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## **PREFACE**

This report has been prepared in accordance with Rule 25(2) of the Rules of Business, 1973, which stipulates that at the beginning of each financial year, each Division shall, for the information of the Cabinet and general public, set up as a permanent record, a Book which shall contain:

- a. The details of its activities, achievements and progress during the preceding financial year giving only the unclassified information which can be used for reference purposes;
- b. The programme of activities and targets set out for itself during the preceding financial year and the extent to which they have been realized; and
- c. The relevant statistics properly tabulated.

The report gives an overview of the activities, achievements and progress of the Petroleum Division, its attached departments and organizations/companies that were working under its administrative control, during the Financial Year 2019-20. However, the reflection of activities and achievements provides a bird's eye view on the broader parameters of policies and functions. For details on particular topics, the website of the Division may kindly be referred to, which is updated on regular basis to reflect the current issues and policies pertaining to the oil, gas and mineral sectors of Pakistan.

I hope that this Year Book will serve as a useful reference document.

Islamabad: 2021

**Mr. Ali Raza Bhutta**  
**Secretary**

## **CHAPTER 1: GENERAL**

## **1.1 INTRODUCTION**

Ministry of Energy has been established after the reorganization of the Federal Secretariat by Cabinet Division on 4<sup>th</sup> August, 2017. Ministry of Energy comprises of two Divisions namely, Petroleum Division and Power Division. Prior to that the Petroleum Division was known as Ministry of Petroleum and Natural Resources which was created in April 1977 after bifurcation of Ministry of Fuel, Power and Natural Resources. Year Book pertains to the activities and achievements of the Petroleum Division pertaining to the period 2019-20.

## **1.2 MISSION STATEMENT**

To ensure availability and security of sustainable supply of oil and gas for economic development and strategic requirements of the country and to coordinate development of natural resources of energy and minerals, in order to cater for needs of the people of Pakistan.

## **1.3 STRATEGY TO ACHIEVE THE MISSION**

- To adopt an integrated approach for promoting exploration and fast track development of oil, gas and mineral resources.
- To deregulate, liberalize and privatize oil, gas and mineral sectors through structural reforms.
- To attract private investment and to establish credible institutions for facilitating the development of petroleum and mineral sectors.
- To develop technical and professional human resources.
- To optimize existing energy delivery infrastructure (oil/gas pipelines).
- To substitute imported fuel oil with indigenous gas by optimally balancing the gas availability and supplies from local and imported sources.
- To attract FDI in Oil, Gas & Mineral Sector by facilitation.

## **1.4 FUNCTIONS OF THE DIVISION**

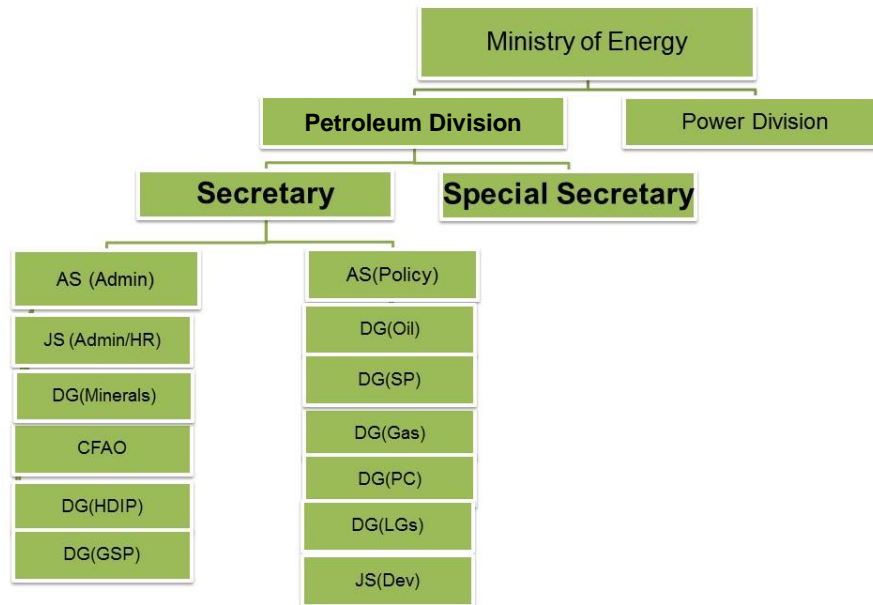
The Division is responsible for dealing with all matters relating to oil, gas and minerals. Its detailed functions as per the Rules of Business are as under:

1. All matters relating to oil, gas and minerals at the national and international levels including:-
  - i) Policy, legislation, planning regarding exploration, development and production of oil & gas sector;
  - ii) import, export, refining, distribution, marketing, transportation and pricing of all kinds of petroleum and petroleum products (Prices of all kinds of petroleum and petroleum products are determined by Oil and Gas Regulatory Authority w.e.f. 01-04-2006)
  - iii) Matters bearing on international aspects;

- iv) Federal agencies and institutions for promotion of special studies and development programmes.
2. Geological Surveys.
    - i) Administration of Regulation of Mines and Oil-fields and Mineral Development (Government Control) Act, 1948, and rules made there-under, in so far as the same relates to exploration and production of petroleum, transmission, distribution of natural gas and liquefied petroleum gas, refining and marketing of oil;
    - ii) Petroleum concessions agreements for land, off-shore and deep seas areas;
    - iii) Import of machinery, equipment, etc., for exploration and development of oil and natural gas.
  3.
    - i) Administration of Marketing of Petroleum Products (Federal Control) Act 1974 and the rules made there-under;
    - ii) Matters relating to Federal investments and undertakings wholly or partly owned by the Government in the field of oil, gas and minerals, excepting those assigned to the Industries and Production Division.
  4. Administration of:-
    - i) The Petroleum Products (Development Surcharges) Ordinance, 1961, and the rules made there-under;
    - ii) The Natural Gas (Development Surcharges) Ordinance, 1967, and the rules made there-under; and
    - iii) The Esso Undertakings (Vesting) Ordinance, 1976; and
    - iv) Hydrocarbon Development Institute of Pakistan Act, 2006 (I of 2006) and the rules made there-under.
  5.
    - i) Coordination of energy policy, including measures for conservation of energy and energy statistics;
    - ii) Secretariat of National Energy Policy Committee.
  6. Central Inspectorate of Mines, Islamabad.
  7. Department of Explosives.

## **1.5 ORGANIZATION OF THE DIVISION**

The Ministry of Energy (Petroleum Division) has been organized into four wings i.e. Administration, Development, Mineral and Policy. The Division has one Attached Department, one Subordinate Office, one Autonomous Body and 11 companies that are working under its administrative control. The Secretary is assisted by two Additional Secretaries, one CF&AO, two Joint Secretaries and five Directors Generals.



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### 1.5.1 ADMINISTRATION WING

Administration Wing consists of a Joint Secretary, two Deputy Secretaries and six Section Officers along with the supporting staff and one IT Network Administrator. The Wing is responsible for the following functions:

- Personnel and general administration of the Ministry (Secretariat), alongwith procurement.
- All matters relating to administration of the Policy Wing, oil and gas companies, Geological Survey of Pakistan (GSP), Pakistan Mineral Development Corporation (PMDC) and Hydrocarbon Development Institute of Pakistan (HDIP).
- Corporate affairs of oil and gas companies.
- All matters relating to technical assistance, tours and training.
- Coordination work of the Division and its attached organizations.
- All matters relating to web-site and networking of the Ministry.
- Coordination work related to Energy (Petroleum Division) Committee on Defense Planning.
- All matters relating to the Parliament Business.

### 1.5.2 DEVELOPMENT WING

This Wing comprises of Joint Secretary, two Deputy Secretaries and four Section Officers along with the supporting staff. The Wing is mainly responsible for coordination on policy matters, processing and seeking approval of oil and gas infrastructure and

mineral sector development projects and monitoring. It also processes foreign aid/loan and coordination with the World Bank, ADB, CIDA, IDB JICA etc. handles Joint Ministerial Commissions, ECO & bilateral relations; and prepares development budget (PSDP), long term plans, economic survey & Budget speeches. Matters relating to ECNEC, ECC, CCOI, CCOP, Cabinet and implementation of decisions, foreign investment, privatization and import of natural gas projects are also undertaken by this Wing.

### **1.5.3. MINERAL WING**

Mineral Wing is a technical arm of the Division head by Director General (Minerals) and looks after the following functions:

- Frame, update and monitor implementation of National Mineral Policy.
- Review and dissemination of geological data.
- Provide support to federating units in improving regulatory regime, negotiation of international mineral agreements and capacity building etc.
- Facilitate local and foreign investment in the mineral sector.
- Provide inputs for formulating sectorial development plans in consultation with the federating units.
- Process mineral development schemes and operational/technical issues of federal public sector bodies /attached departments (PMDC/SML/LCDC/GSP).
- Monitor progress of public sector mineral development projects.
- Promotion of mineral sector through publications, seminars, workshops, road shows and participation in the world fora etc.

### **1.5.4 POLICY WING**

The Policy Wing comprises of (i) Directorate General of Petroleum Concessions, (ii) Directorate General of Oil, (iii) Directorate General of Gas, (iv) Directorate General of Liquefied Gases and (v) Directorate General of Admn/Special Projects. Each Directorate is headed by a Director General. The Policy Wing is responsible for developing policies for oil and gas sectors, forecasting future requirement and assessing the impact of existing policies, rules and regulations.

### **1.5.5 ATTACHED DEPARTMENT, AUTONOMOUS ORGANIZATIONS, CORPORATIONS AND COMPANIES OF THE PETROLEUM DIVISION**

The Division has two attached department, one sub-ordinate office, one autonomous body and eleven organizations/companies under its administrative control:

- Geological Survey of Pakistan (GSP) [Attached Department].
- Department of Explosives [Attached Department]
- Central Inspectorate of Mines (CIM) [Sub-ordinate Office]
- Hydrocarbon Development Institute of Pakistan (HDIP) [Autonomous Body].
- Oil and Gas Development Company Limited (OGDCL).
- Sui Northern Gas Pipelines Limited (SNGPL).

- Sui Southern Gas Company Limited (SSGCL).
- Pakistan State Oil Company Limited (PSOCL).
- Pakistan Petroleum Limited (PPL).
- Pak Arab Refinery Company Limited (PARCO).
- Saindak Metals Limited (SML).
- Lakhra Coal Development Company (LCDC).
- Government Holdings (Pvt.) Limited (GHPL).
- Pakistan Mineral Development Corporation (Pvt.) Limited (PMDCL).
- Inter State Gas Systems (Pvt.) Limited (ISGSL).
- Pakistan LNG Limited (PLL)
- Pakistan LNG Terminal Limited (PLTL)

## **1.6 WEBSITE OF THE DIVISION**

The Division has been regularly updating its website [www.mpn.gov.pk](http://www.mpn.gov.pk) on the basis of feedback received from stakeholders. The website provides information about the activities of the Division, Policies, Projects and Press releases.

## **CHAPTER 2 :        ACTIVITIES, ACHIEVEMENTS AND PROGRESS DURING 2019-20**

## **2.1 MINERAL SECTOR OVERVIEW**

Pakistan is blessed with a variety of mineral resources that include metallic minerals, coal, building stones, industrial minerals and precious gemstones. More than 50 minerals are known to occur and thousands of mines are operative & producing chromite, ores of copper (+gold, silver), iron & lead-zinc, coal, rock salt, limestone, gypsum, dolomite, barite, bentonite, china clay, fireclay, rock phosphate, silica sand, marble, granite, sand stone, emerald, ruby, topaz and tourmaline etc. Both public and private sector organizations including foreign entrepreneurs are engaged in exploration and exploitation of these natural resources.

## **2.2 CONSTITUTIONAL POSITION**

As per Constitutional provisions, the Federal Government is mandated with geological surveys, regulation of nuclear minerals and those occurring in federally controlled areas [Islamabad Capital Territory (ICT) & offshore beyond the territorial waters], co-ordination and formulation of policy/plan for mineral sector at national and international levels. Minerals other than nuclear substances are Provincial subject, which accordingly regulate mineral development activities within their territorial jurisdiction.

## **2.3 NATIONAL MINERAL POLICY FOCUS**

The Government has been encouraging investment in the minerals sector. The Government of Pakistan announced first national mineral policy in 1995 with inputs of the international experts [Commonwealth Secretariat] and the consensus of all federating units. This initiative paved the way for an expansion of mining sector activities in the country as well as the improvement of the sector's investment attractiveness. Pakistan has a fairly large mineral resource base and there has been growing interest from international mining companies. With a view to ensure alignment with the contemporary practice and enhance international competitiveness of the sector through attractive fiscal and regulatory regimes, the National Mineral Policy was updated in 2013 in consultation with all stakeholders/Provinces and approved by Council of Common Interests for implementation.

## **2.4 FUNCTIONS**

Mineral Wing is a technical arm of the Petroleum Division and is entrusted with the following functions:-

- Frame mineral sector related policies and monitor implementation by the concerned organizations;
- Provide support to the Provinces in improving regulatory regime, negotiation of mineral agreements [international] and capacity building;
- Promote and facilitate local and foreign investment in the mineral sector;
- Dealing with operational issues of federal public sector mining & mineral organizations (PMDC, SML, BME, LCDC & GSP);
- Dealing with Joint Commissions and MoU/agreement with different countries, ECO, SAARC and other fora for minerals related agenda;
- Mineral Sector Database;
- Monitor progress of public sector mineral development projects;
- Provide inputs for budget, economic survey reports and mineral sector development plans and China Pakistan Economic Corridor (CPEC) etc.;
- Promotion of mineral sector through organizations and participation in seminars and workshops, including representation at world fora;

- Defense of minerals sector litigation cases in local and international courts;
- Parliament Business related to minerals other than mineral oil and natural gas; and
- Coordination with Provincial departments and other Federal Ministries/ organizations, etc.

### **Achievements**

- A. A Memorandum of Understanding (MoU) has been signed between the Governments of the Kingdom of Saudi Arabia (KSA) and Pakistan on 17.02.2019 regarding bilateral economic cooperation in the mineral resources sector. In follow-up of this MoU, Pakistani delegation visited the KSA to ascertain mining and processing expertise of Saudi side. After due consultation with the Provinces and concerned federal organizations, the following implementation proposals were identified and presented to the Saudi counterparts for possible joint ventures during their visit to Pakistan in September 2019:-
  - I. Copper exploration and development opportunities in Chagai District (other than Reko-Diq & Saindak);
  - II. Surface Coal Gasification of Thar Coal, Sindh for Urea production;
  - III. Barite-Lead-Zinc Processing Project (Balochistan); and
  - IV. Establishment of Steel Mill based on iron ores of Chiniot-Punjab and Chagai area-Balochistan.
- B. Revamping of PMDC – induction of professionals in management team; Managing Director, General Manager (Business Development), General Manager (HSE), Chief Internal Auditor and Company Secretary etc.
- C. Formulation of Strategic Plan for Mineral Sector Development.
- D. Establishment of National Minerals Data Center included in the PSDP 2020-21.
- E. Initiated process for rail connectivity of Thar Coal-field;
- F. Motivation to fertilizer manufacturing companies for combined efforts to conduct feasibility studies for Thar Coal gasification and coal to liquid engineering projects;
- G. Promotion of power generation based on indigenous coal instead of imported fuel;
- H. Approval and implementation of plan for large-scale mining in Balochistan. A dedicated company Balochistan Mineral Exploration Company (BMEC) has been established for this job as joint venture between Federal and Provincial Governments;
- I. Facilitation of Geological Survey of Pakistan (GSP), PMDC, SML and BME in operational matters. Bolan Mining Enterprises (BME) is carrying out exploration and mining of barite, lead-zinc & iron ores; Saindak Metals Limited (SML) engaged at Saindak Copper-Gold Project and Pakistan Mineral Development Corporation (PMDC) working for coal, rock salt and lead-zinc ore mining and processing;
- J. Preparation and processing of mineral sector project portfolios and suggestions for bilateral cooperation with international aid agencies, including the technical cooperation with other countries; and
- K. Facilitated the national and international mineral sector companies in obtaining security clearance and work visas for their expatriates to enable them to work at mineral fields/sites for the projects of copper, gold, lead, zinc, barite, iron, marble and granite etc. in Pakistan.

### **2.1.1 CENTRAL INSPECTORATE OF MINES**

Central Inspectorate of Mines is entrusted with enforcement of the Mines Act, 1923 and rules/regulations framed thereunder [Consolidated Mines Rules, 1952 and Oil & Gas (Safety in Drilling & Production) Regulations, 1974 etc.] concerning occupational safety and health aspects in the mines falling in federal domain i.e. oil-fields & gas-fields in the country. These enactments regulate the competent supervision of mine operations, appropriate working procedures, provision of protective equipment and safety gadgets, first-aid and health-care, working hours and rest intervals etc.

For accomplishment of its organizational objectives, the Inspectorate carries out inspection visit of oil- & gas-fields; drilling well sites, seismic survey sites and oil/gas production facilities to ascertain the status of implementation of legal safety requirements; follow-up of inspection observations for remedy of shortcomings; and inquiry/follow-up of accidents for adoption of preventive measures to avert recurrence and help for the payment of compensation to the affectees. Besides the regulatory functions, the Inspectorate conducts training/awareness raising programs for workers, supervisors and managers regarding occupational safety & health concerns and related laws to promote safety culture at workplace.

## **2.2 POLICY WING**

### **2.2.1 Directorate General of Oil**

The consumption of petroleum products in the country remained around 17.63 million tons during 2019-20. Indigenous crude oil meets only 16% of total requirements, while 84% was met through imports in the shape of crude oil and refined petroleum products. The crude oil is refined by six major and two small refineries.

Refineries are importing crude oil, after uplifting local crude oil, from any source allocated. Oil refineries have their own commercial Standards Terms Contract for importing crude oil from supplier i.e. Saudi Aramco and Abu Dhabi National Company (ADNOC).

At present, oil refineries have long term commercial Agreements for import of crude oil from Saudi Arabia and UAE, PARCO: 60,000 bpd (Saudi Arabia) and 39,000 bpd from UAE, NRL: 50,000 bpd from Saudi Arabia and 6,000 bpd from (UAE), PRL 29,500 bpd from UAE, whereas Byco imports crude oil as per their requirements on spot price basis from Gulf Region.

During 2018-19 and 2019-20 indigenous oil refineries produced 12.3 million tons and 9.8 million tons of POL products, respectively. Oil refineries processed during 2018-19 and 2019-20, 8.9 million tons & 6.98 million tons of imported crude oil and 3.4 million tons and 2.8 million tons of indigenous crude/condensate, respectively.

### **Oil Marketing & Refining Policy**

- a) Salient features of the policy for setting up of new oil refinery Project in the country are as under:

- i. No prior permission of GOP is required for setting up of new refinery project. However, License from Oil & Gas Regulatory Authority (OGRA) is required under OGRA Ordinance 2002.
  - ii. Import parity price formula linked to Singapore Mean FOB spot price for the new oil refineries. There will be no minimum Rate of Return guarantee for new refinery projects.
  - iii. Import of crude oil from any source subject to Price Economics after lifting local crude allocated if any.
  - iv. Concessionary rate of duties / taxes for the equipment not manufactured locally as per the prevailing policy/procedures.
  - v. GOP will not give any product off take right guarantee. Refineries are free to sell their product to any marketing companies or they can set up their own marketing companies.
  - vi. No hydro-skimming refinery will be established in the country. Only semi conversion or fully conversion refineries may be established.
- b) The Government of Pakistan on 27.04.2018 approved an Incentive Package as under for all new state of the art (not second hand/relocated) Deep Conversion Oil Refinery Projects including expansion of existing refineries of minimum 100,000 bpd refining capacity to be set up anywhere in the country:
- i. 20 years income tax holiday.
  - ii. New Refinery Project shall be exempted from the application of the Companies Profits (Workers' Participation) Act 1968 and Workers' Welfare Fund Ordinance 1971.
  - iii. Exemption from all duties, taxes, surcharges and levies on import, by the Refinery Project, its contractors or any other persons, of all machinery, vehicles, plant and equipment, other materials and spares and consumables for setting up, operation, maintenance and repair of the Refinery.
  - iv. Exemption from withholding tax and all other duties, taxes, surcharges, levies imposed relating to foreign contractors/subcontractors and their personnel in connection with engineering, procurement, construction, commissioning, operation, maintenance and repair of the Refinery.
  - v. Exemption from leviable sales tax and excise duty on supply of locally manufactured building and construction material, equipment and services for setting up of Refinery.
  - vi. New Refinery projects would be given a pricing mechanism which shall be no less favourable than the prevailing mechanism.
  - vii. Facilitation in Project infrastructure such as Single Point Mooring (SPM), Jetties, subsea/land pipelines etc.
  - viii. Waiver of applicable Development Surcharge on the value of exports under the EPZA Rules 1981 in case Refinery Project is set up in Export Processing Zone.
  - ix. In case of oil refinery project at upcountry locations, the imported crude oil transportation pipelines and its storages will be integrated part of the refinery project and will also avail all incentives as given above.

The temporary imports by contractors/sub-contractors of all machinery, vehicles, plant and equipment, other materials and spares in connection with engineering, procurement, construction, commissioning, operation, maintenance and repair of the Refinery shall be exempted from all duties, taxes, surcharges and levies on import.

### **ACHIEVEMENT DURING THE YEAR 2019-20**

1) The doubling of demand of refined petroleum products in next 10-12 years will therefore require addition of oil refineries and corresponding infrastructure for long term Energy Security of the country. Therefore, Government of Pakistan (GoP) being cognizant of projected oil refining shortfall in the country, signed a Memorandum of Understanding (MoU) with Kingdom of Saudi Arabia on 17<sup>th</sup> February, 2019 to jointly conducting feasibility study for setting up of a 300,000 bpd (13MTPA) oil refinery plus petrochemical complex with potential investment by Saudi Aramco (SA), the nominated entity of the kingdom of Saudi Arabia. Presently Pakistan State Oil (PSO) has been nominated as Pakistani entity to interact with Saudi Aramco. A Non-Disclosure Agreement (NDA) has also been signed between PSO and Saudi Aramco. PSO and SA are jointly working on prefeasibility study of the project.

2) Export Financing Agreement (EFA) between Saudi Fund for Development (SFD) and Ministry of Finance, Government of Pakistan executed on 17.02.2019 for import of crude oil/refined petroleum products from Saudi Arabia. The import of crude oil on deferred payment has commenced by Pak-Arab Refinery Limited (PARCO) and National Refinery Limited (NRL) from July, 2019. During FY 2019-20, total 12,601,770 barrels of crude oil imported under SFD (PARCO 6,439,702 barrels, and NRL 6,162,068 barrels).

### **3) Collection of Revenue:**

During the financial year 2019-20, GOP earned revenue on petroleum products as follows:-

<u>Earning through</u>	<u>(Rs. In Billion)</u>
Petroleum Levy	292.00
Discount	5.00
Windfall Levy	13.00

### **4) Enhancement of Storages Capacity**

During the period 2019-20, the following storage capacities have been added to meet the enhanced demand of Petroleum Products:-

Figure in M. Tons

<b>S. No.</b>	<b>Product</b>	<b>Storage Capacity</b>	<b>Total Quantity Added</b>	
		<b>2018-19</b>	<b>2019-20</b>	<b>2019-20</b>
1.	MS	494,299	674,929	80,630
2.	HSD	1,342,251	1,442,457	105,206

## 2.2.2 Directorate General of Gas

Natural Gas is a clean, efficient, economical and environment friendly fuel. Its indigenous supplies contribute about 35% of the total primary energy mix in the country. Government of Pakistan is pursuing its policies of enhancing gas production to meet the increasing demand of energy in the country through aggressive exploration activities. Natural Gas consumption including Re-gasified Liquefied Natural Gas (RLNG) during 2019-20 remained 3,597 MMCFD.

### 1. SECTORAL GAS CONSUMPTION

The sector-wise gas consumption in Million Cubic Feet per Day (MMCFD) along-with percentage during 2019-20 is appended below;

Unit: MMCFD				
Sectors	Natural Gas (Indigenous)	RLNG	Total	Percentage
Power	669	525	1,194	33%
Domestic	890		890	25%
Commercial	67	7	74	2%
Transport (CNG)	96	31	127	4%
Fertilizer	656	30	686	19%
General Industry	420	206	626	17%
<b>Total</b>	<b>2798</b>	<b>799</b>	<b>3,597</b>	<b>100%</b>

### 2. NEW CONNECTIONS ACHIEVEMENTS

With the intention to benefit maximum households, gas utility companies have set their objective to enhance consumer base. The company-wise and category-wise new gas connections provided during Fiscal Year 2018-19, 2019-20 and its accumulative status as on 30.06.2020 is given below;

#### i. SNGPL

Sectors	FY 2018-19	FY 2019-20	Present Status as on 30.06.2020
Domestic	427,768	270,058	6,892,609
Commercial	2,523	1,109	59,931
Industry	120	61	6,052
<b>Total</b>	<b>430,411</b>	<b>271,228</b>	<b>6,958,592</b>

#### ii. SSGCL

Sectors	FY 2018-19	FY 2019-20	Present Status as on 30.06.2020
Domestic	114,761	96,581	3,082,792

Commercial	1,232	480	24,251
Industrial	94	67	4,352
<b>Total</b>	<b>116,087</b>	<b>97,128</b>	<b>3,111,395</b>

### 3. COMPANY-WISE TRANSMISSION AND DISTRIBUTION PIPELINES NETWORK (TARGETS AND ACHIEVEMENTS)

The gas utility companies are focused on extending their infrastructure by laying additional transmission & distribution pipeline. The company-wise details of gas network extended during Fiscal Year 2018-19, 2019-20 and its accumulative status as on 30.06.2020 is given below;

#### a. SNGPL

(Figures in Km)

Gas Network	Pipeline	FY 2018-19	FY 2019-20	Present Status as on 30.06.2020
Transmission Network		141	120	9,137
Distribution Mains		5,130	4,600	110,436
Services		1,461	1,039	27,871
<b>Total</b>		<b>6,732</b>	<b>5,759</b>	<b>147,444</b>

#### ii. SSGCL

(Figures in Km)

Gas Network	Pipeline	FY 2018-19	FY 2019-20	Present Status as on 30.06.2020
Transmission Network		-	72	4,126
Distribution Mains		476	306	36,670
Services		308	228	10,856
<b>Total</b>		<b>784</b>	<b>606</b>	<b>51,652</b>

### 4. NATURAL GAS ALLOCATION AND MANAGEMENT POLICY, 2006

During 2005-06 the Government announced natural gas allocation and management policy to set out priorities for use of natural gas in an optimal manner and also to manage demand during short supplies in an economically efficient manner. The priority order defined in the Natural Gas Allocation and Management Policy, 2006 has been reviewed in 2013 and accordingly different sectors have been prioritized as per the following order:

CATEGORY OF CONSUMERS	PRIORITY ORDER
Domestic and Commercial Sectors	First
Power Sector and Zero Rated Industry	Second
General Industry, Fertilizer & Captive Power	Third
Cement Sector including its Captive Power	Fourth
CNG Sector	Fifth

### 2.2.3 DIRECTORATE GENERAL OF LIQUEFIED GASES (DG LGs)

Sr. No.	Items	Units	Target set for F.Y 2019-20	Target achieved during F.Y 2019-20
1	LNG Imports	Tons	6 Million	8.71 Million
2	LNG Terminal Capacity	MMCFD	1200	1200
3	LPG Production	Tons	820,000	754,495
4	LPG Imports	Tons	300,000	350,016

### 2.2.4 DIRECTORATE GENERAL OF PETROLEUM CONCESSIONS (PC)

The Present Government is giving high priority to develop indigenous hydrocarbon resources to minimize the demand and supply gap. The government has taken various measures to create an investment friendly environment in the Exploration & Production (E&P) Sector to attract foreign as well as local investment. The Government is taking serious steps to accelerate oil and gas exploration and production activities in the country.

2. During the last financial year (i.e. July 2019 – June 2020) following millstones were achieved:

Licence Granted	5
Leases Granted	5
Wells drilled	58
Exploratory	25
App./Development	33
Discoveries announced	10
Initial flow from these discoveries	
Oil (BOPD)	976

Gas (MMCFD)	84
<b>Production added from these discoveries</b>	
Oil (BOPD)	103
Gas (MMCFD)	29
Seismic Acquired	
2D L.kms)	4,312
3D (Sq.Kms)	1,435

## **CHAPTER 3**

**Department of Explosives  
(DoE)**

**<http://www.doe.gov.pk/>**

### **3.1 Introduction:**

Department of explosive is an attached department working under the administrative control of Ministry of Energy (Petroleum Division). It is a technical-cum-administrative organization and its main objective is to ensure safety in respect of licensed premises. Head office is situated in Rawalpindi and 5 circle offices are working in Karachi, Lahore, Multan, Quetta and Peshawar.

