (8300mm dia)

166. Pipeline (8350mm dia)

167. Pipeline (8400mm dia)

168. Pipeline (8450mm dia)

169. Pipeline (8500mm dia)

170. Pipeline (8550mm dia)

171. Pipeline (8600mm dia)

172. Pipeline (8650mm dia)

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174. Pipeline (8750mm dia)

175. Pipeline (8800mm dia)

176. Pipeline (8850mm dia)

177. Pipeline (8900mm dia)

178. Pipeline (8950mm dia)

179. Pipeline (9000mm dia)

180. Pipeline (9050mm dia)

181. Pipeline (9100mm dia)

182. Pipeline (9150mm dia)

183. Pipeline (9200mm dia)

184. Pipeline (9250mm dia)

185. Pipeline (9300mm dia)

186. Pipeline (9350mm dia)

187. Pipeline (9400mm dia)

188. Pipeline (9450mm dia)

189. Pipeline (9500mm dia)

190. Pipeline (9550mm dia)

191. Pipeline (9600mm dia)

192. Pipeline (9650mm dia)

193. Pipeline (9700mm dia)

194. Pipeline (9750mm dia)

195. Pipeline (9800mm dia)

196. Pipeline (9850mm dia)

197. Pipeline (9900mm dia)

198. Pipeline (9950mm dia)

199. Pipeline (10000mm dia)

200. Pipeline (10050mm dia)

201. Pipeline (10100mm dia)

202. Pipeline (10150mm dia)

203. Pipeline (10200mm dia)

204. Pipeline (10250mm dia)

205. Pipeline (10300mm dia)

206. Pipeline (10350mm dia)

207. Pipeline (10400mm dia)

208. Pipeline (10450mm dia)

209. Pipeline (10500mm dia)

210. Pipeline (10550mm dia)

211. Pipeline (10600mm dia)

212. Pipeline (10650mm dia)

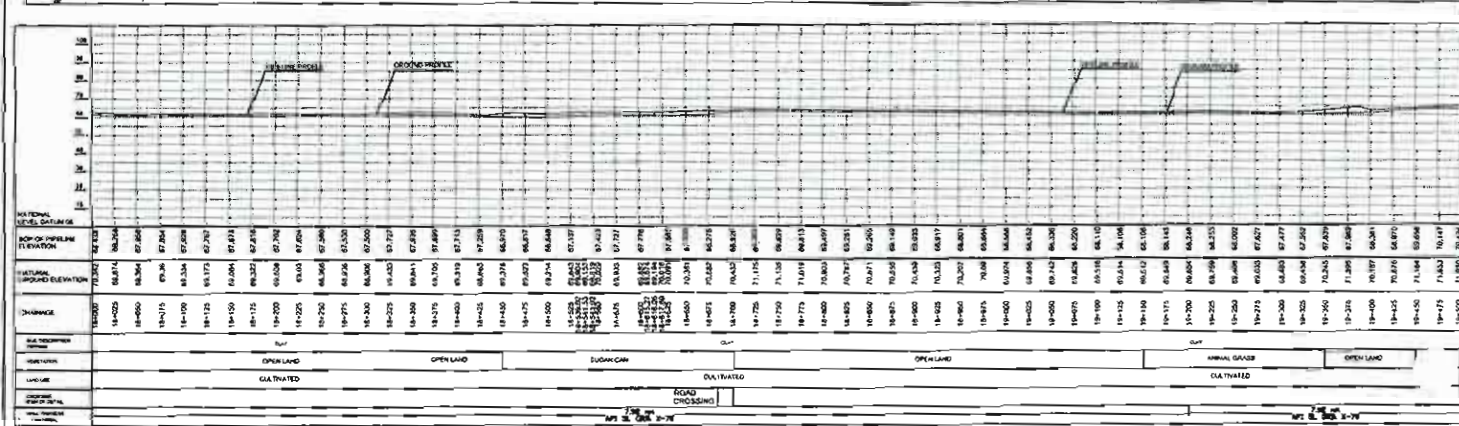
213. Pipeline (10700mm dia)

214. Pipeline (10750mm dia)

215. Pipeline (10800mm dia)

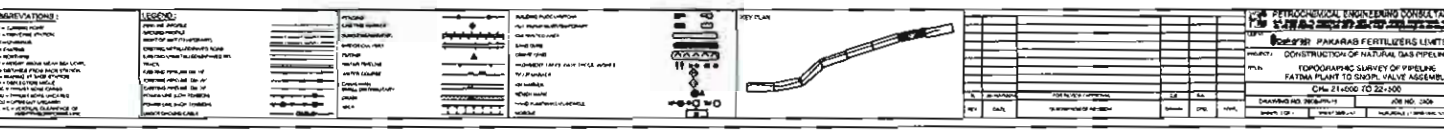
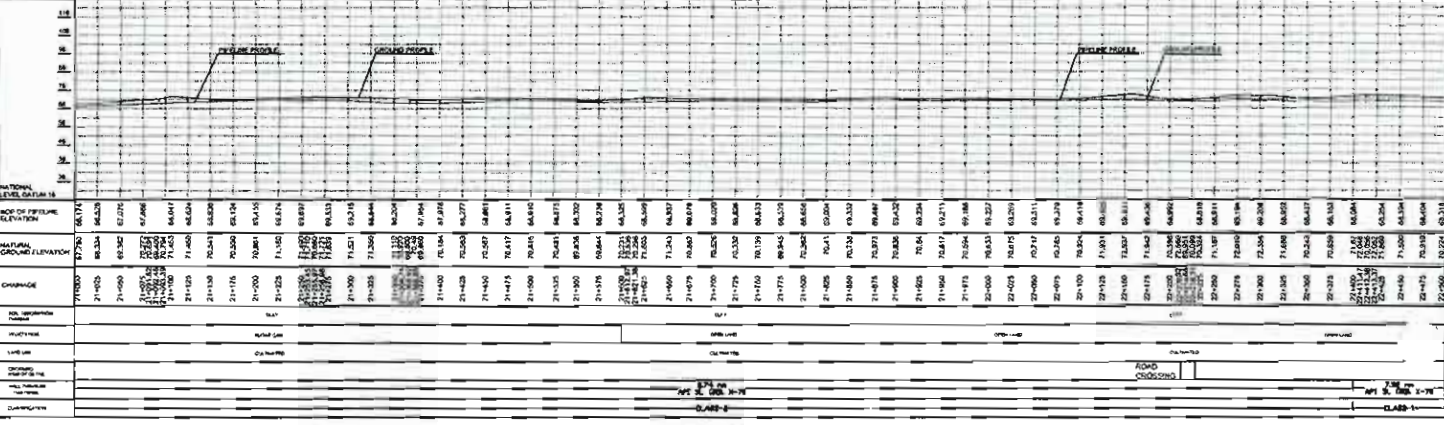
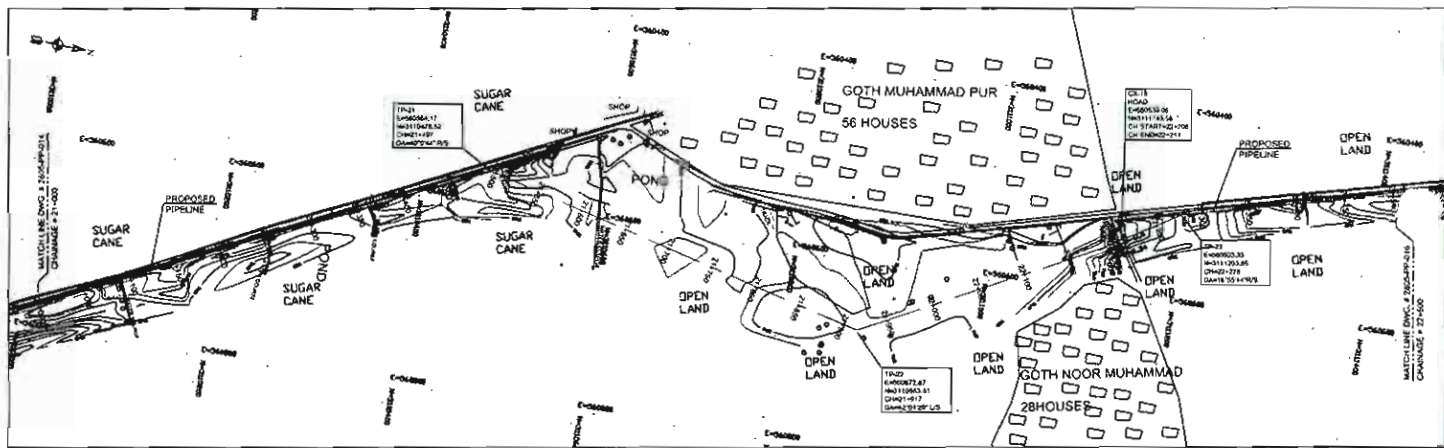
216. Pipeline (10850mm dia)



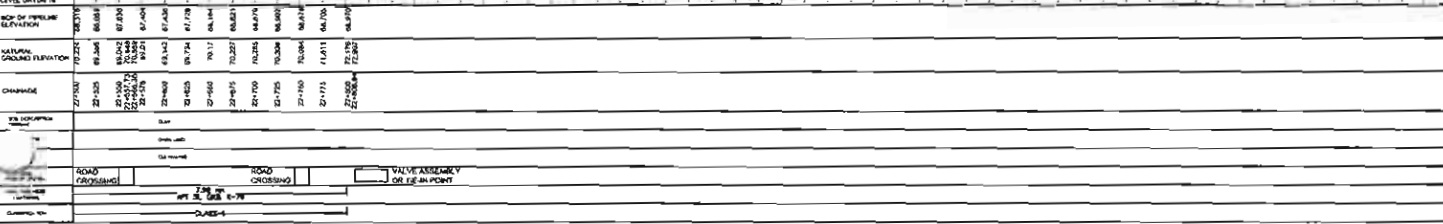


CLASS 1		CLASS 2	
<b>ABBREVIATIONS:</b> 1st - 1st Year 2nd - 2nd Year 3rd - 3rd Year 4th - 4th Year 5th - 5th Year 6th - 6th Year 7th - 7th Year 8th - 8th Year 9th - 9th Year 10th - 10th Year 11th - 11th Year 12th - 12th Year 13th - 13th Year 14th - 14th Year 15th - 15th Year 16th - 16th Year 17th - 17th Year 18th - 18th Year 19th - 19th Year 20th - 20th Year 21st - 21st Year 22nd - 22nd Year 23rd - 23rd Year 24th - 24th Year 25th - 25th Year 26th - 26th Year 27th - 27th Year 28th - 28th Year 29th - 29th Year 30th - 30th Year 31st - 31st Year 32nd - 32nd Year 33rd - 33rd Year 34th - 34th Year 35th - 35th Year 36th - 36th Year 37th - 37th Year 38th - 38th Year 39th - 39th Year 40th - 40th Year 41st - 41st Year 42nd - 42nd Year 43rd - 43rd Year 44th - 44th Year 45th - 45th Year 46th - 46th Year 47th - 47th Year 48th - 48th Year 49th - 49th Year 50th - 50th Year 51st - 51st Year 52nd - 52nd Year 53rd - 53rd Year 54th - 54th Year 55th - 55th Year 56th - 56th Year 57th - 57th Year 58th - 58th Year 59th - 59th Year 60th - 60th Year 61st - 61st Year 62nd - 62nd Year 63rd - 63rd Year 64th - 64th Year 65th - 65th Year 66th - 66th Year 67th - 67th Year 68th - 68th Year 69th - 69th Year 70th - 70th Year 71st - 71st Year 72nd - 72nd Year 73rd - 73rd Year 74th - 74th Year 75th - 75th Year 76th - 76th Year 77th - 77th Year 78th - 78th Year 79th - 79th Year 80th - 80th Year 81st - 81st Year 82nd - 82nd Year 83rd - 83rd Year 84th - 84th Year 85th - 85th Year 86th - 86th Year 87th - 87th Year 88th - 88th Year 89th - 89th Year 90th - 90th Year 91st - 91st Year 92nd - 92nd Year 93rd - 93rd Year 94th - 94th Year 95th - 95th Year 96th - 96th Year 97th - 97th Year 98th - 98th Year 99th - 99th Year 100th - 100th Year 101st - 101st Year 102nd - 102nd Year 103rd - 103rd Year 104th - 104th Year 105th - 105th Year 106th - 106th Year 107th - 107th Year 108th - 108th Year 109th - 109th Year 110th - 110th Year 111th - 111th Year 112th - 112th Year 113th - 113th Year 114th - 114th Year 115th - 115th Year 116th - 116th Year 117th - 117th Year 118th - 118th Year 119th - 119th Year 120th - 120th Year 121st - 121st Year 122nd - 122nd Year 123rd - 123rd Year 124th - 124th Year 125th - 125th Year 126th - 126th Year 127th - 127th Year 128th - 128th Year 129th - 129th Year 130th - 130th Year 131st - 131st Year 132nd - 132nd Year 133rd - 133rd Year 134th - 134th Year 135th - 135th Year 136th - 136th Year 137th - 137th Year 138th - 138th Year 139th - 139th Year 140th - 140th Year 141st - 141st Year 142nd - 142nd Year 143rd - 143rd Year 144th - 144th Year 145th - 145th Year 146th - 146th Year 147th - 147th Year 148th - 148th Year 149th - 149th Year 150th - 150th Year 151st - 151st Year 152nd - 152nd Year 153rd - 153rd Year 154th - 154th Year 155th - 155th Year 156th - 156th Year 157th - 157th Year 158th - 158th Year 159th - 159th Year 160th - 160th Year 161st - 161st Year 162nd - 162nd Year 163rd - 163rd Year 164th - 164th Year 165th - 165th Year 166th - 166th Year 167th - 167th Year 168th - 168th Year 169th - 169th Year 170th - 170th Year 171st - 171st Year 172nd - 172nd Year 173rd - 173rd Year 174th - 174th Year 175th - 175th Year 176th - 176th Year 177th - 177th Year 178th - 178th Year 179th - 179th Year 180th - 180th Year 181st - 181st Year 182nd - 182nd Year 183rd - 183rd Year 184th - 184th Year 185th - 185th Year 186th - 186th Year 187th - 187th Year 188th - 188th Year 189th - 189th Year 190th - 190th Year 191st - 191st Year 192nd - 192nd Year 193rd - 193rd Year 194th - 194th Year 195th - 195th Year 196th - 196th Year 197th - 197th Year 198th - 198th Year 199th - 199th Year 200th - 200th Year 201st - 201st Year 202nd - 202nd Year 203rd - 203rd Year 204th - 204th Year 205th - 205th Year 206th - 206th Year 207th - 207th Year 208th - 208th Year 209th - 209th Year 210th - 210th Year 211st - 211st Year 212nd - 212nd Year 213rd - 213rd Year 214th - 214th Year 215th - 215th Year 216th - 216th Year 217th - 217th Year 218th - 218th Year 219th - 219th Year 220th - 220th Year 221st - 221st Year 222nd - 222nd Year 223rd - 223rd Year 224th - 224th Year 225th - 225th Year 226th - 226th Year 227th - 227th Year 228th - 228th Year 229th - 229th Year 230th - 230th Year 231st - 231st Year 232nd - 232nd Year 233rd - 233rd Year 234th - 234th Year 235th - 235th Year 236th - 236th Year 237th - 237th Year 238th - 238th Year 239th - 239th Year 240th - 240th Year 241st - 241st Year 242nd - 242nd Year 243rd - 243rd Year 244th - 244th Year 245th - 245th Year 246th - 246th Year 247th - 247th Year 248th - 248th Year 249th - 249th Year 250th - 250th Year 251st - 251st Year 252nd - 252nd Year 253rd - 253rd Year 254th - 254th Year 255th - 255th Year 256th - 256th Year 257th - 257th Year 258th - 258th Year 259th - 259th Year 260th - 260th Year 261st - 261st Year 262nd - 262nd Year 263rd - 263rd Year 264th - 2			

This figure is a technical drawing of a proposed pipeline route, labeled as Figure 1. The top portion of the figure is a plan view showing the pipeline alignment across a landscape. The alignment starts from the left, passes through areas labeled "ANIMAL GRASS", "OPEN LAND", and "ANIMAL GRASS" again. It then crosses a "RIVER" and continues through "OPEN LAND" and "ANIMAL GRASS". The pipeline is shown as a solid line with a dashed line indicating a "PROPOSED PIPELINE". A "MINOR VIAL" is marked on the right side. A "MATCHLINE DWG. 4.250-PP-013" is indicated on the left, and a "MATCHLINE DWG. 4.250-PP-015" is indicated on the right. A "5 HOUSES" area is shown on the left side. The bottom portion of the figure is a longitudinal section view showing the vertical profile of the pipeline. The vertical axis is labeled "NATIONAL LEVEL (M) ON DTD" and ranges from 10 to 15. The horizontal axis is labeled "CHANGAGE" and ranges from 10 to 15. The profile shows the ground surface (dashed line) and the proposed pipeline (solid line). The pipeline is shown as a solid line with a dashed line indicating a "PROPOSED PIPELINE". A "MINOR VIAL" is marked on the right side. A "MATCHLINE DWG. 4.250-PP-013" is indicated on the left, and a "MATCHLINE DWG. 4.250-PP-015" is indicated on the right.



<b>AMENDMENTS:</b> 1. As per the survey data. 2. As per the design data. 3. As per the construction data. 4. As per the operation data. 5. As per the maintenance data. 6. As per the safety data. 7. As per the environmental data. 8. As per the social data. 9. As per the economic data. 10. As per the legal data.			
<b>REVISIONS:</b> 1. As per the survey data. 2. As per the design data. 3. As per the construction data. 4. As per the operation data. 5. As per the maintenance data. 6. As per the safety data. 7. As per the environmental data. 8. As per the social data. 9. As per the economic data. 10. As per the legal data.			
<b>APPROVED:</b> [Signature] [Name] [Title]			

[illegible][illegible]

24



**PAK ARAB FERTILIZERS LIMITED**

## CONSTRUCTION OF NATURAL GAS PIPELINE

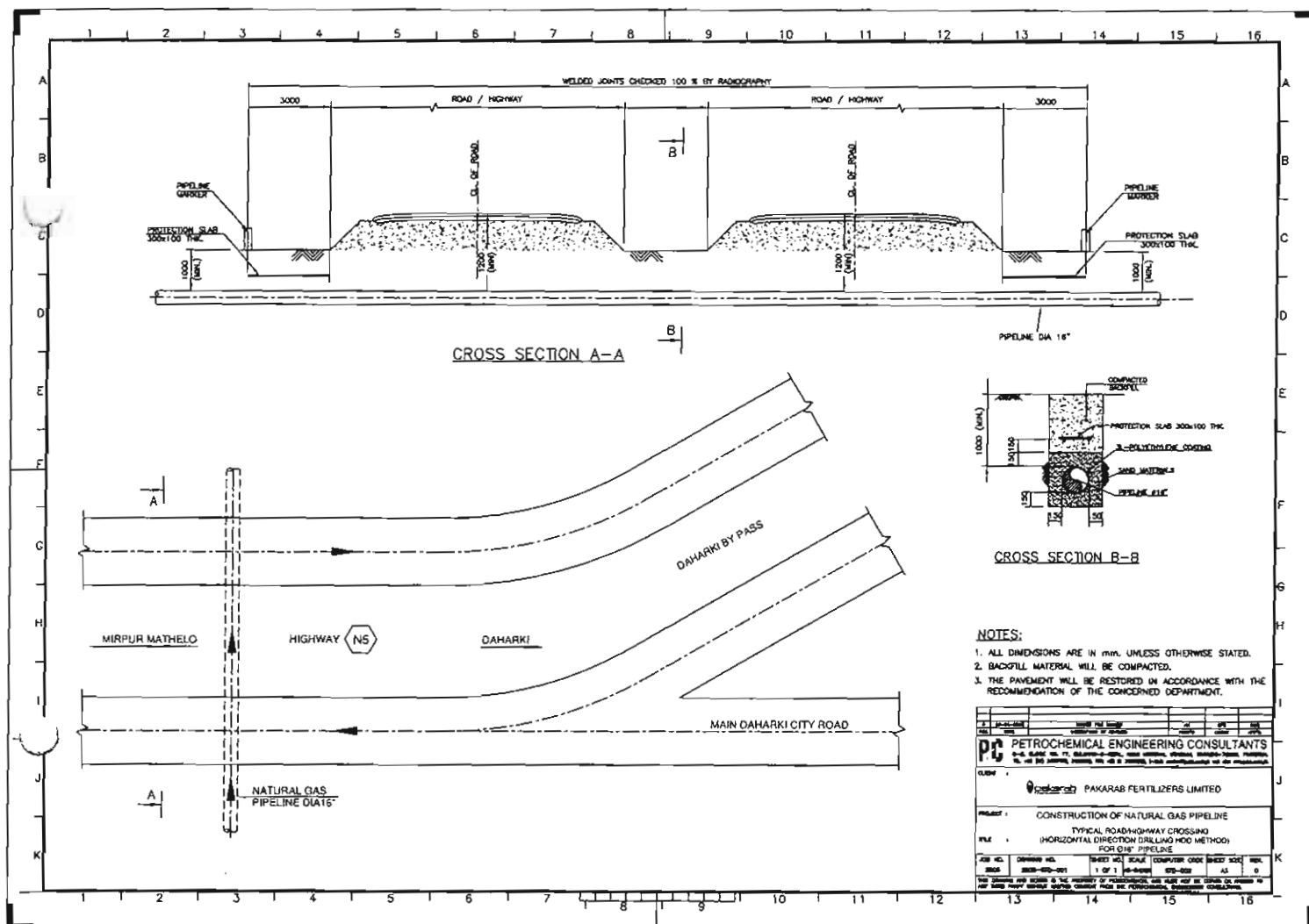
### TYPICAL PIPELINE CROSSING DETAIL






Consultant:



**PETROCHEMICAL ENGINEERING CONSULTANTS**

242



PROJECT NO.		DATE		BY		CHKD							
100-100-001		10/10/2010											
<b>PC PETROCHEMICAL ENGINEERING CONSULTANTS</b>													
P-45, B-10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100													
CLIENT : PAKARAB FERTILIZERS LIMITED													
PROJECT : CONSTRUCTION OF NATURAL GAS PIPELINE													
TITLE : TYPICAL ROAD/HIGHWAY CROSSING (HORIZONTAL DIRECTION DRILLING METHOD) FOR 16" PIPELINE													
JOB NO.	100-100-001	SHEET NO.	1 OF 1	SCALE	AS SHOWN	COMPUTER CODE	000-000						
DATE	10/10/2010	BY		CHKD		APPD							
This drawing was prepared by the consultant or prepared under the supervision of the consultant and is not to be used for any other purpose without the written approval of the consultant.													

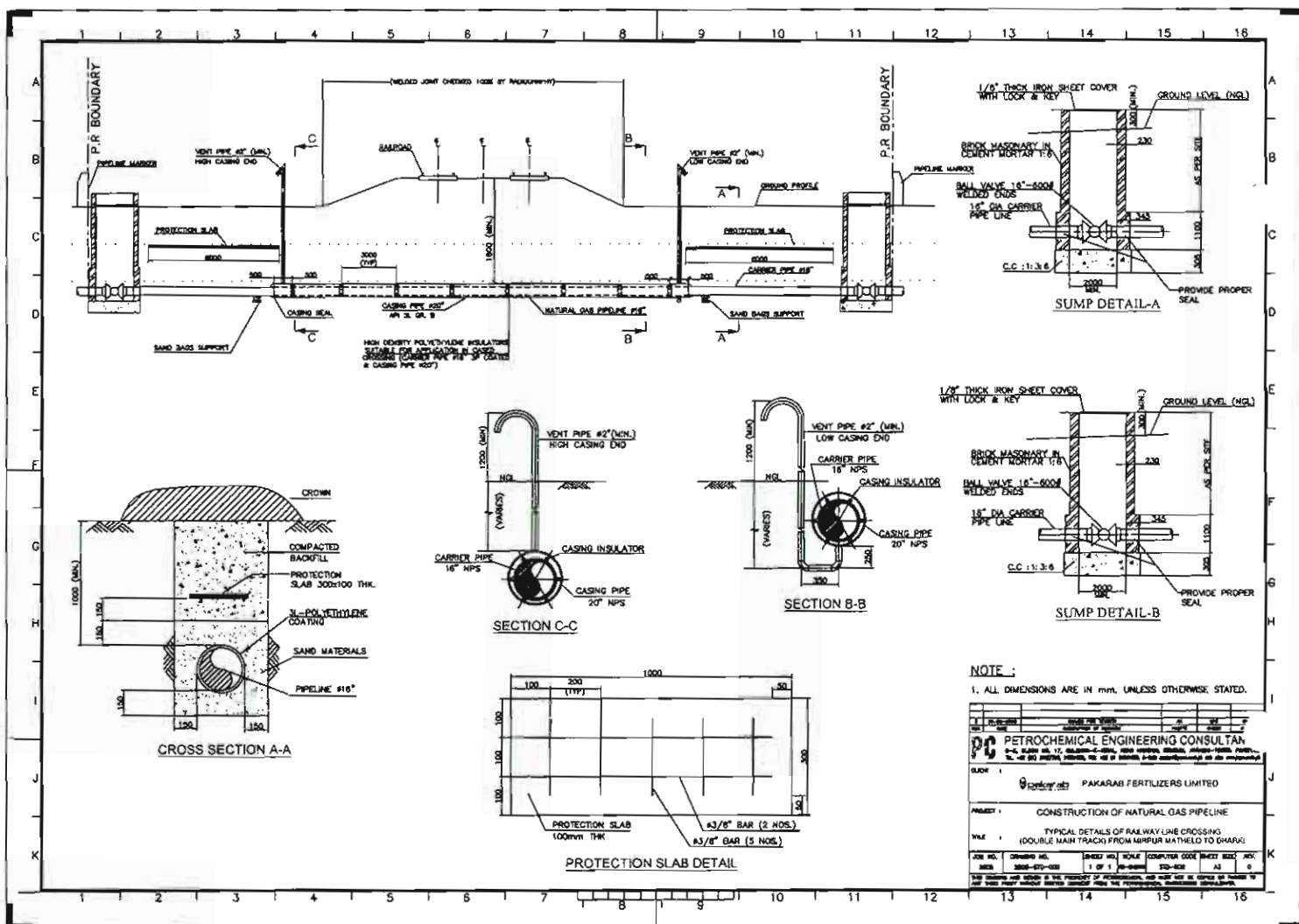
13

14

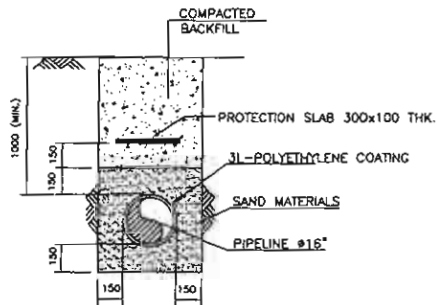
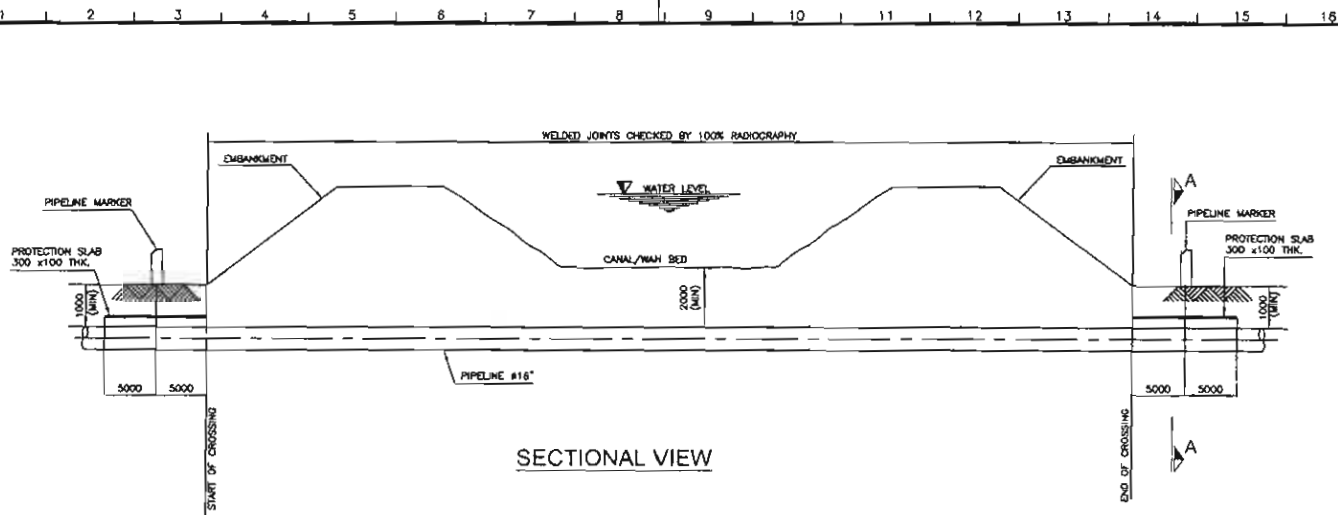
15

16

243



244



- NOTES:
1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
  2. CANAL AND EMBANKMENT SHALL BE RESTORED TO ORIGINAL CONDITION.
  3. PIPELINE TO BE BACKFILLED WITH TRENCH SOIL. SOIL SHOULD BE FREE FROM SHARP ROCKY/STONE. THIS MATERIAL WILL BE COMPACTED AND LEVELLED.

PROJECT NO.		SHEET NO.		DATE	
2008-002-001		1 OF 1		2008-002-001	
PROJECT		SHEET TITLE		SHEET NO.	
CONSTRUCTION OF NATURAL GAS PIPELINE		TYPICAL DETAILS OF WAH / CANAL CROSSING FOR Ø16" PIPELINE		13	
CLIENT		PAKARAB FERTILIZERS LIMITED		14	
DESIGNER		PETROCHEMICAL ENGINEERING CONSULTANTS		15	
CHECKED BY		16		17	
APPROVED BY		18		19	



**pakarab**  
FERTILIZERS LIMITED

**PAK ARAB FERTILIZERS LIMITED**

## CONSTRUCTION OF NATURAL GAS PIPELINE

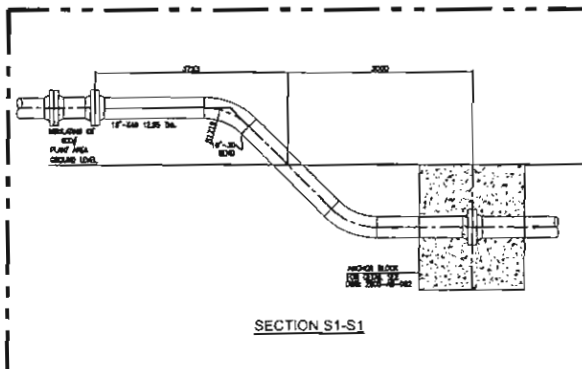
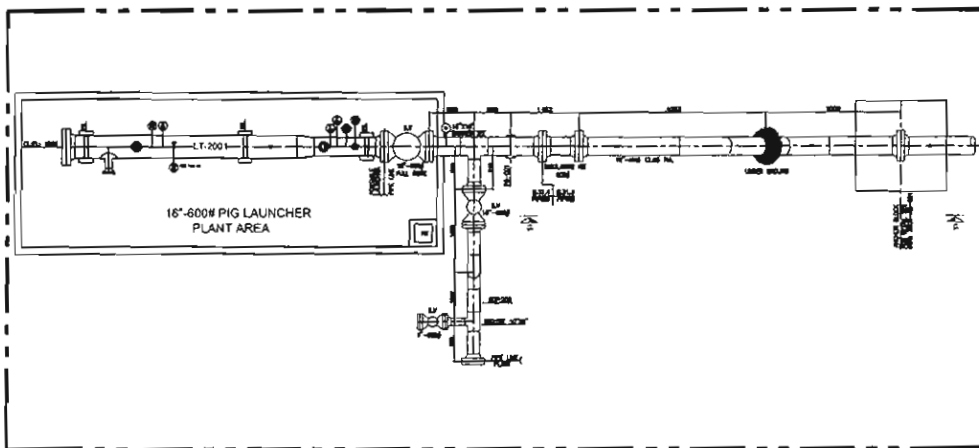
### PIPELINE DETAIL DRAWINGS

Consultant:



**PETROCHEMICAL ENGINEERING CONSULTANTS**

246



ISSUED FOR TENDER

NOTES

1. ALL DIMENSIONS ARE IN METRIC UNLESS OTHERWISE SPECIFIED.

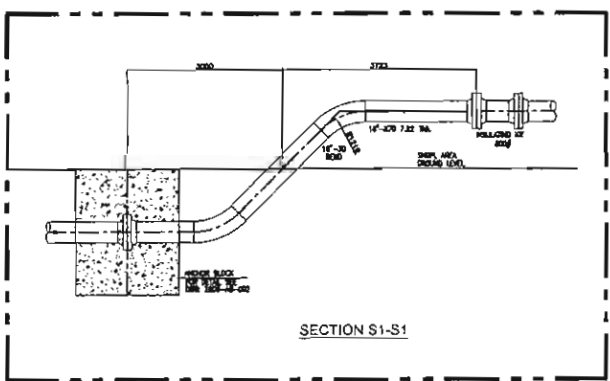
NO.	REVISION	DATE	BY	CHKD.	APPD.
1	ISSUED FOR TENDER	10/10/2011	PC		


**PC PETROCHEMICAL ENGINEERING CONSULTANTS**  
 11, 12th Floor, 110, Market Street, Singapore 048915  
 Tel: 65 6339 1100, Fax: 65 6339 1101, Email: info@petrochemical-engineers.com

CLIENT: **PAKARAS FERTILIZERS LIMITED**

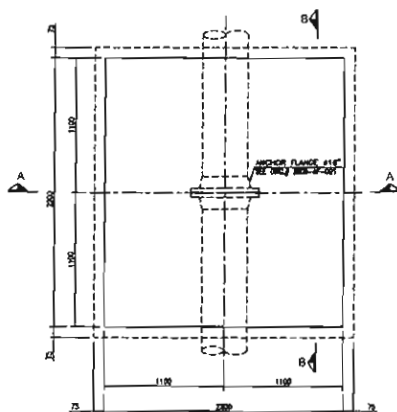
PROJECT: **CONSTRUCTION OF NATURAL GAS PIPELINE**

DRAWING: **PIPING DETAIL OF PIG LAUNCHER AREA FOR 815\"/>**

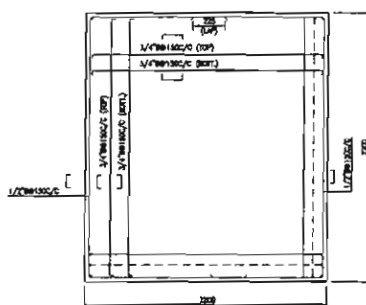


NOTES		ISSUED FOR TENDER	
1. As mentioned in the above, details drawings present.			
DATE	PROJECT NO.	REV.	BY
01/01/01	01/01/01	01/01/01	01/01/01
 <b>PETROCHEMICAL ENGINEERING CONSULTANCY</b> No. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 79			

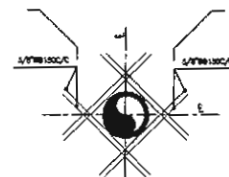
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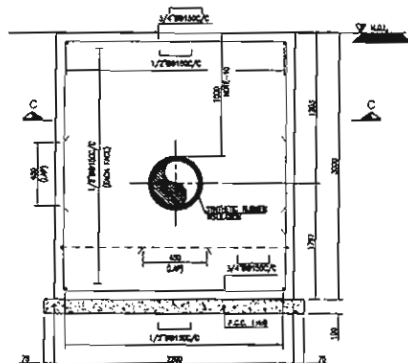
PLAN  
(SCALE - 1:20)



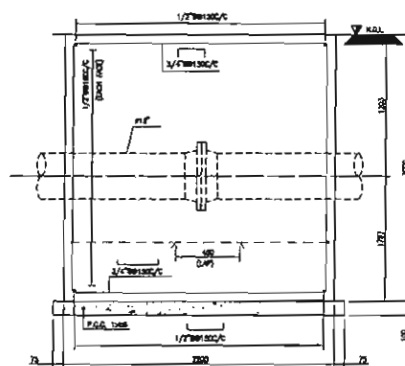
SECTION C-C  
(SCALE - 1:20)



REINFORCEMENT DETAIL  
AROUND PIPE  
(SCALE - 1:20)



SECTION A-A  
(SCALE - 1:20)



SECTION B-B  
(SCALE - 1:20)

ISSUED FOR  
TENDER

NOTES :

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
2. ALL STEEL SHOWN ON THIS DRAWING IS CORROSIVED STEEL.
3. CORROSIVED STEEL BARS SHALL HAVE A MINIMUM YIELD STRENGTH OF 460 MPa.
4. TO CLARIFY DIMENSIONS THERE SHALL BE USED FOR SHOWN THE STEEL REINFORCEMENT.
5. PORTLAND CEMENT SHALL BE USED FOR MAKING A CURB OF CONCRETE.
6. USE GRC WITH SLAB FOR ALL CONCRETE WORK.
7. CONCRETE CURE COLOR FOR REINFORCING STEEL SHALL BE 75mm.
8. CURB STRENGTH OF CONCRETE TO BE 20 MPa.
9. ANCHOR FLANGE DETAILS FOR 414' SEE DET. 2025-10-01.
10. CONTRACTOR TO BE VERTY AND ADJUST DIMENSIONS AS PER SITE CONDITION.

NO.	REVISION	DATE	BY	CHKD.	APPD.
1					
2					
3					
4					
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6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

PC PETROCHEMICAL ENGINEERING CONSULTANTS

CLIENT : PAKARAB FERTILIZERS LIMITED

PROJECT : CONSTRUCTION OF NATURAL GAS PIPELINE

TITLE : ANCHOR BLOCK DETAIL FOR 216" PIPELINE AT PLANT SITE

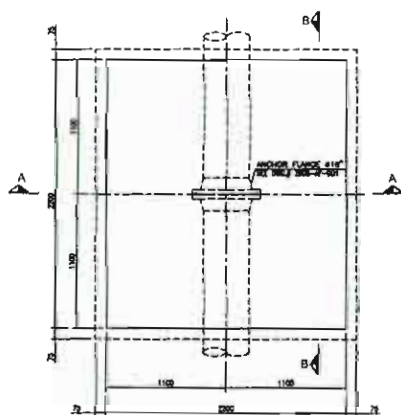
DATE : 2025-10-01

1 OF 1

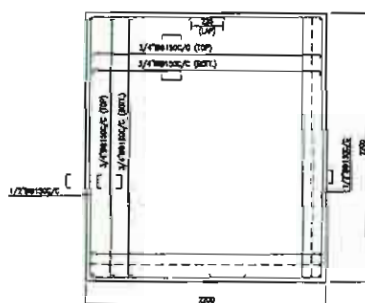
100% COMPLETE

100% COMPLETE

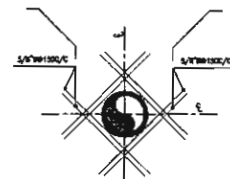
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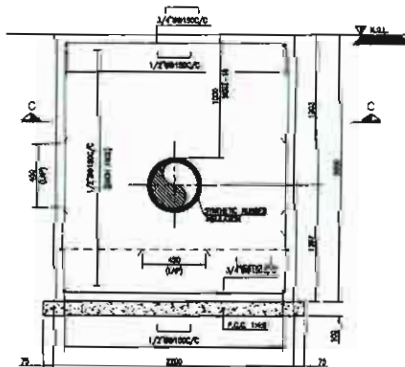
PLAN  
(SCALE - 1:25)



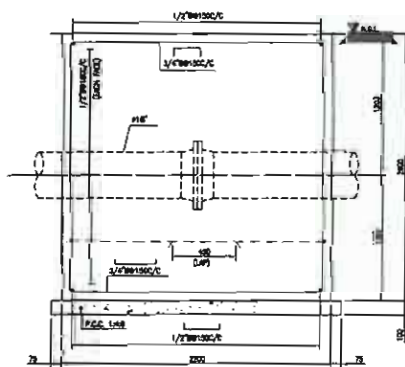
SECTION C-C  
(SCALE - 1:25)



REINFORCEMENT DETAIL  
AROUND PIPE  
(SCALE - 1:25)



SECTION A-A  
(SCALE - 1:25)



SECTION B-B  
(SCALE - 1:25)

ISSUED FOR  
TENDER

NOTES:

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
2. ALL STEEL SHOWN ON THIS DRAWING IS DEFORMED STEEL.
3. DEFORMED STEEL BARS SHALL HAVE A MINIMUM YIELD STRENGTH OF 40,000 psi.
4. 20 GAUGE GALVANIZED WIRE SHALL BE USED FOR BRACING THE STEEL REINFORCEMENT.
5. PORTLAND CEMENT SHALL BE USED FOR BRICKS & CONCRETE.
6. USE OPC WITH SLAB FOR ALL CONCRETE WORK.
7. CONCRETE CLEAR COVER FOR REINFORCEMENT STEEL SHALL BE 75mm.
8. CURING STRENGTH OF CONCRETE TO BE 3,700 psi.
9. ANCHOR FLANGE DETAIL FOR 11\"/>
- 10. CONTRACTOR TO BE VERY CAREFUL REGARDING DIMENSION AS PER SITE CONDITION.

1	SCALE	DATE	BY	CHKD
2	REVISION	DATE	BY	CHKD
3	REVISION	DATE	BY	CHKD
4	REVISION	DATE	BY	CHKD
5	REVISION	DATE	BY	CHKD
6	REVISION	DATE	BY	CHKD
7	REVISION	DATE	BY	CHKD
8	REVISION	DATE	BY	CHKD
9	REVISION	DATE	BY	CHKD
10	REVISION	DATE	BY	CHKD
11	REVISION	DATE	BY	CHKD
12	REVISION	DATE	BY	CHKD
13	REVISION	DATE	BY	CHKD
14	REVISION	DATE	BY	CHKD
15	REVISION	DATE	BY	CHKD
16	REVISION	DATE	BY	CHKD

PREPARED BY: PETROCHEMICAL ENGINEERING CONSULTANTS

FOR: PAKARAB FERTILIZERS LIMITED

PROJECT: CONSTRUCTION OF NATURAL GAS PIPELINE

TITLE: ANCHOR BLOCK DETAIL FOR 11\"/>

DATE: 10/10/2011

BY: [Signature]

CHKD: [Signature]

DATE: 10/10/2011

BY: [Signature]

CHKD: [Signature]

DATE: 10/10/2011

BY: [Signature]

CHKD: [Signature]

DATE: 10/10/2011

BY: [Signature]

CHKD: [Signature]

DATE: 10/10/2011

BY: [Signature]

CHKD: [Signature]

DATE: 10/10/2011

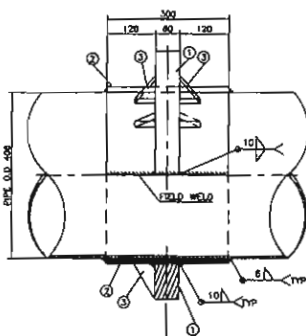
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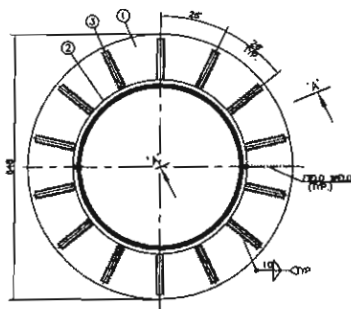
DATE: 10/10/2011

BY: [Signature]

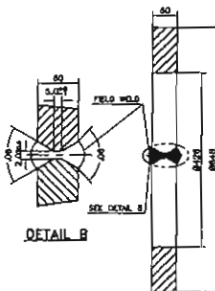
250



HALF SECTION ELEVATION  
(TO BE FABRICATED IN 2 SPLIT SECTIONS)

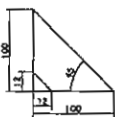


#16" ANCHOR FLANGE ASSEMBLY

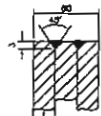


FLANGE PLATE DETAIL  
ITEM NO. 1

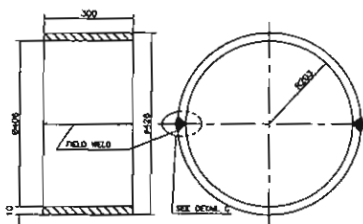
ISSUED FOR  
TENDER



WEB PLATE DETAIL  
ITEM NO. 3



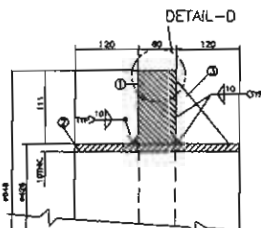
DETAIL-D  
TYPICAL WELDING DETAIL FOR  
MULTIPLE PLATES (NOTE 3)



SLEEVE DETAIL  
ITEM NO. 2



DETAIL C



SECTION A-A

ITEM NO.	DESCRIPTION	QTY.	MATERIAL	UNIT	TOTAL WT.
3	WEB PLATE 120 X 100 X 10 THK.	14	ASTM-A36	PLG PLG/2	5
2	SLEEVE 10 THK	1	ASTM-A36	PLG PLG/2	31
1	FLANGE PLATE 140 X 140 X 10 THK.	1	ASTM-A36	PLG PLG/2	60
TOTAL					96

- NOTES:-
1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE STATED.
  2. ANCHOR FLANGE TO BE MANUFACTURED IN TWO SECTIONS FOR INSTALLATION AND WELDING ON SITE.
  3. REQUIRED THICKNESS MAY BE ACHIEVED BY USING MULTIPLE PLATES OF DIFFERENT THICKNESS (NOT LESS THAN 10mm THK).
  4. ANCHOR BLOCK DETAILS FOR 418" SEE REF. DWG. 2005-AB-001/002

PROJECT :		CONSTRUCTION OF NATURAL GAS PIPELINE	
TITLE :		ANCHOR FLANGE DETAILS FOR Ø16"	
JOB NO.	DRAWING NO.	SHEET NO.	SCALE
2005	2005-AB-001	1 OF 1	AS SHOWN
DESIGNED AND CHECKED BY :		P. C. PETROCHEMICAL ENGINEERING CONSULTANTS	
DATE :		2005-08-01/002	
CLIENT :		PAKARAB FERTILIZERS LIMITED	
PROJECT :		CONSTRUCTION OF NATURAL GAS PIPELINE	
TITLE :		ANCHOR FLANGE DETAILS FOR Ø16"	
JOB NO.	DRAWING NO.	SHEET NO.	SCALE
2005	2005-AB-001	1 OF 1	AS SHOWN
DESIGNED AND CHECKED BY :		P. C. PETROCHEMICAL ENGINEERING CONSULTANTS	
DATE :		2005-08-01/002	
CLIENT :		PAKARAB FERTILIZERS LIMITED	





Phone # +92-42-9201405  
Fax # +92-42-9201353

## SUI NORTHERN GAS PIPELINES LIMITED

21 - KASHMIR ROAD, LAHORE, PAKISTAN.

Ref: P&D/48 (117)

February 10, 2009

M/s. Fatima Fertilizer Company Limited,  
Head Office: 2<sup>nd</sup> Floor Trust Plaza,  
L.M.Q Road,  
MULTAN.

Attention: Mr. M. Arif Rehman - Project Director.

### 20"Ø X 45.52 KM FATIMA FERTILIZER MAINLINE

We are enclosing herewith one set of following drawing Nos. for your information & record please.

- |                     |        |  |
|---------------------|--------|--|
| 1. TL-25-A 20-D5-07 | Rev-3  | Plot Plan Filtration Facility at Fatima (Sheet 2 of 2)   |
| 2. TL-25-A 20-D5-08 | Rev-3  | Filtration Facility at Fatima Fertilizer (Sheet 1 of 2)  |
| 3. TL-25-A 20-D5-08 | Rev-1  | Filtration Facility at Fatima Fertilizer<br>Detail of Filter Foundation & Condensate<br>Vessel Foundation ( Sheet 2 of 2 ) |
| 4. Material List    | Rev -2 | Pig Receiving Arrangement & Filtration at Fatima   |

Thanking you,

Yours faithfully,  
SUI NORTHERN GAS PIPELINES LIMITED

( NAJEEB-UL-HASSAN )  
CHIEF ENGINEER (P&D)  
For MANAGING DIRECTOR

Encl.: As Above.

