EVALUATION OF THE MOR MINERAL CLAIMS

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by:

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SUMMARY

In November 1965 eighty-eight MOR mineral claims were staked in the Swim Lakes area by Dynasty Exploration Limited to cover areas which were thought to be underlain by phyllites and schists which are mineralized elsewhere in the district.

Exploration work on the MOR claims to date includes: airborne E-M survey (1965), airborne magnetometer survey (1966 to 1968), gravity survey (1967, partial coverage of claim area), soil geochemistry (1972), geological mapping (1972), drilling (1969 and 1973), and Turam survey (1973, coverage of western half of claim area).

The preliminary exploration of the MOR claims with an airborne E-M survey detected several conductors. The ground follow-up exploration started in 1967 with a gravity survey over the eastern half of the claim group. This survey indicated the presence of four small, weak (up to 0.65 mgal.) gravity anomalies. The best of the anomalies was drilled to 438 feet in 1969 but intercepted no massive base metal sulfide mineralization. The airborne magnetic data on the 1968 Federal Government survey indicate a long, narrow magnetic anomaly. A gravity survey in 1973 on this anomaly and other exploration data suggest that this area is underlain by magnetic amphibolite. In 1972 a soil geochemical survey conducted over the entire MOR claim group indicated only spot high one metal anomalous values. Zones of coincident lead-zinc anomalies were not found. None of the geochemical anomalies are related to geophysical anomalies.

Regional geological mapping of the area in 1972 indicated only limited outcrop. The eastern half of the mapped area is underlain by rocks of granitic composition equivalent to the Anvil Batholith. The western half of the claims is underlain by amphibolite and white and green thinly banded chloritic tuffs. Drill hole information indicates the presence of chlorite, biotite, muscovite and graphitic phyllites in the central part of the claim group.

In 1973 a Turam electromagnetic survey in the Swim Lake area in part covered the MOR claims. One Turam line checked for conductor anomalies related with three residual gravity anomalies, but found no associated anomalous conductor. The Turam survey on the western half of the MOR claim block located several bands of anomalous conductors, one of which appeared to cut across the inferred geological grain of the area. Diamond drill follow-up of the Turam anomaly in 1973 intercepted highly graphitic phyllites with several sphalerite grains identified in a one inch section in one drill hole.

The geochemical soil survey does not indicate near surface massive base metal sulfide deposits. Geophysical exploration of the MOR claims indicated several targets for drill testing. The geophysical anomalies were not related to base metal sulfide deposits. Additional drill targets of merit cannot be extracted from the exploration data. Additional geophysical surveys would not yield

deeper penetrating exploration data and, therefore, no other deeper drilling targets. All the exploration results to date indicate that no economically significant base metal sulfide deposits are present near the surface of the MOR claims.

The claims should be allowed to lapse.

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INTRODUCTION

The MOR claims were staked in the Swim Lake area in 1965 by Dynasty Explorations Ltd. At that time all areas in the Anvil Range which were believed to be underlain by phyllites and schists, which are host rocks to all the known massive sulfide deposits in the region, were being staked.

Exploration of these claims has been sporadic and limited in extent. This was probably due to the difficult access.

Anvil Mining Corporation undertook a systematic evaluation of its Swim Lake area claims in 1972 and 1973. The evaluation of the presence of massive sulfide deposits, similar to the Vangorda and Faro deposits, is based on that work. The programs were designed so that large massive sulfide deposits, those greater than 1,000,000 tons, and occurring near the surface, would be located.

A compilation map (Figure I) showing all the exploration data is in the back pocket of this report.

LOCATION AND ACCESS

Eighty-eight MOR claims are located in the Swim Lake-Orchay Lakes area, about 22 miles southeast of the Anvil mine site, 6 miles southeast of the Swim ore body, and 2.5 miles southeast of the SEA sulfide mineralization drilled in 1966. The location of the MOR claims relative to the Anvil mine site is shown in Figure 2.

Access to the area for surface work is by various bulldozer roads built during previous exploration years. Only track vehicles should be used on the claims in the Swim Lake area. Ground travel through various parts of the claim area is difficult due to wet and muddy ground conditions.

GEOLOGY

The surface geology of the MOR claims was mapped in 1972 by Anvil Mining Corporation Limited as part of the regional mapping program in the Swim Lakes area.

The mapping indicated that rock outcrop is sparse (about 1 to 5% of the total area) and, therefore, no meaningful surface geologic picture can be presented. Additional bedrock data has been obtained from drill hole data.

