

MEMORANDUM

016984

TO: R. L. Haffner FROM: D. S. Jennings, U. Jansons

SUBJECT: REVIEW OF 1973 EXPLORATION PROGRAM DATE: July 11, 1973

The 1973 Anvil exploration program is divided into four parts: 1) exploration in active Anvil/PRM claim groups, 2) Anvil Range aeromagnetic (AMAG) reconnaissance, 3) Anvil Range geology and geochemistry, and 4) regional programs throughout the Yukon. Each part of this program is reviewed below:

Exploration in Anvil/PRM Claim Groups:

Geophysical investigations as proposed and approved at the February management meeting are complete. These investigations included 146 miles of linecutting, 83 line miles of Turam and 65 line miles of gravity surveys in six areas (East Sea, Sea/Mor, Sink, Dea/Kay, Dy/Gale and Sun grids). The surveys were initiated to test: a) the best remaining geological bets for additional mineralization, b) areas lacking data from deep penetrating methods or c) areas requiring assessment work. Conductive stratigraphic units located by Turam or Lockwood airborne EM surveys were checked for mass concentrations by gravity methods. No significant mass concentrations were found in any of the six areas tested.

A similar program of Turam and gravity surveys will be completed over the Lea-Pea-DP-BP claim groups in the Swim Lakes area. Linecutting for this 56 line mile survey is 60% complete to date. Turam crews are expected to begin work by mid-July.

A detailed gravity grid was cut and metered over a strong gravity anomaly, drilled as DDH 72-01, to evaluate the core of the original anomaly in detail. No additional mass concentrations were detected.

Completion of the geophysical surveys on the claim groups will provide a complete data base for all Anvil claim groups southeast of Blind Creek and for most groups in the Vangorda area northeast of Blind creek. This data base will be used to complete a final evaluation of these claim groups.

Eighteen claims have been staked as the SB group in the Swim Lake area to cover the former BS group held by Kerr-Addison. Drilling of a coincident ground magnetic and ground electromagnetic anomaly in the east arm of Swim Lake by Kerr-Addison revealed a massive pyrite-pyrrhotite deposit beneath the lake. A similar, coincident GMAG/GEM anomaly in the stratigraphic unit hosting the Swim and above-mentioned deposit occurs on Anvil's North Sea claims under the north arm of Swim Lake. A Pb/Zn soil geochemical anomaly also occurs on the north shore of Swim Lake in this area. With the staking of the SB group, Anvil will be in a position to evaluate the North Sea coincident GMAC/GEM anomaly early in 1974.

Drill hole 73-01 was completed to a depth of 650 feet on a gravity anomaly in Zone C on the east Faro grid. This anomaly was not thoroughly tested by 1967 drilling. The anomaly was caused by: a) a hornblende diorite body intersected in the lower 34 feet of the hole, and b) a bedrock ridge.

Anvil Range AMAG Reconnaissance:

Twenty-three federal AMAG anomalies on the Tay River and Glenlyon map sheets in rocks correlative to the Anvil metamorphic belt have been investigated in the field. The coincidence of these anomalies with known pyrrhotite-bearing massive sulfide deposits in the Faro-Vangroda-Swim area prompted this investigation. Of the twenty-three anomalies investigated, one remains unexplained. A Turam reconnaissance grid has been cut and the anomaly mapped and sampled in detail. The Turam program will be completed by late July. Additional investigations on this property are contingent on the Turam results.

Anvil Range Geology and Geochemistry:

Two areas will be investigated outside Anvil's claim holdings in the Anvil Range. A soil geochemical survey will cover a 14.7 mile by 2.5 mile grid over part of the schist and phyllite map units in the Blind Creek valley. This area is not covered by previous surveys (Anvil's or others) as determined from assessment records. The 14.7 mile cut base line is nearly complete and geochemistry crews will be deployed by mid-July.

A reconnaissance geochemical survey will follow reconnaissance mapping of rocks known to correlate with those of the Anvil belt between Tay Mountain and the MacMillan River. Mapping of this area should be completed by the end of July. Geochemical crews will begin sampling at the earliest possible date.

Regional Exploration:

The MM group of 49 mineral claims was staked in early July in the Seagull Creek area of the Quiet Lake sheet to cover a reportedly stratiform Pb/Zn showing geologically similar to deposits of the Anvil area. Eight claims were staked in 1970 by Spartan Explorations covering part of this property. The Spartan claims lapsed in 1971 with no assessment work recorded. An average of three grab samples from the showing assayed 3% Pb and 16% Zn in widths up to 25 feet with a length of 300 feet. Detailed mapping and sampling of the prospect will be completed in early August.

Andrew "Scotty" Allan joined the Exploration Department on June 29, 1973 as Regional Exploration Geologist. He will be mainly involved with prospect acquisition and evaluation throughout the Yukon. He is currently working in the Mayo area.

Eight properties held by Welcome North Mines in the Godlin Lakes area, N.W.T. were examined in late June. Six of these were available for joint venture participation, two were under existing joint venture agreements. Of the six, five were Pb/Zn properties (Tee-Lin, Arn, Lan, Reef, Keg) and one was a Cu property (Nite). None of these are attractive at this time as mineralization over mineable widths is of low grade (generally 1% combined). Some narrow high grade zones are locally present but of insufficient mineable tonnage. Mineralization on the above six groups is principally stratabound as veinlets and fracture fillings in interbedded Paleozoic limestones and dolomites. Minor stratiform mineralization (Keg group) was also seen. Chip channel samples from three of the six properties have been shipped for assay. Results of these assays and final recommendations will be presented in a separate report on the Welcome North properties.

Six federal AMAG anomalies and three showings selected from the Northern Cordillera Mineral Inventory have been investigated on the Quiet Lake map sheet. The areas chosen cover rocks correlative to those of the Anvil belt. Four of the six anomalies have been explained and there is no outcrop in the vicinity of the fifth. The remaining anomaly will be investigated in conjunction with the MM group. Two of the three showings are pyrrhotite/diopside/scheelite contact skarns associated with a granitic pluton north of the North Big Salmon River. Much of the contact zone of this pluton shows skarn development and is a good area for tungsten prospecting. The third showing is now covered by the MM claim group. The remaining 35 AMAG anomalies and showings (including Tintina Silver) on the Quiet Lake and Finlayson sheets will be investigated during August.

Two Pb/Ag vein occurrences held by W. Hakonson were examined in the Dawson City area. The pyrite-galena-chalcopyrite veins on Spotted Fawn Creek in the Tombstone Mountain area were far too small to be of interest, the largest of which was 100' long and up to 1' wide. Argentiferous galena veins and pods exposed on the Connaught Mines property on the Sixtymile River also were of small size with the largest vein exposed continuously over 600 feet up to 1 foot wide. The latter area has potential as an Ag/Pb vein district. Grab samples have been sent out for assay and Connaughts' consulting engineers are being contacted regarding status of the property. W. Hakonson of Dawson City collected a large number of discarded property and assessment reports from the Mining Recorder's office in Dawson when the territorial capital was transferred from Dawson to Whitehorse in 1954. Some of these reports date back into the early nineteen hundreds and are original property descriptions no longer available to the public and not included in the Northern Cordillera Minerals Inventory. An exploration proposal is being made to Hakonson whereby Anvil will follow-up properties of interest culled from his records in exchange for the basic data. A cash settlement basis rather than a retained interest for Hakonson in any property beyond the initial exploration stage is anticipated.

Anvil submitted a proposal for participation in the Hyland Joint Venture regional prospecting and geochemistry program managed by Archer Cathro. The present joint venture partners declined our participation.

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