PIG REC. FILTRATION

S. NO.	DESCRIPTION	SPECIFICATION	QTY. (NO)	REMARKS
<b>A</b>	<b>PIPE</b>			
1	2" X 0.218" WT LINEPIPE	API - 5 L - GR. B	50 FT.	
2	2" X 0.154" WT LINEPIPE	API - 5 L - GR. B	5 FT.	
3	4" X 0.337" WT LINEPIPE	API - 5 L - GR. B	100 FT.	
4	8" X 0.277" WT LINEPIPE	API - 5 LX - GR.X46	75 FT.	
5	12" X 0.375" WT LINEPIPE	API - 5 LX - GR.X46	5 FT.	
6	16" X 0.438" WT LINEPIPE	API - 5 LX - GR.X46	150 FT.	
7	20" X 0.281" WT LINEPIPE	API - 5 LX - GR.X60	50 FT.	
8	22" X 0.312" WT LINEPIPE	API - 5 LX - GR.X60	14 FT.	
9	30" X 0.438" WT LINEPIPE	API - 5 LX - GR.X60	10 FT.	
10	42" X 0.500" WT LINEPIPE OR 1/2" X 11'-0" WIDE C.S. PLATE(FOR PIPE)	API - 5 LX - GR.X 60	15 FT.	
<b>B</b>	<b>VALVES CL 600</b>			
11	1/4" NEEDLE VALVE S.E. CL 600		6	
12	1/2" NEEDLE VALVE S.E. CL 600		4	
13	1/2" PLUG VALVE S.E. CL 600		3	
14	1" PLUG VALVE S.E. CL 600		20	
15	1" PLUG VALVE F.E. CL 600 RTJ. WITH LOCKING DEVICE		1	
16	4" PLUG VALVE F.E. CL 600 RTJ.		1	
17	8" PLUG VALVE W.E. CL 600		1	
18	8" PLUG VALVE F.E. CL 600 RTJ.		8	
19	12" CHECK VALVE F.E. CL 600 RTJ.		1	
20	12" PLUG VALVE F.E. CL 600 RTJ.		1	
21	16" BALL VALVE FE. CL 600 RTJ.		3	2
22	20" BALL VALVE WE. CL 600 (FULL BORE 19.438" , FULL OPEN)		1	
<b>B-1</b>	<b>VALVES CL 300 / 150</b>			
23	2" BALL VALVE FE. CL 150 RF.		1	
<b>C</b>	<b>WELD NECK &amp; BLIND FLANGES CL 600 RTJ.</b>			
24	1" W.N FLANGE CL 600 RTJ.	ASTM - A 105 - GR. 2	1	
25	2" W.N FLANGE CL 600 RTJ.	ASTM - A 105 - GR. 2	1	
26	4" W.N FLANGE CL 600 RTJ.	ASTM - A 105 - GR. 2	2	
27	8" W.N FLANGE CL 600 RTJ.	ASTM - A 105 - GR. 2	20	
28	10" W.N FLANGE CL 600 RTJ.	ASTM - A 105 - GR. 2	6	2

NOTE:

THIS BOQ IS ISSUED ON THE SPECIFIC REQUEST OF  
FATIMA FERTILIZER LIMITED. THIS BOQ COMPRISES  
OF PIG RECEIVING ARRANGEMENT & FILTRATION  
ARRANGEMENT.

2	06-02-09	REVISED AS PER DRG.NO. 11190M01 RECEIVED FROM M/S FATIMA FERTILIZER FOR FILTER SEPARATOR & COMMENTS RECEIVED FROM M/S FATIMA FERTILIZER VIA EMAIL DATED 02-02-2009				
	1/10/2007	REVISED BOQ FOR PIG RECEIVING AND FILTRATION ARRANGEMENT				
NO.	DATE	DESCRIPTION	DRAWN	CHK'D	VERIFIED	APR
REVISIONS						
SUI NORTHERN GAS PIPELINES LTD. P & D DEPARTMENT						
PROJECT 20" DIA. X 45.52 KM: FATIMA FERTILIZER MAINLINE						
TITLE MATERIAL TAKE-OFF PIG RECEIVING ARRANGEMENT & FILTRATION AT FATIMA FERTILIZER LIMITED						
MAT'L	CHK'D	VERIFIED	APPROVED			
HSAAN	TARIQ MAHMOOD ASSOC.ENGR.	IMRAN YOUSAF SPE(D)	NAJEEB-UL-HA: CEI			
E.F.N.	DATE	DOC.NO	SHEET		REV.	
TL-25-A20-B-03-1-1	06-02-09	TL-25-A20-B-03	NO.	OF	2	
			1	4		

PIG REC. FILTRATION

S. NO.	DESCRIPTION	SPECIFICATION	QTY. (NO)	REMARKS
29	12" W.N FLANGE CL 600 RTJ.	ASTM - A 105 - GR. 2	2	
30	16" W.N FLANGE CL 600 RTJ.	ASTM - A 105 - GR. 2	9	2
31	12" BLIND FLANGE CL 600 RTJ.	ASTM - A 105 - GR. 2	1	
32	16" BLIND FLANGE CL 600 RTJ.	ASTM - A 105 - GR. 2	1	2
<b>C-1 WELD NECK &amp; BLIND FLANGES CL 300 / 150 RF.</b>				
33	2" W.N FLANGE CL 150 RF.	ASTM - A 105 - GR. 2	2	
<b>ANCHOR FLANGES</b>				
34	20" ANCHOR FLG. (BORE 19.438")	ASTM - A 105 - GR. 2	1	
<b>D WELDOLETS</b>				
35	3/4" ON 42" WOL	ASTM - A 105 - GR. 2	2	
36	1" ON 8" WOL	ASTM - A 105 - GR. 2	2	
37	1" ON 16" WOL	ASTM - A 105 - GR. 2	3	
38	1" ON 20" WOL	ASTM - A 105 - GR. 2	1	
39	1" ON 22" WOL	ASTM - A 105 - GR. 2	1	
40	1" ON 30" WOL	ASTM - A 105 - GR. 2	2	
	1" ON 42" WOL	ASTM - A 105 - GR. 2	3	
42	2" ON 42" WOL	ASTM - A 105 - GR. 2	2	
43	4" ON 30" WOL	ASTM - A 105 - GR. 2	1	
44	8" ON 22" WOL	ASTM - A 105 - GR. 2	2	
45	8" ON 30" WOL	ASTM - A 105 - GR. 2	1	
<b>E BUTT WELDED FITTING</b>				
46	30" WELD CAP 0.438" WT.	MSS-SP-75, GR. WPHY60	2	
47	42" WELD CAP 0.500" WT.	MSS-SP-75, GR. WPHY60	2	
48	1" X 0.179" WT LRE 90°	ASTM - A 105 - GR. B	18	2
49	2" X 0.154" WT LRE 90°	ASTM - A 105 - GR. B	2	
50	4" X 0.337" WT LRE 90°	ASTM - A 105 - GR. B	1	
51	8" X 0.277" WT LRE 90°	MSS-SP-75, GR. WPHY46	4	
52	16" X 0.438" WT. LRE 90°	MSS-SP-75, GR. WPHY46	3	
53	1" X 0.179" WT. EQUAL TEE	ASTM - A 105 - GR. B	5	
54	16" X 0.438" WT. EQUAL TEE	MSS-SP-75, GR. WPHY46	2	2
55	16" X 16" X 8" RED. TEE 0.438" WT.	MSS-SP-75, GR. WPHY46	6	
56	20" X 20" X 8" RED. TEE 0.281" WT.	MSS-SP-75, GR. WPHY60	1	
	20" X 20" X 16" RED. TEE 0.281" WT.	MSS-SP-75, GR. WPHY60	1	
58	2" X 1" CON. RED. 0.218" WT.	ASTM - A 105 - GR. B	1	
59	10" X 8" CON. RED. 0.307" WT.	MSS-SP-75, GR. WPHY46	6	2
60	16" X 12" CON. RED. 0.438" WT.	MSS-SP-75, GR. WPHY46	1	
61	16" X 8" CON. RED. 0.438" WT.	MSS-SP-75, GR. WPHY46	1	
62	22" X 20" CON. RED. 0.312" WT.	MSS-SP-75, GR. WPHY60	1	
<b>F SOFT IRON OVAL RINGS CL 600 RTJ.</b>				
63	1" RING R-16 CL 600 RTJ.	ANSI B 16 . 20	2	
64	4" RING R-37 CL 600 RTJ.	ANSI B 16 . 20	2	
65	8" RING R-49 CL 600 RTJ.	ANSI B 16 . 20	18	
66	10" RING R-53 CL 600 RTJ.	ANSI B 16 . 20	6	2
67	12" RING R-57 CL 600 RTJ.	ANSI B 16 . 20	3	
68	16" RING R- 65 CL 600 RTJ.	ANSI B 16 . 20	8	2
<b>F-1 GASKETS CL 300 / 150 RF.</b>				
69	2" GASKET CL 150 RF	ANSI B 16 . 21	3	
<b>G STUDBOLTS C/W 2 NUTS &amp; 2 WASHERS CL 600 RTJ.</b>				
70	5/8" X 3 3/4" S.BOLTS (FOR 1")	ASTM - A 193, A 194	8	
71	7/8" X 6" S.BOLTS (FOR 4")	ASTM - A 193, A 194	16	

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PIG REC. FILTRATION

S. NO.	DESCRIPTION	SPECIFICATION	QTY. (NO)	REMARKS
72	1 1/8" X 8" S.BOLTS(FOR 8")	ASTM - A 193, A 194	216	
73	1 1/4" X 8 3/4" S.BOLTS(FOR 10")	ASTM - A 193, A 194	96	△
74	1 1/4" X 9" S.BOLTS(FOR 12")	ASTM - A 193, A 194	60	
75	1 1/2"X10 1/4" S.BOLTS(FOR 16" CL 600)	ASTM - A 193, A 194	160	△
G-1	<b>STUDBOLTS C/W 2 NUTS &amp; 2 WASHERS CL 300 / 150 RF.</b>			
76	5/8" X 3 1/4" S. BOLTS(FOR 2" CL 150)	ASTM - A 193, A 194	12	
H	<b>PRE FABRICATED INSULATING JOINTS</b>			
77	4" PRE FAB.INSU JT.WE. CL 600 0.337" WT.	API - 5 L - GR. B	1	
78	20" PRE FAB.INSU JT.WE. CL 600 0.281" WT	API - 5 LX - GR. X60	1	
	<b>FACTORY BENDS</b>			
79	20"-45" FAC.BEND 0.281" WT,RAD.12'-0"	API-5L-GR. X60	2	
I	<b>SCREWED FITTINGS</b>			
80	1/2"-90° ELB.	CL. 6000	2	
81	1" CP UNION	CL. 6000	3	
82	1" PLUG	CL. 6000	7	
	1"X1/2" S.NIPPLE BET	CL. 6000	4	
84	1" X 4" LG. NIPPLE OET	CL. 6000	22	
85	1/2" X 4" LG.NIPPLE BET	CL. 6000	5	
86	1/4 X 4" LG.NIPPLE BET	CL. 6000	24	
	<b>DOOR CLOSURE</b>			
86	22"DOOR CLOSURE C/W SEALING GAS KETS CL 600		1	
	<b>PIG SIGNAL</b>			
87	PIG SIGNAL ON 20" LINE CL 600		1	
J	<b>PRESSURE GAUGE</b>			
88	PRESSURE GAUGE 0-1600PSIG		4	
89	DIFF. PRESS. GAUGE 0-25 PSIG		3	
K	<b>MISCELLANEOUS MATERIAL</b>			
90	1"X2"RELIEF VALVE FE.CL 600 RT./150 RF. SET AT 155 # 5% OVER PRESSURE		1	
91	FILTER VESSEL DIA. 30", 10" INLET/OUTLET MIN. CAPACITY 110 MMCFD AT 500 - 550 # CL 600 C/W ACCESSORIES		3	
92	7/8" DIA X 21" LG. "J" BOLTS WITH ONE NUT & ONE WASHER ( FOR FILTER)		18	△
93	LIQUID REFLEX GAUGE PENBERTHY 3/4" VESSEL CONNECTION 1/2" NPT GAUGE CONNECTION FOR 42" DIA. VESSEL C/W 2 NOS. NV. SE. & NECESSARY ACCESSORIES		1	
94	2" NOZZLE FOR SUCTION PIPE		1	
95	3/4" COUPLING	CL 6000	2	
96	1/4" THK. 4'-6" SQ. M.S. PLATE WITH SWING HANDLE		1	
97	4" WIDE X 1/8" THK. INSU. MAT. (PLAIN KLINGERIT SHEET)		15 FT.	
98	3" WIDE X 1/4" THK.M.S. FLAT		15 FT.	
99	1" DIA. X 1'-0" LG. M.S. "J" BOLT FOR COND. VESSEL		8	
100	2" STACK CAP (BY FIELD)		1	
101	8" STACK CAP (BY FIELD)		1	
P	<b>8" PIPE SUPPORTS</b>			
102	4.50" O.D. PIPE 0.237" WT.	API-5L-GR.B.	16 FT.	
103	3/8" THK,X 8" SQ. M.S. PLATE		2	
104	5" DIA X 1/2" THICK M.S. PLATE		2	
105	1 3/4" O.D. X 3" LG. X 3/16" THICK M.S. SLEEVE		2	
106	1 1/4" DIA. HEX NUT BSW		4	
107	1 1/4" DIA. M.S ROD THREADED BSW		2	
108	1/8" THK,X 14" WIDE INSULATING MATERIAL (PLAIN KLINGERIT SHEET)		4 FT.	
109	3/8" THK,X2" X 19" LONG M.S. PLATE		4	

PIG REC. FILTRATION

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S. NO.	DESCRIPTION	SPECIFICATION	QTY. (NO)	REMARKS
110	3/8"X11"X14" M.S. PLATE		2	
111	6" LG. X 1/2" DIA. M.S. ROD ONE END THREADED		8	
112	1 1/2" DIA. M.S. HEX NUT BSW		8	
<b>R</b>	<b>12" PIPE SUPPORTS</b>		1	
113	6.625" O.D. PIPE 0.280" WT.	API-5L-GR.B.	8 FT.	
114	3/8" THK. X 12" SQ. M.S. PLATE		1	
115	7" DIA. X 1/2" THICK M.S. PLATE		1	
116	1 3/4" O.D. X 3" LG. X 3/16" THICK M.S. BUSH		1	
117	1 1/4" DIA. HEX NUT BSW		2	
118	1 1/4" DIA. M.S. ROD THREADED BSW		1	
119	1/8" THK. X 18" WIDE INSULATING MATERIAL (PLAIN KLINGERIT SHEET)		2 FT.	
120	3/8" THK. X 2" X 24" LONG M.S. PLATE		2	
121	3/8" X 22" X 17 1/2" M.S. PLATE		1	
122	7" LG. X 1/2" DIA. M.S. ROD ONE END THREADED		4	
123	1 1/2" DIA. M.S. HEX NUT BSW		4	
<b>S</b>	<b>16" PIPE SUPPORTS</b>		5	
124	6.625" O.D. PIPE 0.280" WT.	API-5L-GR.B.	40 FT.	
125	3/8" THK. X 12" SQ. M.S. PLATE		5	
126	7" DIA. X 1/2" THICK M.S. PLATE		5	
127	1 3/4" O.D. X 3" LG. X 3/16" THICK M.S. BUSH		5	
128	1 1/4" DIA. HEX NUT BSW		10	
129	1 1/4" DIA. M.S. ROD THREADED BSW		5	
130	1/8" THK. X 21" WIDE INSULATING MATERIAL (PLAIN KLINGERIT SHEET)		13 FT.	
131	3/8" THK. X 2" X 29" LONG M.S. PLATE		10	
132	3/8" X 26" X 21" M.S. PLATE		5	
133	8" LG. X 1/2" DIA. M.S. ROD ONE END THREADED		20	
134	1 1/2" DIA. M.S. HEX NUT BSW		20	
	<b>20" PIPE SUPPORTS</b>		3	
135	12.750" O.D. PIPE 0.250" WT.	API-5L-GR.B.	24 FT.	
136	3/8" THK. X 1'-4" SQ. M.S. PLATE		3	
137	3/8" X 6" X 12" M.S. PLATE FOR WEB PLATES		6	
138	1/8" THK. X 15" WIDE INSULATING MATERIAL (PLAIN KLINGERIT SHEET)		18 FT.	
139	1/4" THK. X 1'-0" WIDE M.S. PLATE		18 FT.	
140	3/8" X 3/8" X 1 1/2" M.S. CENTERING LUGS		18	
141	1" DIA. X 5'-2 1/2" LG. M.S. 'U' BOLT W/NUTS & WASHERS 6" THREAD EACH END		3	
142	2'-2 1/2" X 1'-2" X 3/8" THK. M.S. PLATE		3	
	<b>22" PIPE SUPPORTS</b>		1	
143	12.750" O.D. PIPE 0.250" WT.	API-5L-GR.B.	8 FT.	
144	3/8" THK. X 1'-4" SQ. M.S. PLATE		1	
145	3/8" X 7" X 12" M.S. PLATE FOR WEB PLATES		2	
146	1/8" THK. X 15" WIDE INSULATING MATERIAL (PLAIN KLINGERIT SHEET)		6 FT.	
147	1/4" THK. X 1'-0" WIDE M.S. PLATE		6 FT.	
148	3/8" X 3/8" X 1 1/2" M.S. CENTERING LUGS		6	
149	1" DIA. X 5'-7" LG. M.S. 'U' BOLT W/NUTS & WASHERS 6" THREAD EACH END		1	
150	2'-5 1/2" X 1'-4" X 3/8" THK. M.S. PLATE		1	



## SUI NORTHERN GAS PIPELINES LIMITED

P&D Department, 3rd Floor, Gas House 21- Kashmir Road Lahore, Pakistan

### TRANSMITTAL

Page 1 of 2

To **MR. M. USMAN IQBAL**  
**GENERAL SERVICES MANAGER**

Reference/Transmittal No. **220**  
Date: **20.09.10**

Project: **20" DIA. X 45.29 KM: FATIMA FERTILIZER MAINLINE**

Subject: **DRAWINGS (AS-BUILT)**

Purpose: **FOR INFORMATION**

Transmitted herewith, please find the following

Sr. No.	Document Number	Document Description	Rev. No.	No. of copies
1	TL-25-A20-D2-02	R.O.W. (SHEET 1 OF 1)	3	1
2	TL-25-A20-D3-03	ROUTE MAP (SHEET 1 OF 4)	5	1
3	TL-25-A20-D3-03	ROUTE MAP (SHEET 2 OF 4)	3	1
4	TL-25-A20-D3-03	ROUTE MAP (SHEET 3 OF 4)	3	1
5	TL-25-A20-D3-03	ROUTE MAP (SHEET 4 OF 4)	3	1
6	TL-25-A20-D4-04	SCHEMATIC ARRANGEMENT (SHEET 1 OF 4)	3	1
7	TL-25-A20-D4-04	SCHEMATIC ARRANGEMENT (SHEET 2 OF 4)	3	1
8	TL-25-A20-D4-04	SCHEMATIC ARRANGEMENT (SHEET 3 OF 4)	3	1
9	TL-25-A20-D4-04	SCHEMATIC ARRANGEMENT (SHEET 4 OF 4)	0	1
10	TL-25-A20-D6-11A	BLACK TOP ROAD CX. NO. 1A	4	1
11	TL-25-A20-D6-11B	12" DIA. ENGRO GAS PIPELINE CX. NO. 1B	2	1
12	TL-25-A20-D6-11C	16" DIA. FFC II GAS PIPELINE CX. NO. 1C	2	1
13	TL-25-A20-D6-11D	8" DIA. TALLO GAS PIPELINE CX. NO. 1D	2	1
14	TL-25-A20-D6-11	BLACK TOP ROAD CX. NO. 1	3	1
15	TL-25-A20-D6-12	MINOR / BLACK TOP ROAD CX. NO. 2 & 3	2	1
16	TL-25-A20-D6-13A	6" DIA. MARI GAS PIPELINE CX. NO. 3A	2	1
17	TL-25-A20-D6-13B	PIARO MINOR CX. NO. 3B	2	1
18	TL-25-A20-D6-14	BLACK TOP ROAD CX. NO. 4	2	1
19	TL-25-A20-D6-14A	6" DIA. MARI GAS PIPELINE CX. NO. 4A	2	1
20	TL-25-A20-D6-16	BLACK TOP ROAD CX. NO. 6	2	1

Note: 1 - Please sign and return the duplicate copy of this advice to the undersigned.

2 - Please destroy superseded issues.

Sender Name

**IMRAN YOUSAF KHAN**  
Chief Engineer (CP&D)

Signature

Received by \_\_\_\_\_



## SUI NORTHERN GAS PIPELINES LIMITED

P&D Department, 3rd Floor, Gas House 21- Kashmir Road Lahore, Pakistan

TRANSMITTAL

Page 2 of 2

To

Reference/Transmittal No. P- 220

Date: 20.09.16

Project: 20" DIA. X 45.29 Km: FATIMA FERTILIZER MAINLINE

Subject: DRAWINGS (AS-BUILT)

Purpose: FOR INFORMATION

Transmitted herewith, please find the following

Sr. No.	Document Number	Document Description	Rev. No.	No. of copies
21	TL-25-A20-D6-18	BLACK TOP ROAD CX. NO. 8	2	1
22	TL-25-A20-D6-24	SEHRWAH CANAL CX. NO. 14	2	1
23	TL-25-A20-D6-27	RAINEE CANAL CX. NO. 17	2	1
24	TL-25-A20-D6-30	BLACK TOP ROAD CX. NO. 20	2	1
25	TL-25-A20-D6-32	BLACK TOP ROAD CX. NO. 22	2	1
26	TL-25-A20-D6-33	JUNGLE MINOR CX. NO. 23	2	1
27	TL-25-A20-D6-34	BLACK TOP ROAD CX. NO. 24	2	1
28	TL-25-A20-D6-35	BLACK TOP ROAD CX. NO. 25	2	1
29	TL-25-A20-D6-35A	16" DIA. FFC-II & 14" DIA. FFC-I GAS PIPELINE CX. NO. 25A	2	1
30	TL-25-A20-D6-36	RAILWAY LINE CX. NO.26	2	1

Note: 1 - Please sign and return the duplicate copy of this advice to the undersigned.  
2 - Please destroy superseded issues.

Sender Name

IMRAN YOUSAF KHAN  
Chief Engineer (CP&D)

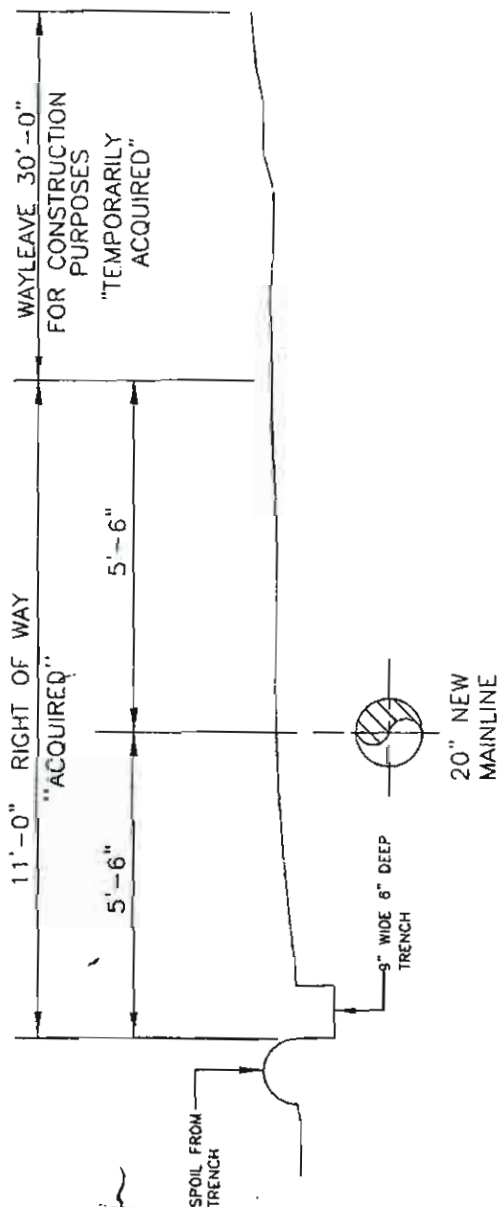
Signature

Received by \_\_\_\_\_

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# GENERAL NOTES:-

1. PLACEMENT OF R.O.W. MARKERS  
(i) AT THE TIME OF SELECTION OF PIPELINE ALIGNMENT, THE MARKERS WERE INSTALLED ON CENTRELINE OF PIPELINE.  
(ii) IMMEDIATELY BEFORE STARTING CONSTRUCTION OF PIPELINE THE MARKERS WERE SHIFTED TO RIGHT EDGE OF WAYLEAVE  
(iii) AFTER COMPLETION OF CONSTRUCTION OF PIPELINE: -  
R.O.W. MARKERS WERE PLACED ON THE RIGHT EDGE OF R.O.W.  
2. THE EXPRESSION... "ACQUIRED" IMPLIES PERMANENT LAND ACQUISITION. WHERE LAND WAS ACQUIRED TEMPORARILY IT IS MENTIONED AS "TEMPORARILY ACQUIRED"  
3. CHAINAGES AS SHOWN ARE DESIGN CHAINAGES  
(ZERO POINT RECKONED NEAR GAS WELL NO. 6)  
4. CHAINAGES AS SHOWN ARE AS BUILT  
(ZERO POINT RECKONED NEAR GAS WELL NO. 6)  
5. KM REFERENCES AS SHOWN ARE DESIGN KM OF 20" NEW MAINLINE  
(ZERO POINT RECKONED NEAR GAS WELL NO. 6)  
6. KM REFERENCES AS SHOWN ARE AS BUILT KM OF 20" NEW MAINLINE  
(ZERO POINT RECKONED NEAR GAS WELL NO. 6)  
7. CHAIN LINK FENCING TO BE INSTALLED TO PROTECT EXISTING 16" GAS LINES WHERE REQUIRED  
8. TEMPORARY WAYLEAVE WAS ACQUIRED OPPOSITE TO M/S FAUJ FERTILIZER R.O.W. HOLD



## TYPICAL RIGHT OF WAY CROSS SECTION (LOOKING IN THE DIRECTION OF GAS FLOW)

### APPLICABILITY

- FROM CH. ZERO TO CH. 149/335 (END POINT)
- FROM CH. ZERO TO CH. 45.52 (END POINT)
- FROM CH. ZERO TO CH. 148/596 (END POINT)
- FROM CH. ZERO TO CH. 45.29 (END POINT)

AS BUILT

NO.	DATE	DESCRIPTION	DRAWN	CHECKD	CHKD	VERIFIED	APP'D
1	09-08-10	AS BUILT AS ON 28-02-2010	SHAHID				
2	28-02-07	END POINT CHAINAGE WAS 139/331 NOW 149/335 DUE TO NEW LOCATION OF END POINT	T.M.				
3	13-11-08	AUTHORISED FOR ISSUE	T.M.				

### REVISIONS

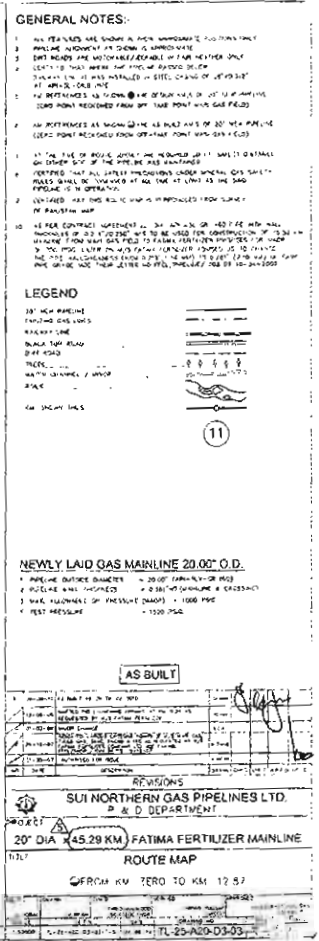
**SUI NORTHERN GAS PIPELINES LTD.**  
P & D DEPARTMENT

PROJECT **3**  
20" DIA. X 45.29 KM: FATIMA FERTILIZER MAINLINE

TITLE  
PIPELINE LOCATION IN R.O.W.

FROM KM. ZERO TO KM. 45.29 (END POINT)

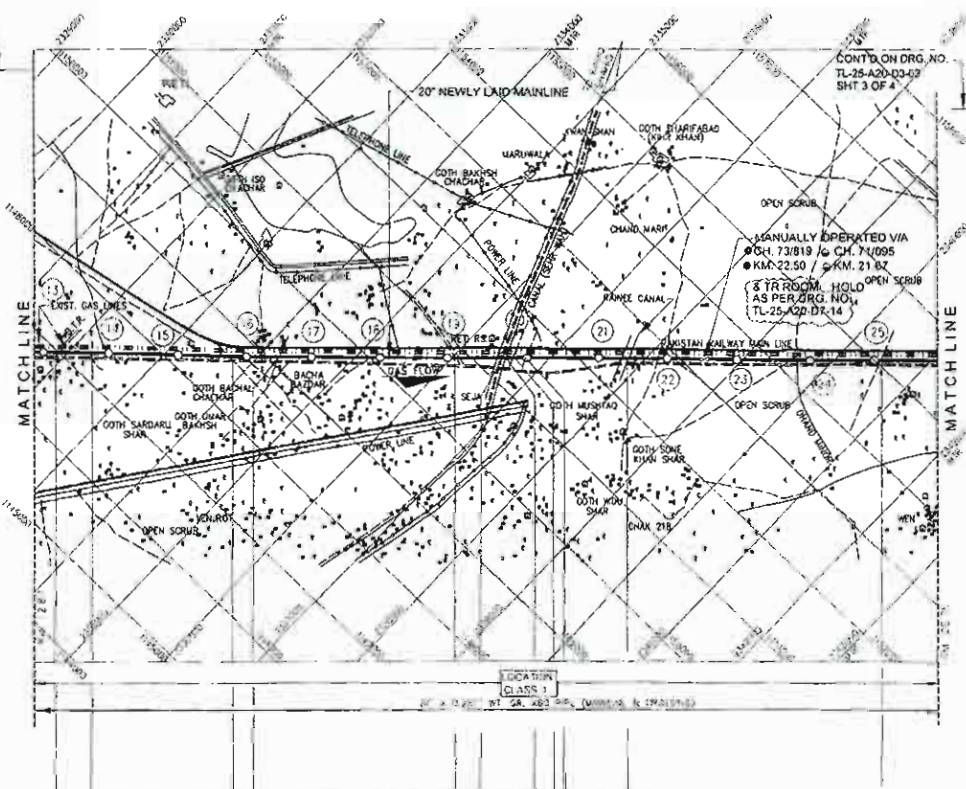
DRAWN	CHK'D	CHK'D	CHK'D	APPROVED	HAZEL	HAZEL	HAZEL
T.M.	ASSOC. ENGINEER	DATE	MUSLIM	NOTES	DRAWING NO.	SHEET	REV.
N.A.	TL-25-A20-D2-1-3	09-08-10	TL-25-A20-D2-02	1	1	1	3



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CONT'D ON DRG. NO.  
TL-25-A20-D3-03  
SHT. 1 OF 4

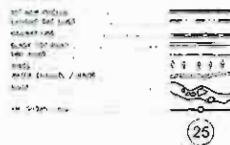
CONT'D ON DRG. NO.  
TL-25-A20-D3-03  
SHT. 3 OF 4



**GENERAL NOTES:**

1. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.
2. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.
3. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.
4. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.
5. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.
6. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.
7. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.
8. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.
9. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.
10. THE PROPOSED GAS MAINLINE IS TO BE LAYED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GAS ACT, 1961 AND THE GAS REGULATIONS, 1961.

**LEGEND**



**NEWLY LAID GAS MAINLINE 20.00\"/>**

1. MATERIAL: GALVANIZED STEEL PIPE
2. METHOD: OPEN CUT
3. RATE: ACCORDING TO PRELIMINARY SURVEY
4. TYPE: GRAVITY

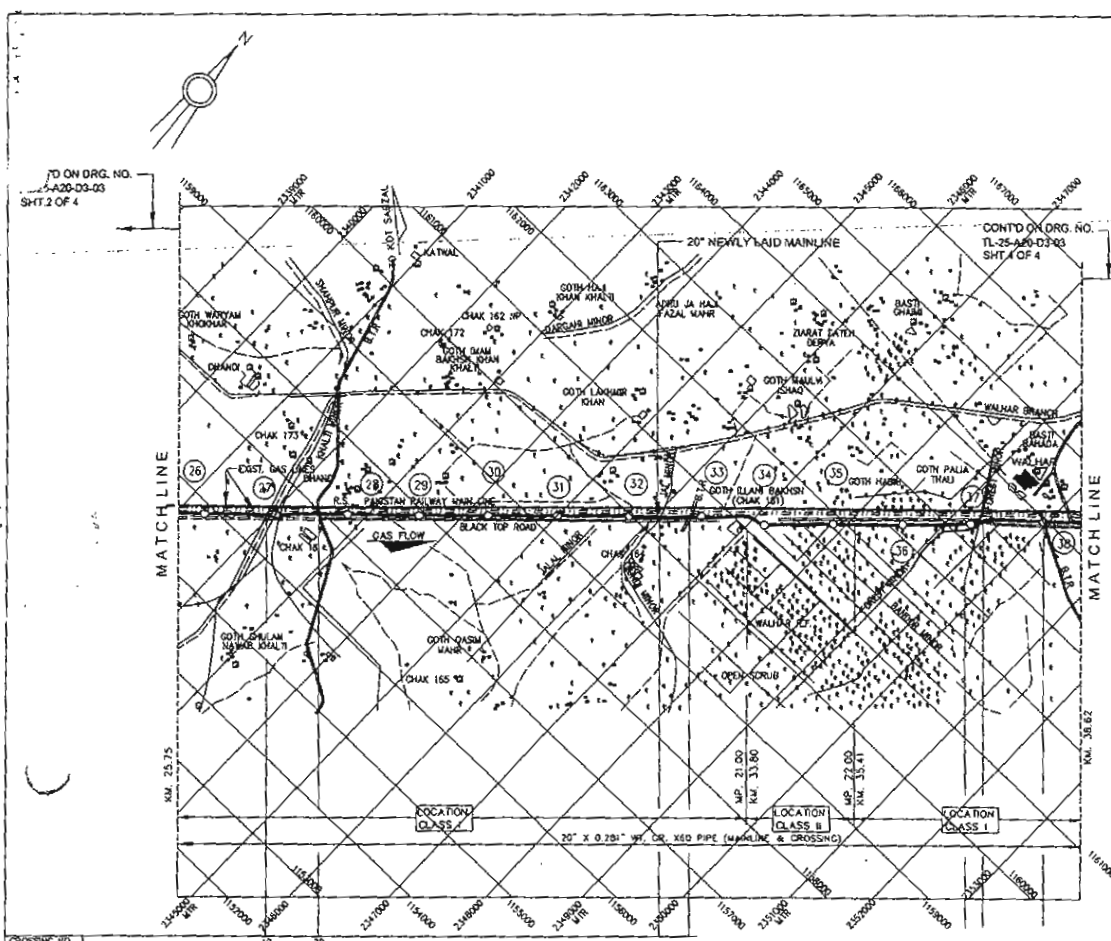
AS BUILT

**SUI NORTHERN GAS PIPELINES LTD.**  
P & S DEPARTMENT

PROJECT: 20\"/>

DATE: 12.87 TO KM. 25.75

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**GENERAL NOTES:-**

1. ALL FEATURES ARE SHOWN IN THEIR APPROPRIATE POSITIONS ONLY.
2. PIPELINE ALIGNMENT AS SHOWN IS APPROXIMATE.
3. SOFT BENCHING AND NOTIFICATION/CONSENT IS OBTAINED ONLY.
4. CERTAIN THAT THE PIPELINE PASSED BELOW.
5. EXISTING LINE (IT WAS INSTALLED IN THE CASE OF 1970-80) AT 100-150 CM DEPTH.
6. NEW PIPELINE AS SHOWN @ 100 CM DEPTH OF 30\"/>

**LEGEND**

- 30\"/>

**NEWLY LAID GAS MAINLINE 20.00\"/>**

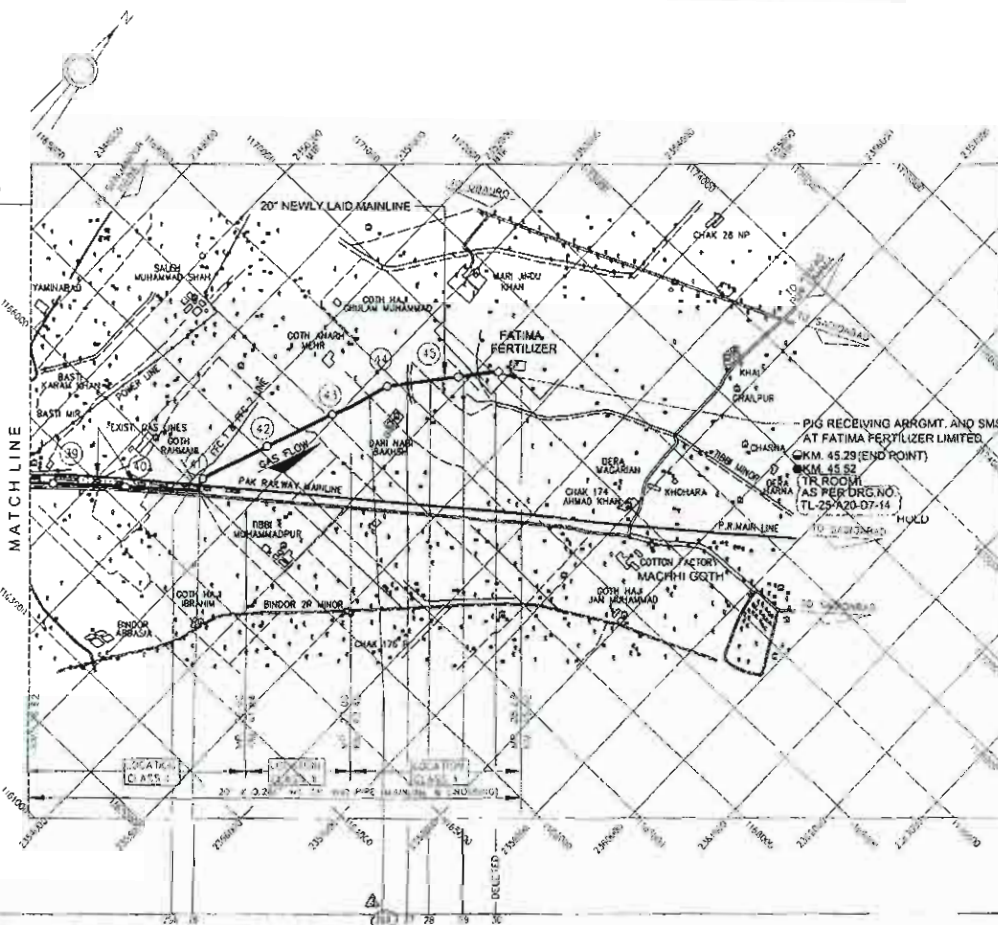
AS BUILT			
1	20" DIA. 445.29 KM. FATIMA FERTILIZER MAINLINE	DATE	2008/07/27
2	ROUTE MAP	DATE	2008/07/27
3	FROM KM. 25.75 TO KM. 38.82	DATE	2008/07/27

DATE		DESCRIPTION		DRAWN BY		CHECKED BY		DATE	
REVISIONS									
SUI NORTHERN GAS PIPELINES LTD.									
P & O DEPARTMENT									
PROJECT									
20" DIA. x 45.28 KM. FATIMA FERTILIZER MAINLINE									
TITLE									
ROUTE MAP									
FROM KM. 25.75 TO KM. 38.82									
SCALE		TWO		TWO		TWO		TWO	

FROM KM. 25.75 TO KM. 38.82

263

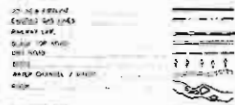
CONT'D ON ORG. NO.  
TL-25-A20-D3-03  
SHT. 3 OF 4



GENERAL NOTES:-

1. ALL FEATURES ARE SHOWN IN THEIR RESPECTIVE POSITIONS ONLY.
2. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE.
3. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
4. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
5. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
6. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
7. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
8. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
9. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
10. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.

LEGEND



NEWLY LAID GAS MAINLINE 20.00\"/>

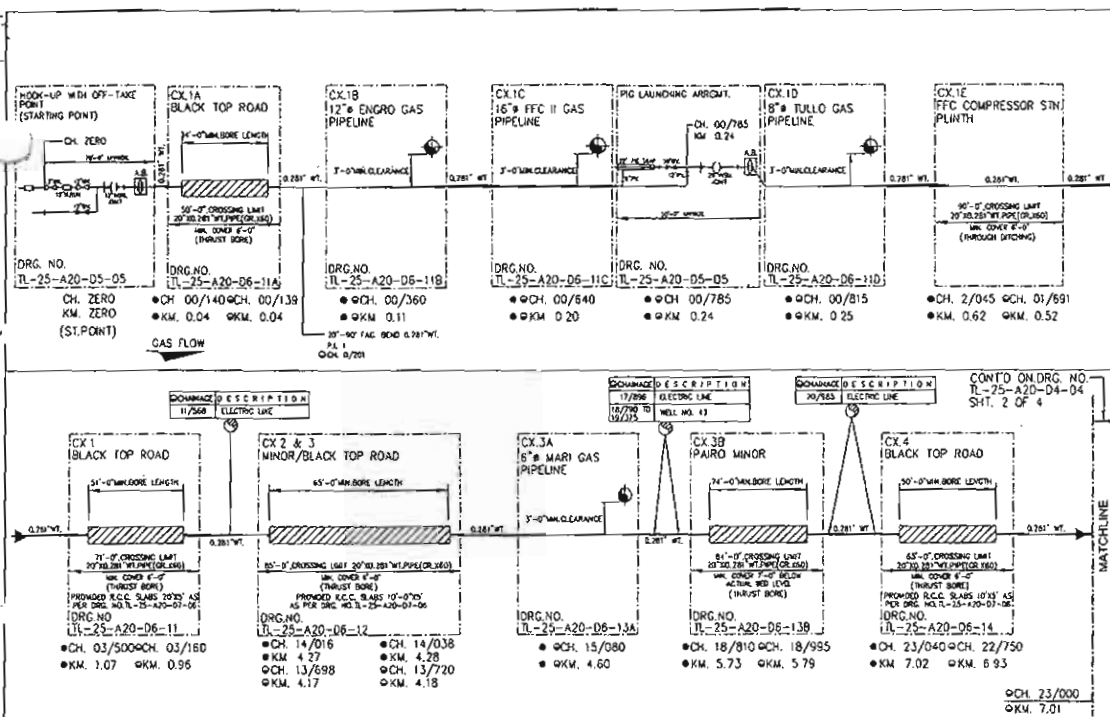
1. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
2. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
3. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.
4. EXISTING ADJUSTMENT TO BE MADE TO THE MAINLINE ONLY.

AS BUILT

REVISIONS

SUI NORTHERN GAS PIPELINE LTD.  
P. & D. DEPARTMENT

20\"/>



- GENERAL NOTES:**
1. MATERIAL CALLED OUT BY THIS DRAWING IS TO BE FURNISHED EXACT ALL OTHER MATERIALS IS CALLED OUT BY THE FOLLOWING MEMORANDUM, DMC NO.:
- |                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 1. 1/2" X 3/4" X 10'-00" DMS  | 2. 1/2" X 3/4" X 10'-00" DIA  | 3. 1/2" X 3/4" X 10'-00" DIA  |
| 4. 1/2" X 3/4" X 10'-00" DIA  | 5. 1/2" X 3/4" X 10'-00" DIA  | 6. 1/2" X 3/4" X 10'-00" DIA  |
| 7. 1/2" X 3/4" X 10'-00" DIA  | 8. 1/2" X 3/4" X 10'-00" DIA  | 9. 1/2" X 3/4" X 10'-00" DIA  |
| 10. 1/2" X 3/4" X 10'-00" DIA | 11. 1/2" X 3/4" X 10'-00" DIA | 12. 1/2" X 3/4" X 10'-00" DIA |
2. ALL COLLECTION METHODS ARE APPROVED
3. ALL COLLECTION METHODS ARE APPROVED AS INDICATED BY THE COLLECTION METHOD
4. CHANGES TO THIS DRAWING ARE APPROVED
5. (DO NOT REVISIONS FROM 1/2" X 3/4" X 10'-00" DIA)
6. CHANGES TO THIS DRAWING ARE APPROVED
7. (DO NOT REVISIONS FROM 1/2" X 3/4" X 10'-00" DIA)
8. ALL REVISIONS TO THIS DRAWING ARE APPROVED
9. (DO NOT REVISIONS FROM 1/2" X 3/4" X 10'-00" DIA)
10. ALL REVISIONS TO THIS DRAWING ARE APPROVED
11. (DO NOT REVISIONS FROM 1/2" X 3/4" X 10'-00" DIA)
12. (DO NOT REVISIONS FROM 1/2" X 3/4" X 10'-00" DIA)

### REFERENCE DRAWINGS

- 7-13-420-03-0208  
 HIDE-UP WITH GFT-TAKE POINT IN PG LACER. AHEAD.  
 AT CM 5778  
 7-13-420-04-0114  
 BLACK TOP ROAD - (CCL4A)  
 179 EMBOS GAS PIPELINE - (CCL9E)  
 174 FFC-G GAS PIPELINE - (CCL12)  
 177 TALL GAS PIPELINE - (CCL10)  
 7-13-420-26-111  
 BLACK TOP ROAD - (CCL13)  
 7-13-420-06-173  
 UNDER A BLACK TOP ROAD - (CCL18E)  
 7-13-420-04-136  
 S1 VARI GAS PIPELINE - (CCL3A)  
 PLAINS ROAD - (CCL2E)  
 7-13-420-04-111  
 BLACK TOP ROAD - (CCL4)  
 7-13-420-07-001  
 AREA NEAR  
 FRENCH HILLS  
 7-13-420-07-008  
 FRENCH HILLS  
 7-13-420-07-008  
 POSITIVE SIGN OVER PVE

SCHEDULE OF DEFLECTION ANGLES @ (DESIGN)				SCHEDULE OF DEFLECTION ANGLES @ (AS BUILT)			
PI. NO	CH. KM.	CH.	DEFLECTION ANGLE RIGHT LEFT	PI. NO	CH. KM.	CH.	DEFLECTION ANGLE RIGHT LEFT
1	3.53	9/252	-	1	0.06	6/201	99°-00'-00"
2	2.79	9/140	48°-48'-00"	2	2.68	9/509	17°-30'-00"
				3	3.15	10/248	83°-00'-00"
				4	4.10	13/438	09°-00'-00"

PIPE DETAIL (SR-680) Q (AS BUILT)				
WALL THICKNESS	MAINLINE DIRT ROAD/ PLINTH	CROSSINGS	V/A	TOTAL
LENGTH IN FEET				
0.781"	22435	90	355	120 23000
C TOTAL = 23,000 FT				

[illegible]

3	1-25-82 15.00 BUILT ON CH 30-32-30	ASB
4	1-25-82 15.00 REPAIR WORK UNCHANGED LAYOUT AND CH 32.41	ASB
5	1-25-82 15.00 REPAIRED BY A. KAHAN, FERTILIZER	ASB
6	1-25-82 15.00 APPROVED FOR ISSUE	ASB
7	CH 32.41	REVISION NO.
8	CH 32.41	REVISION NO.

