Oil and gas production

Oil and gas condensate production

Oil and gas are produced by KMG's operating assets and major domestic projects (megaprojects) where KMG has non-operating interests.

Production assets

Operating assets	KMG's share, %
Ozenmunaigas, Embamunaigas, Kazakhturkmunay, Urikhtau Operating	100
Dunga	60
Mangistaumunaigaz, Karazhanbasmunai, Kazgermunai, Kazakhoil Aktobe, Ural Oil and Gas	50
PetroKazakhstan Inc.	33

Non-operating assets (megaprojects)	KMG's share, %
Tengiz	20
Kashagan	16.88
Karachaganak	10

The Company is well integrated into the global oil and gas ecosystem and cooperates with recognised global leaders, which enables us to introduce best practices, cutting-edge solutions and high standards to support the industry's sustainable growth.

In 2025, oil and gas condensate production went up 10% year-on-year to 26,211 thous. tonnes (544 thous. bbl per day):

- Ozenmunaigas' oil production remained stable at 5,079 thous. tonnes (down 0.4%), while its gas output stood at approximately 610 mln m^3. At Embamunaigas, oil production went up 2.2% to 2,850 thous. tonnes, while gas output totalled 242 mln m^3. Embamunaigas' gas production growth is attributable to the technical commissioning of facilities at the West Prorva field. Mangistaumunaigaz produced 3,083 thous. tonnes of oil.
- Other production assets showed mixed production performance. Ural Oil and Gas LLP (Rozhkovskoye field) posted significant growth, with production going up by 54.4% to 172 thous. tonnes driven by the full-scale operation of wells commissioned in late 2023. The Dunga field saw production grow by 7.5% to 406 thous. tonnes. At the same time, PetroKazakhstan Inc. and Kazgermunai assets experienced declines (13.5% and 13.1%, respectively) due to natural reserve depletion and the expiration of the contract for the East Kumkol field.
- Oil production attributable to KMG from Tengiz soared (up 40.3%) to 7,802 thous. tonnes. The record growth in production indicators is due to the successful completion of the Future Growth Project and the commissioning of the Third-Generation Plant (TGP) in early 2025, which significantly increased our production capacity.
- At Kashagan, oil production attributable to KMG also grew by 4.9% to some 3,025 thous. tonnes. The positive performance was driven by volume recovery after the October 2024 overhaul of the slug catcher and stable uptime of production trains throughout 2025.
- At Karachaganak, oil and gas condensate production attributable to KMG decreased by 0.5% to 1,091 thous. tonnes. Gas production totalled 2,525 mln m^3, surpassing the plan on the back of the 5th compressor commissioning.

Oil and gas condensate production, thous. tonnes

	2023	2024	2025
Oil and gas condensate production	**23,532**	**23,837**	**26,211**
Operating assets	**13,559**	**14,294**	**14,293**
Ozenmunaigas	4,877	5,098	5,079
Embamunaigas	2,722	2,790	2,850
Mangistaumunaigaz	3,075	3,085	3,083
Kazgermunai	594	521	453
Karazhanbasmunai	1,027	1,077	1,053
PetroKazakhstan Inc.	515	472	408
Kazakhoil Aktobe	253	238	241
Kazakhturkmunay	436	440	453
Urikhtau Operating	20	84	95
Dunga	40	378	406
Ural Oil and Gas	1	111	172
Megaprojects	**9,973**	**9,544**	**11,918**
Tengizchevroil	5,779	5,562	7,802
KMG Kashagan B.V.[1]	3,108	2,885	3,025
KMG Karachaganak	1,086	1,097	1,091

Oil and gas condensate production, thous. bbl per day

	2023	2024	2025
Oil and gas condensate production[2]	**486**	**490**	**544**
Operating assets	268	283	284
Megaprojects	217	207	260

Parameters of KMG production assets

The quality of oil produced by KMG's assets varies by region. The heaviest oil (bbl/tonne conversion rate of 6.68) is produced by Karazhanbasmunai while the lightest one (bbl/tonne conversion rate of 8.49) comes from Kazakhturkmunay.

[1] 16.88% – KMG's interest after 15 September 2022.
[2] Assuming indicative individual average weighted bbl/tonne conversion rates used for each asset.