Outcrops found on the MOR claims include monzonite to granodiorite rocks equivalent and probably related to those of the Anvil Batholith, metabasites (amphibolites), and phyllites. Monzonite to granodiorite rocks are found in the south eastern corner of the claim group. Metabasites (amphibolites) and banded chloritic non-chloritic tuffaceous phyllite was found in outcrop and in drill holes along the western edge of the claim block. Chlorite and biotite phyllite was found in drill hole 69-MOR-1 located to the north of the granite outcrops. Graphitic chlorite and biotite phyllites and schists were drilled along the north edge of the MOR claims in drill holes 66-S-1, 66-S-2, 66-S-3, 66-S-4, 73 X 3 and 73 X 4. These six drill holes probably tested electromagnetic conductors in a graphitic phyllite unit.

While the outcrop and bedrock data on the MOR claims is limited, making the geologic presentation difficult, the nearby surrounding area is also virtually devoid of outcrop and rock data and the geologic picture for the area of the MOR claims is conjecture.

Probably a more reliable picture of the underlying rock types in the area of the claims can be obtained from Turam data in conjection with known rock units in drill holes and outcrop.

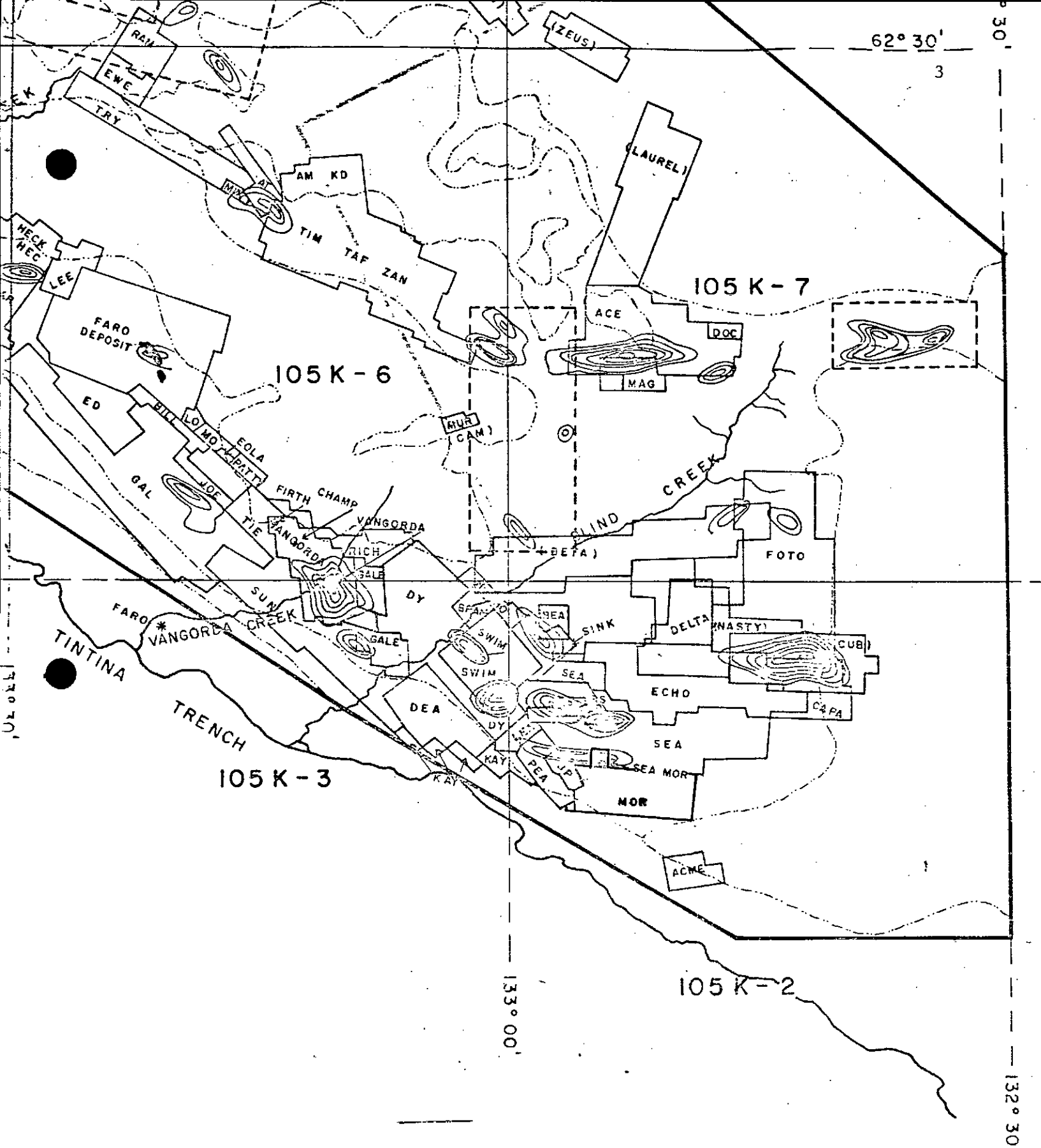


FIGURE 2

Location of MOR claims in Anvil District

GEOPHYSICAL SURVEYS

Airborne Electromagnetic Survey:

An airborne electromagnetic survey conducted in 1965 by Dynasty Exploration covered the MOR claims. The Lockwood in-phase out-of-phase measuring system operating at 4000 Hz primary field was used. This survey reveals two areas of different conductivity. An area of poor conductors with narrow east-west trending zone of conductors is present in the east half of the claim area. Three conductive zones in a broad north-south trend is present in the west half of the claim area (Figure 3).

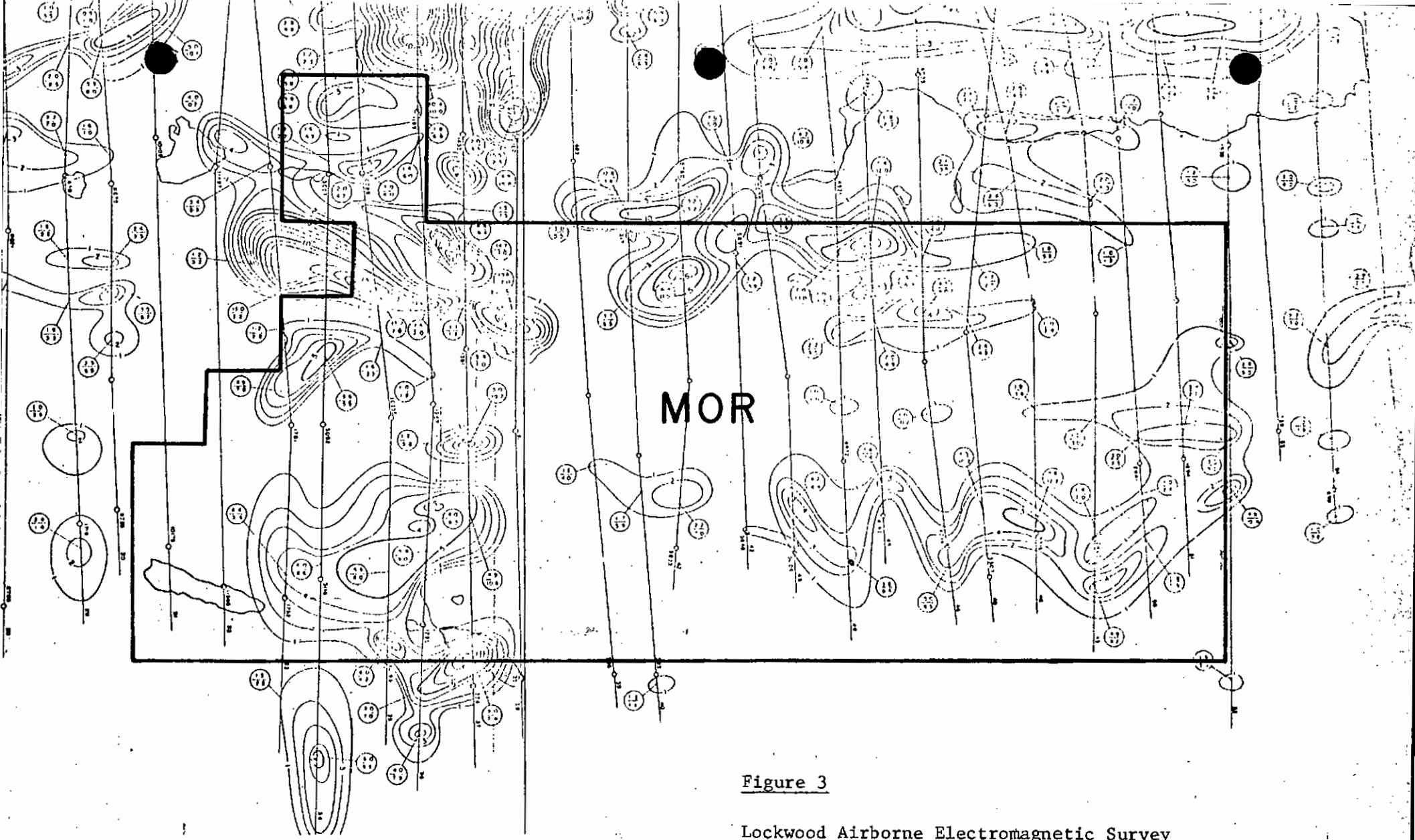
The east-west anomaly is 8000 feet long by 1500 feet wide, and extends east past the MOR claim boundary. The amplitudes of the in-phase response are up to 5 parts per million and maximum in-phase to out-of-phase ratio is 0.7. These measured responses indicate poor conductors. The area of these conductors was partly covered by a gravity survey in 1967 which lead to the diamond drilling of hole 69-MOR-1.

