MEGAPROJECTS

TENGIZ

Discovered in 1979, the Tengiz field is a gem in Kazakhstan's oil and gas industry and one of the largest fields across the globe.

The agreement on Tengizchevroil LLP (TCO) was signed between the Republic of Kazakhstan and Chevron Corporation in 1993, which granted TCO a 40-year–long exploration and production licence for Tengiz and Korolevskoye fields in the Atyrau Region.

KEY INDICATORS

Oil production in 2024 (total)

27,811 thous tonnes
(608 thous. bbl per day)[1]

Oil production (attributable to KMG) (20%)

5,562 thous tonnes
(122 thous. bbl per day)

2P oil reserves life

Over 40 years

Associated gas production (total)

Associated gas production (total), including gas consumed in own operations and gas reinjection

15.1 bln m³

Interests

20% KMG

50% Chevron

25% ExxonMobil

5% Lukoil International GmbH

Outlook

The implementation of the Future Growth Project / Wellhead Pressure Management Project will boost oil production from the Tengiz field by 12 mln tonnes per year

Operator

TCO

[1] 1 tonne = 7.98 bbl.

Tengizchevroil (TCO) operates a licence covering the unique supergiant Tengiz field and the adjacent Korolevskoye field with significant reserves. The company employs highly reliable modern operating facilities, including complex technology lines (CTL), Second-Generation Plant (SGP), and sour gas injection units (SGI).

The project is an example of international cooperation and the application of cutting-edge solutions in Kazakhstan's oil and gas industry.

Tengizchevroil's operational highlights

Year	Oil production, thous. tonnes	Associated gas production, mln m³	Dry gas production, mln m³	LPG production, thous. tonnes	Sulphur production, thous. tonnes	Gas injection, mln m³
2022	29,178	16,146	9,537	1,193	2,590	3,589
2023	28,893	16,009	9,403	1,255	2,573	3,641
2024	27,811	15,059	8,669	1,234	2,468	3,520

Lower oil output is due to two scheduled overhauls at the SGI in May and CTL-1 in August, and an ad hoc 67-day repairs at the SGP.

Progress on the Future Growth Project and the Wellhead Pressure Management Project

TCO is completing the Future Growth Project (FGP) and the Wellhead Pressure Management Project (WPMP).

In April 2024, the company commissioned WPMP facilities to maximise the load of the CTL and SGP.

In January 2025, the the Third-Generation Plant (TGP) obtained the first batch of oil. Its launch will lead to a phased increase in production at Tengiz to reach 12 mln tonnes per year. After all production facilities reach the full capacity, total crude oil production will approach 40 mln tonnes per year, thus increasing revenue streams to the federal budget in the form of taxes, royalty, and other direct payments. On top of that, the FGP will secure the reliable operations of key production facilities and strengthen Kazakhstan's position as a major energy supplier globally. The cost of FGP and WPMP projects totals USD 48.9 bln, with aggregate costs as of the end of 2024 amounting to USD 47.5 bln.

As part of the FGP and Tengizchevroil's partnership with international corporations, the company helped transfer technologies and upgrade infrastructure in the Atyrau Region. Kazakhstani companies took an active part in this large-scale project, too. Tengizchevroil invested some USD 20 bln in procuring local goods and services and signed more than 1,250 contracts with domestic manufacturers.

At the peak of FGP-related construction, the company created around 90,000 jobs. The project contributed a lot to fostering the country's talent pool as local staff improved their qualifications by completing over 37,500 training courses. Today these employees can leverage their production expertise both in Kazakhstan and abroad.

KASHAGAN

Kashagan is the greatest discovery of the last four decades and one of the most complex oil and gas projects globally. The Kashagan field lies in the North Caspian shelf 75 km away from Atyrau. The field reservoir lies at a depth of over 4 km and is characterised by high pressures (over 700 bar) and high hydrogen sulphide (H_2S) concentration, which requires the use of cutting-edge technologies and innovations.

