



MINISTRY OF ECOLOGY, GEOLOGY AND NATURAL RESOURCES OF THE REPUBLIC OF KAZAKHSTAN



INVESTMENTS IN EXPLORATION IN THE REPUBLIC OF KAZAKHSTAN



PURPOSE

Ensuring the replenishment of the mineral resource base for the sustainable economic development of the country, the creation of new projects, jobs

CONCEPTUAL INNOVATIONS:

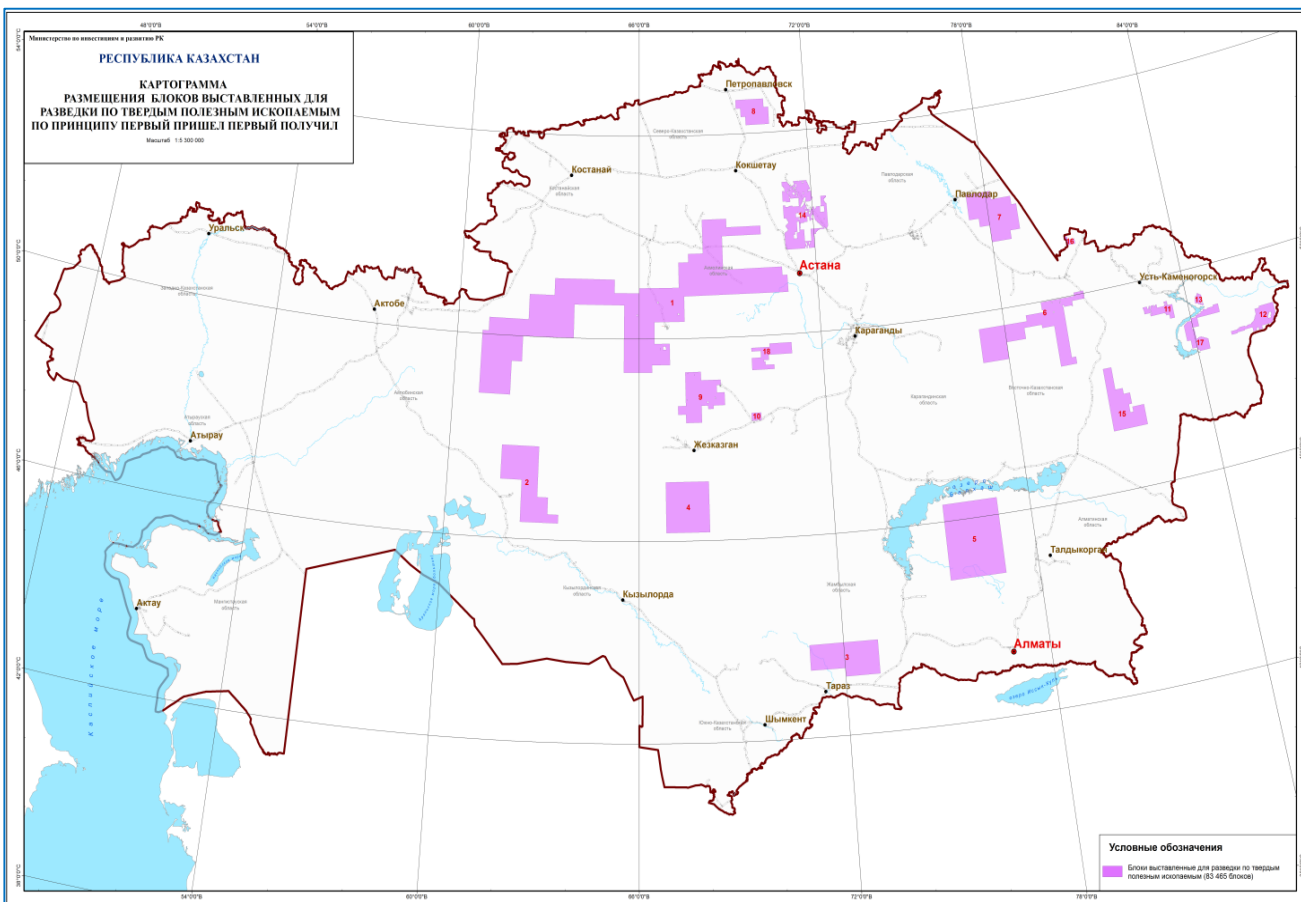
1. The principle of the first application (best international practice)
2. Open access to geological information
3. CRIRSCO International standards for evaluation of the reserves
4. Reduction of administrative barriers and licensing procedures.
5. Ensuring the functioning of the market of junior companies and the possibility of attracting capital



*The Code
"On Subsoil and Subsoil Use"
has entered into force
since June 29, 2018*



Subsoil Management Program



Publicly posted
cartogram
the location of subsoil
plots to grant subsoil
use rights on the “first
application” for the
exploration of solid
minerals.