The western zone of three anomalous broad conductor zones covers a 5000 foot by 7 500 foot area. Within one of these zones the maximum amplitude of the in-phase response is up to 17 parts per million and the maximum in-phase to out-of-phase ratio is 8.6. These responses indicate good conductors. The other zones yielded amplitudes of in-phase response up to 9 parts per million with in-phase to out-of-phase response up to 1.4. These responses indicate that these areas are underlain by poor to moderate conductors.

This area of poor to moderate conductors was explored in 1973 by the Turam ground electromagnetic system which detected a broad zone of anomalous conductors which appeared to cut the interpreted regional geological trend. Two diamond drill holes (73 X 3, 73 X 4) were bored in 1973 to test the nature of this conductor. The northern extensions of the conductive anomalies were explored by a gravity survey. Zones of anomalous mass concentration were not found, but it was inferred that the area is underlain by two zones of different density with values of 2.5 and 2.9, similar to that of phyllites and amphibolites in the district. This interpretation is supported by the Federal aeromagnetic survey and projection of mapped rock units.

Magnetic Surveys:

Magnetic surveys have not been carried out specifically on the MOR claims by Anvil Mining Corporation Limited, but airborne magnetic data are available from the Federal Government (Map 78396) and from Kerr-Addison Mines Ltd. The magnetic data of the Federal Government survey is presented as Figure 3. The results of the Kerr Addison survey are not available, but have been inspected briefly by Anvil personnel.



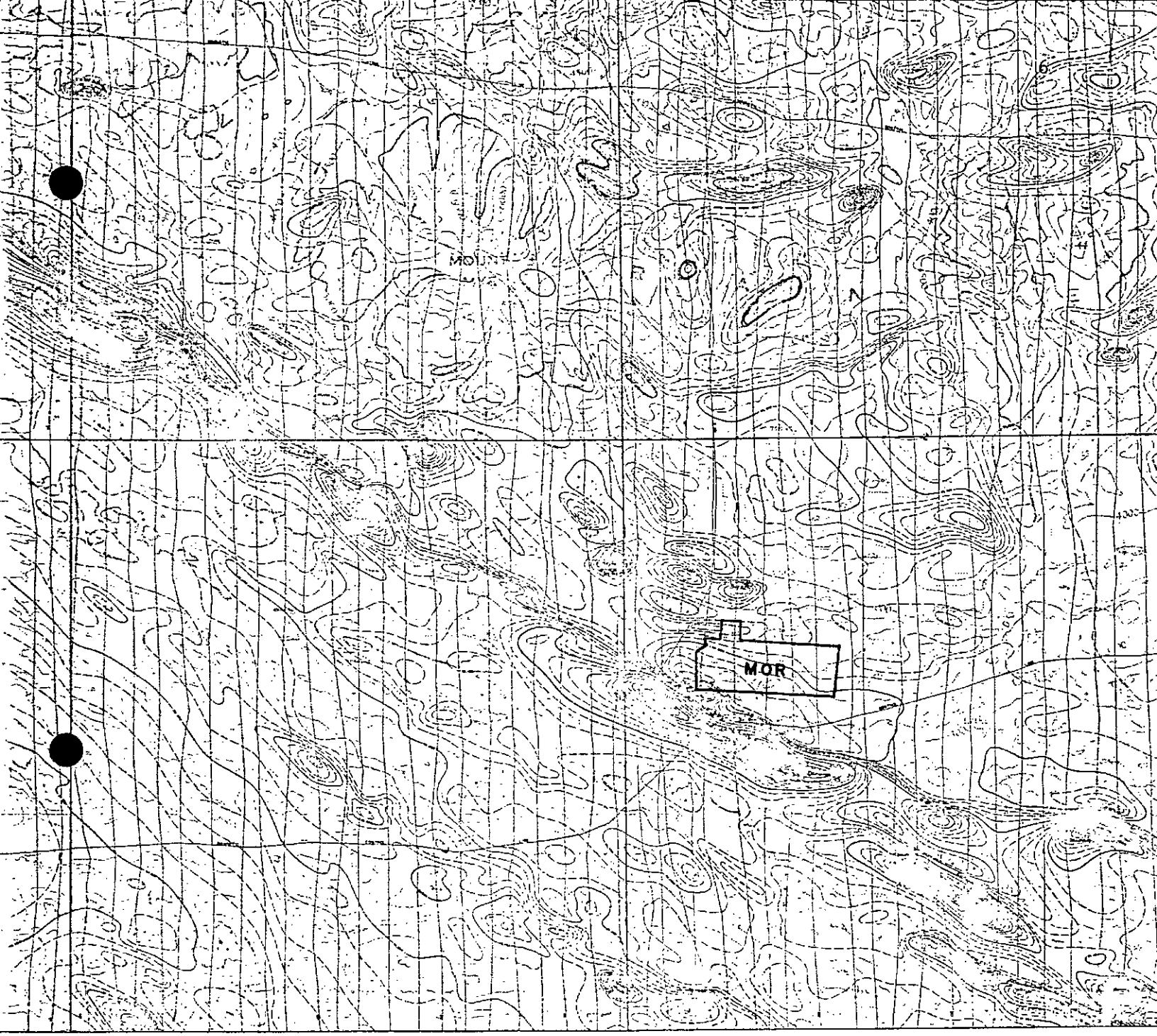
MEAN FLIGHT LINE SPACING ..... 1000 FEET
MEAN TERRAIN CLEARANCE ..... 200 FEET
ELECTROMAGNETIC CONTOURS 5,10,15 etc .....
1, 2, 3, 4 etc .....
FIDUCIAL POINTS 3690
FLIGHT LINES .....

