

APPLICATION FOR NORTHERN MINERAL
ASSISTANCE GRANT

PROPOSED EXPLORATION

HOHO-BRAM MINERAL CLAIMS

Whitehorse Mining District

N.T.S. 105-K-3

Latitude: 62°18'N

Longitude: 133°00'W

April 1 - December 31, 1973

By:

W. J. ROBERTS

DYNASTY EXPLORATIONS LIMITED

January, 1973




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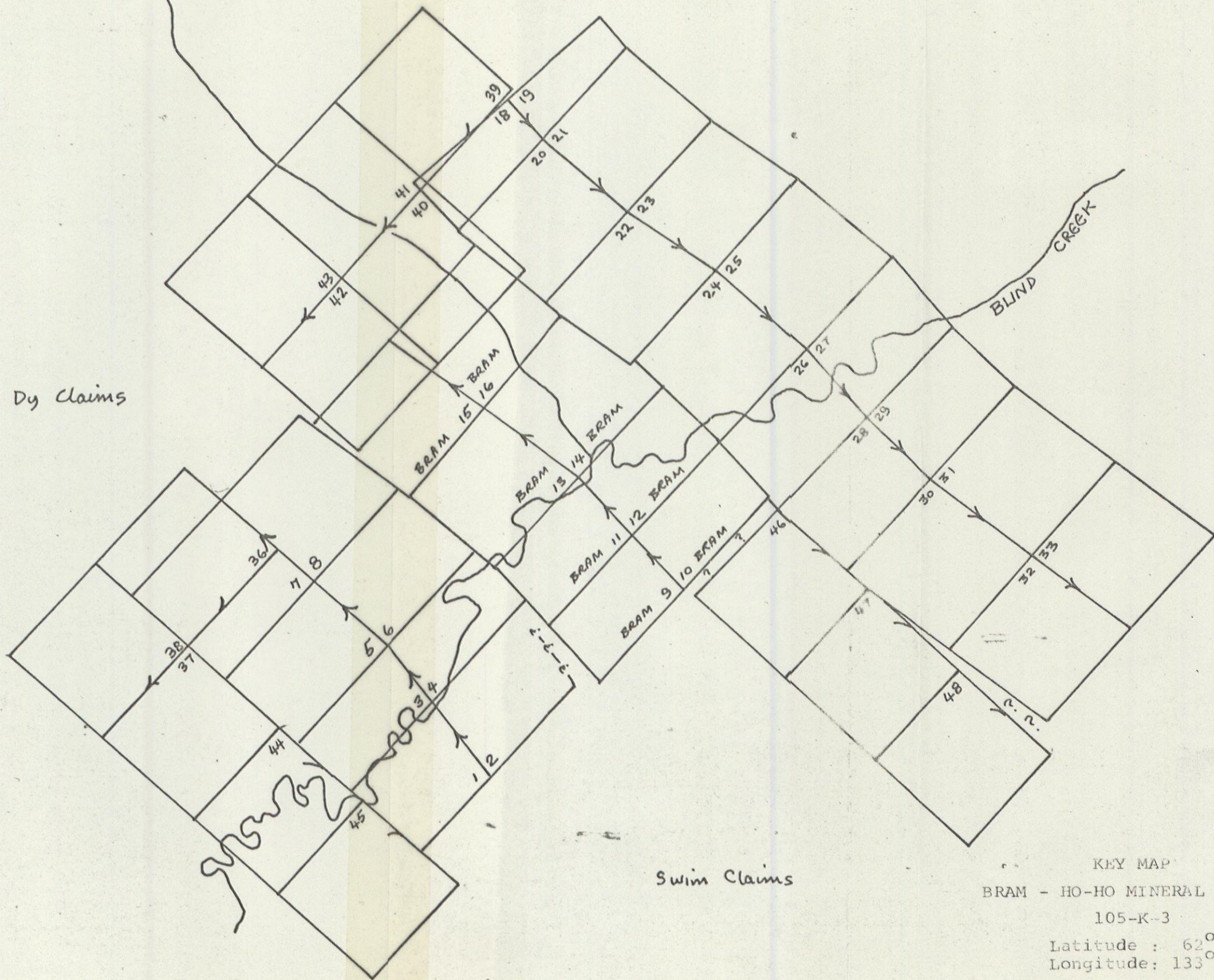
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LIST OF CLAIMS

| <u>Claim</u> | <u>Grant Number</u> | <u>Recording Date</u> |
|--------------|---------------------|-----------------------|
| HOHO 1-8 | Y60357-Y60364 | March 11, 1971 |
| 18-33 | Y60366-Y60381 | March 11, 1971 |
| 36-48 | Y60908-Y60920 | June 30, 1971 |
| BRAM 9-16 | Y60384-Y60391 | March 11, 1971 |

Dy Claims



Swim Claims

KEY MAP

BRAM - HO-HO MINERAL CLAIMS

105-K-3

Latitude : 62°18'N
Longitude: 133°00'W

DYNASTY EXPLORATIONS LIMITED

330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B. C.