Applications for subsoil use rights are accepted from September 15, 2018
The issuance of licenses has started from October 15, 2018.



CRIRSCO Inventory calculation system

1

KAZRC Association has become a member of CRIRSCO and the KAZRC Code has been accepted into the CRIRSCO family of international standards.

2

Phased transition in the framework of the Code "On Subsoil and Subsoil Use":
to KAZRC / CRIRSCO system:
since 2018 - under new licenses,
since 2024 - under existing contracts.

Costs State expertise of the subsoil



1. The absence of conditions for the development of the market of services for the calculation of mineral reserves;
2. Enterprises interested in attracting investments have to incur double expenses - for calculating reserves according to GKZ standards, which are mandatory in the Republic of Kazakhstan, but not recognized by financial institutions, as well as CRIRSCO and SPE-PRMS standards.

Benefits from the implementation of international public reporting standards

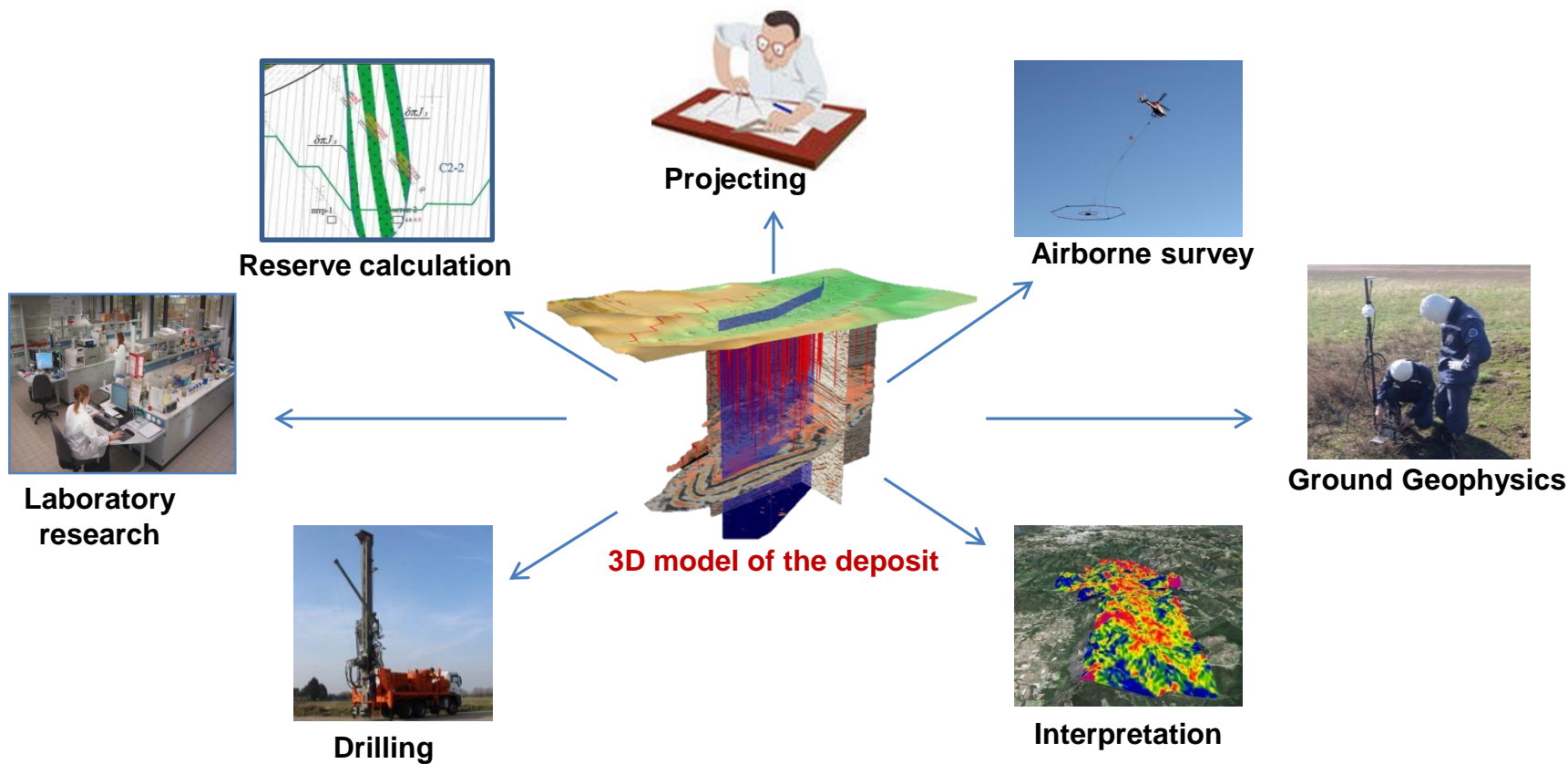
1. The possibility for domestic subsoil users to enter the world stock markets and stock exchanges in order to attract foreign and domestic investments due to the transparency and predictability of the subsoil use sphere;
2. Development of the market of junior companies in subsoil use.



