# **NATURAL RESOURCE POTENTIAL OF TRANS-BAIKAL TERRITORY** LAND RESOURCES MINERAL RAW MATERIAL BASE WATER RESOURCES **FOREST RESOURCES**



«Trans-Baikal Territory has a great potential for the implementation of major investment projects, primarily for the development of natural and mineral resources and development of infrastructure. In recent years, Trans-Baikal Territory has implemented a number of measures to create favorable conditions for all economic entities».

Natalya Zhdanova Governor of Trans-Baikal Territory

## GENERAL GEOGRAPHICAL DATA



#### The area of **431.9 thousand sq. km**

(the size of Trans-Baikal Territory ranks third in the Siberian Federal District and 12th in Russia)



#### The length of borders:

- with the Republic of Buryatia 1700 km.
- with Irkutsk region **520 km.**
- with the Republic of Sakha (Yakutia) 200 km.
- with Amur region 700 km.
- with Mongolia 863 km.
- with China 1095 km.



#### Climate:

extremely continental, the average annual rainfall of 280 mm, the winter is cold. The temperature goes down to -30°C. The summer is hot. The temperature reaches + 25°C.



#### The population:

is more than 1 million people.

## TRANSPORT ACCESSIBILITY

The transport network consists of: rail, road, air transport, in a small extent of water (river) transport.







Length of public railways is 2.4 thousand km.



The international airport of Chita city (Kadala)

#### Federal automobile roads:



P-297 (M-58)

**«Amur»** Chita-Khabarovsk, the length is 2165 km, 740 km of which are within the Territory



P-258 (M-55)

#### «Baikal»

Irkutsk - Ulan-Ude - Chita, the length is 1113 km, 494 km of which are on Trans-Baikal Territory



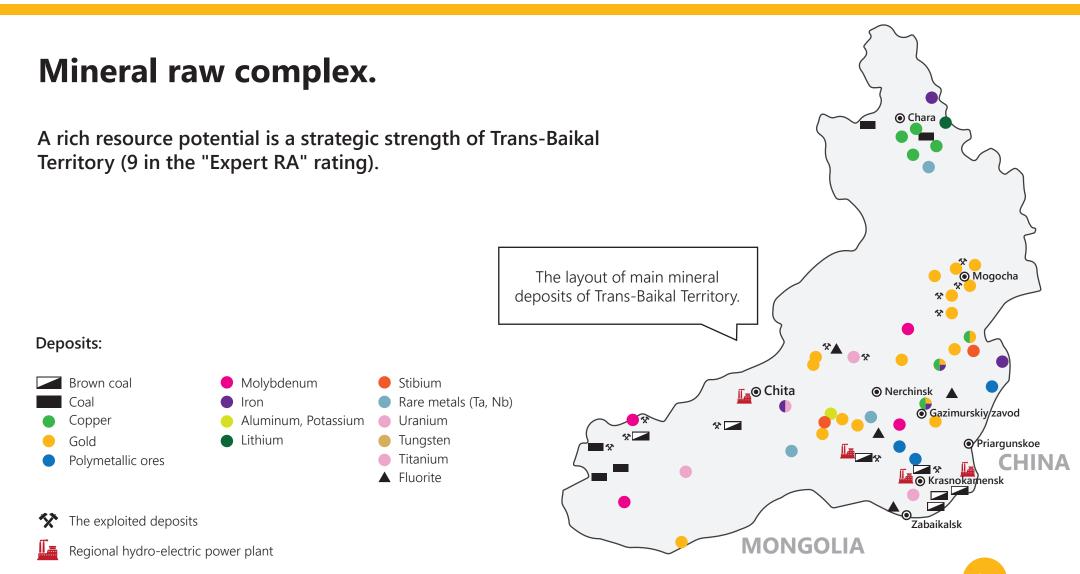
A-350 (A-166)

Chita-Zabaikalsk - the border with China, the length is 493 km.