### **3.2 Statutory Framework:**

**Explosives Act, 1884** (an act to regulate the manufacture, possession, use, sale, transport, export and importation of explosives) Rules made there under is

- Explosives Rules, 2010

**Petroleum Act, 1934** (an act to consolidate and amend the law relating to the transport, storage, production, refining and blending of petroleum and other inflammable substances) Rules made there under are:

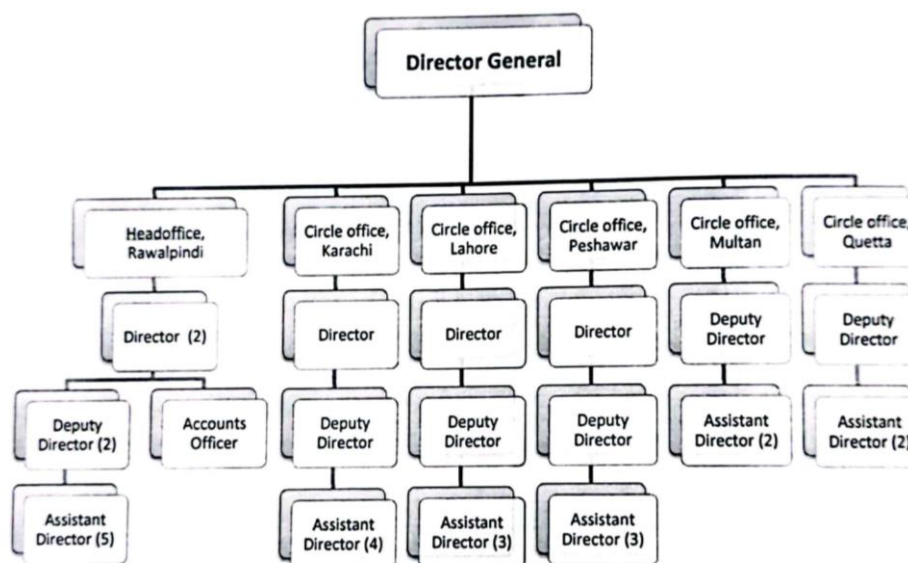
- Petroleum Rules, 1937 (amended 2010)
- Carbide of Calcium Rules, 1937
- Mineral and Industrial Gases Safety Rules, 2010

### **3.3 Objectives:**

It is the basic mandate and responsibility of department of explosive to ensure the public safety and security of human life and their properties within the licensed premises, with respect to manufacturing, transportation, storage, import (except Petroleum), export selling and use of:

- Commercial Explosives
- Petroleum Products
- Mineral compressed/Liquefied gases like CNG and LPG
- Industrial Compressed Gases like Acetylene, Chlorine, Ammonia, Nitrogen and Oxygen

### 3.3 Organization Chart:



### 3.4 Human Resource:

- Strength of Head Office, Rawalpindi = 43
- Strength of Circle Office, Peshawar = 12
- Strength of Circle Office, Lahore = 19
- Strength of Circle Office, Multan = 12
- Strength of Circle Office, Quetta = 10
- Strength of Circle Office, Karachi = 19
- Total Strength = 115**

### 3.5 Working & Performance of Department of Explosives:

- Licensing of import, transport, storage, production, refining and blending of petroleum and other inflammable substances and manufacture, possession, use, sale, transport, export and importation of explosive under the law.
- Safety inspections of licensed premises, installations and equipment to ensure compliance with safety regulations

### 3.6 Revenue Generation in Last Five Years:

Financial Year	Budget Allocated	Revenue Earned
2014-15	40.6 Million	181 Million
2015-16	44.8 Million	179.3 Million
2016-17	46.9 Million	255.2 Million
2017-18	49.2 Million	265.6 Million
2018-19	53.7 Million	228.8 Million (upto May, 2019)

### 3.7 Efforts made for up gradation and modernization of Department of Explosives

- Summary for upward revision of fee structure in respect of Petroleum Rules, 1937 and Mineral and Industrial Gases Safety Rules, 2010 has been approved by Cabinet Committee for Disposal of Legislative Cases on 21<sup>st</sup> June, 2019. Now it is at the stage of Publication in the official gadget for generation of more revenue in National Exchequer.
- Amendment in Petroleum Act, 1934 has been vetted by Law Division and now at the stage of submission in Parliament for approval.
- Up-gradation and re-designation of post of Chief Inspector of Explosive (BS-19) to Director General (BS-20), and its recruitment rules, has also been published.
- Recently, twelve (12) Assistant Directors have been appointed in the Department of Explosives through FPSC.
- Shifting of Head Office from Private Building to Government Building is near to completion.

Department of Explosives has contributed to the Government Exchequer through its functions like grant, renewal and amendment of licenses under P.R. 1937, Explosives Rules 2010, Carbide of Calcium Rules 1937, Mineral and Industry Gas Safety Rules 2010. Performance of DoE from July, 2019 to June, 2020 is given as under:

S#	Activities	Islamabad	Lahore	Karachi	Multan	Peshawar	Quetta	Total
1.	License Granted	196	490	139	440	55	105	1,425
2.	License Renewed	123	775	6401	3016	397	214	10,926
3.	License Cancelled	13	01	01	01	09	00	25
4.	License Suspended	03	00	00	09	00	00	12
5.	License Expired	31	40	03	84	14	15	187
6.	Inspection Conducted	216	3123	1436	145	211	34	5,165
7.	Vehicle Approved	204	2946	1390	1188	123	00	5,851
8.	NOC/Permit	14	246	00	01	00	02	263
9.	Fuel Tank Test	00	00	00	00	00	00	00
10.	Layout GPL	00	233	00	00	00	12	245
11.	PSI Meeting	00	43	30	00	00	00	73
12.	Court Attendance	00	77	00	07	09	00	93
13.	<b>Revenue Earned</b>	40,232,546	48,396,949	57,071,848	33,120,684	36,796,486	6,740,313	222,358,826
14.	<b>Expenditure Incurred</b>	36,415,788	11,678,955	9,532,000	7,888,228	14,202,119	5,378,208	85,095,298

#### Revenue Targets

2020-21	2021-22	2022-23
350,000,000	350,000,000	350,000,000

## CHAPTER 4



**GEOLOGICAL SURVEY OF PAKISTAN  
(GSP)**

<http://www.gsp.gov.pk/>

## 4.1 INTRODUCTION

Geological Survey of Pakistan (GSP) is an attached department of the Federal Ministry of Energy (Petroleum Division) with its headquarters office located at Quetta. As per charter, GSP is responsible for study of geology of the country in all pertinent details. With a balanced, efficient and competitive structure, GSP is capable to explore mineral resources and to undertake geological, geophysical, drilling and geo-technical investigations. During the recent years, the GSP's technical services were frequently availed by different organizations in public and private sector. The GSP also undertakes development projects to cater immediate needs in the fields of geological mapping and mineral exploration.

### 4.1.1 FUNCTIONS AND CORE ACTIVITIES

- i. Geological mapping and other geoscientific surveys.
- ii. Scientific investigations for an accurate understanding of the country's natural resources and their prudent management.
- iii. Geotechnical investigations in connection with the construction of heavy civil engineering projects.
- iv. Environmental and engineering geological studies.
- v. Geothermal energy.
- vi. Description of onshore and offshore geological framework and understanding its formation, evolution and resource potential.
- vii. Geo-hazard studies associated with earthquakes, volcanic activity, waste disposal, landslides, subsidence and recommendations for hazard prediction/mitigation.
- viii. Provision of scientific support and technical advice for legislative, regulatory and management decisions of the federal, provincial and local governments.

## 4.2 INSTITUTIONAL STRUCTURES

The GSP was established in 1947 with the creation of Pakistan. The department is headed by a Director General. The technical and other activities of the department are planned and controlled by the Management Advisory Committee (MAC) with all Deputy Director Generals (BPS-20) and Directors (BPS-19) as its members under the Chairmanship of the Director General.

**TABLE 1: REGIONWISE DISTRIBUTION OF GAZETTED AND NON-GAZETTED STAFF OF GSP**

S.No.	NAME OF OFFICE	GAZETTED	NON-GAZETTED	TOTAL
1.	GSP Headquarters Office, Quetta.	141	378	519

2.	GSP Regional Office, Lahore.	43	97	103
3.	GSP Regional Office, Karachi.	54	109	163
4.	GSP Regional Office, Islamabad.	26	53	79
5.	GSP Regional Office, Peshawar.	21	53	74
6.	GSP Regional Office, AJK.	4	13	17
7.	Geoscience Lab, Islamabad.	24	39	63
	TOTAL	313	742	1055

**TABLE 2: CATEGORYWISE DISTRIBUTION OF GAZETTED AND NON-GAZETTED STAFF OF GSP**

S.No	CATEGORY	NUMBER
1.	Geologist	156
2.	Geophysicists	21
3.	Chemist	27
4.	Drilling Engineers	25
5.	Photogrammetrist	07
6.	Other Technical	08
7.	Administration and Accounts	09
8.	Technical Staff	313
9.	Ministerial Staff	132
10.	BPS 1-2 Staff	307
	TOTAL	1055

### 4.3 BUDGET AND FINANCE

The GSP gets its annual budgetary allocation in the federal budget every year and additional allocation is gained from federal PSDP for executing development projects. The total budget of GSP for the year 2019-20 is Rs. 1015.852 million.

**TABLE 3: BUDGET STATISTICS OF GSP (Rs. in million)**

FINANCIAL YEAR	2017-18	2018-19	2019-20
REGULAR BUDGET	461.018	582.296	582.00
DEVELOPMENT BUDGET	554.291	463.175	433.852
TOTAL	1015.309	1045.471	1015.852

#### **4.4 ACTIVITIES, PROGRESS AND ACCOMPLISHMENTS**

##### **4.4.1 Regional Geological Mapping on 1:50,000 Scale**

Geology of Pakistan is characterized by the interaction of Indian, Arabian and Eurasian plates in different regions under different tectonic settings. This complex interaction has not only created sky scraping mountain ranges in the northern areas but concurrently fabricated significant geological and tectonic features in other regions of Pakistan.

GSP is the premier geoscientific organization of the country and has been implementing statutory obligation of geological mapping and other geoscientific surveys. GSP has completed the geological mapping of the entire outcrop area of the Balochistan and adjacent areas of Sindh and Punjab on 1:250,000 scale. In 2019-20, the preliminary geological mapping of approximately 4,480 sq. km area on 1:50,000 scale has been completed in different parts of the country. The mapping includes coverage of 1920 sq. km. area in Balochistan; 640 sq. km. in Punjab, 640 sq. km. area in KPK, 640 sq. km. in Northern Areas / Gilgit Baltistan and 640 sq. km area in Sindh.

In general practice, fieldwork is normally executed in the last quarter of the running financial year. However, due to pandemic, during this period majority of the fieldwork could not be executed.

##### **4.4.2 Economic Geology**

- Evaluation of aggregate resources for construction material in Sulaiman Range, District DG Khan.

##### **4.4.3 Research Studies**

- Studies carried out to prepare the “Landslide Susceptibility Map of GahkuchMap , District Ghizer, GB.
- Geo-Hazard studies carried out in Mirpur area AJK entitled “Geological setting, geo-hazard assessment, and geotechnical aspects of the Mirpur earthquake 2019”.
- Impact of Lead/Zinc Mining on environment and Human health in Duddar, District Lasbela, Balochistan.
- Landslide hazard mapping along the Muzaffarabad Athmuqam Trunk road in Neelum and Muzaffarabad District, Azad Kashmir, Pakistan.
- Study of environmental contaminants in effluents, surface and groundwater, flora and fauna of Kasur area due to tanning industry.

#### **4.4.4 Geophysical Exploration**

##### **i. Magnetic Mapping**

About 2637.53 sq. km area has been mapped by ground magnetic survey in Muslim Bagh, Khanozai and Qilla Saifullah area under the approved annual programme of GSP.

##### **ii. Resistivity Survey**

Resistivity Survey carried in Nosham Area under the PSDP “Exploration and Evaluation of Coal in Nosham and Bahlol Areas, Balochistan”. Under this project 25 vertical electrical sounding were carried out.

##### **iii. Studies for Hard Rock Aquifers in Islamabad**

To explore new resources of groundwater in Islamabad, a detailed fieldwork is planned, under the annual field program titled “Groundwater Resource Estimation of Hard Rock Aquifers in Islamabad, Capital Territory”. Field work under this project could not be executed during 2019-20.

#### **4.4.5 Chemical Analyses**

Geological Survey of Pakistan has state of the art research facilities for geochemical analysis. Various methods have been developed for the analysis of different samples, ranging from solid fuel (coal) to water, ores to minerals and stream sediments. Analysed 487 samples by using XRD/DTA, ED-XRF, Scanning Electronic Microscope (SEM) EDS for 1367 estimations in GSP labs at Geoscience Lab, Islamabad, Quetta and Lahore.

#### **4.4.6 Drilling Operations**

Geological Survey of Pakistan undertakes drilling operations under PSDP and Annual Field Programs. During this period, GSP executed the drilling operation under PSDP project for coal exploration and completed drilling of first borehole (BNCP#01) at Nosham area, District Barkhan, down to the depth of 297 meters.

#### **4.4.7 International Collaborations**

##### **Geochemical Mapping: Pak-Sino Geological Surveys**

A collaborative project between Geological Survey of Pakistan (GSP) and China Geological Survey (CGS) was initiated during the 2015-16. To geochemically map the country 4,980 stream sediment samples were collected from 360,000 sq.km area on 1: 1,000,000 scale from Punjab, Sindh, KPK, Balochistan, AJK and Gilgit-Baltistan, in previous years.

#### **4.4.8 Internships**

Geological Survey of Pakistan is the main stakeholder in mineral exploration and is committed towards professional excellence. At present the internship programme has been suspended due to COVID-19.

#### **4.4.9 Publications**

- Raw Material Investigation and Evaluation of Limestone Resources for Cement Industry in Toposheet No 35 0/3 Lasbela and Malir Districts, Balochistan and Sindh Provinces. (Information Release No. 1032)
- Morphology and Petrography of Columnar Jointed Basalts in Bela Ophiolites, Balochistan. (Information Release No. 1033).

### **4.5 ONGOING PUBLIC SECTOR DEVELOPMENT PROGRAMMES (PSDP)**

#### **4.5.1. “Appraisal of Newly Discovered Coal Resources of Badin Coalfield and its adjoining areas of Southern Sindh” (2014-20)**

A large coalfield was identified by Geological Survey of Pakistan in Badin area as a result of reconnaissance exploratory drilling programme in the past. For complete evaluation of this region, a PC-II scheme was purposed by GSP to outline subsurface geology, analysis of coal samples and reserve estimation for prudent use of this resource by public and private entrepreneurs. The total cost of this project was expected to be 170.663 million. The exploration work under this project commenced in 2013 and continued till 30-06-2020. Under this project; fifteen boreholes with cumulative depth of 5877.2 meters have been completed at various location in Badin Mirpurkhas and Sanghar Districts. Coal seams encountered in all drill holes at various depths. Geological logging of boreholes and analysis of core samples have been completed. Digitization of borehole data and comprehensive technical report is in process.

#### **4.5.2. “Acquisition of Four Drilling Rigs with Accessories for the Geological Survey of Pakistan” (2015-20)**

To purchase new drilling rigs as a replacement for old drilling rigs and acquire modern technologies in the field of drilling. Two, new, 275 HP, Hydraulic, Truck Mounted Multipurpose Drilling Rigs with drilling capacities of 1300-2000 meters HQ and 2000-3000 meters NQ have been purchased on FOR basis. Preparation of technical specification and prequalification tenders for purchase of 2 more drilling rigs with accessories with strict adherence to PPRA rules has been completed and published in the print media. The prequalification tenders for procurement of further two rigs is in progress.

#### **4.5.3. “Exploration and Evaluation of Metallic Minerals in Uthal and Bela Area, District Lasbela Balochistan” (2016-20)**

The studies under this project were focused on metallic minerals like lead, zinc, copper, chromite, iron etc. in the unexplored areas of Lasbela District, Balochistan. The area falls in Bela Ophiolites, which portrays one of the largest ophiolite belt in Pakistan extending from Gadani in the South to Khuzdar in the North, covering an area of about 4500 sq km. Several Potential mineral localities occur within these ophiolites and underlying Mesozoic sediments.

The exploration work under this project started in 2016 and continued till 30-06-2020. Detailed geological, geophysical & geochemical studies have been executed at several locations. Stream sediments from this region have also been analyzed at Akita University, Japan for rare earth elements, base metal, and other strategic metals. Preliminary results show that the project area has good potential for titanium, nickel, copper, chromium and barium etc.

#### **4.5.4. “Exploration and Evaluation of Coal in Nosham and Bahlol Areas, Balochistan” (2017-20)**

This project was initial to prove the presence of coal, establish its grade and make a preliminary assessment of reserves through large scale mapping, exploratory drilling and collection of representative samples for chemical analyses and petrographic studies in Nosham and Bahlol areas, Balochistan. Geological fieldwork including measurement of Stratigraphic sections was carried out in previous years. Compilation of field data, analysis and integration of data to prepare required geological map is in progress. Exploratory drilling at one site at Nosham area, District Barkhan has been completed. The drilling operation at this site is executed down to depth of 297 meters. Geological logging pertaining to this drill hole also undertaken. Geophysical studies to determine subsurface geology and evaluate coal seams has been conducted.

### **4.6 FUTURE PLANS**

#### **4.6.1 Major Activities Planned To Be Undertaken During FY 2020-23**

- i. Regular Field Projects 2020-23**
- i. Regional Geological Mapping.
- ii. Mineral Exploration.
- iii. Geophysical Surveys/Exploration
- iv. Geochemical Investigation.
- v. Engineering Geology/Geo-hazard studies.

## **ii. Development Projects 2020-23**

- i. Acquisition of Four Drilling Rigs with Accessories for the Geological Survey of Pakistan. Approved by CDWP: 19-11-2009. (Total cost: 665.807 Rs. in million)
- ii. Exploration and Evaluation of Coal in Nosham and Bahlol Areas, Balochistan. (2017-2020). Approved by DDWP: 15-08-2017. (Total Cost: 42.318 Rs. in million).
- iii. Geological Mapping of 50 Toposheets out of 354 Unmapped Toposheets of Outcrop Area of Balochistan Province (2020-2023) (Total Cost: 127.595 Rs. in million).
- iv. Establishment and Strengthening of Research Laboratories at Geological Survey of Pakistan, Regional office Peshawar (2020-2022) (Total Cost: 96.168 Rs. in million).

## **CHAPTER 5**



HYDROCARBON DEVELOPMENT INSTITUTE OF PAKISTAN  
HDIP

## 5.1 INTRODUCTION

Hydrocarbon Development Institute of Pakistan (HDIP) is an autonomous body under the Ministry of Energy (Petroleum Division). HDIP was established in 1975 through a Resolution of the Government of Pakistan. It has been re-established as an autonomous body through an Act of Parliament in January 2006.

### I. Institutional Structure

The activities of the Institute are regulated by a Board of Governors chaired by the Federal Minister for Ministry of Energy (Petroleum Division), while its Chief Executive is designated as Director General and Secretary of the Board.

#### **Board of Governors**

1.	Chairman, Minister for Energy, Petroleum Division, Islamabad.
2.	Secretary, Ministry of Energy, Petroleum Division, Islamabad.
3.	Director General/Chief Executive, Hydrocarbon Development Institute of Pakistan, Islamabad,
4.	Financial Advisor, Ministry of Energy, Petroleum Division, Islamabad.
5.	Director General (Gas), Policy Wing, M/o Energy, Petroleum Division, Islamabad
6.	Chief Fuels (Energy Wing), Planning & Development Division, Islamabad
7.	Prof. Dr. Fazeelat Tahira, Professor, University of Engineering & Technology, Lahore.
8.	Prof. Dr. Masoom Yasinzai, Rector, International Islamic University, Islamabad.
9.	Dr. Shahina Tariq, Chairperson, Metrology Department, COMSATS, Islamabad.
10.	Mr. Abdul Wahid Chughtai, Former Asset Manager, OMV Pakistan / Chairman, Pakistan Association of Petroleum Geoscientists.

HDIP carries out applied research and renders advice to the Government on scientific and technical matters in the oil and gas sector. HDIP also provides consultancy and laboratory services for the oil and gas industry.

### II. Establishment

The Head Office of the Institute is at Islamabad and it maintains four Petroleum Testing Centers at Lahore, Peshawar, Quetta, and Multan. HDIP also operates four CNG Stations, one each at Islamabad, Lahore, Peshawar and Quetta and five Cylinder Testing Labs at Islamabad, Karachi, Lahore, Peshawar and Quetta. HDIP has 302 employees including 58 Scientists and Engineers.

The achievements of HDIP during the year 2019-20 are as under:

## **5.2. UPSTREAM ACTIVITIES-OIL & GAS EXPLORATION**

### **A. Consultancy work**

#### **1. Contracts/Bids:**

Geological and Geochemical analysis of Outcrop samples from M/s Mari Petroleum Company Ltd.

#### **2. Samples Analyzed for Geochemical Parameters:**

- 452 samples have been analyzed for geochemical parameters of Crude Oil, Rock, Water, Formation Water, Solid Waste, Fuel wood and coal of different Universities / Companies.
- Except from this 188 samples have been analyzed for geological and reservoir characteristics during the reporting period from different companies / Universities.

#### **3. Future Plans:**

Study on Hydrocarbon Habitat of Pakistan

#### **4. Clients Served:**

The Institute offers services to the following Companies/Organizations:

- a. Mari Petroleum Company Ltd.
- b. National Centre of Excellence Geology (NCEG), Peshawar University, Peshawar.
- c. UET, Taxila.
- d. Rafhan Maiz Products, Faisalabad
- e. Shell Pvt. Ltd.
- f. Oil and Gas Development Company Ltd.
- g. University of Malaya, Malaysia.
- h. Sewas Pvt Ltd.
- i. Nec Pvt Ltd.
- j. Pak Green Pvt. Ltd.
- k. Bahria University, Islamabad
- l. Fauji Fertilizer Company Pvt. Ltd.
- m. Punjab University, Lahore.
- n. PMDC

### **B. ORGANIZATION OF WELL CORE CUTTINGS IN PAKISTAN PETROLEUM CORE HOUSE (PETCORE)**

During the reported period Pakistan Petroleum Core house (PETCORE) received core of 02 wells and drill cutting samples of 95 wells. Samples of around 66 wells and core of 24 wells have been re-boxed and archived in core storage hall and their information have been added to PETCORE database. PSDP project Expansion and Up-gradation of Pakistan Petroleum Core house (PETCORE) for its Sustainable Operations to Facilitate Oil and Gas Exploration Research in Pakistan” was included in PSDP for CFY 2019-20 with the budgetary allocation of Rs. 70.00 million. The execution of the project was started with the initiation of hiring of technical man power and procurement of consultant for design and supervisor of construction work of new PETCORE building. In this regard applications were received from potential candidates and scrutiny was completed. M/S NESPAK (Pvt.) Ltd. was hired on competitive basis for design and supervision of construction work of new PETCORE building. They have submitted concept design for new building which has been approved, detailed design drawings are awaited.

### **5.3 DOWNSTREAM ACTIVITIES–“PETROLEUM TESTING & QUALITY CONTROL”**

#### **HDIP’s Downstream (Petroleum Testing and Research Facilities)**

HDIP’s main petroleum analytical labs are located at Karachi and Islamabad together with smaller units at Peshawar, Lahore, Multan, and Quetta, cover a range of analytical facilities for crude oil and petroleum products. These labs provide standard analytical services to the national oil and gas industry and work for the Government as authorized labs for quality certification.

HDIP plays a major role for supply of quality POL products (PMG/HSD)/Lubricants etc) in the country and in this regard HDIP carries out numerous inspections on behalf of OGRA at retail outlets, Blending/Reclamation Plants, Refineries, Depots etc.

As per directives of OGRA, HDIP laboratories complex Karachi Operations is providing round the clock laboratory services for sampling and testing of ship samples and imported lubricants to Oil Marketing Companies.

The details of services being provided on behalf of OGRA and M/o Energy (Petroleum Division) are given hereunder:-

- a) Product Quality Control Inspections of Ship samples.
- b) Products quality control inspections for imported lubricants.
- c) Annual inspections to Blending/Reclamation plants.
- d) Quarterly products Quality Control Inspections of Blending, Reclamation/Grease and Transformer plants.
- e) Monthly and bi-annual products quality control inspections of OMC’s depots.
- f) Monthly and weekly product quality control inspections of refineries.
- g) Retail outlet inspections for product quality control as and when directed by OGRA.

- h) HDIP has prepared two (2) major projects for the up-gradation of lab facilities through out Pakistan. In this regard a project titled “Upgradation of POL testing facilities of HDIP at Islamabad, Lahore, Multan, Peshawar, Quetta and ISO certification of Petroleum Testing Laboratory at Islamabad” has been approved by CDWP held on 06-05-2019 at a revised cost of Rs. 303.698 millions.
- i) Lab up-gradation is in progress and some equipment for Euro-V analysis has been purchased and installed at PTRL Islamabad.
- j) Another project titled “Strengthening up-gradation and ISO Certification of Karachi Laboratories Complex (KLC) at HDIP Operations Office, Karachi” has also been approved by CDWP held on 03-06-2020 at a cost of Rs. 440.812 millions. Further work is in progress.

Total Samples Analyzed by HDIP Petroleum Testing Labs during the review periods are 11,520 resulting in revenue earning of Rs. 310.937 Millions.

#### **5.4 HDIP CNG OPERATIONS**

HDIP is a Technical Support Institution for Ministry of Energy (Petroleum Division), operating four CNG Stations located at Islamabad, Lahore, Peshawar, Quetta and five Cylinder Testing Laboratories in the country. For the past 3 decades, HDIP is known for the success story of introducing CNG as an alternate fuel and with continuous endeavor, since 1987, elevating Pakistan to the highest level of global leader. HDIP has also initiated function of training of Technical manpower, increase in sale at HDIP CNG Stations by increasing compression capacity, provision of consultancy services to CNG industries, outsourcing of CNG Cylinder Testing Laboratories in major cities of Pakistan, annual inspection of CNG converted vehicles and annual testing of CNG conversion kits manufactured locally/supplied from abroad.

##### **a) CNG Inspection Wing**

During the review period, altogether 322 CNG Safety Inspections (including Annual Inspections, Re-Inspections, Pre-Commissioning and Accident Inspections) of different CNG Stations were performed, which resulted in revenue earning of Rs. 7.43 Millions.

##### **b) CNG Sale at CNG Stations**

During the review period, revenue for sales of CNG at CNG Stations Islamabad, Lahore, Peshawar and Quetta was about Rs. 145.548 Millions.

##### **c) CNG Cylinder Testing Laboratories Karachi, Islamabad, Lahore, Peshawar, Quetta and outsourced Laboratories.**

During the review period, altogether 27,995 CNG Cylinders from the different vehicles and from different CNG Stations were tested in which 3,952 were Vehicle Cylinders and 15,019 were Storage Cylinders of different CNG Stations in Karachi, Islamabad, Lahore, Peshawar and Quetta. Revenue generated from CTLs Islamabad, Karachi, Lahore, Peshawar and Quetta and HDIP outsourced CTS was Rs. 57.809 Millions.

d) **Trainings:**

CNG Operations conducted training courses in different professional categories i.e. Compressor Operator, Refueling Attendant and CNG Conversion. 27 technicians from private sector have completed trainings under this programme.

## **5.5 INFORMATION DISSEMINATION**

This institute maintains the National Energy Database and also plays an effective supportive role in the development of domestic energy sector by disseminating vital technical information in the form of an annual publication “Pakistan Energy Yearbook”. HDIP also provides energy sector data to Ministry of Energy (Petroleum Division) and line ministries, national and international companies/organizations, universities, research organizations and Gas Sector Companies etc.

Pakistan Energy Yearbook 2017, 2018 and Pakistan Journal of Hydrocarbon Research, Volume 24 have been published by this Institute. The publication of Pakistan Energy Yearbook 2019 and Pakistan Journal of Hydrocarbon Research Volume 25 & 26 are in process.

## **5.6 TECHNICAL ASSISTANCE TO THE UNIVERSITIES**

HDIP provided technical assistance and research support to Universities of Karachi, Baluchistan, Punjab, Azad-Jammu and Kashmir, Peshawar, Quaid-e-Azam and Bahria etc. and also provided training to the students.