**REVISIONS**

**SUI NORTHERN GAS PIPELINES LTD.**  
**P & D DEPARTMENT**

**PROJECT**  
**20" X 45.25 KM. FATIMA FERTILIZER MAINLINE**

**FILE**

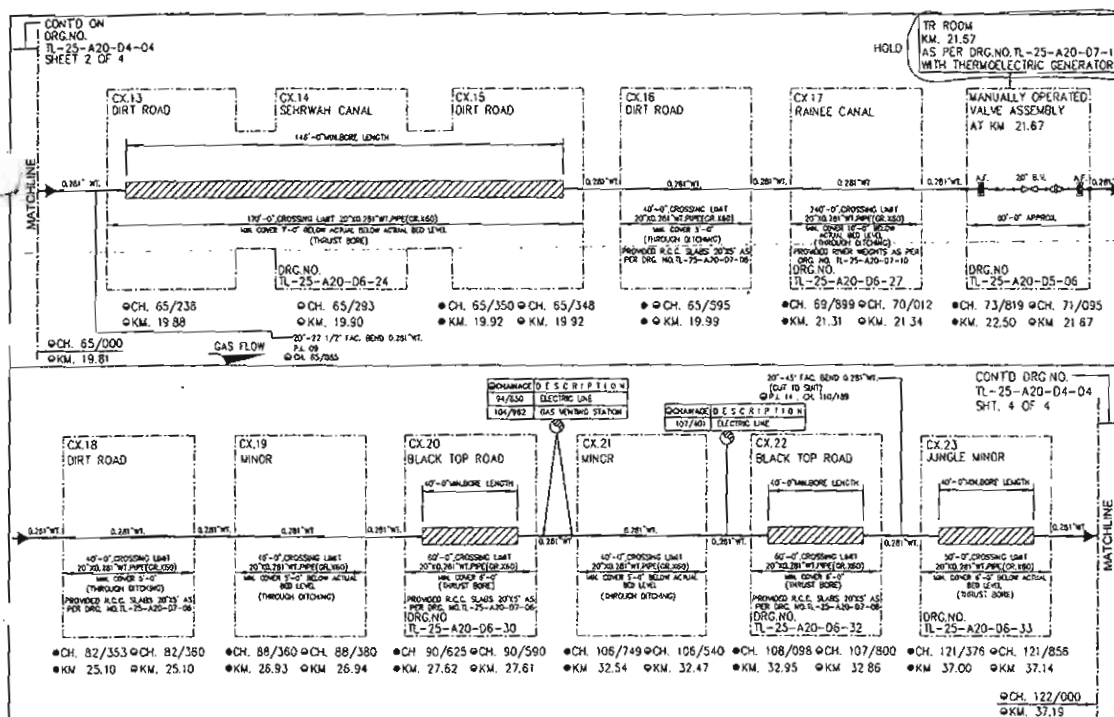
**SCHEMATIC ARRANGEMENT**

FROM CH. ZERO TO CH. 15/300  
OR FROM AL. ZERO TO KM. 7.01

DATE	BY	CHKD	APPROVED



286



- GENERAL NOTES:-**
1. MATERIAL CALLED UP ON THIS DRAWING IS FOR MAINLINE ONLY. ALL OTHER MATERIAL IS CALLED UP ON THE FOLLOWING ADDITIONAL DRG. NOS.
  2. TL-25-A20-D4-24 TL-25-A20-D4-27 TL-25-A20-D4-28
  3. TL-25-A20-D4-29 TL-25-A20-D4-30 TL-25-A20-D4-31
  4. ALL COLLECTION MANHOLE ARE APPROXIMATE
  5. RIVER/STATION HEIGHTS WERE PROVIDED AS INDICATED BY SITE CONDITIONS
  6. CHANGES AS SHOWN ON THIS DRAWING
  7. CROSS POINT RECORDED FROM OFF-ROAD POINTS WHEN ON ROAD
  8. CHANGES AS SHOWN ON THIS DRAWING
  9. DATA POINT RECORDED FROM OFF-ROAD POINTS WHEN ON ROAD
  10. ALL INTERSECTIONS IN SHOWN BUILT (CHECK MAPS OF 30' X 60' V.A. (200' X 200' RECORDED FROM OFF-ROAD POINTS WHEN ON ROAD)
  11. ALL INTERSECTIONS AS SHOWN ON THIS DRAWING (CHECK MAPS OF 30' X 60' V.A. (200' X 200' RECORDED FROM OFF-ROAD POINTS WHEN ON ROAD)

- REFERENCE DRAWINGS**
- TL-25-A20-D4-24 DET. ROAD, SCHWAB CANAL, RAINEE ROAD - (CX13, CX14)
  - TL-25-A20-D4-27 RAINEE CANAL - (CX17)
  - TL-25-A20-D4-28 MANUALLY OPERATED VALVE ASSEMBLY AT KM. 21.67
  - TL-25-A20-D4-30 BLACK TOP ROAD - (CX20)
  - TL-25-A20-D4-31 BLACK TOP ROAD - (CX22)
  - TL-25-A20-D4-32 JUNGLE MINOR - (CX23)
  - TL-25-A20-D4-33 PROTECTIVE SLURRY OVER PIPE
  - TL-25-A20-D4-34 BRIDGE HEIGHTS
  - TL-25-A20-D4-35 BRIDGE HEIGHTS

SCHEDULE OF DEFLECTION ANGLES (DESIGN)				SCHEDULE OF DEFLECTION ANGLES (AS BUILT)				PIPE DETAIL (GR. X80) (AS BUILT)				MATERIAL LIST			
NO.	KM.	CH.	DEFLECTION ANGLE	PL. NO.	KM.	CH.	DEFLECTION ANGLE	WALL THICKNESS	MAINLINE	DIRT ROAD / CROSSINGS	V/A	TOTAL	ITEM NO.	DESCRIPTION	SPEC.
9	18.97	65/238	27-00'-00"	9	18.97	65/238	27-00'-00"	0.281"	56180	160	580	80	1	20'-22 1/2" FAC. BEND 0.281" (17'-0" RAD)	API-5L-XL-GR.160
10	19.01	65/238	15-00'-00"	10	19.01	65/238	15-00'-00"						2	20'-45" FAC. BEND 0.281" (17'-0" RAD)	API-5L-XL-GR.160
11	19.14	65/238	08-16'-00"	11	19.14	65/238	08-16'-00"								
12	19.18	65/238	08-16'-00"	12	19.18	65/238	08-16'-00"								
13	19.24	65/238	08-16'-00"	13	19.24	65/238	08-16'-00"								
14	19.30	65/238	08-16'-00"	14	19.30	65/238	08-16'-00"								
15	19.36	65/238	08-16'-00"	15	19.36	65/238	08-16'-00"								
16	19.42	65/238	08-16'-00"	16	19.42	65/238	08-16'-00"								

G. TOTAL = 57,000 FT.

**AS BUILT**

1. 20'-22 1/2" FAC. BEND 0.281" (17'-0" RAD)

2. 20'-45" FAC. BEND 0.281" (17'-0" RAD)

REVISIONS

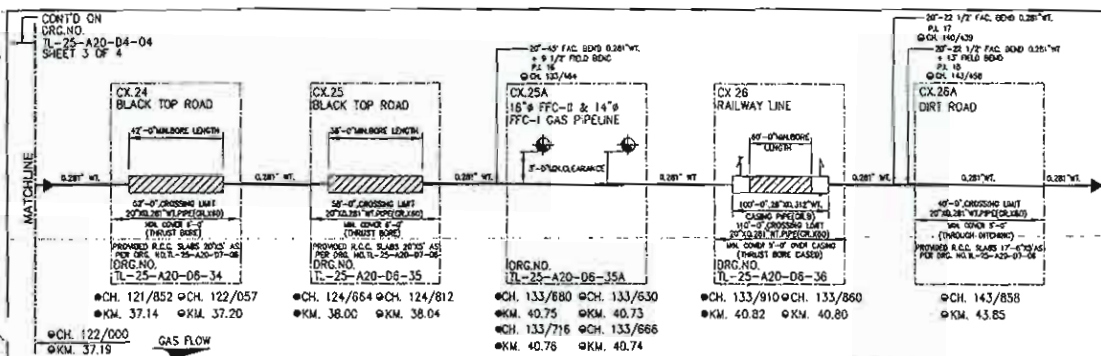
SUI NORTHERN GAS PIPELINES LTD.  
P & D DEPARTMENT

PROJECT  
20' X 45' X 80' KM. FATIMA FERTILIZER MAINLINE

TITLE  
SCHEMATIC ARRANGEMENT

FROM CH. 55/000 TO CH. 122/000  
FROM KM. 19.81 TO KM. 37.19

267

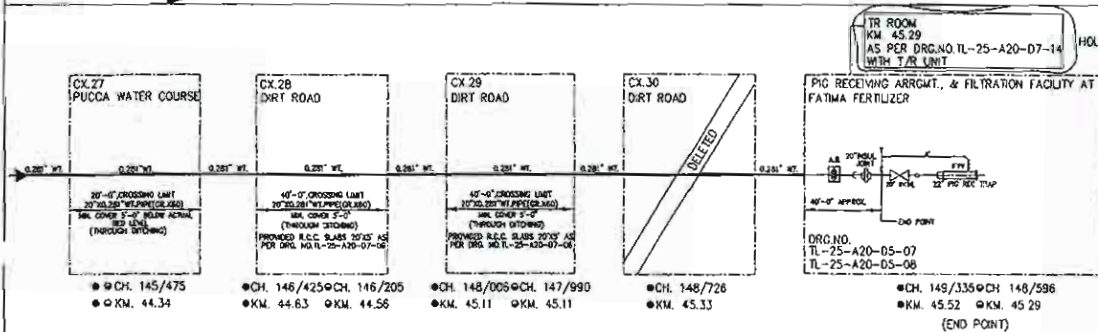


## GENERAL NOTES:-

1. MATERIAL CALLED UP ON THIS DRAWING IS FOR MAINLINE ONLY ALL OTHER MATERIAL IS CALLED UP ON THE FOLLOWING MONUMENTAL DRG. NO.
2. ALL DIMENSIONS ARE IN METERS.
3. PIPES/ROCKS/ROOTS ARE PROVIDED AS INDICATED BY THE CONTRACT.
4. DIMENSIONS AS SHOWN SHALL BE USED UNLESS OTHERWISE SPECIFIED.
5. DIMENSIONS AS SHOWN SHALL BE USED UNLESS OTHERWISE SPECIFIED.
6. ALL REFERENCES AS SHOWN SHALL BE USED UNLESS OTHERWISE SPECIFIED.
7. ALL REFERENCES AS SHOWN SHALL BE USED UNLESS OTHERWISE SPECIFIED.

## REFERENCE DRAWINGS

- TL-25-A20-D4-04 BLACK TOP ROAD - (CX.24)  
TL-25-A20-D4-05 BLACK TOP ROAD - (CX.25)  
TL-25-A20-D4-06 16" FFC-I GAS PIPELINE  
TL-25-A20-D4-07 RAILWAY LINE - (CX.26)  
TL-25-A20-D4-08 DIRT ROAD - (CX.26A)  
TL-25-A20-D4-09 PROTECTIVE SLAB OVER PIPE  
TL-25-A20-D4-10 TYPICAL DETAILS  
TL-25-A20-D4-11 TYPICAL DETAILS OF PIPE CROSSING UNDER  
TL-25-A20-D4-12 TYPICAL DETAILS OF PIPE CROSSING UNDER



SCHEDULE OF DEFLECTION ANGLES (DESIGN)				SCHEDULE OF DEFLECTION ANGLES (AS BUILT)			
PI. NO.	CH.	DEFLECTION ANGLE		PI. NO.	CH.	DEFLECTION ANGLE	
		RIGHT	LEFT			RIGHT	LEFT
17	40.75	133/880	54°-25'-14"	16	40.68	133/84	54°-25'-14"
18	40.84	133/880	52°-06'-41"	17	42.01	140/026	52°-30'-00"
19	42.85	140/026	19°-05'-11"	18	43.73	143/168	15°-30'-00"
20	43.81	144/008	21°-05'-37"	19	45.08	148/232	107°-05'-00"
21	45.11	148/008	01°-07'-31"				

PIPE DETAIL (GR.X60) (AS BUILT)				
WALL THICKNESS	MAINLINE	DIRT ROAD/CROSSINGS	V/A	TOTAL
0.281"	26186	140	230	40
				26596

G. TOTAL = 26,596 FT.

MATERIAL LIST		
ITEM NO.	DESCRIPTION	SPEC.
1	20'-25' 1/2" FAC. BOND 0.281" WT. (7'-0" DIA.)	SP-25-1/2-0.281
2	20'-43' FAC. BOND 0.281" WT. (7'-0" DIA.)	SP-43-0.281

AS BUILT

REVISIONS		
NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

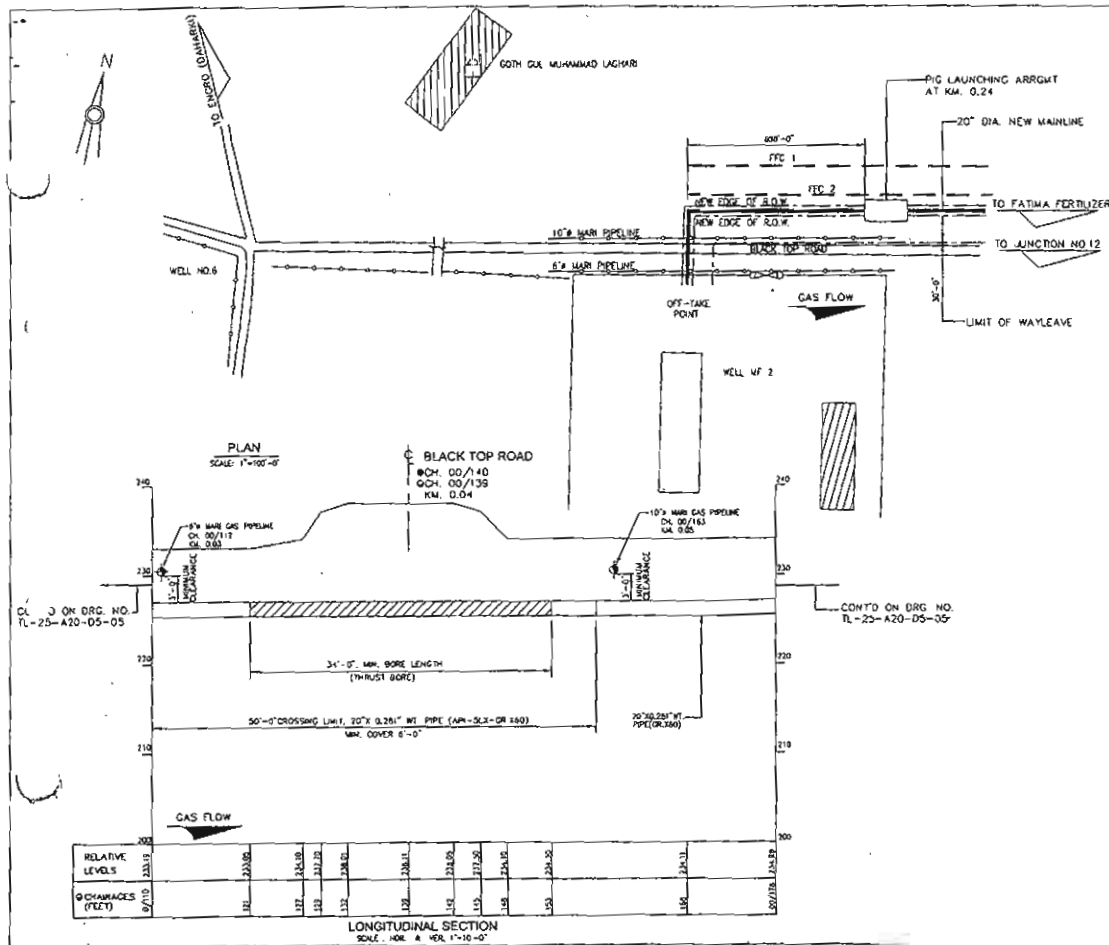
SUI NORTHERN GAS PIPELINES LTD.  
P & D DEPARTMENT

PROJECT  
20' X 45.29 KM: FATIMA FERTILIZER MAINLINE

TITLE  
SCHEMATIC ARRANGEMENT

BY  
CHECKED  
APPROVED  
DATE

268



# GENERAL NOTES:-

1. MINIMUM COVER 8'-0"
2. MAINTAIN ALLOWABLE OPERATING PRESSURE (MAOP) 1000 PSIG
3. ALL MATERIALS SHALL BE FIELD AT ALL TIMES
4. THE LONGITUDINAL SECTION IS TAKEN ON CENTERLINE OF THE 20" NEW MAINLINE
5. CHANGES AS SHOWN @ ARE DESIGN CHANGES (POINT POINTS INDICATED FROM OFF TAKE POINT MAIN GAS FIELD)
6. CHANGES AS SHOWN @ ARE FIELD CHANGES (POINT POINTS INDICATED FROM OFF TAKE POINT MAIN GAS FIELD)

## MATERIAL LIST

QTY	DESCRIPTION	SPEC
1	12" x 0.250" W. PIPE	API 5L X 42

## AS BUILT

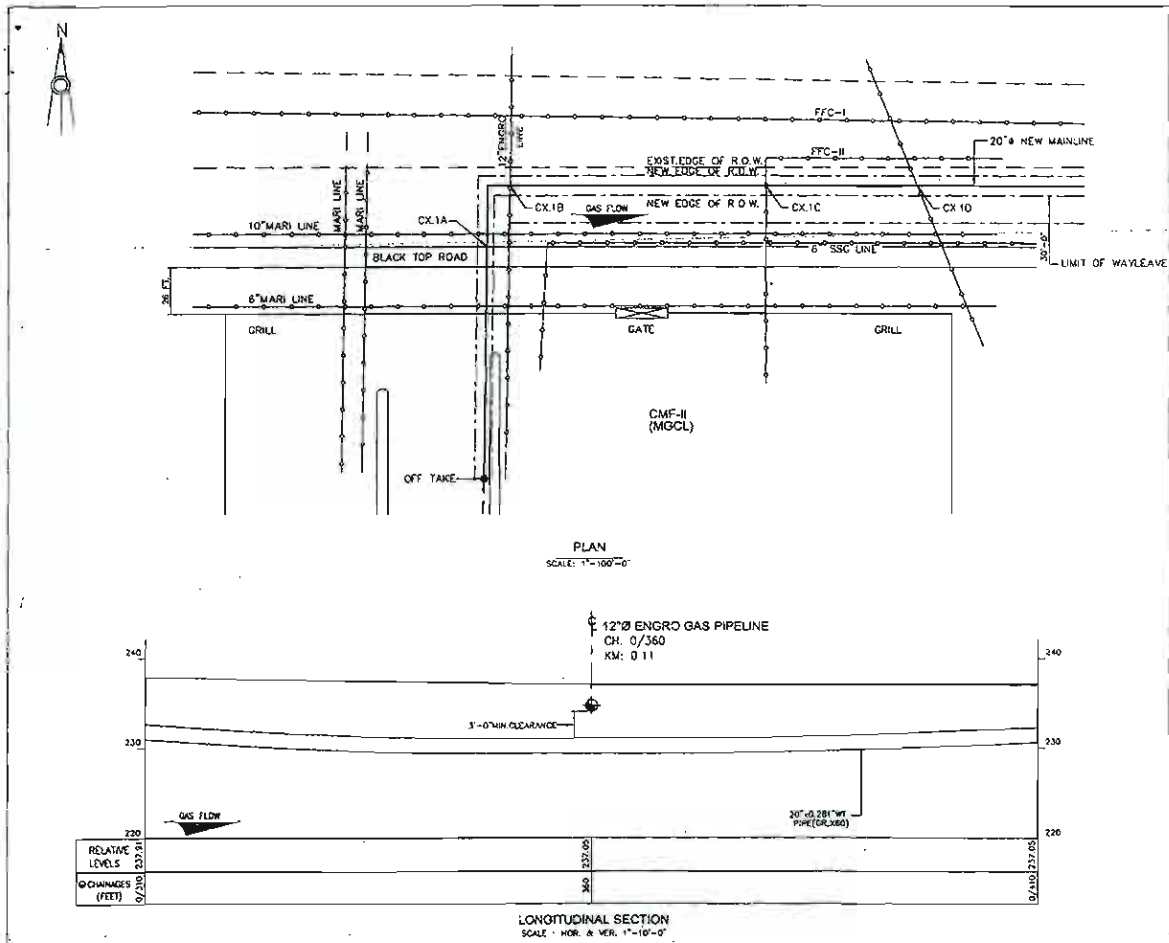
NO.	DESCRIPTION	DATE	BY	CHECKED
1	AS BUILT	02/11/10	...	...

## REVISIONS

NO.	DESCRIPTION	DATE	BY	CHECKED
1	AS BUILT	02/11/10	...	...

71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

269



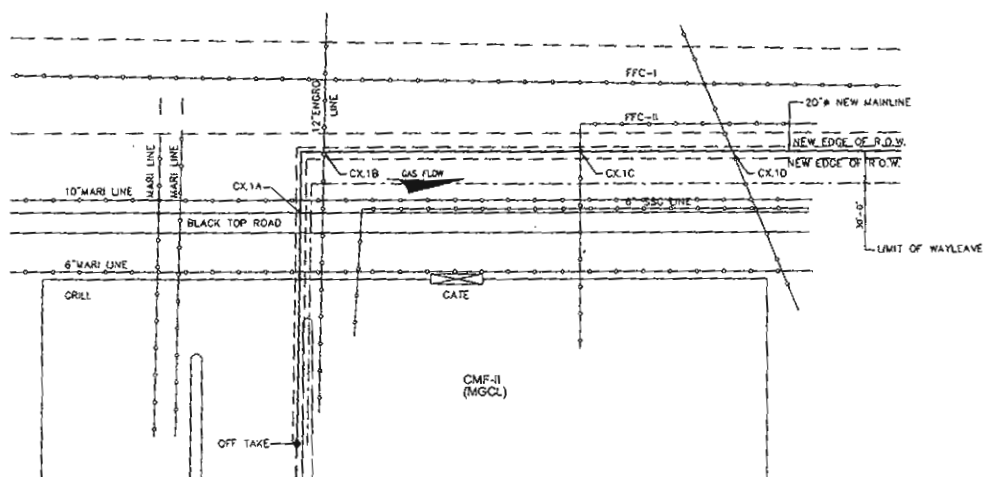
**GENERAL NOTES:-**

1. MAXIMUM CLEARANCE 7'-0"
2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) = 1000 PSIG
3. BUL APPROVED ALL 225.00 AT CH. 0/200
4. THE LONGITUDINAL SECTION IS TAKEN ON CENTERLINE OF THE 20" NEW MAINLINE
5. CHANGES AS SHOWN @ THE DESIGN CHANGES
6. CHANGES AS SHOWN @ LINE AS BUILT CHANGES
7. CHANGES AS SHOWN @ LINE AS BUILT CHANGES

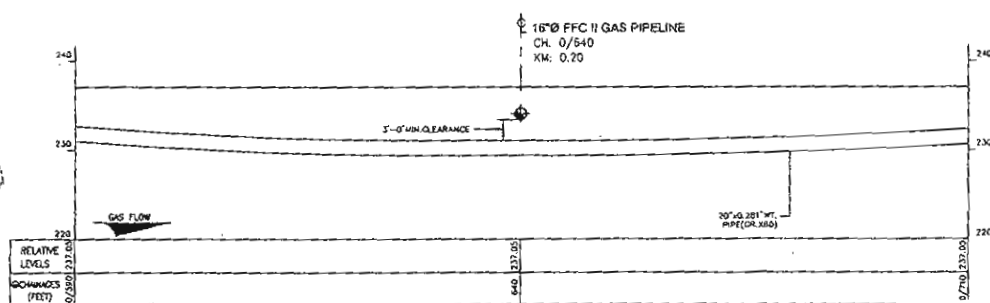
MATERIAL LIST			
SL. NO.	QTY.	DESCRIPTION	REMARKS
1.	1	20" x 0.281" WT. PIPE	AS BUILT

AS BUILT	
1. DESIGNER	2. CHECKED
3. APPROVED	4. DATE
REVISIONS	
SUI NORTHERN GAS PIPELINES LTD. P. & D. DEPARTMENT	
PROJECT	
20" DIA. x 0.281" WT. FATIMA FERTILIZER MAINLINE	
TITLE	
(THROUGH DITCH CROSSING)	
12" Ø ENGRO GAS PIPELINE	
CH. 0/360	CH. 19
Q. 0.11	Q. 0.11
DATE	DATE
BY	BY
CHECKED	CHECKED
APPROVED	APPROVED

270



PLAN  
SCALE: 1"=100'-0"



LONGITUDINAL SECTION

GENERAL NOTES:-

1. MINIMUM CLEARANCE 5'-0"
2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) - 400 PSIG
3. ALL MATERIALS SHALL BE 33.7% AT CH. 0+540
4. THE LONGITUDINAL SECTION IS TAKEN ON CENTERLINE OF THE 20" NEW MAINLINE
5. CHANGES AS SHOWN @ JUNE DESIGN CHANGES
6. (20" PORT REDUCED FROM OFF TAKE POINT MAIN GAS FOLD)
7. CHANGES AS SHOWN @ JUNE AS PER DESIGN CHANGES
8. (20" PORT REDUCED FROM OFF TAKE POINT MAIN GAS FOLD)

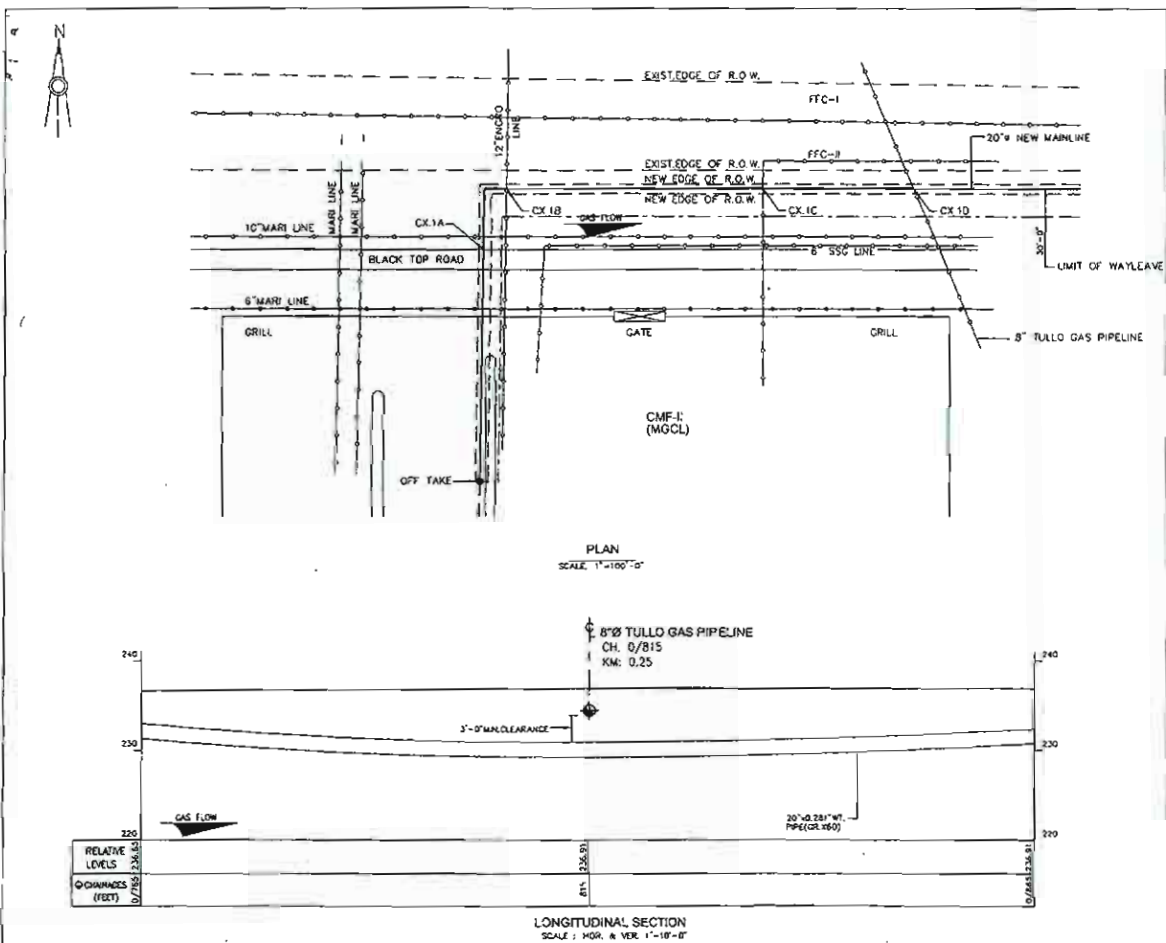
MATERIAL LIST			
QTY	DESCRIPTION	SPEC.	REMARKS
1	20" x 0.281" WT. PIPE	API 5L X40	

AS BUILT

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

SUI NORTHERN GAS PIPELINES LTD.  
P & O DEPARTMENT  
PROJECT  
20" DIA. x 45.29 KM: FATIMA FERTILIZER MAINLINE  
TITLE  
(THROUGH DITCH CROSSING)  
CH. 0+540 16" DIA. FFC II GAS PIPELINE

271



GENERAL NOTES:-

1. MINIMUM CLEARANCE 5'-0"
2. MINIMUM ALLOWABLE OPERATING PRESSURE (MAOP) 1000 PSIG
3. ALL ACCESSORY EQUIPMENT AT CH. 0/815
4. THE LONGITUDINAL SECTION IS TAKEN ON CENTERLINE OF THE 8" NEW MAINLINE.
5. CHANGES AS SHOWN @ THE DESIGN CHAMBER (CH. 0/815) POINT ACCORDING TO THE POINT MARK GAS FIELD (CH. 0/815) POINT ACCORDING TO THE POINT MARK GAS FIELD (CH. 0/815) POINT ACCORDING TO THE POINT MARK GAS FIELD

MATERIAL LIST		
S	QTY	DESCRIPTION
1	1	20" x 0.281" WT. PIPE

AS BUILT

REVISIONS		
NO.	DATE	DESCRIPTION
1	01/10/2018	AS BUILT

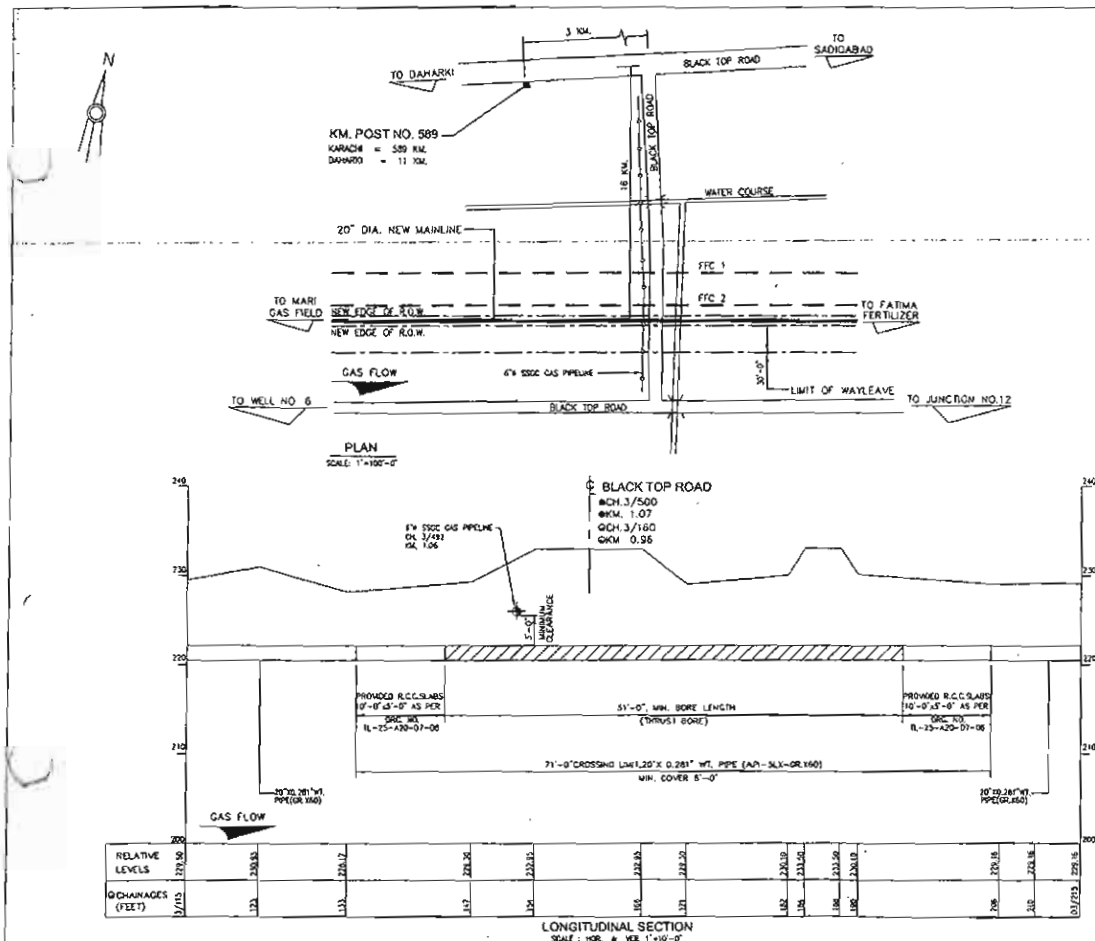
SUI NORTHERN GAS PIPELINES LTD.  
P. & D. DEPARTMENT

PROJECT  
20" DIA. x 45.23 KM: FATIMA FERTILIZER MAINLINE  
(THROUGH DITCH CROSSING)

TITLE  
8" TULLU GAS PIPELINE

CH. 0/815  
KME: 0.25

CK. 10



- GENERAL NOTES:-**
1. WORKMAN POWER 8'-0"
  2. WORKMAN ALLOWABLE OPERATING MEASURE (WORK) 1000 PRC
  3. SH. ASSESSMENT REL. 100' AT 100/1000
  4. THE LONGITUDINAL SECTION IS TAKEN ON CENTRELINE OF THE 100' NEW MAINLINE
  5. CHANGES AS SHOWN @ THE SECTION CHANGES
  6. CHANGES AS SHOWN @ THE 100' NEW MAINLINE
  7. CHANGES AS SHOWN @ THE 100' NEW MAINLINE
  8. CHANGES AS SHOWN @ THE 100' NEW MAINLINE

MATERIAL LIST			
S	QTY	REMARKS	UNIT
1	1	20" DIA. NEW MAINLINE	20'-0"
2	1	6" ESOC GAS PIPELINE	6'-0"

**AS BUILT**

1	20" DIA. NEW MAINLINE	20'-0"	1	6" ESOC GAS PIPELINE	6'-0"
2	6" ESOC GAS PIPELINE	6'-0"	3	71'-0" CROSSING LINE	71'-0"
3	71'-0" CROSSING LINE	71'-0"	4	PROVIDED R.C.C. SLABS	10'-0" X 5'-0"
4	PROVIDED R.C.C. SLABS	10'-0" X 5'-0"	5	PROVIDED R.C.C. SLABS	10'-0" X 5'-0"

**REVISIONS**

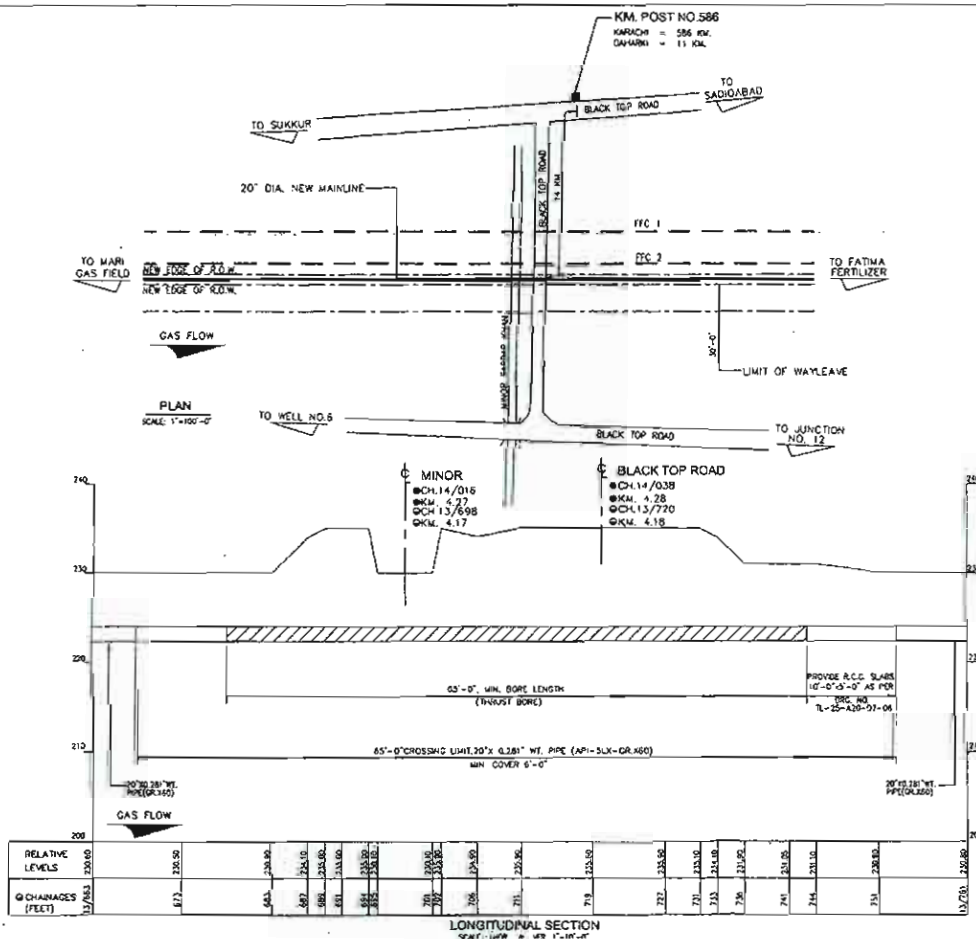
**SUI NORTHERN GAS PIPELINES LTD.**  
P & D DEPARTMENT

**20" DIA. X 45.23 KM: FATIMA FERTILIZER MAINLINE**  
(THRUST BORE CROSSING)  
**BLACK TOP ROAD**  
(WELL NO. 8 LINE)

**CH. 3/500**  
**QCH. 1.07**  
**QCH. 3/160**  
**QCH. 0.95**

**DATE: 11-25-A20-07-11**

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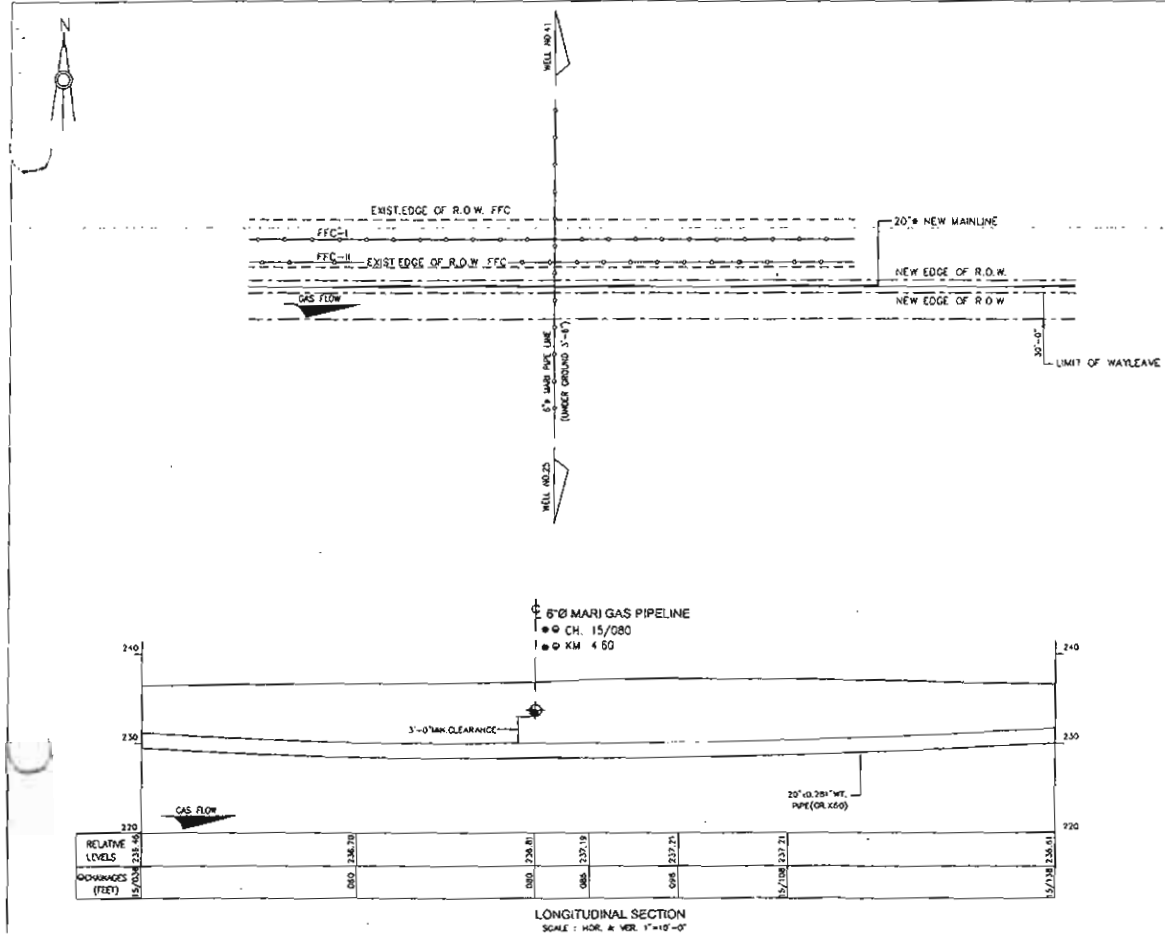
# GENERAL NOTES:-

1. MINIMUM COVER 8'-0"
2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) - 1000 PSIG
3. THE LOCATION OF THE PIPE SHALL BE TAKEN ON THE CENTERLINE OF THE 30' WIDE HIGHWAY
4. THE LONGITUDINAL SECTION IS TAKEN ON THE CENTERLINE OF THE 30' WIDE HIGHWAY
5. CHANGES AS SHOWN BY THE DESIGN CHANGES
6. CHANGES AS SHOWN BY THE DESIGN CHANGES
7. CHANGES AS SHOWN BY THE DESIGN CHANGES
8. CHANGES AS SHOWN BY THE DESIGN CHANGES
9. CHANGES AS SHOWN BY THE DESIGN CHANGES
10. CHANGES AS SHOWN BY THE DESIGN CHANGES

MATERIAL LIST			
NO.	QTY.	DESCRIPTION	UNIT
1	1	PIPE 20" DIA. X 45.29 KM	FT.
2	1	FLANGE 20" DIA. X 150 LB	PC.
3	1	WELD 20" DIA. X 150 LB	PC.

AS BUILT			
NO.	DATE	REVISIONS	BY
1	10/10/2010	AS BUILT	10/10/2010
2	10/10/2010	AS BUILT	10/10/2010
3	10/10/2010	AS BUILT	10/10/2010
4	10/10/2010	AS BUILT	10/10/2010
5	10/10/2010	AS BUILT	10/10/2010
6	10/10/2010	AS BUILT	10/10/2010
7	10/10/2010	AS BUILT	10/10/2010
8	10/10/2010	AS BUILT	10/10/2010
9	10/10/2010	AS BUILT	10/10/2010
10	10/10/2010	AS BUILT	10/10/2010

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**GENERAL NOTES:-**

1. MINIMUM CLEARANCE 3'-0"
2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) 1000 PSIG
3. BVA ASSUMED ALL THE WAY AT CENTRE OF CC
4. THE LONGITUDINAL SECTION IS TAKEN ON CENTRELINE OF THE 20" NEW MAINLINE
5. CHANGES AT 100' @ 10' ARE DESIGN CHANGES
6. (200' POINT) RECORDED FROM OFF THE POINT MAIN GAS FIELD
7. CHANGES AS SHOWN ON THIS DRAWING
8. (200' POINT) RECORDED FROM OFF THE POINT MAIN GAS FIELD

**MATERIAL LIST**

NO.	QTY	DESCRIPTION	SPEC.
1	1	20" x 3.75" WT. PIPE	API 5L X 42

**AS BUILT**

REVISIONS

PROJECT: SUI NORTHERN GAS PIPELINES LTD. P & D DEPARTMENT

TITLE: 20" DIA. X 3.75" WT. FATIMA FERTILIZER MAINLINE (THROUGH DITCH CROSSING)

DATE: 15/08/00

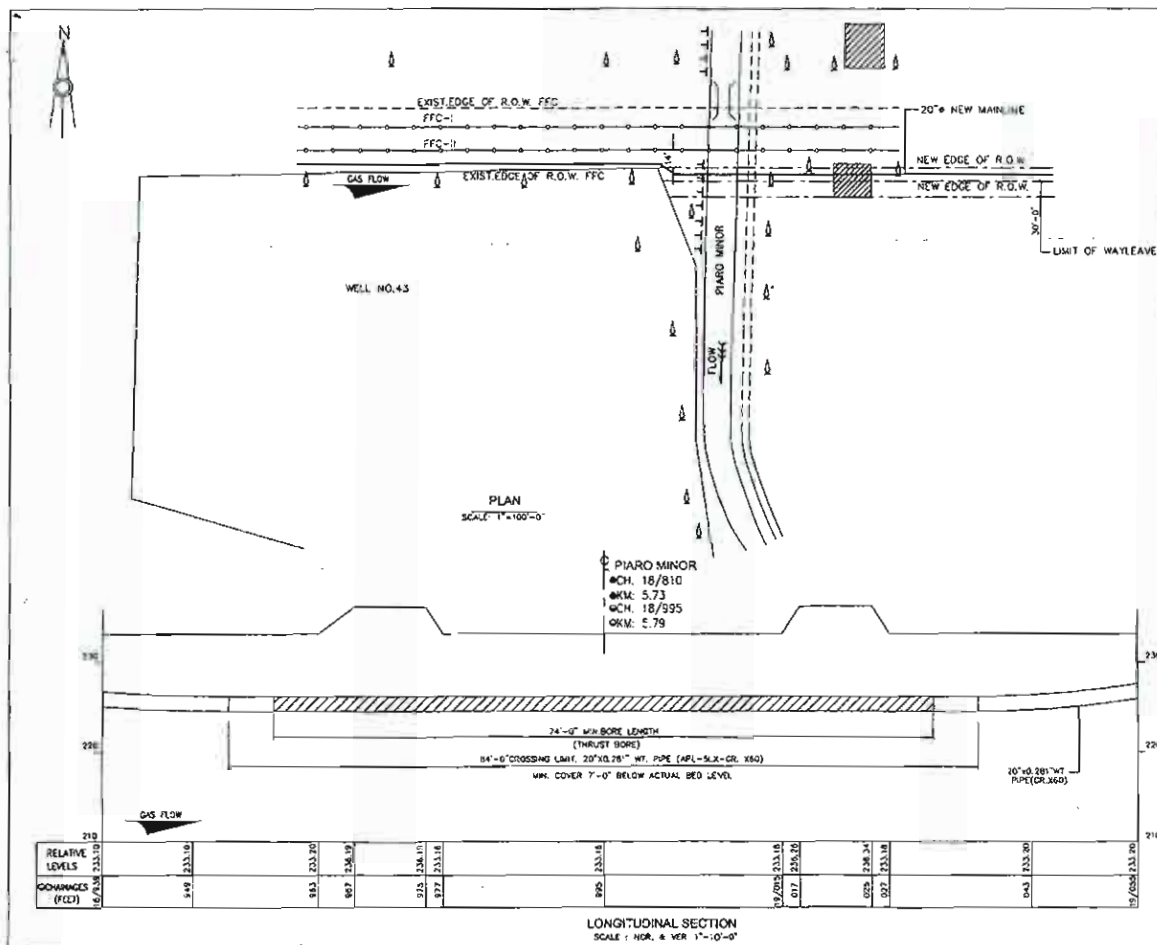
6" MARI GAS PIPELINE

CH. 15/080

XM 4.60

CH. 34

275



- GENERAL NOTES:-
1. MINIMUM COVER 7'-0" BELOW ACTUAL BED LEVEL
  2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) 1000 PSIG
  3. THE ASSUMED R.A. SHALL BE AT THE END OF THE LINE
  4. THE LONGITUDINAL SECTION IS BASED ON THE CENTERLINE OF THE 12" NEW MAINLINE
  5. CHANGES TO BE SHOWN @ THE BEGINNING AND END OF THE LINE
  6. CHANGES TO BE SHOWN @ THE BEGINNING AND END OF THE LINE
  7. CHANGES TO BE SHOWN @ THE BEGINNING AND END OF THE LINE
  8. CHANGES TO BE SHOWN @ THE BEGINNING AND END OF THE LINE
  9. CHANGES TO BE SHOWN @ THE BEGINNING AND END OF THE LINE
  10. CHANGES TO BE SHOWN @ THE BEGINNING AND END OF THE LINE

MATERIAL LIST		
QTY	DESCRIPTION	SPEC.
1	20" X 10.25" WT. PIPE	APL-SLX-CL X50
1	18" X 10.75" WT. PIPE	APL-SLX-CL X50
1	10" X 10.25" WT. PIPE	APL-SLX-CL X50

AS BUILT

REVISIONS

SUI NORTHERN GAS PIPELINES LTD.  
P & D DEPARTMENT

PROJECT

20" DIA. X 10.25" WT. FATIMA FERTILIZER MAINLINE

PIARO MINOR

CH. 18/810 (THRUST BORE CROSSING)  
CH. 5.73  
CH. 18/995  
CH. 5.79

CK-38

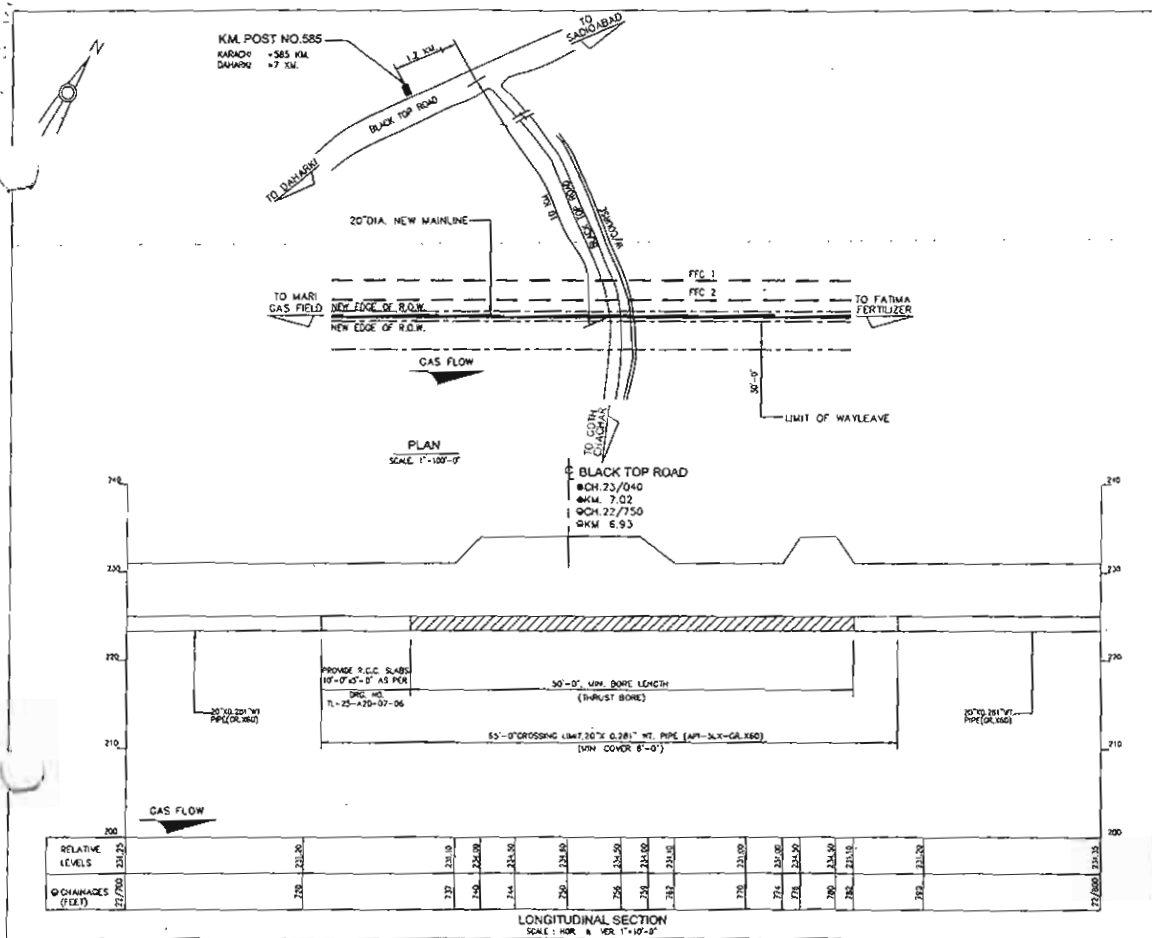
DATE: 18/08/2018

BY: [Signature]

CHKD: [Signature]

APPD: [Signature]

SCALE: 1"=100'-0"



- GENERAL NOTES:-**
1. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN FEET AND INCHES.
  2. ALL DIMENSIONS ARE TO CENTERLINE OF PIPE UNLESS OTHERWISE SPECIFIED.
  3. THE LONGITUDINAL SECTION IS TAKEN ON CENTERLINE OF THE PIPE UNLESS OTHERWISE SPECIFIED.
  4. CHANGES AS SHOWN BY THE DASHED LINES.
  5. CHANGES AS SHOWN BY THE DASHED LINES.
  6. CHANGES AS SHOWN BY THE DASHED LINES.
  7. CHANGES AS SHOWN BY THE DASHED LINES.
  8. CHANGES AS SHOWN BY THE DASHED LINES.