Comparison of Kazakhstan and Australia

| Criteria |  Kazakhstan |  Australia |
|---|---|--|
| Obtaining subsoil use rights | Exploration - 10 working days Extraction – up to 2 years | Exploration– more than 35 working days Extraction – up to 3-4 years |
| Subsoil use operations based on | License | Licenses |
| Inventory calculation | KAZRC (CRIRSCO) | JORC (CRIRSCO) |
| Licensing conditions for mining operations | Minimal expenses for work, R&D + training + MS (mining) | Minimal expenses for work, other conditions by decision of the state authorities |
| The timing of exploration and production | Exploration – 6+5 Extraction – 25+25 | Exploration – 5+5+2 Extraction – 21+21 |
| Subsoil users taxation | Lease payment Signature bonus (license fee) MET | Lease payment License fee Royalties |

Geological subsoil study



| Ground Geophysics | Airborne geophysics | Drilling works |
|--|---|---|
| Wireless 160 channel Electromagnetic geophysical system («Phoenix Geophysics Ltd.», Canada) | Aerolelectromagnetic VTEM, ZTEM systems, with exploration depth range from 800 m to 10 km for solid minerals («Geotech», Canada) | Drilling units with drilling depth up to 1500 m («Atlas Copco», Sweden) |
| High-precision gravimeters CG-5 Autograph («SCINTREX LTD.», Canada) | | Drilling units for integrated drilling up to 1200 m («Dando Drilling», UK) |
| High-precision magnetometer GSM-19W («GEM Systems, Inc.», Canada) | | |
| Surveying equipment («Trimble», USA) | | |



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Attracted investors in exploration



Potential partners:



Commercial Geochemical Laboratory

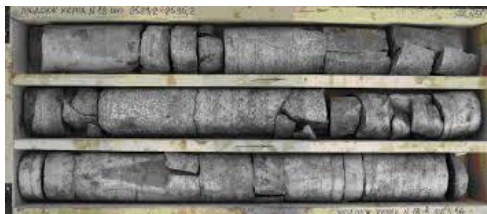
Within the 75 steps of the Plan of the Nation – 100 concrete steps

Project purpose

Kazakhstan currently does not have any **certified laboratories**, dedicated to laboratory analytical testing of minerals samples. Project purpose is to build international accredited commercial laboratory in RK to perform qualitative laboratory and analytical sample tests, using advanced technologies and test methods meeting international standards, whose results will be recognized by global financial institutions.

Laboratory composition

- ✓ Lithopreparation or sample preparation laboratory (rocks crushing and grinding and cutting);
- ✓ Wet laboratory;
- ✓ Fire assay laboratory;
- ✓ Instrumentation room.



Funding



- ✓ KazGeology JSC contribution (noncontrolling partnership share) (funds from authorized capital ~341 mln KZT)

Expected duration



- ✓ 2019

Partner



(Australia)

Laboratory capacity

- ✓ Over 100 thous. samples

Done:

- ✓ Founding documents of the Joint Venture approved by the Management Board and Board of Directors. State registration of Joint Venture - ALS Kazgeochemistry LLP on August 07, 2018.
- ✓ Approved list of purchased laboratory equipment
- ✓ Building selected for commercial geochemical laboratory in Karaganda, located at: Saran highway, construction # 125, with warehouse area -1731.7 sq.m. and office building area – 376.3 sq.m.
- ✓ In February 2019, it is planned to hold extraordinary general meeting of shareholders, where they will discuss the Partnership's budget approval issues for 1 year and its activity, as well as conclusion of lease agreement in Karaganda and other issues related to laboratory creation;
- ✓ Issues related to repair works, technical staff training for laboratory, international accreditation of laboratory are under study.