Operated by NCOC, the projects relies on the Production Sharing Agreement in respect of the North Caspian Sea (NCSPSA) dated 18 November 1997. Together with Aktoty and Kairan, Kashagan is part of North Caspian, the first major offshore oil and gas project in Kazakhstan.

KEY INDICATORS

Oil and condensate production in 2024 (total)

17,424 thous tonnes
(407 thous. bbl per day)[1]

Oil and condensate production (attributable to KMG) (16.88%)

2,885 thous tonnes
(67 thous. bbl per day)

2P oil and condensate reserves life

Over 76 years

Gas production (total)

11.0 bln m³

Interests

- 16.88% KMG Kashagan
- 16.81% Eni S.p.A.
- 16.81% ExxonMobil
- 16.81% Shell
- 16.81% Total S.A.
- 8.33% CNPC
- 7.56% INPEX North Caspian Sea

Operator

NCOC

A total of 40 wells were drilled at the Kashagan field, including 33 production wells, six injection wells, and one monitoring well. Sour gas injection at high pressure improves oil recovery, ensures stable production, and unlocks growth potential.

KMG owns 16.88% in the project through KMG Kashagan B.V., which enables the Company to leverage global best practices and technologies in developing this unique field.

NCOC's operational highlights

Year	Oil production, thous. tonnes	Natural and associated gas production, mln m³	Sulphur production, thous. tonnes	Gas injection, mln m³
2022	12,682	7,878	983	3,917
2023	18,774	11,857	1,486	5,829
2024	17,424	11,253	1,422	5,486

A decrease in production is due to scheduled overhauls to replace the temporary configuration of the slag catcher between 8 and 29 October 2024.

Under the terms of the PSA, all oil produced at the Kashagan field is exported, including KMG's share of the oil. The produced oil is mostly exported to Europe, East Asia, and India via Novorossiysk, where the oil is delivered by the CPC pipeline.

Arbitration dispute

The Republic of Kazakhstan and the contracting companies in accordance with the Production Sharing Agreement in respect of the North Caspian Sea (NCSPSA) (excluding KMG Kashagan B.V., KMG's subsidiary) have a number of disputes regarding the application of certain provisions, which are referred to the arbitration court in accordance with the NCSPSA.

Environmental audit

The Environmental Department of the Atyrau Region under the Committee for Environmental Regulation and Control of Kazakhstan's Ministry of Ecology and Natural Resources inspected the Operator's onshore facilities. Following the inspection, the Operator was served a prescription to rectify the identified breaches, including those regarding excessive sulphur placement of 1.02 mln tonnes. The Operator disagreed with the audit findings and filed an administrative lawsuit challenging the said prescription. On 14 June 2023, the Specialised Interdistrict Administrative Court of Astana ruled in favour of the Operator in the sulphur placement case. On 27 February 2024, the judicial chamber on administrative cases of the Astana court cancelled this ruling. The dispute is considered by Kazakhstan's Supreme Court. If the Operator is held liable for administrative offences, the amount of the fine will be determined in accordance with the Code of the Republic of Kazakhstan on Administrative Infractions. As of 31 December 2024, the Company did not recognise provisions for this audit.

Kashagan expansion projects

Completed projects

In October 2024, the Company completed the construction of a slug catcher to make operational processes more reliable. At the same time, the Company made significant progress in commercialising liquefied petroleum gas. In August 2024, we signed an agreement with QazaqGaz on LPG sales and purchase. The project will be fully completed in 3Q 2026, with total investments estimated at USD 73 mln.

Ongoing projects

QazaqGaz is building a gas processing plant with a capacity of 1 bln m³ per year. As at the end of 2024, NCOC completed 89% of works, including the laying of the gas pipeline, with the installation of the electric substation currently ongoing. The plant is to be commissioned in 4Q 2026. Project costs total USD 160.3 mln. Importantly, UCC Holding, a new investor from QazaqGaz, may cause adjustments to the construction schedule.