Parameters of KMG production assets

Assets	Porosity	API gravity[1]	Sulphur content, %	Number of fields	Average flow rate of new wells, tonnes/day	Average flow rate of base well stock, tonnes/day	Oil barrelisation ratio, bbl/tonne
Ozenmunaigas	0.19	36.51	0.14	2	6.8	4.0	7.23
Embamunaigas	0.27	32.03	0.62	32	12.3	3.8	7.30
Karazhanbasmunai	0.34	19.81	1–2.5	1	2.32	2.09	6.68
Dunga	0.18–0.32	42.15	0.052	1	–	18.3	7.984
Kazgermunai	0.26	39.95	0.14	6	15.8	12.6	7.25
PetroKazakhstan Inc.	0.09–0.30	51.25	0.03–0.08	18	88.2	5.22	7.63–7.67
Mangistaumunaigaz	0.14	30.77	0.2	15	9.8	4.9	7.23
Kazakhoil Aktobe	0.07	39.4	1.13	2	33.4	11.9	7.52
Kazakhturkmunay	0.16	59.30	0.64	6	0	35.0	8.49
Urikhtau Operating	0.1	39.2	2.7	2	74	51.5	7.72
Ural Oil and Gas	0.05	48	0.2	1	–	231	8.2

Main quality indicators for crude oil are API gravity and sulphur content. CPC Blend produced by KMG's megaprojects has low sulphur content (0.56%) and high API gravity (45.3°) ranking among top-quality grades across the globe.

Crude oil quality comparison: API and sulphur content

Crude oil brand	API gravity	Sulphur content, %
CPC Blend (Kazakhstan, Novorossiysk)	45.3	0.56
West Texas Intermediate (USA, Cushing)	40.0	0.42
Arab Extra Light (Saudi Arabia)	39.4	1.09
Brent (UK)	37.5	0.40
Urals/KEBCO (Russia, Novorossiysk)	31.3	1.36

S&P Global Platts' publicly available data.

[1] API gravity is a unit of measurement for the density of crude oil, developed by the American Petroleum Institute (API). API gravity values are used to determine the relative density of oil compared to water at the same temperature.

Oil production at operating assets

KMG pays special attention to the effective management of mature fields accounting for the majority of the portfolio. Some 85% of total oil production at operating assets comes from seven key fields: Uzen and Karamandybas (Ozenmunaigas), Kalamkas and Zhetybai (Mangistaumunaigaz), S. Nurzhanov and East Moldabek (Embamunaigas), and Karazhanbasmunai.

Priorities and initiatives

KMG focuses on streamlining and improving the efficiency of oil production as one of its strategic priorities. Key focus areas:

- energy security;
- longer time between repairs;
- optimised costs;
- reclamation project at Ozenmunaigas;
- investment projects at Embamunaigas;
- upgrade of motor vehicles and special-purpose machinery;
- automated production and digitalisation.

Dunga development project

Located in the Tupkaragan District of the Mangistau Region, Dunga is one of the key producing assets in KMG's portfolio, making a consistent contribution to the Group's total production. Following the acquisition of a 60% interest from TotalEnergies in late 2023, operational management of the project was transferred to KMG, resulting in the consolidation of financial flows and tighter control over the implementation of Phase 3 development.

Strategic partnership and shareholder structure

Ownership structure under the Production Sharing Agreement (PSA):

- **KMG** – 60% (through Dunga Operating GmbH);
- **Oman Oil Company Limited** – 20%;
- **PTTEP (Kazakhstan) Corporation** – 20%.

Expansion project progress update (Phase 3)

The main driver of production growth at the current stage is the full-scale implementation of Phase 3. The strategic objectives of this phase are to maintain the production plateau and expand infrastructure up to 2039 (the expiry date of the PSA).

The following milestones have been achieved:

- onshore infrastructure expansion;
- production started at 61 previously drilled wells;
- conversion of 16 out of 17 wells to water injection, with the conversion of one well expected in 1H 2026;
- contractor selection for the export oil pipeline, with design work now underway.

Prospects and sustainable development

The Dunga project is seen as a platform for deploying new environmental standards and enhanced oil recovery (EOR) technologies.

1. **Gas potential:** the field's geological gas reserves are estimated to exceed 10 bln m^3. Our current focus is to achieve a 99% gas utilisation rate.
2. **Decarbonisation:** integration of pilot carbon capture projects is under consideration, leveraging the field's proximity to the Caspian coast and the Aktau industrial hub.
3. **Local content:** a long-term Local Content Development Programme for 2025–2029 has been developed and approved. In 2025, the Dunga project continued to maintain a high level of local procurement of goods and services from Kazakhstani suppliers. In 2025, the share of local content in procured goods, works, and services increased to 74%, up from 65% a year earlier.

Production efficiency measures

Enhancing oil recovery and implementing new technologies

In 2025, KMG completed the transition from laboratory research to the full-scale industrial application of technologies as part of its roadmaps for resolving operational bottlenecks. Implementation of the road maps delivered 434 thous. tonnes of additional oil production over the year. The existing Testing Centre portal continues to serve as a one-stop shop for the analysis and implementation of breakthrough solutions, including technologies such as Fishbone multiple well completions and water shut-off systems. For more details on the technological dimension of development, particularly the integration of AI modules from the ABAI system for flooding management and selection of well interventions, see the Innovative Technology Development section.