APPLICATION FOR NORTHERN MINERAL ASSISTANCE GRANT

PROPOSED EXPLORATION HOHO-BRAM MINERAL CLAIMS

INTRODUCTION

The Hoho-Bram group straddles Blind Creek and was staked in the spring of 1971 to cover two airborne electromagnetic anomalies outlined by a previous helicopter-borne geophysical survey in 1965. A tributary of Blind Creek passing through the centre of the property has cut down through overlying Unit 3b leaving exposures of Unit 3a in the valley bottom.

Exploration carried out on the Hoho-Bram Group during the 1971 season consisted of the following:

Geology

- Logging of core from 3 diamond drill holes located approximately 3 miles northwest of the Hoho-Bram claims.
- Detailed geologic mapping of the property and surrounding area at scale 1:1320.
- Geologic mapping of grid area on property at scale 1:400.

Prospecting

- Locating of minor sulphide occurrences, including:
 - (i) Minor pyrite pyrrhotite, chalcopyrite, sphalerite and galena in quartz veins.
 - (ii) Pyrrhotite and chalcopyrite in greenstone lenses.

Geophysics

- Interpretation of airborne magnetic and electromagnetic data.
- Completion of deep penetrating C.E.M. horizontal loop survey over entire claim group.
- Inspection of gravity survey results over portions of Hoho-Bram claims from previous surveys on former DY claims staked in 1964.

Geochemical
Sampling

- 225 samples collected over grid lines in proximity to A.E.M. anomalies.
- 200 samples collected on a 'recce-grid' extending over airborne geophysical anomalies extending west and north of the gridded area.
- Rock geochemical studies of outcrop and drill core from surrounding area.

A program of ground geophysical surveys accompanied by contingent diamond drilling was planned for the 1972 field season. Due to a late starting drilling program and emphasis on assessing the nearby C.E.D. claims, no field work was undertaken on the Hoho-Bram claim group.

The proposed 1973 field program consists of electromagnetic Turam coverage, followed by two contingent diamond drill holes.

REGIONAL GEOLOGY

The Anvil Range, located in the eastern portion of the Selwyn Basin, northeast of the Tintina Trench, consists of a 20-mile wide by 50-mile long belt of Proterozoic and Paleozoic strata. This succession of strata, dominated by Cambrian to Eocambrian quartz mica schist and phyllite, forms the Anvil Arch, a northwest-trending asymmetric antiform with an elongate intrusive, the Anvil Batholith, in the core. In the southeast portion of the district, the amplitude of the Anvil Arch diminishes resulting in a shallow broad basin. A simplified geologic section consists of quartz mica schist and calc-silicates overlain by phyllite which, in turn, is unconformably overlain by late Paleozoic volcanics and sediments. Structurally, this area has had a complex history of at least five deformations during regional metamorphism. Major faults are oriented in northeast as well as northwest directions.

The known major massive sulphide deposits occur at the same stratigraphic level within the phyllite unit. Increasing regional metamorphic grade to the N.W. is paralleled by a corresponding increase in sulphide grain size. Pyrrhotite content also increases with metamorphism. An elongation of deposits paralleling deformational fabrics adds evidence to the fact that the sulphides were affected during regional metamorphism.

The three major massive sulphide deposits are thought to be of syngenetic origin as indicated by stratigraphy, similar average metal content, uniform lead-zinc ratios, similar textures and mineralogy.

TABLE OF GEOLOGIC FORMATIONS

| <u>Age</u> | | <u>Unit</u> | <u>Description</u> |
|------------|---|-------------|--|
| CRETACEOUS |) | 11 | "Anvil Batholith" - medium grey weathering, equigranular but locally porphyritic and foliated, hypidiomorphic medium grained biotite quartz monzonite to granodiorite. |
| |) | | |
| |) | | |
| |) | | |
| EOCAMBRIAN |) | 3d | "Greenstone" - light to dark green foliated to massive chlorite schist to andesite to amphibolite. |
| |) | 3c | Thinly laminated silty limestone, alternating laminae of phyllite and silty fine-grained grey limestone |
| |) | | |
| |) | 3b | Silvery grey weathering, light grey to black sericite, biotite, graphite phyllite. |
| |) | | |
| |) | | |
| |) | 3a | Light grey to black, quartz sericite, biotite, chlorite, phyllite. Also includes quartz graphite phyllite (3ag) and quartzite (3aq). |
| |) | | |
| |) | 2d | Tan weathering medium to coarse grained quartz biotite, sericite, andalusite, garnet, staurolite schist |
| |) | | |
|) | | | |
|) | | | |

