

## CANEX AERIAL EXPLORATION LTD.

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VANCOUVER 5, B. C. CANADA

18 July, 1963.

Noranda Exploration Co. Ltd.,  
2256 West 12th Avenue,  
Vancouver, B.C.

Kerr Addison Gold Mines Ltd.,  
409 Granville Street,  
Vancouver 2, B.C.

Attention: Mr. B.O. Brynson

Attention: Mr. W. Sirola ✓

Homestake Mining Company,  
100 Bush Street,  
San Francisco, Calif. USA.

Silver Titan Mines Limited,  
Rm. 328 - 355 Burrard Street,  
Vancouver 1, B.C.

Attention: Mr. D.C. Sharpstone

Attention: Dr. A. Aho

Gentlemen:

TITAN PROJECT

Monthly Report - Mid June to Mid July, 1963

Personnel Movements:

M. Templeman-Kluit, Reconnaissance Geologist, spent the period June 17th to July 2nd carrying out surface mapping for Paso Silver Mines Ltd. over their ground near the head of Secret Creek.

J.S. Brock, Junior Geologist, left on July 2nd to join the field staff of the Pelly minerals Syndicate, but returned on July 5th to assist in the accelerated geochemical prospecting programme planned for the Titan Project.

J. French, Prospector, returned from a month's prospecting trip for the Dynasty Syndicate, and will now be employed in prospecting for the Titan Project.

R. Fraser, Bulldozer Operator, was hired on a daily basis for the period June 29th to July 4th in order to assist Hampton in the soil sampling programme over the Shanghai group of claims. Fraser's bulldozer was lying idle at the time.

Staff at the close of the second month of field operations consisted of - Seymour, Templeman-Kluit, Hampton, Brock, French and Foley, together with Fraser of General Construction Ltd.

Dr. D.R. Claws of Barringer Research Ltd. visited the Titan Project from June 26th to 29th and dealt with the problems involved in geochemically prospecting the Silver Titan ground on both limbs of the McQuesten anticline.

Dr. A.E. Aho visited the Project from July 8th to 10th and held discussions with the Project Manager evaluating the field work to date and laying future exploration plans.

Work Done:

Galena Hill Properties:

Geophysical Methods:- The resistivity survey of the two areas delineated in last month's report was completed on June 18th, and a complete set of readings was left by the geophysicist. His report has not been received as yet. Nevertheless, contouring of the readings did reveal definite trends of low or high readings, and the possible significance of these is discussed below.

Area "A" (covering all of LEO No. 1 and portions of LEO No. 3, LEO Fraction and KPO No. 1) is marked by a resistivity low trending N70°W and a resistivity high trending N45°E. It is reasonably certain that this low marks a zone of graphitic schists that cap the south-dipping Central (or Hector-Calumet) Quartzite. The northwestern end of this low was detected in a previous survey. This new data extends the anomaly towards the southeast until it is abruptly cut off by the N45°E trending resistivity high. This high seems to represent the northeast extension of a suspected vein fault system detected in previous resistivity surveys as a series of lows across the width of KPO No. 1. Further northeast along the same general strike and stratigraphically below the quartzite, strong E.M. anomalies were discovered and diamond drilled. The drill holes, T. 1 and T. 2, confirmed the existence of a vein fault zone, but mineralization was very sparse. Therefore, the optimum conditions for ore formation in the district, that of a vein fault system passing from competent quartzite up into incompetent micaceous schists and thin-bedded quartzites, do exist below this resistivity high. The significance of the strong high readings rather than a continuation of the low readings from the southwest is not as yet appreciated.

Area "B" (covering portions of LEO Nos. 4, 6, 8, 16 and 17), on the other hand, is marked by a lack of dominant trends and does little to assist in clarifying the underlying structure. Two rather weak lows, both trending N20-30°E, occur at opposite corners of the surveyed area, and could possibly represent the disrupted members of the same vein fault system displaced by a northwest-trending cross-fault. The likelihood of much economic mineralization in this area is certainly not enhanced by this new resistivity work.