## **5.7 CONCLUSION**

HDIP is a scientific and technical organization/institute of the Ministry of Energy (Petroleum Division) in the oil & gas sector. At the same time it is third party inspector of OGRA for Petroleum/CNG testing/inspection and facilitates private sector by providing professional guidance and advice. Being a public sector entity, it meets about 86% of its budget from its own resources and generates substantial amount in the shape of taxes on its services.

## **CHAPTER 6**



### **OIL AND GAS DEVELOPMENT COMPANY LIMITED**

## **6.1 Background:**

Oil & Gas Development Company Limited (OGDCL) is the largest Exploration & Production (E&P) Company in Pakistan, listed on Pakistan Stock Exchange as well as on London Stock Exchange.

OGDCL was initially created under an Ordinance in 1961, as a Public Sector Corporation and was converted from a statutory Corporation into a Public Limited Company w.e.f October 23, 1997. Currently, the Government of Pakistan is holding 74.98% of the total equity in the Company. OGDCL is responsible to plan, promote, organize and implement programs for the exploration and development of oil and gas resources.

## **6.2 Exploration:**

OGDCL holds the largest share of exploration acreage in the Country with 44, own and operated joint venture (JV) Exploration licenses covering an area of 79,994 Sq. Km. Out of the 44 blocks, 20 blocks (100% working interest) while 24 blocks are in joint venture. In addition, OGDCL has considerable interest in 07 non-operated blocks with other companies.

## **6.3 Seismic:**

OGDCL during FY-2019-20 acquired 3,407 L.Kms. During the same period Company processed/reprocessed 5,582 L. Kms 2D & 4,977 Sq. Kms 3D seismic data of various blocks.

## **6.4 Wells:**

OGDCL during FY-2019-20 spudded a total of 25 wells which consisted of 14 exploratory wells, 01 appraisals well, 05 development wells and 05 re-entry wells.

## **6.5 Discoveries:**

OGDCL made 05 discoveries during FY-2019-20 namely Pandhi-1 (Bitrisim EL), Chanda-5 (Wargal) (Chanda D&PL), Togh-1 (Lumshiwal) (Kohat EL), Metlo-1 (Ranipur EL) and Togh-1 (Hangu) (Kohat EL).

## **6.6 Reserves:**

The Company has the largest hydrocarbon reserves in Pakistan. Out of the total country's oil and gas reserves, the Company holds 44% oil and 37% of gas reserves as of 30<sup>th</sup> June, 2020 (Source: PPIs).

## **6.7 Production:**

OGDCL is making out all efforts to maintain and enhance production level by following best industry practices and applying the latest techniques with efforts to keep production loss time at a minimum. The on-going projects are also being undertaken/completed on a seamless track to meet the growing energy demand of the country. It has above 50 producing fields all over Pakistan. Its average net production for the FY-2019-20 is at around 36,073 bopd of oil and 893 MMcfd of gas, 739 MTD of LPG and 54 MTD of Sulphur.

## **6.8 Financial:**

OGDCL continues to deliver robust financial results for the FY-2019-20 as its Sales Revenue amounted to Rs. 244.856 billion with Profit after Tax at Rs. 100.081 billion translating into Earnings per Share of Rs 23.27.

## **6.9 Future Outlook:**

OGDCL, although operating on a level playing field, still enjoys an edge over other oil companies operating in Pakistan due to its largest technical skill base in the industry, and a strong equipment base, coupled with knowledge and experience of exploring in varied terrains of all four provinces of Pakistan. However, its greatest challenge to date, has been to provide impetus to the Government's efforts to attain self-reliance in energy.

Looking ahead, OGDCL on account of financial strength and determination to enhance country's energy security will spare no effort to continue the intensified exploratory activities and capitalize on new growth opportunities while ensuring that health and safety of people and fulfilling social obligations remain a business priority. The Company believes that the extensive exploration program including fast track seismic data acquisition, data processing/interpretation and active drilling campaigns not only offers the potential for near term value creation but will also provide a platform to embark upon new tasks and opportunities.

## **CHAPTER 7**



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**PAKISTAN PETROLEUM LIMITED  
(PPL)**

## **7.1 INTRODUCTION:**

Pakistan Petroleum Limited (PPL) is a pioneer in the natural gas industry in Pakistan and has been a frontline player in the exploration, development, and production of oil and natural gas resources since early 1950s. The Company's current exploration and production portfolio is spread across Pakistan with an international presence in Iraq and Yemen through its subsidiaries. PPL also holds mineral exploration and development rights in Balochistan through Bolan Mining Enterprises (BME), a 50:50 joint operation between PPL and Government of Balochistan.

## **7.2 VISION:**

To achieve energy self-sufficiency for Pakistan by becoming the most successful and efficient discoverer and producer of oil and gas.

## **7.3 MISSION STATEMENT:**

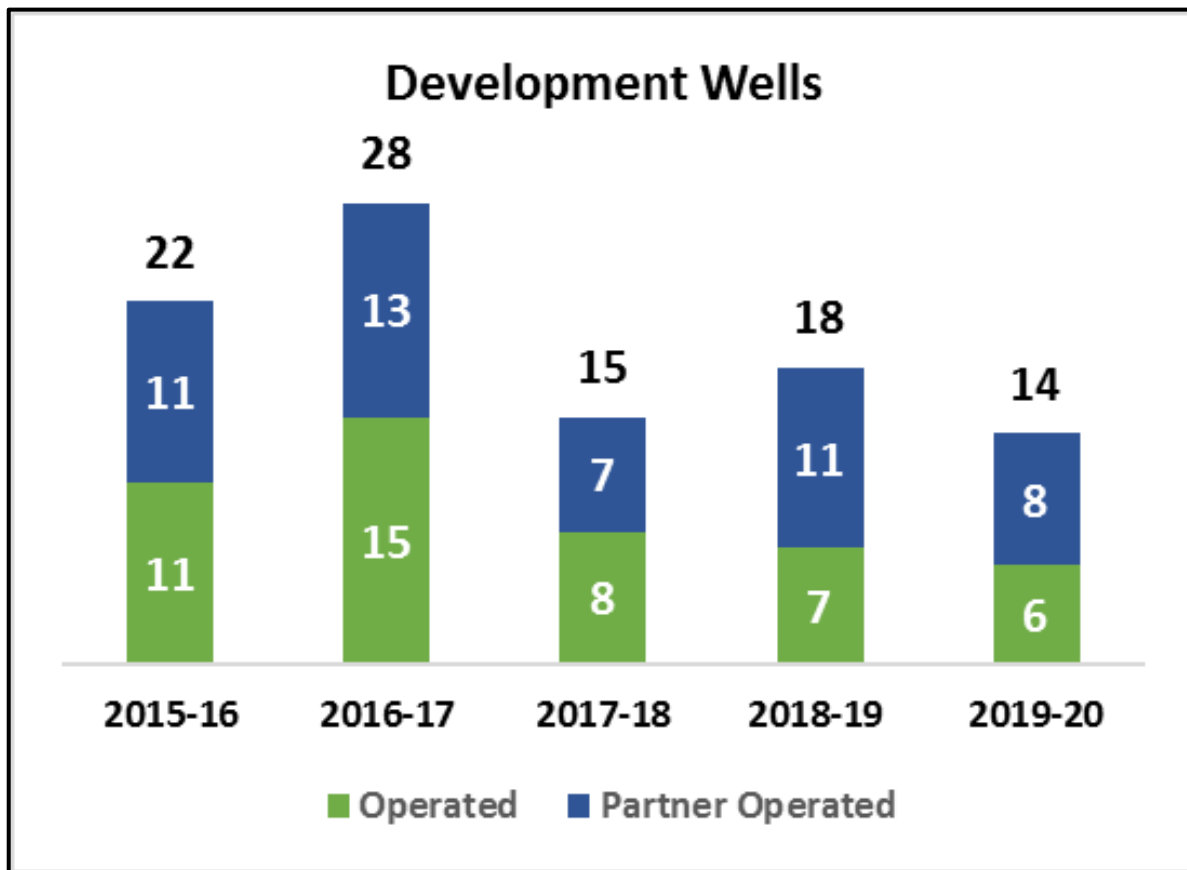
To serve the people of Pakistan in an area critical to their economic development by employing, training and developing the best people available and empowering them to deliver extraordinary results while insisting that they conform to the highest standards of professional and ethical conduct.

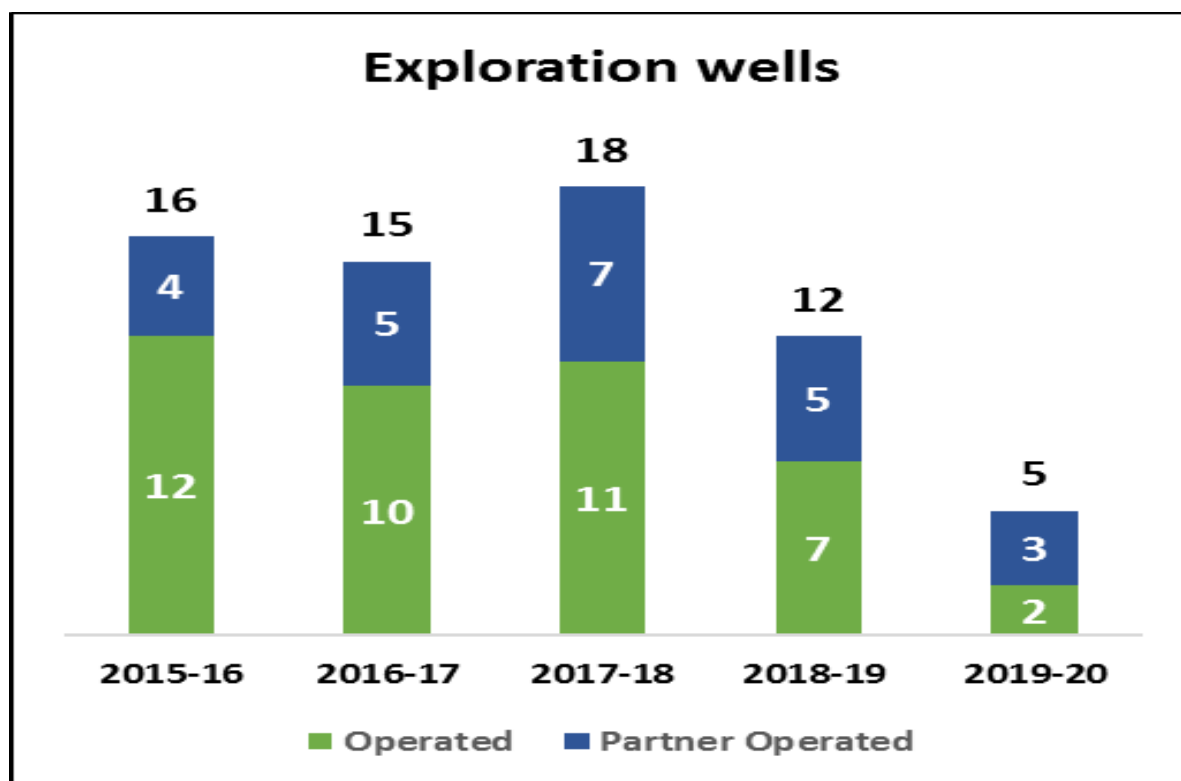
## **7.4 MAJOR ACHIEVEMENTS OF THE YEAR (2019-20)**

2019-20 has been a good year for PPL with the following major achievements:

- PPL's work program is one of the most extensive in the industry, as the Company drilled 5 exploration and 14 development wells in operated and partner operated areas despite the COVID-19 pandemic.
- Two discoveries were made during 2019-20, Morgandh X-1 (Margand Block) in operated area, in high hills of Kalat plateau, which is the westernmost discovery of Pakistan in the deeper part of frontier areas of Balochistan and Bitro (Latif Block) in partner operated area.
- Production was maintained at around 0.9 Bcfde in 2019-20 despite low customer offtakes from GENCO-II as well as the curtailed oil demand from refineries during pandemic.
- Robust processes and technologies were swiftly deployed to maintain the deliverability of production from fields along-with enabling office-based staff to 'Work From Home' during the pandemic.
- The Company successfully led a consortium comprising of PPL, OGDCL, MPCL and GHPL and participated in the Abu Dhabi bid round 2019. Results of the bid round are awaited.
- Production commenced from Dhok Sultan, Fazal (Hala Block), Unarpur (Kotri North Block) and Bitro (Latif Block) discoveries.
- Farm-out agreements were executed in Block-8 (Iraq), Musa Khel and Punjab blocks, while farm-in agreement was executed in ShakarGanj West block. The farm-ins/farm-outs are pending regulatory approvals.
- Debottlenecking of SML Pipeline Network was successfully completed and commissioned at Sui in June 2020 achieving around 10 MMscfd gain in production.
- Adhi South-3 well was completed in a record time of 52 days realizing considerable savings.
- In-house 3D reservoir simulation studies were completed for Shahdadpur, Zafir, Shahdadpur West and Kandhkot fields.
- SAP SuccessFactors for performance management was implemented in a record time of 6 weeks.
- BME commenced commercial dispatch of iron ore from June 2020.

- PPL received 15th consecutive award from the Pakistan Centre for Philanthropy for being the top contributors in terms of volume of donations.





## 7.5. OPERATIONAL OVERVIEW

### 7.5.1 OPERATIONS:

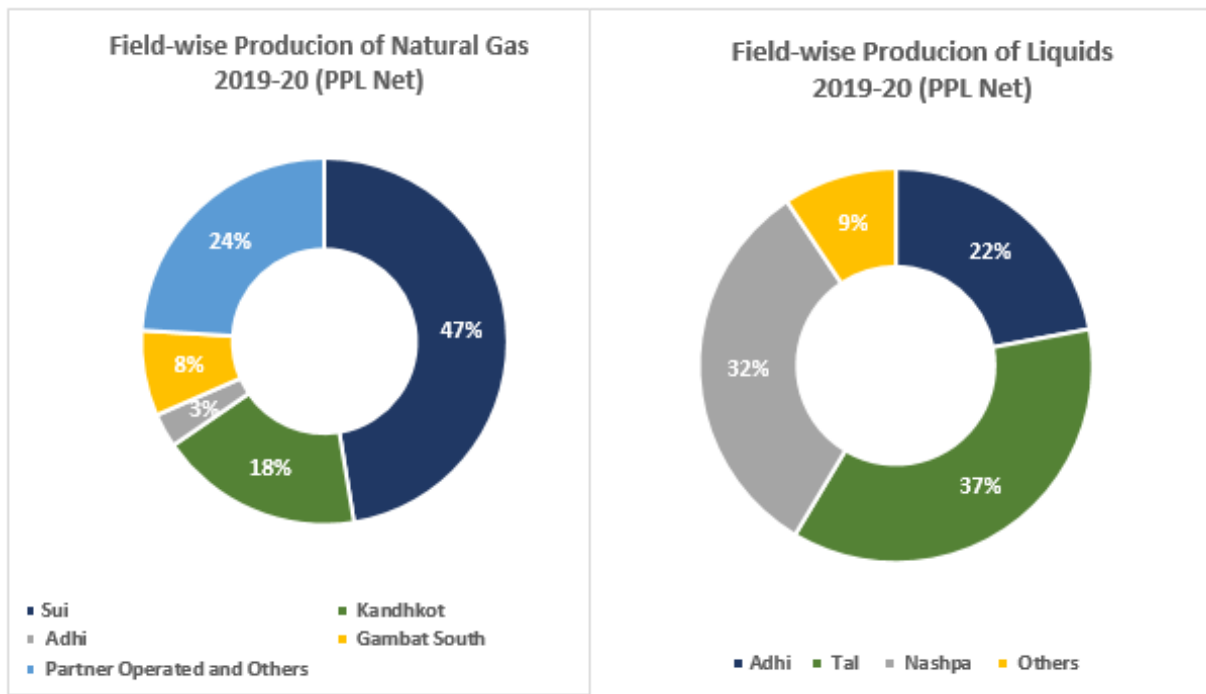
The Company currently operates producing fields at Sui, Kandhkot, Adhi, Gambat South, Hala, Mazarani, Chachar, and Dhok Sultan. In addition, the Company has working interests in 12 partner-operated producing assets. The Company is playing its role in meeting the country's energy requirements by focusing on production enhancement through use of advanced technology and management skills. Furthermore, the Company has an operated interest in BME, which is a joint operation between the Company and the Government of Balochistan.

PPL's average production of gas, liquids and LPG have declined by 11%, 12% & 8% respectively as compared to the previous year. The primary reason for decrease in production is the substantially lower offtakes by GENCO-II in Kandhkot Gas Field coupled with lower offtakes by refineries due to Covid-19 pandemic and natural decline in mature fields. A comparison of the current year's production (net to PPL) to the previous year is given below:

	2019-20	2018-19
Natural Gas (MMscf)	283,792	317,457
Crude Oil / NGL / Condensate (Thousand Barrels)	5,142	5,868
LPG (Metric Tonnes)	107,114	116,723

Production of hydrocarbons during the year including the Company's share from joint ventures averaged at about ~775 MMscfd of gas, 14,049 barrels per day of Oil / NGL/ Condensate and 293 metric tonnes per day of LPG.

The Company's major clients include Sui Southern Gas Company Limited, Sui Northern Gas Pipelines Limited, Central Power Generation Company Limited and Attock Refinery Limited.



Field-wise key initiatives taken by PPL during the year are given below:

### 7.5.2 OPERATED FIELDS:

#### i. SUI Gas field:

- Average production from Sui field was 369 MMscfd. The field is undergoing natural decline; however, optimization efforts have reduced the decline to 4.2% in 2019-20 viz-a-viz 5.2% in 2018-19.
- Two development wells were drilled and completed: Sui-106(U) and Sui-110(U), contributing around 11 MMscfd into the production network of the Sui field.
- Staking, land acquisition and site construction activities have been completed for a new development well Sui-111(U). This well is expected to be spud and completed in the year 2020-21.
- Based on the successful drilling and subsequent well/G&G data of Sui-108(P), Pab reservoir model was updated in-house which helped in finalizing the location for new development well Sui-112(P). This well has been spud in July 2020 and is being drilled using PPL's own rig.
- Sui-107(U), which was spud during the last quarter of 2018-19, was commissioned during the year contributing around 7.1 MMscfd of gas.
- Debottlenecking of SML Pipeline Network was successfully completed in June 2020 achieving around 10 MMscfd gain in production.

- Maintenance, upgradation, and enhancement of plant reliability activities were undertaken at both Purification Plant and Sui Field Gas Compression Station, including major overhaul of three compressors, two gas turbines, one purification bank and other units.
- The grant of Sui D&PL is awaited. In the interim, the GoP through periodic notifications has allowed the Company to continue production from Sui gas field, the most recent of which allowed the Company to continue production for another six months with effect from May 31, 2020.

**ii. KANDHKOT / CHACHAR Gas fields:**

- The average production rate for the year was 142 MMscfd as compared to 210 MMscfd in 2018-19 due to continuous lower offtakes by GENCO-II.
- Development well KDT-47(U) was completed in September 2019.
- In-house Kandhkot reservoir simulation study was completed during the year.
- Major overhaul of Turbo Compressor TUCO-A was successfully completed.

**iii. Adhi / Dhok Sultan:**

- Production from Adhi Field declined primarily due to natural depletion.
- Four development wells Adhi-33(T/K), Adhi-34(T/K), Adhi South-4 & Adhi South-3 were completed and commissioned. Adhi-South-3 was completed in a record time of 52 days, resulting in considerable saving in drilling cost.
- Adhi South-2 was spud-in during Q4 of the year and was completed & commissioned subsequent to the year end.
- In-house Integrated Reservoir Simulation Study was commenced in September 2019. Work on Petrophysical interpretation, Seismic interpretation & Structural Model was completed whereas work on Static model is in progress.
- Nodal Compression Project has been successfully commissioned. The Project is providing pressure boost to 20 wells improving well deliverability.
- Oil and Gas production from Dhok Sultan EWT commenced in November 2019 at the rate of ~ 600 bbl/day and 1 MMscfd gas. The gas was sold through a virtual gas pipeline. However, the production was stopped in April 2020 due to gas offtake issues.
- Dhok Sultan's appraisal and development activities are underway at a fast pace. An appraisal well DS-02 is being drilled.

**iv. GAMBAT SOUTH, HALA and MAZARANI Gas fields:**

- Post termination of Gambat South GPF-III EPCC contract, the Company is making all efforts to optimize production from the field, to complete the project through alternate means.
- Gambat South GPF IV Phase-I production was further optimised by 15 MMscfd, whereas the production from Phase-II was delayed due to COVID-19. Recently, the work has resumed on Phase-II and it is expected to be completed within (2Q 2020-21) to give an additional flow of 30 MMscfd.
- Construction of 19 km Nasr X-1 feeder line and Phase-I of Hadaf X-1 feeder line was completed. Hadaf X-1 has been tied-in to GPF-IV plant through Nasr X-1 feeder line and pre-commissioning activities have been successfully carried out. It will be commissioned after the approval of D&PL by the regulator.
- Development well Sharf-3 well site construction is underway and the well spud is expected in first half of 2020-21.

- D&PL applications for Kabir and Hadaf Fields (Gambat South) have been submitted for approval, while D&PL of Bashar X-1 ST (Hala) has been approved by the regulator.
- Fazl X-1 (Hala) was commissioned and is flowing at 5 MMscfd taking the overall Hala plant production to 20 MMscfd.
- Interim extension of Mazarani D&PL was granted till May 31, 2020 on existing terms & conditions and sales gas price. Approval for 2-year re-grant is still awaited.
- Efforts are underway to get the approval of 20 MW Hatim Power Project from CPPA and NTDC.

### **7.5.3 PARTNER OPERATED AREAS**

#### **i. NASHPA Block (operated by OGDCL Pakistan):**

- Development wells Nashpa-9 & Mela-7 were completed as oil & gas producers whereas appraisal well Nashpa-5A was plugged and abandoned due to discouraging results. Moreover, testing is in progress in development well Nashpa-10.
- Installation works on Nashpa Front End Compression (FEC) is in progress.
- Laying of flow line from Mela to Nashpa (for extraction of LPG) and commissioning of Mela FEC were completed.

Performance Test of LPG Plant was completed.

#### **ii. KIRTHAR Block (operated by POGC Pakistan):**

- Development well Rizq-3 was completed as gas producer and currently producing 7 MMscfd, whereas frac job was completed in development well Rehman-7 and testing is planned.
- Installation of 2nd Dehydration train has been completed along with sales line capacity augmentation.

#### **iii. QADIRPUR Gas field (operated by OGDCL):**

- Development well QP HRL-15 was successfully completed as gas producer.
- Procurement for Front End Compression (FEC) revamp project is in progress.

#### **iv. Miano Field (operated by UEP Beta)**

Development well Miano-25 has been completed and was tested at 8 MMscfd.

#### **v. LATIF Gas Field (operated by UEP Beta)**

- Development wells Latif-18 and 23 were successfully completed as gas producers.

#### **vi. BOLAN MINING ENTERPRISES:**

- The total sales of baryte by BME stood at 186,320 tons.
- Enhancement of baryte powder sales is planned through the installation of a new grinding mill by Q3 2020-21.
- Commercial dispatch of Iron Ore from Nokkundi commenced in June 2020. Detailed mine development plan with value addition through mineral processing is underway.
- In line with the Company's diversification strategy, Baryte Lead Zinc (BLZ) project has been identified as a growth prospect. Based on feasibility study of BLZ project, an application for

grant of Mining Lease (ML) has been submitted. Planning activities for mine development are underway.

## 7.6 EXPLORATION

PPL, together with its subsidiaries, has a portfolio of 48 exploration blocks, of which 28 are PPL-operated, including Block-8 in Iraq, and 20 are partner-operated including three offshore blocks in Pakistan and one onshore block in Yemen.

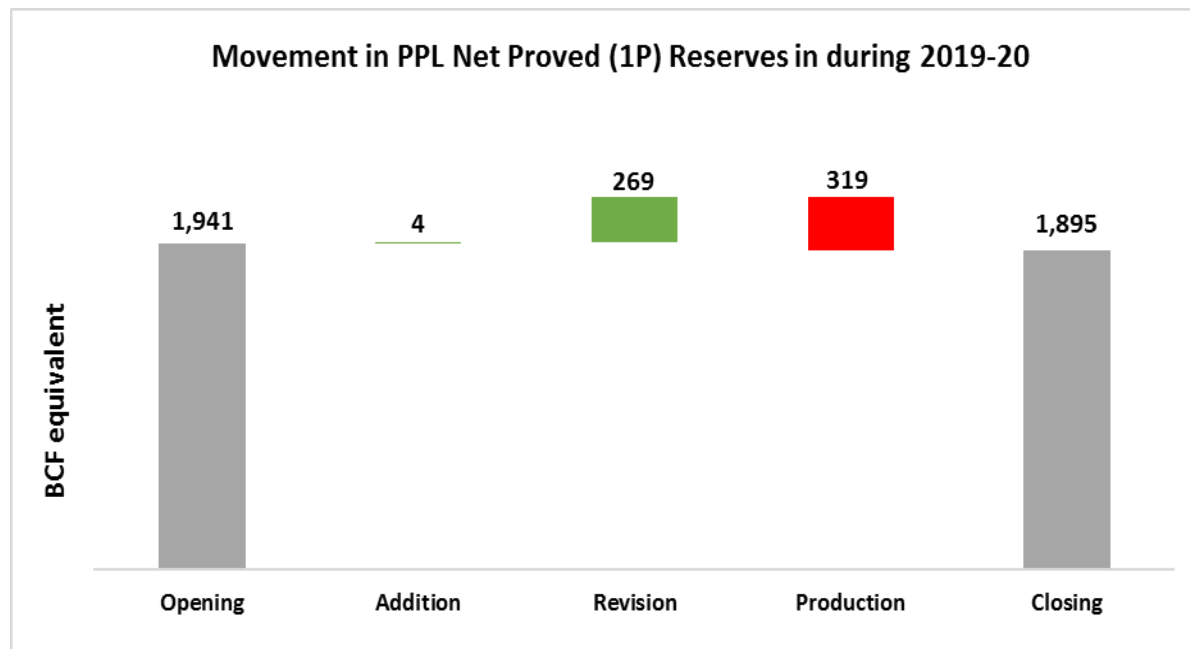
The Company holds a diversified exploration portfolio with a mix of High-Risk, High-Reward and Low-Risk, Low/Medium-Reward assets. Because of the maturity of the existing blocks, the prospect inventory is diminishing in size and quality. Efforts are at hand to use the unconventional seismic technology to map subtle hydrocarbon traps. Additionally, the Company is making efforts to strengthen its portfolio by acquiring a balanced mix of new blocks in the bid round and through farm-ins

Block wise details of exploratory work program delivered during the year in the PPL's operated blocks is provided in **Section-6.11**.

## 7.7 RESERVES MANAGEMENT:

Based on hydrocarbon reserves revisions, additions and production for the year, the Company's Proven Reserves Replenishment Ratio (RRR) stands at ~85 percent, indicating that around 85% of total production for the year has been replaced in the Company's reserves base. The additions have come due to discoveries in Benari X-1 (Shahbandar), Yasar X-1 (Kotri), Bitro-1 (Latif) and Unarpur-1 (Kotri North), while the revisions have primarily come from Shahdadpur and Shahdadpur West (Gambat South fields), Makori East and Maramzai (Tal fields).

Addition of reserves from Morgandh discovery will be incorporated after obtaining additional data from on-going appraisal activities.