MATERIAL LIST			
NO.	QTY.	DESCRIPTION	UNIT
1	1	20" DIA. X 0.375" WALL THICKNESS PIPE	LINEAL FEET

**AS BUILT**

**REVISIONS**

NO.	DATE	DESCRIPTION
1	20/06/2014	AS BUILT

**SUI NORTHERN GAS PIPELINES LTD.**  
P. & O. DEPARTMENT

**PROJECT:** 20" DIA. X 0.375" WALL THICKNESS PIPE

**TITLE:** (THRUST BORE CROSSING) BLACK TOP ROAD (GOPI CHANDAR LINK)

**STATION:** 21+00 TO 22+00

**SCALE:** HOR. 1"=100'-0" VER. 1"=10'-0"

**DATE:** 20/06/2014

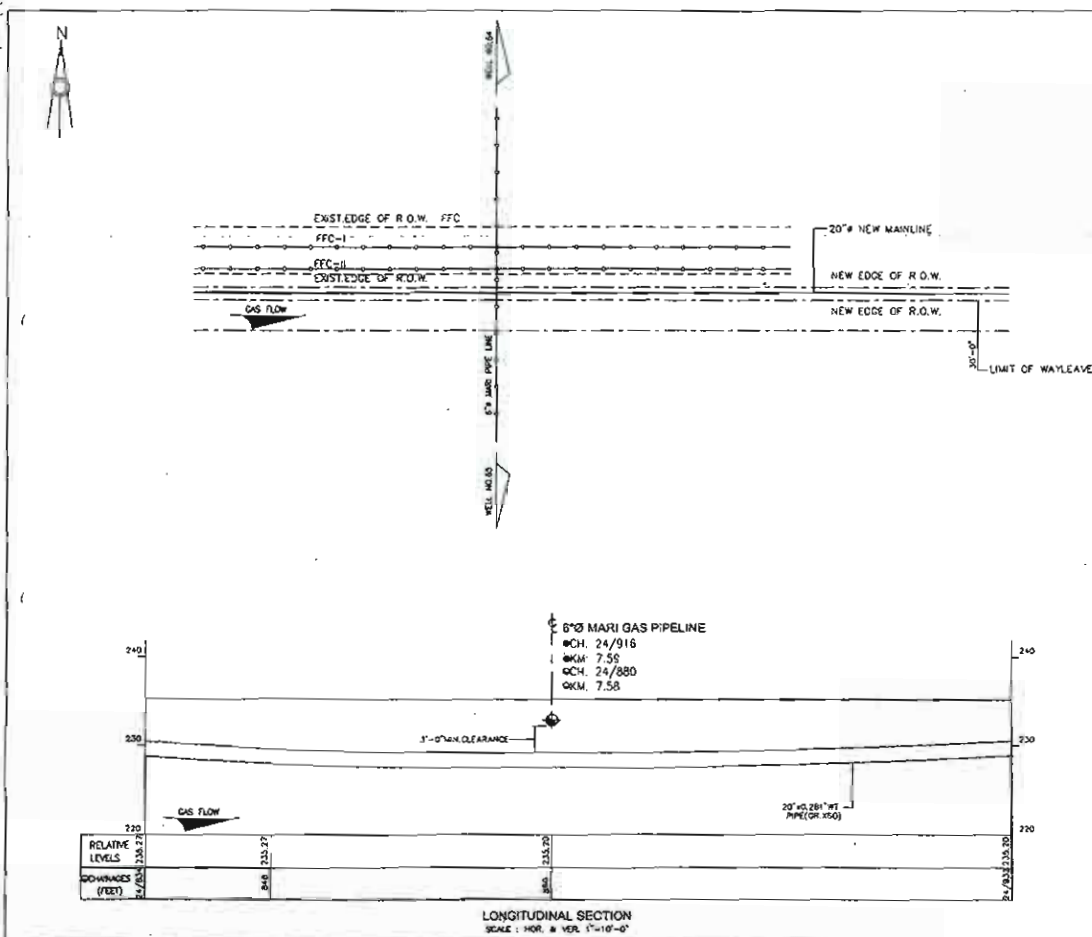
**BY:** [Signature]

**CHECKED BY:** [Signature]

**APPROVED BY:** [Signature]

**PROJECT NO.:** TL-25-A20-D6-14

277



#### GENERAL NOTES:-

1. MINIMUM CLEARANCE 15'-0"
2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) 1000 PSIG
3. ALL MEASUREMENTS SHALL BE TAKEN AT THE LINE OF CENTERLINE OF THE 20" NEW MAINLINE
4. THE LONGITUDINAL SECTION IS TAKEN ON CENTERLINE OF THE 20" NEW MAINLINE
5. CHANGES AS SHOWN @ ARE DESIGN CHANGES  
(DEAD POINT REQUIRED FROM OFF HAZZ POINT MAIN GAS FIELD)
6. CHANGES AS SHOWN @ ARE AS BUILT CHANGES  
(DEAD POINT REQUIRED FROM OFF HAZZ POINT MAIN GAS FIELD)

MATERIAL LIST		
QTY	DESCRIPTION	SPEC.
1	20" X 0.281" WT. PIPE	API 5L X 42

AS BUILT

NO.	DATE	REVISIONS
1	10/10/11	AS BUILT

REVISIONS

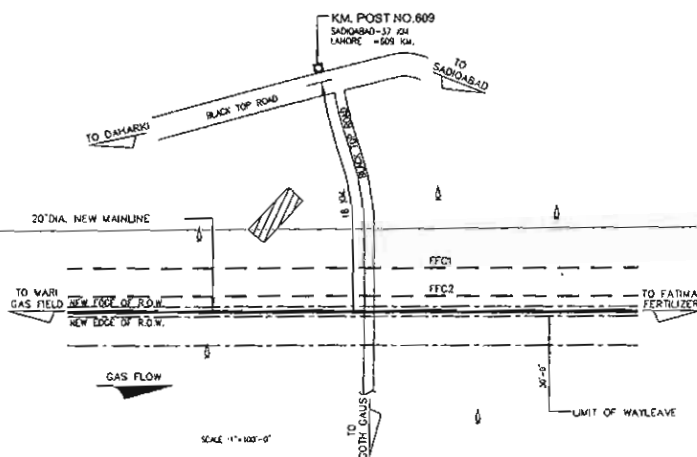
SUI NORTHERN GAS PIPELINES LTD.  
P & D DEPARTMENT

PROJECT: 20" DIA. X 42.281" WT. PIPE (OR 150)

TITLE: 20" DIA. X 42.281" WT. PIPE (OR 150) (THROUGH DITCH CROSSING)  
6" MARI GAS PIPELINE

DATE: 10/10/11  
DRAWN: [Signature]  
CHECKED: [Signature]  
APPROVED: [Signature]

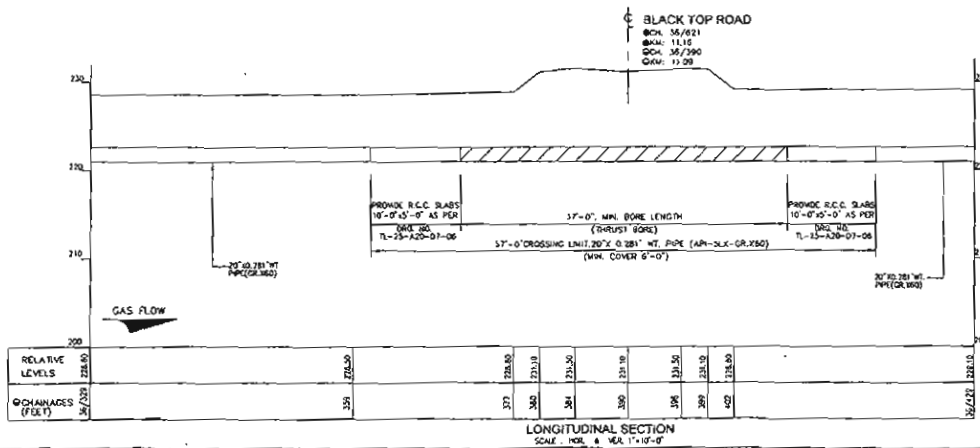
FILE: 25-A20-06-14A-7-1-1



GENERAL NOTES:-

1. BORING CODE IS "0"
2. WORKING ALLOWABLE OPERATING PRESSURE (WOP) 1000 PPS
3. THE HISTORIC B.A. 22% OF (CHL/RO)
4. THE LONGITUDINAL SECTION IS TAKEN ON CENTRAL LINE OF THE 30" NEW MAINLINE.
5. DIMENSIONS AS SHOWN @ ARE DESIGN DIMENSIONS  
(STANDARD POINT RECORDED FROM OFF TIE POINT MARK GAS FIELD)
6. DIMENSIONS AS SHOWN @ ARE AS BUILT DIMENSIONS  
(STANDARD POINT RECORDED FROM OFF TIE POINT MARK GAS FIELD)


MATERIAL LIST			
S. NO.	QTY.	DESCRIPTION	UNIT.
1	"	200LBS. 1/2" W.P.	200LBS. 1/2" W.P.




AS BUILT

[illegible]

## REVISIONS

 SUI NORTHERN GAS PIPELINES LTD.  
P & D DEPARTMENT

PROJECT  
20" DIA. x 45.29 KM: FATIMA FERTILIZER MAINLINE

TITLE		 (THRUST BORE CROSSING) <b>BLACK TOP ROAD</b> (COTH GAUS LINK)		CX 08	
BOH:	35/624				
BOAC:	11.18				
BOH:	35/360				
CHM:	11.09				

FILE NO.	DATE	TIME	LOCATION	REMARKS
100-420-06-16	10-25-66	10:00 AM	FL 25-A20-06-16	1

**GENERAL NOTES:-**

1. MINIMUM COVER 8'-0"
2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) - 1000 PSIG
3. THE REQUIRED 45° TURN AT CROSSING
4. THE LONGITUDINAL SECTION IS BASED ON CENTERLINE OF THE 35' HIGH MAINLINE
5. CHANGES TO SHOW @ ARE DESIGN CHANGES
6. CHANGES TO SHOW @ ARE DESIGN CHANGES
7. CHANGES TO SHOW @ ARE DESIGN CHANGES
8. CHANGES TO SHOW @ ARE DESIGN CHANGES
9. CHANGES TO SHOW @ ARE DESIGN CHANGES
10. CHANGES TO SHOW @ ARE DESIGN CHANGES

**MATERIAL LIST**

NO.	QTY.	DESCRIPTION	SPEC.
1	1	20" DIA. 1000 PSI. PIPE	ASTM A106

**AS BUILT**

NO.	DATE	REVISIONS
1	10/10/00	ISSUED FOR CONSTRUCTION
2	10/10/00	ISSUED FOR CONSTRUCTION

**REVISIONS**

**SUI NORTHERN GAS PIPELINES LTD.**  
P & D DEPARTMENT

**PROJECT**

**20" DIA. x 45.29 KM. FATIMA FERTILIZER MAINLINE**

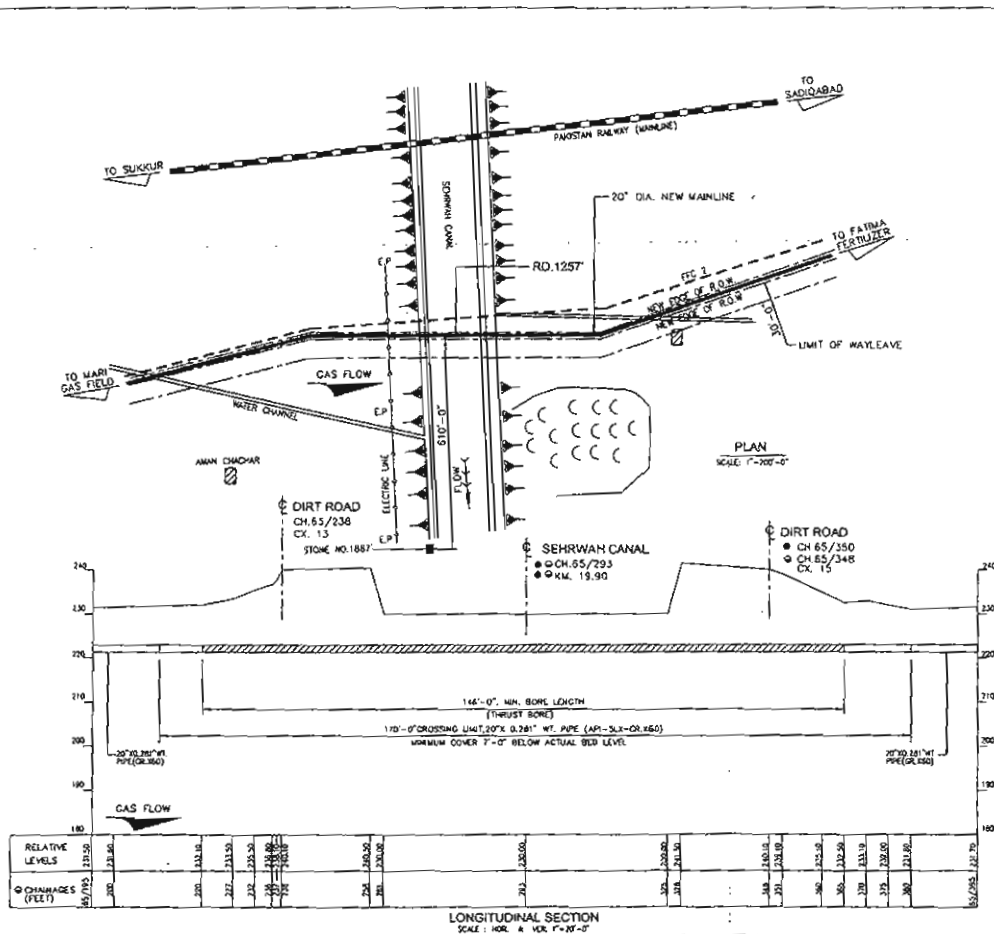
**FILE**

**10" DIA. x 45.29 KM. (THURST BORE CROSSING)**  
**BLACK TOP ROAD**  
(SHOUBH AGRA LIMIT)

**SCALE: 1"=100'-0"**

**LONGITUDINAL SECTION**  
SCALE: 1"=10'-0"

2-80



- GENERAL NOTES:**
1. MINIMUM COVER 1'-0" BELOW FUTURE BED LEVEL.
  2. MAXIMUM ALLOWABLE OPERATING PRESSURE (QAOP) 1500 PSI.
  3. ALL CHAINAGES ARE IN CH. 1/1000.
  4. THE LONGITUDINAL SECTION IS BASED ON THE CENTERLINE OF THE 10' PROPOSED MAINLINE.
  5. CHAINAGES AS SHOWN BEHIND DESIGN CHAINAGES.
  6. (2000 POINT) REQUIRED FROM OFF TAKE POINT MAIN GAS FIELD.
  7. CHAINAGES AS SHOWN BEHIND AS BUILT CHAINAGES.
  8. (2000 POINT) REQUIRED FROM OFF TAKE POINT MAIN GAS FIELD.

MATERIAL LIST			
NO.	QTY	DESCRIPTION	UNIT
1	1	20" DIA. 10' R/W	10' R/W

**AS BUILT**

**REVISIONS**

**SUI NORTHERN GAS PIPELINES LTD.**  
P & D DEPARTMENT

**PROJECT**  
20" DIA. 45.28 KM: FATIMA FERTILIZER MAINLINE

**TITLE**  
(THURST BORE CROSSING)  
SEHRWAH CANAL  
(RD. 1257)

**QCH. 65/293**  
**QCH. 12/90**

**SCALE**  
1"=20'-0"

**TL-25-A20-08-24-1-1**

[illegible]

1. MAXIMUM DEPTH 10'-0" BELOW ACTUAL BED LEVEL
2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) = 1000 PSIG
3. BM ASSUMED R/L 225.0' AT CH 3+00.0'
4. THE LONGITUDINAL SECTION IS BASED ON CONTINUITY OF THE 20' HCP MAGNITUDE
5. CHANGES AS SHOWN BEFORE DESIGN CHANGES
6. CHANGES AS SHOWN ARE AS BUILT CHANGES
7. (ZERO POINT RECORDED FROM OFF TAKE POINT MARK GAS FIELD)

MATERIAL LIST			
QTY	DESCRIPTION	UNIT	PRICE
1	20' x 24' x 12" W/ PINE	EA	100.00

AS BUILT

P	08-06-00	AS BUILT AS SHOWN	DATE 09-03-2000	ISSUED			
A	07-06-00	AS NOTED FOR	NAME	REVISION			
NO	DATE		DESCRIPTION	BY	CHECKED		

## REVISIONS

 SUI NORTHERN GAS PIPELINE, . . .  
P & D DEPARTMENT

20" DIA. x (45.29) KM: FATIMA FERTILIZER MAINLINE

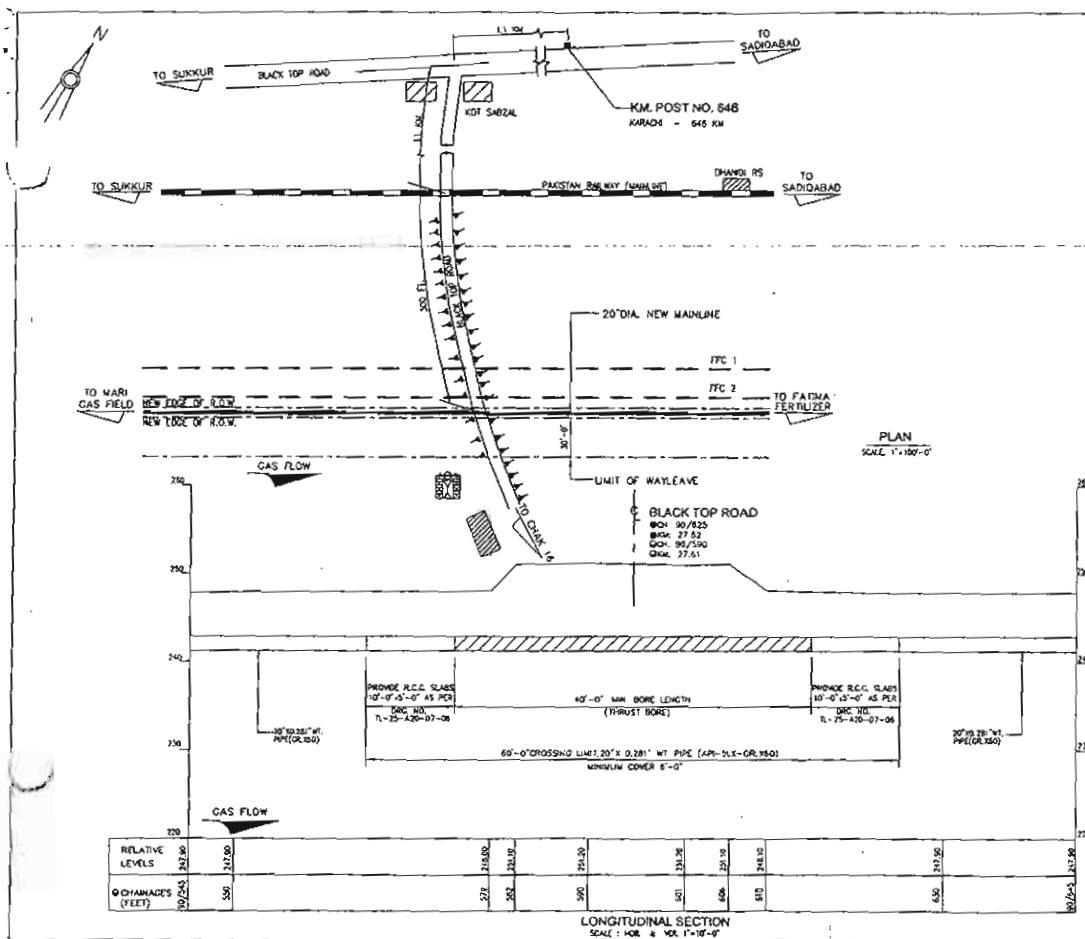
TITLE	(THROUGH DITCHING)
NO: 89/899	RAINFEE CANAL

@K: 21.31  
 @K: 70/012  
 @K: 21.34

NAME	DATE	TIME	LOCATION	REMARKS
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47	48	49	50
51	52	53	54	55
56	57	58	59	60
61	62	63	64	65
66	67	68	69	70
71	72	73	74	75
76	77	78	79	80
81	82	83	84	85
86	87	88	89	90
91	92	93	94	95
96	97	98	99	100

16-25-A20-50-21

282



- GENERAL NOTES:**
1. HAZARD CLASS 2.0
  2. MINIMUM ALLOWABLE OPERATING PRESSURE (MAOP) - 1000 PSIG
  3. ALL ASSUMED ALL DATA AT 04/1/2000
  4. THE LONGITUDINAL SECTION IS TAKEN ON CENTERLINE OF THE 30' WIDE ROADWAY.
  5. CHANGES AS SHOWN @ EACH SECTION CHANGES
  6. CHANGES AS SHOWN @ EACH SECTION CHANGES
  7. CHANGES AS SHOWN @ EACH SECTION CHANGES
  8. CHANGES AS SHOWN @ EACH SECTION CHANGES

MATERIAL LIST			
QTY	DESCRIPTION	UNIT	REMARKS
1	20" DIA. NEW MAINLINE	LINEAL FEET	
1	20" DIA. NEW MAINLINE	LINEAL FEET	

**AS BUILT**

REVISIONS

**SUI NORTHERN GAS PIPELINES LTD.**  
P. & D. DEPARTMENT

PROJECT  
20" DIA. x 15.29 KM: FATIMA FERTILIZER MAINLINE

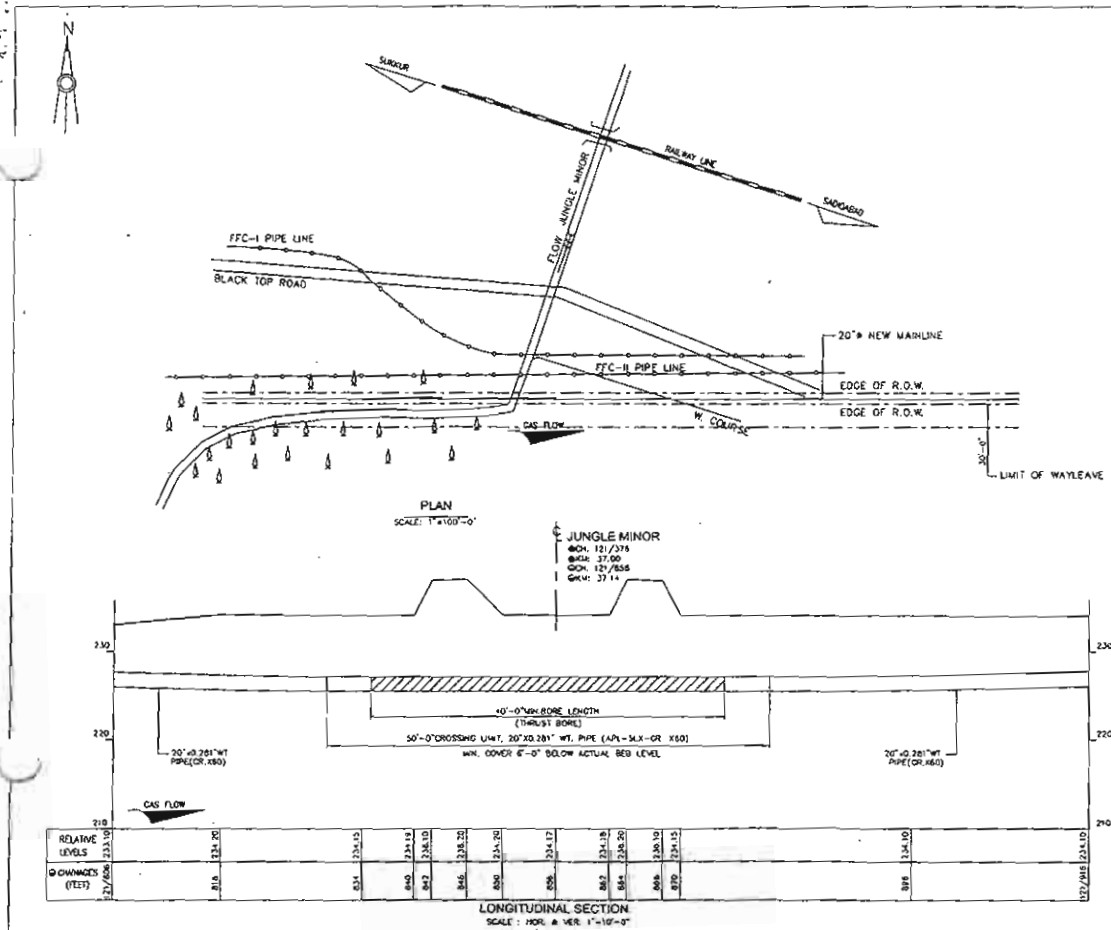
FILE  
(THURST BORE CROSSING)

**BLACK TOP ROAD**  
(NOT SABZAI - CHAK 15 LINE)

DATE: 04/1/2000  
BY: [Signature]  
CHECKED: [Signature]  
APPROVED: [Signature]



284



- GENERAL NOTES:-**
1. WORKMAN SHOULD BE AT ALL TIMES AT THE END OF THE PIPE LINE.
  2. WORKMAN ALLOWABLE OPERATING PRESSURE QUANTITY 1000 PSI.
  3. THE ALLOWABLE A.L. QUANTITY AT THE END OF THE PIPE LINE.
  4. THE LONGITUDINAL SECTION IS TAKEN ON THE CENTERLINE OF THE PIPE LINE.
  5. OVERLAP AS SHOWN @ THE CROSS CHANGES.
  6. CROSSING POINT RECEIVED FROM OFF THE POINT NAME GAS FEEDS.
  7. CROSSING AS SHOWN QUANTITY AS SHOWN QUANTITY.
  8. CROSSING POINT RECEIVED FROM OFF THE POINT NAME GAS FEEDS.

MATERIAL LIST		
QTY	DESCRIPTION	UNIT
1	20" DIA. X 45.23 KM. FATIMA FERTILIZER MAINLINE	FT.
1	20" DIA. X 45.23 KM. FATIMA FERTILIZER MAINLINE	FT.

**AS BUILT**

**REVISIONS**

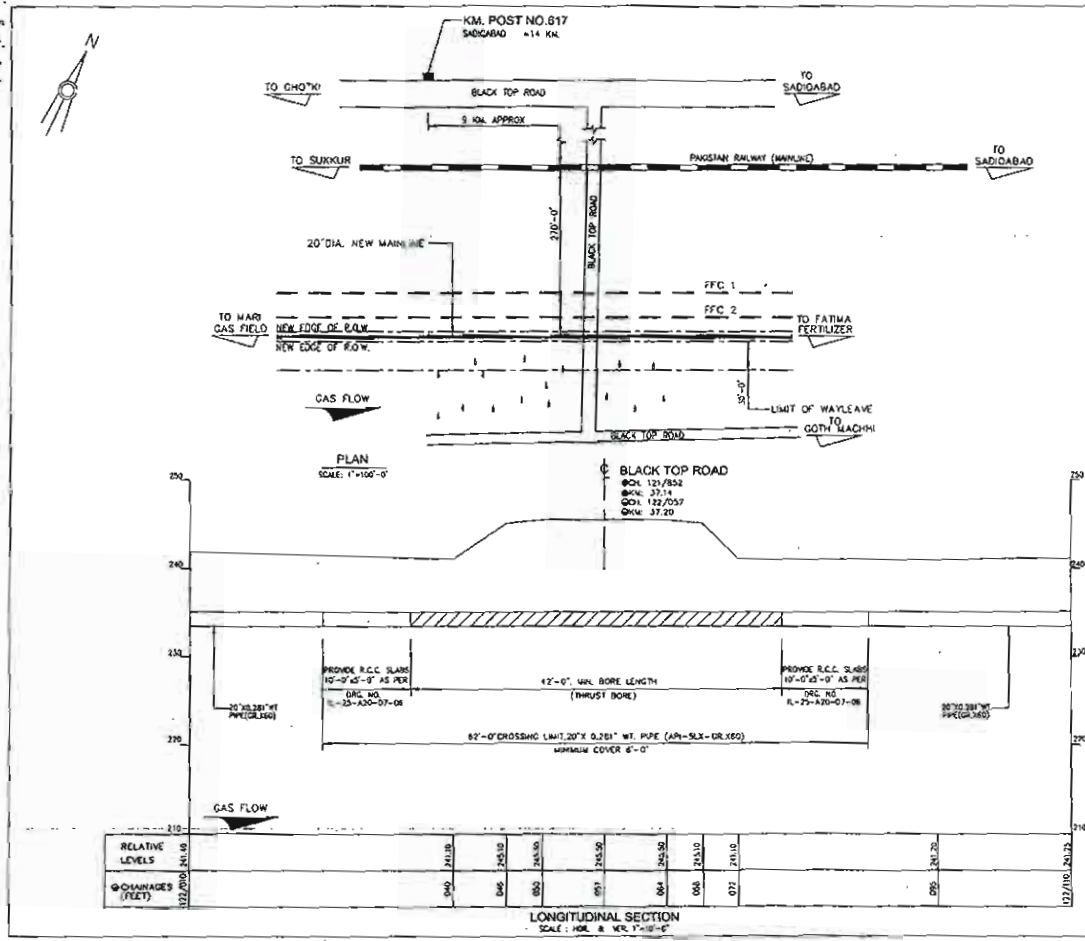
**SUI NORTHERN GAS PIPELINES LTD.**  
P. & Q. DEPARTMENT

**PROJECT**  
20" DIA. X 45.23 KM. FATIMA FERTILIZER MAINLINE  
(THURST BORE CROSSING)

**JUNGLE MINOR**

CK. 25

285



- GENERAL NOTES:-**
1. MINIMUM COVER 1'-0"
  2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) 1000 PSIG
  3. SH. APPROVED ALL 2207 AT D/L/MS
  4. THE LONGITUDINAL SECTION IS BASED ON CENTERLINE OF THE 20" NEW MAINLINE
  5. DIMENSIONS AS SHOWN BEFORE SLOPE CHANGES
  6. DIMENSIONS AS SHOWN AFTER SLOPE CHANGES
  7. DIMENSIONS AS SHOWN BEFORE SLOPE CHANGES
  8. DIMENSIONS AS SHOWN AFTER SLOPE CHANGES

MATERIAL LIST			
QTY	DESCRIPTION	UNIT	REMARKS
1	PIPE 20" x 1/2" SCH 40	LINEAL FT	FOR PUMP

**AS BUILT**

**REVISIONS**

NO.	DATE	DESCRIPTION	BY	CHKD.
1	12/1/85	AS BUILT	...	...

**SUI NORTHERN GAS PIPELINES**  
P & D DEPARTMENT

**PROJECT**  
20" DIA. X 45.29 KM: FATIMA FERTILIZER MAINLINE

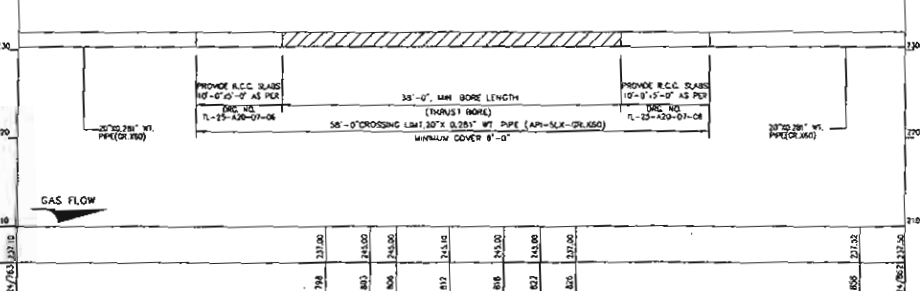
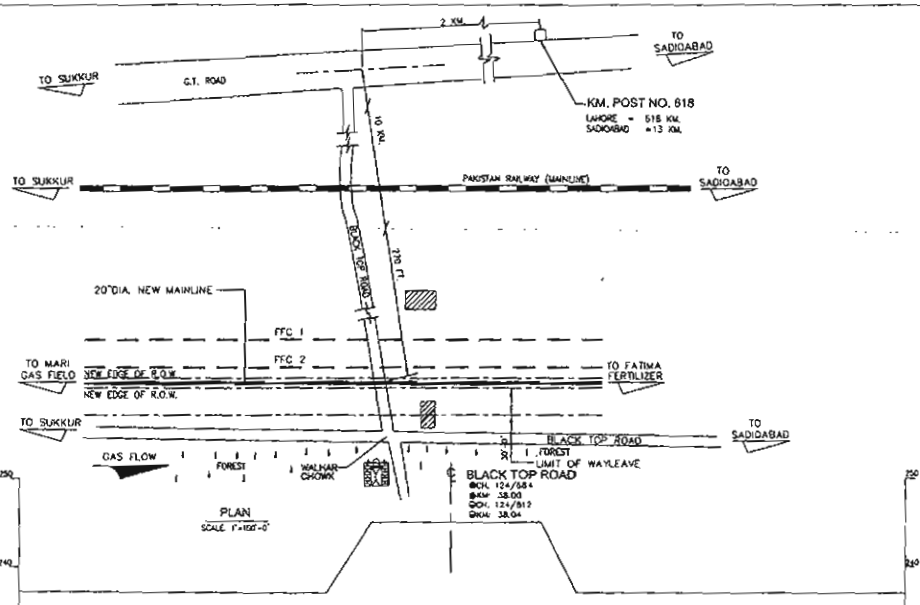
**TITLE**  
(THRUST BORE CROSSING)  
**BLACK TOP ROAD**

B.O.L. 121/852  
 B.M.C. 27.14  
 O.C.H. 122/057  
 S.H.C. 37.20

(SEE IN MAINLINE LINK)

DRAWN BY: ...  
 CHECKED BY: ...  
 DATE: ...  
 SCALE: ...

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LONGITUDINAL SECTION  
SCALE: HOR. & VER. 1"=100'-0"

- GENERAL NOTES:-**
1. MINIMUM COVER 4'-0"
  2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) - 100 PSIG
  3. ALL ASSESSMENT ALL PIPES AT OR 1/800
  4. THE LONGITUDINAL SECTION IS TAKEN ON CENTRELINE OF THE 20" NEW MAINLINE
  5. CHANGES AS SHOWN @ LINE SCOUR CHANGES
  6. CHANGES AS SHOWN @ LINE AS BUILT CHANGES
  7. (EOD POINT RECEIVED FROM OFF THE POINT MAIN GAS FIELD)
  8. (EOD POINT RECEIVED FROM OFF THE POINT MAIN GAS FIELD)

MATERIAL LIST			
NO.	QTY	REMARKS	UNIT
1	1	20" DIA. X 45.29 KM. PIPE	20" DIA.

**AS BUILT**

DESIGNED BY	CHKD BY	APPD BY
DATE	DATE	DATE

**REVISIONS**

NO.	DESCRIPTION	DATE
1	20" DIA. X 45.29 KM. PIPE	12/12/2010

**SUI NORTHERN GAS PIPELINES LTD.**  
P & D DEPARTMENT

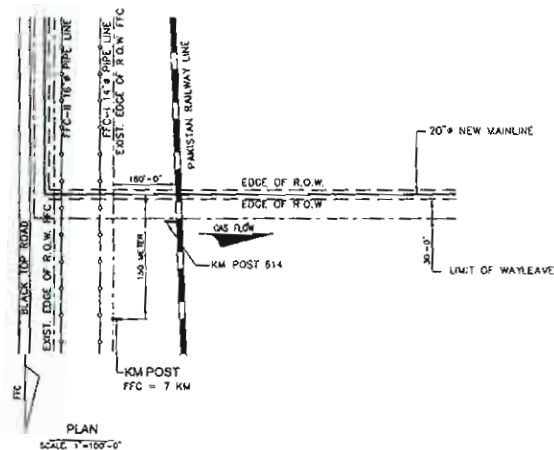
**PROJECT**  
20" DIA. X 45.29 KM. FATIMA FERTILIZER MAINLINE

**TITLE**  
BLACK TOP ROAD

**LOCATION**  
(WALHAR LINE) CL 25

**SCALE**  
HOR. & VER. 1"=100'-0"

287



**GENERAL NOTES:-**

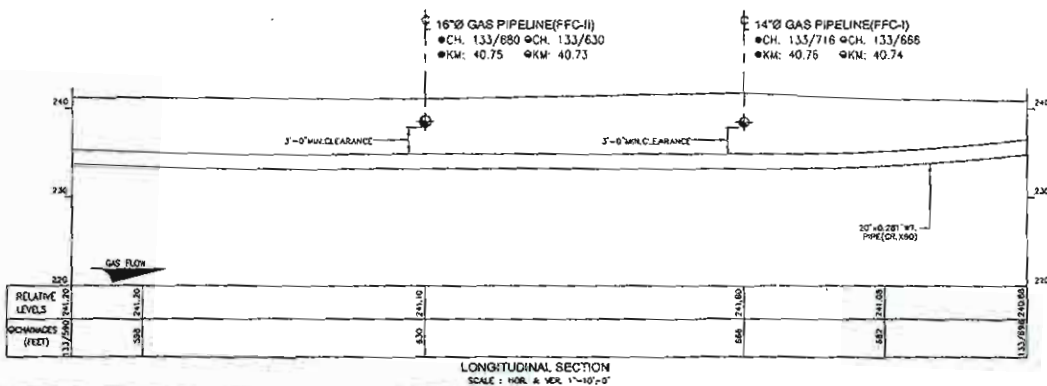
1. MINIMUM CLEARANCE 7'-0"
2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) 1000 PSIG
3. ALL JOINTS SHALL BE WELDED AT 100% OF ALL PIPELINE JOINTS
4. THE LONGITUDINAL SECTION IS TAKEN ON CENTERLINE OF THE 10\"/>

MATERIAL LIST			
SL	QTY	DESCRIPTION	SPEC
1	1 FT	10" X 0.361" WFL PIPE	API-5L SCH 40

AS BUILT

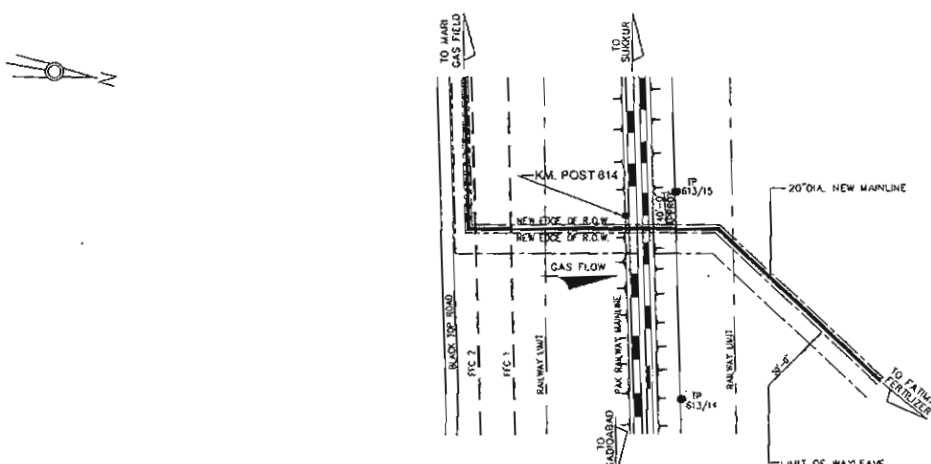
REVISIONS			
NO	DATE	DESCRIPTION	BY
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**SUI NORTHERN GAS PIPELINES**  
**P & D DEPARTMENT**  
**PROJECT**  
**20\"/>**

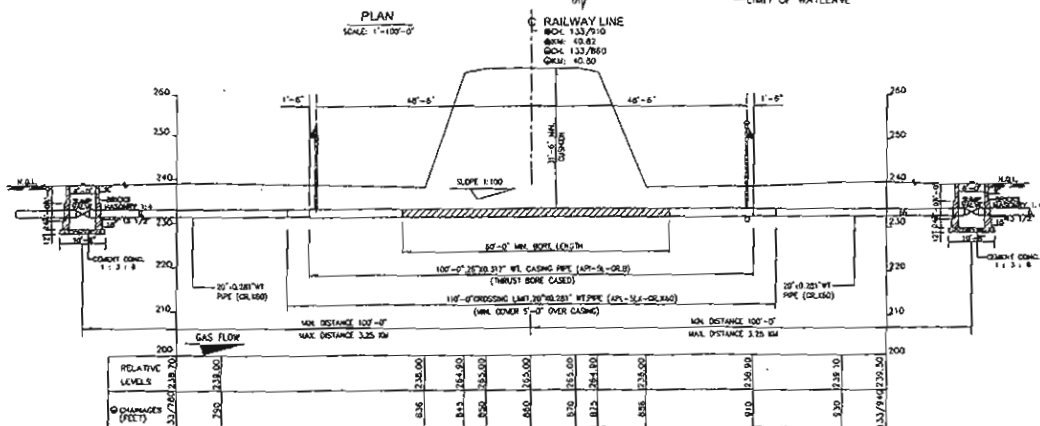


LONGITUDINAL SECTION  
 SCALE: HOR. & VERT. 1\"/>

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PLAN  
SCALE: 1"=100'-0"



LONGITUDINAL SECTION  
SCALE: HORIZ. & VERT. 1"=20'-0"

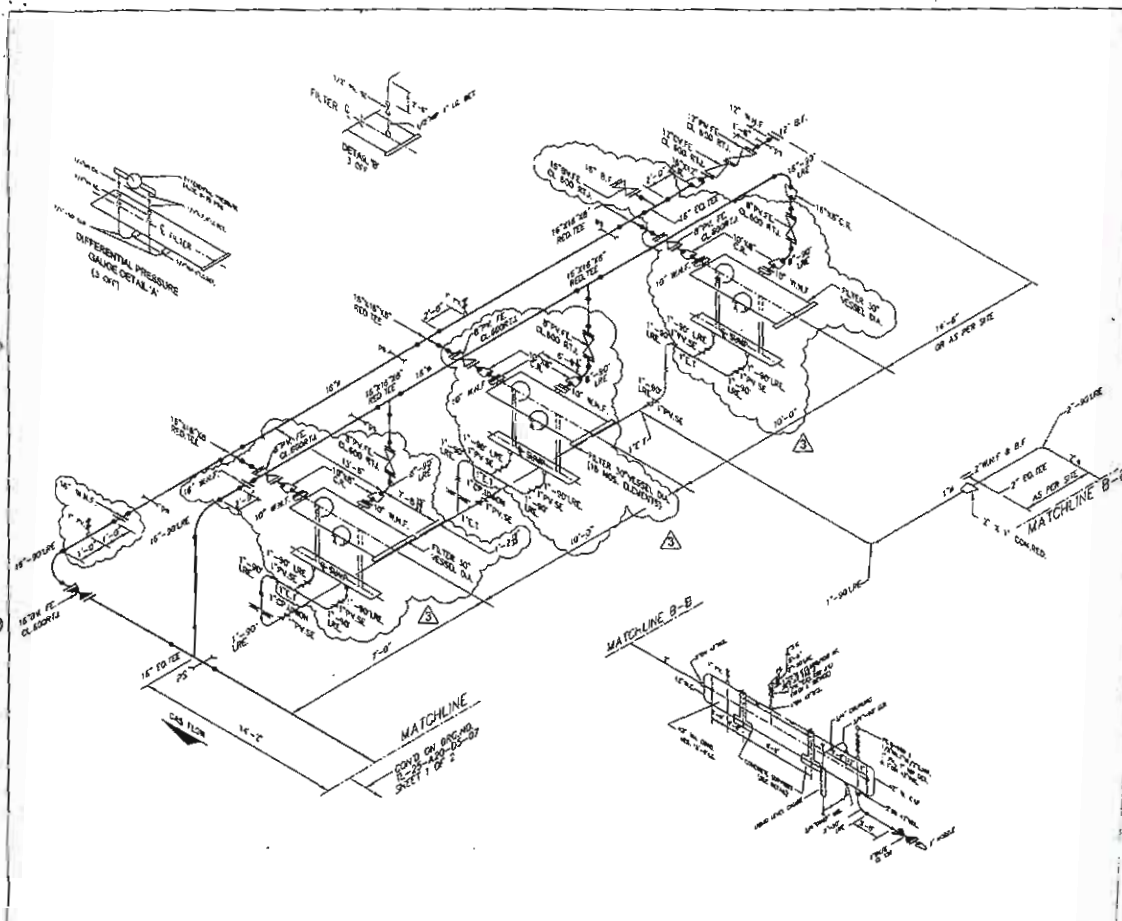
- GENERAL NOTES:-**
1. MINIMUM COVER 5'-0" OVER CASING
  2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) 1000 PSIG
  3. MAX. ALLOWED FILL ZONE AT JOINTS
  4. THE LONGITUDINAL SECTION IS BASED ON CENTERLINE OF THE 10' HIGH FILL
  5. CHANGES AS SHOWN @ PIPE JOINT CHANGES  
(JOINT POINTS INDICATED FROM OFF TAKE POINT WITH GAS FLOW)
  6. CHANGES AS SHOWN @ PIPE JOINT CHANGES  
(JOINT POINTS INDICATED FROM OFF TAKE POINT WITH GAS FLOW)

MATERIAL LIST			
NO.	QTY	DESCRIPTION	UNIT
1	1	20" DIA. NEW MAINLINE	LINEAL FT.
2	1	20" DIA. NEW MAINLINE	LINEAL FT.
3	1	20" DIA. NEW MAINLINE	LINEAL FT.
4	1	20" DIA. NEW MAINLINE	LINEAL FT.
5	1	20" DIA. NEW MAINLINE	LINEAL FT.
6	1	20" DIA. NEW MAINLINE	LINEAL FT.
7	1	20" DIA. NEW MAINLINE	LINEAL FT.
8	1	20" DIA. NEW MAINLINE	LINEAL FT.
9	1	20" DIA. NEW MAINLINE	LINEAL FT.
10	1	20" DIA. NEW MAINLINE	LINEAL FT.
11	1	20" DIA. NEW MAINLINE	LINEAL FT.

