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PROGRESS REPORT
EXPLORATION DEPARTMENT
AUGUST 3, 1971

Exploration work for the period July 7 to August 3, 1971 has been a continuation of previously initiated programs and follow up on recommendations from the July 7, 1971 Exploration Management Meeting.

The previously programs that were carried on through this period include: 1) the detailed mapping of rock units and their mutual relations as exposed in the pit; 2) regional soil geochem sampling; 3) overburden drilling; and 4) assessment work and reports. Suggestions from the July 7, 1971 Management Meeting that have been followed up include: 1) detailed geochemical soil sampling in the area northeast of the 1965 Faro soil geochem grid; 2) extension of the 1971 gravity survey for 1200 feet to the west; 3) resurvey of the overburden drill hole locations on the BOB - DY - RICH claims; and 4) relocation of Faro Creek diversion ditch to spill at original proposed site.

PIT GEOLOGY

Stratigraphy:

The following stratigraphic sequence has been defined in the pit:

	Rock Type	Thickness
Stratigraphic Top		
	Calc-silicate schist	≥ 500' (top not exposed)

	Biotite schist with graphitic schist interbands	100'

	Muscovite, biotite schist	100'
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	Quartzite	0 - 15'

	Massive sulfides	150' Avg.

	Quartzite	0 - 15'
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	Muscovite, Biotite schist	≥ 100' (base not exposed)
Stratigraphic Base		

---- = gradational contact ═══ = sharp contact

In accordance with Templeman-Kluit, the base of the section was chosen as those units exposed in the core of the Anvil Arch. All lithologic units recognized in the pit are subdiversions of Templeman-Kluit's Unit 3 with the lowest six units forming part of his 1000 foot thick siliceous phyllite sequence at the base of Unit 3. The upper unit in the pit represents the base of his less siliceous calcareous tuffaceous sequence forming the upper 3000 feet of Unit 3. The Faro orebodies lie approximately 300 feet below this tuffaceous sequence.

Structural Geology:

Five deformational events have been recognized in the pit. An abbreviated summary of these events is given in tabular form below:

Event	Features Produced
D_1 (oldest)	Earliest penetrative bedding plane foliation, S_1
D_2	Main penetrative metamorphic foliation S_2 which cuts and folds S_1 into F_2 folds (little data on geometry of these folds due to paucity of development). S_2 strikes 110° dips 30° SW.
D_3	Strong, penetrative crenulation lineation, L_3, which is the axis of F_3 folds on S_2 trending 150° plunging 20° SE. S_3 foliation is axial planar to these folds and is weakly developed.
D_4	Well developed crenulation lineation parallel to axes of F_4 folds in S_2 which trend 110° and plunge 0 to 20° NW. S_4 foliation is axial planar to these folds and is weakly developed. Thrust faulting along existing D_2 axisotropy with accompanying warping of L_3 lineation around D_2 boudin lines trending 110° and plunging 0 to 20° NW.
D_5 (youngest)	Sporodically developed F_5 folds in S_2. These folds trend ≈60° and plunge shallowly NE on SW. A crenulation lineation often parallels the axes of these folds.

The S_2 foliation and L_3 lineation are the most penetrative fabric elements. F_3 and F_4 folds are close, similar folds occuring in the ore. The latter set extend through several benches on the east side of the pit creating ore control problems. The forth coming map and structural analysis of the pit should aid in the interpretation of the regional deformational history of the Anvil belt and in problems of day to day ore control.

GEOCHEMICAL SOIL SAMPLING PROGRAM

Regional Program

The regional soil sampling program is proceeding as originally proposed, but with the sampling of organic material for Hg analysis discontinued. The regional sampling north of the base line has been completed to Blind Creek and now sampling is proceeding south of the base line.

The sampling rate has increased to an average of 45 samples per sampling party per day, from the previous rate of about 25 samples per day. This improvement is a result of a vehicle placed at the disposal of the sampling parties, as recommended at the July 7, 1971 Exploration Management Meeting.

Detailed Geochem Sampling

A detailed geochemical soil sampling program northeast of the 1965 Faro soil sampling area was completed. Samples were taken intervals between the North Base Line and Second North Base Line along extensions of lines from the 1965 Faro soil survey. This program was designed to check the extent of open geochem anomalies indicated by the 1965 geochem sampling program.

Organic Samples for Hg Analysis

Collection of organic material at soil sample stations for mercury analysis has been discontinued. Barringer's equipment does not yield reliable results for samples containing more than 20% organic material.

GEOPHYSICS - Gravity

Three 3500 lines of gravity stations were read to trace the western extent of a moderate gravity high, located by an earlier survey in 1971, in the area of approximately 2000 south line 156 west on the 1965 Faro grid. The lines traversed during this survey were 160 W, 164 W, 168 W south from the North Base Line.

Diversion Ditch

The proposed rechannelling of the diversion ditch has been investigated. From distribution of drill holes and the position of the earlier erosion by spillage from the diversion ditch, the channel of the diversion ditch should be relocated and flow established in the originally planned. With erosion at the end of the original diversion ditch rock would be exposed in an area of limited outcrop, between lines of overburden drilling, and about 1300 feet east of the sulfides exposed by erosion in 1971.

Assessment Work

Assessment work and requirements are being kept up to date and reported to validate the claims. Work this year is being planned on claims for which assessment work has to be done this winter or early spring 1972.

OVERBURDEN DRILLING

Faro Grid

The overburden and bedrock drilling program is proceeding as planned. Work on the Faro Grid has been completed except for some deep drilling to test the gravity geochem anomaly in the west end of the Faro Grid, on holes 71065, 71066 and 71067 respectively.

Hole 71065 was originally drilled to 30 feet with 3 samples collected at 10 foot intervals yielding anomalous Cu, Pb and Zn.

Hole 71066 yielded no high geochem values but it is near the gravity high in this area and it is being deepened.

Hole 71067 yielded no anomalous geochem values.

Proposed Drilling

Sites for overburden drilling have been proposed for the BOB - DY - RICH and for the TIE - SUN claim area. The proposed sites are on a 2400 x 1000 foot grid as on the Faro Grid.

The first areas to be drilled are to the south east and north west of the original drill holes. This area has yielded anomalous overburden and bedrock values in 9 of 16 drill holes. Approximately 24 drill holes will test the area between the Vangorda Claim group and 22 holes will test the area to the southeast of earlier overburden drilling.

Drilling on the TIE-SUN claims will be about 40 holes to the west of the original overburden drilling in this area. Targets for this drilling are western extensions of the Firth and Champ mineralized zones.

Drilling Performance

For period 1 - 15 July 1971 a total of 2362 feet was drilled, or about 162 feet per day. The cost for this drilling combining contract work and supplies for the period 1 - 15 July 1971 was $ 30, 117 or about $12.75 per foot.

Drilling for the period 1 July to 30 July 1971 totalled 4959 feet of which about 2465 feet were overburden and 2494 feet were rock.