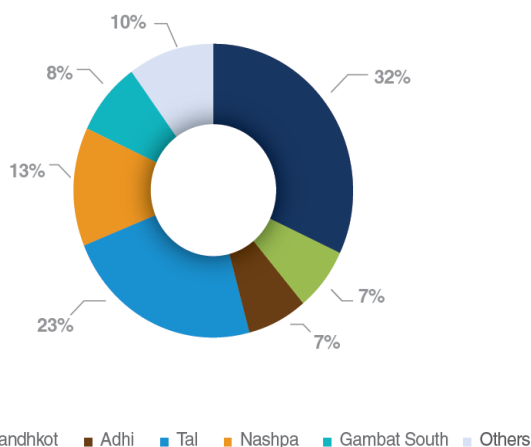
## 7.8 FINANCIAL OVERVIEW:

	2020 ----- (Rupees in thousand) -----	2019 ----- (Rupees in thousand) -----
<b>Revenue from contracts with customers</b>	<b>157,593,092</b>	<b>163,889,602</b>
Operating expenses	(42,760,217)	(40,006,776)
Royalties and other levies	(23,798,843)	(24,328,918)
	(66,559,060)	(64,335,694)
<b>Gross profit</b>	<b>91,034,032</b>	<b>99,553,908</b>
Exploration expenses	(14,733,694)	(24,858,354)
Administrative expenses	(3,072,536)	(2,385,446)
Finance costs	(1,069,908)	(741,020)
Other charges	(8,138,138)	(8,165,580)
	64,019,756	63,403,508
Other income	6,464,998	16,527,696
<b>Profit before taxation</b>	<b>70,484,754</b>	<b>79,931,204</b>
Taxation	(20,228,484)	(18,298,840)
<b>Profit after taxation</b>	<b>50,256,270</b>	<b>61,632,364</b>
<b>Basic and diluted earnings per share (Rs)</b>	<b>18.47</b>	<b>(Restated) 22.65</b>

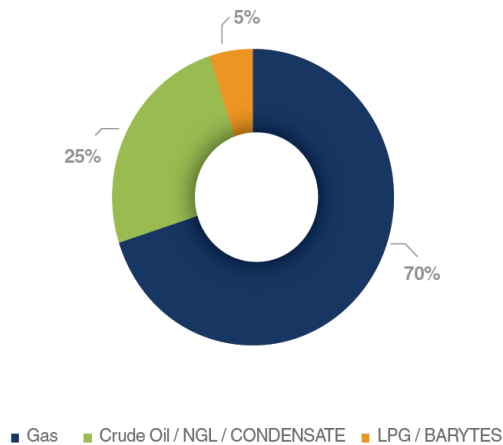
### 7.8.1 SALES REVENUE:

Sales revenue has declined by Rs 6,297 million during the current year as compared to the corresponding year. The decrease is due to negative volume variance of Rs 13,941 million, partially offset by positive variance on account of price amounting to Rs 7,644 million. The primary reason for negative volume variance is due to the lower offtakes by GENCO-II in Kandhkot Gas Field coupled with lower offtakes by refineries due to Covid-19 and natural decline in mature fields. Positive price variance is due to devaluation of Pak rupee against US dollar (average exchange rate for the current year was PKR 158.45 / US\$ as compared to PKR 136.37 / US\$ during the corresponding year), partially offset by drop in average international crude oil prices to US\$ 51.1 / bbl during the current year versus US\$ 68.3 / bbl during the corresponding year.

Field-wise Sales Revenue (2019-20)



Product-wise Sales Revenue (2019-20)



Sales Volumes	Unit	2019-20	2018-19
Natural Gas	MMCF	246,619	278,296
Crude Oil / NGL / Condensate	BBL	5,060,867	5,753,564
LPG	Metric Tonnes	107,421	117,194
Barytes *	Metric Tonnes	77,738	100,284

\* Total gross sales volume of baryte powder, baryte ore and iron ore, made by BME aggregated to 186,320 metric tonnes during the year. After eliminating the sales made by BME to PPL and applying 50% share of PPL, net volume is reported as 77,738 metric tonnes.

## 7.9 QUALITY, HEALTH, SAFETY AND ENVIRONMENT (QHSE)

The key QHSE focus areas are as follows:



### 7.9.1 QHSE Automation

The QHSE Audit & Inspection module was launched during the year. This automation transformed existing paper formats into a digitized form that can be tracked and analyzed throughout the workflow and supports continual improvement with many advanced features. Next year, the Sustainability Reporting and Management of Change modules are targeted for automation.

### 7.9.2 Road Transport Safety

- Live Monitoring of vehicles and Automatic Head Count System was implemented at Gambat South Field.
- Journey Risk Management forms were introduced and implemented specially in purview of COVID-19 road movement.
- Stakeholders were engaged at Head Office and Islamabad office to uplift Road Safety practices.

### 7.9.3 Occupational Health

- All action items related to PPL Fields arising from 3rd Party Occupational Health Gap Analysis were closed.
- First Aid Guide Books (Urdu Version) were distributed to all NMPT staff across PPL.

#### **7.9.4 Customer Satisfaction & QHSE Certifications**

- ISO Certification Audit services were rotated to a new contractor and is expected to provide a fresh insight to PPL management in its improvement journey.
- Several PPL operated fields and departments were successfully upgraded to the latest 2015 version of QHSE international certifications i.e. ISO 9001 (Quality), 14001 Environment) and OHSAS 18001 (Occupational Health & Safety).
- Remaining fields and departments are scheduled for transition as per Annual Surveillance Audit Plans in the coming years.

#### **7.9.5 Process Safety**

##### **Leadership & Culture Initiatives**

- Celebrated Safety Weeks at Head Office, Adhi, Kandhkot, Gambat South & Sui to enrich knowledge of staff on QHSE/process safety matters.
- Engagement and conversation sessions were completed at Kandhkot and Gambat South fields.
- Next year focus is to develop and roll out a QHSE Accountability Framework at PPL for strengthening the culture where everyone bears the responsibility and accountability to adhere to QHSE norms.

##### **Asset / Mechanical Integrity**

- 3D fire & gas mapping study was completed at Sui Field Gas Compressor Station.
- Pre-Startup Safety Review (PSSR) held at Dhok Sultan X-1 EWT operations to ensure safe startup
- PHA, MOC, PSSR & Well Testing safety requirements sessions were conducted at Gambat South field.
- Stakeholders engagement was initiated to introduce new safety studies at PPL's Plants including Hazardous Area Classification and Safety Integrity Level.

#### **7.9.6 Environmental Footprint / Legal Compliance**

- NOCs were acquired from respective EPAs for drilling wells Khipro East X-1, Margand X-1, South Kharan X-1 and seismic surveys in Shah Bander & Musakhel.
- Independent Monitoring Consultants were deployed in seismic, drilling and construction activities for effective monitoring and reporting of compliance against agreed project specific Environment Management Plans.
- 10,000 native saplings were provided to EPA Attock under Government's initiative of "Clean & Green Pakistan".
- A widespread tree plantation campaign is planned to be undertaken in the Project areas in the following years.
- Various legal compliance audits were completed during the year.
- Community complaints on spills/leakages at Adhi Field, Margand and Dhok Sultan were addressed through environmental monitoring, reporting and meetings / interactions with government authorities.

#### **7.9.7 Contractor's Safety**

Contractor's Safety is one of the high-risk area in oil & gas industry which is recognized as corporate risk at PPL as well. Accordingly, following key measures were undertaken in general for seismic, drilling & projects contractors:

- Pre-Mobilization workshops

- Pre-spud inspections
- Independent monitoring
- Contractors' trainings
- Regular meetings with contractor's management on outstanding QHSE issues
- Behavioural intervention and modification program at drilling rigs
- Safety membership and safety captain programs
- HSE Experience sharing with JV partners
- Distribution of Basic First Aid guide

## **7.10. CORPORATE SOCIAL RESPONSIBILITY:**

During the year under review, the Company continued to support schemes at its producing and exploration areas. These included scholarship schemes for local students, support to educational facilities catering to children with special needs, provision of free-of-cost healthcare services through mobile medical dispensaries and ophthalmic camps, development of educational, healthcare and road infra-structure, initiation of potable water supply schemes, provision of free gas etc. The major CSR programs of PPL are mentioned in the following paragraphs:

### **7.10.1 Education**

The Company believes in the strength of formal education to empower communities. The Company has been building on school infrastructure and providing furniture etc. to Government schools at its operated areas. In addition, the following activities were undertaken during the year:

- Sui Model School & Girls College, Dera Bugti, Balochistan is being operated benefitting over 3,000 local students including over 100 female students at the Girls College.
- Financial support was provided to the Virtual University campus at Sui town.
- Support was provided to run three PPL-TCF primary and one secondary schools at Kandhkot, benefitting more than 600 students.
- Operations were supported at the 2 Government schools adopted in District Kambar-Shahdadkot.
- Transport was provided to local students of FC School & College, FG Public High School and Taleem Foundation School at Sui town.

Furthermore, PPL is operating five scholarship schemes for deserving students from its producing districts including Balochistan. The summary is as follows:

- 145 students were awarded scholarships to pursue higher professional level education in the areas of education, medicine, management, IT and engineering.
- 135 students belonging to Balochistan were awarded scholarship to continue their education from classes 9 to 12 under a four-year education program.
- 100 scholarships were awarded to local students of Sui town to pursue their education at FC Public School and College, Sui.
- A female alumnus of the Sui Model School & Girls College was awarded a scholarship enabling her to study medicine.
- 30 physically impaired children of District Sanghar and Matiari were awarded scholarships to pursue primary and secondary level education at the Deaf Reach School at Rashidabad, operated by the Family Education Services Foundation (FESF).
- PPL Chair in Petroleum Engineering at Mehran University of Engineering and Technology, Jamshoro remained functional, and continued to make efforts to achieve its objectives.

### **7.10.2 Skill Development**

- In order to provide skills development to the unemployed youth, the Company has partnered with the Hunar Foundation, and awarded scholarships to 39 students, to acquire a technical diploma recognised by the City & Guilds Skill Development Institute, UK.
- The Vocational Training Center at Adhi has become financially sustainable. Production of marketable items i.e. hand embroider dresses, stitching of dresses, hand knitted sweaters and bags have been commenced at the center. Over 750 females are now enabled to generate income for their livelihood empowering women.
- Over 100 men and women were trained at Vocational Training Institute, Sui in different trades like tailors, graphic designing, computer repairing, textile, cooking, etc enabling them to earn their livelihood.

### **7.10.3 HEALTHCARE**

- Over 8,000 patients of Sui Town were provided free of cost consultation, treatment and medicine this year at the Sui Field Hospital.
- Mobile dispensaries operated at Mazarani, Kandhkot, Gambat South and Adhi jointly benefitted over 89,000 patients.
- Six surgical eye camps were organized for the population residing in the surrounding areas of Sui, Kandhkot, Adhi, Mazarani and Shahdadpur that benefitted over 20,000 patients.
- PPL established the Ophthalmic Operation Theatre at Dr. Ruth Pfau Health Centre (DRPHC), Kandhkot. Over 8,000 patients were provided free-of-cost treatment for leprosy, blindness and tuberculosis at the center.

### **7.10.4 Free Gas and Water Supply**

The Company continued to provide free gas and water to the residents of Sui town, to enhance the quality of life of the local residents. The Company also continued to supply potable water to locals at Ghaibi Dero and operated water filtration plant at Sunjar Khan Junejo, District Sanghar. During the year, the Company completed solar powered water supply schemes at Nichara, District Kalat and village Haji Kareem Bux Brohi, District Lasbela and drilled water bore at village Muneeb Langari at District Kalat. Besides, the Company also completed installation of RO plant at village Fateh Muhammad Punjabi at District Naushahro Feroz and village Qasim Panhwar at District Hyderabad.

### **7.10.5 Infrastructure Development**

The Company contributed in infrastructure development with respect to the roads and bridges in District Kashmore and Sanghar, benefitting the communities by connecting farmers with the nearest markets.

## 7.11 EXPLORATION BLOCKS

### Company Operated Frontier Blocks:

<b>BARKHAN</b>	<ul style="list-style-type: none"> <li>Reprocessing of ~ 313 line km 2D seismic data is in progress.</li> </ul>
<b>BELA WEST</b>	<ul style="list-style-type: none"> <li>Drilling of first exploration well Bela West X-1 was completed.</li> <li>Well was plugged &amp; suspended due to very high formation pressures and non-availability of compatible wellhead equipment.</li> <li>Post well evaluation of Bela West X-1 is in progress.</li> </ul>
<b>HAB</b>	<ul style="list-style-type: none"> <li>Third exploration well Nooh X-1 was plugged &amp; abandoned due to discouraging results.</li> <li>Feasibility study of Hub X-1 appraisal was completed.</li> <li>Seismic data reprocessing of 457 line km was completed. Its interpretation and mapping are in progress.</li> </ul>
<b>KALAT</b>	<ul style="list-style-type: none"> <li>Preparations are underway to spud-in Pandrani X-1 in second half of 2020-21.</li> <li>Depth imaging update of 312 line km 2D seismic data is in progress.</li> </ul>
<b>KHARAN, KHARAN EAST, &amp; KHARAN WEST</b>	<ul style="list-style-type: none"> <li>Reprocessing, interpretation and mapping of ~600 line km 2D seismic data in Kharan Block and 380 line km 2D seismic data in Kharan West Block was completed.</li> <li>Gravity magnetic survey and acquisition of 3D seismic data is planned.</li> <li>Relinquishment notice for Kharan West Block was submitted to DGPC.</li> </ul>
<b>KHUZDAR</b>	<ul style="list-style-type: none"> <li>Acquisition of 100 line km 2D seismic data is planned to mature remaining leads into drillable prospects, subject to security clearance.</li> </ul>
<b>MARGAND</b>	<ul style="list-style-type: none"> <li>Drilling and testing of first exploration well Morgandh X-1 was completed. Gas discovery was made in Chiltan Limestone.</li> <li>Planning is in progress for appraisal of Morgandh X-1 discovery.</li> <li>Depth imaging update of 262 line km 2D seismic data was completed.</li> </ul>
<b>MUSAKHEL</b>	<ul style="list-style-type: none"> <li>Reprocessing of 168 line km 2D seismic data was completed and its interpretation/mapping is in progress.</li> <li>Gravity &amp; Magnetic survey is planned.</li> </ul>
<b>NAUSHERWANI</b>	<ul style="list-style-type: none"> <li>3D seismic data acquisition and Gravity &amp; Magnetic survey is planned.</li> <li>Evaluation of deeper prospectivity is in progress.</li> </ul>
<b>SOUTH KHARAN</b>	<ul style="list-style-type: none"> <li>Reprocessing of 775 line km 2D seismic data was completed.</li> <li>Interpretation &amp; mapping of reprocessed 2D seismic data was completed.</li> <li>Gravity &amp; Magnetic survey is planned.</li> </ul>

## Company Operated North blocks:

Exploration activities in respect of PPL Operated North Blocks are summarised below:

<b>DHOK SULTAN</b>	<ul style="list-style-type: none"> <li>• Drilling of second exploration well Dhok Sultan South X-1 was completed. Presence of oil was confirmed in Patala and Lockhart formations. However, well has been plugged &amp; suspended (P&amp;S) due to high H<sub>2</sub>S content encountered in Chorgali/Sakesar formation during testing. Post well evaluation is in progress.</li> <li>• Drilling of first appraisal well Dhok Sultan-2 is in progress.</li> <li>• Seismic data processing of 378 line km 2D and 175 sq. km 3D is in progress.</li> </ul>
<b>HISAL</b>	<ul style="list-style-type: none"> <li>• Geochemical study has been completed.</li> <li>• In-house G&amp;G evaluation is in progress.</li> </ul>
<b>KARSAL</b>	<ul style="list-style-type: none"> <li>• Seismic data processing/reprocessing of 155 line km 2D and 253 sq. km 3D was completed.</li> <li>• Fracture characterization study is in progress.</li> <li>• Evaluation of remaining block prospectivity is in progress.</li> </ul>
<b>SADIQABAD</b>	<ul style="list-style-type: none"> <li>• Third exploration well Cholistan X-1 was plugged &amp; abandoned.</li> <li>• Seismic data processing / reprocessing of ~ 550 line km is in progress.</li> <li>• 4G microbial geochemical study has been completed.</li> <li>• Evaluation of remaining block prospectivity is in progress.</li> </ul>
<b>PUNJAB</b>	<ul style="list-style-type: none"> <li>• Punjab block was awarded during the year.</li> <li>• In house G&amp;G evaluation is in progress.</li> <li>• Gravity &amp; Magnetic survey is planned.</li> </ul>

## Company Operated South blocks:

<b>GAMBAT SOUTH</b>	<ul style="list-style-type: none"> <li>• Location of 'Qasar X-1' well was staked.</li> <li>• Sequence Stratigraphy Study of the block &amp; 3D Mechanical Earth Modelling Study of Hadi X-1A Tight Gas discovery were completed.</li> <li>• PSTM processing and merging of the 650 sq. km 3D seismic data was completed. PSDM processing is in progress.</li> </ul>
<b>HALA</b>	<ul style="list-style-type: none"> <li>• Purchase of offset wells and 3D seismic data was completed.</li> <li>• In-house integrated G&amp;G evaluation of data is in progress.</li> </ul>
<b>KHIPRO EAST</b>	<ul style="list-style-type: none"> <li>• Civil works for 1st exploration well Khipro East X-1 were completed.</li> <li>• Interpretation &amp; mapping of newly acquired 399 line km 2D seismic data over eastern lead was completed.</li> </ul>
<b>KOTRI</b>	<ul style="list-style-type: none"> <li>• Drilling of 5th exploration well Durab X-1 was completed. Well was plugged and abandoned.</li> <li>• Evaluation of remaining block prospectivity is underway.</li> </ul>
<b>MALIR</b>	<ul style="list-style-type: none"> <li>• Structural Modelling Study to de-risk Malir Updip prospect was completed and its integration with available wells and G&amp;G data is in progress.</li> </ul>
<b>NAUSHAHRO FIROZ</b>	<ul style="list-style-type: none"> <li>• PSDM processing and interpretation of 340 sq. km 3D seismic data was completed.</li> <li>• Evaluation of remaining block prospectivity is underway.</li> </ul>
<b>SHAH BANDAR</b>	<ul style="list-style-type: none"> <li>• Preparations are underway for start of production from Benari gas discovery.</li> <li>• Acquisition of 130 sq. km 3D seismic is planned.</li> <li>• Reprocessing and interpretation of vintage 180 sq. km 3D seismic data was completed.</li> </ul>
<b>SIRANI</b>	<ul style="list-style-type: none"> <li>• One prospect has been identified in the marshy area and planning for civil works is underway.</li> </ul>
<b>SORAH</b>	<ul style="list-style-type: none"> <li>• In house G&amp;G evaluation is in progress to finalize 3D seismic data acquisition.</li> </ul>
<b>JUNGSHAHI</b>	<ul style="list-style-type: none"> <li>• Security clearance for activities is awaited.</li> <li>• Reprocessing of 175 line km 2D seismic data was completed and its interpretation and mapping are in progress.</li> </ul>

## CHAPTER 8



### **Government Holdings (Private) Limited**

## 8.1 INTRODUCTION

Government Holdings (Private) Limited (GHPL) manages Government of Pakistan's working interest in upstream petroleum Joint Ventures. GHPL was established in the year 2000 and is 100% owned by the Government of Pakistan. Being working interest owner in multiple on-shore Joint Ventures on behalf of the GoP. GHPL performs in-depth analysis on the available geological, geophysical, wells, surface facilities, production data, etc and subsequently approves the work programs and budgets in various joint ventures. It pay its share of expenditure for the work done against the approved work program. GHPL also monitors progress work program progress through field visits, technical, financial and management committee meetings and workshops with joint venture partners. In Onshore, GHPL manages its interest as non-operated partner and in Offshore, GHPL acts as licensee.

GHPL is a non-operating partner with local and foreign oil and gas exploration and production companies in Pakistan, which includes OGDCL, MPCL, POL, PEL, PPL, Al-Haj Enterprises, UEPL, OPPL, Hycarbex, Tallahassee Resources, MOL and KUFPEC.

GHPL's current portfolio consists of:

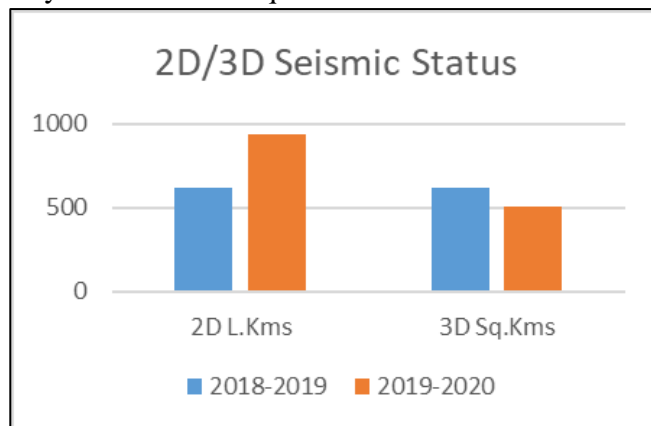
- 19 onshore concessions in exploration stage under Petroleum Concession Agreement (PCA)
- 26 onshore exploration licenses with OGDCL, PPL, OMV, Al-Haj, KUFPEC and Tallahassee (Petroleum Policy 2012) ranging from 2.5% to 4.66% on full sharing basis
- 03 Farm-in onshore exploration licenses with 25% interest on full participation basis with PPL
- 89 Development and Production Leases (D&PLs)
- 04 concessions in offshore area under Production Sharing Agreement (PSA)
- Farm-in onshore exploration licenses have been evaluated with OGDCL & PPL.

## 8.2 MAJOR EXPLORATION ACTIVITIES

### Seismic Acquisition Activity (during 2019-2020):

Block	Operator	Seismic	
		2D L.km	3D Sq.km
Orakzai & Tirah	OGDCL	435	-
Zorgarh	OGDCL	268	-
Khuzdar North	OGDCL	235	-
Tal	MOL		510
<b>TOTAL</b>		<b>938</b>	<b>510</b>

The comparative analysis for 2D/3D acquired seismic is as follows:



Furthermore, following 2D/3D seismic processing/reprocessing projects have been carried out during this fiscal year:

S.No	Block Name	Operator	2D		3D		Status
			Processing (L. Km)	Re-Processing (L. Km)	Processing (Sq. Km)	Re-processing (Sq. Km)	
1	TAL	MOL			152	3100	Ongoing
2	Kuhan	UEPL		90			Completed
3	Mehar	UEPL		435			Completed
4	Mubarak	UEPL		380		548	Completed
5	Dhok Sultan	PPL	378		175		Ongoing
6	Shah Bandar	PPL				180	Completed
7	Gambat South	PPL			650		Ongoing
8	Kharan South	PPL		865			Completed
9	Musa Khel	PPL		168			Completed
10	Hub	PPL		295			Completed
11	Pasni West	OGDCL	881				Completed
12	Planatak	OGDCL	344				Completed
13	Zorgarh	OGDCL	346				Completed
14	Gurgalot	OGDCL			320		Ongoing
15	Guddu	OGDCL			545		Completed
16	Ranipur	OGDCL				2689	Ongoing
17	Sinjhoro	OGDCL				952	Ongoing
18	Rakshan	OGDCL		602			Completed
19	Makhad	KPBV		1220			Completed
Sub- Total			1949	2835	1842	7469	
Total 2D Processing/Re-processing			4784				
Total 3D Processing/Re-processing					9311		

Due to COVID-19 pandemic, few 2D/3D Seismic processing/reprocessing projects have been delayed and expected to be completed in next fiscal year.

### 8.3. E&P ACTIVITIES IN OFFSHORE BLOCKS

GHPL being licensee in offshore is managing the following 04 Production Sharing Agreements (PSA) by different Operators:

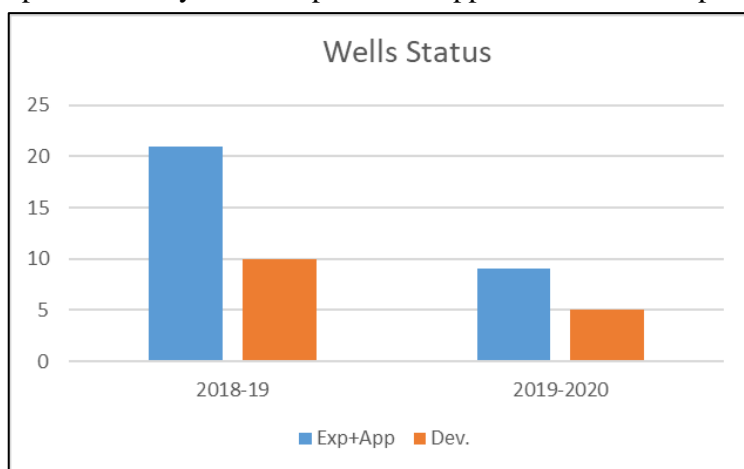
- |                            |                      |      |
|----------------------------|----------------------|------|
| ➤ Offshore Indus N         | Eni Pakistan Limited | (01) |
| ➤ Offshore Indus G         | Eni Pakistan Limited | (01) |
| ➤ Eastern Offshore Indus C | Eni Pakistan Limited | (01) |
| ➤ Offshore Indus J         | PEL                  | (01) |

## 8.4 DRILLING ACTIVITIES

Following drilling activities were carried out in different blocks in which GHPL is Joint Venture Partner.

Wells Status	2018-19	2019-2020
Exploration & Appraisal Wells	21	9
Development Wells	10	5
Discoveries	8	3

The comparative analysis for Exploration/Appraisal and Development wells is as follows:



Furthermore, due to COVID-19 pandemic, few Exploration/Appraisal and development wells have been postponed to next fiscal year.

## 8.5 DISCOVERIES 2019-2020

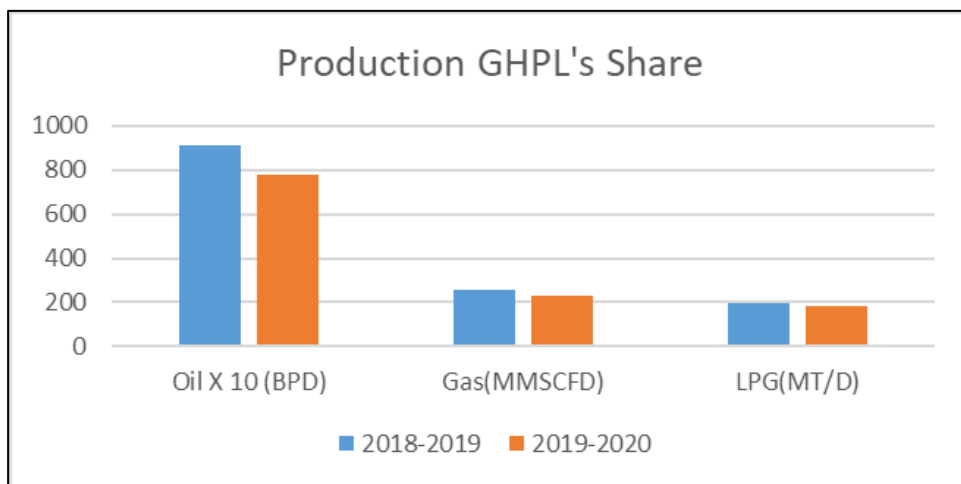
A total of 3 discoveries were made during the year 2019-2020:

- Pandhi-1 discovery was made in Bitrisim Block by OGDCL.
- Metlo-1 discovery was made in Ranipur Block by OGDCL.
- Mamikhel South-1 discovery was made in Tal Block by MOL.

## 8.6 PRODUCTION STATUS

GHPL's share of average daily production from all fields during FY 2019-20 is as follows and also shown graphically:

	2018-2019	2019-2020
Oil/condensate (Bpd)	9,094	7,780
Gas (MMscfd)	257	233
LPG (MT/D)	197	181



COVID-19 pandemic affected production during March – May 2020.

## 8.7 MAJOR PRODUCTION & DEVELOPMENT ACTIVITIES

### 8.7.1 SAWAN – Operated by OMV

*(GHPL working interest 22.5%)*

Gas production from Sawan continued in the year 2019-20 through front-end compression with a natural declining trend. The average gas production from the field during 2019-20 was 33.8 MMscfd (Million Standard Cubic Feet Per Day).

Several well intervention activities including additional perforations/scale cleanout jobs were carried out to maintain/enhance production especially at Sawan-4 and Sawan-10. A workover was carried out at Sawan-4 well to clear fish / restriction in the well. Plan is to execute hydraulic fracturing to revive production.

Sawan processing facilities continued to process Latif JV gas resulting in efficient utilization of processing facilities and extension of field life for both fields. Following modifications are under review by JV to address the production decline and lower technical limit of production facilities:

- Lowering of Plant Technical Limit (Engineering Study in progress & actual test of plant at 12.5 MMscfd raw gas planned)
- Replacement of existing front-end compressors (oversized for current production) with smaller machines to account for high technical limit and OPEX optimization (to save on high fuel consumption and maintenance costs associated with existing compressors)
- Installation of nodal compressors to reduce back pressures on distant wells

### 8.7.2 GAMBAT / TAJJAL – Operated by OMV

*(GHPL working interest 25%)*

Gas production from the Tajjal field continued in the year 2019-20 at 0.52 MMscfd. The field is on natural decline & producing through Sawan Font End Compression. The Tajjal-1 well is on production. Scale clean-out jobs are carried out at Tajjal-1 to ensure production continuity. Operator has applied for relinquishment of Gambat exploration license.

### 8.7.3 ZAMZAMA – Operated by OPPL

*(GHPL working interest 25%)*

Zamzama field produces gas and condensate. The average production from the field during 2019-20 was 26.31 MMscfd Gas and 122 BCPD condensate (Barrels of condensate per day). The field is on natural decline.

