

GEOLOGIC, GEOCHEMICAL, GEOPHYSICAL
AND DIAMOND DRILLING REPORT ON THE
CAPA, ECHO, DELTA CLAIMS
TINTINA-ANVIL PROJECT

Whitehorse Mining District
Yukon Territory

Latitude: 62°12'N.
Longitude: 132°45'W.

N.T.S. 105-K-2

January 1, 1972-December 31, 1972

By:

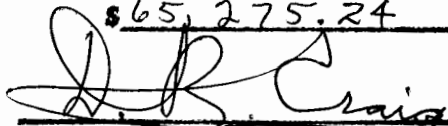
J. S. BROCK
W. J. ROBERTS

DYNASTY EXPLORATIONS LIMITED

January, 1973

This report has been examined by the
Geological Evaluation Unit and is recom-
mended to the Commissioner to be consider-
ed as representation work in the amount of

\$65,275.24



Resident Geologist or

~~Resident Mining Engineer~~

Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act



Commissioner of Yukon Territory

TABLE OF CONTENTS

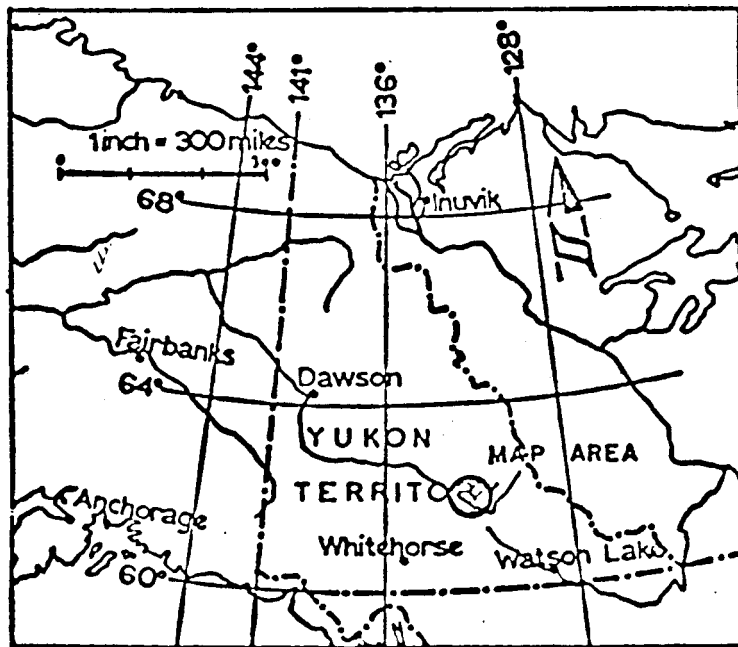
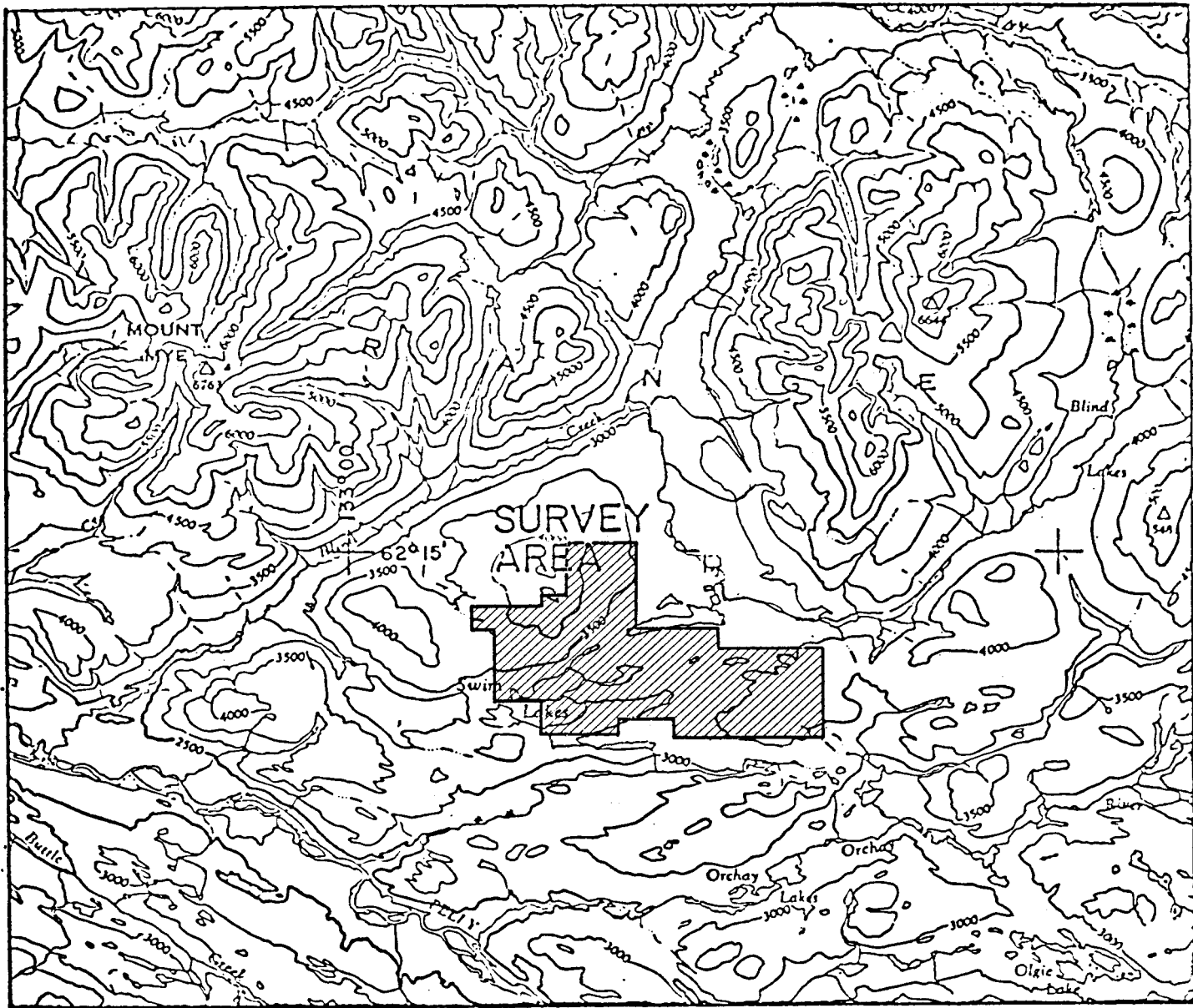
	<u>Page</u>
List of Claims	
Introduction	1
Location and Access	2
Regional Geology	3
Table of Geologic Formations	4
Geology	5
Economic Geology	9
Linecutting	9
Geochemical Surveys	10
Soil Sampling	10
Geophysical Surveys	11
(a) Magnetic Survey	11
(b) C.E.M. Electromagnetic Surveys ...	11
(c) Turam Electromagnetic Survey	12
(d) Gravity Surveys	14
Diamond Drilling	17
Conclusions and Recommendations	25
Proposed 1973 Program	26
Appendix I - Diamond Drill Logs	
Appendix II - List of Personnel	
Appendix III - Summary of Costs	
Appendix IV - Affidavit Supporting Summary of Costs	
Appendix V - Vouchers Supporting Costs	