Projects under consideration

The Company is exploring opportunities to expand production. As part of the Phase 2A project, KMG signed a pre-FEED agreement. UCC Holding is expected to complete pre-FEED and feasibility study in 1Q 2025. The new production capacities will be launched in 2029–2030.

[1] 1 tonne = 7.9272 bbl.

KARACHAGANAK

Karachaganak is one of the largest oil and gas condensate fields in the world located in the West Kazakhstan Region. Spreading over 280 km², the field plays the key role in advancing Kazakhstan's oil and gas industry. Karachaganak was discovered in 1979, while its commercial development started in 1984.

KEY INDICATORS

Production of liquid hydrocarbons (stable[1]) (total)

10,968 mln tonnes
(245 thous. bbl per day)[2]

Production of liquid hydrocarbons (stable) (attributable to KMG) (10%)

1,097 thous. tonnes
(24.5 thous. bbl per day)

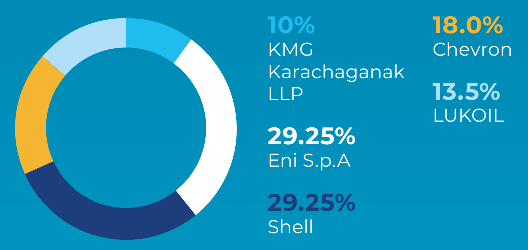
2P oil and condensate reserves life

Over 18 years

Gas production (total)

23.9 bln m³

Interests



Outlook

The implementation of investment projects to maintain the achieved liquid hydrocarbon production plateau levels

Operator

Royal Dutch Shell and Eni are the joint operators of the Karachaganak field

Final Production Sharing Agreement and project operators

The project relies on the Final Production Sharing Agreement (FPSA) in respect of the contracted plot at the Karachaganak oil and gas condensate field signed on 18 November 1997 by the Republic of Kazakhstan and the Karachaganak Petroleum Operating (KPO) international consortium. Shell and Eni are the joint operators of the Karachaganak project.

Technological infrastructure

The Karachaganak project has three core process facilities comprising the entire cycle of production, processing, and transportation of hydrocarbons:

1. Karachaganak Processing Complex
   - Processes liquid hydrocarbons coming from wells and feedstock transported from Unit 2 and 3.
   - Partially prepares gas for export, injection, and production needs.
2. Gas treatment unit 2 (Unit 2)
   - Separates and reinjects raw gas at high pressure.
   - Feeds liquid hydrocarbons to the KPC for stabilisation before shipment for export.
3. Gas treatment unit 3 (Unit 3)
   - Separates and partially stabilises liquid hydrocarbons and gas before shipment for export.

Injection of liquid hydrocarbons grew proportionately to an increase in gas production due to the use of technologies to maintain reservoir pressure..

Arbitration dispute

Pursuant to the Final Production Sharing Agreement (FPSA) in respect of the contracted plot at the Karachaganak oil and gas condensate field dated 18 November 1997, the Republic of Kazakhstan and the contracting companies have a number of disputes regarding the application of certain FPSA provisions that are subject to arbitration. The Contracting Companies believe that they are acting in accordance with the FPSA, the laws of the Republic of Kazakhstan, applicable standards, and best practices. At present, the arbitration is ongoing.

Pursuant to the notification served on the Operator on 13 April 2023, KMG Karachaganak was fully excluded from the negotiation process due to a conflict of interests in accordance with the Joint Venture Agreement (JVA).