Developing depleting fields

At mature assets, including Embamunaigas' fields – S. Balgimbayev, Botakhan, and Koshkar – our operations focus on cost optimisation and the leveraging of new management models.

- **Cost optimisation:** the deployment of slim-hole drilling at fields with mature reserves helped cut CAPEX by 30%.
- **Servicing:** KMG is actively transitioning to an unbundled services model and engaging small service companies through risk service contracts for managing wells with low flow rate.
- **Inflow stimulation:** horizontal wells drilled using multi-stage hydraulic fracturing techniques have been the primary growth driver at Embamunaigas fields, yielding flow rates double the original targets.

Reclamation project at Uzen and Karamandybas fields

The reclamation project for the Uzen and Karamandybas fields at Ozenmunaigas has entered the active capital deployment phase, driven by tax relief.

- **Tax regime:** the classification of the fields as watered-out enabled the application of a reduced MET rate of 2.6% until 2036.
- **2025 results:** the released funds of KZT 38 bln delivered additional oil production of 161.3 thous. tonnes.
- **Technological achievements:** the slim-hole technology has been successfully scaled up (41 wells drilled, with an effect of KZT 4.6 bln). The deployment of scale inhibitors increased the mean time between failures (MTBF) for wells from 54 to 141 days.

Power supply at KMG facilities

In 2024 and 2025, the number of power outages and the total oil production shortfall resulting from frequent power outages by power generation and distribution organisations were as follows:

Subsidiaries and associates	2024 total		2025 total	
	Total number of outages	Total oil losses, tonnes	Total number of outages	Total oil losses, tonnes
Mangistaumunaigaz	7	453	16	6,869
Ozenmunaigas	10	547	18	31,149
Karazhanbasmunai	5	1,267	18	8,050
Embamunaigas	122	1,133	88	1,625
Total	**144**	**3,400**	**256**	**47,693**

The increase in power outages in 2025 compared to 2024 is attributable to the shutdown of Mangistau Nuclear Power Plant's power units and represents less than 0.2% of total production attributable to KMG's share.

Constructing energy infrastructure and improving energy efficiency

Hybrid power plant in the Mangistau Region (Zhanaozen). In 2025, the project to construct Kazakhstan's first 247 MW hybrid power complex implemented jointly with Eni (Plenitude) entered the commissioning phase.

- **First stage commissioning:** a 50 MW solar power plant was officially brought online in Zhanaozen on 25 September 2025. The actual volume of electricity generation from solar power plants and output to the grid amounted to 11,630.1 MWh in 2025, amounting to 534 million tenge, and 15,932 MWh in the first quarter of 2026, amounting to 579 million tenge.
- **Technical characteristics:** More than 80,000 bifacial photovoltaic panels were installed across an area of 80 ha, which will generate approximately 86 mln kWh of green energy per year.
- **Intended use:** The power generated is supplied to ensure the stable operation of production facilities at Ozenmunaigas and KazGPP, which is critical for minimising the risks of downtime caused by disruptions to the region's power grid.
- **Plans:** Construction of a 77 MW wind power plant and a 120 MW gas power plant is scheduled for completion in 2026. Once finished, the facility will source up to 40% of its energy from renewables.

Gas engine power plants. To ensure energy self-sufficiency and reduce dependence on external power constraints that previously caused production declines (notably at the fields of Ozenmunaigas, Mangistaumunaigaz, Embamunaigas, and Karazhanbasmunai fields in 2024–2025), KMG Group is implementing its own power generation projects:

- **Karazhanbas field (Karazhanbasmunai):** Karazhanbasmunai is currently conducting a comprehensive review of a power generation project, evaluating options that include attracting long-term investors or leasing a gas engine power plant. On 23 December 2025, Karazhanbasmunai submitted a finance lease and rental agreement for a 5 MW gas engine power plant (the "Lease") to the Board of Directors. On 24 December 2025, the Board of Directors of Karazhanbasmunai approved the lease by Resolution (Minutes No. 05). A confidentiality agreement was made between Karazhanbasmunai and Borusan Makina.
- **Zhetybai and Kalamkas fields (Mangistaumunaigaz):** Completion of the 25 MW (Zhetybai) and 10 MW (Kalamkas) gas power plants is scheduled for 2Q 2026. Collectively, the facilities will process over 85 mln m³ of gas annually, producing 320 mln kWh of power for Mangistaumunaigaz and guaranteeing a stable supply to meet the fields' energy needs.

Improving well operability

To ensure stable production and restore asset functionality at KMG's subsidiaries in 2025, a set of programmes aimed at production enhancement and operational optimisation was implemented.