AS BUILT

PROJECT		SUI NORTHERN GAS PIPELINES LTD.	
20" DIA. X 45.25 KNOX FERTILIZER MAINLINE		P & D DEPARTMENT	
TITLE			
20" DIA. X 45.25 KNOX FERTILIZER MAINLINE			
RAILWAY LINE			
SCALE: 1"=100'-0"			
DATE: 11/25/2005			
DRAWN BY: [Signature]			
CHECKED BY: [Signature]			
APPROVED BY: [Signature]			
PROJECT NO. TL-25-A20-05-38			

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# GENERAL NOTES:

1. PIPE TO BE SEAMLESS/200M CARBON STEEL
2. FLANGES TO BE WELD NECK TYPE TO AWS B-16.5
3. WELDING FITTINGS TO BE FORGED CARBON STEEL TO AWS B-16.5
4. RFA GASKETS TO BE "ARMO" SOFT IRON OR EQUIVALENT TO AWS B-16.5 SERIES
5. STRESSABILITY TO BE ALLOW STEEL WITH 2 WELTS & 2 WELPS
6. SYMBOLS: ASTM-A182 GRADE B1  
ASTM-A182 GRADE B1  
WELPS: 80-3415-TABLE 1
7. VALVE NORMALLY CLOSED SHOWN THIS
8. PROPOSED ARRANGEMENT SHOWN THIS
9. ALL SHUTTERED CONNECTIONS ON BOUNDARIES OF MAINLINE TO BE 2\"/>

## REFERENCE DRAWINGS

- TL-25-A20-05-01 DETAIL OF PIPE SUPPORTS (3 SHEETS)
- TL-25-A20-05-02 DETAIL OF STAGE GAP
- TL-25-A20-05-03 PNE. RECEIVING ARRANGEMENT AT FATIMA FERTILIZER KILN 45.5/7 (LAD POND)
- TL-25-A20-05-04 G.A. DRAINING FILTER SEPARATOR INLET/OUTLET 10\"/>

FOR MATERIAL TAKE-OFF  
SEE SEPARATE SHEETS

FOR PLOT PLAN SEE  
DRG. NO. TL-25-A20-05-07  
SHEET 2 OF 2

REVISIONS			
NO.	DATE	DESCRIPTION	BY
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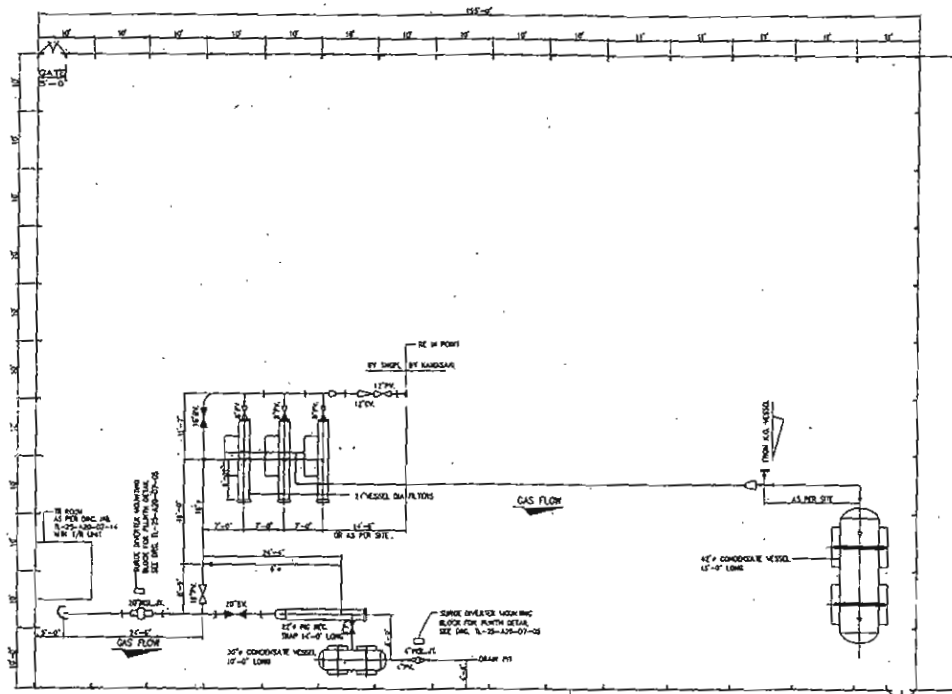
DESIGNED BY  
SUI NORTHERN GAS PIPELINES LTD.  
P. & O. DEPARTMENT

PROJECT  
20" DIA. X 45.52 KM: FATIMA FERTILIZER MAINLINE

TITLE  
FILTRATION FACILITY AT FATIMA FERTILIZER

DATE  
TL-25-A20-05-08

290



PROPOSED VALVE ENCLOSURE,  
HANDSTAND AND GAGE ROOF  
REFER DRG. NO. TL-25-A30-07-02

GENERAL NOTES:

1. VALVE NORMALLY CLOSED SHOWN (DASH)
2. PROPOSED ARRANGEMENT SHOWN (SOLID)

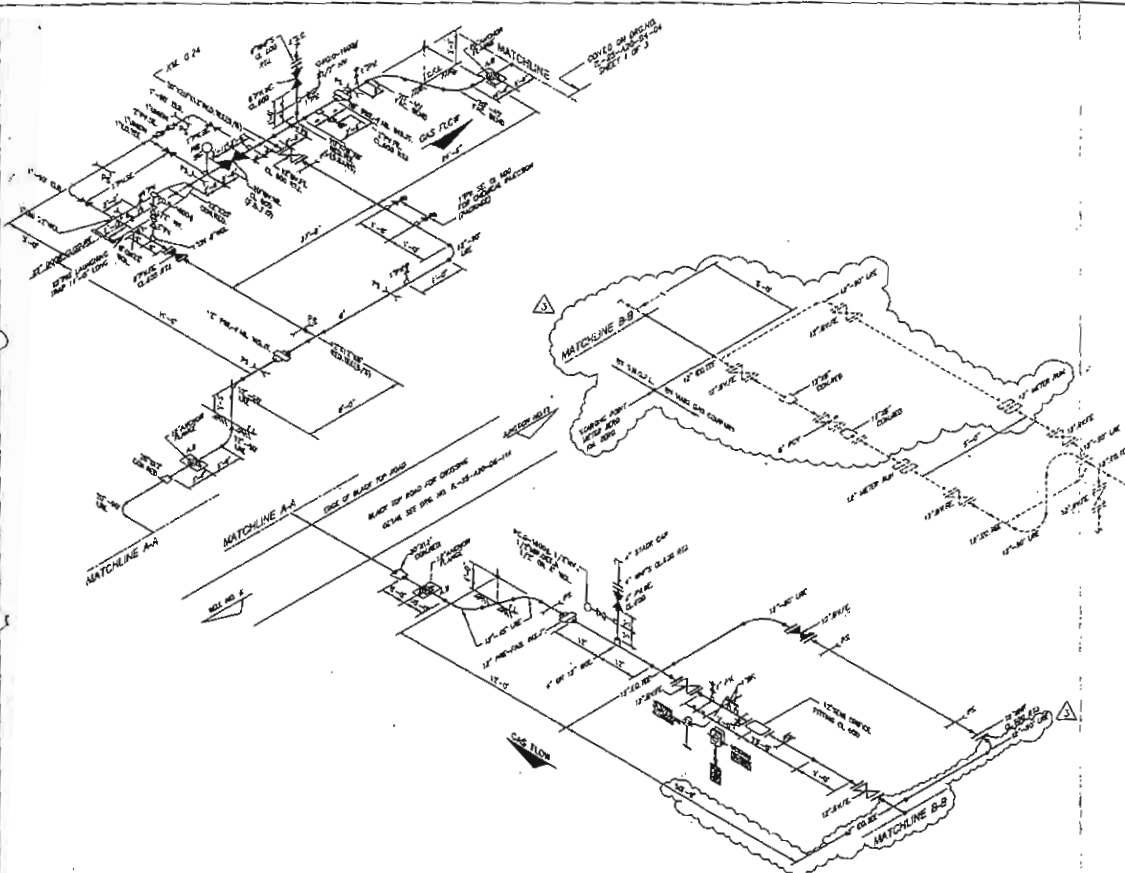
REFERENCE DRAWINGS

- TL-25-A30-07-01 DETAIL OF 20\"/>

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...
2	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...
3	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...
4	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...
5	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...
6	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...
7	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...
8	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...
9	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...
10	10/1/00	ISSUED FOR CONSTRUCTION	W. J. ...

PROJECT: SUI NORTHERN GAS PIPELINES LTD.  
P. & O. DEPARTMENT

20\"/>



# GENERAL NOTES:-

1. PIPE TO BE SEAMLESS/LOW CARBON STEEL
2. FLANGES TO BE WELDED AHEAD TIME TO AWS B-1.2.3
3. WELDING FITTINGS TO BE FORGED CARBON STEEL TO AWS B-1.2.3
4. UTA GASKETS TO BE 100% OF 50% ROR OR EQUIVALENT TO AWS B-1.2.3 SERIES
5. EQUIVALENT TO BE ALLOY STEEL WITH 2 HITS & 2 HITCHES
6. DIMENSIONS - ASTM-A183 GRADE 67
7. INCHES - ASTM-A183 GRADE 20
8. WELDERS - BS-5454-TABLE 7
9. VALVE NORMALLY CLOSED SHOWN THIS
10. PROPOSED ARRANG. SHOWN THIS
11. EXISTING ARRANG. SHOWN THIS
12. ALL THREADED CONNECTIONS ON BRANCHES OF MAINLINE TO BE SEAL WELDED
13. PIPE SUPPORTS/STACK CAPS TO BE FABRICATED BY FIELD
14. GASKING FLANGES/FITTINGS TO BE PAINTED GREEN WITH APPROVED NON METALLIC PAINT
15. ALL PIPE SUPPORTS TO BE INSULATED
16. W/ 20% REDUCED AS SHOWN ARE DESIGN W/ 20% OF 20% PROPOSED MAINLINE
17. (20% POINT REDUCED FROM OFF-TAKE POINT MAIN GAS FIELD)

# REFERENCE DRAWINGS

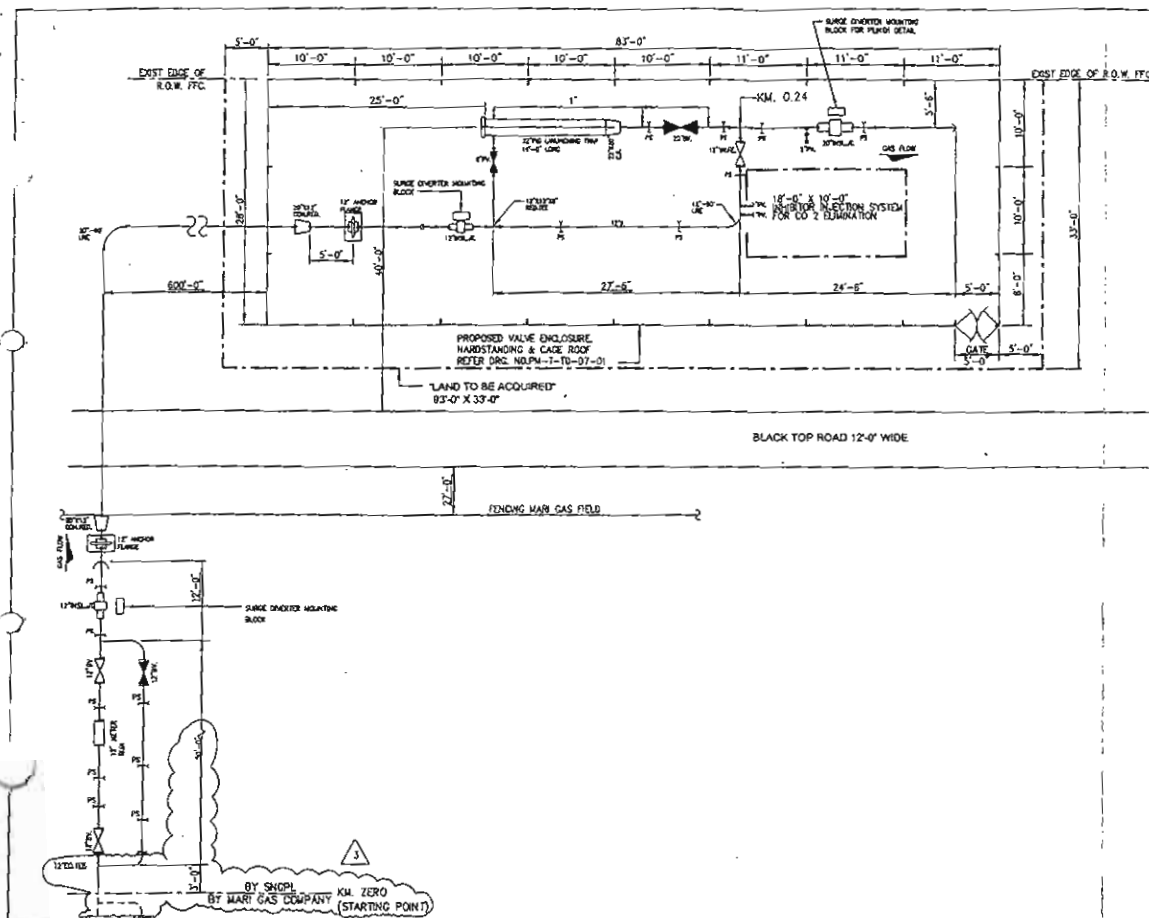
- 1. TL-25-A20-01-01 DETAIL OF 20" X 22" PIPE SUPPORT
- 2. TL-25-A20-01-02 DETAIL OF STACK CAP
- 3. TL-25-A20-01-03 DETAIL OF ANCHOR BLOCK
- 4. TL-25-A20-01-04 DETAIL OF PIPE SUPPORT(S) SHEETS
- 5. TL-25-A20-01-05 METER REORDER CONNECTIONS
- 6. TL-25-A20-01-06 TOLERANCE APPROXIMATION

SHEET 1 OF 3

FOR PLOT PLAN SEE  
DRG. NO. TL-25-A20-05-05  
SHEET 2 OF 2

REVISIONS	
NO.	DESCRIPTION
1	1. TL-25-A20-01-01 DETAIL OF 20" X 22" PIPE SUPPORT
2	2. TL-25-A20-01-02 DETAIL OF STACK CAP
3	3. TL-25-A20-01-03 DETAIL OF ANCHOR BLOCK
4	4. TL-25-A20-01-04 DETAIL OF PIPE SUPPORT(S) SHEETS
5	5. TL-25-A20-01-05 METER REORDER CONNECTIONS
6	6. TL-25-A20-01-06 TOLERANCE APPROXIMATION
SUI NORTHERN GAS PIPELINES L. P. & D. DEPARTMENT	
PROJECT: 20" DIA. X 45.52 KM: FATIMA FERTILIZER MAINLINE	
WITH HOOK-UP & METERING ARRANG. AT MARI GAS OFF-TAKE POINT KM ZERO (STARTING POINT) & PIG LAUNCHING ARRANG. AT KM 0.24	
DATE: 11-25-2006	BY: [Signature]
SCALE: 1:1	PROJECT NO: TL-25-A20-05-05

292



GENERAL NOTES:-

1. VALVE NORMALLY CLOSED SHOWN THIS
2. PROPOSED HANDSTANDING SHOWN THIS
3. EXISTING HANDSTANDING SHOWN THIS

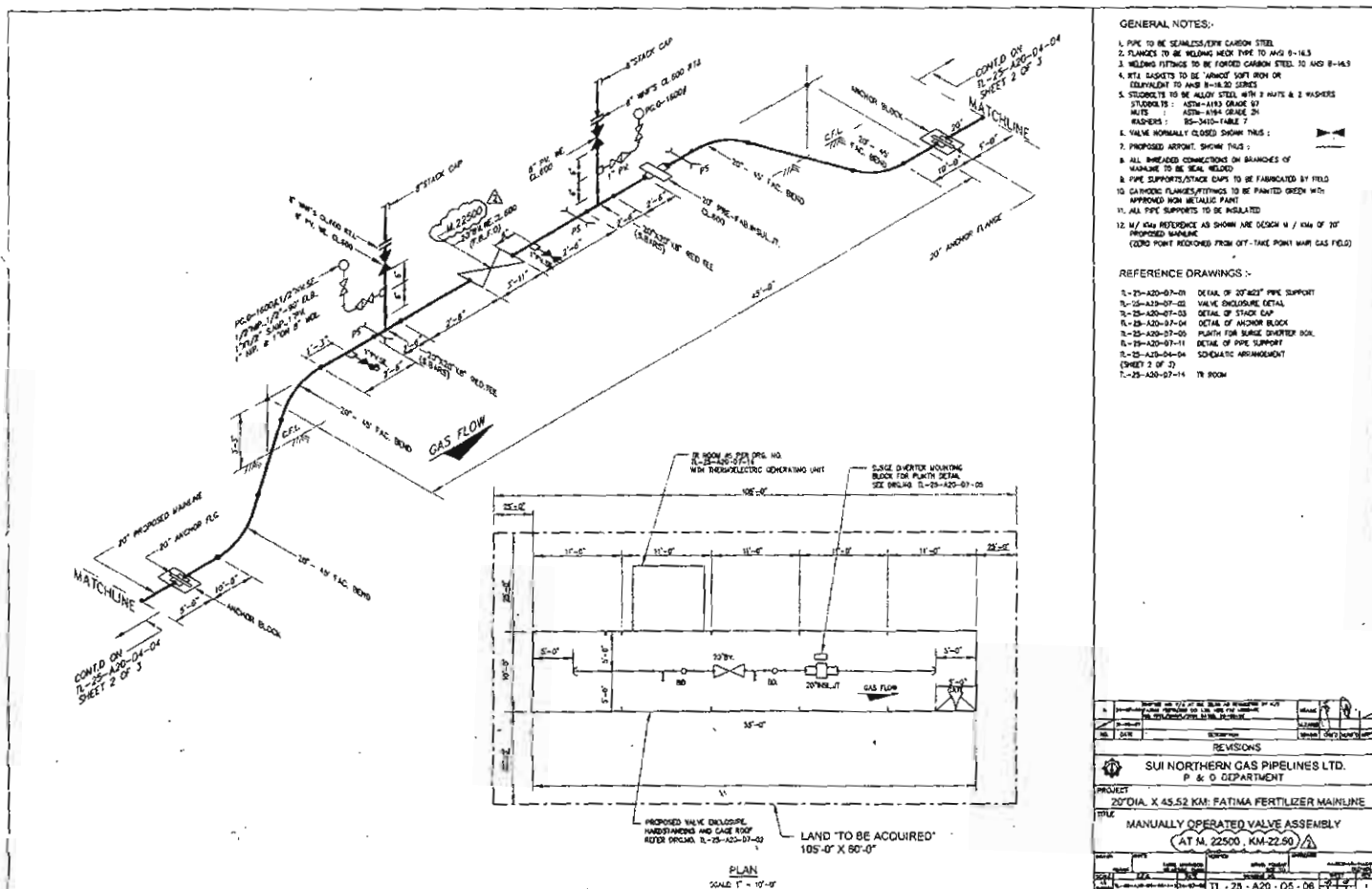
REFERENCE DRAWINGS

- PM-1-10-01-28 DETAIL OF 24\"/>

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	ISSUED AS QUOTED TO THE CLIENT	10/10/01	...
2	ISSUED AS QUOTED TO THE CLIENT	10/10/01	...
3	ISSUED AS QUOTED TO THE CLIENT	10/10/01	...

SUI NORTHERN GAS PIPELINES LTD.	
P & D DEPARTMENT	
PROJECT	20\"/>
TITLE	PLOT PLAN
HOOK-UP & METERING ARRANG. AT MARI GAS OFF-TAKE POINT KM.024(STARTING POINT) & PIG LAUNCHING ARRANG. AT KM. 0.24	
DATE	10/10/01
BY	...
CHECKED	...
APPROVED	...



### Rule-16 Evaluation of the application

(a) The technical, administrative and financial capabilities of the applicant in relation to the regulated activity for which the licence is sought. **Enclosed as Annexure-H**

(b) the viability of the sources of supply of natural gas. **Enclosed as Annexure-H**

(c) **If applicable, the effects of the proposed project on other transmission, distribution or storage facilities;**

MPCL (Mari Petroleum Company Limited) will deliver the Raw Natural Gas at MPCL Central Manifold-2 at Mari, Daharki, Sindh. From Custody Transfer Point (CTP) of MPCL, raw gas will be transmitted to the processing facility located at a distance of ~1 KM thru dedicated lines having no impact on any other system. At processing facility, raw gas will be treated to achieve acceptable specification for injection into SNGPL transmission network. After which treated gas will be transmitted from processing facility to SNGPL Muhammadpur valve assembly (QV-2) located at a distance of ~24 KM thru independent pipeline. At Muhammadpur, treated gas will be injected into SNGPL network and equivalent quantity in terms of BTUs will be drawn-off from SNGPL network at downstream e.g. Pakarab Fertilizers Limited, Multan for consumption by the Applicant.

There are no impacts envisaged on other distribution or storage facilities.

(d) **The methods and procedures proposed to be adopted for operating and maintaining the transmission, distribution or other related facilities;**

Applicant follows world best practices of DuPont Process Safety management (PSM). Process safety management is about recognizing hazards and the associated risks. We believe that Process safety principles and systems not only help manage risks, but they effectively increase the safety of our operation while also improving productivity, cost efficiency and quality.

Based on decades of experience of managing hazardous substances in our own Fertilizer facilities and natural gas pipeline (Fatima Fertilizer Company Limited – Sister Company), our expert employees have a thorough understanding of the means through which a process safety management system can be built, and sustained. Based on this vast operational & maintenance experience, we have refined our system, procedures and adopted world best practices and achieved Excellence level in the Process Safety management. Our approach to managing operational risk and preventing process-related injuries and incidents addresses both the cultural and technical aspects of our organization.

Our employees have a proven ability to prevent major process-related disaster incidents, while also preserving business continuity, capitalization, right to operation, and – most importantly – to protect precious lives.

The DuPont process safety management systems are designed to bring about a cultural transformation within the company to achieve excellence in process safety.

DuPont's safety management system consists of globally recognized HSE Best Practices comprised of the following 22 elements:

1. Management Commitment
2. Policies & Principles
3. Integrated Organization Structure
4. Line Management

27-8-2018  
Record By hand

5. Accountability & Responsibility
6. Goals, Objectives, & Plans
7. Safety Personnel
8. Procedures & Performance Standards
9. Training & Development
10. Effective Communication
11. Motivation & Awareness
12. Audits & Observations
13. Incident Investigation
14. Management of Change – Personnel
15. Contractor Safety Management
16. Quality Assurance
17. Pre-start-up Safety Reviews
18. Mechanical Integrity
19. Management of Change – Facilities
20. Process Safety Information
21. Management of Change -Technology
22. Risk Assessment and Process Hazards Analysis
23. Emergency Preparedness and Contingency Planning

(e) The technical specifications of the proposed transmission, distribution or other related facilities;

**Transmission:**

Summary of Pipeline Design Specifications is as follows:

Sr. No.	Description	Shallow Feeder Pipeline	Deep Feeder Pipeline	HRL Feeder Pipeline	Main Gas Pipeline
1	Design Pressure, psig	1100	1375	330	1375
2	Design Temperature, °F	175	175	175	175
3	Pipeline Material	API 5L	API 5L	API 5L	API 5L
4	Material Grade	Grade B	Grade B	Grade B	X46 & X70
5	Size, inch	NPS 12	NPS 14	NPS 12	NPS 16
6	Length, meters	870	870	870	22,800
7	Thickness	API 5L Grade B, Location Class 3: 15 MM	API 5L Grade B, Location Class 3: 15 MM	API 5L Grade B, Locations Class 3: 8.74 MM	i. API 5L Grade X70, Location Class 1: 7.92MM ii. API 5L Grade X70, Location Class 2: 8.74MM iii. API 5L Grade X46, Location Class 2: 12.95MM

					iv. API 5L Grade X46, Location Class 3: 17.65MM
--	--	--	--	--	---

Detailed Technical Specifications of Transmission facilities are provided in following attached documents:

- (a) Annexure-1: Main Gas Pipeline Design Package
- (b) Annexure-2: Feeder Pipeline Design Package

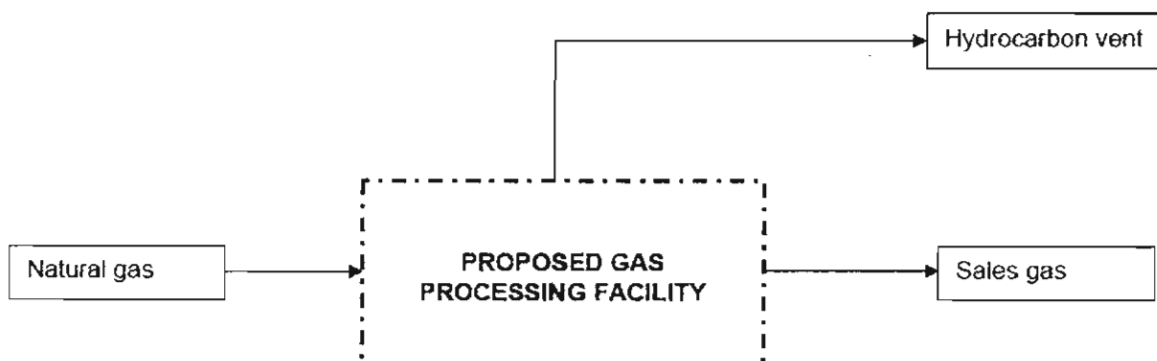
**Processing Facility:**

Gas processing facility for treatment of high CO<sub>2</sub> Natural Gas is planned to be installed near MPCL CMF-2, Daharki field in phased approach which includes Gas compression, Membrane Separation unit, Amine Sweetening Unit, Gas Dehydration unit & Metering unit.

Brief Technical Specifications of major equipments are provided in following attached documents:

- (a) Annexure-3: Technical Specification- Gas Compressors
- (b) Annexure-4: Technical Specification- Membrane Separation unit
- (c) Annexure-5: Technical Specification- Amine Sweetening Unit
- (d) Annexure-6: Technical Specification- Gas Dehydration unit
- (e) Annexure-7: Technical Specification- Metering unit

**Material Flow Chart:**



**(f) The basis for potential demand for the transmission, distribution or sale of natural gas:**

The Economic Coordination Committee (ECC) of the Federal Cabinet of Government of Pakistan has approved on May 17, 2018; a proposal to allocate 35 MMCFD Mari Shallow Gas and 40 MMCFD of Mari Deep Gas to Pakarab Fertilizers Limited (PFL) in order to optimally utilize its available installed capacity, encourage indigenous production of fertilizers and to lessen the reliance on imported Fertilizer.

Pakarab Fertilizers Limited (PFL) has responded to this development and plans to setup a gas Processing facility at Mari and lay about 24 km natural gas line from Mari Gas Company Limited (MPCL) custody transfer point to SNGPL tie-in point near Muhammad-pur.

Technical Specifications (Shallow Gas Compressor)							
Project		Pakarab Gas Processing Facility (PGPF)					
Site Conditions							
Location		Mari, Daharki, Sindh, Pakistan					
Ambient Temperature (Max./Min.)		°F			125 / 36		
Maximum Wind Speed		km/hr			160.1		
Seismic Zone		--			2A		
Rainfall (Max./Min.)		mm/ year			51 / Traces		
Dust Load (Dust Storm/ Typical)		mg/m <sup>3</sup>			400 / 10		
Relative Humidity (Max./Min.)		%			60 / 20		
Elevation		ft.			240 ft above Sea Level		
Barometric Pressure		psia			14.6		
Electrical Classification		--			Class 1 Div 2 Group D		
Base Conditions For Flow Rates		--			14.65 PSIA @ 60 °F		
Process Conditions							
		Inlet			Outlet		
Fluid		Natural Gas					
Pressure	PSIG	Min	Normal	Max	Min	Normal	Max
		250	300	400	950	1100	1300
Temperature	°F	≤ 125			≤ 145		
Flow Rate	MMSCFD	35					
Inlet Gas Composition							
		HHV (Min.)		HHV (Normal)		HHV (Max.)	
Methane	mol %	77.224		80.04		81.99	
Ethane		0.994		1.03		1.05	
Propane		0.261		0.27		0.26	
I-Butane		0.068		0.07		0.07	
N-Butane		0.068		0.07		0.07	
I-Pentane		0.096		0.1		0.03	
N-Pentane		0.000		0		0.02	
Hexane		0.000		0		0.04	
Heptane +		0.000		0		0.00	
Carbon dioxide		8.061		5.08		3.17	
Nitrogen		13.228		13.34		13.30	
Hydrogen Sulphide	ppmv	0 - 15					
Water Content	Lb/ MMSCF	Fully Saturated					

Annex-4  
300

Project		Gas Processing Facility-Membrane Unit			
Process Conditions					
Fluid		Natural Gas			
		Inlet			Outlet
Pressure	PSIG	Min	Normal	Maximum	
		800	1000	1200	*
Temperature	°F	≤ 125			*
CO2 contents	mol %	40	45	50	≤ 20
H2S	ppm	≤ 20			≤ 3.0
Flow Rate	MMSCFD	40	40	110**	*
Inlet Gas Composition					
		Feed (Deep Gas)			
		Design	Operating		
Methane	mol %	35.46	38.87		
Ethane		1.75	1.92		
Propane		0.32	0.36		
I-Butane		0.17	0.18		
N-Butane		0.13	0.16		
I-Pentane		0.09	0.10		
N-Pentane		0.05	0.05		
Hexane		0.03	0.03		
Heptane +		0.02	0.01		
Carbon dioxide		50.09	45.32		
Nitrogen		11.65	12.76		
water	0.258 (saturated)	0.25 (saturated)			
Hydrogen Sulphide	ppmv	20.00	0.00		
Notes:					
1. * To be specified by Vendor.					
2. **Currently, Feed Flow rate is 40 MMSCFD with the future potential of total 110 MMSCFD.					

Project		Gas Processing Facility-Amine Unit			
Process Conditions					
Fluid		Natural Gas			
		Inlet			Outlet
Pressure	PSIG	Min	Normal	Max	
		800	1000	1200	*
Carbon dioxide	mol %	15	15	20	≤ 1.5
Hydrogen Sulphide	ppmv	≤ 20			≤ 3.0
Temperature	°F	≤ 145			*
		Case-1 (Upstream Membrane Outlet)^		Case-2 (Membrane Outlet + Raw Feed)^^	
Flow Rate	MMSCFD	25		57 (max 102)**	
Methane	mol %	57.13		64.83	
Ethane		2.82		1.35	
Propane		0.52		0.23	
I-Butane		0.27		0.12	
N-Butane		0.23		0.10	
I-Pentane		0.15		0.07	
N-Pentane		0.07		0.03	
Hexane		0.04		0.02	
Heptane +		0.02		0.01	
Carbon dioxide		20.00		15.04 ( 17.1)**	
Nitrogen		18.73		18.08	
water	0.01		0.12		

**Notes:**

1. \*Vendor To Specify

2. \*\*Currently, Feed Flow rate is 57 MMSCFD with the future potential of total 102 MMSCFD with inlet CO<sub>2</sub> content of 17.1 mol%.

3. ^ Offered Amine Sweetening Unit will be part of Hybrid Acid Gas removal system with upstream Membrane system reducing the CO<sub>2</sub> content of raw Feed from 45 mol% to 20 mol%.

4. ^^ Facility is being designed to Treat raw gas from different sources. Accordingly, Feed to offered amine unit will be commingled upstream Membrane system outlet & Raw Compressed Gas.

Annex-6  
302

Project		Gas Processing Facility-Dehydration Unit			
Process Conditions					
Fluid		Natural Gas			
		Inlet			Outlet
Pressure	PSIG	Min	Normal	Max	*
		800	1000	1200	
Water contents	lbs/MMSCF	100	200	500	< 6
Temperature	°F	≤ 145			*
		Case-1 (Minimum Flow)	Case-2 (Normal Operating)	Case-3 (Maximum Flow)	
Flow Rate	MMSCFD	35	54	87 (max 127)**	
Methane	mol %	80.04	76.85	77.39	
Ethane		1.03	2.05	1.29	
Propane		0.27	0.43	0.25	
I-Butane		0.07	0.18	0.11	
N-Butane		0.07	0.15	0.10	
I-Pentane		0.10	0.14	0.06	
N-Pentane		0.00	0.04	0.03	
Hexane		0.00	0.02	0.03	
Heptane +		0.00	0.01	0.01	
Carbon dioxide		5.08	2.63	2.73	
Nitrogen		13.34	17.51	17.84	
water		Saturated at Op. Temp & Pressure			
Notes:					
1. *Vendor to specify					
2. **Currently, maximum Feed Flow rate is 87 MMSCFD with the future potential of total 127 MMSCFD.					

Technical Specifications (Custody Transfer Metering Skid)				
Project		Gas Processing Facility (GPF)		
Site Conditions				
Location		Mari, Daharki, Sindh, Pakistan		
Ambient Temperature (Max./Min.)		°F	125 / 36	
Maximum Wind Speed		km/hr	160.1	
Seismic Zone		--	2A	
Rainfall (Max./Min.)		mm/ year	51 / Traces	
Dust Load (Dust Storm/ Typical)		mg/m <sup>3</sup>	400 / 10	
Relative Humidity (Max./Min.)		%	60 / 20	
Elevation		ft.	240 ft above Sea Level	
Barometric Pressure		psia	14.6	
Electrical Classification		--	Class 1 Div 2 Group D	
Base Conditions For Flow Rates		--	14.65 PSIA @ 60 °F	
Process Conditions				
		Inlet		
Fluid		Natural Gas		
Pressure	PSIG	Min	Normal	Max
		900	1100	1250
Temperature	°F	≤ 125		
Flow Rate	MMSCFD	35	60	130
Inlet Gas Composition				
		HHV (Min.)	HHV (Normal)	HHV (Max.)
Methane	mol %	77.350	80.04	77.62
Ethane		0.770	1.03	2.01
Propane		0.190	0.27	0.42
I-Butane		0.050	0.07	0.17
N-Butane		0.050	0.07	0.16
I-Pentane		0.070	0.1	0.10
N-Pentane		0.000	0	0.05
Hexane		0.000	0	0.04
Heptane +		0.000	0	0.01
Carbon dioxide		6.870	5.08	2.51
Nitrogen		14.640	13.34	16.89
Hydrogen Sulphide	ppmv	0 - 15		
Water Content	Lb/ MMSCF	≤ 7		

PFL/OGRA/2018-  
August 30, 2018

The Registrar  
Oil and Gas Regulatory Authority (OGRA)  
1st Floor, 54-B, Fazal-e-Haq Road  
Islamabad

**Subject: INFORMATION TO BE ATTACHED TO THE APPLICATION FOR  
SHIPPER LICENSE AND THE APPLICABLE FEE UNDER OGRA GAS  
(THIRD PARTY ACCESS) RULES 2018**

Dear Sir,

ECC of the Cabinet in its meeting held on May 17, 2018 allocated 75 mmcf/d gas along with supporting dedication of reserves from Mari Gas Fields to Pakarab Fertilizers Limited (PFL) exclusively for self use.

Subsequent to the ECC decision, PFL submitted an application to OGRA for issuance of Transmission License under Natural Gas Regulatory Authority (Licensing) Rules 2002 for construction and operation of pipeline from point of delivery of Mari field gate to SNGPL's injection point at Muhammad Pur Ghotki along with ancillary/connected facilities. SNGPL will transport the gas from injection point to PFL plant at Multan under a mutually agreed gas transportation agreement.

OGRA Gas (Third Party Access) Rules 2018 specifies in Rule 3 that "No person shall operate as a transporter or shipper unless a license has been issued in his favour by the authority to undertake such activity and which is in force" and defines Shipper in Serial (X) of Rule 2 as "a person holding a valid license issued by the authority for transmission, distribution or sale of gas through an access arrangement for transportation of gas by utilizing capacity of gas pipeline transportation system above such thresholds as may be specified in the Network code"

However the rules are silent about the Form of Application, information to be attached and the applicable fee for the issuance of License to operate as Shipper.

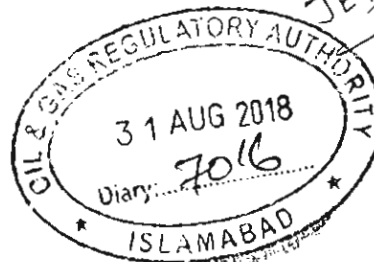
We would request OGRA to guide us for the submission of the application and the applicable fee for the issuance of above referred License to operate as Shipper enabling us to proceed further on fast track basis.

We are available to meet and discuss the modalities of the application.

Thanking you,

Yours faithfully,  
For PAKARAB FERTILIZERS LIMITED

  
SAQIB AZIZ  
(Department Manager Business Development)



OGRA-6(1)-NG(PFL)/2018

November 07, 2018

Mr. Saqib Aziz,  
Department Manager Business Development,  
Pakarab Fertilizers Limited,  
E-110, Khayaban-e-Jinnah Road,  
**LAHORE**

**Subject: PAKARAB FERTILIZERS LIMITED - APPLICATION FOR CONSTRUCTION & OPERATION OF PIPELINE FOR TRANSMISSION OF NATURAL GAS**

Dear Sir,

Please refer to your letter No. PFL/OGRA/2018 256 BH dated August 20, 2018 on the subject noted above.

2. It is to inform that the information/data provided vide subject application has been examined by the concerned deptts. under the statutory requirement of Rule 4(3) & (5) of NGRA (Licencing) Rules, 2002 wherein the following deficient documents/information have not been provided:-

- i. Status of GTA with SNGPL,
- ii. Hydraulic / simulation study alongwith recommendations of the proposed pipeline,
- iii. Three different gathering lines are proposed whereas ECC has allocated gas from Mari Shallow and Mari Deep only,
- iv. SNGPL's project acceptance letter for construction of subject transmission pipeline,
- v. Breakup of Capital Cost / Project Cost,
- vi. Source of Financing.

3. In view of above, you are advised to furnish the above mentioned information / documents in order to proceed further in the matter, please.

Best Regards,



o/e

(Abdul Basit Qureshi)  
Registrar

(For & on behalf of the Authority)

325



PFL/OGRA/2018-  
November 09, 2018

The Registrar  
Oil and Gas Regulatory Authority (OGRA)  
1st Floor, 54-B, Fazal-e-Haq Road  
Islamabad

**Subject: PAKARAB FERTILIZERS LIMITED – APPLICATION FOR CONSTRUCTION & OPERATION OF PIPELINE FOR TRANSMISSION OF NATURAL GAS**

**Reference: Your letter No. OGRA-6(1)-NG(PFL)/2018 dated 07 November, 2018**

**Dear Sir,**

Please find below the point wise response to your queries raised via above referred letter.

- i. ECC of the Cabinet in its meeting held on May 17, 2018 has directed SNGPL to transport these gases through its existing network. GTA with SNGPL will be finalized after Network Code Approval by OGRA.  
(Annex-A - DG Gas letter No. NG (I)-7(158)/18-F-Pt dated 31<sup>st</sup> May, 2018)
- ii. Hydraulic / simulation study along with recommendations of the proposed pipeline (Annex-B)
- iii. Third line is for future prospects and for intermittent availability of HRL (Habib Rahi Limestone) gas during shutdown/turnarounds of other fertilizer plants on Mari Network.
- iv. SNGPL's offer letter No. P&D/02-12204 dated 10<sup>th</sup> September, 2018 for construction of subject transmission pipeline (Annex-C)
- v. Total project cost estimated at US\$ 70 million.
- vi. Internal group resources and debt financing

We are available to meet and provide additional information or clarification if required.

**Thanking you,**

**Yours faithfully,  
For PAKARAB FERTILIZERS LIMITED**

**SAQIB AZIZ  
(Department Manager Business Development)**

*Please Process  
DR  
AED  
Lo*

*Amir Buzin  
12/11/18*



No. NG (I)-7(158)/18-F-Pt  
Government of Pakistan  
Ministry of Energy - - Petroleum Division  
(Policy Wing)  
Directorate General of Gas  
First Floor, Petroleum House, Ataturk Avenue G-5/2

Islamabad, the 31<sup>st</sup> May, 2018

01. **The Managing Director,**  
M/s Mari Petroleum Company Ltd,  
Islamabad

✓ 02. **The Chief Executive Officer,**  
Pak Arab Fertilizers Ltd,  
Lahore

03. **The Managing Director,**  
M/s Sui Northern Gas Pipelines Ltd,  
Lahore

Subject: **ALLOCATION OF ADDITIONAL GAS PRODUCTION FROM MPCL'S EXISTING RESERVOIRS TO PAKARAB FERTILIZERS LTD**

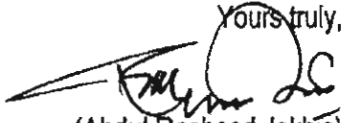
Dear Sir (s),

I am directed to inform that ECC of the Cabinet in its meeting held on 17.05.2018 vide case No. ECC-43/10/2018 dated 17.05.2018 while considering a summary submitted by Petroleum Division on the subject approved the proposals contained in para-6 of the summary as under:

- (i) 35 MMCFD Mari shallow gas along with supporting reserves may be allocated to M/s Pakarab Fertilizers Ltd (PFL) which will require dehydration and transportation by PFL at its own cost for injection into M/s SNGPL's system and M/s SNGPL would be required to induct this gas into its system soon after completion of the required infrastructure.
- (ii) 40 MMCFD of Mari Deep gas along with supporting reserves may be allocated to M/s Pakarab Fertilizers Ltd which will be processed by PFL at its own cost for injection into SNGPL's system as a comingled stream along with shallow gas.
- (iii) MPCL will be required to have necessary regulatory approvals for production of these gases from its existing reservoirs.
- (iv) Subject to availability of adequate system gas volumes, M/s SNGPL would supply the minimum gas required along with Mari shallow gas to M/s PFL enabling the plant to operate. This arrangement would be for the interim period i.e. till full flow of comingled processed Mari gases.
- (v) The allocated gases are to be transported by M/s SNGPL through its system for supply to M/s PFL plant at Multan under a mutually agreed gas transportation arrangements and M/s PFL would be required to pay a tolling fee to M/s SNGPL against transportation of these gases.

2. You are requested to take further necessary action in the implementation of above ECC decision under intimation to this office at the earliest.

Yours truly,

  
(Abdul Rasheed Jokhio)  
Director (Tech.)

**C.C:**

- (i) PS to Secretary Petroleum Division
- (ii) PS to Additional Secretary (P) Petroleum Division
- (iii) PA to DG(Gas) Petroleum Division
- (iv) PA to DG (PC) Petroleum Division



## **PAK-ARAB FETILIZERS LIMITED**

### **HYDRAULIC STUDY REPORT FOR FLOWLINES OF PFL GAS PROCESSING FACILITY**

**3109-PR-RP-0001**



#### **PETROCHEMICAL ENGINEERING CONSULTANTS**

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REV.	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY	CLIENT APPROVAL	DATE
A	Interdisciplinary Check	BA	Adeel	Adeel	-----	MAY 21, 2018
0	Issued for Review	BA	Adeel	Adeel	-----	MAY 31, 2018

 <b>pakarab</b> <small>PETROCHEMICAL CONSULTANTS</small>	<b>FEEDER LINE HYDRAULICS</b>			 <b>Petrochemical Consultants</b>
	<b>Document Title:</b>	<b>Hydraulic Study Report</b>		
	<b>Document No:</b>	<b>3109-PR-RP-0001</b>	<b>Rev-0</b>	<b>Sheet 3 of 13</b>

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	<b>FEEDER LINE HYDRAULICS</b>			
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## 1.0 SUMMARY

MPCL (Mari Petroleum Company Limited) will deliver the Raw Natural Gas at MPCL Central Manifold-2 at Mari, Daharki, Sindh. Accordingly, raw gas transmission from Custody Transfer Point (CTP) to processing facility located at a distance of ~1 KM & then treated gas transmission from processing facility to SNGPL Muhammadpur valve assembly located at a distance of ~24 KM would be Fatima's responsibility.

For the above mentioned purpose, PFL acquired services of Petrochemical Engineering Consultants (PEC) for hydraulic analysis of above described flow lines.

The Study includes the calculation of pressure drop, velocities and flow pattern in the flow lines in order to estimate the reception pressure of proposed gas processing facility.



Each flow line is sized at worst case scenario i-e maximum gas flow rate and minimum operating pressure which results in following design cases:

	<b>Gas flow rate MMSCFD</b>	<b>Inlet Pressure PSIG</b>
<b>Shallow Feeder Pipeline</b>	35	100
<b>Deep Feeder Pipeline</b>	110	700
<b>HRL Feeder Pipeline</b>	44	100
		<b>Outlet Pressure @ Muhammad Pur</b>
<b>Main Gas Pipeline</b>	126	1000 psig

Following line sizes are opted from hydraulic study based on above mentioned design basis:

1. For Shallow feeder line: NPS 12-inch
2. For Deep feeder line: NPS 12-inch
3. For HRL feeder line: NPS 12-inch
4. For Main gas line: NPS 16-inch

Following results are obtained when operating flow line at worst case scenario:

	<b>FEEDER LINE HYDRAULICS</b>			 Petrochemical Engineering Consultants
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	Shallow Feeder Pipeline	Deep Feeder Pipeline	HRL feeder line	Main Gas Pipeline
Flow line size, inches	12	12	12	16
Velocity, ft/sec	97.60	37.0096	103.9	16.26
Pressure drop, psi/100ft	0.3614	0.8181	0.52	0.1092
Flow Regime	SP-Turbulent	SP-Turbulent	SP-Turbulent	SP-Turbulent

## 2.0 STUDY BASIS

Hydraulic Analysis of flow line has been carried out using process software tool PIPESYS an extension of HYSYS software.



Data considered for Hydraulic Analysis is described below:

## 2.1 COMPOSITION

### • SHALLOW GAS

The gas composition used in hydraulic analysis for Shallow feeder pipeline is presented here under:

SHALLOW GAS	
COMPONENT	Mole%
C <sub>1</sub>	81.564
C <sub>2</sub>	1.055
C <sub>3</sub>	0.259
i-C <sub>4</sub>	0.070
n-C <sub>4</sub>	0.080
i-C <sub>5</sub>	0.040
n-C <sub>5</sub>	0.030
C <sub>6</sub> +	0.040
CO <sub>2</sub>	3.185
N <sub>2</sub>	13.231

	FEEDER LINE HYDRAULICS			
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Water	0.448
H <sub>2</sub> S	0.00

#### • DEEP GAS



The gas composition taken in hydraulic analysis for Deep feeder pipeline is presented here under:

DEEP GAS	
COMPONENT	Mole%
C <sub>1</sub>	38.871
C <sub>2</sub>	1.919
C <sub>3</sub>	0.356
i-C <sub>4</sub>	0.184
n-C <sub>4</sub>	0.156
i-C <sub>5</sub>	0.103
n-C <sub>5</sub>	0.048
C <sub>6</sub> +	0.041
CO <sub>2</sub>	45.32
N <sub>2</sub>	12.75
Water	0.246
H <sub>2</sub> S	0.00

#### • HRL GAS

The gas composition taken in hydraulic analysis for HRL feeder pipeline is presented here under:

DEEP GAS	
COMPONENT	Mole%
C <sub>1</sub>	70.55



	<b>FEEDER LINE HYDRAULICS</b>			
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C <sub>2</sub>	0.169
C <sub>3</sub>	0.00
i-C <sub>4</sub>	0.00
n-C <sub>4</sub>	0.00
i-C <sub>5</sub>	0.00
n-C <sub>5</sub>	0.00
C <sub>6</sub> +	0.00
CO <sub>2</sub>	10.99
N <sub>2</sub>	17.45
Water	0.82
H <sub>2</sub> S	0.00

• **MAIN GAS**

The gas composition taken in hydraulic analysis for main gas flow line is presented here under:

MAIN GAS	
COMPONENT	Mole%
C <sub>1</sub>	77.56
C <sub>2</sub>	1.32
C <sub>3</sub>	0.26
i-C <sub>4</sub>	0.11
n-C <sub>4</sub>	0.10
i-C <sub>5</sub>	0.06
n-C <sub>5</sub>	0.03
C <sub>6</sub> +	0.03
CO <sub>2</sub>	2.71

	FEEDER LINE HYDRAULICS			
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N <sub>2</sub>	17.79
Water	0.01
H <sub>2</sub> S	0.00

## 2.2 CASES

Different cases have been made in view of the pressure & flow variation in the future. Comparison based on pressure (Shallow, Deep & HRL) and volume (Main gas) is tabulated below.

### SHALLOW GAS



No.	Cases	Gas Flow Rate MMSCFD	Inlet Pressure, psig
1	Maximum	35	300
2	Minimum		100

### DEEP GAS

No.	Cases	Gas Flow Rate	Reception Pressure, psig
1	Maximum	110 MMSCFD	1200
2	Minimum		700

### HRL Gas

No.	Cases	Reception pressure @ Muhammad Pur	Gas Flow rate MMSCFD
1	Maximum	44 MMSCFD	150
2	Minimum		100

	<b>FEEDER LINE HYDRAULICS</b>			
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#### MAIN Gas

No.	Cases	Reception pressure @ Muhammad Pur	Gas Flow rate MMSCFD
1	Maximum	1000 PSIG	126
2	Minimum		35



### 3.0 FLOW LINE RESULTS

#### • SHALLOW GAS

NPS (inch)	Pressure at CMF-II (psig)	Pressure at Facility (psig)	Pressure Drop (psi/100 ft)
10"	300	285	0.3153
	100	52.55	0.8851
12"	300	294	0.1290
	100	82.02	0.3614

Governing scenario for line sizing will be at low pressure i.e. 100 psig Reception/ inlet pressure. Due to greater Pressure loss at 10 inch line size, 12" line size is selected for shallow gas feeder line.