Karachaganak Petroleum Operating B.V.'s operational highlights

Year	Gas production, mln m³	Liquid hydrocarbon production, thous. tonnes	Gas injection, mln m³
2022	19,442	10,135	11,131
2023	22,385	10,858	12,650
2024	23,942	10,968	14,231

Karachaganak expansion projects

Project	Status	Objectives	Deliverables	Additional information
KEP1 A Commissioning of the 5th compressor	Commissioned in September 2024, testing is ongoing	Increasing gas injection by 3.7 bln m³ per year; maintaining reservoir pressure; stabilising annual oil production at 10–11 mln tonnes	Boosting oil production by around 7.1 mln tonnes over the remaining life of the FPSA	–
KEP1 B Construction of the 6th compressor	Active construction (67.5% completed as of 1 November 2024, 45.1% ahead of schedule)	Increasing gas injection by 3.7 bln m³ per year; maintaining oil production	An increase in oil output of 5.8 mln tonnes	Commissioning planned in 4Q 2026
Karachaganak GPP	Concept selection, development of feasibility study	Processing of 4.5 bln m³ of gas per year, LPG production of 0.3 mln tonnes per year	–	–

[1] A conversion factor of 0.9 is applied to total oil and condensate production to estimate stable liquid hydrocarbons.
[2] 1 tonne = 7.86 bbl.

Gas production

KMG's Gas Strategy for 2024–2030

KMG is implementing an ambitious gas strategy for 2024–2030 with a focus on a significant increase in natural gas production and processing in Kazakhstan. Annual gas production is to be stepped up from 3.2 to 8.9 bln m³. For this purpose, the Company intends to advance gas infrastructure, upgrade gas processing plants, and create a single gas accounting system. Another key objective is to boost the processing of associated gas into commercial and liquefied natural gas.

In 2024, the Company drafted a granular plan comprising exploration of green fields and construction of infrastructure. To give an impetus to gas production and boost the profitability of production and processing projects, new pricing mechanisms taking into account both domestic and export gas prices were put in place. On top of that, Kazakhstan's Ministry of Energy supported KMG's proposal to increase commercial gas prices.

Natural and associated gas production

In 2024, natural and associated gas production increased by 1% to 9,554 mln m³. Operating assets produced 2,286 mln m³ (24% of the total), while 7,268 mln m³ (76%) came from megaprojects.

Gas production values are the actual volume of gas produced, including injected gas and own gas needs.

Gas injection is used to maintain reservoir pressure, which is essential for sustaining high oil production rates.

Commercial gas production in 2024 was 5,255 mln m³, of which 1,723 mln m³ came from operating assets and 3,532 mln m³ from megaprojects. Year-on-year, KMG's commercial gas production increased by 125 mln m³, or 2.4% cumulatively.

Indicator, mln m³	2022	2023	2024
Natural and associated gas production by asset (attributable to KMG)	**8,241**	**9,459**	**9,554**
Operating assets	**2,190**	**2,055**	**2,285**
Ozenmunaigas	623	596	613
Embamunaigas	213	217	205
Mangistaumunaigaz	431	427	443
Kazgermunai	115	129	137
Karazhanbasmunai	33	33	41
PetroKazakhstan Inc.	127	112	109
Kazakhoil Aktobe	430	402	403
Kazakhturkmunay	197	127	102
Urikhtau Operating	21	9	55
Dunga		3	27
Ural Oil and Gas		2	151
Megaprojects	**6,051**	**7,403**	**7,269**
Tengizchevroil	3,229	3,202	3,011
KMG Kashagan B.V.	877	1,963	1,863
KMG Karachaganak	1,944	2,239	2,394

Commercial gas production from KMG-operated assets

Indicator, mln m³	2022	2023	2024
Ozenmunaigas + KazGPZ[1]	496	689	627
Mangistaumunaigaz (PD Zhetybaimunaigaz)	156	239	337
Kazgermunai	182	203	241
Kazakhoil Aktobe	374	338	346
Embamunaigas	164	171	158
Kazakhturkmunay	144	71	43
PetroKazakhstan Inc.	0	0	0
Total for operating assets	**1,516**	**1,711**	**1,723**

Commercial gas production from megaprojects (attributable to KMG), mln m³

Indicator	2022	2023	2024
Tengiz	1,907	1,881	2,025
Karachaganak[2]	745	881	874
Kashagan	263	657	633
Total for megaprojects	**3,013**	**3,419**	**3,532**

[1] Raw gas from Ozenmunaigas and Mangistaumunaigaz's PD Zhetybaimunaigaz is supplied to the KazGPZ plant.
[2] Raw gas supplies to the Orenburg Gas Processing Plant.

