

# NI43-101 TECHNICAL REPORT ON THE GOLCUK LICENCE, SIVAS PROVINCE, TURKEY

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SUMMARY ONLY IN  
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Prepared For

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## 1 SUMMARY

This technical review of the Golcuk Property for Pasinex Resources Limited (Pasinex) was prepared in compliance with Canadian National Instrument 43-101 and its Form 43-101F1 format for Technical Reports (June 2011 version).

The review summarises the exploration data available from various historic assessments of the Golcuk licence area (the Property) in Turkey, as well as exploration work done by Pasinex from September 2012 to February 2013. In places the author has expressed his opinion with regard to information gained during a visit to the property in October 2012.

In Turkey all useful mineral substances occurring under the surface are the property of the State. An exploration licence is valid for 10 years and is renewable six times for the same period. It provides the company with the right to explore for and extract base and precious metals within the property. The licence is exclusive and transferable.

The Golcuk property, covering 40 square kilometres, lies in the Sivas Province of north central Turkey. The property is held under Licence number 61567 issued by General Directorate of Mining Affairs on the 31<sup>st</sup> July 2008 for the exploration of base and precious metals. This exploration licence was originally granted to Eurasia Madencilik Ltd. Şti. (Eurasia) on 25 December, 2003, and was assigned to Pasinex Arama ve Madencilik A.S. by Eurasia on 25 July, 2012. Eurasia is the Turkish subsidiary of Eurasian Minerals Inc., and Pasinex Arama ve Madencilik A. S. is the Turkish subsidiary of Pasinex.

Within seven years of receipt of an exploration licence, the licence holder (or transferee of the licence) must apply for an Operating Licence, and commence with mining on the property. Eurasia applied for an operating licence in November, 2007, and the licence to mine 9000 tons per year at Golcuk was granted on July 16, 2008. However, by the date of transfer of the exploration and operation licences to Pasinex, Eurasia had not initiated their planned mining operations on the property.

In order to avoid cancellation of the licence, Pasinex established from the Mining Directorate that production by Pasinex before September 30, 2012, (later extended) of a minimum of 90 tons from the planned and permitted underground mining area, and a further 810 tons by the 31<sup>st</sup> of July, 2013, would be sufficient for continued validity of the Golcuk licences to 31 July, 2014.

Pasinex contracted Mitto Madencilik to undertake the 90 tons of production, which was successfully completed. The production was accepted as satisfactory with respect to the first obligation mentioned above by the Mining Directorate in a report finalised on October 15, 2012.

While the Mining Law is not clear in this regard, according to assurances given to the author by the CEO of Pasinex, it is necessary for Pasinex to complete, annually, only 10% of the 9000 tons of annual production specified in the Eurasia's original production plan in order to maintain its exploration and production licences during future years. This amounts to 900 tons of production per year. It is Pasinex's intention to meet its obligations in this regard.

Pasinex' agreement with Eurasia requires:

1. Expenditure of US\$200 000 by the first anniversary of the completion date, with the money to be spent on fulfilling the outstanding Mining Obligations and a maximum of 750m of core drilling.
2. Expenditure of US\$250 000 by the second anniversary of the completion date and
3. Expenditure of US\$250 000 by the fourth anniversary of the completion date.
4. Reports on work done have to be submitted every six months to Eurasia.

A royalty of 2.9% NSR is payable to Eurasia. This may be reduced to a 2.0% NSR by a payment before February 2019 of US\$1 000 000.

The author believes that the agreements amongst Eurasia, Pasinex and the Government, together with the exploration carried out and planned by Pasinex, comply with the rules and regulations regarding mining and exploration in Turkey. However, the agreements and permits have not been legally tested (in court) as it is believed that such testing is beyond the scope of this technical report.

The property is some 120 kilometres east-northeast of the provincial capital of Sivas and is accessed by a secondary well maintained gravel road from the main tarred E88/D200 highway between Sivas and Erzurum. It has the climate of the Central Anatolian Region with warm to hot dry summers and cold snowy winters.