- **Laboratory is planned to be launched in 2019**

Creation and implementation of the information system "National Data Bank of Mineral Resources of the Republic of Kazakhstan"

Within the 75 steps of the Plan of the Nation - 100 concrete steps and the SP "Digital Kazakhstan" (55 action item)

Creation of a system that will provide equal, full access of investors to geological information, openness and transparency of processes for attracting investments in subsoil use.

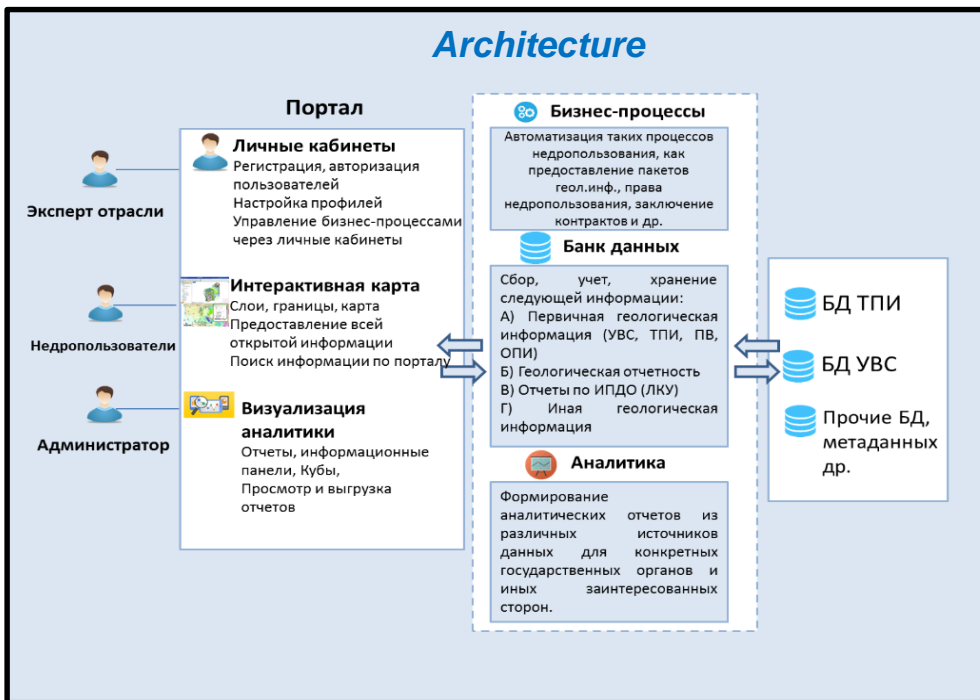
The goal is to increase the overall effectiveness of government agencies and other interested organizations in the field of geological study of the subsoil of the Republic of Kazakhstan and subsoil use.

The main tasks are complex automation of the processes of managing geological data and information about the subsoil of the Republic of Kazakhstan and their subsoil users:

- ✓ creation and implementation of a digitized data warehouse for the explored areas and deposits
- ✓ introduction of analytical and reporting methods and tools for assessing and monitoring the knowledge and use of the subsoil of Kazakhstan
- ✓ implementation and adaptation of new and / or changed activity processes (interested CS and their subordinate organizations)

Integration with the following IS, DB :

- ✓ State database "Legal entities"
- ✓ State database "Individuals"
- ✓ IPI " Unified state system of subsoil use management of the Republic of Kazakhstan»
- ✓ Payment gateway "e-government", etc.



Financing



- ✓ Authorized capital of JSC "Kazgeology" (3.2 billion tenge - according to the feasibility study)

Estimated timeline for implementation



- ✓ December 2019

Effects



- ✓ Consolidation of all geological information
- ✓ Attracting investment in exploration
- ✓ Increased transparency and availability of geological information
- ✓ Providing information of a higher level and quality

Done:

Financial feasibility study (FFS)

- ✓ In order to finance the project, an investment proposal, a feasibility study and adjusted financial feasibility study were developed
- ✓ Republic Budget Commission (RBC) Protocol was received for direction to adjusted FFS (1st stage)
- ✓ Industry conclusions were received for FS (MIID, MIC), for FFS (MIID, MNE)
- ✓ RBC approval was received for FFS (2nd stage) (preliminary)

Plans for 2019:

- ✓ Approval of FFS
- ✓ Approval of TT
- ✓ The introduction of the information system into operation