The contours represent amplitude of in phase response of the resultant field expressed in parts per million of the primary
The figures $\frac{1.1}{0.2}$ represent amplitude $\frac{\text{in phase component}}{\text{quadrature component}}$
The frequency of the primary current is 4000 cycles per second.

Figure 3

Lockwood Airborne Electromagnetic Survey

Scale: 1" = 2640'



MAP 7839 G

TAY RIVER

YUKON TERRITORY

Scale One Inch to Four Miles = $\frac{1}{253,440}$

Miles

4 2 0 8 12

FIGURE 4

Government Airborne
Magnetometer Survey

The Federal Government's survey was flown at a nominal 1000 foot ground clearance at approximately one mile flight line spacings. Most of the MOR claims appear to situate on the north side of a broad magnetic low but a 10,000 foot long, about 2000 foot wide, magnetic anomaly strikes east-west along the northern most MOR claims.

A gravity survey over this area did not indicate any mass concentrations in this area, but did indicate that the area is underlain by rock with a specific gravity of 2.9 similar to amphibolites, many of which are strongly magnetic elsewhere in the district.

The inspected contour plots of the Kerr-Addison magnetic survey which was flown at closer line spacing and lower altitude than the Federal survey did not indicate zones of anomalous magnetic response in this area. (This airborne magnetometer survey by Kerr-Addison detected and located the Swim and Swim Lake sulfide deposits.)

Gravity Surveys:

A gravity survey on the eastern half of the MOR claims was conducted in October 1967 by United Geophysical Company of America and the data were submitted to R. B. Galesky, P. Geoph. of Calgary, Alberta, for interpretation. His interpretation of the data indicates four residual gravity anomalies. All were postulated to be related to sulfide mineralization. Three of these anomalies "A. C. D" are on line on the same east-west gravity trend and anomaly "B" is south of this trend. The "A" anomaly, with a 0.65 milligal amplitude, was interpreted to be the most significant, with a depth to the top of the causative mass at 240 feet.

The adjacent anomalies "C" and "D", with peaks about 1200 feet apart, on trend with and 4000 feet to the west of anomaly "A", have not been tested by drilling. Their maximum residual gravity responses are about 0.5 milligal.

Anomaly "B" with a 0.61 milligal response is located about 2800 feet south of anomaly "D", on the south side of an east-west trending fault postulated on basis of the results of the gravity survey. The depth to the top of this causative mass was calculated as 460 $\pm$ feet. Anomalies "B", "C" and "D" were examined for associated conductors in 1973 by a Turam electromagnetic profile. While this profile does not cross at the peak responses on either of the "C" and "D" anomalies, it would test the flanks of the gravity anomalies. This profile indicated no conductors in the area of the residual gravity highs.