Gas segment: highlights and projects in 2024

Current projects

Field	2024 highlights	Company
Rozhkovskoye	Phase 1 equipment is installed, four wells are launched; production in 2024 – 222 thous. tonnes of condensate and 301 mln m^3 of gas; commercial gas production – 240 mln m^3 (89% for the needs of the West Kazakhstan Region)	Ural Oil and Gas
East Urikhtau	Three new wells are launched, production – 84 thous. tonnes of oil and 55 mln m^3 of gas; compressor stations for the full utilisation of associated gas are installed	Urikhtau Operating
Urikhtau (KT-1)	A feasibility study is designed for large-scale development and processing of up to 1 bln m^3 per year	Urikhtau Operating
West Prorva	A feasibility study to build infrastructure is completed; launch of Phase 1 with a capacity of 150 mln m^3 per year is scheduled for 2025	Embamunaigas
Kalamkas	Gas reserves are expanded by 6.7%; a feasibility study to build infrastructure is designed	Mangistaumunaigaz
South Aksay	An audit is conducted and an upgrade of gas processing infrastructure is underway; launch is scheduled for 2025	Kazgermunai

Kazakh Gas Processing Plant

Key highlights

KazGPZ is the first gas processing plant built in Kazakhstan and the only plant in the Mangistau Region. Design capacity: 1.5 bln m^3 of raw gas, 90 thous. tonnes of gas condensate, and 510 thous. tonnes of natural gas liquids per year.

The plant processes feedstock from the operating assets of KMG and other subsoil users to produce commercial gas, liquefied petroleum gas, and household fuel for local needs.

2024 results

The plant processed 837.0 mln m^3 of raw gas, 3.9 thous. tonnes of gas condensate, and 40.7 thous. tonnes of natural gas liquids. In 2025, LPG production is expected at 184.9 thous. tonnes. In 2024, 184.2 thous. tonnes of LPG were sold against 198.9 thous. tonnes in 2023.

Importance for the region

This is the key facility in the industrial agglomeration of the Mangistau Region as it provides local inhabitants and production facilities with critically important products.

Construction of a new gas processing plant in Zhanaozen

Objectives

Meeting growing domestic demand for gas and its derivatives in the Mangistau Region

Enhancing the social environment in the region by creating new jobs and developing infrastructure

Key parameters

The project will run from 2023 to 2027. The new facility is expected to process 900 mln m^3 of raw gas per year. Its core products will be:

- commercial gas – 742 mln m^3;
- LPG – 219 thous. tonnes;
- penthane-hexane fraction – 123 thous. tonnes.

Current status

At present, the Company completed key preparations such as engineering surveys and feedstock sampling to streamline future processes. Design and estimate documents for Phase 2 are at the drafting stage. Gosexpertiza is expected to issue its opinion on Phase 2 in July 2025. On 17 February 2025, Gosexpertiza gave its approval No. 01-0075/25 for Phase 1 of the project.

On 3 March 2025, the Contractor mobilised special-purpose machinery and workforce as Phase 1 construction and installation started.

Plans for 2025

1. Field development

In accordance with the strategy to increase gas production, the Company plans to complete the construction of infrastructure at West Prorva and commission new wells. We will also implement project to develop Urikhtau, Kalamkas, and Rozhkovskoye.

2. Gas commercialisation

To use the produced gas more efficiently, the Company plans to build new methanol capacities at South Karatobe and Laktybai. Gas conversion to methanol will enable KMG to expand sales geography and increase added value.

3. Infrastructure projects

To ensure seamless gas transportation and processing, the Company will complete the upgrade of booster compressor stations and expand processing capacities at the key gas facilities.