Several well intervention activities including additional perforations were carried out along with process optimizations to maintain/enhance production and reduce OPEX. Khadro formation was tested in Zam-9 and added in production w.e.f. 25-Aug-2019. Flow rates are: Gas = 3.35 MMscfd, Water = 51 bpd

Rental compressors were installed in place of FEC to enhance recovery and reduce fuel gas.

#### **8.7.4 CHANDA – Operated by OGDCL**

*(GHPL working interest 17.5%)*

Average production from the field during 2019-20 was 07 MMscfd; 2,641 Bpd (Barrels of Oil per day) and 12 MT/D of LPG (Metric Ton per Day) from 05 wells. Reservoir simulation study is in progress to evaluate further potential and enhance recovery.

Drilling & testing of Chanda-5 development well was completed and Chanda-5 production started w.e.f. 28-Feb-2020 at initial rates of 4.21 MMscfd & Oil at 740 bpd. Additional perforations were carried out at Chanda-2 well resulting in increase in production by 1.37 MMscfd & 680 bpd. Both these wells resulted in increase of LPG production from 10 to 20 MT/D.

Moreover, well interventions & process optimizations are being planned to enhance production & recoveries.

#### **8.7.5 TAL – Operated by MOL Pakistan**

*(GHPL working interest 15%)*

Total average production from Tal Block (Manzalai, Makori, Mamikhel, Maramzai, Makori East, Mardankhel, Tolanj X1, Tolanj West and Makori Deep Fields) during 2019-20 was 301.3 MMscfd of Gas, 18,990 Bpd of Oil & condensate & 454.44 MT/D of LPG.

Mamikhel South-1 was drilled as an exploratory well and resulted in discovery. The well flowed at 18.20 MMscfd of Gas and 3870 Bpd of Condensate @ 32/64" choke with 5208 psi FWHP. The well tie-in activities are currently being planned.

An overall production curtailment was observed during the year due to reduced receipt of crude & condensate as refineries faced issue of piling stock of furnace oil, locals strikes, delay in uplifting of LPG and COVID-19 pandemic. Several well interventions and reservoir monitoring activities were also carried out during the year for production continuity and enhancement.

- a. **Manzalai:** Average production from the field during 2019-20 was 24 MMscfd, 426 Bpd condensate & 6.44 MT/D LPG from 06 wells. Compression remained operational to support the field's declining pressures & production rates. Field is in depletion phase. Further field compression options are being considered to enhance recoveries.
- b. **Makori:** Average production from the field during 2019-20 was 0.22 MMscfd, 16 Bpd and 0.58 MTD of LPG from one well only. Field is in depletion phase and well is on cyclic production.
- c. **Mamikhel:** Average production during 2019-20 is 12.43 MMscfd Gas, 254 Bpd Condensate & 3.29 MTD LPG from two wells. Wellhead compression remained operational to support the field's declining pressures & production rates.
- d. **Maramzai:** Average production during 2019-20 is 122 MMscfd Gas, 4,192 Bpd Condensate and 88 MTD of LPG from four wells.
- e. **Makori East:** Average production during 2019-20 is 73 MMscfd Gas, 9,965 Bpd Oil and 291

MTD of LPG from six wells.

- f. **Mardankhel:** Average production during 2019-20 remained 46 MMscfd Gas, 3,341 Bpd Condensate and 28 MTD LPG. Mardankhel-3 successful commissioned on July 4, 2019 at 12.63 MMscfd Gas and 338 Bpd Condensate.
- g. **Tolanj X1 & Tolanj West:** Average production during 2019-20 was 10.41 MMscfd Gas and 22 Bpd Condensate from two wells.
- h. **Makori Deep:** Average production during 2019-20 was 13 MMscfd Gas, 1,776 Bpd Condensate and 37 MTD of LPG. Makori Deep-2 was put on production w.e.f. 19-Nov-2019 @ 10 MMscfd Gas, 1100 Bpd Condensate & 21 MTD of LPG.

Upcoming projects in TAL Block are Maramzai field compression and recovery of LPG from sales gas of Manzalai CPF.

#### **8.7.6 MAZARANI – Operated by PPL**

*(GHPL working interest 12.5%)*

Average production from the field during 2019-20 was 4 MMscfd and around 08 Bpd Condensate. The field is approaching its economic limits and D & PL expiry was by 31<sup>st</sup> August 2019. Therefore, Operator has applied for D & PL extension and is evaluating various options to continue production from the field including gas price increase and gas sales to third-party. Handling of water & continuity of production is challenging in the field.

#### **8.7.7 PARIWALI – Operated by POL**

*(GHPL working interest 17.5%)*

Average production from the field during 2019-20 was 4 MMscfd Gas, 263 Bpd Condensate and 10 MT/D of LPG. The field is on natural decline.

#### **8.7.8 BITRISM – Operated by OGDCL**

*(GHPL working interest 22.5%)*

Based on the revised Production Strategy and subsequently revised Bitrism Field Development Plan, early production (18-24 months) from Bitrism West well(s) at 5 MMscfd Gas, 650 Bpd Condensate and 40 MT/D LPG was achieved thereby resulting in effective utilization of existing infrastructure (Sinhoro Plant) and CAPEX savings.

Bitrism well(s) are being processed through Sinjhoro gas processing facilities & LPG Plant. Average production from the field during 2019-20 was 6 MMscfd Gas, 708 Bpd Condensate and 42 MTD of LPG.

#### **8.7.9 MIRPUR KHAS & KHIPRO – Operated by UEPL**

*(GHPL working interest 25%)*

Total average production from these two blocks during 2019-20 was 401 MMscfd of Gas, 2,742 Bpd of Condensate and 33 MTD of LPG. Several well intervention activities were carried out along with Rig workovers, artificial lift and compression projects to maintain production and enhance recovery.

Various compression and efficiency improvement projects were initiated/ completed during the year. Production of LPG remained constrained due to Wobbe index control issue.

#### **8.7.10 BLOCK-22 – Operated by PEL**

*(GHPL working interest 22.5%)*

Average Gas production from Block-22 during 2019-20 was about 4 MMscfd. Water production has increased and an existing depleted well has been converted into a disposal well by installing surface facilities.

#### **8.7.11 MUBARAK – Operated by OMEL**

*(GHPL working interest 25%)*

Mitha-1 well was drilled in 2018 and was put on production from December, 2018. Well head compression was also installed and average Production from the well during 2019-20 was about 08 MMscfd.

3D Processing is currently ongoing, which will be followed by 3D Seismic interpretation to firm up the leads into prospects for future drilling.

Revival of Saqib-1A well is being planned for production through Kadanwari CPP and in this regard Revised FDP will be submitted to the regulator (i.e. Saqib-1A tie-in at Mitha-1 well flowline and subsequent utilization of installed Miano pipeline network). Well revival is subject to regulatory approvals.

#### **8.7.12 MEHAR – Operated by OMEL**

*(GHPL working interest 25%)*

Average production from the Mehar field during 2019-20 was about 14 MMscfd Gas and 580 Bpd Condensate from three wells. Mehar-5 development well achieved 1<sup>st</sup> Gas in September, 2019 with 11 MMscfd Gas and 560 Bpd Condensate. Compression System also commissioned at Mehar-5 and Sofiya-2 ST-3 wells.

Average production from Sofiya field (Sofiya-2 well) during 2019-20 was 4 MMscfd Gas and 132 Bpd Condensate and well ceased to flow in June 2020. CTGL is planned for reviving the well.

Several well intervention activities including reservoir surveillance and re/ additional perforations were carried out along with process optimizations to maintain/ enhance production and reduce OPEX. G & G and reservoir studies are in progress to identify further drilling of new development wells and prospects or workover in existing wells.

#### **8.7.13 MINWAL – Operated by POL**

*(GHPL working interest 17.5%)*

Average production from Minwal Field during 2019-20 was 85 Bpd Oil. The field is being produced using artificial lift.

#### **8.7.14 CHACHAR – Operated by PPL**

*(GHPL working interest 25%)*

Chachar field is being produced through Kandhkot processing facilities. Average production from the field during 2019-20 was 1.46 MMscfd Gas.

#### **8.7.15 MELA D & PL - Operated by OGDCL**

*(GHPL working interest 15%)*

Average production from the field during 2019-20 was around 07 MMscfd Gas and 1,327 Bpd Condensate. Drilling of Mela-7 development well completed and well was tested at 7.9 MMscfd Gas and 525 Bpd Oil. The 1<sup>st</sup> Gas was achieved on July 07, 2020.

Work completed on following projects: a) Mela Compression project, b) up-gradation of Mela processing facilities and c) laying of pipeline from Mela to Nashpa plant for extraction of LPG. Diversion of Mela gas to Nashpa plant for LPG recovery is pending acceptance by gas buyer of change in Point of Delivery (for Mela sales gas).

#### **8.7.16 NASHPA D & PL - Operated by OGDCL**

*(GHPL working interest 15%)*

Average production from the field during 2019-20 was around 82 MMscfd Gas, 14,522 Bpd Oil and 258 MTD of LPG from seven wells. Nashpa-9 development well drilling was completed and achieved 1<sup>st</sup> Gas in October, 2019. The initial rate was 1.4 MMscfd Gas and 675 Bpd Oil.

Process optimization of the LPG Extraction plant parameters to increase LPG and Performance test of the plant has been successfully completed.

Production was revived from Nashpa-6 by water shut off and additional perforations which resulted in 2.8 MMscfd Gas, 1068 Bpd Oil and 7 MT/D LPG. Nashpa-4 & Nashpa-9 were diverted through Nashpa-5 separation battery & MP compressor to continue production due to declining pressures.

Upcoming projects include Nashpa reservoir simulation study, further development wells whilst field compression project is in progress (Planned Completion revised to 4Q-2020 due to Covid-19 Pandemic).

#### **8.7.17 NIM E.L – Operated by OGDCL**

*(GHPL working interest 22.5 %)*

The average production from Nim E.L during 2019-20 was around 07 MMscfd Gas & 251 Bpd Oil/ Condensate. Jarwar-1 well continued producing through artificial lift (Jet pump) along with Chutto-1. Flowline construction in progress for tie-in of Mangrio-1 and Saand wells. Saand wells will be produced through KPD-TAY processing plant.

#### **8.7.18 SINJHORO E.L – Operated by OGDCL**

*(GHPL working interest 22.5 %)*

Average production from the field during 2019-20 was around 32 MMscfd Gas, 1,462 Bpd Oil/Condensate and 131MT/D of LPG. Field is on natural decline and options are being evaluated to enhance production and bring back shut-in wells to production. At Chak-2 well, Acid wash job of Gravel pack was conducted resulting in production increased from 1.15 to 2.90 MMscfd Gas & 35 to 80 Bpd condensate and 5 to 10 MT/D LPG.

#### **8.7.19 JAKHRO D&PL – Operated by OGDCL**

*(GHPL working interest 22.5 %)*

Jakhro field was being processed at Sinjhor processing facilities. Average production from the field during 2019-20 was around 1.48 MMscfd Gas, 14 Bpd Condensate and 5 MTD of LPG from 01 well. Production volumes from Jakhro field are restricted to control high Nitrogen content in Sales gas as it was commingled through Sinjhor processing facilities.

#### **8.7.20 GUDDU EL – Operated by OGDCL**

*(GHPL working interest 22.5 %)*

Gas from Guddu field was being supplied to third party (M/s Engro). Average production from the field during 2019-20 was about 11 MMscfd Gas from 07 wells. Production has intermittently suffered due to plant technical issues at gas buyer's side. Reservoir surveillance job were carried out during ATA of gas buyer's facilities. Umair-1 well is expected to come on production in coming FY subject to gas allocation from the regulator.

3D Seismic processing has been carried out and based on interpretation results, the leads and prospects will be identified for further exploratory drilling.

Field Compression project has been initiated (Planned completion: 3Q, 2021).

#### **8.7.21 ZARGHUN SOUTH D&PL – Operated by MPCL**

*(GHPL working interest 17.5 %)*

Average production from the field during 2019-20 was about 16 MMscfd Gas & 05 Bpd Condensate. ZS-4 was drilled, completed and put on production on March 31, 2020. ZS-4 is currently producing at 14 MMscfd Gas. Security issues remain a threat, however, are being managed for smooth operations. G & G and reservoir studies were in progress and development wells may be drilled subject to Technical and commercial viability.

#### **8.7.22 TANDO ALLAH YAR EL – Operated by OGDCL**

*(GHPL working interest 22.5 %)*

Production from the field was being processed at KPD-TAY Plant. Average production from the field during 2019-20 was about 54 MMscfd Gas, 1,268 Bpd Oil/Condensate and 85 MTD of LPG. An overall production curtailment was observed during the year due to reduced receipt of crude & condensate as refineries faced issue of piling stock of furnace oil. Work was in progress for the tie-in of recent discovery, TAY SW-1 well.

Sub-surface/surface studies for compression of TAY field are being initiated.

#### **8.7.23 GAMBAT SOUTH EL – Operated by PPL**

*(GHPL working interest 25 %)*

Total average production from Gambat South block during 2019-20 was about 90 MMscfd Gas, 1,037 Bpd condensate and 11.3 MTD of LPG.

GPF-IV Phase-I (by relocating Rehmat Gas Plant) was completed in Sept 2018 and works on GPF-IV Phase -II and GPF-III continued and expected to be completed by 3Q-2020 and 3Q-2021 respectively. Additional Perforations jobs carried out at Sharaf-1 & Sharaf-2 wells. Regular reservoir surveillance and well intervention activities were conducted. A development well Sharaf-3 is also planned to be drilled in next fiscal year.

G & G and reservoir studies were in progress to identify further drilling prospects.

Average production from Kabir-1 well during 2019-20 was about 0.76 MMscfd Gas and 63 Bpd condensate. EWT operation at Kabir has been suspended from 28<sup>th</sup> Dec, 2019 due to unavailability of requisite regulatory license by third party gas buyer. Development options were under review to exploit the reserves of Hatim discovery due to its low heating value gas.

#### **8.7.24 JHAL MAGSI SOUTH D&PL – Operated by OGDCL**

*(GHPL working interest 22.5 %)*

Procurement of processing plant and material has been completed. However, construction work has stopped, as the gas buyer (M/s SSGCL) did not start work on Sales gas line. Alternate field development options are being explored/ pursued by the JV.

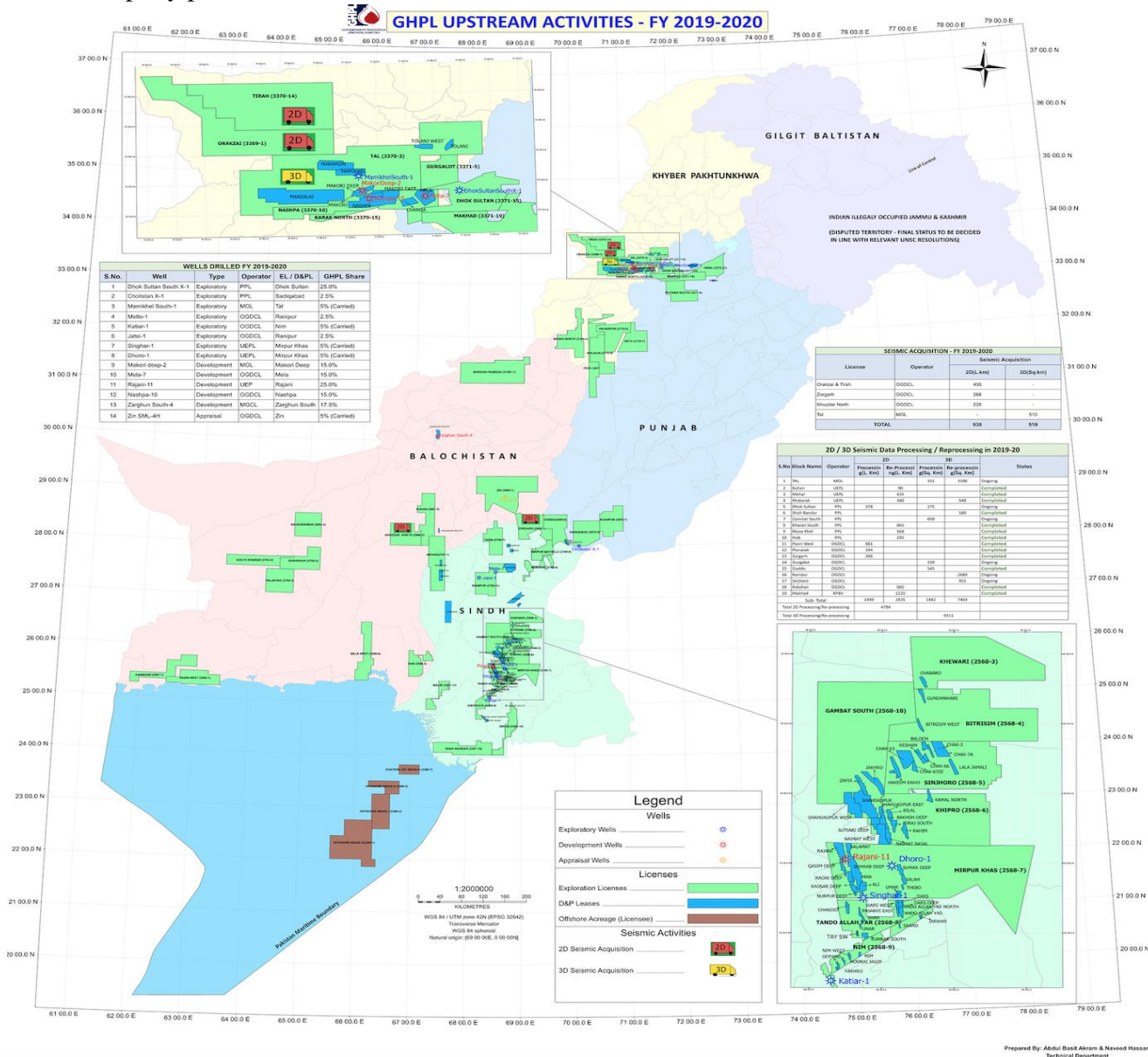
#### **8.7.25 DHOK SULTAN – Operated by PPL**

*(GHPL working interest 25 %)*

3D seismic was acquired on Musal structure and 3D Seismic processing was ongoing. Drilling of Dhok Sultan South well was also carried out and well is currently suspended. Dhok Sultan-2 well is also planned.

Production started under EWT from well Dhok Sultan X-1 ST-3 w.e.f. 02-Nov-2019. Average rates are: Gas = 1.14 MMscfd, Oil = 655 Bpd, Water = Nil, WHFP = 5035psi @ 14/64" Choke.

Average production from the field during 2019-20 was 0.44 MMscfd and 261 Bpd. EWT operation at Dhok Sultan X-1 ST-3 has been suspended from 2nd April, 2019 due to unavailability of requisite regulatory license by third party gas buyer. The work on rental oil handling facility & gas transportation pipeline for gas processing and LPG recovery at third party plant has been initiated.



## 8.8 INVESTMENTS, REVENUES, ROYALTY AND TAX

During 2019-20 GHPL invested Rs. 1.6 billion in the exploration activities and Rs. 5.2 Billion in the development of discovered oil and gas fields. Additionally, Rs. 301.5 Million were given as loan to Inter State Gas System Private Limited (ISGSL).

Revenue of Rs. 71.5 Billion was generated from sale of Oil, Gas and LPG. Royalty and Income tax payments made to GoP during 2019-20 were Rs. 8.4 Billion and Rs. 19.5 Billion, respectively. Further, an amount of Rs. 5 Billion was paid as cash dividend to GoP.

## 8.9 **BOARD OF DIRECTORS (as on 30th June 2020)**

<b>S#</b>	<b>Name of Directors</b>	<b>Designation</b>
1	Ms. Ayla Majid	Chairperson / Independent Director
2	Mian Asad Hayaud Din	Secretary, Ministry of Energy (Petroleum Division)
3	Dr. Kazim Niaz	Chief Secretary, KPK
4	Mr. Muhammad Anwer Sheikh	Senior Joint Secretary (CF-II), Finance Division
5	Ms. Saira Najeeb Ahmad	Joint Secretary (I&JV), Ministry of Energy (Petroleum Division)
6	Dr. Sajjad Ahmad	Independent Director
7	Mr. Haseeb Shakoor Paracha	Independent Director

## **CHAPTER 9**



**SUI NORTHERN GAS PIPELINES LIMITED**

S. No.	ITEM	UNIT	TARGET (2019-20)	ACHIEVEMENT (2019-20)
1	LPG Production	-	-	-
2	Gas consumers (Addition)	Million	300,000	271,228
3	Supply of Gas to Villages/ Abadies (Addition)	Nos	-	256
4	Transmission Pipelines (Addition)	Km	155	224
5	Distribution Pipelines (Addition) Main & Services	Km	3,019	5,639
6	System Losses	%	6,840 1.50%	-4,471 0.340%
7	CNG Stations (Addition)	Nos	Part of Targets given at Sr. No. 2	-
8	LPG Stations (Addition)	-	-	-

**A Projects completed during FY 2019-20 (achievements)**

Following pipelines construction projects have been successfully completed by SNGPL during FY 2019-20:

1. 8”dia x 14.50 Km Transmission Line from Dhoke Hussain to Dhoda Valve Assembly.
2. 24”dia x 19.83 Km Transmission Line from Kohat to Dakhni.
3. 10”dia x 50.70 Km Transmission Line from Daudkhel to Mianwali Line.
4. 24”dia x 93 Km Transmission Line for Punjab Power Plant.
5. 10”dia x 11.50 Km Transmission Line from Adhi to Sukho.

Following pipelines construction projects for other clients have been successfully completed by SNGPL during FY 2019-20

1. 12”dia x 1.4 Km Transmission Gas Feeder Line for Pak-Arab Fertilizers Limited.
2. 16”dia x 24 Km Transmission Gas Sales Line for Pak-Arab Fertilizers Limited.
3. 6”dia x 1.2 Km Makori Deep-2 Flow Line along with Fiber Optic Cable.
4. 8”dia x 7.5 Km Mardankhel 3 to Mardan Khel 1 Line along with Fiber Optic Cable.

**B UNDER PROGRESS PROJECTS DURING FY 2019-20**

Following pipelines construction projects are under progress during FY 2019-20:

1. 16”dia x 7 Km and 8” dia x 20 Km Transmission pipeline from Wazirabad to Jalalpur Jattan.
2. 16”dia x 29.2 Km Transmission pipeline from Ismailkot to Doorstep at Rashakai Special Economic Zone-SEZ for the supply of 30 MMCFD gas to Rashakai SEZ.
3. Lahore City Bifurcation/Augmentation Project to address low pressure.  
Phase-I
  - a) 24”dia x 48 Km Transmission pipeline from Phoolnagar to Nabi Bakhshwala (Ferozpur Road)
  - b) 16”dia x 27 Km Transmission pipeline from Ferozpur Road to Barki.
4. 16”dia x 50 Km Transmission pipeline from A5 to Bahawalpur to address low pressure problem of Bahawalpur.

## **CHAPTER 10**



**SUI SOUTHERN GAS COMPANY LIMITED**

## **10.1 GAS-DEMAND SUPPLY**

### **10.1.1 Gas pipelines commissioned for bridging demand-supply gap**

The SSGC completed two gas pipelines in January-February 2020 that would help to reduce the current gas demand-supply gap in Sindh and particularly in its largest load centre, Karachi. The company completed 12” dia x 46 km line for bringing in additional 40 MMCFD gas to add on to the 35 MMCFD gas already in the system. The second pipeline, the 8” dia. x 28 kms line injects 23 MMCFD gas into SSGC’s system.

### **10.1.2 Gas Pipeline repaired post rains in Balochistan**

SSGC's technical teams successfully repaired the 12” dia. Gas Pipeline located in Bibi Nani area in Balochistan. The line was damaged during the recent rains. Gas supply to Quetta was restored after a round the clock repair of the pipeline.

### **10.1.3 New gas line laying**

SSGC recently commissioned newly connected 16 inch dia. pipeline with the existing 16 inch dia. supply main at Sariab Road, Quetta to augment gas supplies in the area.

## **10.2 ANTI-GAS THEFT DRIVE**

### **10.2.1 SAPM on Petroleum-SSGC holds talks on UFG control efforts**

The Government of Pakistan and SSGC are implementing since April 2019 a campaign to control UFG and gas theft. The Special Assistant to PM, on Petroleum chaired a meeting with the SSGC management to review the progress in July 2019 on UFG and anti-gas theft campaigns.

### **10.2.2 Anti-gas theft campaign Operation Grift made major gains**

The Company’s Operation Grift continued its raids and crackdown against gas thieves. By June 2020, more than 220 offenders were arrested, 445 trials were held in gas utility courts and 475 FIRs were lodged.

## **10.3 COVID-19**

### **10.3.1 COVID-19 – SSGC contributes Rs. 30 million to PM Fund**

Through the Ehsaas Telethon, SSGC contributed Rs. 30 million to the Prime Minister’s COVID19 Relief Fund. The announcement to this effect was made by Chairperson SSGC Dr. Shamshad Akhtar at the Telethon transmission held in April 2020.

### **10.3.2 COVID-19 - CSR support to marginalized communities provided**

In the wake of the outbreak of Coronavirus Pandemic in the country, as part of its CSR initiatives, SSGC reached out to the marginalized communities of its franchise areas of Sindh and Balochistan by providing monetary assistance to more than 10 health care institutions and NGOs and media-persons through local press clubs.

### **10.3.3 Covid-19: Gas supply provided to quarantine center**

SSGC provided gas supply to quarantine center set up by Government of Balochistan in Mustang Road, Quetta for the COVID-19 victims.

## **10.4 EVENTS**

### **10.4.1 SSGC participated in ADIPEC**

SSGC was one of the leading oil and gas sectors of Pakistan that actively participated in *Abu Dhabi* International Petroleum Exhibition and Conference (ADIPEC) 2019 held in Abu Dhabi. The Company was part of the Pakistan Pavilion set up at the mega exhibition-cum-conference. SSGC’s senior management participated in the event.

#### **10.4.1 Participation in POGC in Islamabad**

SSGC participated in Pakistan Oil and Gas Conference held in Islamabad in September 2019 by setting up a corporate booth that encapsulated the Company's efforts to control UFG and bridge demand-supply gap of natural gas.

### **10.5 CUSTOMER RELATIONS**

#### **10.5.1 Recovery drive in Hyderabad proves productive**

Persistent persuasion by SSGC's Recovery Department (Hyderabad Region) even during the COVID-19 driven lockdown resulted in retrieval of over Rs. 3.89 million from Liaquat University of Medical Health Sciences (LUMHS), Jamshoro.

### **10.6 IT/SOCIAL MEDIA-DRIVEN EFFORTS**

#### **10.6.1 E-Khuli Kacheri launched**

On the directives of the Prime Minister of Pakistan's PMDU (Performance Delivery Unit), SSGC launched online khuli kachehri sessions in its Head Office for redressal of customer complaints. So far eight such sessions have been convened.

#### **10.6.2 SSGC Customer Connect App**

SSGC Customer Connect App was relaunched in July 2020 with more customer friendly features.

#### **10.6.3 Meter Read Image Printing deployed on SSGC Utility Gas Bills**

SSGC's IT department implemented another business-critical service by printing meter read images on SSGC gas utility bills as per court orders. These images were being printed on gas utility bills through an automated and seamless technological solution developed in-house by IT's CC&B team.

### **10.7 ENERGY CONSERVATION DRIVE**

#### **10.7.1 Bachat ka Tadka digital episodes launched**

As part of the initiative to make people aware of natural gas being a non-renewable resource and why it is a necessity to conserve it, SSGC developed a series of digital/social media episodes with Chef Saadat to introduce the concept of using gas wisely and conserving it while cooking.

#### **10.7.2 Introduction of Conical Baffle**

As part of the energy conservation campaign, SSGC encouraged the installation of conical baffles in gas-fired geysers that would help the customer make 25% savings on their gas bills.

#### **10.7.3 Back to Basics program launched in schools**

SSGC launched a campus-driven Back to Basics awareness program to create awareness about energy conservation, gas theft and other gas related issues. Several sessions were held in Karachi and Hyderabad.

### **10.8 TRAININGS/CSR Activities**

#### **10.8.1 Workshops held on ethical business dealings for senior management**

The HR department organized several 2-day training program for the senior management of the Company on "Ethical Business Dealings, Conflict of Interest and Benefits of Good Corporate Governance" in line with the Board mandate to facilitate transformation of SSGC to a dynamic and well managed ethically and professionally run organization with high standard of corporate governance.