A gravity survey was conducted in 1973 on a long, narrow 60 γ airborne magnetic anomaly located along the northern edge of the MOR claims and southern edge of the SEA claims. A gravity survey was selected because graphitic rocks on strike from the magnetic anomaly were intercepted in drill holes. This gravity survey

indicated two zones of underlying different specific gravity - 2.4 and 2.9. These values are similar to those measured in the laboratory for some phyllite and amphibolite respectively from this district. Reconnaissance Turam lines also yielded conductive responses in this area that are similar to those obtained over amphibolite elsewhere in the district. No soil geochemical anomalies were found in this area. The magnetic anomaly is believed to be a reflection of underlying magnetite bearing magnetite.

Turam Electromagnetic Survey:

A Turam electromagnetic survey of the western half of the MOR claims was conducted in 1973 for Anvil Mining Corporation Limited by Peter E. Walcott and Associates. This survey, conducted at 400 Hz, indicates two zones of strong electromagnetic response, two zones of moderate response, and extensive broad areas of weak to poor response.

Most of these various conductor zones can be related to underlying rock types with characteristic conductivity, but the northern most and strongest conductor zone has limited strike extent. The field strength and phase difference profiles indicate that this zone consists of multiple conductors of different conductivities. Because the profiles were similar in character to those from the Faro #3 ore body, had limited strike extent, and multiple zones of conductors were present, two diamond drill holes tested these anomalies.

The southern strong conductor zone extends across the entire surveyed area which is more characteristic of a rock formation. The half widths of the anomalies suggest that these conductive units are near surface. Therefore, if these were zones of base metal sulfide mineralization, soil geochemical anomalies should be associated with the conductors.

The zones of moderate to weak Turam response are broad plateau types more similar to zone underlain by phyllites elsewhere in the district, and in part here also as indicated by rotary drilling of overburden and sampling of the top of bedrock.

GEOCHEMICAL SURVEYS

The total copper, lead and zinc content was determined in "B" soil samples collected on a 400 foot by 1200 foot grid system. The average metal content in soil samples in the Swim Lake area is 26 parts per million copper, 16 parts per million lead, and 70 parts per million zinc. Samples with twice the average metal content were defined as anomalous. The geochemical data were contoured at 2, 3, 4 etc. times the average metal content.

On the MOR grid one sample with anomalous copper (53 parts per million) is present. Two samples contain anomalous lead (37 parts per million and 48 parts per million). Samples contained anomalous zinc with the values ranging from 142 parts per million to 375 parts per million zinc present.

Both the copper and lead form one station highs and cannot be fitted into a pattern. For zinc up to five group samples may be into a north southwest trend in the area interpreted as being underlain by monzonites, but most of the values appear to be randomly distributed one station highs.

DIAMOND DRILLING

Three diamond drill holes, 69-MOR-1, 73 X 3, and 73 X 4, have tested one gravity and two Turam anomalies on the MOR claims.

69-MOR-1 - Testing 0.65 milligal residual gravity anomaly

Total Depth - 438 feet

Type - AQ

Results:

0-35 feet	Overburden
35-75	Chlorite phyllite, trace to minor chalcopyrite and pyrrhotite
75-115	Chlorite biotite phyllite, traces of pyrrhotite
115-275	Chlorite sericite biotite phyllite, traces of finely disseminated pyrite and pyrrhotite
275-315	Quartz chlorite biotite andalusite schist, minor chalcopyrite, pyrite and pyrrhotite as fracture filling and disseminations
315-389	Quartz chlorite biotite schist, minor pyrrhotite as stringers and disseminations throughout this section
389-407	Quartz chlorite tremolite schist - greenstone
407-438	Quartz chlorite tremolite schist, garnetiferous 436-438

End

73 X 3 Testing Turam conductor

Total Depth - 432 feet

Type - BQ

Results:

0-26 feet	Overburden
26-179	Chlorite-sericite schist (phyllitic)
179-205	Highly graphitic schist, minor pyrite
205-208	Talcose sericite schist
208-209.5	As 179-205
209.5-211.5	As 205-208
211.5-286.5	Very graphitic schist in part pyritic, minor bands
286.5-337	Talc-chlorite phyllite
337-432	Biotite-chlorite-sericite phyllite

End

73 X 4 Testing Turam anomaly

Total Depth - 487 feet

Type - BQ

Results:

0-25 feet	Overburden
25-166	Graphitic and pyritic schist (phyllitic) one bleb black shalerite in cross-cutting quartzite stringer @ 72'
166-216	Tuffaceous talc sericite schist
216-287	Biotite schist with graphitic bands, minor pyrite along foliation planes
287-331	Calc-silicate, traces of pyrite
331-337	Greenstone
337-371	Calc Silicate
371-393	Greenstone
393-467½	Biotite schist
467½-475	Chlorite, popyhyroblastic (?) schist
475-487	Greenstone

End

CLAIM STATUS

The MOR group consists of 88 full size mineral claims. A list of these and their assessment status is presented as Appendix "A" in this report. The anniversary date for 75 of these is December 6 and for 13 of these it is December 3. Sufficient physical work for all these will be filed to keep these claims in good standing to at least December of 1974. Seven MOR claims will be in good standing to 1975. The distribution of the claims is shown in Figure 5.