- **Well interventions:** the deployment of high-tech well interventions, including multi-stage hydraulic fracturing and sidetracking, successfully brought idle wells back into production and, in many cases, delivered flow rates well above target.
- **Well servicing:** the well servicing programmes were focused on predictive maintenance and enhancing equipment reliability. Deploying specialist pumps designed for harsh conditions (mechanical impurities, corrosion) together with scale inhibitor treatments increased the mean time between repairs at several assets.

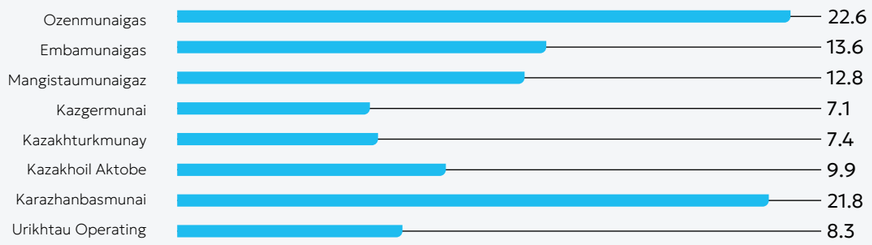
Well stock: as of 31 December 2025, KMG had **18,200 wells** under its operational management, of which **14,135** were active production wells.

Number of wells at KMG-operated assets

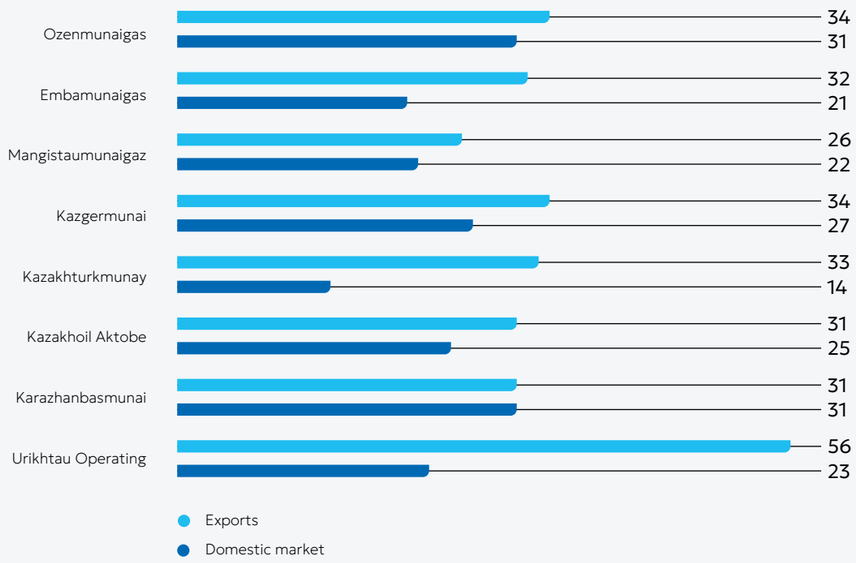
Indicator	2023	2024	2025
New wells	513	517	518
Base well stock, including idle wells	13,142	13,313	13,647
	771	828	689
Injection wells	3,869	4,084	4,336
	341	379	286
Total for KMG-operated assets	**17,524**	**17,914**	**18,501**

Number of drilling rigs involved – 48.

Lifting costs (indicative estimates), USD per bbl



Netbacks (indicative estimates), USD per bbl



Plans for 2026

Key initiatives seek to develop mature fields.

1. **Uzen and Karamandybas field reclamation:**
   allocation of a KZT 40 bln budget for the drilling of new wells and infrastructure modernisation to deliver additional oil production of 160.2 thous. tonnes.

2. **Slim-hole technology scale-up:**
   ramping-up slim-hole drilling at Uzen to 132 wells, cutting well construction CAPEX by an estimated 30%.

3. **Gas infrastructure:**
   bringing online the sixth injection compressor at Karachaganak (KEP1 B) in 2Q. The completion and commissioning of a gas processing plant with a capacity of 1 bln m^3 per year at Kashagan are expected by year-end 2026.

4. **EOR expansion**[1]**:**
   commissioning of two new polymer flooding sites at Kalamkas and launch of full-scale surfactant-polymer flooding pilot trials at Karazhanbas.

5. **Tapping new reserves:**
   starting the active development of the Karazhanbas coastal zone with 25 production wells scheduled for drilling.

6. **Digital transformation:**
   scaling of the ABAI intelligent flooding management system and deployment of a unified digital transport management platform across all of the Group's producing assets.

[1] Enhanced oil recovery – a set of physicochemical, thermal, and hydrodynamic reservoir stimulation techniques aimed at increasing the ultimate oil recovery factor.