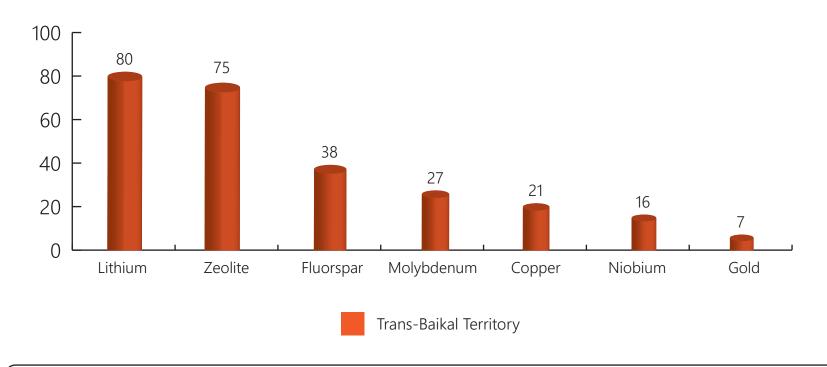
## MINERAL RAW MATERIAL BASE



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### MINERAL RAW MATERIAL BASE

## The reserves of Trans-Baikal Territory proportion in the ratio of the all-Russian indices.



Mineral raw resources of Territory are the basis of social and economic development not only for the Eastern Siberia, and for needs of whole Russia too.



# LARGE DEPOSITS OF HARD AND BROWN COAL OF TRANS-BAIKAL TERRITORY



#### «Chitkandinskoe deposit of hard coal»

Reserves: **31.3 million tons.** The deposit is developed by underground mode. Mining geological and hydrogeological conditions are favorable. The infrastructure is not exist. According to the feasibility study, the capital investments are **1 135 million** (in 2003 prices).

#### «Daurskoe deposit of brown coal»

Reserves: **58.4 million tons.** Useful components: titanium, vanadium, apatite. Subsoil plot area is economically developed. Transport conditions are favorable, many ground highways are suitable to traffic throughout the year. Distance to the highway and power line is 5 km.



## **GOLEVSKOE DEPOSIT OF BROWN SYNNYRITE**

Reserves: **175 million tons.** The deposit can develop by the open method. Mining geological and hydrogeological conditions are favorable. The infrastructure is not exist.

The investment offer «Production of chlorine-free potassium fertilizers on the basis of the development Golevskoe synnyrite deposit.»

**Content of the proposal:** market launch of a unique type of natural chlorine-free synnyrite-based potassium fertilizers.

The powdered ore of the Golevskoe synnyrite deposit can serve as a long-acting fertilizer.

The project is useful in waste-free recycling of synnyrite:

55% for fertilizers; 25% for building materials; 20% for obtain alum earth.







Trans-Baikal Territory is high on the list on a scale of zeolitization. Explored reserves of industrial mineral species of zeolite is **1196.6** million tons, predicted resources are **137.7** million tons.

#### Deposits of zeolite (01.01.2014):

- Shivyrtuyskoe (unallocated subsoil reserve fund);
- Kholinskoe;
- Badinskoe (unallocated subsoil reserve fund).

#### Investment projects for development of Transbaikal zeolites:

- 1. Production of foam glass and other new building materials, the volume of investments is **47.7 million rubles**, the payback period of 7 years
- 2. Create artificial soil on the basis of recycled crust and zeolites, investment is **2.5 million rubles**, implementation period of 5 years.
- 3. The long acting integrated peat zeolite fertilizer, investment is **2 million rubles**, implementation period of 4 years.
- 4. The long acting biologically active organomineral fertilizer
- 5. Using Transbaikal zeolites for natural and waste water treatment
- 6. Potential project «Production of medicines and dietary supplements, based on zeolites»