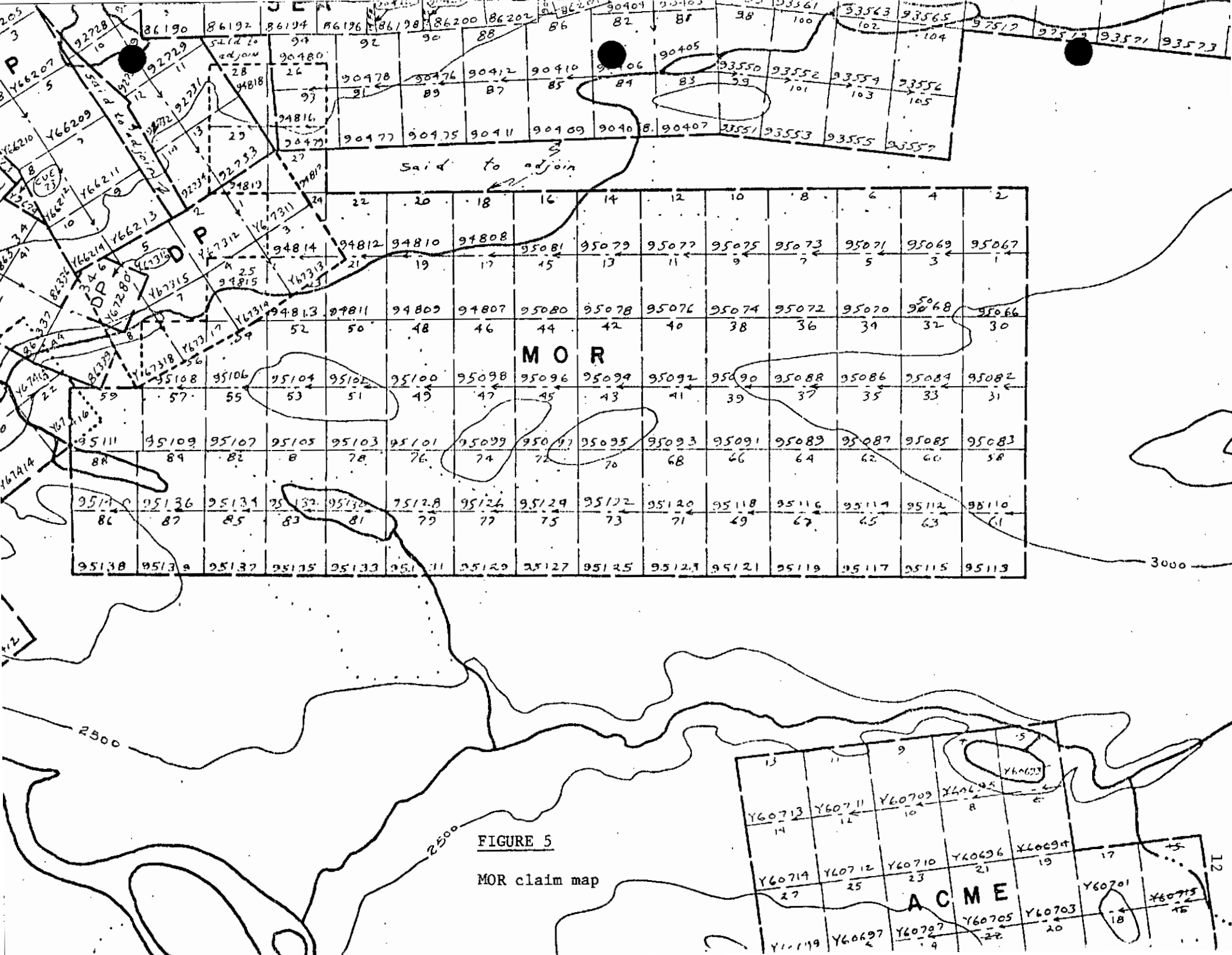


FIGURE 5

MOR claim map

APPENDIX "A"