#### **10.8.2 Support for 25 Deaf Children of FESF**

SSGC's CSR Program took up the responsibility of supporting 25 deaf students, enrolled in Family Educational Services Foundation (FESF) by funding the entire yearly expenses related to their education in September 2019.

### **10.8.3 SSGC supports Thalassemia Patients**

SSGC provided financial support for the provision of blood bags to benefit 150 Thalassemia patients of Afzaal Memorial Thalassemia Foundation (AMTF) in September 2019.

## **10.9 AWARDS**

### **10.9.1 SSGC wins CSR Awards 2020**

SSGC was conferred with NFEH's Corporate Social Responsibility Awards 2020 at the 12th CSR Summit organized by National Forum for Health and Environment (NFEH) held in Islamabad. The event was held on January 22, 2020.

### **10.9.2 SSGC bags 9th Intl CSR Award in the field of Education**

SSGC bagged the 9th Intl CSR Award for its contribution in the area of education and scholarships. The Awards ceremony and Summit was organized by The Professional Network on Jan 30, 2020.

### **10.9.3 SSGC's CSR contribution acknowledged by YPFW**

In order to acknowledge the role of Corporate entities in uplifting the society through CSR and to bring the government's and key stakeholder's attention towards the future targets and goals of CSR, Youth Parliament Welfare Foundation organized a Conference and Awards ceremony called CSR Targets 2020. SSGC was conferred with the Award on the occasion for its services in the field of CSR.

### **10.9.4 SSGC wins 6th Environment Award**

SSGC was conferred with 6th Environment Health & Safety Award 2020 in August 2020. The award ceremony was organized by the Professionals Network. SSGC was selected in the "Responsibility for Health and Safety" category.

### **10.9.5 9th Fire & Safety Excellence Award 2019 for SSGC**

SSGC won the 9th Fire & Safety Excellence Award 2019 in November 2019 which was a manifestation of its HSE & QA goals.

## **10.10 SPORTS**

### **10.10.1 Triumph in soccer**

In October 2019, SSGC Football Team recently outclassed WAPDA 3-0 to win All-Pakistan Senator Salahuddin Memorial Tournament held in Multan.

### **10.10.2 SSGC riders won big for the Company**

SSGC triumphed in the 65th edition of National Track Cycling Championship 2019, held under the aegis of Pakistan Cycling Federation from December 28 to 30, 2019 at the Velodrome of Nishtar Park Sports Complex in Lahore. Punjab secured the second place.

## CHAPTER 11



**Inter State Gas Systems (Private) Limited**

## 11.1 Introduction

- ISGS is a public sector company set up by the Government of Pakistan and is mandated to act as a bulk importer of natural gas for re-sale in bulk to national gas distribution companies, develop gas infrastructure projects, assess augmentation requirements of gas transmission networks and identify, analyze and assess opportunities for reliable sources to import natural gas.
- Going back to what Joseph Stiglitz has elucidated in his seminal work, “Globalization and its discontents.” Developing countries such as Pakistan are confronted by a protracted struggle to upgrade and develop infrastructure to streamline and maintain economic growth which then leads to equitable economic dividends for a burgeoning populace.
- Pakistan is poised to be on a sustained growth trajectory upon the successful completion of the China Pakistan Economic Corridor which under the aegis of China’s landmark OBOR, One Belt One Road initiative will act as a hub of movement of goods and produce across continents.
- As the momentum of economic growth shifts towards Asia, Pakistan is ideally placed to take advantages of this shift and must position itself in reaping maximum rewards.

## 11.2 TRANSNATIONAL GAS PIPELINE PROJECTS

In order to meet the gas supply-demand gap, The Government of Pakistan is pursuing multiple projects, including import of Liquefied Natural Gas (LNG) Iran Pakistan (IP) & Turkmenistan Afghanistan Pakistan India (TAPI) Gas Pipeline Projects. The Government of Pakistan has also embarked on a much needed programme of infrastructure development by conceiving the North South Gas Pipeline, a new pipeline that will transport gas from the South to the North of the country.

Projects	Brief features and current status
TAPI Gas Pipeline	<ul style="list-style-type: none"><li>• GSPA concluded in 2012 whereby Turkmenistan will supply 1,341 MMscfd gas for 30 years</li><li>• A consortium Company namely TAPI Pipeline Company Limited (TPCL) incorporated in 2014 to undertake the project Development Activities.</li><li>• Turkmengaz has been nominated as the Consortium Leader of TPCL (2015) and will inject 85% of equity part in TPCL while rest of the TAPI member share 5% each of equity.</li><li>• Shareholder Agreement signed in 2015 while Investment Agreement in 2017.</li><li>• Estimated Project Cost was US\$ 10 billion.</li><li>• Pakistan share @ 5% of the original cost estimates is US \$ 200 million.</li><li>• Stone laying ceremony of the Project held in December, 2015</li><li>• FEED completed; Contract for LLI’s are being finalised.</li><li>• Physical work commenced in Turkmenistan and Afghanistan</li><li>• Heads of Terms of Host Government Agreement (HGA) signed on March 12,</li></ul>

Projects	Brief features and current status
IP Gas Pipeline	<p>2019 and work on full form HGA is underway.</p> <ul style="list-style-type: none"> <li>• Approval of environmental authorities of Baluchistan and Punjab obtained.</li> <li>• Initial land acquisition activities are underway.</li> <li>• Subject to completion of codal formalities importantly finalization of HGA and issues related to gas sales &amp; purchase arrangements, ground breaking ceremony will be held.</li> <li>• Currently TAPI Parties are discussing Herat offtake strategy implementation approach wherein gas flow is planned FY 2023-24.</li> </ul>
	<ul style="list-style-type: none"> <li>• GSPA concluded in 2010 whereby Iran will supply 700 mmscfd gas for 25 years</li> <li>• BSF, FEED, DRS, SEIA studies and installation of Concrete Markers on ROW completed for Pakistan.</li> <li>• Financial close and appointment of EPC contractor couldn't be achieved due to sanctions</li> <li>• A meeting was chaired by the Honorable Prime Minister of Pakistan on 6th March 2019. The Prime Minister directed that Iran must be engaged with a reconciliatory approach regarding the Project.</li> <li>• An amendment to IP GSPA was signed on 5 September 2019 whereby the period for limitation applicable with any claim(s) arising under or in connection with GSPA has been extended for a period of 05-years.</li> <li>• Iran has withdrawn its "Seller Termination Event" Notice.</li> </ul>
North South Gas Pipeline	<ul style="list-style-type: none"> <li>• ECC Approval - January 10, 2015 under G to G arrangement with Russia</li> <li>• Inter-Governmental Agreement (IGA) between Pakistan and Russia was signed on October 16, 2015</li> <li>• Under IGA the Project will be 100% foreign funded with local element for ROW and security</li> <li>• Inter State Gas System (ISGS) from Pakistan side and RT-Global Resources (RT-GR) from Russian side are the Nominated Entities</li> <li>• ECC Approval for Implementation in 2 Phases - April 11, 2016 <ul style="list-style-type: none"> <li>• Phase I: 860 Km 600 MMCFD Pipeline from Nawabshah to Lahore</li> <li>• Phase II: Compression Facilities to increase capacity to 1,200 MMCFD</li> </ul> </li> <li>• Subsequent to ECC's decision, the discussion/negotiation on the BOOT Agreement have been substantially concluded.</li> <li>• Finalization remains pending due to approval of latest sanction free project structure by Ministry of Law, gas source and concessions to be allowed to the Russian entity.</li> <li>• The route for the Project has been charted and has been submitted for the approval of Ministry of Defense.</li> <li>• A draft Facilitation Agreement and provision of sovereign guarantee has also</li> </ul>

Projects	Brief features and current status
	<p>been shared with the MoE for their input.</p> <ul style="list-style-type: none"> <li>• Later in the light of Supreme Court of Pakistan decision on utilization GIDC funds and start of activities on the Project, it is planned to implement the project through JV- Special Purpose Vehicle (SPV) of Pakistan and Russian nominated entities for the project development with Pakistan having major shareholding. Same will be discussed with Russia in upcoming JCC meeting scheduled by end of September 2020.</li> </ul>
Strategic Underground Storages	<ul style="list-style-type: none"> <li>• Asian Development Bank (ADB) Mission visited Pakistan during September 2003, for providing Technical Assistance for undertaking a feasibility study in selecting and developing underground gas storage system.</li> <li>• A Feasibility Study on the development of underground gas storages was undertaken by SOFREGAZ, France in 2004-07.</li> <li>• Steering/Sub- Committee of the ECC of the Cabinet held on January 1, 2008, wherein ISGS was directed to immediately undertake necessary measure for building strategic underground gas storage facilities cater for the country's enhanced gas needs in the winter season.</li> <li>• Unfortunately, indigenous gas is in constant decline and even the country's gas requirements cannot be fulfilled. Therefore the development on the project was not progressed during 2010-2017 due to non-availability of excess gas.</li> <li>• Keeping in view the upcoming natural gas import projects including IPI, TAPI and import of LNG, ISGS is planning to develop and implement this project parallel with the commissioning of these pipeline projects to ensure the uninterrupted supply of natural gas.</li> <li>• Asian Development Bank (ADB) has agreed to provide technical assistance and loan to develop much needed underground gas storages in the country which will cater for seasonal fluctuation and peak shaving.</li> <li>• ADB is in process of recruitment of consulting services for update feasibility study.</li> </ul>

### 11.3 ISGSL Gas import and Infrastructure Development Project

Inter State Gas Systems (Private) Limited (ISGSL) is a public sector company, operating under Ministry of Energy (Petroleum Division). ISGSL is a specialized company setup for planning, implementing, owning and operating projects related to Gas import and infrastructure development. In order to meet the gas supply-demand gap, Government of Pakistan (GoP) is pursuing multiple projects. In line with the directions of GoP, ISGSL, besides persevering with the primordial objective of stimulating gas import options, has played a key role in the implementation of gas infrastructure development projects, such as Turkmenistan Afghanistan Pakistan India (TAPI), Iran Pakistan (IP) Pipeline Project, North South Gas Pipelines (NSGP) Projects, LNG Terminal etc.

ISGSL successfully concluded two (02) GSPAs with Iran and Turkmenistan, which provides a ready framework for the supply of natural gas equivalent to 30% of Pakistan's current gas utilization.

TAPI Gas Pipeline Project : The Project has entered the stage of practical implementation. Pursuant to the incorporation of Project Implementation Company i.e. TAPI Pipeline Company Limited (TPCL),

feasibility studies have been prepared, Front End Engineering Design (FEED) completed and contract for LLI's are being finalized. While physical work commenced in Turkmenistan and Afghanistan, initial land acquisition activities are underway for Pakistan section of the Pipeline. GoP and TPCL also signed the Heads of Terms of Host Government Agreement (HGA) signed in March 2019 and work on full form HGA is underway.

IP Gas Pipeline Project: The Company has completed the feasibility study, FEED with the help of International consultant for the Project. However, financial close and appointment of EPC contractor couldn't be achieved due to international sanction issue. As a way forward, an amendment to IP GSPA was signed on 5 September 2019 whereby the period for limitation applicable with any claim(s) arising under or in connection with GSPA has been extended for a period of 05-years.

North South Gas Pipeline Project: GoP has embarked on a much needed program of infrastructure development by conceiving the North South Gas Pipeline, a pipeline that will transport gas from the South to the North of the country. Pursuant to the approval of ECC, Pakistan and Russia signed an Inter-Governmental Agreement (IGA) in October 2015 for cooperation for the development of the Project. Work is underway to implement the project through JV- Special Purpose Vehicle (SPV) of Pakistan and Russian nominated entities with Pakistan having major shareholding.

Underground Gas Storages (UGS): A Feasibility Study on the development of UGS was undertaken by SOFREGAZ, France in 2004-07. The development on the project was not progressed during 2010-2017 due to non-availability of excess gas. However, keeping in view the upcoming natural gas import projects including TAPI and import of LNG, ISGS is planning to develop and implement this project parallel with the commissioning of these pipeline projects to ensure the uninterrupted supply of natural gas. Asian Development Bank (ADB) has agreed to provide technical assistance and have engaged the consultant for update feasibility study. Further negotiations are also under way with the potential international project developing companies.

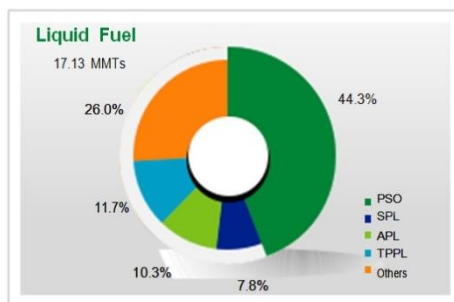
## **CHAPTER 12**



**Pakistan State Oil Company Limited**

## 12.1 Company Profile

PSO is the nation's leading Oil Marketing Company (OMC) and is fueling every sector of Pakistan's economy. Since its inception in 1976, PSO has a long and proud history of serving the energy needs of the country in a responsible manner. For over four decades we have striven to empower people across air, land and sea with our innovative fueling products and services. As Pakistan's Largest OMC, we are proud to be at the heart of all journeys. In FY 2019-20, PSO continued to stand tall as the oil Market leader with a market share of more than 44.3% in liquid fuels. A snapshot of Pakistan's downstream sector for FY2019-20 is hereunder:



Source: Oil Companies Advisory Council (OCAC) TPPL includes Pearl Parco. Others includes OMCs having share less than 5%

The Company's primary business involves sourcing (imports and local), storage and marketing of petroleum products along with the import of Re-gasified Liquefied Natural Gas (RLNG). The Company also has ancillary businesses in non-fuel retail and cards. Efforts are also being made to further increase PSO's presence in the lubricants and gaseous fuels businesses. PSO's wide spread infrastructure comprising of approx. 3,500 retail outlets, 9 installations and 23 depots is its major strength. As the market leader in the aviation fuel business, PSO has presence and refueling facilities at 10 aviation stations. The Company also has two state-of-the-art lubricant manufacturing facilities with a production and blending capacity of 70,000 MT per annum. PSO has increased its shareholding in Pakistan Refinery Limited (PRL) to 63.6%, making it the largest stakeholder of the entity. This acquisition strengthens our supply chain and supplements PSO's drive to vertically integrate the business. During FY19 the Company, subsequent to its nomination by GOP, initiated a project to set up a grass-root deep conversion refinery under a government-to-government arrangement with Saudi Aramco. The project is currently in the advance feasibility development stage.

As the country's flagship OMC, PSO gives utmost consideration to its triple bottom line i.e. securing business operations to safe-guard the planet, enabling a congenial working environment for its people and increasing shareholder's income through profitability. Health and safety of internal & external stakeholders are of prime importance and a vital part of the Company's core corporate objectives. The Company strives to conduct business operations in a manner that is sustainable and has minimal impact on the environment. PSO's focus on conserving the environment may be substantiated from its initiatives of introducing environment friendly fuels Hi-Octane 97 Euro 5 & Euro 5 Altron Premium as well as the launch of electrical vehicle charging units under the brand name Electro. PSO is the first OMC to upgrade Pakistan's fuel standard from Euro 2 to Euro 5.

The Company is actively giving back to the society by participating in various community development, healthcare and educational projects through PSO's CSR Trust. During the year, PSO committed Rs. 180 million with a contribution of Rs. 85 million exclusively to assist the nation in combatting the COVID-19 pandemic.

At PSO, our customers are at the heart of everything we do. To receive customer feedback, resolve queries and increase customer satisfaction, a dedicated customer services centre and help-line are in place. The Company also has a strong presence on various social media platforms wherein customers are updated regarding latest offerings and developments. These touch points assist the

Company in gauging the pulse of customers and receiving feedback in real-time. The Company also monitors the complaints received on “Pakistan Citizen Portal” to ensure timely resolution.

To keep our stakeholders updated about the Company’s information, PSO has a website (www.psopk.com) and following key pages on social media that provide news and information.

<https://www.facebook.com/PSOCL/>






<https://twitter.com/PSOPakistan>

<https://www.linkedin.com/company/pakistan-state-oil-company-psy/>

PSO’s commitment towards leadership, governance, customer focus and social responsibility has been recognized by the Management Association of Pakistan. During the period under review, PSO won the 35th Corporate Excellence Award in the oil and gas marketing companies’ category.

## 12.2 Markets Served & Product Lines

PSO has strong market participation in Pakistan and is also involved in the export of Petroleum products. Proceeds from the local market i.e. Pakistan, account for 99.5% of the Company’s sales.

Brand	Product	Usage
	HOBC	Automobile
	PMG	Automobile
	HSD	Motorist, Industrial & Power sector,
Served through Retail and Consumer Business Segment		
<b>JP1</b>	Jet Fuel	Aviation Sector
Served through Aviation Business		
<b>Furnace Oil</b>	Oil Furnace	and Marine Sector Power, Industrial
Served through Aviation Business Power Projects and Marine		
<b>SKO</b>	Kerosene Oil	Industrial, Domestic
<b>LDO</b>	Light Diesel Oil	Agriculture
Served through Consumer Business and Lubricants & Chemicals		
	LPG	Domestic, Industrial
<b>LNG</b>	LNG	Power, Domestic and Industrial
Served through Gaseous Fuel Business		
	Electric Vehicle Charger	Electric Vehicle
Served through Retail Business Segment		

PSO has a complete range of lubricants for automobile and industrial sectors with recognized brand names for each segment that include “Blaze 4T” for motorcycles, “Carient” series for motor cars and “DEO” series for diesel engines.

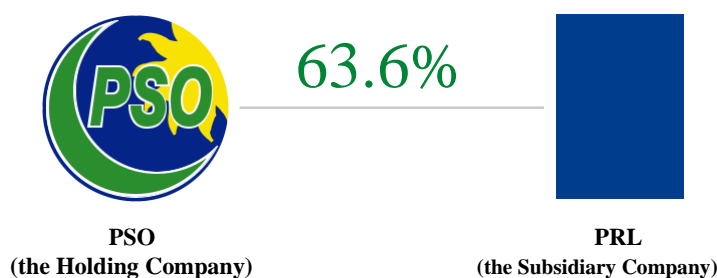
The Company has revamped its Shop-Stops at retail outlets with a fresh and vibrant look & feel. The recently introduced customer focused card Digi Cash has become a success story with users exceeding 100,000 in less than a year.



### 12.3 Group Structure

The Group consists of Pakistan State Oil Company Limited (the Holding Company) and Pakistan Refinery Limited (the Subsidiary Company).

PRL became PSO's subsidiary on December 01, 2018 as a result of increase in shareholding of PSO in PRL from 24.1% to 52.7%. During the year ended June 30, 2020, PSO acquired further shareholding in PRL thereby increasing its stake in PRL to 60.00% which was further increased to 63.6% subsequent to June 30, 2020.



### 12.4 Ownership and Operating Structure

PSO and PRL are operating as Public Limited Companies incorporated in Pakistan & listed on the Pakistan Stock Exchange Limited.

Majority of shares in PRL are owned by the Holding Company – PSO (63.6%). GOP enjoys 51% (direct and indirect) shareholding in PSO with 25.5% direct shareholding. Detailed shareholding structures have been mentioned in pattern of shareholdings of each Company.

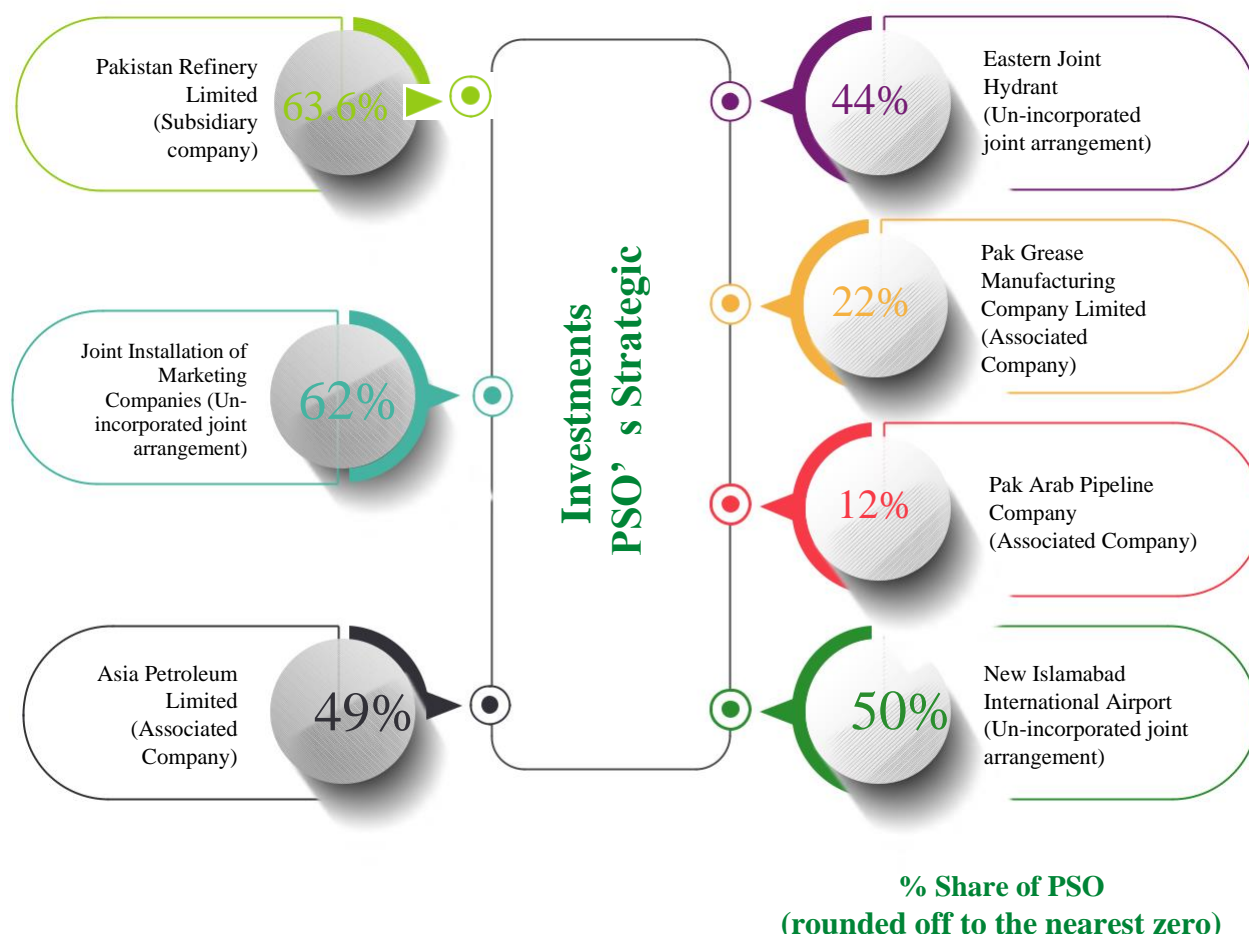
PRL's corporate office is located at its refining facility in Karachi, with a storage terminal at Keamari. PSO's Head Office and two lubricant manufacturing plants are at Karachi while a network of retail outlets, storage locations and sales offices are available throughout the country.

### 12.5 Nature of Relationship

PRL is engaged in the production and sale of Petroleum products, whereas, PSO is engaged in the marketing of petroleum products. The acquisition of PRL has resulted in backward integration for PSO and has provided it with secured source of purchase.

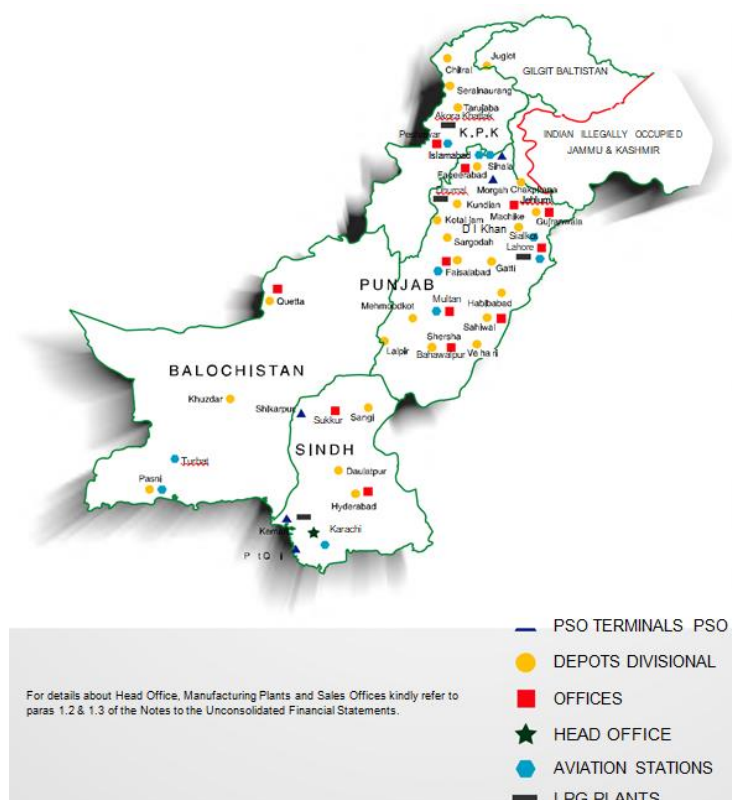
## 12.6 STRATEGIC INVESTMENTS

PSO has strategic investments in storage, refining, aviation, lubricants and pipeline businesses.



- Pak Grease Manufacturing Company Ltd (Pak.Grease) – Others include private investors.
- Pakistan Refinery Limited (PRL) – Others are listed on Pakistan Stock Exchange and held by the general public.
- The New Islamabad International Airport Fuel Farm - Attock Petroleum Limited (APL) (50%).
- Eastern Joint Hydrant System (EJHD) - Others include SPL (25%) & TPML (13%), managed by PSO.
- Asia Petroleum Limited (APL) - Others include Industrial Petro. Group (12.5%), Veco Int'l (12.5%), Infravest (26%).
- Joint Installation of Marketing Companies (JIMCO) - Others include SPL (25%) & TPML (13%), managed by PSO.
- Pak Arab Pipeline Company (Private) Limited (PAPCO)-Others include PARCO (51%), Shell (26%), Chevron/TPML (11%).

## 12.7 GEOGRAPHICAL PRESENCE



## 12.8 SIGNIFICANT CHANGES FROM PRIOR YEARS

### Acquisition of Additional Shares in Pakistan Refinery Limited (PRL)

During FY2019-20, PSO further acquired 10.5 million shares and 2.6 million shares of PRL from The Shell Petroleum Company Limited and Chevron Global Energy Inc., USA, respectively. Further, the Company subscribed 21 million right shares of PRL, previously under injunction. Resultantly, PSO's shareholding in PRL increased from 52.7% to 60.0%. Subsequent to June 30, 2020 PSO's stake in PRL further increased to 63.6% as PSO in addition to fully subscribing its share in right issue made by PRL also subscribed 22.5 million unsubscribed right shares.



### Decline in International Oil Prices



FY 2019-20 saw an abnormal decline in International oil prices owing to Russia-Saudi Arabia's price war. The decline was further aggravated by suppressed demand arising due to decreased economic activity primarily attributable to COVID-19 during the 4th quarter of FY2019-20. The impact of price decline at global level also impacted Pakistan's Oil Industry with significant inventory losses

### Change in the Energy Mix

The Company's volumes in black oil further reduced by 40.7% approx. in FY20 vs. FY19 due to the continuing impact of Government's policy of shifting power production plants to RLNG. Owing to this shift black oil's share has reduced considerably in the country's energy mix.



### Pakistani Rupee against the Dollar

The Company has incurred significant exchange losses on the import of white oil products in the past due to devaluation of Pakistani currency against USD, as only a certain portion of exchange losses were allowed by OGRA in pricing. This year ECC and OGRA allowed complete recovery of actual exchange losses in pricing.



### Revised Vision, Mission and Values (VMV)

### High Discount Rate

Higher policy rate of 13.25% aggravated financing cost for the company. Policy rates witnessed steep decline during Q4 of FY20 as part of mitigation efforts adopted by regulator i.e State Bank of Pakistan (SBP).



PSO, realigned its VMV subsequent to adopting a rigorous & inclusive approach. The realigned VMV shall assist the Company in taking on much bigger challenges in future.

## CHAPTER 13



**PAK ARAB REFINERY COMPANY**

[www.parco.com.pk](http://www.parco.com.pk)

### **13.1 Introduction**

Incorporated in Pakistan in May 1974, Pak-Arab Refinery Limited (PARCO) is a 60:40 joint venture between the Government of Pakistan (GoP) and the Emirate of Abu Dhabi. Since the commencement of commercial operations in 1981, the company has been able to fund its projects without further equity injection from sponsors. The Company has now an asset base of ~USD 1 billion.