# OTHER DEPOSITS (SUBSOIL AREAS) IN THE UNALLOCATED SUBSOIL RESERVE FUND

| DEPOSIT            | RAW MATERIAL           | RESOURCES<br>mln. tons  | ADDITIONAL COMMENTS  |
|--------------------|------------------------|---|--|
| Larginskoe         | Magnesium<br>carbonate | 31,7  | Characterized by high quality, natural purity, fully meet<br>environmental requirements. Used for production of<br>refractory materials, binding materials, refractory bricks,<br>chemical industry, production of construction materials. |
| Shamanskoe         | Chromites              | Projected:<br>60 mln. tons of ore<br>22.7 mln. tons Cr2O3<br>1.4 tons of platinum | Feasibility study of the enterprise organization with an annual capacity of 500 thousand tons of ore (337.5 thousand tons of chrome concentrate containing 45%)  |
| Kruchininskoe      | Titano-magnetite       | 617   | The average content of iron ores is 22,5%. To the west of the deposit may be a significant increase in reserves of apatite ores.   |
| Yuzhno-Sulumatskoe | Ironstone              | 650   | Ores are composed primarily of magnetite (15-45%) and silica (60 - 70%). Ores are free-milling, enrichment of possible schemes for two and three-stage magnetic separation   |

## **GOLD DEPOSITS**



## Gold deposits in the unallocated subsoil reserve fund

| Deposit    | Mining      | Commercial reserves<br>of gold, kg | Infrastructure                                    |
|------------|-------------|------------------------------------|---|
| Baleyskoe  | Ground      | 37 976                             | Auto and railway service,<br>power capacity       |
| Baleyskoe  | Underground | 2 326                              |   |
| Itakinskoe | Underground | 62 553                             | Dirt road, ETL                                    |
| Ukonikskoe | Underground | 24 414                             | 23 km of dirt road to the railway station and ETL |





#### 3 bln. tons stored waste of various man-made material.

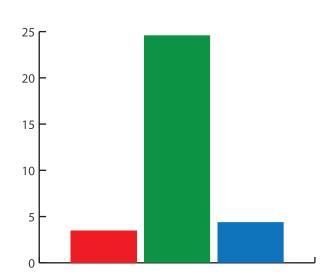
The main deposits of mining industry waste contain basic useful components:

| The deposit which created the entity                   | The main mineral components and their contents %, g/t   |  |
|--|---|--|
| Klyuchevskoe gold deposit                              | Au from 0.35 g / t to 1.0 g / t   |  |
| Davendinskoe, Alexandrovskoe gold deposit              | Au - 2-3 g/t  |  |
| Kariyskoe gold deposit (Pilny area)                    | Au-3 g/t  |  |
| Kariyskoe gold deposit (Novinka and Dmitrievsky areas) | Au - 0,35 g / t   |  |
| Darasunskoe gold deposit                               | Au - from 6,2 g / t - 7,0 g / t Ag - from 9,3 g / t - 30 g / t<br>S - from 4,1% - 24,4% As - 0,95% - 3,9% |  |
| Baleyskoe gold deposit                                 | Au - from 0,34 g / t - 1,2 g / t  |  |
| Taseevskoe gold deposit                                | Au from 0,34 g / t - 0,65 g / t   |  |
| Shakhtaminskoe molybdenum deposit                      | Mo - 0,028% Pb - 0,053% S - 1,92% Bi - 0,0045%<br>Au - 0,2 g / t Ag - 5,2 g / t                           |  |
| Blagodatskoe polymetallic deposit                      | Pb - 0,595% Zn - 1,188% Cd - 0,008%<br>Ag -18,63 g / t Au - 0,235 g / t                                   |  |