Geochemical Methods:- During his visit, Dr. Clews was taken on a tour of the typical muskeg country of the Galena Hill Properties, and his advice was sought on all aspects of geochemically prospecting in this type of terrain, i.e. the sampling method, type of material to be sampled, sample interval and analytical method. In order to collect samples from the permafrost, he developed a sampling tool consisting primarily of a five-foot core barrel which is hammered into the frozen ground until the "G" horizon is reached below the organic layer. The core from the top few inches of the "G" horizon constitute the sample which Dr. Clews felt

would give the most reliable soil values. In view of the extreme narrowness of the ore-bearing veins in the district, he suggested an initial 50-foot sample interval, possibly to be followed by a 25-foot interval if any anomalous values appear at the original interval. Unfortunately, there was no known (and still uncontaminated) mineralized zone over which he could run an orientation survey which would permit the development in the lab of the most suitable analytical method. Nevertheless, he seemed quite optimistic that mineralization, although buried by more than 15 feet of permanently frozen gravelly material, would still be reflected in the topmost soils or silts of the "G" horizon. He recommended lead as the element for wet analyses.

A soil sampling grid, measuring 1000 feet by 550 feet, has been laid out to cover completely the resistivity high anomaly in Area "A", and sampling has been started. The "G" horizon is reached from one to three feet below surface, and its appearance is marked by an abrupt colour change from dark brown to medium grey. Sampling the material is, however, a slow process, and seldom are more than four or five samples collected in an hour. The preparation of the samples from their original frozen state to a dry sieved state ready for mercury detection and wet analysis is also a rather long and messy operation.

#### North Limb Properties:

##### Shanghai Group:

Bulldozer trenching over the Shanghai claims was halted after the mid June visit of Dr. Aho in order to allow time for the completion of a geochemical soil sampling programme, and for additional thawing of the permafrost which seriously impedes progress in the trenches. The bulldozer returned to the Shanghai Group on July 12th with a load of diesel fuel and, at the time of writing, was making rapid progress through the newly thawed ground. Bedrock exposure over the full length of trench No. 2 is expected momentarily.

The geochemical soil sampling grid, half of which was sampled during early June, was completed over the July 1st long weekend. The total of 307 samples have now been dried, crushed, sieved and run with a Lensire Mercury Detector. The results are plotted in profile on the plan entitled "Mercury Detector Results" which accompanied this report. Two points should be most apparent to the observer of this plan, namely (1) the considerable amount of unsamplable ground, and (2) the almost complete lack of anomalies.

(1) Unsamplable ground, regrettably, covers much of the area where mineralization is predicted, for example, along the baseline between lines 3E and 24E, and, of consequence, reduces considerably the contribution made by this geochemical soil sampling grid. Permafrost muskeg, composed wholly of organic material, tends to fill the depressions which mark the fault zones thought possibly to be ore-bearing. This organic material cannot be run reliably with the mercury detector because when it is heated in a sample-heating tube it gives off columns of smoke which produce a high reading on the detector.

(2) Only one strongly anomalous sample appeared on the grid, that being the sample taken on the baseline at 12W. It is not surprising that this sample should "kick" because it was taken from the rusty spoil from a shallow shaft sunk nearby by C. Poli some years ago. Its reading of 5.2 micrograms/litre of mercury is approximately equal to ~~5.2~~ parts <sup>520.</sup> per billion, and exceeds the next highest sample by almost seven times. In fact, only a very few samples exceeded the threshold value of 0.50 mgm/l. By far the majority of the samples ran in the vicinity of 0.25 mgm/l. One barely discernible trend of slightly higher samples is marked on the plan, and lines up extremely well with the southernmost major break on the Shanghai's Group (see Location Map).

Dr. Clews visited the Shanghai Group, and collected from the rusty-coloured "B" horizon two suites of soil samples over known (albeit rather weak) mineralization and two suites of soil samples over unmineralized schists and greenstones. He hoped on the basis of this sampling to be able to recommend a suitable analytical method for lead, one simple enough to be run in a field laboratory.