### **13.2 Vision Statement**

“To be a leading national energy company of choice for all stakeholders by employing a strategy of diversification and integration with the right technology and adopting best industry practices for sustained competitive advantage”.

### **13.3 Mission Statement**

“To transport, refine and market petroleum and related products in Pakistan in a safe, efficient, reliable and environment-friendly manner maintaining professional excellence and ensuring favorable returns on all employed resources”.

### **13.4 Core Values**

Integrity, Teamwork, Results Orientation, Innovation and Continuous Improvement, Commitment, Courage, Communication.

### **13.5 Board of Directors**

The Board of the Company comprises of following members:-

Mr. Mian Asad Hayaud Din, Chairman

Mr. Ali Al Dhaheri, Vice Chairman

Mr. Shahid Mahmood Khan, Managing Director

Mr. Muhammad Ayub Chaudhry, Director

Mr. Aftab Hussain, Director

Mr. Abdul Hadi Shah, Director

Mr. Maximilian Grasserbauer, Director

Mr. Florian Merz, Director

Mr. Zayed Ali Mazrouei, Director

### **13.6 Employment Opportunities and Manpower Strength**

PARCO's Refinery, cross country Pipeline network, LPG Plants and Gas Centers, etc., with their allied facilities and installations have been instrumental in expanding the country's industrial, technology and employment base.

The consistent growth in PARCO's business and introduction of new projects has enabled the Company to generate direct and indirect employment opportunities across the country especially in remote and underdeveloped areas. PARCO's human resource base is highly skilled and uniquely talented and frequently finds employment opportunities in the lucrative Gulf markets, enabling PARCO to claim that it has been contributing towards country's foreign exchange earnings.

### **13.7 PARCO, an Energy Company**

PARCO is a key player in the country's strategic oil supply and its logistics, with an integrated network which includes 120,000 bpd refinery, 2000 km of oil pipeline, 1.5 million tons of storage, and a rapidly expanding retail network of TOTAL PARCO (TPPL) – a joint venture with TOTAL of France. With the acquisition of Chevron's fuel business in Pakistan, TPPL is now the second largest Oil Marketing Company in the country. PARCO is also

marketing nationwide LPG under the brand of Pearl Gas and fuel oil under the brand of Pearl fuels. High quality asphalt is also being marketed as Biturox.

### **13.8 Pipeline Network**

PARCO is the largest operator of cross country crude oil and product pipelines network of over 2000 km. It has become vitally important, for country's oil logistics in the Central and Northern areas and has resulted in major savings in freight expenses.

#### **13.8.1 Karachi-MahmoodKot Pipeline (KMK)**

PARCO transports crude oil from Karachi to Mahmood Kot near Muzaffargarh for its Mid-Country Refinery (MCR) through its 870 km, 16" dia Pipeline, commissioned in 1981. The original pumping capacity was 3.0 million tons per annum (MTPA) however, after the technological up-gradation of the system is now capable of pumping up to 6 MTPA.

Imported Crude oil received through KPT's jetty at Keamari and transported to Korangi for onward transportation to MCR through Booster Pumping Stations.

#### **13.8.2 Mahmood Kot-Faisalabad-Machhike Pipeline (MFM)**

PARCO's 362 km, 18" & 16" dia. MFM pipeline was commissioned in June 1997 and is transporting Diesel and Kerosene from Mahmood Kot to Faisalabad via Kot Bahadur Shah and onwards transportation to Machhike. Refined Products are received from MCR as well through White Oil Pipeline (WOP).

The installed capacity of MFM pipeline is approximately 5 MTPA and its pipeline design allows for laying and tie-in of future spur lines from Faisalabad to Kharian and Sahiwal subject to commercial feasibility.

#### **13.8.3 White Oil Pipeline (WOP)**

PARCO operates and maintains the 786 km, 26" dia White Oil Pipeline (WOP) which was commissioned in March 2005 with an installed capacity of 8 MTPA, and can be upgraded to 12 MTPA with the addition of booster pumps. The WOP is owned by Pak-Arab Pipeline Company Limited (PAPCO), a joint venture between PARCO (51%), Shell Pakistan Ltd (26%), Pakistan State Oil (12%) and TOTAL PARCO Marketing Ltd (11%).

#### **13.8.4 Korangi-Port Qasim Link Pipeline (KPLP)**

The 22 km, 26" dia pipeline linking PARCO's Korangi Station with PAPCO's Port Qasim Station is a bi-directional pipeline which was commissioned in March 2006. The strategic link has connected both the Karachi ports of Keamari and Port Qasim with the PARCO and PAPCO pipeline systems, providing flexibility in pipeline operations to receive crude as well as product from either port.

### **13.9 Mid-Country Refinery**

PARCO's Mid-Country Refinery (MCR) is the country's largest and most complex refinery employing state of the art primary and secondary processing facilities. MCR was completed commissioned in year 2000. The capacity has recently been revamped from 100,000 bpd to 120,000 bpd. It represents about 25% of the indigenous refining capacity of the country and helps in substituting imports of value-added refined products.

PARCO is the first refinery to produce environment friendly Euro III compliance diesel. The air emissions and water quality discharge from the refinery are regularly monitored and have remained well within NEQS limits. To cater to the increasing production of local crude in Pakistan, a crude decanting facility has recently been installed at MCR in collaboration with MOL and OGDCL.

**13.9.1 CRUDE FEED:** Arabian Light, Upper Zakhum, Murban, DAS Crude, Local Crude and Condensate.

**13.9.2 PRODUCTS:** LPG, Mogas, Kerosene/Jet Fuel 1 (JP-1) and JP-8, High Speed Diesel (HSD)/ Light Diesel Oil (LDO), Furnace Oil, Sulfur, Asphalt.

The Refinery Complex includes thirteen Onsite Process Units besides numerous Offsite/Utilities Units and other permanent facilities with 53 tanks to store Crude Oil, intermediate feed stocks and finished products. Process units also include the mild hydrocracker unit Dieselman which is an integrated technology of mild hydrocracker and thermal cracker and is the only unit in Pakistan to produce value added petroleum products like Diesel and Kerosene from reduce crude oils. PARCO refinery also have state of the art CCR (Continues Catalyst Regeneration) Platformer unit to produce high RON reformat which is used in motor gasoline blending.

**13.9.3 Major Process Units:**

Crude Distillation Unit (CDU), Vacuum Distillation Unit (VDU), Naphtha Hydrotreater (NHT), CCR Platforming unit, Diesel Max Unit, Visbreaker Unit (VBU), Gas Concentration Unit (GCU), Diesel Hydrodesulphurization Unit (DHDS), Amine Treating Unit, KeroMerox Unit, LPG Merox Unit, Sulfur Recovery Unit, Asphalt Air Blowing Unit, Penex and Hydrogen PSA Unit.

**13.9.4 Offsite / Utilities Units:**

Steam, Feed Water and Condensate Handling System, Fuel Oil and Gas System, Water Systems, Tankage and Blending System, Product Transfer and Loading System. Flare System. Effluent Collection, Treatment and Disposal System. Safety and Fire Fighting. Chemical handling system and Decanting Facility.

The Refinery also operates an automated Truck Loading Gantry for supply of Petroleum Products to Oil Marketing Companies (OMCs). Besides it is linked with PSO & JIMCO terminals through pipelines for transfer of FO and HSD respectively.

**13.10 Marketing Initiatives**

**13.10.1 Retail Marketing**

TOTAL PARCO PAKISTAN LTD (TPPL), is a 50:50 joint venture of PARCO and TOTAL of France is marketing consumer petroleum products through a retail outlets network across Pakistan.

In 2015, TPPL has acquired Chevron's Fuel Marketing Business in Pakistan. After the acquisition, the Total PARCO retail fuel network has increased from 285 to 813 outlets and is now the 2<sup>nd</sup> largest OMC in the country in terms of retail network.

**13.10.2 Lubricants Marketing**

PARCO has acquired 50% shareholding in Total Oil Pakistan Ltd, which is the 4th largest lubricants blending and marketing in Pakistan. Along with the retail fuel business, the lubricants business is now part of the TOTAL PARCO network.

**13.10.3 LPG Marketing & Distribution**

In 2012, PARCO acquired SHV Energy Pakistan, and renamed it to PARCO Pearl Gas Ltd (PPGL). It has 5 Filling Plants and 8 Gas Distribution Centers at strategic locations throughout Pakistan, as well as a network of over 400 distributors and is the largest LPG Marketing & Distribution Company in Pakistan.

PPGL markets LPG under two different brands, i.e. Pearl Gas and Super Gas. Super Gas offers customized solutions designed to cater to the requirements of industrial/commercial users.

**13.10.4 Industrial Marketing**

PARCO is engaged in its marketing activities through the brand name "PEARL" and has a base of over 500 industrial customers for furnace oil, high speed diesel, bitumen, light diesel oil and kerosene.

### 13.11 Progress for 2019-20

PARCO, like any professional organization, strives for self-sufficiency, mitigation of risk and profitable operations. The salient features of the actual performance during the year are as under:-

<b>Sales Revenue (PKR millions)</b>	<b>231,608</b>
<b>Net Loss after tax (PKR millions)*</b>	<b>10,339</b>
<b>Payments to GOP (PKR millions)</b>	
Income Tax	2,519
Sales Tax	47,971
Petroleum Levy	48,622
Excise Duty	8
Dividend (expected)	-
<b>Total Payments to GOP</b>	<b>99,120</b>
<b>Refinery Production (million tons)</b>	
Liquid Petroleum Gas	0.095
JP-1/8/Kero	0.271
Mogas	0.662
High Speed Diesel	1.223
Furnace Oil	0.592
Other	0.074
<b>Total</b>	<b>2.917</b>
<b>Pipeline Thruput (million tons)</b>	
KMK Pipeline	2.692
MFM Pipeline	2.390
<b>Decanting (million tons)</b>	
Korangi	2.633
MCR	0.255

\* COVID-19 and exchange loss have resulted in heavy losses in overall refinery industry. Further, turnaround has also impacted PARCO profitability.

### 13.12 Goals/Targets for Financial Year 20 20- 21

To focus the efforts of the company in achieving its Vision, the following Corporate Goals have been set for the next year:-

1. Leading National Energy Company of Pakistan
2. Company of Choice for All Stakeholders
3. Diversification
4. Integration
5. Right Technology
6. Best Industry Practices
7. Sustained Competitive Advantage

In addition to the above, PARCO will continue its efforts towards the betterment of the country as a whole with the following objectives:

- To enhance and establish a professionally sound corporate identity.
- To operate the existing Pipeline and Refining System in a manner that establishes it as a center of excellence in Pipeline and Refining Activities in the Country.
- To embark upon an Integrated Investment Program which takes cognizance of the existing bottlenecks and long-term petroleum needs of the Country.
- To provide a lead to the indigenous Petroleum Industry in finding of solutions to Technical and Managerial problems.
- To develop an appropriate Human Resource for undertaking of large Energy Projects in the Country.

### **13.13 On-going Projects**

- **MFM Mogas Project**

To cater to the rapidly growing MOGAS consumption in the country, MFM pipeline has been technically upgraded for capacity enhancement and multi-product transportation capability of MOGAS with HSD batches, however, commissioning is expected by October 2020 in synchronization with PAPCO's White Oil Pipeline MOGAS project and off take connectivity with OMCs. The Project involves capacity increase, from 3 to 5 MTPA which has been completed and upto 7 MTPA post construction of new pumping station at Kot Bahadur Shah, new storage tanks and modifications to the overall pipeline network.

- **MCR Revamp**

The MCR Revamp project was executed during the refinery turnaround (TA-4) in Feb-March 2020. Project comprised of revamp of six existing process units, utilities and installation of two new units i.e. Hydrogen Purification (PSA) & Isomerization units. The existing units have been tested and were successfully commissioned on March 21, 2020, whereas the new units were commissioned upon availability of Vendors in October 2020. On commissioning of revamped units, the production has increased from 100,000 to 120,000 bpd with capability to process more local crude/condensate and improved production yields of high-value Euro-III fuels. This will result in positive impact on gross refinery margins and returns

- **Investment in RLNG/Gas Infrastructure**

PARCO, along with Bahria Foundation, completed the Front End Engineering Design study for an LNG Terminal Project in 2018, however, the LNG Terminal Project could not be further proceeded due to lack of connectivity for upcountry transmission. During ADIPEC Conference 2019, PARCO and Mubadala along with BF signed a non-binding Strategic Framework Agreement (SFA), that covers the entire LNG related project landscape. PARCO and Mubadala along with BF, will work together for the materialization of LNG Infrastructure project(s) after completion of the necessary studies.

- **PARCO Coastal Refinery Project**

The project, a 250,000 bpd grass-root green field refinery to be setup in Baluchistan. This will be a significant addition to country's oil refinery infrastructure, focused on Euro 5 transportation fuels for domestic consumption. The project will add approximately 11-12 MTPA, thereby reducing the demand-supply gap significantly for refined fuels along with numerous other benefits to the country. Due to the current global economic environment, the Board of Directors of PARCO Coastal Refinery Limited (PCRL) has decided to place the

Project on hold until further clarity is reached on the macro-economic environment, project timetable and the refinery size and configuration.

### **13.14 Social Responsibility & Community Development Program**

At PARCO, we believe that CSR is strategic, building long term relationships with neighboring communities and stakeholders. As a good corporate citizen PARCO focuses on meeting the expectations of its internal and external stakeholders and undertakes a wide range of projects to benefit in areas of education, health, environment, vocational training, community development, natural calamities, etc.

The social contribution by PARCO in the society it operates has been well received since the past several years. The company is striving towards making a positive impact in the lives of the communities by adopting the Sustainable Development Goals (SDGs). The SDGs have already been embedded in our CSR strategy and are playing significant role in shaping a better future.

### **13.15 Protection of Environment**

Towards keeping the environment free from pollution, PARCO adopted the following measures.

- The state of the Effluent Treatment Plant and Emissions Control Systems ensure that the air, water sources and subsoil strata of the Mid-Country Refinery and surrounding areas remain free of pollutants.
- PARCO introduced lead-free Motor Gasoline four years earlier than the deadline.
- Installation of Diesel Hydrodesulphurization Plant (DHDS) reduces sulphur contents from the High Speed Diesel at Euro II standards, ensuring cleaner environment.
- The availability of LPG in remote areas, helped save trees in Baluchistan and northern areas.

### **13.16 Human Capital**

Through continuous new projects and expansion, PARCO has been able to provide opportunities to existing and new talent in learning new technologies, help equip them for highly skilled jobs that improve the standard of living; contribute towards national development and save substantial foreign exchange. PARCO also has an elaborate Trainee Program and an Internship Program where fresh engineers, technologists and management professionals are provided training.

#### **13.16.1 Education & Health**

Our cross country pipeline network makes us a next-door neighbor to many remote and underprivileged communities. Since 2007, PARCO conducts an extensive Schools & Clinics Support Program which aims at improving the education and health infrastructure in adjoining communities by supporting rural health clinics, primary, middle and secondary schools, being run by Government of Pakistan.

- Up till 2020, PARCO had provided assistance to more than 100 institutions along its pipeline and refinery across Pakistan. Thousands of children are enrolled in PARCO supported schools. PARCO's assistance to these institutions has raised communities' interest in sending their children to these refurbished and well-maintained schools, diverting them from child labor to primary education, and raising the literacy rate
- During 2020, PARCO has supported different institutions for blind, mentally challenged and deaf children. These institutions are managed by professional NGOs and rely mostly on philanthropic contributions. They help these children in developing skills to manage their lives in less challenging manner. PARCO's contribution has helped these institutions sustain their operations even during the pandemic.

- PARCO has been distributing school bags, stationary items and notebooks in the Government schools, supported by PARCO near its Corporate Headquarters, Mid-Country Refinery and various Stations and Terminals since several years. This year again about 2000 bags were distributed among the underprivileged children of these schools.
- Under the umbrella of Schools and Clinics Support Program, PARCO has supported several basic and rural health centers based in small villages nearby PARCO cross-country pipeline and Stations and Terminals. The clinics are providing basic healthcare to the local communities within their villages. As a result, community members are no longer required to travel for long hours to the cities for basic treatment.
- PARCO's Mid-Country Refinery at Qasba Gujrat is surrounded by many underprivileged communities, deprived of the basic education and health facilities. PARCO operates a Community Welfare Clinic to provide basic health facilities to the domestic workers working at the Mid-Country Refinery, their families and other people from nearby areas.
- In Pakistan, there are various charity hospitals that serve the underprivileged who are not able to afford hospitalization, treatments, medication, etc. PARCO has been helping several such hospitals through philanthropic contributions in capacity building. The Company had also helped several such institutions in the realm of COVID-19 pandemic.

### **13.6.2 Vocational Training & Entrepreneurship**

One of the areas in which PARCO has been heavily investing is in fostering the culture of vocational training and entrepreneurship. Several government vocational training centers in Sindh and Punjab are being supported to fulfill their infrastructural needs and equipment requirements. PARCO provided modern equipment to conduct quality trainings. The Company has also supported students to begin their own business through equipment support program especially to female community, thus increasing their chances of employment.

In addition, PARCO is also operating a sewing and embroidery center for woman at Qasba Gujrat to enhance their skills through higher level of training.

### **13.6.3 PARCO's Response During COVID-19**

PARCO has been closely monitoring developments concerning the COVID-19 pandemic, and took all necessary steps to ensure the wellbeing of employees and its communities around while also preventing any potential business impact. As the energy lifeline to the nation, PARCO has a fundamental and undeniable responsibility to the country in this hour of need and stands by the communities it operates in. Following were the initiatives taken to ease suffering of the needy:

- PARCO made philanthropic contributions to major healthcare institutions across the country to help them procure necessary equipment and PPEs to ease suffering of COVID-19 patients.
- The company partnered with several reputable NGOs with good outreach to provide dry food ration to communities in Karachi, Lahore and Quetta.
- PARCO Mid-Country Refinery (MCR) also organized dry food ration distribution for all the underprivileged communities associated with MCR.
- Proper hand washing arrangements were made outside the entrance of Corporate Headquarters and Mid-Country Refinery.
- The peak days of COVID-19 came during extreme summers. PARCO distributed water bottles, hand gloves and masks to Law Enforcement Agencies (LEAs) in Karachi nearby its Corporate Headquarters. This activity was undertaken to appreciate the LEAs for their strenuous efforts in maintaining law and order and encouraging citizens to follow safety guidelines for COVID-19.

## CHAPTER 14



### SAINDAK METALS LIMITED (SML)

## 14.1 INTRODUCTION

The Saindak Metals Limited (SML), formerly known as Resources Development Corporation of Pakistan (RDC), is a national company, which deals in exploration, exploitation and development of non-ferrous minerals and extraction of base metals like copper.

The construction work of Saindak Copper-Gold Project (SCGP) was completed by Metallurgical Construction Corporation (MCC) of China in the year 1995 and handed over to SML in January 1996, after successful trial production of 1,500 Tons of Blister Copper. The project remained closed between 1996 to 2002. In February 2000, it was decided by the Federal Cabinet to restart the project through leasing option by inviting International bids. Accordingly, GoP awarded the lease to M/s Metallurgical Construction Corporation of China (MCC) for a period of 10 years to operate the project as joint venture. M/s MCC Resources Development Company (Private) Limited (MRDL) arranged finances including working capital for maintenance, preparation, and rehabilitation and production activities amounting to US \$ 25.915 million as per terms of contract. The project was handed over to M/s MCC China and commercial production started in August, 2003. On expiry for the first term of 10 years on 31st October 2012 the agreement was extended for further 5 years with the consent of Government of Balochistan and Ministry of Petroleum & Natural Resources and on expiry of five years extension the lease agreement has been extended for further five years with the consent of Government of Balochistan and Ministry of Energy (Petroleum Division).

## 14.2 ACHIEVEMENTS FOR THE PERIOD OF 2019:

### 14.2.1 PRODUCTION

The SCGP remained in production during the period of January 2019 to December 2019 and following quantities were produced:

i.	Copper Ore	4,231,874.00 MT
ii.	Copper Concentrate	53,706.13 MT
iii.	Blister Copper	13,049.33 MT

### 14.2.2 SALES STATUS

MRDL exported following quantities of blister copper during the year 2018.

Blister Copper	13,054.61	M Tons
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### 14.2.3 GOVERNMENT TAXES:

The Lessee paid US\$ 5,617,132 as royalty @ 5% on sale value to Government of Balochistan. Similarly, 1% Presumptive Tax amounting to US\$ 1,123,426 and EPZ service charges @ 0.5% amounting to US\$ 561,713 were paid to EPZ authorities. On account of Corporate Social Responsibilities (CSR) US \$ 959,997 paid to Government of Balochistan for Social Upliftment Activities.

### 14.3 COMPANY'S PROFILE:

- a) Name and Address of the company with telephone and fax number:  
Saindak Metals Limited, Gul Bagh, Samungli Road, Quetta. (PAKISTAN)  
Tel +92- 081-9201645, 9201646, 9201475, 9201690, 9201815,  
9201082, 9201084  
Fax : 081-9204067.  
E-Mail: [saindak.smlho@gmail.com](mailto:saindak.smlho@gmail.com), [info@saindak.com.pk](mailto:info@saindak.com.pk)
- b) Name of Chief Executive:  
Mr. Muhammad Raziq Sanjrani
- c) Type of Company:  
Limited Liability Company, 100% owned by the Government of Pakistan.
- d) Type of Business/Manufacturing:  
Metal Mining
- e) Auditors:  
M/s Deloitte Yousaf Adil Chartered Accountant,  
18-B/ 1, Chohan Mansion, G-8  
Markaz, Islamabad
- f) Legal Advisor:  
Mr. Muhammad Riaz Ahmed
- g) Company Secretary  
Mr. Ghazi Khan

### 14.4 Vision:

To make the country economically and financially sound through leasing out Saindak Copper Gold Project to a Chinese company, M/s MCC Resources Development Company (Pvt.) Limited (MRDL).

### 14.5 Mission:

To make Saindak Metals Limited, a vibrant organization, capable of bringing the mineable resources to a stage where investors (local and foreign) are attracted.

### 14.6 TOTAL STRENGTH OF THE MANAGEMENT:

#### 14.6.1 EXECUTIVE / NON-EXECUTIVE STAFF:

Executives	16
Regular / Non-Executive Staff (BPS 1-16)	38
<b>Sub-Total:</b>	<b>54</b>
Contract Employees	5
Piecework basis workers/miners	13
<b>Sub- Total:</b>	<b>18</b>

#### 14.6.2 Province / Region-wise Breakup:

Province/Region	Punjab	Sindh	KP	Balochistan	AJK	FATA	TOTAL
Officers	-	3	1	11	1	-	16
Regular / Non-Executive Staff (BPS 1-16 Staff)	1	1	3	31	2	-	38
<b>Sub Total:</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>42</b>	<b>3</b>	<b>-</b>	<b>54</b>
Contract Employees	-	-	-	5	-	-	5

Piecework basis workers/miners	-	-	-	13	-	-	<b>13</b>
<b>Grand Total:</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>60</b>	<b>3</b>	<b>-</b>	<b>72</b>

#### 14.6.3 Category and post-wise breakup of officer's strength:

Category/Post	MD	Company Secretary/ G.M (F)	Manager (Cord.)	Chief Engineer (Mining)	Coord. Officer, Sr. Accounts Officer	Admn Officer/ Law Officer, Engineer, Geologist	APO, AAO, APO PS to MD, Asstt Store Officer, Asstt Engineer	TOTAL
Head Office, Quetta	1	1	-	1	-	6	7	<b>16</b>
Branch Office, Islamabad	-	-	1	-	-	-	-	<b>1</b>
<b>Grand Total:</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>6</b>	<b>7</b>	<b>16</b>

#### 14.6.4 Category and post-wise breakup of contractual officer's strength

Category/Post	Company Secretary	Manager (Finance)	Audit Officer	Chief Engineer Mining	Assistant Manager (Admin)	Principal (TTC)
Head Office, Quetta	-	1	1	1	1	-
TTC Dalbandin	-	-	-	-	-	1
<b>Grand Total:</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

#### 14.6.5 Breakup of regular / contractual / piecework basis workers etc.

Head Office, Quetta	46
Branch Office, Islamabad	8
Contract Employees	5
<b>Total:</b>	<b>59</b>

#### 14.7 Corporate Social Responsibility (CSR) Activities for Social Uplift of the local Community:

- ✓ Since 2002, MRDL in close collaboration/coordination with Saindak Metals Limited (SML) has spent **Rs. 618.932 Million** on CSR related activities, including, Health,

Education, Power Generating, Communication, Water Supply Schemes, Infrastructure, Employment etc. *Since 2013 till 2017 MRDL has paid US\$ 5.501 Million to Government of Balochistan for CSR related activities.*

- ✓ Construction and establishment of “Saindak Model School” for improving the existing educational capacities of the deprived and underprivileged community children of the locality;
- ✓ Construction and establishing of a (20) bed hospital for provision of free medical services to the residents of the nearby villages, facilities including: (chemical examination, electrocardiogram, B-Ultrasound examination, X-Ray fluoroscopy, treatment Debridement, suture, medical dressing change, injection), provision of medicines & vaccination on reduced charges, approximately 3,860 local populations are getting benefited by the Saindak Hospital.
- ✓ Flawless supply of purified/clean drinking water to the nearby villages and also for the law enforcement agencies such as, FC, Police, BC & Levies, spending more than \$20,000 each year for transportation of clean drinking water from Taftan to project site Saindak.
- ✓ Installation and activation of power-supply equipment for free electric power to the neighboring villages (namely: Killi Saindak, Killi, Sarwar, Killi Amalaf, Killi Noor Ahmed & Killi Syed Abad).
- ✓ Providing Scholarships to the talented students around Balochistan, particularly focusing from District Chagai, to various reputed Schools & Cadet colleges around the country. The management took the initiative to boost up the quality education in the area and to encourage the education among the masses of the district by launching a Scholarship Scheme in 2010. Majority of the students belong from Balochistan province, out of which approximately 90% of the students are mainly focused from district Chagai.
- ✓ Construction and establishment of a state of the art Technical Training Centre at Dalbandin, to enhance the technical skills of the local youth of the region in exploring and exploiting the natural resources of the mineral rich District as well as creating job opportunities. The Managing Director SML with coordination of MRDL management established the TTC at Dalbandin with a positive approach for providing technical and professional skills to the unskilled youth particularly in the Mineral and Mining fields to be helpful in exploring the natural rich resources of the district. The Centre would further help in strengthening the economy of the country in particular and a source for job opportunities for the demoralized youth of the area in general, this ingenuity will also attract foreign investors in mining sector to invest in establishment of mining companies where local technical human resource would be available which ultimately would lead to development of the area.
- ✓ Repairing and restoration of a 15 kilometer road from Taftan to Saindak for easy trouble free easy access;
- ✓ Out of 1,800 employees at Saindak project; around 1500 employees belonging from District Chagai.
- ✓ Basic necessities of life such as; Clean Drinking Water are lacking in the district of Chagai. In this connection, SML in close collaboration with Government of Balochistan initiated a Clean Drinking Water Supply Project for the inhabitants of the area. SML and Public Health Engineering (PHE) Department, GoB started a project for providing drinking water from Gath Baroth from a distance of approximately 64 KM away from Nokkundi with a cost of Rs. 406.590 Million and by the grace of Al-mighty ALLAH the project is successfully completed and functional.

- ✓ SML in close collaboration with Balochistan Welfare Agency (BWA) has established a mobile health unit and free eye camps for the deprived and disadvantaged community of District Chagai by providing, free lenses & glasses, medicines, MHU awareness programs for the community, (a highly backward and underdeveloped area of Balochistan province with scattered population lacking health facilities).
- ✓ During the recent COVID-19 Pandemic, SML Provided Rs. Ten (10) million for provision of ration and other needs to the deserving people of District Chagai in the prevalent crisis due to COVID-19 Pandemic induced lockdown through the Provincial Disaster Management Authority (PDMA) Balochistan.
- ✓ A sum of Rs. 10 Million were granted to Balochistan University of Information Technology, Engineering and Management Sciences Quetta (BUITEMS) for purchase of DNA extraction kit for Forensic DNA Lab at BUITEMS.