Case	Gas Flow Rate	Line Size	Velocity	Flow Pattern
Case-1	35 MMSCFD	12"	19.62	SP-Turbulent
Case-2			97.60	SP-Turbulent

	<b>FEEDER LINE HYDRAULICS</b>			 Petrochemical Engineering Consultants
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• **DEEP GAS**



NPS (inch)	Pressure at CMF-II (psig)	Pressure at Facility (psig)	Pressure Drop (psi/100 ft)
10"	1200	1149	1.094
	700	600.8	2.013
12"	1200	1179	0.4448
	700	661	0.8181

Governing scenario for line sizing will be at low pressure i.e. 700 Psig Reception pressure. As there is less pressure losses in 12" deep feeder line that's why 12" line size is selected.

Case	Gas Flow Rate	Line Size	Flow Pattern	Velocity
Case-1	110 MMSCFD	12"	SP-Turbulent	20.096
Case-2			SP-Turbulent	37.0096

• **HRL GAS**

NPS (inch)	Pressure at CMF-II (psig)	Pressure at Facility (psig)	Pressure Drop (psi/100 ft)
10"	150	124.4	0.90
	100	57.6	1.48
12"	150	140.2	0.34
	100	85.2	0.52

	<b>FEEDER LINE HYDRAULICS</b>			
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Governing scenario for line sizing will be at low pressure i.e. 100 Psig Reception pressure. At low pressure scenario, pressure drop exceeds the allowable limit i.e. 1 psi/100ft. Moreover, velocity in 10-inch flow line also exceeds the allowable limit. It is suggested to opt. 12-inch flow line for transferring HRL gas to PFL facility.

Case	Gas Flow Rate	Line Size	Velocity	Flow Pattern
Case-1	44 MMSCFD	12"	66.71 ft/s	SP-Turbulent
Case-2			103.9ft/s	SP-Turbulent

#### • MAIN GAS

NPS (inch)	Pipe Schedule	Volume Flow rate	Pressure at PGPF Facility PSIG	Pressure Drop (psi/100 ft)
14"	40	35	1015	0.018
	40	126	1176	0.2176
16"	40	35	1010	0.009
	40	126	1100	0.1092

Governing scenario for line sizing will be at high flow rate i.e. 126 MMSCFD Volume flow rate. Both the line sizes are feasible but due to minor pressure drop in 16" line as compared to 14" line and expected future volumes, 16" line size is selected.

Case	Reception pressure at Muhammad Pur	Line Size	Flow Pattern	Velocity
Case-1	1000 PSIG	16"	SP-Turbulent	5.2 ft/s
Case-2			SP-Turbulent	16.26 ft/s



Petrochemical Engineering Consultants

Karachi-Pakistan

Hydraulic Simulation of Sales Gas Pipeline  
Mari Wei to Muhammad Pur SNGPL  
Phase-1 & Phase-2  
Fatima Fertilizers Limited

Eng	Chkd	Apvd	Date	Project	Rev
SS	IA	SMS	24-03-18	DC-001	0

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GENERAL

Current file name = H:\Fatima Fertilizers\Pipeline\Hydraulic\Hydraulic Analysis of Gas Pipeline-Phase-1.dat

Defaults : Compressible = Isothermal  
Two phase flow = Homogeneous  
Acceleration = Inverse  
Elevation den = Homogeneous  
Dukler hold-up = Dukler  
Atmospheric pres = 14.696 psi abs

To view/print : Font = Courier, Size 7-8  
Orientation = Landscape  
Margins = 1-2 cm.

Run message = Problem solution reached after 19 iterations.

NOTE - Close before running and viewing next results.

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PRESSURE PROFILE REPORT

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Circuit Feed 1

Number	Description	Flow t/h	Density lb/ft3	Visc cP	Dia in	Sch	Length m	dp/L psi/100ft	Velocity ft/s	Elev m	dPelev psi	dPin-out psi	Pin psig	Pout psig
SML/SUL	SML/SUL													
L1	Process line/pipe	53.12	4.62	0.0152	8	30	2,000	0.416	19.8	0	0	28.5	1,342	1,313
T1	Tee piece									0			1,342	1,313

Circuit Feed 2

Number	Description	Flow t/h	Density lb/ft3	Visc cP	Dia in	Sch	Length m	dp/L psi/100ft	Velocity ft/s	Elev m	dPelev psi	dPin-out psi	Pin psig	Pout psig
Mari Wel	Mari Deep													
L2	Process line/pipe	66.36	4.6	0.0154	12	30	2,000	0.0801	11.1	0	0	5.65	1,319	1,314
T1	Tee piece									0			1,319	1,314

Circuit T-Piece 1 : 3

Number	Description	Flow t/h	Density lb/ft3	Visc cP	Dia in	Sch	Length m	dp/L psi/100ft	Velocity ft/s	Elev m	dPelev psi	dPin-out psi	Pin psig	Pout psig
T1	Tee piece													
L3	Process line/pipe	119.5	4.58	0.0153	16	30	200	0.0777	12.6	0	0	0.875	1,314	1,313
Plant	Plant P.D.									0-0	0	30.0	1,313	1,283
L4	Fuel Gas Supply Pipeline	119.5	4.36	0.0153	16	30	25,000	0.0842	13.2	0	0	67.2	1,283	1,215
Metering	Metering									0-0	0	14.5	1,215	1,201
L5	Process line/pipe	119.5	4.19	0.0153	16	30	200	0.0849	13.8	0	0	0.897	1,201	1,200
SNGPL	Mohd. Pur SNGPL									0	0	0	1,200	1,200

NOTES - (1) dPElev and dPin-out represent DRAWING Inlet - Outlet.  
(2) dPfrictional + dPacccl = dPElev + dPin-out.  
(3) Vessel/Tank dPElev represent effect of fluid levels inside vessel.  
(4) Elev represent equipment or nozzle (vessel/tank) elevation.



PIPE LINE REPORT

Line number	L1	L2	L3	L4
Line name	Process line/pipe	Process line/pipe	Process line/pipe	Fuel Gas Supply Pipeline
LIQUID HOLOUP				
Liquid Fraction (vol)	0	0	0	0
Liquid Holdup (dp) (vol)	0	0	0	0
2-PHASE METHOD	Isothermal	Isothermal	Isothermal	Isothermal
FLOW REGIME				
Horizontal	-	-	-	-
Vertical-Up	-	-	-	-
Vertical-Down	-	-	-	-
HOMOGENEOUS/DUKLER				
Reynolds No	6.038E6	4.976E6	7.145E6	7.145E6
Friction factor	0.0142	0.01321	0.01259	0.01259
Friction factor (turb)	0.01403	0.01293	0.01236	0.01236
Dukler-2phase factor	1.00	1.00	1.00	1.00
density lb/ft3	0	0	0	0
LOCKHART-M/CHENOWETH-M				
Liquid-Re	0	0	0	0
f	0	0	0	0
Psi/Psi^2	0	0	0	0
Vapor-Re	0	0	0	0
f	0	0	0	0
Psi^2	0	0	0	0
X factor	0	0	0	0
FITTINGS				
	TYPE	TYPE	TYPE	TYPE
	Entrance	Entrance	Entrance	Entrance
	Exit	Exit	Exit	Exit
	Gate valve	Gate valve	Gate valve	Gate valve
	Globe valv	Globe valv	Globe valv	Globe valv
	Check	Check	Check	Check
	Stop-check	Stop-check	Stop-check	Stop-check
	Elbow	Elbow	Elbow	Elbow
	180 Bend	180 Bend	180 Bend	180 Bend
	T-Straight	T-Straight	T-Straight	T-Straight
	T-Branch	T-Branch	T-Branch	T-Branch
	Other	Other	Other	Other
	1.5	1.5	1.5	1.5
	400	400	256	200
	2,103	2,155	343	25,122
Total K				
Total L/D				
Equiv Length	m			

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PIPE LINE REPORT

Line number	L5
Line name	Process line/pipe
PROCESS DATA	
Temperature	C
Pressure	psig
Liq Fraction	wt
Total-Flow	t/h
Dens-NS	lb/ft3
Elev	lb/ft3
Visc-NS	CP
Vapor-Flow	t/h
Density	lb/ft3
Visc	CP
Mol wt	
Z	
Cp/Cv	
Liquid-Flow (wt)	t/h
Flow (vol)	m3/h
Density	lb/ft3
Visc	CP
PIPE DATA	
Size	in
Length	m
Schedule	
ID	in
Roughness (E-3)	in
Safety factor	
Sum of elev's	m
VELOCITY	
Velocity	ft/s
Sonic-Vapor adia	ft/s
Vapor isot	ft/s
PRESSURE DROP (In-Out)	
Overall	psi
Friction	psi
Accel'n	psi
Static	psi
dp/Length	psi/100ft
LINE SIZING	
dp/Length	psi/100ft
Velocity	ft/s
VelCoef	ft/s
Size-Larger/Small	in
dp/Length	psi/100ft
Velocity	ft/s

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PIPE LINE REPORT

Line number	L5	Process line/pipe
LIQUID HOLDUP		
Liquid Fraction (vol)	0	
Liquid Holdup(dp) (vol)	0	
2-PHASE METHOD	Isothermal	
FLOW REGIME		
Horizontal	-	
Vertical-Up	-	
Vertical-Down	-	
HOMOGENEOUS/DUKLER		
Reynolds No	7.145E6	
Friction factor	0.01259	
Friction factor (turb)	0.01236	
Dukler-2phase factor	1.00	
density lb/ft <sup>3</sup>	0	
LOCKHART-M/CHENOWETH-M		
Liquid-Re	0	
f	0	
Psi/Psi <sup>2</sup>	0	
Vapor-Re	0	
f	0	
Psi <sup>2</sup>	0	
X factor	0	
FITTINGS		
TYPE	No	L/D K
Entrance	1	0 0.5
Exit	1	0 1
Gate valve	2	8 0
Globe valv	0	340 0
Check	0	50 0
Stop-check	0	400 0
Elbow	6	14 0
180 Bend	0	50 0
T-Straight	2	20 0
T-Branch	1	60 0
Other		0 0
Total K	1.5	
Total L/D	200	
Equiv Length	m	322

NOTES - (1) d<sub>overall</sub> = d<sub>frictional</sub> + d<sub>paccel</sub> + d<sub>pstatic</sub>  
 (2) NS = NO slip or homogenous

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FEED SUMMARY

Number	Description	Elevation m	Density lb/ft3	Level m	Rel Elev m	Rel Pres psi	dP Level psi	dP Inlet psi	Pres psig
SML/SUL	SML/SUL	0	4.62	0	0	-	0	0	1.342
Mari Wel	Mari Deep	0	4.6	0	0	-	0	0	1.319

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PRODUCT SUMMARY

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Number	Description	Elevation m	Density lb/ft3	Level m	Rel Elev m	Rel Pres psi	dp Level psi	dp Inlet psi	pres psig
SNGPL	Mohd. Pur SNGPL	0	4.19	0	0	-	0	0	1,200

Hydraulic Simulation of Sales Gas Pipeli  
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T-PIECE SUMMARY

Number	Description	Service	Line	Spacing L/ID	Kc	Q/Qc	A/Ac	Pressure psig
T1	Tee piece	Combined	L3	0	0.552	1.0	1.0	1,314
		Manifold	L1					1,313
		Branch	L2					1,314

NOTES - (1) dP Inlet for Feed, Products and Vessels represent pressure to velocity conversion only, not friction.



# SUI NORTHERN GAS PIPELINES LIMITED

Ref: P&D /02- 12204

Dated: 10.09.2018

Mr. Ifthikhar Balg,  
Director - Business Development,  
Pakrab Fertilizers Limited,  
Head Office E-110, Khayaban-e-Jinnah,  
Lahore Cantt.

## **PROPOSAL FOR CONSTRUCTION OF PIPELINE FROM MPCL TO SNGPL NETWORK AT MUHAMMAD-PUR**

Please refer to your letter ref. No. Nil dated 16.08.2018 and subsequent meeting held at Head Office Lahore on 17.08.2018 regarding the subject matter.

We are pleased to submit our offer against the scope of work of subject project which is enclosed as Annexure-A. Our following offer is exclusive of all taxes and shall be charged in addition to this cost if applicable.

Sr. No.	Description	Unit Rate (Rs. Million/KM)	Total Cost (Rs. Million)
01.	16"dia x 24 Km pipeline with 0.312" / 0.344" / 0.510" / 0.695" WT from Gas Processing facility(GPF) at MPCL to Tie-in Point on SNGPL transmission network.	14	336
02.	02 Nos. 12"dia x 1.4 Km each with 0.590" / 0.394" WT Feeder pipelines MPCL Manifold to GPF	10	28
03.	01 No. 14"dia x 1.4 Km with 0.625" WT Feeder pipeline from MPCL Manifold to GPF	11	15.4
Total Cost			379.4

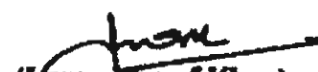
Above offer shall be valid up to 01.10.2018. Tentative completion time would be 90 days. In case of non completion of job within stipulated time of 90 days due to stoppages and hurdles by locals and non-clearance of ROW by M/s PFL due to community issues, SNGPL shall have the right to claim all such expenses of SNGPL's resources engaged at site from PFL beyond the stay of 90 days period. All the terms and conditions defined in the contract (to be signed after the acceptance of this offer letter) shall also remain enforced during the contract period.

Please send us your concurrence on this offer to move further.

Regards,

Yours sincerely,

SUI NORTHERN GAS PIPELINES LTD

  
(Imran Yousaf Khan)  
General Manager (P&D)  
For Managing Director

Encl: As Above.

**SCOPE OF WORK**  
**CONSTRUCTION OF 01 SALE GAS PIPELINE AND 03 FEEDER PIPELINES**  
**FOR PAKARAB FERTILIZERS LIMITED (PFL)**

**A- CONSTRUCTION**

1. ROW preparation / Leveling / Grading
2. Unloading of pipe at storage yard
3. Excavation / Trenching
4. Construction and Laying of 01 No. Sale Gas Line (16"dia x 24 Km) and 03 Nos. Feeder Lines (02 Nos. of 12"dia x 1.4 Km & 14"dia x 1.4 Km).
5. Hydrostatic Testing
6. Radiography & QA
7. Crossings, Sleeving, coating repair, laying, backfilling etc.
8. Dewatering
9. Hook up and metering station at end point.
10. Testing & Commissioning
11. Civil Protective Works
12. As-Built mark ups

**B- CATHODIC PROTECTION**

1. Installation and testing of Cathodic Protection System.

**NOTE:**

1. M/s PFL will provide all the detailed pipeline design drawings / construction drawings along with BOQ lists and detailed route maps.
2. M/s PFL shall provide an encumbered corridor of land (permanent and temporary) for ROW as well as working strip.
3. M/s PFL shall provide the material such as coated line pipe (three layer PE coated), valves & fittings, factory bends, heat shrinkable sleeves along with compatible primers, coating patches, repair kit, insulating joints / flanges, corrosion monitoring system, all metering gadgets, civil material etc.
4. M/s PFL shall provide all the material required to install CP system along with detailed design drawings.
5. M/s PFL shall timely provide / arrange all approvals for crossings (Nullah/Canal/River) from the concerned departments. Payment of crossing fees shall be made by PFL.
6. M/s PFL shall arrange availability of dehydrated gas as per ECC decision for commissioning of pipelines ( for purging and packing) at their cost.
7. M/s PFL shall ensure the minimum requirement of following metering gadgets at CTP drawing according to which SNGPL will construct the CTP station.  
 1)- Filter 0.5 Micron rating 2)- AGA-3 (latest edition) complaint orifice meter 3)- Flow computer 2 Nos. 4)- Gas Chromatograph 02 Nos. 5)- H2S analyzer 6)- Total Sulphur Analyzer 6)- Moisture Analyzer 7)- Oxygen Analyzer 8) - HCDP analyzer

OGRA-6(1)-NG(PFL)/2018

December 18, 2018

Mr. Saqib Aziz,  
Department Manager Business Development,  
Pakarab Fertilizers Limited,  
E-110, Khayaban-e-Jinnah Road,  
**LAHORE**

**Subject: PAKARAB FERTILIZERS LIMITED - APPLICATION FOR CONSTRUCTION & OPERATION OF PIPELINE FOR TRANSMISSION OF NATURAL GAS**

Dear Sir, *السلام علیکم*

Please refer to your letter No. PFL/OGRA/2018 dated November 09, 2018 on the subject noted above.

2. It is to inform that the information/data provided vide your subject letter has been examined by the concerned depts. However, your application is still devoid of the following data/information:-


- i. MoU/Letter of comfort/Non-disclosure Agreement with SNGPL
- ii. As per Hydraulic study report conducted on HYSYS Software the following pipelines has been recommended:-
  - a). Three 12" \* 870 meters long Pipelines from MPCL Custody Transfer point to processing Facility.
  - b). Main line 16" \* 24 Km long from processing Facility to SNGPL's Mahmudpur Valve Assembly.

You are required to provide a confirmation from the producer regarding construction and operation of the subject three gathering lines by them. It is to be noted that request for grant of license for construction and operation of 16" x 24 Km pipeline for transmission of natural Gas will be processed by OGRA.

- iii. Detailed break up of project cost as well as firm commitments of financing the said project from internal group and details of debt financing.
- iv. Copies of the agreement made with the financiers may also be provided.

3. In view of above, you are advised to furnish the above mentioned information / documents at an early stage, in order to proceed further in the matter, please.

Best Regards,

*for*   
(Abdul Basit Qureshi)  
Registrar  
(For & on behalf of the Authority)



*o/e*



# SUI NORTHERN GAS PIPELINES LIMITED

GAS HOUSE, 21 KASHMIR ROAD, P.O. BOX 56, LAHORE (PAKISTAN)

352

Ref. RA-TPA-02-19

January 09, 2019

Registrar,

Thru: Courier

Oil and Gas Regulatory Authority,  
54-Old ZTE Plaza, G-6/F-6,  
Near PIA Building, Fazal-e- Haq Road, Blue Area,  
Islamabad.

**Subject: ALLOCATION OF ADDITIONAL GAS PRODUCTION FROM MPCL'S EXISTING RESERVOIRS TO PAK ARAB FERTILIZER LIMITED (PEL)**

Dear Sir,  
السلام عليكم

Please find enclosed the Pakarab's letter No. PFL/SNGPL/2019 dated 05.01.2019 regarding the subject cited above; wherein PFL has requested SNGPL to issue a letter to OGRA stating that Gas Transportation Agreement (GTA) is being negotiated in order to issue the Transmission License.

In this context, it may please be noted that PFL has approached SNGPL for the purpose of Gas Transportation Agreement (GTA) for pipeline capacity allocation. It is highlighted that the first step for proceeding in respect of negotiation / finalization of GTA is the issuance of capacity allocation through First come First Serve basis, for which SOP has already been submitted to the Authority for approval vide our letter No. RA-TPA-01-19 dated 01-04-2019.

The definition of the Shipper in Third Party Access Rules (2018) is stated as below:

**Quote:**

"Shipper means a person holding a valid license issued by the Authority for transmission, distribution or sale of gas through an Access Arrangement for transportation of gas by utilizing capacity of gas pipeline transportation system above such threshold as may be specified in the Network Code".

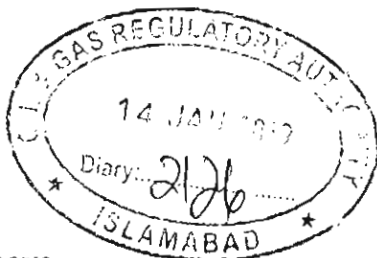
**Un-Quote**

We further understand that as per the above definition Access Arrangement / GTA can only be finalized once the PFL has a valid License issued by the Authority and capacity has been allocated to it as per TPA Rules.

Thanking you.

Yours Sincerely,  
SUI NORTHERN GAS PIPELINES LTD

(LIAQAT ALI)  
CHIEF OFFICER (RA)  
for MANAGING DIRECTOR



Encl: as above

Telephones Exch: { + (92-42) 99082000  
+ (92-42) 99082006

Telephones: { (92-42) 9920 1483

Fax: (92-42) 9920 4428

www.sngpl.com.pk



OHSA 18001 ISO 14001

Handwritten signatures and dates: 15/1/19, 16/1/19, 17/1/19

PFL/SNGPL/2019-  
January 05, 2019

The Managing Director  
Sui Northern Gas Pipelines Limited  
21-Kashmir Road  
Lahore

Subject: ALLOCATION OF ADDITIONAL GAS PRODUCTION FROM  
MPCL'S EXISTING RESERVOIRS TO PAKARAB FERTILIZERS  
LIMITED (PFL)

Reference: 1) ECC Decision dated 31.05.2018 Allocation of Additional Gas Production from MPCL's Existing Reservoirs to Pakarab Fertilizers Limited  
2) Our Letter Composition of MPCL Gas Fields (SML/SUL & Tipu) Allocated to Pakarab dated 10.07.2018  
3) Our Letter Gas Specification of SML/SUL & Goru B Wells and Pipeline Material NACE Compliance dated 28.09.2018  
4) DG Gas Letter Allocation of Additional Gas Production from MPCL's Existing Reservoir to Pakarab Fertilizers Ltd. dated 03.01.2019

Dear Sir,

We would refer to the meeting held under Chairmanship of Director General (Gas) on November 27, 2018 with representatives of PFL and SNGPL. PFL provided an update on the work completed including but not limited to the following:

- Managed all engineering and safety studies and reviews
- Managing extremely challenging ROW to expedite the construction
- Pipeline construction at PFL's own cost. Construction contract signed with SNGPL and work initiated
- Arrangement of 26 km pipeline and associated fittings / valves etc within very short period
- Managing all necessary approvals on fast-track including EIA, Railways, NHA etc

PFL has subsequently procured and installed necessary infrastructure facilities including compressors and dehydration plant etc.

During the meeting, SNGPL management apprised that adequate pipeline capacity from MPCL to PFL in SNGPL's existing system is available to cater to PFL. SNGPL is also willing to execute GTA in accordance with the ECC decision to transport allocated gases. TAPI pipeline is expected to intersect at Qasba Maral, which is approximately 18-20 km short of PFL plant site. SNGPL Team suggested to PFL to undertake a dedicated pipeline for this segment at its own cost. PFL hereby gives its concurrence to construct pipeline from Qasba Maral to Multan at its own cost provided TAPI Pipeline project is built.

PFL also informed the meeting that it had filed a Transmission License application with OGRA and one of the requirements is the execution of a GTA, however, OGRA would accept a letter from SNGPL stating that GTA is being negotiated in order to issue the Transmission License.

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SNGPL Team agreed to comply with such OGRA requirement and also negotiate Terms once Network Code is notified. ECC decision could be used as basis for this letter.

ECC decision states that SNGPL would supply minimum gas required along with Mari Shallow gas enabling the plant to operate. This arrangement would be for the interim period i.e. till full flow of comingled processed Mari gases.

SNGPL has indicated gas supply constraints in which case PFL would accept RLNG along with 35 mmcf/d Mari Shallow gas until 40 mmcf/d Goru-B gas comes online (expected mid-2019). RLNG to be provided under the same modalities approved by GoP for other fertilizer plants on SNGPL network (Agritech & Fatimafert) to provide a level playing field.

Pakistan Gas Network Code has been notified by OGRA as such you are requested to allocate pipeline capacity for transportation of above gases to PFL. The information required for capacity allocation under Article 2.4 of Network Code is as follows

Shipper	Pakarab Fertilizers Limited
Entry Point	SNGPL Valve assembly QV-2 at Muhammad Pur district Ghotki
Exit Point	PFL's manufacturing plant at Khanewal Road, Multan
Capacity Start Date	January 15, 2019
Capacity End Date	January 14, 2029
Capacity Duration	10 Years
Capacity Applied (MMSCFD)	35 MMSCFD
Capacity Requested (MMSCFD)	Firm Capacity
Use of Capacity	Gas Transportation for self-consumption to run the PFL Plant and allied equipment

Your kind directions on issuance of letter to OGRA stating that GTA is being negotiated are requested. We look forward to early finalization of capacity allocation enabling PFL to restart operations to provide much needed fertilizers to the farmers.

Thanking you,

Yours faithfully

For PAKARAB FERTILIZERS LIMITED

  
IFTIKHAR MAHMOOD BAIG  
(Director Business Development)

General Manager RA,  
SNGPL,  
Lahore

Subject: **LICENSE FOR CONSTRUCTION AND OPERATION OF PIPELINE FOR  
TRANSMISSION OF NATURAL GAS BY PFL**

Dear Sir,

Please refer to your letter No. RA-TPA-02-19 dated 9<sup>th</sup> January 2019 regarding subject cited above.

2. It is informed that OGRA grants a one-year conditional license to prospective shippers on the basis of MoU/Letter of comforts from LNG Suppliers, Terminal Operator, Sui companies and consumers. During this period of one year these agreements are formally executed and as such this point of time neither GTA nor capacity allocation is required. However, an MoU or Letter of comfort regarding undergoing negotiation is pre requisite for grant of license. Furthermore, OGRA has already responded SNGPL regarding their request for amendment in NWC.

Yours truly,

  
Registrar



PFL/OGRA/2019-  
February 12, 2019

The Registrar  
Oil and Gas Regulatory Authority (OGRA)  
1st Floor, 54-B, Fazal-e-Haq Road  
Islamabad

**Subject: PAKARAB FERTILIZERS LIMITED - APPLICATION FOR CONSTRUCTION & OPERATION OF PIPELINE FOR TRANSMISSION OF NATURAL GAS**

**Reference: Your letter No. OGRA-6(1)-NG(PFL)/2018 dated 18 December, 2018**

**Dear Sir,**

Fatima Fertilizer Company Limited (FFL) an associated company of PFL would provide financial support to complete the project as and when required.

As requested at point iii & iv of your above referred letter, we are pleased to enclose herewith:

- Project Cost breakup. Annex-A
- FFL Board Resolution. Annex-B
- FFL 3<sup>rd</sup> Quarterly Report 2018. Annex-C
- FFL Annual Report 2017. Annex-D

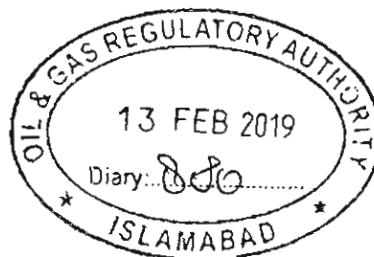
Should you require further information or clarification please contact us

**Thanking you,**

**Yours faithfully,  
For PAKARAB FERTILIZERS LIMITED**



**SAQIB AZIZ**  
(Department Manager Business Development)



*Handwritten notes and signatures:*  
 DR  
 13/2/19  
 L.O  
 13/2/19

(Annex-A)

## Project Cost Breakup

S.No.	Costing Head	Cost (MM US\$)
<b>1.0</b>	<b>Phase-1: (35 MMSCFD Mari Shallow Gas; Compression + Dehydration)</b>	
1.1	Engineering (Pipeline + Facility)	0.30
1.2	Front End Compressors	5.40
1.3	Pipeline	14.40
1.4	Construction, Facility Development, Utilities, DHU	4.50
1.5	Land	0.23
1.6	Contingency (5%)	0.45
<b>1.7</b>	<b>Sub Total</b>	<b>25.28</b>
<b>2.0</b>	<b>Phase-2: CO2 Removal facility for 35MMSCFD Shallow + 40 MMSCFD Deep Gas</b>	
2.1	Engineering	1.00
2.2	Acid Gas Removal System	27.50
2.3	Mari Deep Pipeline (Feeder Line)	1.50
2.4	Utilities & Off-sites	4.50
2.5	Facility Development + Control System	5.20
2.6	Plant Construction	4.50
2.7	Scope Contingency (5%)	2.21
<b>2.8</b>	<b>Sub Total</b>	<b>46.41</b>
<b>3.0</b>	<b>Total (Phase-1 + Phase-2)</b>	<b>71.69</b>



**EXTRACT OF RESOLUTION THROUGH CIRCULATION PASSED BY THE BOARD OF DIRECTORS OF M/S FATIMA FERTILIZER COMPANY LIMITED (THE "COMPANY") ON FEBRUARY 6, 2019**

Whereas, pursuant to the decision of ECC of the Cabinet vide case No. ECC-43/10/2018 dated May 17, 2018 regarding allocation of additional gas production from Mari Petroleum Company Limited's existing reservoirs to Pakarab Fertilizers Limited, the associated company namely Pakarab Fertilizers Limited (PFL) has applied to Oil and Gas Regulatory Authority (OGRA) for construction and operation of pipeline for transmission of natural gas;

And whereas, OGRA has required PFL to provide information about source of financing of this project which PFL intends to arrange through internal group resources and debt financing (if required) and has requested Fatima Fertilizer Company Limited to confirm the same to OGRA as required;

**Now, Therefore, Be it Resolved**, that Board of Directors of Fatima Fertilizer Company Limited hereby confirms to provide financial support, as and when needed, for processing and transportation of natural gas from Mari Petroleum Company Limited to Pakarab Fertilizers Limited Multan as already approved by the ECC of the Cabinet.

**Resolved further**, that the Chief Executive Officer and Chief Financial Officer of the Company be and are each hereby authorized, directed and empowered singly to do all such acts as may be necessary for carrying out the purposes aforesaid and to give full effect to this resolution.

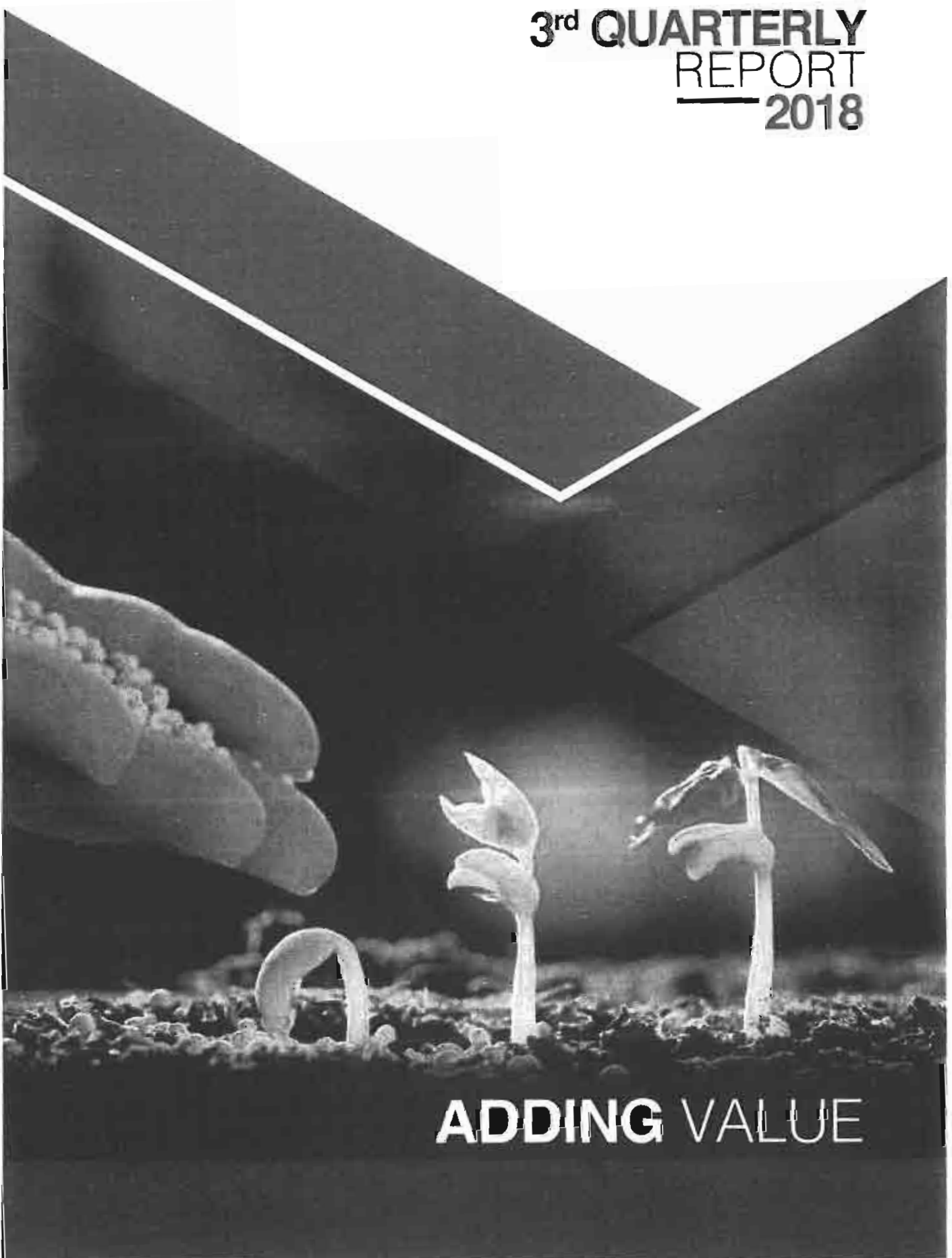
**CERTIFIED TRUE COPY**

I hereby certify that the above resolution was duly passed through circulation by the Board of Directors on February 6, 2019.

  
COMPANY SECRETARY



# 3<sup>rd</sup> QUARTERLY REPORT — 2018



**ADDING VALUE**



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# 36 Company Information

## Board of Directors

Mr. Arif Habib

*Chairman*

Mr. Fawad Ahmed Mukhtar

*Chief Executive Officer*

Mr. Fazal Ahmed Sheikh

*Director*

Mr. Faisal Ahmed Mukhtar

*Director*

Mr. M. Abad Khan

*Director*

Mr. Muhammad Kashif Habib

*Director*

Ms. Anja E. Nielsen

*Independent Director*

Mr. Tariq Jamali

*Nominee Director - NBP*

## Director Finance & Chief Financial Officer

Mr. Asad Murad

## Company Secretary

Mr. Ausaf Ali Qureshi

*(communications@fatima-group.com)*

## Key Management

Mr. Arif-ur-Rehman

*Chief Manufacturing Officer*

Mr. Rehman Hanif

*Plant Manager*

Ms. Sadia Irfan

*Director HR*

Mr. Iftikhar Mahmood Baig

*Director Business Development*

Mr. Ahsen-ud-Din

*Director Technology Division*

Sardar Naufil Mahmud

*Chief Information Officer*

Mr. Salman Ahmad

*Head of Internal Audit*

Mr. Aftab Khan

*Chief Supply Chain Officer*

Mr. Faisal Jamal

*Corporate HSE Manager*

## Audit Committee Members

Mr. Muhammad Kashif Habib

*Chairman*

Ms. Anja E. Nielsen

*Member*

Mr. Faisal Ahmed Mukhtar

*Member*

Mr. M. Abad Khan

*Member*

Mr. Tariq Jamali

*Member*

## HR and Remuneration Committee Members

Mr. M. Abad Khan

*Chairman*

Ms. Anja E. Nielsen

*Member*

Mr. Muhammad Kashif Habib

*Member*

Mr. Faisal Ahmed Mukhtar

*Member*

**Legal Advisors**

M/s. Chima & Ibrahim Advocates  
1-A/245, Tufail Road, Lahore-Cantt

**Auditors**

M/s. Deloitte Yousuf Adil  
Chartered Accountants, Lahore  
(A member firm of Deloitte Touche  
Tohmatsu Limited)  
134-A, Abu Bakar Block, New Garden  
Town, Lahore  
Tel: +92 42 3591 3595-7  
+92 42 3544 0520  
Fax: +92 42 3544 0521  
Web: www.deloitte.com.pk

**Registrar and Share Transfer Agent**

Central Depository Company of  
Pakistan Limited  
Share Registrar Department, CDC  
House, 99-B, Block 'B',  
S.M.C.H.S., Main Shahra-e-Faisal,  
Karachi-74400  
Tel: Customer Support Services  
(Toll Free) 0800-CDCPL (23275)  
Fax: (92-21) 3432 6053  
Email: info@cdcpak.com  
Website: www.cdcpakistan.com

**Bankers**

Allied Bank Limited  
Askari Bank Limited  
Bank Alfalah Limited  
Bank Al-Habib Limited  
Bank Islami Pakistan Limited  
Citibank N.A.  
Faysal Bank Limited  
Habib Bank Limited  
Habib Metropolitan Bank Limited  
MCB Bank Limited  
Meezan Bank Limited  
National Bank of Pakistan  
Sindh Bank Limited  
Soneri Bank Limited  
Standard Chartered Bank (Pakistan)  
Limited  
Standard Chartered Bank, United  
Kingdom

Summit Bank Limited  
The Bank of Khyber  
The Bank of Punjab  
United Bank Limited

**Registered Office / Head Office**

E-110, Khayaban-e-Jinnah,  
Lahore Cantt., Pakistan  
UAN: 111-FATIMA (111-328-462)  
Fax: +92 42 3662 1389

**Plant Site**

Mukhtar Garh, Sadiqabad, Distt.  
Rahim Yar Khan, Pakistan  
Tel: 068 – 5951000  
Fax: 068 – 5951166

# 363 Directors' Report

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**Dear Shareholders,**

On behalf of the Board of Directors of Fatima Fertilizer Company Limited, we are pleased to present the un-audited financial statements of the Company for the nine months ended September 30, 2018 along with brief overview of operational and financial performance of the Company.

## **Market Overview - Global**

During the quarter major demand for Urea in Asia originated from India and Thailand while other Southeast Asian countries purchased small lots mostly from Indonesia, Malaysia and China including re-export tonnes. Petronas in Malaysia was shut down for maintenance while Indonesia did several spot sales during the quarter, but its producers continued to have issues with export licenses. Domestic production in Bangladesh and Pakistan was, however hit by gas supply shortages.

Phosphates import demand in the third quarter has spiked, especially from India and Pakistan. In India, buyers have purchased record volumes of DAP following a good monsoon. It is estimated that India has bought around 5 million MT of DAP so far. Chinese producers refocused on the export market with steady shipments to regions with high demand, especially, India, Pakistan, Southeast Asia and Latin America, as domestic DAP/MAP prices remained low.

## **Market Overview - Pakistan**

Domestic production for the current quarter of the year remained almost at par with last year. Due to both, continued shut down of fertilizer plants on SNGPL network and improved offtake of 1.40 million MT from 1.27 million MT versus comparative period last year, Government was forced to import 0.1 million MT of Urea to ensure availability in the market. Towards the end of current quarter, the Government while appreciating the need for revival of local industry has started operating SNGPL Network based plants, Fatimafert and Agritech, after resumption of gas supplies but at much higher than normal gas rates.

The industry's DAP production and imports for the current quarter grew by almost 11% to 880K MT from 796K MT last year. However, offtake dipped by 26% to 554K MT from 749K MT last year which is expected to recover in the 4<sup>th</sup> quarter.

## **Company Performance**

With 6% increase in overall sales volumes, the Company achieved its highest ever sales volume in first nine months of a year. NP and Urea achieved volume growths of 12% and 9% respectively compared to corresponding nine-month period of last year, while sales of CAN remained at par.

## Sales Volume

Products	("000" Tons)	
Urea	423	389
CAN	407	405
NP	297	266
Total	1,127	1,060

With sustained and reliable plant operations, production volume for the nine-month period of current year was 12% higher than the comparative period last year, where the plant remained shut-down for 27 days for Turnaround in 2017.

## Production Volume

Products	("000" Tons)	
Ammonia	436	394
Nitric Acid	387	356
Urea	367	338
CAN	358	323
NP	314	264

The total revenue generated amounted to PKR 34.5 billion against PKR 26.1 billion posted in same period last year due to increase in sales volumes and stable fertilizer prices in the market.

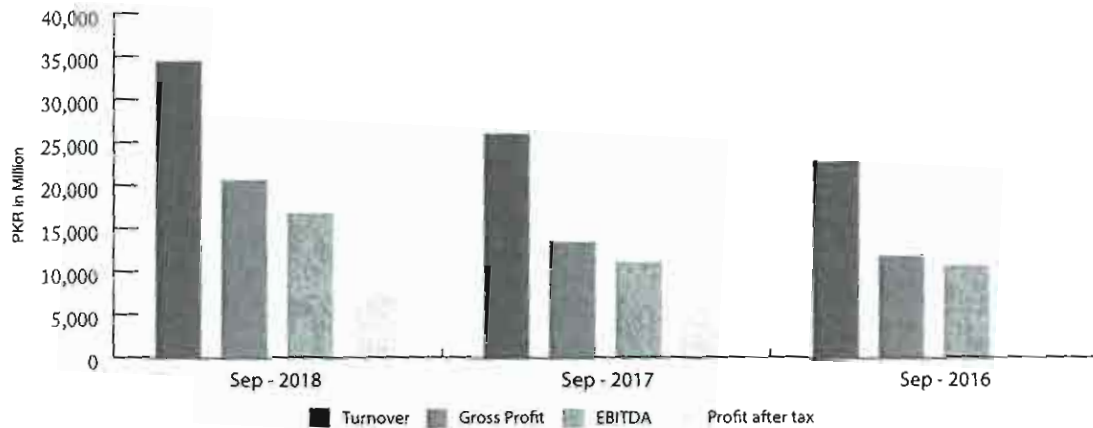
In addition, effective and efficient resource utilization, improved plant efficiencies and firm product prices translated into increased Gross Profit for the period under review which achieved PKR 20.7 billion from PKR 13.5 billion achieved during comparative period last year.

Distribution cost increased by 35% owing to increased sales volumes and extensive advertisement and sales promotion activities. Administrative expenses increased by 22% mainly due to higher CSR contribution, while finance costs receded by 40% due to scheduled loan repayments and reduced reliance on working capital lines due to improved liquidity situation.

Resultantly, the Company has posted Profit Before Tax of PKR 14.5 billion and After Tax Profit of PKR 9.4 billion, compared to PKR 8.2 billion and PKR 6.7 billion respectively posted for comparative period last year. Company's Earnings Per Share (EPS) stood at PKR 4.49 against PKR 3.18 in the corresponding period last year.

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## Financial Performance



Fatima Plant Site has achieved combined 45.80 million safe man-hours by September 30, 2018. Our state of the art plant safety management systems received admiration from participants across the globe when a paper titled "Achieving Excellence in PSM at Fatima" was presented at American Institute of Chemical Engineer's Conference (AIChE-2018) in Canada.

### Consolidated Financial Results

Due to non-availability of gas at viable rates, Fatimafert (FF) had to remain shut down during the period under review. However, after resumption of gas supply, the plant has started operations in October 2018. Hopefully the sustained operations during the fourth quarter of the year will further augment the bottom line of the consolidated results of the Company.

Summary of consolidated financial results for the nine months ended September 30, 2018 is as follows:

	PKR in Million
Sale	35,566
Gross Profit	20,082
Profit Before Tax	13,233
Profit After Tax	8,468

### Future Outlook

For the purpose of business expansion and consolidation of fertilizer operations of the wholly owned subsidiary – Fatimafert Limited and associated company – Pakarab Fertilizers Limited, the Board of Directors in their meeting held on October 15, 2018, have decided to amalgamate Fatimafert Limited and acquire the production and operating plants of Pakarab Fertilizers Limited. The move is expected to maximize the benefits of synergies and cost

efficiencies to the shareholders of the Company. As per preliminary assessment, acquisition of Pakarab plants will increase Earning Per Share by PKR 1 (One) for shareholders of Fatima Fertilizer. With continued operations of all the production plants, the operating prowess of the Company will catapult to 2,572,400 MT from the existing 1,280,000 MT.

Future Name Plate Capacity of Fatima Fertilizer (MT)				
	Urea	CAN	NP	Total
Fatima Fertilizer – Current Capacity	500,000	420,000	360,000	1,280,000
From Amalgamation of Fatimafert	445,500	–	–	445,500
From Acquisition of Assets from Pakarab	92,400	450,000	304,500	846,900
Fatima Fertilizer – Future Capacity	1,037,900	870,000	664,500	2,572,400

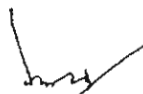
The decision will be presented for approval of the shareholders in the Extraordinary General Meeting of Shareholders to be held on November 19, 2018.

With its strong financial and liquidity position, your Company is considering various additional initiatives from within and outside fertilizer sector to further add value for its stakeholders. Some of these initiatives including the above will be finalized soon that will lead to incremental values for the stakeholders of the Company in the coming years.

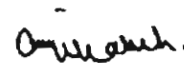
### Acknowledgements

The Board places on record its gratitude for the hard work and dedication of every employee of the Company. The Board also appreciates and acknowledges the assistance, guidance and cooperation of all stakeholders including the Government of Pakistan, financial institutions, commercial banks, business associates, customers and all others whose efforts and contributions strengthened the Company.

For and on behalf of the Board



Fawad Ahmed Mukhtar  
Chief Executive Officer



Arif Habib  
Chairman

Lahore  
October 30, 2018



**Fatima Fertilizer Company Limited**  
**Condensed Interim**  
**Financial Statements**

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for the nine months ended September 30, 2018

# Condensed Interim Statement of Financial Position

As at September 30, 2018

		Un audited September 30, 2018	Audited December 31, 2017
	Note	(Rupees in thousand)	
<b>EQUITY AND LIABILITIES</b>			
<b>CAPITAL AND RESERVES</b>			
Authorized share capital			
2,500,000,000 (December 31, 2017: 2,500,000,000)			
shares of Rs. 10 each		25,000,000	25,000,000
Issued, subscribed and paid up share capital			
2,100,000,000 (December 31, 2017: 2,100,000,000)			
ordinary shares of Rs. 10 each		21,000,000	21,000,000
Reserves	4	37,455,464	32,741,792
		58,455,464	53,741,792
<b>NON CURRENT LIABILITIES</b>			
Long term finances	5	8,044,500	10,774,286
Deferred liabilities	6	16,212,557	15,763,775
Long term deposits		48,670	51,269
		24,305,727	26,589,330
<b>CURRENT LIABILITIES</b>			
Trade and other payables		15,875,191	11,459,546
Accrued finance cost		369,358	167,823
Short term finances - secured	7	1,167,674	1,725,938
Current maturity of long term finances	5	5,598,500	5,652,048
		23,010,723	19,005,355
<b>CONTINGENCIES &amp; COMMITMENTS</b>	8		
		105,771,914	99,336,477

The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim financial statements.

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		Un audited September 30, 2018	Audited December 31, 2017
	Note	(Rupees in thousand)	
<b>ASSETS</b>			
<b>NON CURRENT ASSETS</b>			
Property, plant and equipment	9	74,595,576	72,989,957
Intangible assets	10	34,950	38,196
		74,630,526	73,028,153
Long term investments		2,240,359	2,238,400
Long term loan to associated company		2,499,000	2,999,000
Long term deposits		254,498	114,217
		79,624,383	78,379,770
<b>CURRENT ASSETS</b>			
Stores and spares	11	5,217,835	4,745,061
Stock in trade	12	3,775,271	3,813,626
Trade debts		1,665,376	1,796,351
Short term loans		7,241,723	3,966,888
Advances, deposits, prepayments and other receivables		7,467,776	5,626,723
Short term investment - available for sale		197,302	198,113
Cash and bank balances		582,248	809,945
		26,147,531	20,956,707
		105,771,914	99,336,477

  
Chief Executive Officer

  
Director

  
Chief Financial Officer

**Condensed Interim Statement of Profit or Loss (Un Audited)**

For the nine months ended September 30, 2018

	Note	Three months ended		Nine months ended	
		September 30, 2018	September 30, 2017 (Rupees in thousand)	September 30, 2018	September 30, 2017
Sales	13	11,409,902	8,386,617	34,511,124	26,078,355
Cost of sales	14	(4,398,154)	(3,693,851)	(13,740,654)	(12,528,970)
<b>Gross profit</b>		<b>7,011,748</b>	<b>4,692,766</b>	<b>20,770,470</b>	<b>13,549,385</b>
Distribution cost		(880,614)	(880,561)	(3,231,180)	(2,398,132)
Administrative expenses		(393,125)	(323,649)	(1,408,217)	(1,153,720)
		<b>5,738,009</b>	<b>3,488,556</b>	<b>16,131,073</b>	<b>9,997,533</b>
Finance cost	15	(328,446)	(558,550)	(968,730)	(1,607,588)
Other operating expenses		(445,018)	(185,480)	(1,239,312)	(533,219)
		<b>4,964,545</b>	<b>2,744,526</b>	<b>13,923,031</b>	<b>7,856,726</b>
Other income		234,612	112,486	588,534	371,474
<b>Profit before tax</b>		<b>5,199,157</b>	<b>2,857,012</b>	<b>14,511,565</b>	<b>8,228,200</b>
Taxation		(2,096,645)	(473,525)	(5,072,381)	(1,553,723)
<b>Profit for the period</b>		<b>3,102,512</b>	<b>2,383,487</b>	<b>9,439,184</b>	<b>6,674,477</b>
<b>Earnings per share</b>					
- basic and diluted (Rupees)	17	1.48	1.13	4.49	3.18

The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim financial statements.

