



Mayska Perspective Area of Gold Ore

Mineral: gold ore.

Type and period of subsoil use: 20-years licenses for exploration, pilot development and production.

Location: Podilsk District of Odessa Region, on the South-Eastern outskirts of Savran Village. The major highway of the area is Kyiv-Odessa (M05) located 15 km East of Savran. Zavallivsky Graphite Plant, located 14 km North-West from the site, has access to railway tracks from the Khashchuvate station of Odessa Railway. An asphalt road approaches the Northern part of the site directly.

Plot area: 253.05 hectares.

Geological information: Two major mineralized (ore) zones identified within the perspective area – Northern zone and Southern zone, which are embedded with the displacing stratum stretch, have North-Western aligning (290°-300°) and subvertical decline. Gold ore formation is confined to metasomatites of biotite-quartz-oligoclase (quartz-biotite-oligoclase, biotite-oligoclase-quartz) compound, which were formed mainly by rocks of the main compound (amphibolites and pyroxene-cummingtonite). Ore formations of the prospective area have indistinct textural and structural characteristics and inhomogeneous mineral composition. The ores of the perspective area belong to the gold-quartz bare-sulfide type. Ore mineralization is represented by oxide, sulfide and precious metal mineralizations. Oxide mineralization is the first stage of ore mineral formation and is represented by magnetite, chromium magnetite, ilmenite, scheelite, rutile, anatase (mineral association of chromium spinelid-chromagnetite-magnetite-ilmenite). Sulfide mineralization is directly related to gold mineralization and is represented by pyrrhotite, pyrite (of three generations), pentlandite, marcasite, chalcopyrite (of two generations), sphalerite, galena, as well as arsenopyrite, loellingite, cobaltite. Precious metal mineralization is separated into two branches. The first branch is the actual golden branch, characterized by the predominance of high-fineness native gold and gold tellurides with a subordinate amount of bismuth and native bismuth tellurides. The second branch differs by the development of bismuth-silver-telluride mineralization with the major compound of native bismuth with the subordinate compound of native silver, electrum, hessite and galena. The size of gold grain is 0.001 - 2.0 mm, sometimes visible gold reaches 4 mm. The content of large gold (> 0.07 mm) is 50 - 60%, small (0.07-0.001 mm) - about 30%, fine - 10-20%. The morphology of gold grains is diverse: lumpy, lamellar, dendritic, streaked, hooked, film, xenomorphic, dusty formations. Native gold fineness is high - 983-992. The gold content in the samples taken from the core wells, ranges from the initial g/t content to 1570 g/t. The gold-silver ratio for areas with industrial parameters averages at 7:1. Mining and geological conditions of the prospective area determine the underground method of ore mining. The conducted hydrogeological works revealed that the main water inflow into the excavation site will occur during the development of the 10 m horizon and will constitute 162.8 m³/h. The prospective area is classified as simple in terms of drainage of the minefield category. No special drainage measures will be required. Drainage can be carried out by means of internal mine outflow. Groundwaters of the prospective area, which are going to be drained during mining operations, have salinity of 0.5-0.7 g/l with hardness of up to 4.2 mg-eq/l. Groundwaters can be discharged into the Southern Bug through the settling tanks for the deposition of mechanical suspensions as well as partially used for technical water supply of the mine complex.

Available geological information: The site was discovered in 1991 during predicting geological works on uranium of Sinitsivska grounds. In 1991-1993 greenfield exploration was performed within the prospective area. In 1994-2000 excavation-drilling exploration was performed but was not completed due to lack of funding. A total of 177 inclined assessment wells and exploration wells of total capacity of 64 510 m; and 40 hydrogeological wells with a total capacity of 7 726 m were drilled within the prospective area. The North-Western part of the prospective area contains a 204 m deep mine shaft of industrial cross section. At the moment the shaft has a wet conservation status. In metallogenic terms the prospective area is confined to the Savran ore field and is its major gold ore object.