There are no perennial rivers on the property. The property is partly covered with boreal wet forest, conifers and birch and is dominantly pastoral. The soil in the area is thin (generally <10cm) soil with numerous bedrock fragments. There is a high probability of an earthquake of magnitude >7 occurring in a 50 year cycle and low landslide hazard. Water for mining would be available from underground sources. There is no electricity on site but a 154Kva line of the national grid crosses the property. A gas pipeline is proposed to pass within 32km of the licence indicating that additions to the infrastructure of the area are ongoing.

The exploration focus is on copper and silver mineralisation hosted in mafic volcanics. Copper mineralisation, mainly as malachite and chrysocolla derived from bornite and chalcocite, is present in outcrops over at least two kilometres of strike. Previously work had been carried out by Maden Tetkik ve Arama (MTA) and Etibank Arama ve Madencilik (Etibank), both Turkish para-statal organisations, Rio Tinto Turkey (Rio Tinto), Eurasia and Turmenka Madencilik Sanayi ve Ticaret (Turmenka).

In the 1970's Etibank carried out rock chip and geochemical soil sampling and in 1973 drilled a total of 1113m in six vertical and one inclined diamond core holes around the site of old workings. The best intersection was in borehole GS2 with 1.36%Cu over 34.0m from 85m. The geological logs record andesitic and basaltic volcanics, volcanic and diabase breccia with chalcopyrite, bornite and malachite mineralisation.

In the 1990's Rio Tinto carried out some exploration and drilled one hole, GD1, inclined to the west at 80° and drilled to a depth of 198.2m in the same area as the Etibank boreholes. The borehole returned an interval of 17m grading 1.17% Cu and 11.7g/t Ag.

In 2008, Turmenka drilled a total of 1863m in 13 core holes, all within the small area previously investigated by Etibank. Assay from eight holes yielded intersections of >1% Cu and >11g/t Ag including an intercept in borehole TGSJ-18 from 87.0m of 13.5m grading 2.6% Cu and 41.9g/t Ag.

In 2011 a total of 2856 geochemical soil samples were collected by Eurasia on a line spacing of 50m and sample spacing of 50m, covering some 7km<sup>2</sup> of the 40km<sup>2</sup> licence. The results using a >150ppm Cu contour showed three main anomalous areas, two of which have not yet been drilled.

Eurasia also carried out geological mapping of part of the soil sampled area at a scale of 1:5000, and a ground magnetic survey was carried out over the central part of the soil-sampled area by Wright Geophysics for Eurasia in July 2009. It was concluded that the interpretation of the magnetic and the mapped geology did not agree and further soil sampling and geological mapping was recommended.

According to the MTA 1:100,000 geological map (H39-Giresun), mineralisation at Golcuk occurs in Eocene-aged volcanoclastic rocks. These correspond with Eocene volcano-sedimentary sequences identified over a broad area in Turkey, and associated with a regional extensional regime bracketed in time by two compressional regimes. Modern literature on this volcano-sedimentary sequence names it as the Mucur Formation.

Tectonically, it should be noted that the property lies on the Anatolian block some 2-3km south of the North Anatolian Fault.

Also of note some 2.5km to the southeast of the property is the large (225 km<sup>2</sup>) Kosedag pluton. This Eocene multi-sourced syenite and quartz syenite was intruded into the basin hosting the Mucur Formation, and may have played a role in the genesis of mineralisation at Golcuk.

The main deposit type being explored for on the Golcuk property is copper with ancillary silver in basic to intermediate mafic volcanics and associated sediments, which corresponds to the United States Geological Survey (USGS) Deposit Model 23, "Basaltic Copper".

Exploration work carried out by Pasinex at Golcuk up until 28 February, 2013, excluding drilling, falls into the following categories:

- (1) Re-analysis of soil samples
- (2) Geological mapping
- (3) Outcrop sampling
- (4) Adit excavation

Less than half of the soil samples collected at Golcuk by the previous owner were analysed for elements other than copper. However, when the data available for these elements was plotted on a map,

patterns were apparent which might assist with better understanding the geology of the prospect. Pasinex therefore decided to recover from the previous owner, for the purpose of re-analysis for missing elements, those soil samples which were still in a suitable condition for analysis, and analysed them. The data may prove useful in discriminating different lithological units encountered during drilling on the property.

