

# SECTOR BRIEF

## Oil and Gas Industry



By Research and Publications Department, ICMA Pakistan

### Historical Background:

A brief history of oil and gas discoveries in Pakistan since its independence in 1947 is provided below:

**In 1952:** the first oil field was discovered in the Balochistan province, near a Sui gas field. In the same year, Sui gas field was also discovered which remains the biggest natural gas field in Pakistan.

**In 1955:** the commercial drilling and exploring of Sui gas fields was started. The daily production of sui gas field stood at approx. 550 million standard cubic feet [MMscf]. In the same year, Pakistan Petroleum Limited (PPL) discovered gas reserves at Uch gas field located in District Dera Murad Jamali, Balochistan.

**In 1964:** The Toot Oil fields were discovered which is located in the Potwar region of Punjab. Pakistan Petroleum and Pakistan Oil fields explored and drilled the first well whereas the commercial production started in 1967. Toot Oil fields has an approx. capacity to produce 60 million barrels of oil.

**In 1976:** Dhodak gas field was discovered in the province of Punjab.

**In 1981:** Union Texas Pakistan discovered an oil field in lower Sindh.

**In 1983:** Dakni gas field was discovered which is located about 135 Kms in the south-west of Islamabad.

**In 1984:** Tando Adam oil field, located in Hyderabad, was drilled and completed.

**In 1986:** Chak Naurang field located 90 kms away from Islamabad was discovered in June 1986. The year also witnessed the peak in oil production from Toot Oilfields which was 2,400 barrels per day.

**In 1989:** Dakni gas field started commercial production in December 1989.

**In 1990:** Qadirpur gas field was discovered in Sindh province. It remains the third largest gas field in Pakistan.

**In 1994:** Rajjan oil field, located in Gujjar Khan, was discovered.

**In 2004:** Chanda oil fields located in Khyber Pakhtunkhwa started oil production.

**In 2006:** Mela oil fields were discovered in the area of Kohat, located in Khyber Pakhtunkhwa (KPK)

**In 2009:** NASHPA oil fields were discovered in Karak district of Khyber Pakhtunkhwa (KPK).

**In 2010:** Sheikhan gas field were discovered in the area of Kohat in Khyber Pakhtunkhwa (KPK).

**In 2015:** OGDC discovered around 1,095 bpd crude oil supply at Tando Allahyar in Sindh Province.

**In 2016:** A total number of six discoveries were made across Pakistan, including four in Sindh Province. These discoveries added 50.1 mmcf of gas and 2,359 bpd of crude oil to existing production levels.

### Exploration & Production (E&P) Companies

There are 11 active E&P companies operating in Pakistan; out of which 6 are domestic and 5 are foreign:

#### Domestic E&P Companies

- 1) Oil & Gas Development Company Ltd (OGDCL)
- 2) Pakistan Petroleum Limited (PPL)
- 3) Mari Petroleum Company Limited (MPCL)

## Other Features

- 4) Pakistan Oilfields Limited (POL)
- 5) Pakistan Exploration Private Limited (PEL)
- 6) Orient Petroleum Private Limited (OPL)

OGDCL, PPL and MPCL are public listed companies whereas POL, PEL and OPL are domestic operating companies which are in active exploration of hydrocarbon.

### Foreign E&P Companies

- 1) Ente Nazionale Idrocarburi (ENI) - Italy
- 2) Magyar Olaj-es Gazipari (MOL) Hungary
- 3) Polskie Gornictwo Naftowe I Gazownictwo (PGNIG) - Poland
- 4) United Energy Pakistan Limited (UEPL) - China
- 5) Kuwait Foreign Petroleum Exploration Co. (KUFPEC) - Kuwait

Out of five foreign E&P Companies, three are European [ENI, MOL and PGNIG] whereas one is from China and the other is from Middle East. All of them actively pursuing exploration and production in Pakistan.

## Current Status & Way Forward

Daily oil production in Pakistan stands at 87,286 bbl. whereas daily gas production is a touch below 4 billion cubic ft. The daily production of LPG is at 1,521 metric ton. Despite diminishing reserves, Sui Gas Field still remains one of the largest natural gas producing field in Pakistan, contributing substantially to the country's requirements with daily production of around 400 MMscf.

OGDCL and PPL, the two largest domestic E&P companies have announced business plans and expect to double their well count FY 2020 for exploratory drilling, development drilling and working-over existing wells.

Other E&P operating companies in Pakistan are also looking at increasing their well count that will further increase drilling activities and increase rig count.

Pakistan's Ministry of Petroleum & Natural Resources has conducted road shows and meetings in global O&G hubs in Canada, USA, Russia, China and the UAE, as a result several international E&P companies have shown keen interest in Pakistan's E&P landscape.

## SWOT Analysis of Oil & Gas Industry



### STRENGTHS

- Mature regulatory framework
- 70% untapped sedimentary area
- 0.31 billion barrels of oil reserves
- 30 TCF gas reserves
- 51 TCF shale gas reserves [Third largest in Asia]
- 185 billion tons of coal reserves
- Low well density 3 wells/1000 Sq. Km.
- 1,100 exploratory wells drilled
- 90 oil and 310 gas/cond. Discoveries
- Healthy gas price i.e. USD 4-6 MMBTU
- Low operating cost
- Low lifting cost

### WEAKNESSES



- Operating in a heavily regulated environment
- High Import dependence
- Less resources for transfer of technology
- Absence of R&D in the oil field
- No major local gas discovery is made
- Price escalation due to end of subsidies



### OPPORTUNITIES

- Investment potential in onshore and offshore exploration
- Investment potential in midstream and downstream sectors
- Potential for construction of gas pipelines
- Potential for setting up new oil refinery projects
- Potential for capacity expansion in existing refineries
- Potential for developing shale oil and gas resources
- Frontier markets



### THREATS

- Declining trend in oil production
- Depletion of reserves of oil and gas
- Security issues in Balochistan exploration areas
- Intake of imported LNG and gas will increase
- Ever increasing demand
- Exploration and drilling risks
- Environmental concerns