Resources/reserves assessment. Promising gold reserves of the perspective area are estimated as: category P1 - 21.98 tons; category P2 - 18.75 tons; the weighted average gold content in sections is 3.4 g/t (Minutes of the Meeting of Scientific Council on Forecasting of the Ukrainian State Geological Survey #31 dated 12.12.2001). Given the close geographical proximity between Mayska prospective area of gold ore and Kvitka prospective area of gold ore which are located within the common Savran ore field, these prospective areas can be considered as a single investment project.

Geological information package.

Available geological reports in the geological funds of KP "Kirovgeologiya".

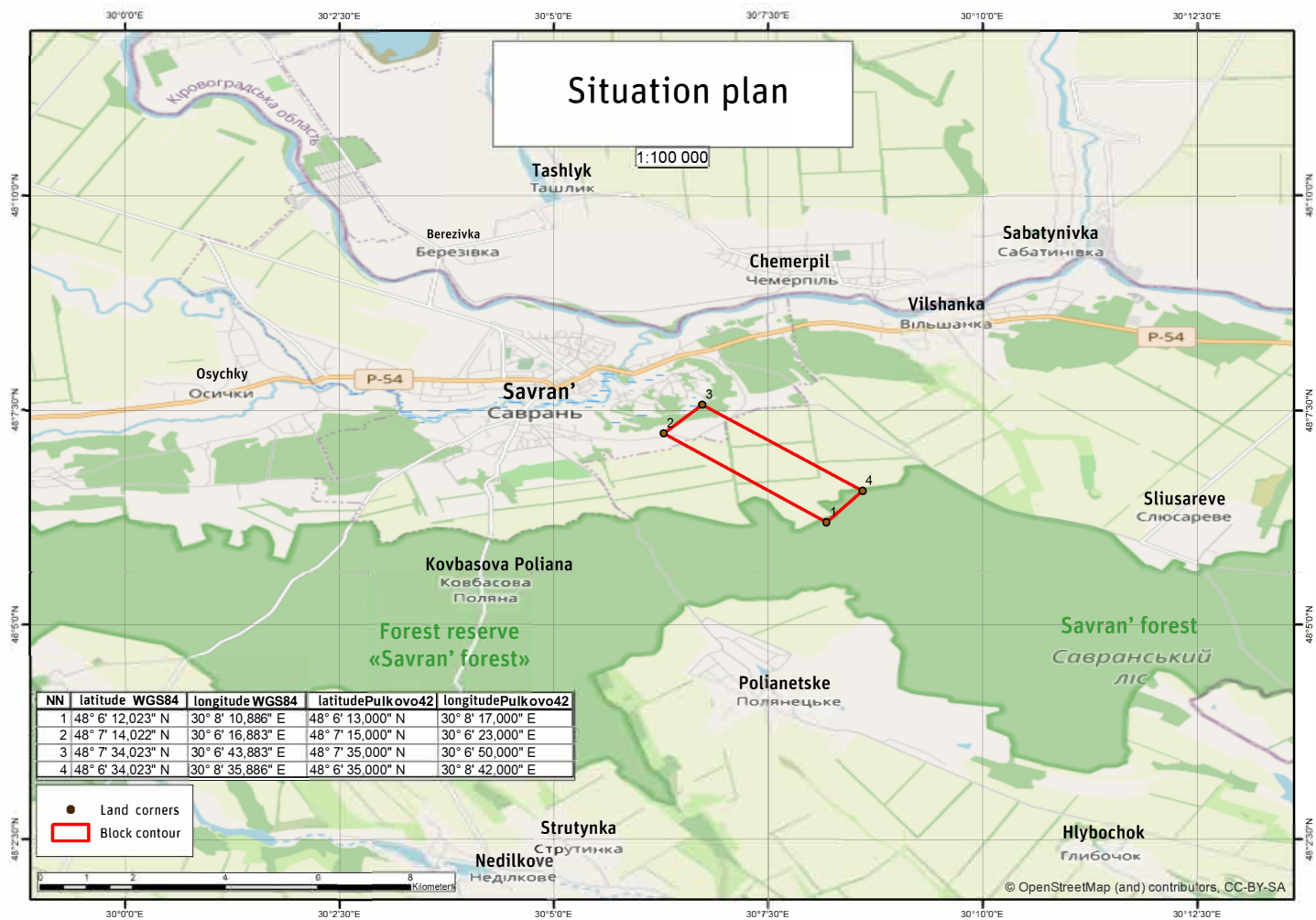
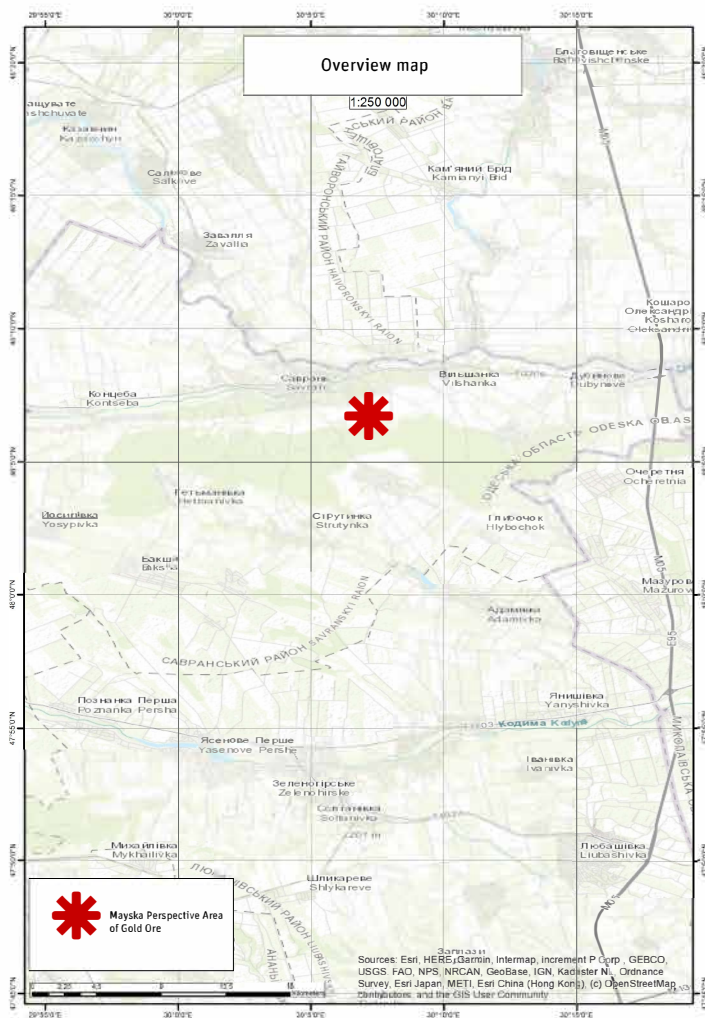
http://geoinf.kiev.ua/wp/geologichni-zviti.php?rep=fnd_shifr.rdf&schifr=58219