#### 14.8 PAYMENTS TO NATIONAL EXCHEQUER 2019

Particulars	US \$
Royalty	5,617,132
Development Surcharges	561,713
Presumptive Tax	1,123,426
SML Share of profit	9,119,963
GoB Social Upliftment	959,997

#### 14.9 ACTIVITIES/PROPOSALS TO BE UNDERTAKEN FROM 2019-20

##### i. Further exploration/Development of East Ore Body (EOB) of SML Saindak Copper Gold Project

SML has three ore bodies i.e. South, North and East. The contract has been extended with MCC/MRDL up to 31<sup>st</sup> October 2022. The remaining mineable ore of South and North ore body will sustain the project up to the mid of 2021. On 23<sup>rd</sup> January 2019 MRDL submitted Design Scheme of Supplementary Geological Exploration for Saindak **East Ore Body**. As per plan, 23 exploratory holes (7551m) drilled for copper & gold along with combination analysis elements for Moly, S and Ag. The exploratory drilling was started on 1<sup>st</sup> March 2019 and was completed on May 21<sup>st</sup> 2019. Due to mineralization conditions, the exploratory holes were increased up to 46 at the depth of 10875.25 meters. The Pre-Feasibility Study Report (PFSR) for mining of East Ore Body (EOB) of Saindak project submitted by MRDL in August 2019. The salient feature are as below;

- The estimated ore reserves including measured, indicated and inferred ore of EoB at 0.25%Cu cutoff is about 358 million tons @ 0.36% Cu.
- The mineable ore reserves with in UPL stands at 81.148 million tons @ 0.374% Cu on 0.25% Cu cutoff grade and 86.092 million tons of waste with an average stripping ratio of 1.06 t/t.
- Development work of EoB will include stripping work of 20.7 million tons including 2 million ton byproduct ore, 1.1 km road from mining area to waste dump and primary crusher, new waste dump and tailing pond needs to be constructed.
- The Copper metal price calculated for the project economic effect is 6318 \$/t.

- Annual output of blister copper is 13203 tons, annual operating revenue is \$ 82165000; total cost is \$ 76539000, operating tax expenses and additional expenses is \$ 53441000.
- After the Technical evaluation committee (constituted by SML Board) review the Pre-Feasibility Study Report (PFSR) submitted to SML and reply of MCCT China on TEC report, the annual profitability has increased from US\$ 285000 to US \$ 6.95 million NPV increased from –ve US \$ 26.962 to +ve 36.603 million. The payback period reduced from 19 years to 11 years, IRR improved from 3.16% to 14.63% and also the maintenance cost has been reduced from US \$ 9.1 million to US \$ 7.649 million.
- Keeping in view the time factor and the existing ore reserves at Saindak project, EOB development is the sole and only solution to the sustainability of the project and looking to the prevailing economic situation in the country where unemployment is at peak the project is not only providing employment to the youth but also generating profit for the country.

## **ii. Induction and Preparation of exploration team;**

The SML board in its 134<sup>th</sup> Meeting held on June 30<sup>th</sup>, 2018, approved three Geology/Mining Software's along with hiring of professionals i.e Mining Engineers/Geologists, Financial expert and software engineer for training and operating the Software. Now it is in the process of tendering. SML is expecting to establish a well-equipped exploration team for geological modeling, pit designing and development/exploitation of existing ore bodies of Saindak as well as to be utilized in rest of the country.

## **iii. Dasht- E- Kain Porphyry Copper Gold Molybdenum Deposits**

Dasht-e- Kain is located at a distance of 48 km northwest of Chagai village in the Chagai arc, very close to the Pakistan- Afghanistan border.

During 1978-82 Geological Survey of Pakistan carried out initial exploration and produced a geological and geochemical/geophysical IP anomaly maps. Three bore holes have been drilled in western stock. Average copper values in quartz sericite zone vary from 0.1-0.17% and in the potassium silicate zone from 0.25 to 0.54 %. The breccia pipe zone in the eastern stock contains surface values up to 4.5% copper but not drilled.

These preliminary results are very encouraging for further exploration. In 2007, prospecting License (PL) was granted to Saindak Metals limited (SML), in 2009 SML submitted exploration scheme in MMDD Government of Balochistan which was approved. But unfortunately the PL license was cancelled in 2010, SML lodged appeal with Secretary Mine and Minerals GoB, which is still pending.

### **SML BOARD OF DIRECTORS**

1	<b>Mr. Muhammad Raziq Sanjrani</b> Managing Director, Saindak Metals Limited
2	<b>Ms. Saira Najeeb Ahmed</b>

	Additional Secretary (I&JV), MoE (PD)
3	<b>Mr. Muhammad Iqbal</b> Director General (Mineral), Ministry of Energy (Petroleum Division)
4	<b>Mr. Farhan Shafi</b> Managing Director, PMDC
5	Director General Geological Survey of Pakistan, GoP
6	<b>Mr. Abdul Rehman Buzdar</b> Addl. Chief Secretary (Dev.) Development, GoB
7	<b>Syed Zafar Ali Bukhari</b> Secretary, Mines & Minerals Department, GoB

## CHAPTER 15



<http://www.pmdc.gov.pk>

**PAKISTAN MINERAL DEVELOPMENT CORPORATION (PVT) LIMITED (PMDc)**

## **15.1 Introduction**

Pakistan Mineral Development Corporation (PMDC) is a commercial organization 100% owned by the government of Pakistan and is working under administrative control of Ministry of Energy (Petroleum Division). The corporation is as registered private limited company established in 1973 with an authorized capital of Rs.1,000 million. PMDC is engaged in prospecting, exploration and evaluation of economic mineral deposits, preparation of techno-economic feasibilities, mining and marketing activities. The company is operating five (5) Salt Mining Projects, three (3) Coal Mining Projects and Silica Sand quarry and other joint venture projects; on Soap Stones and Lead-Zinc.

### **15.1.1 Mining and Exploration**

PMDC is well known for mineral prospecting, exploration, development and execution of mining projects. This organization prepares techno-economic feasibility reports of mineral resources on the basis of exploration data in Pakistan and work on all kind of processing of metallic and non-metallic minerals in partnership with private and state owned foreign mining companies.

### **15.1.2 Disclosure of Resources and Responsibility**

PMDC is a responsible organization for undertaking industrial based approved plans of planning commission of Pakistan and to comply with the relevant planning regulations according to the national mineral policy. Mineral exploration projects have been established with the equity funding or loan allocations by the government of Pakistan.

### **15.1.3 Investment in Joint Venture Mining Projects**

Since its inception, PMDC has executed twenty-six (26) joint venture mineral exploration projects in Northern Areas of Pakistan, Azad Jammu & Kashmir, erstwhile FATA, Baluchistan, and Provincially Administered Tribal Areas (PATA). These projects have been undertaken in JV with other federal organizations, provincial governments of Pakistan, and international mining companies like M/s PASMINGO (Australia), a state-owned Chinese mining company, MCC China Metallurgical Corporation. PMDC also participated in execution of joint venture mineral projects in association with defunct FATA-DA.

### **15.1.4 Consultation Services**

PMDC has also been providing consultation services to mining companies, cement factories and chemical industries in the following disciplines:

- a) Mineral exploration and evaluation for extraction and processing
- b) Geochemical exploration of minerals
- c) Mineral resources evaluation and mine survey
- d) Mine feasibility studies and mine development

## **15.2 Corporate Profile**

<b>Name of the company</b>	<b>Pakistan Mineral Development Corporation (Pvt) Ltd.</b>
<b>Registered office</b>	Head Office, 13 -H/9, Islamabad.
<b>Name of Chief Executive</b>	Brig. (R) M. Iqbal Malik, SI (M), CEO/ Managing Director
<b>Type of company</b>	Private Limited Company, 100% Owned By GOP.
<b>Auditors</b>	M/S. Grant Thornton Anjum Rahman, CAs, Islamabad.
<b>Legal advisor</b>	Mr. Majid Bashir, Advocate, Islamabad.
<b>Bankers</b>	National Bank Limited and Habib Bank Limited.

### 15.3 List of Board of Directors as at 24.12.2020

1	Mr. Irshad Ali Khokhar	Chairman Board of Directors
2	Mr. Muhammad Iqbal Malik	CEO/ Managing Director
3	Ms. Shahnaz Akhtar	Director
4	Mr. Muhammad Iqbal	Director
5	Ms. Siara Najeeb Ahmed	Director
6	Ms. Huma Ejaz Zaman	Director
7	Mr. Ejaz Ali Khan	Director
8	Mr. Muhammad Daud	Director

### 15.4 HR Structure of the Corporation

	<b>Technical</b>	<b>Non-Technical</b>	<b>Security</b>	<b>Total</b>
Officers	37	60	-	97
Supervisors	32	10	-	42
Regular Staff	271	352	117	740
Contingent	164	246	106	516
Total	504	668	223	1,395

### 15.5 Achievements (Review Report) 2019-20

#### 15.5.1 Production/ Sale Performance Review 2019-20

The economic survey of industries has witnessed the impact of lockdowns in 2019-20 COVID-19 pandemic due to which the production and marketing activities of PMDC have also been suffered. Overall, COVID-19 pandemic challenged PMDC operational matters during 2019-20.

#### 15.5.2 Coal Production Sales/ Performance

PMDC is pioneer in coal mining in Pakistan and operating 3-Coal Mine Projects. All of the three projects are located in Balochistan in vicinity of provincial capital Quetta. The Coal is lignite to sub bituminous, the calorific value ranges from 3,000-7,000 kcal. PMDC has a total lease area of 18,000 acres. PMDC has established it in the indigenous coal market as a reliable and trusted supplier. Coal supplies are maintained through mining operations carried-out at coal projects. The coal is supplied to customers which is used as fossil fuel. Coal based Industries include; Cement factories, electricity generation plant and countrywide brick kilns etc. The Annual supplies of coal remained 0.350 million ton during 2019-20.

S.N	Coal Mining Projects	% of total Sale/Prod
1	Degari	04%
2	Sor Range	22%
3	Shahriagh	74%

### 15.5.3 Rock Salt production/ Sales Performance

PMDC having the world's largest Pink Rock Salt mines with estimated reserves of more than **22.22 billion Tons**. PMDC is operating 5-Rock Salt Mine Projects. PMDC Rock Salt is truly unique which contains natural minerals and trace elements including Calcium, Magnesium, Potassium and Iron. There are four different types of Rock Salts; Crystal White, Light Pink, Dark Pink and Greyish. The purity levels of these rock salts can go up to **99.3% (as certified by the Pakistan Council of Scientific and Industrial Research (PCSIR))**. PMDC's Rock Salt is **100%** natural and directly crushed for human consumption unlike sea Salt and has multiple health benefits.

Rock salt production/sales remained 83% against annual target. PMDC sell edible grade Salt in local market as well exports value added products directly. Private dealers purchase Rock Salt from PMDC for local and export purpose. The consumers of PMDC Industrial grade Rock Salt include major chemical industries in the country including; ICI, Sitara Chemicals, Olympia Chemicals, Itihad Chemicals and small-scale industrial units; ice factories, and tanneries. PMDC produce around 40% of Pakistan annual total Rock Salt production. PMDC total Sales of Rock Salt remained 1.385 million ton during 2019-20.

S.N	Salt Mining Projects	% of total Sale/ Prod
1	Khewra	24%
2	Makrach	6%
3	Warcha	49%
4	Kalabagh	14%
5	Jatta/ B.Khel	7%

### 15.5.4 Financial Review 2019-20

A- FINANCIAL REVIEW 2019-20		PKR. MILLION
	Sales revenue	2,432.621
	Pretax profit	390.003
	Post tax profit	292.848
	Shareholders' equity	10
<b>B-</b>	<b>Financial ratios</b>	
	Earnings per share basic/ diluted dividend per share %	292.85
	Debt to equity ratio	0.52
	Current ratio	3.26
	Interest cover ratio (no. of times)	0
	Fixed assets turnover ratio (times)	7.43
<b>D-</b>	<b>Percentage sales revenue</b>	
	Selling & distribution to sales revenue %	6.04
	Financial charges to sales revenue %	0.04
	Return on equity %	14
<b>III.</b>	<b>Contribution to national exchequer 2019-20</b>	<b>Rs. million</b>
	Income tax	74.05

Royalty	122
Excise duty	6.93
Sales tax	368.85
<b>Total</b>	<b>571.83</b>

## **15.6 Progress during the year 2019-20**

### **15.6.1 Progress of Activities (Growth-Development)**

PMDC has achieved desired physical and financial performance in spite of constraints of pandemic COVID-19, with no standing loan liability and bank borrowing.

### **15.6.2 Corporate Social Responsibility Contribution (CSR) 2019-20**

PMDC has spent total amount PKR 56.201 million on CSR activities in 2019-20 as laid down in the principles of policy articles 38, “promotion of social and economic wellbeing of people” of Constitution of the Islamic Republic of Pakistan. Following is the detail:

### **15.6.3 Community Development Programs (CDPs)**

PMDC is rendering Community Development Programs (CDPs) for the socio-economic development of mining community at its operational projects.

- i. Standard educational institutes are providing quality education to the children of employees and other inhabitants of adjoining areas at nominal charges being public welfare contributions which stimulate development of communities in the remote areas of Pakistan.
- ii. Participation in trainings is provided for skills development and observance of mining techniques for mining staff.

### **15.6.4 Medical coverage to the Miners**

- i. Miners are provided medical coverage as per mining concession rules, 2002.
- ii. Workmen’s compensation act, 1923 provides compensation and financial assistance package of accidental cases.
- iii. Rescue stations of provincial governments are set up at mining points.
- iv. Mine safety equipment kits are placed for emergency use along with first aid medical facility. Ambulance service is readily provided for emergency at all mining projects.

## **15.7 Health Safety and Environment Management System (HSEMS)**

### **15.7.1 Health Safety**

This is responsibility of management and employees to ensure the health and safety protection in all functions. In this regard PMDC has established new dedicated health safety and environment management system (HSEMS) under supervision of HSE department. Health and safety awareness policy has been formulated to disseminate among employees. Workers have been briefed in Urdu. They are given brochures after converting and printing into Urdu language for better understanding at all levels especially to face the pandemic COVID-19.

We are committed to foster a work place culture, where our principle concern is to guarantee physical integrity of our employees in congenial work environment which promotes excellence and implementation of health safety and environment management system in the areas of its business operations. Development of framework to review performance excellence, risk assessment and to be prepare for prevention of unsafe conditions including dissemination of unpreventable injuries, environmental damages and occupational illnesses and prevention of contagious diseases in employees.

#### **15.7.2 Other HSE innovations:**

- i. HSE team has been organized besides organizing HSE management system training workshops to HSE team. Formulation of HSE manual and procurement of standardize PPEs have been initiated and exhibition of public notice, safety signs & mine plates having PMDC logos showing mines names and safety precautions’.
- ii. Project’s management have been solicited to initiate monthly evidence based reporting on account of leading/ lagging indicators including incidents occur at projects (LTI, MT & fatality) within 24 hours and investigation report with pictorials.
- iii. Risk assessments are conducted prior to initiation of risky activities to identify the dangers to reduce risk of injury and occurrence of unsafe. This includes identifying hazards, creating controls to keep workers safe on their job.
- iv. HSE department has arranged to sit with raising contractors at projects to sensitize the post fatality scenarios and some standard HSE clauses have been added to all forthcoming contracts with raising contractors.

### **15.8 Major minerals exploration projects completed by PMDC as executing agency:**

#### **15.8.1 Defunct FATA Development Authority sponsored Exploration Projects:**

- a) Exploration and Resource Estimation of coal in Shirani area F.R.D.I. Khan.
- b) Exploration & Mining of Copper Project of North Waziristan
- c) Exploration & Development of Soapstone, Kurram Agency, and erstwhile FATA-DA & PMDC are equity shareholders.
- d) Exploration of Coal deposits, Kurram/ Orakzai Agencies, defunct FATA-DA & PMDC equity shareholder.

#### **15.8.2 Exploration Project in partnership with Provincial Governments:**

- a) Exploration at Duddar Lead-Zinc Project, District Lasbella, Baluchistan,
- b) PMDC & Baluchistan Development Authority (BDA) are equity profit sharing partners.
- c) Exploration of Rock Salt Resource, Kohat, PMDC & Sarhad Minerals Authority, KPK are equity shareholders.
- d) Lakhra Coal Development Company (LCDC), PMDC & Govt. of Sindh and WPDA are equity shareholders.

## **15.9 Program of Activities & Targets set-out during 2019-20:**

### **15.9.1 Program of activities with a particular long-term planning**

Besides setting yearly production and revenue targets, PMDC recognizes that in competing business environment it has to take number of initiatives to keep it commercially and financially viable. Accordingly, PMDC is determined to do all possible efforts to maximize the revenue and has developed a multipronged approach with the categorization of business development initiatives as Low-Lead and Low Investment Projects as well as Long Lead Time and High Investment Projects:

- Revenue Enhancement in Existing Business Lines
  - Better pricing
  - Advantageous commercial arrangements
  - Efficient commercial negotiations
- Projects of Value addition within Existing Business Lines
- Revival of Existing Operating Projects
- Metallic Mining
- Mineral Base New Business
- Quality Certifications for value addition

Chapter 16



**Pakistan LNG Limited (PLL)**

**9<sup>th</sup> Floor, Petroleum House  
G-5/2, Ataturk Avenue, Islamabad  
Pakistan  
Tel: (051)  
Fax: 051-  
[www.gov.pk](http://www.gov.pk)  
Email:**

Quantity of LNG Imported in FY 19-20 (Metric Tonnes)	Value of LNG Imported in 19-20 (Million USD)
2,328,887	779.56*

\* Port Qasim Authority (PQA) port charges are part of the LNG DES price as determined by OGRA. The total value of LNG imported is based on the provisional assessment of port charges by PQA, which is subject to change upon issuance of the final invoices.

Chapter 17



**Pakistan LNG Terminals Limited (PLTL)**

**5<sup>th</sup> Floor, Petroleum House  
G-5/2, Ataturk Avenue, Islamabad  
Pakistan**

**Tel: +92-051-9216901**

**Fax: +92-051-9216902**

**[www.paklngterm.com](http://www.paklngterm.com)**

## 17.1 INTRODUCTION

Pakistan LNG Terminals Limited (“PLTL”) was established in December 2015 with a mandate to establish LNG terminals and to procure entire regasification capacity.

With the start of its commercial operations since January 4, 2018, PLTL, being the operation manager of 2<sup>nd</sup> LNG terminal of Pakistan, has facilitated the energy sector and played its part in curtailing the energy crises faced by the country.

As a public sector organization, PLTL endeavors to establish and maintain the LNG infrastructure and regasification operations in Pakistan to provide cheap energy to the end consumer.

## 17.2 OVERVIEW OF FINANCIAL AND OPERATIONAL PERFORMANCE

		2020	2019	2018	2017	2016
<b>Ratios</b>						
<b>Profitability Ratios</b>						
Gross Profit Margin	%	3	4	3	0	0
Operating Profit Margin	%	2	3	0	0	0
Net Profit Margin	%	2	2	(2)	0	0
<b>Investors' Ratio</b>						
Earning / Loss per Share	PKR	163	170	(55)	(70)	(41)
<b>Liquidity Ratio</b>						
Current Ratio	times	1.27	1.07	0.83	0.08	0.7
<b>Operational Performance</b>						
Cargoes Handled	No.	37	43	22	0	0
LNG Volume	Million Tons	2.3	2.7	1.4	0	0
Capacity Utilized	%	50	58	53	0	0
Average Re-gas Rate	mmcf/d	302	350	316	0	0

The net revenue of PKR 14 billion for the financial year 2019-2020 was 18% higher than PKR 12 billion recorded for the year 2018-2019. The growth is attributable to higher exchange rate.

The company has handled 2.3 million tons of LNG on its terminal with an average re-gas rate of 302 MMCFD during the current financial year a decrease of 15% owing to reduce demand of RLNG from SNGPL.

The operating profit for the year is PKR 288 million at operating profit margin of 2%. During the year the company has repaid the long-term loan of PKR 40 million resulting into decrease in financial expense by 25%. The company reported a profit of PKR 245 million in FY2019-20 a decrease of 4%. The net equity of company has increase to PKR 365 million as compared to PKR 4 million in last financial year.

Earning per share of the company is PKR 163. Gross profit ratio has reflected a marginal decrease of 1% since the last year owing to low utilization of terminal. However, Net profit margin for the current year remains at 2%. Current ratio has increased by 19% to 1.27 over the last year. On average receivable and payable period days are 30 days.

## 17.3 SUMMARY OF FIVE YEARS FINANCIAL DATA

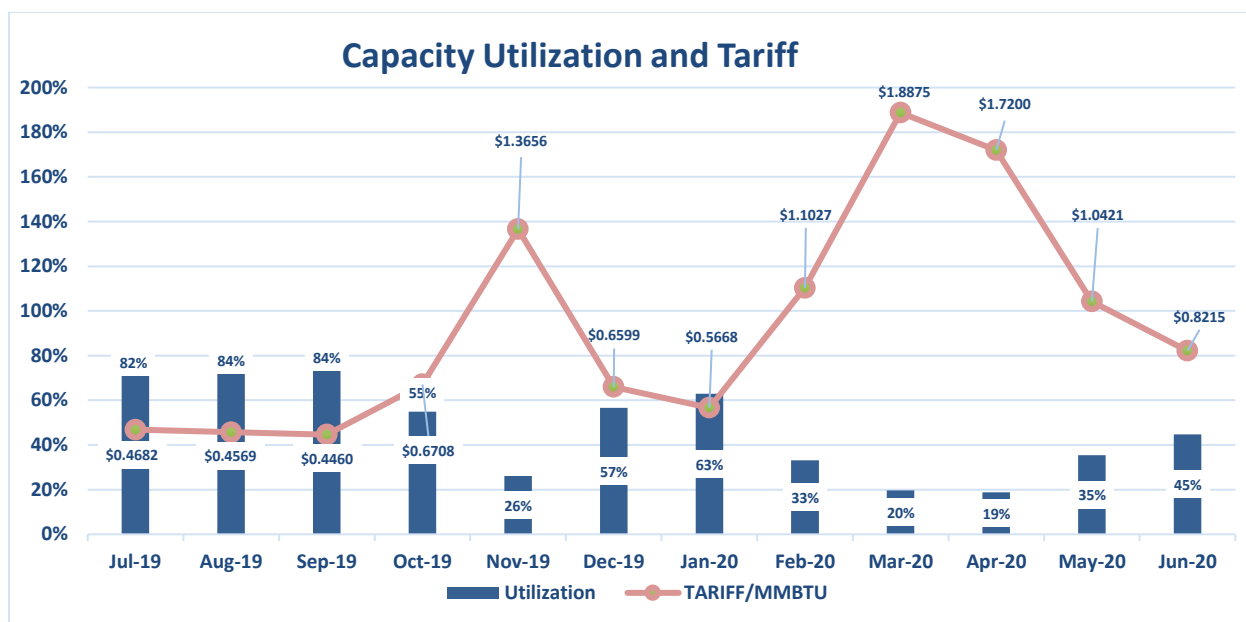
All amounts are in PKR Thousands	2020	2019	2018	2017	2016
<b>Balance Sheet</b>					
Non-Current Assets	11,982	15,797	16,576	18,821	0
Cash and Bank Balance	527,062	379,112	68,927	11,878	106,573
Current Assets	1,547,383	1,537,725	1,096,558	3,234	1,195
Long Term Liability	84,500	129,332	15,444	0	0
Current Liabilities	1,636,434	1,783,523	1,401,491	186,334	154,491
Accumulated Profits / (Losses)	350,493	4,780	(249,875)	(167,371)	(61,724)
Net Equity	365,493	19,780	(234,875)	(152,371)	(46,723)
<b>Statement of Profit and Loss</b>					
Revenue	14,455,737	12,156,301	5,067,003	0	0
Cost of Service	(13,976,534)	(11,673,968)	(4,892,556)	0	0
Gross Profit	479,203	482,333	174,447	0	0
Admin Expenses	(191,139)	(108,924)	(191,548)	(108,091)	(63,162)
Earnings before Interest & Tax	360,594	424,299	(7,557)	(105,648)	(61,724)
Finance Cost	(14,881)	(19,775)	(11,610)	0	0
Taxation	(100,622)	(149,868)	(63,338)	0	0
Net Earnings / (Loss)	245,091	254,656	(82,505)	(105,648)	(61,724)
<b>Statement of Cash Flow</b>					
Cashflows from Operating Activities	268,667	313,370	(7,597)	(139,338)	(1,289)
Cashflow from Investing Activities	(844)	(3,185)	(1,354)	(19,102)	0
Cashflow from Financing Activities	(120,873)	0	66,000	63,745	107,862

## 17.4 OPERATIONAL PERFORMANCE AND BUSINESS DEVELOPMENT

Capacity Underutilization has been a key concern since start of commercial operations from 4th January 2018. PLTL strived hard to maximize the capacity utilization through different proposals presented to the Ministry of Energy (Petroleum Division) for;

1. Optimization of existing utilization at both terminals (A potential of US \$ 6.2 million p.a.) if both terminals are under one control (novation of terminal 1)
2. Optimum utilization of idle terminal capacity with a potential of reducing the burden to end-consumer to the extent of US \$ 1.14 million per cargo which arises due to capacity payments.

and suggested that in order to minimize the idle capacity, Terminals may be allowed to provide regasification services to interested private parties. Resultantly ECC has allowed sale of idle capacity to private parties through its decision dated 28<sup>th</sup> July 2020, which will be implemented by Pakistan LNG Limited a sister concern in light of decision. The terminal tariff to end consumer was \$0.9340 / mmbtu in FY 2019-20. It is envisaged that with sale of idle capacity consumer end tariff will decrease by 45% to \$0.42 / mmbtu.



## 17.5 SIGNIFICANT PLANS REGARDING CORPORATE RESTRUCTURING ALONG WITH FUTURE PROSPECTS

Ministry of Energy (Petroleum Division) vide its letter dated February 6, 2018 had directed to merge the Company with Pakistan LNG Limited (PLL), an associated company. In this regard a presentation to Joint Boards of the Company, PLL and Government Holdings Pvt Limited (GHPL- The Parent Company) has held about the economics of merger. The Board of directors of parent company has accorded its principle approval and referred the matter to Economic Committee of Cabinet (ECC) for formal approval. The Federal Government through its letter dated 2<sup>nd</sup> January 2020 has formally accorded approval of merger. The final scheme of amalgamation/merger and its effective date is being finalized. In the meanwhile, the Company continues to operate on going concern basis.

## 17.6 FUTURE OUTLOOK

PLTL has approached Ministry of Energy (Petroleum Division) to utilize the idle capacity of Terminal-2 which will reduce the payments for idle capacity by \$ 16.7 million per annum and will bring down the end consumer tariff to \$0.42/mmbtu. PLTL revenue is estimated to increase by \$1 million by availing the opportunity.

## 17.7 COMPANY INFORMATION

### Composition of the Board of Directors

Mr. Asim Murtaza	Independent Director	Chairman
Mr. Zahid Hussain	Independent Director	Director
Mr. Saeed Akhtar Chughtai	Independent Director	Director
Mr. Masood nabi	Non-Executive Director	MD & CEO, GHPL
Mr. Muhammad Ayub Chaudhry	Non-Executive Director	Additional Secretary Petroleum
Mr. Omar Hamid Khan	Non-Executive Director	Secretary Finance
Mr. Nadeem Nazir	Executive Director	Acting MD & CEO, PLTL

## **Composition of the Committees of the Board**

### **Audit & Risk Management Committee**

Mr. Saeed Akhtar Chughtai	Chairman	Independent Director
Mr. Masood Nabi	Member	Non-Executive Director
Mr. Omar Hamid Khan	Member	Non-Executive Director

### **Human Resource and Nomination Committee**

Mr. Zahid Hussain	Chairman	Independent Director
Mr. Saeed Akhtar Chughtai	Member	Independent Director
Mr. Muhammad Ayub Chaudhry	Member	Non-Executive Director

### **Procurement Committee**

Mr. Zahid Hussain	Chairman	Independent Director
Mr. Saeed Akhtar Chughtai	Member	Independent Director
Mr. Muhammad Ayub Chaudhry	Member	Non-Executive Director

### **Executive Management**

Chief Executive Officer	Mr. Nadeem Nazir (Acting Charge)
Chief Financial Officer	Mr. Nadeem Nazir
Company Secretary	Mr. Waqas Ghazi (Acting Charge)
Chief Internal Auditors	A. F. Ferguson & Co., Chartered Accountants

Bankers	National Bank of Pakistan
	Bank Alfalah Limited
	United Bank Limited

### **Auditors and Advisors**

External Auditors	Deloitte Yousaf Adil, Chartered Accounts
Internal Auditors	A. F. Ferguson & Co., Chartered Accountant
Legal Advisors	Liaquat Merchant Associates / Orr Dignam & Co
Tax Advisors	A. F. Ferguson & Co., Chartered Accountant

Registered Office Address	5th floor, Petroleum House, Ataturk Avenue, G-5/2, Islamabad
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