  
 Chief Executive Officer

  
 Director

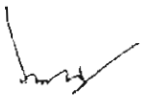
  
 Chief Financial Officer

# Condensed Interim Statement of Comprehensive Income (Un Audited)

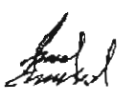
For the nine months ended September 30, 2018

	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017 (Rupees in thousand)	September 30, 2018	September 30, 2017
Profit for the period	3,102,512	2,383,487	9,439,184	6,674,477
<b>Other comprehensive Income</b>				
Items that may be reclassified subsequently to profit or loss:				
Deficit on remeasurement of investments classified as available for sale	—	—	(731)	—
Related tax thereon	—	—	219	—
Other comprehensive Income	—	—	(512)	—
<b>Total comprehensive income for the period</b>	<b>3,102,512</b>	<b>2,383,487</b>	<b>9,438,672</b>	<b>6,674,477</b>

The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim financial statements.

  
Chief Executive Officer

  
Director

  
Chief Financial Officer

# Condensed Interim Statement of Changes in Equity


For the nine months ended September 30, 2018

	Ordinary share capital	Share premium	Unappropriated profit	Post retirement benefit obligation reserve	Surplus / (deficit) on remeasurement of investment available for sale	Total
(Rupees in thousand)						
Balance at December 31, 2016 (Audited)	21,000,000	1,790,000	24,626,089	(42,418)	345	47,374,016
Profit for the period	-	-	6,674,477	-	-	6,674,477
Other comprehensive income	-	-	-	-	-	-
Total comprehensive income	-	-	6,674,477	-	-	6,674,477
Transactions with owners:						
- Final dividend for the year ended December 31, 2016 @ Rs 2 per share	-	-	(4,200,000)	-	-	(4,200,000)
	21,000,000	1,790,000	27,100,566	(42,418)	345	49,848,493
Balance at December 31, 2017 (Audited)	21,000,000	1,790,000	31,002,102	(49,073)	(1,237)	53,741,792
Profit for the period	-	-	9,439,184	-	-	9,439,184
Other comprehensive income	-	-	-	-	(512)	(512)
Total comprehensive income	-	-	9,439,184	-	(512)	9,438,672
Transactions with owners:						
- Final dividend for the year ended December 31, 2017 @ Rs 2.25 per share	-	-	(4,725,000)	-	-	(4,725,000)
	21,000,000	1,790,000	35,716,286	(49,073)	(1,749)	58,455,464

The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim financial statements.



Chief Executive Officer



Director



Chief Financial Officer

# Condensed Interim Statement of Cash Flows (Un Audited)

For the nine months ended September 30, 2018

		September 30, 2018	September 30, 2017
	Note	(Rupees in thousand)	
<b>Cash flows from operating activities</b>			
Cash generated from operations	18	16,529,280	8,871,939
Net (decrease) / increase in long term deposits		(2,599)	3,915
Finance cost paid		(767,195)	(1,341,582)
Taxes paid		(1,580,249)	(716,675)
Employee retirement benefits paid		(26,158)	(40,787)
		14,153,079	6,776,810
<b>Cash flows from investing activities</b>			
Additions in property, plant and equipment		(3,049,034)	(1,450,112)
Additions in intangible assets		(7,119)	(966)
Long term investment		(1,959)	-
Short term loans to associated companies - net		(3,274,835)	(779,400)
Proceeds from disposal of property plant and equipment		605	2,037
Net increase in long term deposits		(140,282)	(5,509)
Proceeds from short term investment		80	80
Profit received on short term loan and saving accounts		292,046	376,620
		(6,180,498)	(1,857,250)
<b>Cash flows from financing activities</b>			
Repayment of long term finances		(2,967,630)	(2,866,184)
Dividend paid		(4,674,384)	(4,199,239)
Refund of over-subscribed Sukuk		-	(8,092,675)
Decrease in short term finance - net		(558,264)	(345,800)
<b>Net cash used in financing activities</b>		<b>(8,200,278)</b>	<b>(15,503,898)</b>
		(227,697)	(10,584,338)
		809,945	11,099,884
		582,248	515,546

The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim financial statements.

  
Chief Executive Officer

  
Director

  
Chief Financial Officer

## Notes to and Forming Part of the Condensed Interim Financial Statements (Un audited)

For the nine months ended September 30, 2018

### 1. Legal Status and nature of business

Fatima Fertilizer Company Limited ('the Company'), was incorporated in Pakistan on December 24, 2003 as a public company under the Companies Ordinance, 1984. The Company is listed on Pakistan Stock Exchange.

The principal activity of the Company is manufacturing, producing, buying, selling, importing and exporting fertilizers and chemicals. Registered office of the Company is situated at E-110, Khayaban-e-Jinnah, Lahore Cantt. The manufacturing facility of the Company is located at Mukhtargarh, Sadiqabad, Pakistan.

These condensed interim financial statements are the separate financial statements of the Company in which investments in subsidiary company and associates are accounted for on the basis of actual cost incurred to acquire subsidiaries or associates rather than on the basis of reported result. Consolidated financial statements are prepared separately.

### 2. Basis of preparation

- 2.1 These condensed interim financial statements of the Company for the nine months ended September 30, 2018 have been prepared in accordance with the requirements of the International Accounting Standard - 34: "Interim Financial Reporting" and provisions of and directives issued under the Companies Act, 2017. In case where requirements differ, the provisions or directives issued under the Companies Act, 2017 have been followed.
- 2.2 These condensed interim financial statements do not include all the information required for full annual financial statements and should be read in conjunction with the annual financial statements of the Company for the year ended December 31, 2017. Comparative condensed interim statement of financial position is extracted from annual audited financial statements for the year ended December 31, 2017 and comparative condensed interim statement of profit or loss, condensed interim statement of comprehensive income, condensed interim statement of changes in equity and condensed interim statement of cash flows are extracted from un audited condensed interim financial statements for the nine months ended September 30, 2017.
- 2.3 These condensed interim financial statements are presented in Pak Rupees, which is the Company's functional and presentation currency.

### 3. Accounting policies and estimates

The accounting policies, related judgments, estimates and related assumptions adopted for the preparation of these condensed interim financial statements are the same as those applied in the preparation of annual financial statements of the Company for the year ended December 31, 2017.

		Un audited September 30, 2018	Audited December 31, 2017
	Note	(Rupees in thousand)	
<b>4. Reserves</b>			
<b>Capital reserve:</b>			
Share premium		1,790,000	1,790,000
<b>Revenue reserve:</b>			
Unappropriated profit		35,716,286	31,002,102
Post retirement benefit obligation reserve		(49,073)	(49,073)
Deficit on remeasurement of investment - available for sale		(1,749)	(1,237)
		<b>37,455,464</b>	<b>32,741,792</b>
<b>5. Long term finances</b>			
Rated, listed and secured Ijarah Sukuk Certificates		7,350,000	8,400,000
Secured loans from banking companies/ financial institutions		6,293,000	8,026,334
		<b>13,643,000</b>	<b>16,426,334</b>
Less: Current portion		5,598,500	5,652,048
		<b>8,044,500</b>	<b>10,774,286</b>
<b>5.1 Movement of long term finances</b>			
Opening balance		16,426,334	21,860,759
Repayments		(2,967,630)	(5,518,025)
Exchange loss on translation of foreign currency loan		184,296	83,600
Closing Balance		<b>13,643,000</b>	<b>16,426,334</b>
<b>6. Deferred liabilities</b>			
Deferred taxation	6.1	15,642,716	15,246,794
Employee retirement benefits	6.2	569,841	516,981
		<b>16,212,557</b>	<b>15,763,775</b>

# Notes to and Forming Part of the Condensed Interim Financial Statements (Un audited)

For the nine months ended September 30, 2018

## September 30, 2018 (Un audited)

2017	profit and loss	comprehensive income	2018
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Accelerated tax depreciation	15,319,359	396,025	—	15,715,384
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Provision for retirement benefits	(50,541)	116	—	(50,425)
Remeasurement of short term				
Investment - Available for sale	(530)	—	(219)	(749)
Remeasurement of defined				
benefit obligation	(21,494)	—	—	(21,494)
	(72,565)	116	(219)	(72,668)
	15,246,794	396,141	(219)	15,642,716

## December 31, 2017 (Audited)

2016	profit and loss	comprehensive income	2017
------	-----------------	----------------------	------

Accelerated tax depreciation	15,279,998	39,361	—	15,319,359
Remeasurement of short term				
Investment - Available for Sale	155	—	(685)	(530)
	15,280,153	39,361	(685)	15,318,829

Provision for retirement benefits	(34,528)	(16,013)	—	(50,541)
Remeasurement of defined				
benefit obligation	(19,541)	—	(1,953)	(21,494)
	(54,069)	(16,013)	(1,953)	(72,035)
	15,226,084	23,348	(2,638)	15,246,794

	Un audited September 30, 2018	Audited December 31, 2017
	(Rupees in thousand)	
<b>6.2 Employee retirement benefits</b>		
Gratuity	393,705	348,551
Accumulating compensated absences	176,136	168,430
	<b>569,841</b>	<b>516,981</b>

## 7. Short term finances

The Company has obtained short term financing facilities from various banks for working capital requirements in the nature of Running Finance, Cash Finance and Finance against Imported Merchandise.

These facilities are secured by Pari Passu charge on present and future current assets of the Company with 25% margin over financed amount, pledge of raw material and finished goods and personal guarantees of sponsoring directors.

The facilities carry mark up ranging from 5.78% to 9.01% (December 31, 2017: 5.78% to 7.29%) per annum for Running Finance and 6.81% to 7.25% (December 31, 2017: 6.34% to 7.28%) per annum for Cash Finance

## 8. Contingencies and commitments:

### 8.1 Contingencies

As at September 30, 2018, there is no material change in the status of contingencies as reported in the notes to the financial statements of the Company for the year ended December 31, 2017.

	Un audited September 30, 2018	Audited December 31, 2017
	(Rupees in thousand)	
<b>8.2 Commitments in respect of:</b>		
(i) Contracts for capital expenditure	1,634,556	1,130,885
(ii) Contracts for other than capital expenditure	138,091	828,532
(iii) The amount of future payments under non-cancellable operating leases:		
Not later than one year	226,539	294,355
Later than one year but not later than five years	195,832	243,516
	<b>422,371</b>	<b>537,871</b>

# Notes to and Forming Part of the Condensed Interim Financial Statements (Un audited) For the nine months ended September 30, 2018

	Note	Un audited September 30, 2018	Audited December 31, 2017
		(Rupees in thousand)	
<b>9. Property, plant and equipment</b>			
Operating fixed assets - tangible	9.1	71,183,215	70,142,753
Capital work in progress	9.2	3,412,361	2,847,204
		<b>74,595,576</b>	<b>72,989,957</b>
<b>9.1 Movement of operating fixed assets - tangible</b>			
Opening book value		70,142,753	70,493,773
Add: additions during the period	9.1.1	2,483,877	1,477,699
Less: book value of disposals during the period		—	856
		<b>72,626,630</b>	<b>71,970,616</b>
Less: depreciation charged during the period		1,443,415	1,827,863
Closing book value		<b>71,183,215</b>	<b>70,142,753</b>
Freehold land		—	5,259
Building on freehold land		95,234	501,713
Building on leasehold land		30,445	—
Plant and machinery		656,621	817,077
Air craft		1,567,285	—
Furniture and fixtures		7,850	4,602
Office equipment		3,164	6,429
Electric installations and appliances		39,667	88,375
Computers		48,073	34,818
Vehicles		35,538	19,426
		<b>2,483,877</b>	<b>1,477,699</b>
Civil works		336,739	271,528
Plant and machinery		1,356,214	1,509,257
Capital stores		346,109	341,212
Advances:			
- Freehold land		187,879	158,958
- Civil works		3,351	6,143
- Plant and machinery		882,069	260,106
- Other advances		300,000	300,000
		<b>1,373,299</b>	<b>725,207</b>
		<b>3,412,361</b>	<b>2,847,204</b>

	Un audited September 30, 2018	Audited December 31, 2017
(Rupees in thousand)		
<b>Movement of capital work in progress</b>		
Opening balance	2,847,204	2,447,601
Additions during the period	1,236,089	1,538,614
	4,083,293	3,986,215
Less: Capitalization during the period	670,932	1,139,011
Closing balance	3,412,361	2,847,204
<b>10. Intangible assets</b>		
Opening book value	38,196	17,909
Add: additions during the period	7,119	29,383
	45,315	47,292
Less: amortization charged during the period	10,365	9,096
Closing book value	34,950	38,196
<b>11. Stores and spares</b>		
Stores	222,699	218,082
Spares	3,846,477	3,578,721
Catalyst and chemicals	1,148,659	948,258
	5,217,835	4,745,061
<b>12. Stock in trade</b>		
Raw material {including in transit Rs 561.981 million (December 31, 2017: Rs 376.952 million)}	1,599,749	1,348,958
Packing material	8,543	3,543
<b>Mid Products</b>		
Ammonia	15,939	6,362
Nitric Acid	13,578	3,360
Others	416	394
	29,933	10,116
<b>Finished goods</b>		
Urea	720,802	1,212,219
NP	964,186	538,127
CAN	368,961	631,772
Certified emission reductions	83,097	68,891
	2,137,046	2,451,009
	3,775,271	3,813,626

## Notes to and Forming Part of the Condensed Interim Financial Statements (Un audited)

For the nine months ended September 30, 2018

	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
(Rupees in thousand)				
<b>13. Sales</b>				
Fertilizer Products				
- Local Sales	11,541,015	6,910,752	33,063,927	23,501,101
- Export Sales	14,151	1,686,810	1,470,159	2,009,430
Subsidy from Government of Pakistan	—	140,265	270,655	1,845,868
Mid products	124,436	45,206	300,988	174,197
Certified emission reductions	—	—	—	82,924
	11,679,602	8,783,033	35,105,729	27,613,520
Less : Discounts	269,700	396,416	594,605	1,535,165
	11,409,902	8,386,617	34,511,124	26,078,355

13.1 Sales are exclusive of sales tax of Rs 1,827.577 million (September 30, 2017: Rs 2,992.742 million).

	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
(Rupees in thousand)				
<b>14. Cost of sales</b>				
Raw material consumed	2,211,278	1,336,423	5,281,543	3,574,169
Packing material consumed	276,907	215,636	752,298	567,460
Salaries, wages and other benefits	526,656	477,001	1,710,590	1,752,234
Fuel and power	786,699	729,903	2,236,148	2,054,207
Chemicals and catalyst consumed	155,390	120,310	406,618	343,033
Stores and spares consumed	177,299	171,474	582,775	927,819
Technical assistance	9,011	16,041	34,182	52,346
Repair and maintenance	284,618	51,253	801,162	316,681
Insurance	42,895	35,569	121,743	102,580
Travelling and conveyance	17,270	19,820	55,104	62,323
Rent, rates and taxes	9,442	2,069	32,424	36,225
Vehicle running and maintenance	14,800	11,695	41,585	32,935
Depreciation	449,856	439,327	1,349,369	1,315,919
Others	10,323	32,988	40,967	100,709
Opening stock of mid products	31,209	30,960	10,116	15,862
Closing stock of mid products	(29,933)	(32,232)	(29,933)	(32,232)
Opening stock of finished goods	1,561,480	3,256,336	2,451,009	4,527,422
Closing stock of finished goods	(2,137,046)	(3,220,722)	(2,137,046)	(3,220,722)
	4,398,154	3,693,851	13,740,654	12,528,970

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	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017 (Rupees in thousand)	September 30, 2018	September 30, 2017
<b>15. Finance cost</b>				
Markup on long term finances	266,881	341,039	837,881	1,085,819
Markup on short term finances	58,023	155,552	100,238	369,965
Interest on Worker Profit Participation Fund	—	—	—	9,901
Bank charges and others	3,542	61,959	30,611	141,903
	<b>328,446</b>	<b>558,550</b>	<b>968,730</b>	<b>1,607,588</b>

#### 16. Transactions with related parties

The related parties comprise the associated undertakings, directors and other key management personnel of the Company. The Company in the normal course of business carries out transactions with various related parties. Significant transactions with related parties are as follows:

		Nine months Ended	
		September 30, 2018	September 30, 2017
		(Rupees in thousand)	
Subsidiary company	Short term loan	1,274,835	729,400
	Other income	226,021	93,261
	Store and spares	20,700	59
	Miscellaneous expenses	43,721	21,445
Associated companies	Short term loan	2,000,000	50,000
	Miscellaneous expenses	145,910	260,524
	Purchase of Aircraft and related accessories	1,599,997	—
	Store and spares	4,877	—
	Purchase of raw / packing material	864,367	568,414
	Other income	331,385	261,860
	Payment against assignment of sales tax refund	—	1,150,280
	Fee for services	537,953	339,975
Directors and key management personnel	Remuneration including benefits and perquisites	176,015	184,899
Retirement benefit plans	Retirement benefit expense	123,267	105,398

# Notes to and Forming Part of the Condensed Interim Financial Statements (Un audited)

For the nine months ended September 30, 2018

	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
	(Rupees in thousand)			
17.				
Profit attributable to ordinary shareholders	3,102,512	2,383,487	9,439,184	6,674,477
	(Number of shares)			
Weighted average number of shares	2,100,000,000	2,100,000,000	2,100,000,000	2,100,000,000

	Nine months Ended	
	September 30, 2018	September 30, 2017
	(Rupees in thousand)	
18. Cash generated from operations		
Profit before tax	14,511,565	8,228,200
Adjustments for :		
Depreciation on property, plant and equipment	1,443,415	1,365,877
Amortization of intangible assets	10,365	6,866
Finance cost	968,730	1,607,588
Provision for staff retirement benefits	79,018	64,699
Exchange loss on translation of foreign currency loan	184,296	7,595
Profit on short term loan to subsidiary and associated companies	(557,406)	(355,121)
Profit on saving accounts	(21,503)	(16,190)
Gain on disposal of property plant and equipment	(605)	(1,193)
	2,106,310	2,680,121
Operating cash flows before working capital changes	16,617,875	10,908,321
Effect on cash flow due to working capital changes:		
(Increase)/decrease in current assets:		
Stores and spares	(472,774)	319,862
Stock in trade	38,355	1,663,862
Trade debts	130,975	(2,515,586)
Advances, deposits, prepayments and other receivables	(1,590,213)	(1,466,407)
Increase/(decrease) in creditors, accrued and other liabilities	1,805,062	(38,113)
	(88,595)	(2,036,382)
	16,529,280	8,871,939

## 19. Financial instruments

The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

Level 1 - Quoted prices (unadjusted) in active markets for identical assets or liabilities

Level 2 - Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).

Level 3 - Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The following table presents the Funds / Company's financial assets which are carried at fair value:

September 30, 2018 (Un audited)				
	Level 1	Level 2	Level 3	Total
	(Rupees in thousand)			
Financial assets - at fair value Available for sale				
Short term investment	–	197,302	–	197,302
	–	197,302	–	197,302
December 31, 2017 (Audited)				
	Level 1	Level 2	Level 3	Total
	(Rupees in thousand)			
Financial assets - at fair value Available for sale				
Short term investment	–	198,113	–	198,113
	–	198,113	–	198,113

## 20. Date of Authorization of Issue

These condensed interim financial statements have been authorized for issue on October 30, 2018 by the Board of Directors of the Company.

## 21. General

Figures have been rounded off to the nearest thousand of rupees unless stated otherwise.

  
Chief Executive Officer

  
Director

  
Chief Financial Officer



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**Fatima Fertilizer Company Limited**  
**Condensed Interim Consolidated**  
**Financial Statements**

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for the nine months ended September 30, 2018

# Condensed Interim Consolidated Statement of Financial Position

As at September 30, 2018

		Un audited September 30, 2018	Audited December 31, 2017
	Note	(Rupees in thousand)	
<b>EQUITY AND LIABILITIES</b>			
<b>CAPITAL AND RESERVES</b>			
Authorized share capital 2,500,000,000 (December 31, 2017: 2,500,000,000) shares of Rs 10 each		25,000,000	25,000,000
Issued, subscribed and paid up share capital 2,100,000,000 (December 31, 2017: 2,100,000,000) ordinary shares of Rs 10 each		21,000,000	21,000,000
Reserve	4	48,387,316	44,644,998
		69,387,316	65,644,998
<b>NON CURRENT LIABILITIES</b>			
Long term finances	5	9,533,166	13,751,619
Deferred liabilities	6	14,938,298	14,825,896
Long term deposits		56,847	56,626
		24,528,311	28,634,141
<b>CURRENT LIABILITIES</b>			
Trade and other payables		17,906,514	13,864,053
Accrued finance cost		545,710	259,961
Short term finances - secured	7	2,483,874	2,116,673
Current maturity of long term finance	5	7,087,167	7,140,715
		28,023,265	23,381,402
<b>CONTINGENCIES &amp; COMMITMENTS</b>	8		
		121,938,892	117,660,541

The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim consolidated financial statements.

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		Un audited September 30, 2018	Audited December 31, 2017
	Note	(Rupees in thousand)	
<b>ASSETS</b>			
<b>NON CURRENT ASSETS</b>			
Property, plant and equipment	9	88,103,185	86,704,799
Intangible assets	10	5,935,067	5,938,386
		94,038,252	92,643,185
Long term investments		139,338	85,946
Long term loan to associated company		2,499,000	2,999,000
Long term deposits		255,024	114,743
		96,931,614	95,842,874
<b>CURRENT ASSETS</b>			
Stores and spares	11	6,025,239	5,564,520
Stock in trade	12	4,015,624	4,207,756
Trade debts		1,677,502	1,930,632
Short term loans		3,241,723	1,241,723
Advances, deposits, prepayments and other receivables		9,256,354	7,842,835
Short term investment		197,302	198,113
Cash and bank balances		593,534	832,088
		25,007,278	21,817,667
		121,938,892	117,660,541

  
Chief Executive Officer

  
Director

  
Chief Financial Officer

# Condensed Interim Consolidated Statement of Profit or Loss (Un Audited)

For the nine months ended September 30, 2018

	Note	Three months ended		Nine months ended	
		September 30, 2018	September 30, 2017 (Rupees in thousand)	September 30, 2018	September 30, 2017
Sales	13	11,935,681	9,082,626	35,566,278	33,240,297
Cost of sales	14	(5,170,053)	(4,777,529)	(15,483,843)	(21,034,260)
<b>Gross profit</b>		<b>6,765,628</b>	<b>4,305,097</b>	<b>20,082,435</b>	<b>12,206,037</b>
Distribution cost		(884,628)	(890,849)	(3,238,288)	(2,532,364)
Administrative expenses		(450,242)	(372,549)	(1,565,884)	(1,308,902)
		5,430,758	3,041,699	15,278,263	8,364,771
Finance cost	15	(417,264)	(687,522)	(1,227,430)	(2,016,592)
Other operating expenses		(445,018)	(185,480)	(1,239,312)	(533,219)
		4,568,476	2,168,697	12,811,521	5,814,960
Other income		158,125	86,992	377,367	293,492
Share of profit from Associate		13,121	—	43,718	—
<b>Profit before tax</b>		<b>4,739,722</b>	<b>2,255,689</b>	<b>13,232,606</b>	<b>6,108,452</b>
Taxation		(1,970,458)	331,806	(4,764,776)	(488,903)
<b>Profit for the period</b>		<b>2,769,264</b>	<b>2,587,495</b>	<b>8,467,830</b>	<b>5,619,549</b>
<b>Earnings per share</b>					
- basic and diluted (Rupees)	17	1.32	1.23	4.03	2.68

The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim consolidated financial statements.

  
**Chief Executive Officer**
  
**Director**
  
**Chief Financial Officer**

# Condensed Interim Consolidated Statement of Comprehensive Income (Un Audited)

For the nine months ended September 30, 2018

	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
	(Rupees in thousand)			
Profit for the period	2,769,264	2,587,495	8,467,830	5,619,549
<b>Other Comprehensive Income:</b>				
Items that may be reclassified subsequently to profit or loss:				
Deficit on remeasurement of investments classified as available for sale	—	—	(731)	—
Related tax thereon	—	—	219	—
Other Comprehensive Income:	—	—	(512)	—
Total comprehensive income for the period	2,769,264	2,587,495	8,467,318	5,619,549

The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim consolidated financial statements.

  
Chief Executive Officer

  
Director

  
Chief Financial Officer

# Condensed Interim Consolidated Statement of Changes In Equity

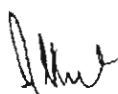
For the nine months ended September 30, 2018

	Ordinary share capital	Share premium	Unappropriated profit	Post retirement benefit obligation reserve	Surplus/ (deficit) on remeasurement of investment- reserve available for sale	Total
(Rupees in thousand)						
Balance at December 31, 2016 (Audited)	21,000,000	1,790,000	37,831,111	400	345	60,621,856
Profit for the period	-	-	5,619,549	-	-	5,619,549
Other comprehensive income	-	-	-	-	-	-
Total comprehensive income	-	-	5,619,549	-	-	5,619,549
Transactions with owners:						
- Final dividend for the year ended December 31, 2016 @ Rs 2 per share	-	-	(4,200,000)	-	-	(4,200,000)
	21,000,000	1,790,000	39,250,660	400	345	62,041,414
Balance at December 31, 2017 (Audited)	21,000,000	1,790,000	42,899,054	(42,819)	(1,237)	65,644,998
Profit for the period	-	-	8,467,830	-	-	8,467,830
Other comprehensive income	-	-	-	-	(512)	(512)
Total comprehensive income	-	-	8,467,830	-	(512)	8,467,318
Transactions with owners:						
- Final dividend for the year ended December 31, 2017 @ Rs 2.25 per share	-	-	(4,725,000)	-	-	(4,725,000)
	21,000,000	1,790,000	46,641,884	(42,819)	(1,749)	69,387,316

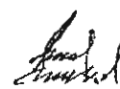
The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim consolidated financial statements.



Chief Executive Officer



Director



Chief Financial Officer

# Condensed Interim Consolidated Statement of Cash Flows (Un Audited)

For the nine months ended September 30, 2018

	Note	September 30, 2018	September 30, 2017
(Rupees in thousand)			
<b>Cash flows from operating activities</b>			
Cash generated from operations	18	16,318,309	9,585,106
Net (decrease) / increase in long term deposits		(2,599)	3,915
Finance cost paid		(1,159,073)	(1,838,319)
Taxes paid		(1,618,339)	(1,040,278)
Employee retirement benefits paid		(38,682)	(55,214)
		<b>13,499,616</b>	<b>6,655,210</b>
<b>Cash flows from investing activities</b>			
Additions in property, plant and equipment		(3,061,252)	(1,462,661)
Additions in intangible assets		(7,119)	(966)
Long term investment		(1,959)	—
Short term loan to associated company - net		(2,000,000)	(50,000)
Proceeds from disposal of property plant and equipment		1,338	3,532
Net increase in long term loans and deposits		(137,462)	(6,119)
Proceeds from short term investment		80	80
Profit received on loans and saving accounts		231,684	283,576
		<b>(4,974,690)</b>	<b>(1,232,558)</b>
<b>Cash flows from financing activities</b>			
Repayment of long term finance		(4,456,296)	(2,866,184)
Dividend paid		(4,674,384)	(4,199,239)
Refund of over-subscribed Sukuk		—	(8,092,675)
Increase / (decrease) in short term finances - net		367,200	(1,282,498)
<b>Net cash used in financing activities</b>		<b>(8,763,480)</b>	<b>(16,440,596)</b>
		<b>(238,554)</b>	<b>(11,017,944)</b>
		<b>832,088</b>	<b>11,583,670</b>
		<b>593,534</b>	<b>565,726</b>

The annexed explanatory notes from 1 to 21 form an integral part of these condensed interim consolidated financial statements.

  
Chief Executive Officer

  
Director

  
Chief Financial Officer

## Notes to and Forming Part of the Condensed Interim Consolidated Financial Statements (Un audited)

For the nine months ended September 30, 2018

### 1. Legal Status and nature of business

Fatima Fertilizer Company Limited (the Holding Company) and its wholly owned subsidiary - Fatimafert Limited (FF) collectively referred to as 'the Group' were incorporated in Pakistan under the Companies Ordinance, 1984. The Holding Company is listed on Pakistan Stock Exchange Limited. The control of FF was transferred to the Holding Company on July 01, 2015.

The principal activity of the Holding Company and FF is manufacturing, producing, buying, selling, importing and exporting fertilizers and chemicals.

Registered offices of the Holding Company and FF are located in Lahore, Pakistan. The manufacturing facility of the Holding Company is located at Mukhtargarh, Sadiqabad, Pakistan and that of FF is located near Chichoki Mallian at Sheikhpura Road.

### 2. Basis of preparation

**2.1** These condensed interim consolidated financial statements of the Group for the nine months ended September 30, 2018 have been prepared in accordance with the requirements of the International Accounting Standard - 34: "Interim Financial Reporting" and provisions of and directives issued under the Companies Act, 2017. In case where requirements differ, the provisions or directives issued under the Companies Act, 2017 have been followed.

**2.2** These condensed interim consolidated financial statements do not include all the information required for full annual financial statements and should be read in conjunction with the annual consolidated financial statements of the Group for the year ended December 31, 2017. Comparative condensed interim consolidated statement of financial position is extracted from annual audited consolidated financial statements for the year ended December 31, 2017 and comparative condensed interim consolidated statement of profit or loss, condensed interim consolidated statement of comprehensive income, condensed interim consolidated statement of changes in equity and condensed interim consolidated statement of cash flows are stated from un audited condensed interim consolidated financial statements for the nine months ended September 30, 2017.

**2.3** These condensed interim consolidated financial statements are presented in Pak Rupees, which is the Group functional and presentation currency.

### 3. Accounting policies and estimates

The accounting policies, related judgments, estimates and related assumptions adopted for the preparation of these condensed interim consolidated financial statements are the same as those applied in the preparation of annual consolidated financial statements of the Group for the year ended December 31, 2017.

	Note	Un audited September 30, 2018	Audited December 31, 2017
(Rupees in thousand)			
<b>4. Reserve</b>			
<b>Capital reserve:</b>			
Share premium		1,790,000	1,790,000
<b>Revenue reserve:</b>			
Unappropriated profit		46,641,884	42,899,054
Post retirement benefit obligation reserve		(42,819)	(42,819)
Deficit on remeasurement of investments classified as available for sale		(1,749)	(1,237)
		<b>48,387,316</b>	<b>44,644,998</b>
<b>5. Long term finances</b>			
Parent Company		13,643,000	16,426,334
Fatimafert Limited		2,977,333	4,466,000
	5.1	<b>16,620,333</b>	<b>20,892,334</b>
Less: Current portion		7,087,167	7,140,715
		<b>9,533,166</b>	<b>13,751,619</b>
<b>5.1 Movement of long term finances</b>			
<b>Parent Company</b>			
Opening balance		16,426,334	21,860,759
Repayments		(2,967,630)	(5,518,025)
Exchange loss on translation of foreign currency loan		184,296	83,600
Closing balance		<b>13,643,000</b>	<b>16,426,334</b>
<b>Fatimafert Limited</b>			
Opening balance		4,466,000	4,466,000
Repayments		(1,488,666)	—
Closing balance		<b>2,977,334</b>	<b>4,466,000</b>
<b>6. Deferred liabilities</b>			
Deferred taxation	6.1	14,295,996	14,234,362
Employee retirement benefits	6.2	642,302	591,534
		<b>14,938,298</b>	<b>14,825,896</b>

## Notes to and Forming Part of the Condensed Interim Consolidated Financial Statements (Un audited)

For the nine months ended September 30, 2018

September 30, 2018 (Un audited)				
	2017	profit and loss	comprehensive income	2018
Accelerated tax depreciation	15,552,975	390,178	—	15,943,153
Tax on equity accounted investments	—	7,715	—	7,715
	15,552,975	397,893	—	15,950,868
Carry forward losses	(1,223,356)	(337,520)	—	(1,560,876)
Provision for retirement benefits	(73,233)	1,480	—	(71,753)
Remeasurement of short Investment - Available for Sale	(530)	—	(219)	(749)
Remeasurement of defined benefit obligation	(21,494)	—	—	(21,494)
	(1,318,613)	(336,040)	(219)	(1,654,872)
	14,234,362	61,853	(219)	14,295,996
December 31, 2017 (Audited)				
	2016	profit and loss	comprehensive income	2017
Accelerated tax depreciation	15,507,134	45,841	—	15,552,975
Remeasurement of short Investment - Available for Sale	155	—	(685)	(530)
	15,507,289	45,841	(685)	15,552,445
Carry forward losses	(236,000)	(987,356)	—	(1,223,356)
Provision for retirement benefits	(41,656)	(15,903)	(15,674)	(73,233)
Remeasurement of defined benefit obligation	(19,541)	—	(1,953)	(21,494)
	(297,197)	(1,003,259)	(17,627)	(1,318,083)
	15,210,092	(957,418)	(18,312)	14,234,362
Un audited September 30, 2018      Audited December 31, 2017				
(Rupees in thousand)				

### 6.2 Employee retirement benefits

Gratuity	410,796	365,639
Accumulating compensated absences	231,506	225,895
	642,302	591,534

## 7. Short term finances

### 7.1 Parent Company

The Company has obtained short term financing facilities from various banks for working capital requirements in the nature of Running Finance, Cash Finance and Finance against Imported Merchandise.

These facilities are secured by Pari Passu charge on present and future current assets of the Company with 25% margin over financed amount, pledge of raw material and finished goods and personal guarantees of sponsoring directors.

The facilities carry mark up ranging from 5.78% to 9.01% (December 31, 2017: 5.78% to 7.29%) per annum for Running Finance and 6.81% to 7.25% (December 31, 2017: 6.34% to 7.28%) per annum for Cash Finance.

### 7.2 Fatimafert Limited

The Company has obtained short term financing facilities from various banks for working capital requirements in the nature of Running Finance and Cash Finance.

These facilities are secured by way of pledge of stocks and hypothecation charge on all current and future current assets of the Company.

These facilities carry mark up ranging from 7.28% to 9.01% ( December 31, 2017; 6.90% to 8.28 %) per annum.

## 8. Contingencies and commitments

### 8.1 Contingencies:

As at September 30, 2018, there is no material change in the status of contingencies as reported in the notes to the financial statements of the Group for the year ended December 31, 2017.

	Un audited September 30, 2018	Audited December 31, 2017
	(Rupees in thousand)	
<b>8.2 Commitments in respect of:</b>		
<b>Fatima Fertilizer Company Limited</b>		
(i) Contracts for capital expenditure	1,634,556	1,130,885
(ii) Contracts for other than capital expenditure	138,091	828,532
(iii) The amount of future payments under non-cancellable operating leases:		
Not later than one year	226,539	294,355
Later than one year but not later than five years	195,832	243,516
	422,371	537,871
<b>Fatimafert Limited</b>		
Letters of credit for purchase of chemicals and spares	—	3,764

# Notes to and Forming Part of the Condensed Interim Consolidated Financial Statements (Un audited)

For the nine months ended September 30, 2018

	Note	Un audited September 30, 2018	Audited December 31, 2017
		(Rupees in thousand)	
<b>9. Property, plant and equipment</b>			
Operating fixed assets - tangible	9.1	84,460,527	83,626,121
Capital work in progress	9.2	3,642,658	3,078,678
		88,103,185	86,704,799
<b>9.1 Movement of operating fixed assets - tangible</b>			
Opening book value		83,626,121	84,258,748
Add: additions during the period	9.1.1	2,493,904	1,485,687
Less: book value of disposals during the period		26	936
		86,119,999	85,743,499
Less: depreciation charged during the period		1,659,472	2,117,378
Closing book value		84,460,527	83,626,121
<b>9.1.1 Additions during the period</b>			
Freehold land		—	5,259
Building on freehold land		95,234	501,713
Building on leasehold land		30,445	—
Plant and machinery		656,621	817,077
Air craft		1,567,285	—
Furniture and fixtures		7,850	4,685
Office equipment		13,127	6,776
Electric installations and appliances		39,667	88,375
Computers		48,073	42,376
Vehicles		35,602	19,426
		2,493,904	1,485,687
<b>9.2 Capital work in progress</b>			
Civil works		342,846	277,633
Plant and machinery		1,383,746	1,534,598
Capital stores		542,767	541,240
Advances :			
- Freehold land		187,879	158,958
- Civil works		3,351	6,143
- Plant and machinery		882,069	260,106
- Other advances		300,000	300,000
		1,373,299	725,207
		3,642,658	3,078,678
<b>9.2.1 Movement of capital work in progress</b>			
Opening balance		3,078,678	2,680,157
Additions during the period		1,238,281	1,542,232
		4,316,959	4,222,389
Less:			
Capitalization during the period		670,932	1,139,011
Provision for obsolescence for Capital Stores		3,369	4,700
Closing balance		3,642,658	3,078,678

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	Un audited September 30, 2018	Audited December 31, 2017
(Rupees in thousand)		
<b>10. Intangible assets</b>		
Opening book value	5,938,386	5,918,675
Add: additions during the period	7,119	29,383
	5,945,505	5,948,058
Less: amortization charged during the period	10,438	9,672
Closing book value	5,935,067	5,938,386
<b>11. Stores and spares</b>		
Stores	446,908	428,594
Spares	4,592,848	4,341,863
Catalyst and chemicals	1,148,659	948,258
	6,188,415	5,718,715
Less: provision for obsolete items	163,176	154,195
	6,025,239	5,564,520
<b>12. Stock in trade</b>		
Raw material {including in transit Rs 561.981 million (December 31, 2017: Rs 376.952 million)}	1,599,749	1,348,958
Packing material	35,690	30,700
<b>Mid Products</b>		
Ammonia	43,898	76,626
Nitric Acid	13,578	3,360
Others	416	394
	57,892	80,380
<b>Finished goods</b>		
- own manufactured		
Urea	720,802	1,212,219
NP	964,186	538,127
CAN	368,961	631,772
Certified emission reductions	83,097	68,891
	2,137,046	2,451,009
- purchased for resale		
DAP	185,247	296,709
	4,015,624	4,207,756

# Notes to and Forming Part of the Condensed Interim Consolidated Financial Statements (Un audited)

For the nine months ended September 30, 2018

	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
	(Rupees in thousand)			
<b>13. Sales</b>				
Fertilizer Products:				
- own manufactured				
- Local Sales	11,541,015	7,232,897	33,063,934	28,254,764
- Export	14,151	1,686,810	1,470,159	2,009,430
- purchased for resale	523,338	351,147	966,460	1,779,865
Subsidy from Government of Pakistan	—	164,279	270,655	2,652,038
Mid products	126,877	101,681	391,971	379,140
Certified emission reductions	—	—	—	82,924
	12,205,381	9,536,814	36,163,179	35,158,161
Less: Discounts	269,700	454,188	596,901	1,917,864
	11,935,681	9,082,626	35,566,278	33,240,297

13.1 Sales are exclusive of sales tax of Rs 1,868.717 million (September 30, 2017: Rs 3,607.692 million).

	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
	(Rupees in thousand)			
<b>14. Cost of sales</b>				
Raw material consumed	2,217,438	1,390,692	5,287,703	6,450,916
Packing material consumed	276,907	215,687	752,298	625,735
Salaries, wages and other benefits	655,826	607,188	2,086,546	2,185,534
Fuel and power	787,090	737,574	2,236,741	2,531,709
Chemicals and catalyst consumed	159,493	122,942	420,586	372,843
Stores and spares consumed	183,000	193,776	675,266	1,036,796
Technical assistance	9,011	16,307	34,187	52,639
Repair and maintenance	359,281	56,948	884,579	325,991
Insurance	52,068	44,898	148,568	130,147
Travelling and conveyance	27,902	30,033	86,266	91,729
Rent, rates and taxes	9,442	11,490	36,821	55,625
Vehicle running and maintenance	16,463	14,325	49,139	40,714
Depreciation	521,254	510,662	1,563,414	1,530,088
Others	29,271	59,742	107,304	173,859
Opening stock of mid products	60,847	102,181	80,380	100,459
Closing stock of mid products	(57,892)	(79,020)	(57,892)	(79,020)
Opening stock of finished goods	1,561,480	3,860,462	2,451,009	7,208,998
Closing stock of finished goods	(2,137,046)	(3,506,274)	(2,137,046)	(3,506,274)
Cost of sales - purchased for resale	438,218	387,916	777,974	1,705,772
	5,170,053	4,777,529	15,483,843	21,034,260

	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
(Rupees in thousand)				
<b>15. Finance cost</b>				
Markup on long term finances	342,767	426,938	1,072,953	1,340,057
Markup on short term finances	67,078	186,898	112,943	497,887
Interest on Worker Profit Participation Fund	—	—	—	9,901
Bank charges and others	7,419	73,686	41,534	168,747
	<b>417,264</b>	<b>687,522</b>	<b>1,227,430</b>	<b>2,016,592</b>

#### 16. Transactions with related parties

The related parties comprise the associated undertakings, directors and other key management personnel of the Group. The Group in the normal course of business carries out transactions with various related parties. Significant transactions with related parties are as follows:

		Nine months Ended	
		September 30, 2018	September 30, 2017
		(Rupees in thousand)	
Associated companies	Short term loan	2,000,000	50,000
	Miscellaneous expenses	158,623	267,892
	Purchase of Aircraft and related accessories	1,599,997	—
	Store and Spares	4,877	—
	Purchase of raw / packing material	870,271	578,845
	Other income	331,385	279,593
	Payment against assignment of sales tax refund	—	1,150,280
	Fee for services	545,638	425,747
Directors and key management personnel	Remuneration including benefits and perquisites	176,015	190,740
Retirement benefit plans	Retirement benefit expense	152,596	133,581
		Three months ended	
		September 30, 2018	September 30, 2017
		(Rupees in thousand)	

#### 17.

Profit attributable to ordinary shareholders	2,769,264	2,587,495	8,467,830	5,619,549
(Number of shares)				
Weighted average number of shares	2,100,000,000	2,100,000,000	2,100,000,000	2,100,000,000

# Notes to and Forming Part of the Condensed Interim Consolidated Financial Statements (Un audited)

For the nine months ended September 30, 2018

	Nine months Ended	
	September 30, 2018	September 30, 2017
	(Rupees in thousand)	
<b>18. Cash generated from operations</b>		
Profit before tax	13,232,606	6,108,452
Adjustments for:		
Depreciation on property, plant and equipment	1,659,468	1,583,346
Amortization of intangible assets	10,437	7,418
Finance cost	1,227,431	2,016,592
Provision for staff retirement benefits	89,451	74,424
Provision for slow moving stores, spares and loose tools	12,350	8,677
Exchange loss on translation of foreign currency loan	184,296	7,595
Profit on short term loan to related parties	(331,385)	(261,860)
Share of profit from Associates	(43,718)	—
Profit on saving accounts	(21,511)	(16,407)
Gain on disposal of property plant and equipment	(1,313)	(2,633)
	2,785,506	3,417,152
Operating cash flows before working capital changes	16,018,112	9,525,604
Effect on cash flow due to working capital changes:		
(Increase) / decrease in current assets:		
Stores and spares	(469,700)	104,131
Stock in trade	192,132	4,357,835
Trade debts	253,130	(2,417,344)
Advances, deposits, prepayments and other receivables	(1,272,894)	(1,910,796)
Increase / (decrease) in creditors, accrued and other liabilities	1,597,529	(74,324)
	300,197	59,502
	16,318,309	9,585,106

## 19. Financial instruments

The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

Level 1 - Quoted prices (unadjusted) in active markets for identical assets or liabilities

Level 2 - Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).

Level 3 - Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The following table presents the Funds / Company's financial assets which are carried at fair value:

	September 30, 2018 (Un audited)			
	Level 1	Level 2	Level 3	Total
	(Rupees in thousand)			
Financial assets - at fair value				
Available for sale				
Short term investment	–	197,302	–	197,302
	–	197,302	–	197,302
	December 31, 2017 (Audited)			
	Level 1	Level 2	Level 3	Total
	(Rupees in thousand)			
Financial assets - at fair value				
Available for sale				
Short term investment	–	198,113	–	198,113
	–	198,113	–	198,113

## 20. Date of Authorization of Issue

These condensed interim consolidated financial statements have been authorized for issue on October 30, 2018 by the Board of Directors of the Holding Company.

## 21. General

Figures have been rounded off to the nearest thousand of rupees unless stated otherwise.

  
Chief Executive Officer

  
Director

  
Chief Financial Officer

401

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- 📖 Online Quizzes

- 📈 Stock trading simulator  
(based on live feed from PSX)
- 📖 Knowledge center
- 📊 Risk profiler\*
- 📊 Financial calculator
- 🔔 Subscription to Alerts (event  
notifications, corporate and  
regulatory actions)
- 📱 Jamapunji application for  
mobile device



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Securities and Exchange  
Commission of Pakistan

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\*Mobile apps are also available for download for android  
and ios devices





E-110, Khayaban-e-Jinnah  
Lahore Cantt., Pakistan



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[www.fatima-group.com](http://www.fatima-group.com)



VANTAGE

Page - 404 - 578

# Annual Report

Fatima Fertilizers Ltd

for 2017

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Link — [www.fatima-group.com](http://www.fatima-group.com)

PFL/MPCL/2019-295  
February 26, 2019

**General Manager (Sales)**

Sui Northern Gas Pipelines Limited  
Gas House, 21 Kashmir Road  
Lahore.

**SUBJECT: APPLICATION FOR ALLOCATION OF PIPELINE CAPACITY**

**Reference:** 1) ECC Decision dated 31.05.2018 Allocation of Additional Gas Production from MPCL's Existing Reservoirs to Pakarab Fertilizers Limited  
2) DG (Gas) letter No. NG(I)-7(158)/18-F(Vol-1) dated 17<sup>th</sup> December 2018  
3) SNGPL letter No. GMS: 938 (LNG) dated 17<sup>th</sup> December 2018  
4) PFL letter to DG (Gas) dated 18.12.2018 Concurrence to construct pipeline if TAPI materializes  
5) PFL letter to MD (SNGPL) dated January 05, 2019 for capacity allocation

Dear Sir,

We would like to thank you for meeting with us on February 20<sup>th</sup>, 2019 under the Chairmanship of Senior General Manager (Business Development) and appreciate continued support and guidance by SNGPL Team to PFL who is a loyal customer of SNGPL since 1974 and has been supplied with gas by SNGPL since then from existing system.

Reference to the subject, this application primarily provides the background and relevant information for the allocation of pipeline capacity to PFL.

Background:

Due to non-operation of the local fertilizer industry, the country is heading towards potential shortage of Fertilizers leading to possible food crisis. Government of Pakistan, in order to mitigate foreseeable shortage of fertilizers in the country and to avoid additional burden on foreign exchange due to Fertilizers imports, decided to allocate the additional gas production from MPCL's existing reservoirs to Fertilizer sector. Consequently, gas volumes of 35 mmcf/d & 40 mmcf/d were allocated to PFL through ECC decision dated May 17, 2018, communicated through DG (Gas) letter dated May 31, 2018 from Mari shallow and Mari Deep respectively along with their supporting reservoirs.

It is worth mentioning that restoration of operations of PFL will:

add around half a million MT of High efficiency fertilizers, ensuring food security of the country by timely availability of the much needed fertilizers for the farming community at affordable prices;  
consistent additional supply of fertilizer would stabilize prices in the market;



Handwritten signature and date: "Amir Bhatt 28/2/19"

Page 1 of 3



- contribute to National Exchequer by approximate annual saving of foreign exchange of US\$ 150 million, reduction of subsidy burden of around PKR 11 billion on imported fertilizer;
- contribute additional revenues to MPCL and SNGPL; and
- generate GDP growth and continuous employment opportunities to the highly skilled personnel.

As per ECC directions referred above, the allocated gas would be transported by SNGPL through its system for supply to PFL plant at Multan under a mutually agreed gas transportation agreement (i.e., the approved Network Code and access agreement). PFL had to make necessary arrangements for the transportation of the allocated gas to the SNGPL injunction point at its own cost including dehydration thereof. In this regard PFL has spent ~20 Million USD and completed the infrastructure required to process shallow gas i.e. installation of dehydration and compression facilities in line with the ECC directions. For pipeline laying from Mari to SNGPL injunction point, considering the expertise of SNGPL in pipeline construction, the contract was assigned to SNGPL as a third party contractor.

In the meanwhile, Pakistan Gas Network Code "Code" has been finalized and issued by OGRA providing comprehensive and uniform contractual framework for use of gas pipeline transportation system by third parties. Complying with the requirements of Article 2 of the Code, SNGPL has recently published the pipeline capacities on its website and as per published data we understand that pipeline entry capacity at Muhammad-pur (SNGPL QV-2 assembly) and exit capacity at Pakarab Fertilizers Limited Multan are available. In this regard we refer to the meeting held on November 27, 2018 with Managing Director (SNGPL) under the Chairmanship of Director General (Gas) wherein SNGPL management appraised that adequate pipeline capacity is available in SNGPL system at the suggested entry point at Muhammad-pur and the exit point of PFL factory flange at Multan to meet the gas transportation requirements of PFL.