GEOLOGY

Detailed geologic mapping of the claims has been hampered by a lack of outcrop. On the property, a sequence of phyllitic rocks is exposed. The lowest, stratigraphically, are dark grey, very quartz-rich phyllites, Unit 3a, which outcrop along the lowest part of the Blind Creek Valley. This rock type grades upward in the section through a pale grey to pale greenish sericite-chlorite phyllite, Unit 3b, which in turn grades into a limy, carbonate-phyllite, Unit 3c, at the top of the section. Throughout the middle and upper sections of the phyllite unit there are many greenstone lenses up to a few tens of feet in thickness. These vary from massive, unfoliated amphibolite near their cores to well-foliated chlorite schists near the margins. These lenses frequently contain pyrrhotite and pyrite, and occasionally contain sparse chalcopyrite in quartz veins.

In some greenstones close to the claim group abundant euhedral pyrite crystals up to one-half inch in size were found. No outcrop has been found in the vicinity of geophysical anomalies. Anomalies occur over phyllites that are high in the section and are probably within a few hundred feet, stratigraphically, of the limy upper phyllite member. Greenstone lenses containing pyrrhotite occur abundantly within 1000 feet of a coincident magnetic-conductive anomaly on the northwest side of Blind Creek.

The quartz graphite-sericite phyllite found on the Hoho-Bram claims can be traced southeasterly through aeromagnetic and electromagnetic trends to the Swim deposit.

GEOPHYSICS

A helicopter-borne A.E.M. survey was flown over the Hoho-Bram area in 1965 for Dynasty Explorations by Lockwood Survey Corporation. Two well-defined conductors were outlined, one west of Blind Creek and located within sericite chlorite schists, the other is east of Blind Creek and located within limestone and limy-phyllite units.

The western conductor is partially coincident with a small aeromagnetic expression. This 20 gamma aeromagnetic anomaly is likely due to a band of greenstone mapped in close proximity to the plotted location of the aeromag feature. No aeromagnetic survey coverage was completed east of Blind Creek in the vicinity of the property.

Ground geophysical follow-up consisted of Crone C.E.M. surveys and magnetometer surveys over the Hoho-Bram picket-line grid.

(a) Magnetic Results

A combination of nearly continuous magnetic storms and a suspected malfunction within the circuitry of the magnetometer gave unreliable data, thus causing the survey to be abandoned. Available aeromagnetic data was used for geophysical interpretations.

(b) Electromagnetic Results

A large conductor has been outlined in the area of the A.E.M. anomaly located west of Blind Creek. This conductor as defined by a C.E.M. survey has dimensions of 2200 feet by 2400 feet, its major axis trends in an east-west direction and is on strike with the Vangorda deposit located 5 miles west of the Hoho-Bram claims. Conductive response reaches negative resultant dip angle values in excess of -50 degrees.

The negative dip angle profile is typical of a flat-lying conductive body. The field strength ratio profiles closely approximate the dip angle response and also typify a flat-lying body of good conductivity.

Three other C.E.M. anomalies were outlined on the grid:

| <u>Location</u> | <u>Mid-point</u> | <u>Maximum</u> | <u>Coincident</u> |
|------------------|------------------|------------------|----------------------|
| <u>Conductor</u> | <u>Axis</u> | <u>Response</u> | <u>Features</u> |
| 4E | 7N | -20 ^o | Aeromagnetic anomaly |
| 72E | 3S | -30 ^o | A.E.M. Conductor |
| 72E | 18S | +30 ^o | |

The two anomalies on line 72E are related to the A.E.M. conductor outlined in that area. Ground survey coverage in this area is not complete. The north-south strike of the main axis of the A.E.M. conductor coincides with the strike of nearby outcrops.

GEOCHEMISTRY

Approximately 420 soil samples were collected at 200 foot intervals along selected lines in the vicinity of the C.E.M. anomalies. Background values for copper and lead within the claim group are in the order of 20 to 25 ppm. For zinc, the background appears to be about 60 to 70 ppm.

(a) Copper

Copper values range from 15 to 140 ppm, anomalous values are considered to be in excess of a threshold of 50 ppm, median values range from 25-30 ppm.

Seven small areas of anomalous copper, each area including between 2 and 5 stations, occur on the grid. A few 'spot highs' in excess of 50 ppm were also found.

(b) Lead

With the exception of one copper "high" on the recon. grid, anomalous copper values do not coincide with anomalous lead-zinc values. Lead and zinc geochemistry is certainly less widespread than copper. Lead values range from 15 ppm to a high of 360 ppm, average values of lead in soils are in the order of 30 ppm, threshold has been estimated at 50 ppm.