Detailed geological mapping of the Golcuk drilling area produced by Eurasia has been extended by Pasinex to cover both the Golcuk North and Golcuk West soil geochemical anomalies.

In November and December 2012 Pasinex carried out surface outcrop sampling in the Main Golcuk target area which broadly confirmed outcrop sampling results obtained by earlier workers in the area.

In early October, 2012, Pasinex commissioned the mining of a 12 meter-long 2m by 2m horizontal adit located at North 4450185 and East 400765 in order to fulfill the minimum Golcuk licence mining obligations for 2012/13. No economic mineralisation was encountered in this mining.

In December, 2012, boreholes PAS-01 and PAS-02 were sited to test for mineralisation plunging to the north-east of existing intersections of mineralisation.

Assay results for PAS-01 indicated two mineralised intersections at a 0.5% Cu cut-off: 3.50m from 174.70m grading 0.54% Cu and 9.70m from 203.70m grading 2.97%Cu, including 6.70m grading 3.7%Cu.

Borehole PAS-02 returned no significant intersections of mineralisation.

The author believes that the sample preparation, analysis and security measures implemented by Pasinex on the Golcuk project were adequate for the metals of interest, grades expected and encountered, and level of maturity of the project.

No information is available with respect to the sample preparation and security procedures adopted by workers on the property prior to Pasinex. However the following factors give the author comfort that the results reported for historical drilling accurately represent the Golcuk property:

- (I) The availability for inspection and sampling of half-core for all the Turmenka drill core;
- (II) The availability of all assay certificates from an internationally-reputable laboratory (ALS-Chemex) for samples analysed from Turmenka drilling;
- (III) Verification assays undertaken by the author and reported in Section 12 below.

The geology of the licence area was inspected during some foot traverses on the 29<sup>th</sup> and 30<sup>th</sup> October 2012. The geology was verified at selected sites during these traverses.

Quarter core was sampled by the author from borehole TGSJ-18 between 84.0m and 106.0m. Assay results confirm the previous Eurasia values.

During the field visit an apparent error was noted in the location of some of the drill collars, which does not compromise the geological investigation to date, and which Pasinex have corrected.

A metallurgical report prepared for Rio Tinto on samples from their single borehole at Golcuk indicated that, “the grain size and mode of occurrence of the copper sulphide minerals is highly variable, but in general, it should prove possible to produce an acceptable grade of concentrate from the material at a reasonably fine grind size”.

While the geology at Golcuk is sufficiently well understood to be able to apply an exploration model with considerable economic potential (the “Basaltic Copper Model”) to guide exploration, most of the property has not been subjected to geochemical or geophysical surveying, or mapping at better than a scale of 1:100,000. This provides the property with considerable potential for discovery of new centres of mineralisation not contiguous with the existing known mineralisation.

The two copper-in-soil geochemical anomalies that are not contiguous with the central, drilled, anomaly at Golcuk are examples of these, and both are certainly drilling targets.

As the structural controls on the known mineralisation have not yet been worked out, and the bodies of mineralisation identified to date are relatively narrow, the known mineralisation remains open in a number of directions.

Mineral resource and reserve estimates made previously by Eurasia to comply with the Golcuk property’s licencing conditions were considered inappropriate for the style of mineralisation and the amount of drilling completed at Golcuk. Currently the Golcuk property contains no resources or reserves compliant with the National Instrument 43-101 standard.

In the light of Pasinex’s intention to change to open pit mining to maintain the Golcuk licence, consideration should be given to applying for new mining permits located over cropping out mineralisation in order to maximise the likelihood of producing saleable material.

Pasinex’s Golcuk licence clearly covers an under-explored area with considerable potential for the discovery of economic deposits of copper. It has clearly not yet been subjected to 20<sup>th</sup> or 21<sup>st</sup> century best-practice exploration methods, and therefore constitutes an exploration property of considerable merit.

A budget of US\$800,000 is recommended for the next phase of exploration on the Golcuk property, divided between an airborne magnetics survey, soil sampling, geological mapping and drilling.