A soil sampling grid measuring 3000 by 500 feet from which 96 samples were collected has been completed over the Lundquist showings to the west of the main area of interest in the Shanghai Group. The "B" horizon is well developed over much of the ground, and a minimum of trouble with permafrost was encountered. The samples have been dried, crushed and sieved and await mercury detection.

#### UR Group:

Three days of bulldozer trenching were carried out over the UR Group after the temporary abandonment of the Shanghai trenches. New trenches over a minor lineament (possibly a vein fault zone) crossing claim Nos. 38, 40 and 43 were given an initial stripping. The newly thawed ground in trench Nos. 1 to 6 was removed exposing a zone of brecciated material six to eight feet in width in both trench Nos. 1 and 2. This material was virtually in place and was composed mainly of grey micaceous schist fragments, dark grey gouge, some siliceous matter and scattered limonitic vugs and narrow veinlets. Manganese staining was widespread. An assay of a grab sample ran trace gold, trace silver and nil lead.

A soil sampling grid 4500 by 500 feet was sited over the major N30°E trending lineament. Due to permafrost conditions and the lack of a suitable sampling tool, only 92 samples were collected. However, should the soil samples provide any anomalous results, the permafrost sampling tool will be employed to fill in the unsampled ground, providing, of course, a suitably inorganic soil horizon is developed below the surface organic layer. The samples have been dried, crushed and sieved, and await mercury detection.

#### Other Areas:

Templeman-Kluit is expected back momentarily from two weeks mapping in the May Creek area which lies approximately 35 miles west-southwest of Galena Hill. He has accompanied Al Triggs who holds the title to two

groups of claims towards the head of May Creek. A D6 was also to carry out some trenching over the sulphide showings on the properties.

Future Plans:

Galena Hill Properties:

Geophysical Methods:- A McPhar magnetometer was shipped to the Project but proved to have a fault in its electrical system which could not be rectified locally or in Whitehorse. However, when a second instrument is obtained it is intended to run magnetometer surveys over both areas "A" and "B".

Geochemical Methods:- The soil sampling grid over the resistivity high in Area "A" should be completed shortly and the samples run with the mercury detector and with lead wet analytical methods when available. Two small areas of soil sampling are planned for Area "B" (over the two resistivity lows) if any degree of success is achieved with the grid over Area "A".

North Limb Properties:

Shanghai Group:

Bulldozer trenching will continue until downward progress is again stalled by permafrost. It is hoped, however, to have full-length exposure of one or more trenches in the next few days. Several cases of dynamite have been taken across to the Shanghai, and will be used in an effort to loosen up the strips of permafrost muskeg and accelerate the thawing process.

The soil samples from the Lundquist showing will be run with the mercury detector. All the 403 Shanghai samples will be run with the lead wet method when it becomes available.

UR Group:

The soil samples from this group will be run with the mercury detector in the near future and the results plotted in profile as on the Shanghai grid. Future bulldozer trenching depends on the outcome of the geochemical surveys.

CAT Group:

A geochemical soil sampling grid has been laid out, but the actual sampling has been postponed temporarily in order to concentrate on the Galena Hill Properties and the Shanghai Group. A minimum amount of bulldozer trenching has already been carried out.

BOB Group:

It is planned to have French prospect the Bob Group for a week or more in an effort to locate some reported mineralization. Stream sediment

sampling will assist the evaluation of the economic potential of this large group of claims.

Other Areas:

Templeman-Kluit will be mapping the Mt. Haldane area as part of his regional mapping programme leading towards his post-graduate degree. French will be dealing with the possibilities of economic mineralization.

Maps, Plans etc. Completed:

To accompany this report:

- (1) UR Group; Location Map showing local geology, trench location and soil sampling grid; scale: 1 inch to 500 feet.
- (2) Shanghai Group; Location Map showing local geology, trench location and soil sampling grid; scale: 1 inch to 500 feet.
- (3) Shanghai Group; Mercury Detector Results (to overlie above map).

Silver Titan Camp,  
Elsa, Y.T.

15 July, 1963

(signed) "David L. Seymour"  
Project Manager.

Typed Vancouver  
17 July, 1963.  
/jhw