The South Emba Sub-Basin of The Pre-Caspian, Kazakhtsan

New Opportunities

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Summary



- Huge potential in Pre-Caspian basin of West Kazakhstan with established and growing infrastructure
- 15-year-old Company, 100% Privately Owned, debt free Operator with robust governance structure.
- Multiple discovered oil and gas assets in West Kazakhstan, located less than 50 km South of the giant Tengiz field
- 4 Oil and Gas fields starting a phased development in 2025 through 2030
- 73MMboe 2P PRMS Reserves approximately 70% gas with reserves growth expected
- 4460km2 "KDS" Exploration Acreage with 201MMbbls Mean Prospective STOIIP with most of block remaining to be explored

"New" Opportunities

New Opportunities are in fact Not New

- 1. Under-explored Acreage waiting for the application of new exploration, including Remote Sensing, 3D seismic and processing techniques, and rock physics, basin modelling.
- 2. Heritage Assets discovered complex and/or marginal oil and gas accumulations.

Recent Changes

In 2022 authorities introduced a "**use it or loose it**" policy for contract extensions. Companies are now moving to production with appraisal where possible.

Gas pricing and legislation has been greatly revised in order to attract exploration and development of gas fields. Long term contracts, with pricing linked to export prices are being negotiated.

2024 price for Lucent is $120/Mm^3$ (3.4/Mscf).



Pre-Caspian Basin, Kazakhstan – SE European Plate



PETROLEUM OPPORTUNITIES





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South Emba Petroleum System(s) – KDS Block



Previously Little-Understood Carboniferous Shelf

South Emba High - now a better understood tilted shelf of ca. 1000km2- Only 3 wells drilled to Paleozoic, (Off-structure & only 1 to Visean/Dev)

Dissectible Stratigraphy, Clastic carbonates with karst features & dolomitization, high AI intervals = internal seal potential, Low = improved reservoir quality, clear source and charge from below and internally.

3D has also identified high confidence 4-way dip stacked closures from Triassic to Lower Cretaceous with forms the basis of the prospectivity.



Stacked Targets Along Strike-Slip Fault



Exploration Programme

Kaz Drill Solution LLP (KDS) is the Operator of a large **4460km2** exploration and production contract in the Mangistau Oblast of Western Kazakhstan. The company has a 2 wells drilling commitment for 2024-2025 and 3 drill-ready prospects mapped by recent 3D seismic.

Reservoir targets are: Mesozoic at 1500m to 2600m depth Carboniferous/Devonian down to 3500m.

In total 10 prospects have been mapped within 3D seismic survey area, with a combined mean prospective OOIP resources of **201MMbbl**. Total estimated recoverable resources is estimated to be **70.5MMbbl**, of which 3 wells will test **56.1MMbbl**.

3 Drill-ready Well Locations

Well	Mean Unrisked STOIIP, MMbbl	Mean Risked STOIIP, MMbbl	Mean Unrisked Recoverable, MMbbl	Mean Risked Recoverable, MMbbl	EMV, \$MM
KDS-1	30.90	16.50	10.28	5.78	60.70
KDS-2	72.46	27.44	22.14	8.79	48.00
KDS-3	64.66	23.28	23.17	8.34	28.00
3 WELLS TOTAL	168.02	67.22	56.14	22.91	106.60

KDS-1



Possible Heritage Opportunity- Lebyazhye Field





- **Discovered** in 1980's with 5 (Soviet era) wells and one Lucent appraisal well. **7.1 MMbbls** C1 GKZ reserves.
- 19.4 BCM Contingent Gas in place
- PRMS Reserves planned based on horizontal development
- Production start scheduled for Q2 2025
- **Tight Upper Triassic sands** Deltaic-Top to Delta-Fan, Draped over Palaeozoic Carbonate platform.
- Conventional Reservoir, 12% por, 5-20md K
- Conventional Oil 37°API oil; GOR 250sm3/sm3
- Conventional Problems
 - Depth of 3500m = increased drilling costs
 - Tight sands = low production rates
 - Difficult identification of pay on Soviet logs
 - Conflicting and incomplete historical database
 - Shallow relief = water-coning from higher perm aquifer
- **Conventional Solutions**
 - 3D Seismic processing PSDM/Inversion/Rock Physics
 - Improved Petrophysical Analysis
 - Horizontal completions
 - Drill fewer wells
 - Avoid aquifer
 - Stimulation/Completion
 - Fit for purpose infrastructure

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Lebyazhye Staged Development Plan

Stage 1 (5 wells) 2025-2026

1 W/O, 2 Rentries, 2 new wells Capex = \$31.8 Cash Requirement = \$23m Payback 2 years

Stage 2 (? wells) 2027-2048 Full field oil development Development Contingent Gas

Stage 1																																
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Gas processing Plan																																
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Tender facilities																																
Construction facilities																																
Commissioning																																
Production Phase																																

Existing Facilities



Cumulative production for 5 wells -13 years = ca. 2 MMbbls



- Country "entry level" Farm-in offering Early production with appraisal and low risk exploration.
- Farm-out due to large development commitments

Lebyazhye Oil Field

50% earnin-in for \$15m:

- 1 work-over, (ESP)
- 2 reactivations of heritage wells: J-1, J11
- · Facilities upgrade,
- 1 well to 3700m.

Future Payment - \$1/boe of reserves increase assessed annually

First Oil Q2 2025

KDS Exploration Block

50% for 3 wells – 2700m, 3500m & 3700m

Total expenditure ca. \$20m

Drilling Q4 2024-2025

10 targets to be drilled

3 year exploration extension