http://geoinf.kiev.ua/wp/geologichni-zviti.php?rep=fnd_shifr.rdf&schifr=57153

Minimum work program: Provided by Mining terms Model agreements and defined in "Work Program" annex. Model agreements are listed at the link:

<https://www.geo.gov.ua/primirni-ugodi-pro-umovi-koristuvannya-nadrami/>

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List of cadastral numbers of land plots, within the contour of the deposit



1	5124355100:02:002:0111	67	5124355100:01:003:0263
2	5124355100:02:002:0045	68	5124355100:01:003:0379
3	5124355100:02:003:0204	69	5124355100:01:003:0373
4	5124355100:02:003:0357	70	5124355100:01:003:0431
5	5124355100:02:003:0407	71	5124355100:01:003:0275
6	5124355100:02:003:0359	72	5124355100:01:003:0339
7	5124355100:02:003:0358	73	5124355100:01:003:0271
8	5124355100:02:003:0121	74	5124355100:01:003:0288
9	5124355100:02:003:0425	75	5124355100:01:003:0315
10	5124355100:01:003:0093	76	5124355100:01:003:0370
11	5124355100:01:003:0515	77	5124355100:01:003:0438
12	5124355100:01:003:0397	78	5124355100:01:003:0248
13	5124355100:01:003:0398	79	5124355100:01:003:0001
14	5124355100:01:003:0499	80	5124355100:01:003:0002
15	5124355100:01:003:0247	81	5124355100:01:003:0318
16	5124355100:01:003:0366	82	5124355100:01:003:0320
17	5124355100:01:003:0087	83	5124355100:01:003:0319
18	5124355100:01:003:0327	84	5124355100:01:003:0374
19	5124355100:01:003:0302	85	5124355100:01:003:0233
20	5124355100:01:003:0237	86	5124355100:01:003:0270
21	5124355100:01:003:0235	87	5124355100:01:003:0281
22	5124355100:01:003:0236	88	5124355100:01:003:0290
23	5124355100:01:003:0242	89	5124355100:01:003:0371
24	5124355100:01:003:0145	90	5124355100:01:003:0375
25	5124355100:01:003:0144	91	5124355100:01:003:0502
26	5124355100:01:003:0301	92	5124355100:01:003:0138
27	5124355100:01:003:0238	93	5124355100:01:003:0139
28	5124355100:01:003:0243	94	5124355100:01:003:0140
29	5124355100:01:003:0321	95	5124355100:01:003:0141
30	5124355100:01:003:0404	96	5124355100:01:003:0152
31	5124355100:01:003:0239	97	5124355100:01:003:0155
32	5124355100:01:003:0241	98	5124355100:01:003:0160
33	5124355100:01:003:0386	99	5124355100:01:003:0166
34	5124355100:01:003:0405	100	5124355100:01:003:0172
35	5124355100:01:003:0240	101	5124355100:01:003:0153
36	5124355100:01:003:0450	102	5124355100:01:003:0156
37	5124355100:01:003:0424	103	5124355100:01:003:0161
38	5124355100:01:003:0294	104	5124355100:01:003:0167
39	5124355100:01:003:0465	105	5124355100:01:003:0173
40	5124355100:01:003:0461	106	5124355100:01:003:0419
41	5124355100:01:003:0261	107	5124355100:01:003:0184
42	5124355100:01:003:0393	108	5124355100:01:003:0185
43	5124355100:01:003:0322	109	5124355100:01:003:0186
44	5124355100:01:003:0500	110	5124355100:01:003:0187
45	5124355100:01:003:0462	111	5124355100:01:003:0188
46	5124355100:01:003:0463	112	5124355100:01:003:0157
47	5124355100:01:003:0475	113	5124355100:01:003:0162
48	5124355100:01:003:0378	114	5124355100:01:003:0168
49	5124355100:01:003:0372	115	5124355100:01:003:0174
50	5124355100:01:003:0330	116	5124355100:01:003:0420
51	5124355100:01:003:0377	117	5124355100:01:003:0158
52	5124355100:01:003:0474	118	5124355100:01:003:0163
53	5124355100:01:003:0352	119	5124355100:01:003:0169
54	5124355100:01:003:0503	120	5124355100:01:003:0175
55	5124355100:01:003:0326	121	5124355100:01:003:0421
56	5124355100:01:003:0337	122	5124355100:01:003:0164
57	5124355100:01:003:0505	123	5124355100:01:003:0170
58	5124355100:01:003:0408	124	5124355100:01:003:0176
59	5124355100:01:003:0312	125	5124355100:01:003:0422
60	5124355100:01:003:0266	126	5124355100:01:003:0423
61	5124355100:01:003:0348	127	5124355100:01:003:0165
62	5124355100:01:003:0269	128	5124355100:01:003:0171
63	5124355100:01:003:0335	129	5124355100:01:003:0177
64	5124355100:01:003:0267	130	5124355100:01:005:0008
65	5124355100:01:003:0409	131	5124355100:01:003:0215
66	5124355100:01:003:0262	132	5124355100:01:003:0214



Information on land plots, in particular by cadastral number,
can be obtained on the Public Cadastral Map of Ukraine:
<https://cutt.ly/Fx0CuBg>