**Technical Information:** (As required in the network code; further information can be furnished as per requirement of SNGPL)

a.	Shipper	Pakarab Fertilizers Limited (PFL)
b.	Entry Point	SNGPL Valve assembly QV-2 at Muhammad Pur District Ghotki (Muhammad pur is not appearing in the list of entry points posted by SNGPL, therefore, it is also requested to enlist it as a entry point, unless it is specified as another defined entry points.)



c. Exit Point	PFL's manufacturing plant at Khanewal Road, Multan
d. Capacity Start Date	March 01, 2019
e. Capacity End Date	March 14, 2029
f. Capacity Term	10 Years
g. Initial Capacity	35 MMCFD
Required For Year-1	(after treating 35 MMCFD of Mari Shallow Gas allocated by the ECC)
h. Ramp-up Period	12 months
i. Total Capacity	55 MMCFD
Required From Year-2 to Year-10	(after treating 35 MMCFD of Mari Shallow Gas and 40 MMCFD of Mari Deep Gas allocated by the ECC, referred below)
j. Capacity Type	Preferred Firm Capacity. Interruptible, if firm not available.
k. Use of Capacity	Gas Transportation for self-consumption to run the PFL Plant and allied equipment

We request SNGPL to allocate the requisite pipeline capacity to PFL as it would not only revive a National asset but also help ensuring food security of the country by timely availability of much needed fertilizers for the farming community at affordable prices. It will also save the huge investment that has gone into the PFL project and allied pipeline infrastructure, which is nearing completion.

Thanking you,

Yours faithfully

For PAKARAB FERTILIZERS LIMITED

**IFTIKHAR MAHMOOD BAIG**  
(Director Business Development)

CC:

1. Director General (Gas), Ministry of Energy (Petroleum Division)
2. Director General (LGs), Ministry of Energy (Petroleum Division)
3. Director General (PC), Ministry of Energy (Petroleum Division)
- ✓ 4. Registrar, Oil & Gas Regulatory Authority (OGRA)
5. Joint Secretary, Large Enterprises Development (PSD), Ministry of Industries & Production

No. NG (I)-7(158)/12-P-I  
 Government of Pakistan  
 Ministry of Energy -- Petroleum Division  
 (Policy Wing)  
 Directorate General of Gas  
 First Floor, Petroleum House, Alatarik Avenue G-5/2  
 ...

Islamabad, the 31<sup>st</sup> May, 2018

01. The Managing Director,  
 M/s Mari Petroleum Company Ltd,  
Islamabad

02. The Chief Executive Officer  
 Pak Arab Fertilizers Ltd,  
Lahore

03. The Managing Director,  
 M/s Sui Northern Gas Pipelines Ltd,  
Lahore

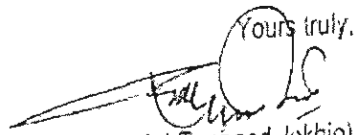
Subject: ALLOCATION OF ADDITIONAL GAS PRODUCTION FROM MPCL'S EXISTING RESERVOIRS TO PAKARAB FERTILIZERS LTD

Dear Sir (s),

I am directed to inform that ECC of the Cabinet in its meeting held on 17.05.2018 vide case No. ECC-43/10/2018 dated 17.05.2018 while considering a summary submitted by Petroleum Division on the subject approved the proposals contained in para-6 of the summary as under:

- (i) 35 MMCFD Mari shallow gas along with supporting reserves may be allocated to M/s Pakarab Fertilizers Ltd (PFL) which will require dehydration and transportation by PFL at its own cost for injection into M/s SNGPL's system and M/s SNGPL would be required to induct this gas into its system soon after completion of the required infrastructure.
- (ii) 40 MMCFD of Mari Deep gas along with supporting reserves may be allocated to M/s Pakarab Fertilizers Ltd which will be processed by PFL at its own cost for injection into SNGPL's system as a comingled stream along with shallow gas.
- (iii) MPCL will be required to have necessary regulatory approvals for production of these gases from its existing reservoirs.
- (iv) Subject to availability of adequate system gas volumes, M/s SNGPL would supply the minimum gas required along with Mari shallow gas to M/s PFL enabling the plant to operate. This arrangement would be for the interim period i.e. till full flow of comingled processed Mari gases.
- (v) The allocated gases are to be transported by M/s SNGPL through its system for supply to M/s PFL plant at Multan under a mutually agreed gas transportation arrangements and M/s PFL would be required to pay a tolling fee to M/s SNGPL against transportation of these gases.

2. You are requested to take further necessary action in the Implementation of above ECC decision under intimation to this office at the earliest.

Yours truly,  
  
 (Abdul Rasheed Jokhio)  
 Director (Tech.)

o/L

c.c:

- (i) PS to Secretary Petroleum Division
- (ii) PS to Additional Secretary (P) Petroleum Division
- (iii) PA to DG(Gas) Petroleum Division
- (iv) PA to DG (PC) Petroleum Division

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**IMMEDIATE**  
**BY FAX**

No.NG(I)-7(158)/18-F (Vol-I)  
Government of Pakistan  
Ministry of Energy (Petroleum Division)  
Directorate General Gas  
Petroleum House, G-5/2  
\*\*\*\*\*

Islamabad, the 17<sup>th</sup> December, 2018

Chief Executive Officer,  
Pakarab Fertilizers Limited,  
Lahore.

Subject:- **ALLOCATION OF ADDITIONAL GAS PRODUCTION FROM MPCL's**  
**EXISTING RESERVOIR TO PAKARAB FERTILIZERS LIMITED**

Dear Sir,

I am directed to enclose herewith M/s SNGPL's letter no. GMS:938 (LNG) dated 17.12.2018 on the above subject which is self explanatory.

2. It is requested to furnish your views/comments in the matter to this office at the earliest.

Yours faithfully,

  
(Sohail Anwar)  
Deputy Director (Gas)  
Tele: 9220894  
Email: ddgaspr@gmail.com

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Ref: GMS: 938 (LNG)

December 17, 2018

Director General (Gas),  
Ministry of Energy (Petroleum Division),  
Government of Pakistan,  
ISLAMABAD

*Diad (DD)*

Attn: Mr. Sohail Anwar  
Deputy Director (Gas)

**ALLOCATION OF ADDITIONAL GAS PRODUCTION FROM MPCL'S EXISTING RESERVOIRS TO  
PAKARAB FERTILIZERS LIMITED**

Dear Sir,

Further to our letter of even number dated 04.12.2018, it is to apprise that Network Code has been notified by OGRA and we shall be proceeding in the matter per Capacity Allocation Methodology under Network Code. However, we await your concurrence to the following before proceeding further.

1. Supply of RLNG to PAFL along with Mari Shallow gas in view of unavailability of Indigenous gas.
2. Construction / laying of pipeline from Qasba Maral to Multan by PAFL at its own cost, since capacity of the existing segment would not be available after materialization of TAPI project.

Regards,

Yours faithfully,  
SUI NORTHERN GAS PIPELINES LIMITED

*Shahid Maqsood*  
17/12.  
**SHAHID MAQSOOD**  
General Manager (Sales)  
for MANAGING DIRECTOR

**Copy to:**

- SPS to Secretary – Ministry of Energy (Petroleum Division), Islamabad
- Additional Secretary, Ministry of Energy (Petroleum Division), Islamabad
- Director General (LGs) – Ministry of Energy (Petroleum Division), Islamabad

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+92-42-99201005

Telephone: 042-99201056

Fax: 042-99201209

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ONGC (India) - 2018



PFL/MOE/DG (Gas)  
December 18, 2018

Director General (Gas)  
Ministry of Energy (Petroleum Division)  
1st Floor, Petroleum House  
Islamabad

Subject: ALLOCATION OF ADDITIONAL GAS PRODUCTION FROM MPCL'S EXISTING RESERVOIRS TO PAKARAB FERTILIZERS LIMITED (PFL)

Reference: Your Letter No. NG(I)-7(158)/18-F(Vol-1) dated 17<sup>th</sup> December 2018  
SNGPL Letter No. GMS: 938 (LNG) dated 17<sup>th</sup> December 2018

Dear Sir,

We take this opportunity to thank you for inviting our views and comments vide your above-referred letter. We would refer to the meeting held under your Chairmanship on November 27, 2018 with representatives of PFL and SNGPL. PFL provided an update on the work completed including but not limited to the following:

- Managed all engineering and safety studies and reviews in time
- Managing extremely challenging ROW to expedite the construction
- Pipeline construction at PFL's own cost.. Construction contract signed with SNGPL and work initiated
- Arrangement of 26 km pipeline and associated fittings / valves etc within very short period
- Managing all necessary approvals on fast-track including EIA, Railways, NHA etc

PFL has subsequently procured and installed necessary infrastructure facilities including compressors and dehydration plant etc.

During the meeting, SNGPL management apprised that adequate pipeline capacity from MPCL to PFL in SNGPL's existing system is available to cater to PFL. SNGPL is also willing to execute GTA in accordance with the ECC decision to transport allocated gases. TAPI pipeline is expected to intersect at Qasba Maral, which is approximately 18-20 km short of PFL plant site. SNGPL Team suggested to PFL to undertake a dedicated pipeline for this segment at its own cost. PFL's Team concurred to SNGPL's suggestion provided no other option is available.

PFL also informed the meeting that it had filed a Transmission License application with OGRA and one of the requirements is the execution of a GTA, however, OGRA would accept a letter from SNGPL stating that GTA is being negotiated in order to issue the Transmission License. SNGPL Team agreed to comply with such OGRA requirement and also negotiation Terms once Network Code is notified. ECC decision could be used as basis for this letter.

Point wise responses to the queries raised by SNGPL in their above-captioned letter are as follows:

1. To operate the plant at minimum level, PFL would accept RLNG along with 35 mmcf/d Mari Shallow gas until 40 mmcf/d Goru-B gas comes online (expected mid-2019). RLNG to be provided under the same modalities approved by GoP for other fertilizer plants on SNGPL network (Agritech & Fatimafert) to provide the level playing field.

*W*  
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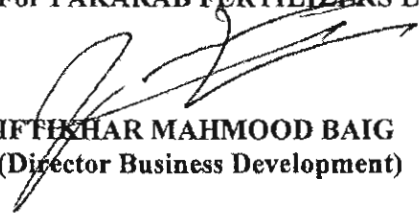
2. PFL hereby gives its concurrence to construct pipeline from Qasba Maral to Multan at its own cost provided TAPI Pipeline project is built.

Your kind directions to SNGPL on issuance of letter to OGRA stating that GTA is being negotiated are requested. We look forward to early finalization of capacity allocation enabling PFL to restart operations to provide much needed fertilizers to the farmers.

Thanking you,

Yours faithfully

For PAKARAB FERTILIZERS LIMITED

  
IFTIKHAR MAHMOOD BAIG  
(Director Business Development)

PFL/SNGPL/2019-  
January 05, 2019

The Managing Director  
Sui Northern Gas Pipelines Limited  
21-Kashmir Road  
Lahore

Subject: ALLOCATION OF ADDITIONAL GAS PRODUCTION FROM  
MPCL'S EXISTING RESERVOIRS TO PAKARAB FERTILIZERS  
LIMITED (PFL)

Reference: 1) ECC Decision dated 31.05.2018 Allocation of Additional Gas Production from MPCL's Existing Reservoirs to Pakarab Fertilizers Limited  
2) Our Letter Composition of MPCL Gas Fields (SML/SUL & Tipu) Allocated to Pakarab dated 10.07.2018  
3) Our Letter Gas Specification of SML/SUL & Goru B Wells and Pipeline Material NACE Compliance dated 28.09.2018  
4) DG Gas Letter Allocation of Additional Gas Production from MPCL's Existing Reservoir to Pakarab Fertilizers Ltd. dated 03.01.2019

Dear Sir,

We would refer to the meeting held under Chairmanship of Director General (Gas) on November 27, 2018 with representatives of PFL and SNGPL. PFL provided an update on the work completed including but not limited to the following:

- Managed all engineering and safety studies and reviews
- Managing extremely challenging ROW to expedite the construction
- Pipeline construction at PFL's own cost. Construction contract signed with SNGPL and work initiated
- Arrangement of 26 km pipeline and associated fittings / valves etc within very short period
- Managing all necessary approvals on fast-track including EIA, Railways, NHA etc

PFL has subsequently procured and installed necessary infrastructure facilities including compressors and dehydration plant etc.

During the meeting, SNGPL management apprised that adequate pipeline capacity from MPCL to PFL in SNGPL's existing system is available to cater to PFL. SNGPL is also willing to execute GTA in accordance with the ECC decision to transport allocated gases. TAPI pipeline is expected to intersect at Qasba Maral, which is approximately 18-20 km short of PFL plant site. SNGPL Team suggested to PFL to undertake a dedicated pipeline for this segment at its own cost. PFL hereby gives its concurrence to construct pipeline from Qasba Maral to Multan at its own cost provided TAPI Pipeline project is built.

PFL also informed the meeting that it had filed a Transmission License application with OGRA and one of the requirements is the execution of a GTA, however, OGRA would accept a letter from SNGPL stating that GTA is being negotiated in order to issue the Transmission License.

1/2

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SNGPL Team agreed to comply with such OGRA requirement and also negotiate Terms once Network Code is notified. ECC decision could be used as basis for this letter.

ECC decision states that SNGPL would supply minimum gas required along with Mari Shallow gas enabling the plant to operate. This arrangement would be for the interim period i.e. till full flow of comingled processed Mari gases.

SNGPL has indicated gas supply constraints in which case PFL would accept RLNG along with 35 mmcf/d Mari Shallow gas until 40 mmcf/d Goru-B gas comes online (expected mid-2019). RLNG to be provided under the same modalities approved by GoP for other fertilizer plants on SNGPL network (Agritech & Fatimafert) to provide a level playing field.

Pakistan Gas Network Code has been notified by OGRA as such you are requested to allocate pipeline capacity for transportation of above gases to PFL. The information required for capacity allocation under Article 2.4 of Network Code is as follows


Shipper	Pakarab Fertilizers Limited
Entry Point	SNGPL Valve assembly QV-2 at Muhammad Pur district Ghotki
Exit Point	PFL's manufacturing plant at Khanewal Road, Multan
Capacity Start Date	January 15, 2019
Capacity End Date	January 14, 2029
Capacity Duration	10 Years
Capacity Applied (MMSCFD)	35 MMSCFD
Capacity Requested (MMSCFD)	Firm Capacity
Use of Capacity	Gas Transportation for self-consumption to run the PFL Plant and allied equipment

Your kind directions on issuance of letter to OGRA stating that GTA is being negotiated are requested. We look forward to early finalization of capacity allocation enabling PFL to restart operations to provide much needed fertilizers to the farmers.

Thanking you,

Yours faithfully

For PAKARAB FERTILIZERS LIMITED

  
**IFTIKHAR MAHMOOD BAIG**  
 (Director Business Development)

آئل اینڈ گیس  
ریگولٹری اتھارٹی



Oil & Gas  
Regulatory Authority

15<sup>th</sup> February 2019

Mr. Saqib Aziz,  
Deptt. Manager Business Development,  
M/s Pakarab Fertilizers Limited,  
HO: E-110 Khayaban-e- Jinnah, Lahore Cantt  
+92-42-111-328-462

Subject: **LICENSE FOR CONSTRUCTION AND OPERATION OF PIPELINE  
FOR TRANSMISSION OF NATURAL GAS TO PFL**

Dear Sir,

Please refer to the meeting held in OGRA on 14-02-2019 regarding above subject.

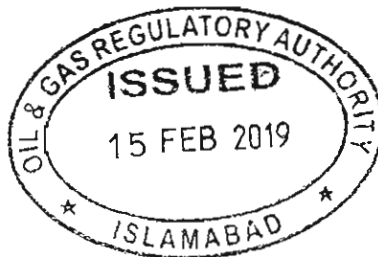
2. The issue was deliberated at length and it was concluded that MPCL and PFL may settle the issue of gathering lines, upstream of the processing plant, vis-à-vis applicable legal provisions including OGRA Ordinance 2002, NGRA (Licensing) Rules 2002 and Natural Gas Transmission Technical Standards Regulations, 2004 and apprise accordingly enabling OGRA to proceed further in the matter.

Yours truly,

(Malik Mazhar H. Makhdoom)  
Joint Executive Director (Gas)

Copy to:

Managing Director,  
Mari Petroleum Company Ltd,  
21 Mauve Area, 3<sup>rd</sup> Road, G-10/4,  
**Islamabad**



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آئل اینڈ گیس  
ریگولیٹری اتھارٹی



Oil & Gas  
Regulatory Authority

OGRA-9(454)-(PFL)/2018  
5<sup>th</sup> March 2019

Mr. Saqib Aziz,  
M/s Pakarab Fertilizers Limited,  
HO: E- 110 Khayaban-e-Jinnag, Lahore cantt  
92-42-111-328-462

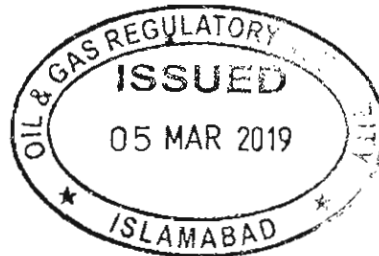
Subject: **LICINSE FOR CONSTRUCTION AND OPERATION OF PIPELINE FOR TRANSMISSION OF NATURAL GAS TO PFL**

Dear Sir *[Signature]*

Please refer to the meeting held in OGRA on the subject issue and subsequent OGRA's letter of even No. Dated 15.02.2019 on the above subject. Your reply in the matter is still awaited which may be furnished at the earliest for proceeding further in the matter.

Your truly,  
*[Signature]*  
(Dr. Abdul Basit Qureshi)  
Registrar

Cc:  
Managing Director,  
Mari Petroleum Company Ltd,  
21 Mauve Area, 3<sup>rd</sup> Road, G-10/4,  
**Islamabad**



*o/c*

609



آئل اینڈ گیس  
ریگولیٹری اتھارٹی

Oil & Gas  
Regulatory Authority

**Reminder-I**

June 28, 2019

OGRA-9(454)-(PFL)/2018

Mr. Saqib Aziz,  
M/s Pakarab Fertilizers Limited,  
HO: E- 110 Khayaban-e-Jinnag,  
Lahore cantt  
92-42-111-328-462  
**Lahore**


**Subject: PAKARAB FERTILIZERS LIMITED - APPLICATION FOR CONSTRUCTION & OPERATION OF PIPELINE FOR TRANSMISSION OF NATURAL GAS**

Dear Sir,

Please refer to OGRA's earlier letter of even No. dated February 15, 2019, followed by a reminder dated 05-03-2019 on the subject noted above (copies attached).

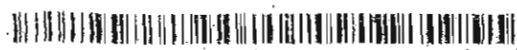
2. Reply of the above noted letters are still awaited which may kindly be communicated at the earliest, in order to proceed further, please.

Best Regards,

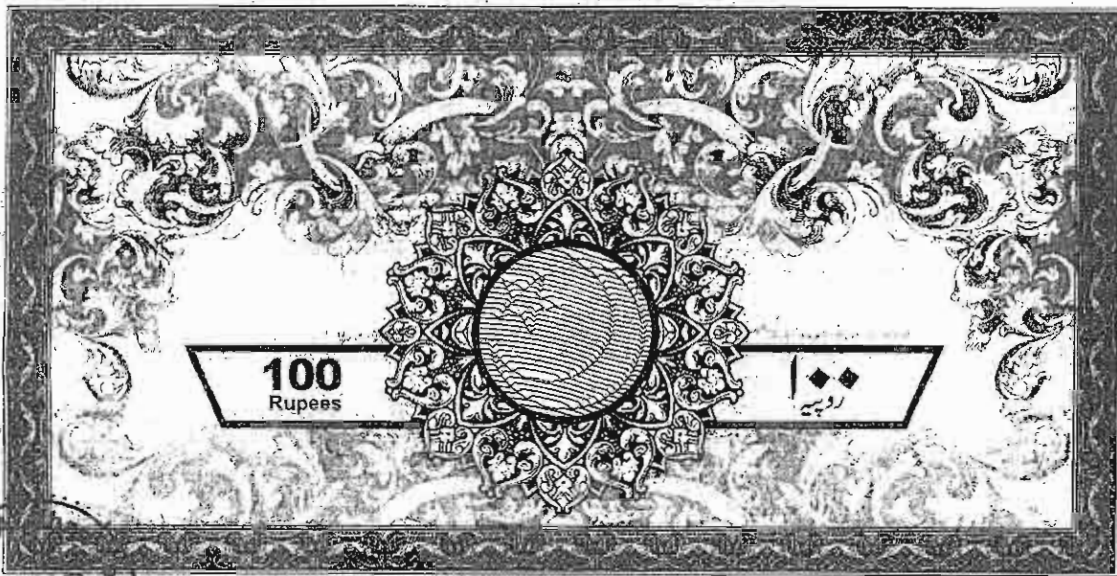
  
(Dr. Abdul Basit Qureshi)  
Registrar  
(For & on behalf of the Authority)

o/e





606



THIS MEMORANDUM OF UNDERSTANDING ("MOU") is made on the day of 25<sup>th</sup> January, 2019

**BY AND BETWEEN:**

- ✓ Sui Northern Gas Pipelines Limited (hereinafter referred to as "SNGPL"), a Public Limited Company incorporated under the laws of Pakistan and having its registered office at Gas House, 21 Kashmir Road, Lahore which expression shall, where the context so admits, include its successors and assigns. **Party of the First Part**

**AND**

- ✓ Pakarab Fertilizers Limited (hereinafter referred to as "PFL"), a public Limited Company incorporated under the law of Pakistan and having its registered office at E-110 Khayaban-e-Jinnah, Lahore Cantt, Lahore which expression shall, where the context so admits, include its successors in interest and permitted assigns. **Party of the Second Part**

SNGPL and PFL are referred to herein collectively as the "Parties" or individually as a "Party".

**WHEREAS:**

- (A) Whereas SNGPL is authorized and licensed for the transmission and distribution of natural gas in the north of Pakistan.
- (B) Whereas PFL is a Company engaged in the business of manufacturing and sale of chemical fertilizers.
- (C) Whereas PFL is desirous to obtain the services of SNGPL for transportation of its gas from the designated entry points to designated exit points;
- (D) Whereas SNGPL may provide the requisite services in accordance with the Third Party Access (TPA) Rules, 2018 read with Pakistan Gas Network Code, subject to PFL being allocated capacity in accordance with the said TPA Rules and Pakistan Gas Network Code and subject to the Parties entering into a binding and formal Gas Transportation Agreement.

**ATTESTED**



607 1227

NOW THEREFORE THIS MEMORANDUM OF UNDERSTANDING (MOU) SETS FORTH THE UNDERSTANDING BETWEEN THE PARTIES AS FOLLOWS:

1. SCOPE

The scope of this MOU is restricted to the purpose of recording the understanding between the Parties regarding initiation of negotiation of transportation of gas in accordance with the relevant provisions of the TPA Rules, 2018 together with the applicable rules of Pakistan Gas Network Code.

2. NON-BINDING NATURE OF MOU

This MOU shall be non-binding on the Parties and shall have no legal effect. Nothing contained in this MOU shall confer any legal right or entitlement whatsoever in favour of PFL.


3. CAPACITY ALLOCATION

SNGPL shall follow the provisions in respect of capacity allocation contained in the TPA Rules and Pakistan Gas Network Code including advertisement of available capacity. PFL acknowledges that SNGPL is required to allocate capacity on a "first come first serve basis". In case PFL is allocated capacity by SNGPL, the Parties shall enter into a binding Gas Transportation Agreement on mutually agreed terms and conditions subject to completion of all codal and legal formalities.

4- This MOU shall be executed in two (2) counterparts; one to be retained by each Party and the each instrument shall be considered as original and duly executed by the Parties.

IN WITNESS whereof the Parties have signed this MOU on the day and year first above written.

SUI NORTHERN GAS PIPELINES  
LIMITED

By: 

Name: Amer Tufail

Title: Managing Director

Date: January 28 in 2019

PAKARAB FERTILIZERS LIMITED

By: 

Name: Asad Murad

Title: Chief Financial Officer

Date: January 25 in 2019



PFL/OGRA/2019  
June 26, 2019

The Registrar  
Oil & Gas Regulatory Authority  
Islamabad

**Subject: APPLICATION FOR TRANSMISSION LICENSE REQUIRED FROM OGRA UNDER NATURAL GAS REGULATORY AUTHORITY (NGRA) (LICENSING) RULES 2002 FOR CONSTRUCTION u& OPERATION OF PIPELINE ALONG WITH ANCILLARY/CONNECTED FACILITIES FOR TRANSMISSION OF NATURAL GAS**

**Reference:** Our letter no. PFL/OGRA/2018- dated August 20, 2018

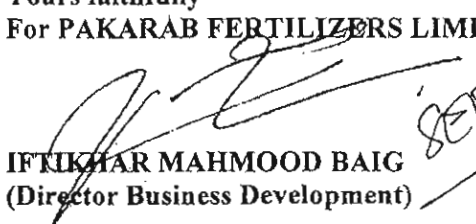
Dear Sir,

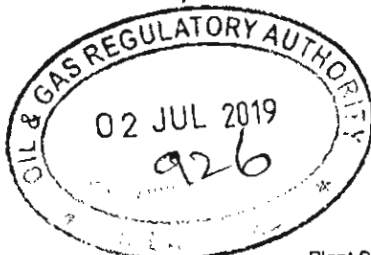
This refers to our letter no. PFL/OGRA/2018- dated August 20, 2018 regarding subject application. We have applied for license for 03 feeder lines and one main transmission line in subject application. We would like to notify OGRA that due to certain technical constraints, the construction of 12" Deep feeder line (@700 PSIG) from MPCL custody transfer point till PFL processing facility has been suspended and PFL would like to withdraw subject line from its licensing application. The remaining 02 feeder lines will be constructed, but since their operating pressure does not exceed 300 PSIG, these feeder-lines do not fall under "transmission" or "distribution" definition as per NGRA Licensing Rules, 2000. In this regard MPCL letter dated June 26, 2019 confirming that these lines lie in Mari D&P Lease Area and MPCL will oversee O&M of these lines is attached.

In light of the above, PFL hereby requests OGRA to review the application for grant of transmission license for 16" x 24km long main gas pipeline from processing facility to SNGPL's Muhammadpur Valve assembly.

Thanking you,

Yours faithfully  
For PAKARAB FERTILIZERS LIMITED

  
IFTIKHAR MAHMOOD BAIG  
(Director Business Development)



Plant Site: Khenewal Road, Multan, Pakistan. PABX: +92 61 9220022, Fax: +92 61 9220021

Head Office: E-110, Khayaban-e-Jinnah, Lahore Cantt., Pakistan. PABX: +92 42 111-FATIMA (111-328-462) Fax: +92 42 36621389, www.fatima-group.com

Received at ED (Gas) Office  
Dt: 07-07-19  
Time: 11:55 AM

*Handwritten notes:*  
JED-5 / 2/7  
2/7/19  
2/7  
2/7/19  
2/7/19  
AED-F

610



## Mari Petroleum Company Limited

21 Mauve Area, 3rd Road, G-10/4, Islamabad-44000, Pakistan  
UAN: +92-51-111-410-410 Fax: +92-51-2352859 P.O. Box No 1614

www.mpcl.com.pk

NTN: 1414673-8

GST No. 07-01-2710-039-73

Ref: MPCL/BDC//Mari/63

Date: June 26, 2019

Mr. Abdul Basit Qureshi,  
Registrar,  
Oil & Gas Regulatory Authority (OGRA),  
54-B, Fazal-e-Haq Road, Blue Area,  
Islamabad

**SUBJECT: APPLICATION FOR CONSTRUCTION AND OPERATIONS OF PIPELINE FOR TRANSMISSION OF NATURAL GAS TO PFL**

Sir,

This refers to your letter No. OGRA-6(1)-NG(PFL)/2018 dated December 18, 2018 addressed to Pakarab Fertilizer Limited (PFL).

As desired by OGRA in Para # 2 (ii) of the referred letter, we hereby submit the requisite Confirmation Letter expressing MPCL's consent to oversee Operation and Maintenance (O&M) of the pipeline being laid across the Mari D&P Lease for PFL and its O&M by PFL for which PFL has sought a license.

Best regards,

*Muhammad Aqib Anwer*  
Muhammad Aqib Anwer  
General Manager (Business Development & Commercial)

Encl: As stated above

*DR. Process plan*  
*28/6/19*  
*Plz put up with relevant record for discussion*  
*Cal 28/6*  
*AED-2*



### Daharki Field Office

Daharki, District Gholki,  
Pakistan  
UAN: +92-723-111-410-410  
Fax: +92-723-660402

### Karachi Liaison Office

D-87, Block-4, Kenkashan  
Clifton, Karachi-75600  
Pakistan UAN: +92-21-111-410-410  
Fax: +92-21-35870273  
P.O. Box No 3887

### Quetta Liaison Office

26, Survey-31  
Defence Officers Housing Scheme  
Airport Road, Quetta  
Tel: +92-81-2821052, 2838790  
Fax: +92-81-2834465

611



## Mari Petroleum Company Limited

21 Mauve Area, 3rd Road, G-10/4, Islamabad-44000, Pakistan  
UAN: +92-51-111-410-410 Fax: +92-51-2352859 P.O. Box No 1614

[www.mpcl.com.pk](http://www.mpcl.com.pk)

NTN: 1414673-8  
GST No. 07-01-2710-039-73

Date: June 26, 2019

### TO WHOM IT MAY CONCERN

Reference to the project being undertaken between M/s MPCL (Producer) and M/s PFL(Buyer) & your letter reference OGRA-6(I)-NG (PFL)/2018 dated December 18, 2018 addressed to M/s Pak Arab Fertilizers Limited regarding their application for transmission license of natural gas pipelines.

As desired by OGRA in Para # 2 (ii) of the referred letter, we hereby confirm that two 12" diameter transition lines between MPCL custody transfer point and Pak Arab Fertilizer Processing Facility, lie in Mari D&P lease area and will be constructed by SNGPL as contractor for PFL and we will oversee O&M of gathering lines.

This is for your information and perusal as desired please.

**Javed Iqbal Jadoon**  
General Manager (Operations)



#### **Daharki Field Office**

Daharki, District Ghotki,  
Pakistan  
UAN: +92-723-111-410-410  
Fax: +92-723-660402

#### **Karachi Liaison Office**

D-87, Block-4, Kenkashan  
Clifton, Karachi-75600,  
Pakistan UAN: +92-21-111-410-410  
Fax: +92-21-35870273  
P.O. Box No. 3887

#### **Quetta Liaison Office**

26 Survey-31,  
Defence Officers Housing Scheme,  
Airport Road, Quetta  
Tel: +92-81-2821052, 2839790  
Fax: +92-81-2834465



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21 Mauve Area, 3rd Road, G-10/4, Islamabad-44000, Pakistan  
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www.mpcl.com.pk

NTN: 1414673-8  
GST No. 07-01-2710-039-73

Ref: MPCL/BDC//Mari/62  
Date: June 21, 2019

Mr. Abdul Basit Qureshi,  
Registrar,  
Oil & Gas Regulatory Authority (OGRA),  
54-B, Fazal-e-Haq Road, Blue Area,  
Islamabad

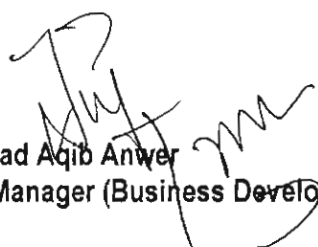
**SUBJECT: APPLICATION FOR CONSTRUCTION AND OPERATIONS OF PIPELINE FOR TRANSMISSION OF NATURAL GAS TO PFL**

Sir,

This refers to your letter No. OGRA-6(1)-NG(PFL)/2018 dated December 18, 2018 addressed to Pakarab Fertilizer Limited (PFL).

As desired by OGRA in Para # 2 (ii) b of the referred letter, we hereby submit the requisite Confirmation Letter in this regard.

Best Regards,

*for*   
Muhammad Aqib Anwer  
General Manager (Business Development & Commercial)

Encl: As stated above



### Daharki Field Office

Daharki, District Gholki  
Pakistan  
UAN: +92-723-111-410-410  
Fax: +92-723-660402

### Karachi Liaison Office

D-87, Block-4, Khekhshan  
Clifton, Karachi-75600,  
Pakistan UAN: +92-21-111-410-410  
Fax: +92-21-35870273  
P.O. Box No 3887

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613



## Mari Petroleum Company Limited

21 Mauve Area, 3rd Road, G-10/4, Islamabad-44000, Pakistan  
UAN: +92-51-111-410-410 Fax: +92-51-2352859 P.O. Box No 1614

www.mpcl.com.pk

NTN: 1414673-8  
GST No. 07-01-2710-039-73

Date: June 20, 2019

### TO WHOM IT MAY CONCERN

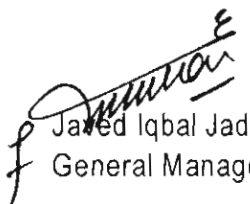
Reference to the project being undertaken between M/s MPCL (Producer) and M/s PFL (Buyer) & your letter reference OGRA-6(1)-NG (PFL)/2018 dated December 18, 2018 addressed to M/s Pak Arab Fertilizers Limited regarding their application for transmission license of natural gas pipelines.

As desired by OGRA in Para # 2 (ii) b of referred letter, we hereby confirm that three 12" diameter transition lines between MPCL custody transfer point and Pak Arab Processing Facility, lie in Mari D&P lease area and M/s PFL will be responsible for Laying, Operating and maintaining of these pipelines.

MPCL hereby confirms that it shall oversee O & M of gathering lines from MPCL's custody transfer point to Pak Arab processing facilities.

This is for your information and perusal as desired please.

Very truly yours

  
Javed Iqbal Jadoon  
General Manager (Operations)



#### Daharki Field Office

Daharki, District Ghotki,  
Pakistan  
UAN: +92-723-111-410-410  
Fax: +92-723-680402

#### Karachi Liaison Office

D-87, Block-4, Kenkashan  
Clifton, Karachi-75600,  
Pakistan UAN: +92-21-111-410-410  
Fax: +92-21-35870273  
P.O. Box No 3887

#### Quetta Liaison Office

26, Survey-31,  
Defence Officers Housing Scheme,  
Airport Road, Quetta  
Tel: +92-81-2821052, 2839790  
Fax: +92-81-2834465

PFL/OGRA/2019  
July 03, 2019

The Registrar  
Oil & Gas Regulatory Authority  
Islamabad

**Subject: ADVICE TO SNGPL FOR ALLOCATION OF PIPELINE CAPACITY  
TO PAKARAB FERTILIZERS LIMITED**

**Reference: SNGPL Letter No. GMS: 938 (LNG-Allocation) dated July 02, 2019  
Our Letter No. PFL/OGRA/2019 dated June 26, 2019  
Your Letter No. OGRA-6(1)-NG(PFL)/2018 dated December 18, 2018**

Dear Sir,

Pakarab Fertilizers Limited (PFL) has been severely affected by gas shortages and remained intermittently operational since 2011 and has not operated at all since September 2017. ECC of the Cabinet in its decision dated May 17, 2018 allocated low BTU gas from Mari fields to PFL. The allocated gas would be transported by SNGPL through its system for supply to PFL plant at Multan through an Access Arrangement.

In order to secure pipeline capacity for transportation of gas to PFL plant at Multan, PFL submitted an application for allocation of pipeline capacity to SNGPL in compliance with Third Party Access Rules (TPA) 2018 and Pakistan Gas Network Code. It may be highlighted that the requirement of a valid license for construction & operation of pipeline for transmission of natural gas is pending. In its above referred letter, SNGPL has requested to submit a copy of valid license latest by July 17, 2019.

We understand that all the information/ documentation required by OGRA vide its above referred letter have been furnished. PFL would request OGRA to confirm to SNGPL that all documents are complete and license will be issued as per procedure, therefore SNGPL can process capacity allocation application and inform OGRA accordingly.

Thanking you,

Yours faithfully  
For PAKARAB FERTILIZERS LIMITED

*Perfected  
necessary action taken  
Amir Baig 7  
3/7/19*

*3/7/19*

**IFTIKHAR MAHMOOD BAIG**  
(Director Business Development)





**SUI NORTHERN GAS PIPELINES LIMITED**

GAS HOUSE, 21 KASHMIR ROAD, P.O. BOX 56, LAHORE (PAKISTAN)

Ref: GMS: 938 (LNG-Allocation)

July 02, 2019

Mr. Iftikhar Mahmood Baig,  
Director Development,  
Pakarab Fertilizers Limited,  
E-110, Khayaban-e-Jinnah,  
Lahore Cantt

**Application for Allocation of Pipeline Capacity**

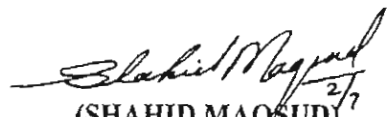
Dear Sir,

This is further to our letter No: 938 (LNG-Allocation) dated June 13, 2019 whereby it was informed that your application for allocation of capacity is under scrutiny.

In this regard, you are requested to advise latest status w.r.t issuance of shipper's license by OGRA on immediate basis while submitting a copy of valid license latest by July 17, 2019.

Regards,

Yours sincerely,  
Sui Northern Gas Pipelines Limited

  
(SHAHID MAQSUD)  
General Manager (Sales)  
For MANAGING DIRECTOR

Telephones Exch: { + (92-42) 99082000  
+ (92-42) 99082006

Telephones: { + (92-42) 99201376

Fax: + (92-42) 99201834

www.sngpl.com.pk



625



PFL/OGRA/2019-328  
July 30, 2019

Ms. Uzma Adil Khan  
Chairperson  
Oil & Gas Regulatory Authority (OGRA)  
Islamabad

Subject: REQUEST TO EXPEDITE TRANSMISSION LICENSE APPLICATION

Reference: Our letter no. PFL/OGRA/2018- dated August 20, 2018

Dear Madam Chairperson,

The Economic Committee of Cabinet (ECC), in order to mitigate shortage of fertilizers in the country and to avoid additional burden on foreign exchange due to fertilizer imports, allocated gas production from MPCL's reservoirs to PFL and further directed that allocated gas will be transported through SNGPL's pipeline network for supply to PFL Plant at Multan.

Subsequent to ECC's approval, PFL submitted an application to OGRA on August 20, 2018 for grant of requisite license under Natural Gas Regulatory Authority (Licensing) Rules 2002. The license is a prerequisite to entering into Access Arrangement (GTA) between PFL and SNGPL. However, the applicable process for the grant of license is still pending.

We may bring to your attention that PFL is presently the only fertilizer plant in the country that is closed since September 2017. Early resumption of PFL's operations will be of highest national and strategic importance for the country and the contracting parties, i.e., MPCL, SNGPL and PFL. The early restart of PFL operations will result in multiple benefits to the economy of Pakistan, including the following:

- Timely availability of much needed "value-added fertilizers" to farmers at affordable cost;
- Food security and potential growth in agriculture outputs;
- Early monetization of MPCL gas, which will be invested in exploration/ drilling of new oil / gas fields in Pakistan;
- Saving of foreign exchange of US\$ 150 million a year;
- Subsidy of PKR 10 billion on account of import substitution from PFL fertilizer production will be avoided;
- SNGPL will earn substantial revenue from Tolling Charges;
- GDP growth in Large Scale Manufacturing sector; and
- Saving of of 2,000 jobs for highly skilled personnel of PFL.

We would, therefore, request OGRA to expedite the processing of our application for license dated August 20, 2018 and issue notice for public hearing under the Licensing Rules. We have furnished all the requisite information and additional documents required by OGRA.

Thanking you,

Yours faithfully  
For PAKARAB FERTILIZERS LIMITED

IFTIKHAR MAHMOOD BAIG  
(Director Business Development)

CC: - Member Finance, OGRA Islamabad  
- Member Oil, OGRA Islamabad



→ How the company was operating before 2017



PFL/OGRA/2019-335

August 06, 2019

Ms. Uzma Adil Khan  
Chairperson  
Oil & Gas Regulatory Authority (OGRA)  
Islamabad

Subject: **REQUEST TO EXPEDITE TRANSMISSION LICENSE APPLICATION**

Reference: Our Letter No. PFL/OGRA/2018- dated August 20, 2018  
Our Letter No. PFL/OGRA/2019-328 dated July 30, 2019

Dear Madam Chairperson,

We understand that all the requisite information and additional documents required by OGRA for the processing of our transmission license application dated August 20, 2018 have been furnished.

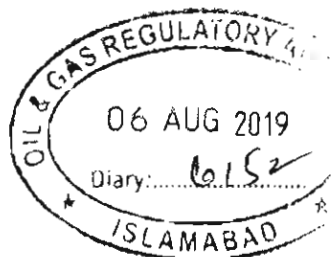
We would, therefore, request OGRA to expedite processing of license application and issue notice for public hearing under the Natural Gas Regulatory Authority Licensing Rules (2002) at the earliest.

Thanking you,

Yours faithfully  
For PAKARAB FERTILIZERS LIMITED

  
IFTIKHAR MAHMOOD BAIG  
(Director Business Development)

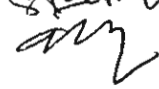
CC: ✓ - Member Finance, OGRA Islamabad  
- Member Oil, OGRA Islamabad



For necessary provision  
of Financial Analysis  
to the Authority, as discussed  
in the Auth's meeting pt.

ED (F-1)  
CC: JED-S

  
7/8

Kauman plan  
check full station.  


  
7/8

7-8-19 10:15 Am  
7/8/19 10:40 am

(Annex-A)

## Project Cost Breakup

S.No.	Costing Head	Cost (MM US\$)
<b>1.0</b>	<b>Phase-1: (35 MMSCFD Mari Shallow Gas; Compression + Dehydration)</b>	
1.1	Engineering (Pipeline + Facility)	0.30
1.2	Front End Compressors	5.40
1.3	Pipeline	14.40
1.4	Construction, Facility Development, Utilities, DHU	4.50
1.5	Land	0.23
1.6	Contingency (5%)	0.45
<b>1.7</b>	<b>Sub Total</b>	<b>25.28</b>
<b>2.0</b>	<b>Phase-2: CO<sub>2</sub> Removal facility for 35MMSCFD Shallow + 40 MMSCFD Deep Gas</b>	
2.1	Engineering	1.00
2.2	Acid Gas Removal System	27.50
2.3	Mari Deep Pipeline (Feeder Line)	1.50
2.4	Utilities & Off-sites	4.50
2.5	Facility Development + Control System	5.20
2.6	Plant Construction	4.50
2.7	Scope Contingency (5%)	2.21
<b>2.8</b>	<b>Sub Total</b>	<b>46.41</b>
<b>3.0</b>	<b>Total (Phase-1 + Phase-2)</b>	<b>71.69</b>



Page- 636-827

Annual Report

Fatima Fertilizers Ltd

for 2018

Link — [www.fatima-group.com](http://www.fatima-group.com)

آئل اینڈ گیس  
ریگولیشن اتھارٹی  
حکومت پاکستان



Oil & Gas  
Regulatory Authority  
Government of Pakistan

## NOTICE OF PUBLIC HEARING

### APPLICATION BY PAKARAB FERTILIZERS LIMITED FOR GRANT OF LICENCE FOR CONSTRUCTION AND OPERATION OF PIPELINE FOR TRANSMISSION OF NATURAL GAS

1. Pakarab Fertilizer Limited (PFL) (the applicant) has applied under Section 23 of Oil and Gas Regulatory Authority Ordinance, 2002 read with Rule 4 of the Natural Gas (Licensing) Rules, 2002 for the grant of licence to carry out the regulated activity of Construction and Operation of 16' x 24 km long gas pipeline from processing facility to SNGPL's Muhammadpur valve assembly, for transmission of natural gas.
2. PFL has informed that being cognizant of the hardships faced by the farming community, ECC of the Cabinet Division approved allocation of 75 mmcmd gas from Marri Gas Fields to PFL. Restart of operation at PFL will add approximately half a million MT of Urea equivalent fertilizers. As per ECC decision, SNGPL will transport the gas from Muhammadpur valve Assembly to PFL plant at Multan under mutually agreed gas transportation agreement. The Authority has considered the matter and admits the subject application Under Rule 5 of the OGRA's Natural Gas (Licensing) Rules, 2002.
3. OGRA invites all interveners and interested / affected persons and parties to furnish their comments / interventions / views, if any, on the petition filed by PFL, within 14 days from date of publication of this notice. The intervention request be addressed to the Registrar, OGRA, containing the name and address of the intervener and be accompanied by an affidavit verifying the contents of the intervention and intervention fee of Rs. 500/- (demand draft in favor of Oil & Gas Regulatory Authority, payable at Islamabad). In case of a person representing any organization/agency/body, he must file an authority letter of the same.
4. All parties to the proceedings, stakeholders, general public and interested / affected persons are hereby informed of the above proceedings.
5. For the subject propose, OGRA has also decided to hold this Public Hearing at Islamabad according to the date, time and venue mentioned below.

Date: 02 October 2019 (Wednesday)

Time: 10:30 am

Venue: Marriott Hotel, Ambassador Hall, Islamabad

6. For any information required from the applicant, please contact

Mr. Saqib Aziz,  
Department Manager Business Development,  
Pakarab Fertilizers Limited (PFL),  
E-110, Khayaban-e-Jinnah,  
Lahore, Cantt. UAN: 111-328-462  
Fax: 042-36621389  
Saqib.aziz@fatima-group.com

REGISTRAR  
Oil and Gas Regulatory Authority  
54-B, Fazal-e-Haq Road, Blue Area, Islamabad  
Phone: 051-9244296, 051-9244090-98 (Ext-157)  
Fax: 051-9244379  
Website: [www.ogra.org.pk](http://www.ogra.org.pk)

"DONATE FOR DIAMER BASHA AND WOH-MANO DAMS"

PIC01307/19

آئل اینڈ گیس  
ریگولیشن اتھارٹی  
حکومت پاکستان



Oil & Gas  
Regulatory Authority  
Government of Pakistan

## نوٹس برائے عوامی سماعت

پاک عرب فریٹلائزرز لمیٹڈ کی طرف سے درخواست برائے لائسنس قدرتی گیس پائپ لائن (تعمیر و ترسیل)

- 1- پاک عرب فریٹلائزرز لمیٹڈ (PFL) (درخواست دہندہ) نے سیکشن 23 اوگرا آرڈیننس 2002 اور رول 4 اوگرا لائسنس رولز 2002 کے تحت آئل اینڈ گیس ریگولیشن اتھارٹی کو لائسنس کیلئے درخواست دی ہے جس میں 24"x16" کلو میٹر لمبی گیس پائپ لائن محمد پور والو اسبلی تک بچھانی شامل ہے۔
- 2- پاک عرب فریٹلائزرز لمیٹڈ نے بتایا کہ کاشکار برادری کو درپیش مشکلات کا ادراک کرتے ہوئے، کابینہ ڈویژن کی ای سی سی نے ماری گیس فیلڈز سے PFL میں 75 mmcfcd گیس مختص کرنے کی منظوری دی ہے۔ PFL آپریشن شروع ہونے سے تقریباً نصف ملین میگا ٹن یوریا مادی کھاد کا اضافہ ہوگا۔ ای سی سی کے فیصلے کے مطابق، سوئی نادر ن گیس پائپ لائن لمیٹڈ باہمی طے شدہ گیس کی نقل و حمل کے معاہدے کے تحت گیس محمد پور والو اسبلی سے PFL پلانٹ ملتان پہنچائے گی۔ اتھارٹی نے اوگرا کے قدرتی گیس لائسنسنگ رولز 2002 کے ضابطہ 5 کے تحت اس درخواست کو قبول کیا اور عوامی سماعت منعقد کر رہی ہے۔
- 3- اس ضمن میں اوگرا نے تمام دلچسپی رکھنے والے افراد اور متاثرہ فریقین کو دعوت دی ہے کہ وہ اپنے تاثرات، آراء اور کوئی بھی تو اس نوٹس کی اشاعت کی تاریخ سے 14 دن کے اندر اندر پیش کریں۔ درخواست گزار اپنی گزارشات، نام اور پتہ بیان حلفی کے طور پر درج کرے گا اور -500/- روپے کا ڈیمانڈ ڈرافٹ بحق آئل اینڈ گیس ریگولیشن اتھارٹی، اسلام آباد بھی ادا کرے گا۔ کسی ادارے / تنظیم / انجمنی کی نمائندگی کرنے کی صورت میں درخواست گزار اتھارٹی لینز بھی پیش کرے گا۔
- 4- اس نوٹس کے ذریعے تمام فریقین، سٹیک ہولڈرز، عوام، دلچسپی رکھنے والے اور متاثرہ افراد کو آگاہ کیا جاتا ہے۔
- 5- اوگرا نے اس موضوع پر اسلام آباد میں عوامی سماعت کا بھی فیصلہ کیا ہے جو کہ درج ذیل تاریخ، وقت اور مقام کے مطابق ہوگی۔

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6- درخواست گزار کسی بھی معلومات کیلئے رابطہ کر سکتے ہیں۔

شاقب عزیز

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