## **FOREST RESOURCES**





**3.5 mln. ha** - Protective forests

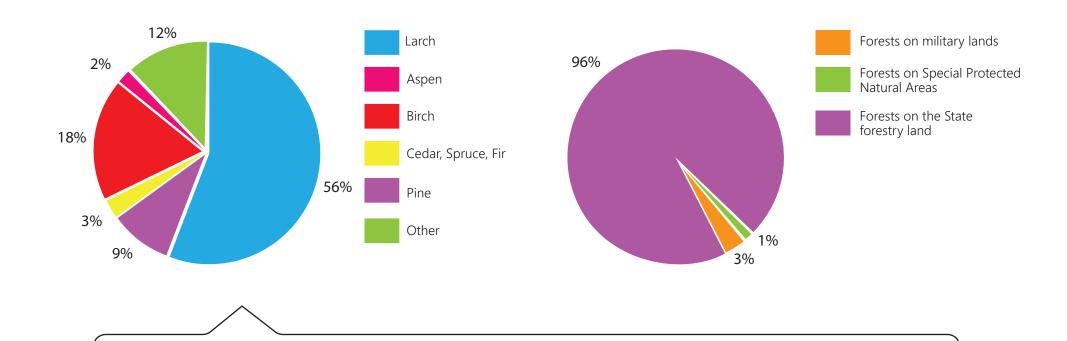
**24,6 mln. ha** - Production forests

**4.4 mln. ha** - Reserved forests

The total reserve of plants – 2,5 billion m³ Including ripe and overripe – 1,2 billion m³ Rated wood cutting – 18,3 billion m³



## **FOREST RESOURCES**

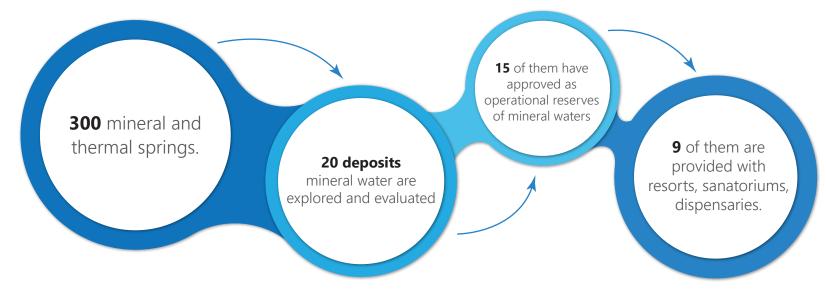


The predominance of larch in the species composition determines the prospects of its processing in

view of the increasing global demand for products made of this kind of wood.



## **WATER RESOURCES**



Also lake mud and medicinal herbs have unique healing properties.

Transbaikal mineral springs are unique and useful for cure variety of diseases:

- Peripheral Nervous System
- Diseases of the musculoskeletal system
- Cerebral palsy
- Gastrointestinal tract
- Respiratory
- Urinary System etc.

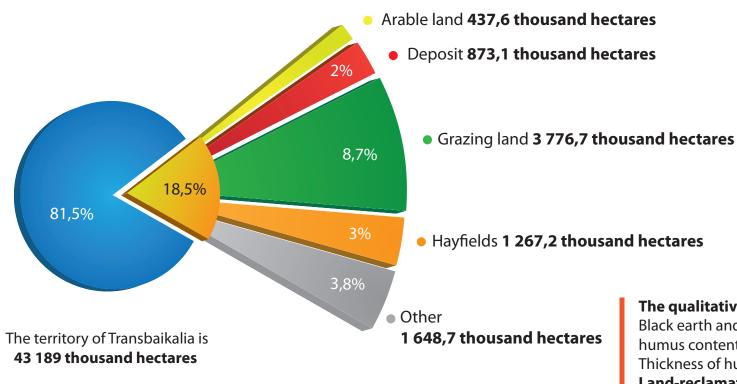
Arkinsky, Zubkovschinsky, Darasun-Nerchinsky, etc. mineral springs are perspective.





### **LAND RESOURCES**

#### The availability of agricultural resources:



- Agricultural land 8 003,3 thousand hectares
- Other land 35 185,7 thousand hectares

#### The qualitative composition of soils

Black earth and meadow soil
humus content – to a max. of 7-8%
Thickness of humus horizon of 60-70 cm
Land-reclamation
43,3 thousand hectares of reclaimed land
PROVISION OF ROAD NETWORK

### **ADVANTAGES OF TRANS-BAIKAL TERRITORY**



- Snowy winters favor the development of pastoralism
- 288 sunny days per year favor the development of crop production



 1095 km of border with China and 863 km of border with Mongolia, the presence of the major auto and railways



 No hazardous industries, the low level of using fertilizers and other chemicals, the predominance of traditional technologies of agricultural production



• Cattle breeding, sheep breeding, horse breeding, reindeer breeding



• 35 organizations of livestock breeding, land reclamation network, processing plants, agro-parks.

INFRASTRUCTURE
OF THE AGROINDUSTRIAL
COMPLEX

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