M O R

November 29, 1973

CLAIMS	GRANT NO.	1974	1975	1976	1977
MOR 1	95066	Dec. 6			
2	95067	Dec. 6			
3	95068	Dec. 6			
4	95069	Dec. 6			
5	95070	Dec. 6			
6	95071	Dec. 6			
7	95072	Dec. 6			
8	95073	Dec. 6			
9	95074	Dec. 6			
10	95075	Dec. 6			
11	95076	Dec. 6			
12	95077	Dec. 6			
13	95078	Dec. 6			
14	95079	Dec. 6			
15	95080	Dec. 6			
16	95081	Dec. 6			
17	94807	Dec. 3			
18	94808	Dec. 3			
19	94809	Dec. 3			
20	94810	Dec. 3			
21	94811	Dec. 3			
22	94812	Dec. 3			
23	94813		Dec. 3		
24	94814		Dec. 3		
25	94815		Dec. 3		
26	94816		Dec. 3		
27	94817	Dec. 3			
28	94818	Dec. 3			
29	94819	Dec. 3			
30	95082	Dec. 6			
31	95083	Dec. 6			
32	95084	Dec. 6			
33	95085	Dec. 6			
34	95086	Dec. 6			
35	95087	Dec. 6			
36	95088	Dec. 6			
37	95089	Dec. 6			
38	95090	Dec. 6			
39	95091	Dec. 6			
40	95092	Dec. 6			
41	95093	Dec. 6			
42	95094	Dec. 6			
43	95095	Dec. 6			
44	95096	Dec. 6			
45	95097	Dec. 6			

M O R

November 29, 1973

CLAIMS	GRANT NO.	1974	1975	1976	1977
MOR 46	95098	Dec. 6			
47	95099	Dec. 6			
48	95100	Dec. 6			
49	95101	Dec. 6			
50	95102	Dec. 6			
51	95103	Dec. 6			
52	95104	Dec. 6			
53	95105	Dec. 6			
54	95106	Dec. 6			
55	95107	Dec. 6			
56	95108		Dec. 6		
57	95109		Dec. 6		
58	95110	Dec. 6			
59	95111		Dec. 6		
60	95112	Dec. 6			
61	95113	Dec. 6			
62	95114	Dec. 6			
63	95115	Dec. 6			
64	95116	Dec. 6			
65	95117	Dec. 6			
66	95118	Dec. 6			
67	95119	Dec. 6			
68	95120	Dec. 6			
69	95121	Dec. 6			
70	95122	Dec. 6			
71	95123	Dec. 6			
72	95124	Dec. 6			
73	95125	Dec. 6			
74	95126	Dec. 6			
75	95127	Dec. 6			
76	95128	Dec. 6			
77	95129	Dec. 6			
78	95130	Dec. 6			
79	95131	Dec. 6			
80	95132	Dec. 6			
81	95133	Dec. 6			
82	95134	Dec. 6			
83	95135	Dec. 6			
84	95136	Dec. 6			
85	95137	Dec. 6			
86	95138	Dec. 6			
87	95139	Dec. 6			
88	95140	Dec. 6			

1973 SEA - MOR GRAVITY GRID

1973 MOR, LEA, PEA TURAM GRID

1967 MOR GRAVITY GRID

LEGEND

ROCK TYPES (in Anvil Range)

- Biotite quartz monzonite granodiorite
- Basalts - (Anvil Range Group)
- Fossiliferous Limestone
- Biotite muscovite phyllite
- Graphitic phyllite
- Banded chlorite phyllite
- Metabasite

SYMBOLS

GEOLOGICAL

- ⊙66-S3 Diamond drill hole location and number
- ⊡72-15 Rotary drill hole location and number
- 1410 Outcrop and station location and number
- Defined geological contact
- Inferred geological contact

GEOCHEMICAL / GEOPHYSICAL

- Zn soil anomaly and threshold value in ppm.
- Cu soil anomaly and threshold value in ppm.
- Pb soil anomaly and threshold value in ppm.
- Federal AMAG anomaly
- Lockwood AEM anomaly
- Residual gravity anomaly values in milligals
- Turam anomaly

inches 0 1 2 / 0 1 2 3 4 5 centimetres

YUKON GEOLOGICAL SURVEY

This reference scale bar has been added to the original drawing. When the scale of the same data as the image, therefore it can be used as a reference for the original size.

ANVIL MINING CORP.

FARO, Y. T.

COMPILATION MAP OF MOR CLAIM GROUP

DATE : NOV 6th, 1973 | DRAWING Nº 7314

SCALE : 1" = 1000'

DRAWN BY : [illegible] | FILE : 14

Figure 1