Only one significant lead anomaly in soils was outlined on the northwest border of the claim group on the recon. grid. Two recce soil samples taken 400 feet apart along a sidehill contour gave values of 360 to 120 ppm. A third sample taken 1000 feet northwest of the first two samples and along the direction of geologic strike assayed 78 ppm lead.

Although this recon. anomaly is small and is made up of only three anomalous sites, it is nevertheless a significant target in that it follows the strike of the quartzose phyllite unit, it has coincident anomalous values in zinc and copper, and it falls near a weak 20 gamma aeromagnetic gradient.

(c) Zinc

Zinc values range from 20 to 410 ppm, average values are in the order of 60 ppm and threshold is 100 ppm.

The major zinc anomaly in soils coincides with the above-mentioned copper and lead anomaly on the northwest border of the property. As expected, the zinc anomaly is larger than the copper and lead anomalies and has dimensions of 2000 feet by 500 feet in width. Several small zinc anomalies were outlined, most are in close proximity to the contact of the Anvil Batholith and are probably of no economic significance.

CONCLUSIONS AND RECOMMENDATIONS

The Hoho-Bram group is located over a band of quartz-rich phyllite, the host for massive sulphide deposits in the Anvil area. The claims are within close proximity to the Swim deposit and are also on strike with the Vangorda deposit. Favourable geology, accompanied by aeromagnetic and ground electromagnetic features, make this property favourable for additional exploration for massive sulphides.

It is recommended that further work consist of a deep penetrating electromagnetic Turam survey followed by contingent diamond drilling of interesting targets.

1973 PROPOSED PROGRAM

1. Ground Electromagnetic Turam Survey

- Selection of Turam because of deeper penetrating ability.
- Contract to either Seigel Associates or P. Walcott.
- Contract for 17 miles at est. \$200/mile 3,400

1 man to assist Turam crew - est.
2 weeks @\$20/day 280 \$ 3,680

2. Transportation

Helicopter from Faro - Est. total of 5 hrs. @\$155/hr. 775
One-half Mob.-Dembo. of Turam crew from Vancouver - Est. 500 \$ 1,275

3. Camp Operations

3 men for estimated 14 days @\$10/man/day 420
Other supplies 100 \$ 520

4. Contingent Diamond Drilling

- Estimate two 500 ft. holes or 1000 ft.
- Drillers to supply their own camp, fuel and machinery - Estimated cost @\$15/ft. \$15,000

5. Assaying

Estimate 1000 ft. @\$5/10 feet \$ 500

6. Supervision

1 man for 1 month @\$1000/month \$ 1,000

7. Property Maintenance

| | | |
|--|-----------|-----------------|
| Recording Fee for assessment work @\$20/claim for 4 years x 48 claims | 960 | |
| Grouping charge @\$5/16 claims | <u>60</u> | \$ 1,020 |
| Total Direct Costs | | \$22,995 |
| Expediting - 5% | | \$ 1,150 |
| Administration - 10% | | <u>\$ 2,299</u> |
| TOTAL COST | | <u>\$26,444</u> |

Respectfully submitted,



W. J. Roberts,
Staff Geologist

January, 1973



LEGEND

- 3c THINLY LAMINATED SILTY LIMESTONE ALTERNATING LAMINAE OF DIABOLITE AND SILTY FINE GRAINED GREY LIMESTONE (320)
- 3b SILVERY GREY WEATHERING GREY TO BLACK FOLIATED SERICITE CHLORITE BIOTITE GRAPHITE PRAWLITE, CAN CONTAIN LARGE GREENSTONE LENSES (334)
- 3a LIGHT TO DARK GREY, BLACK QUARTZ SERICITE, BIOTITE, CHLORITE, PRAWLITE, ALSO INCLUDES QUARTZ, GRAPHITE PRAWLITE (345) AND QUARTZITE (344) GENERALLY CONTAINS SMALL GREENSTONE LENSES (334)
- A.E.M. CONDUCTOR OUTLINE
- C.E.M. CONDUCTOR OUTLINE
- AEROMAGNETIC ANOMALY
- COPPER ANOMALY IN SOILS
- LEAD ANOMALY IN SOILS
- ZINC ANOMALY IN SOILS
- ASSUMED GEOLOGICAL CONTACTS
- CLAIM OUTLINE

| | |
|--|---------------------|
| DYNASTY EXPLORATIONS LIMITED | |
| TINTINA-ANVIL PROJECT | |
| BRAM - HO,HO GROUP | |
| GEOLOGICAL, GEOPHYSICAL, & GEOCHEMICAL COMPILATION | |
| LOCATION MAP: 105-K-2 | DATE: JANUARY, 1973 |
| SCALE: 1 inch to 1320 feet. | |
| 019826 | |