ILLUSTRATIONS

<u>Figure</u>	<u>Map</u>	<u>Scale</u>
1	Claim Map	1"=1320'
2	Geology Map	1"=1320'
3	Geochem Values Map	1"=400'
4	Magnetic Values and Profiles	1"=400'
5	C.E.M. Electromagnetic Profiles and Values	1"=400'
6	C.E.M. Electromagnetic Contours	1"=400'
7	Turam Electromagnetic Profiles	1"=400'
8	Residual Gravity Contours	1"=400'
9	Airborne Geophysical Compilation	1"=1320'
10	Ground Geophysical Compilation and Proposed Work	1"=1320'

LIST OF CLAIMS

<u>Claim</u>		<u>Grant Number</u>	<u>Recording Date</u>
CAPA	1-16	Y61509-Y61524	July 30, 1971
	17-32	Y61733-Y61748	August 27, 1971
	33-36	Y61541-Y61544	July 30, 1971
	37-44	Y61749-Y61756	August 27, 1971
	45-67	Y67006-Y67028	August 16, 1972
DELTA	1-31	Y62073-Y62103	September 17, 1971
	32-39	Y61725-Y61732	August 27, 1971
ECHO	1-146	Y61757-Y61902	August 27, 1971
	148-155	Y66708-Y66715	June 23, 1972



DYNASTY EXPLORATIONS LTD.

LOCATION MAP

CED. GROUP

FARO AREA, YUKON TERRITORY

SCALE 1 : 250,000

4miles 0 4miles

DYNASTY EXPLORATIONS LIMITED

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

GEOLOGIC, GEOCHEMICAL, GEOPHYSICAL
AND DIAMOND DRILLING REPORT ON THE
CAPA, ECHO, DELTA CLAIMS
TINTINA-ANVIL PROJECT

INTRODUCTION

The Echo-Delta-Capa mineral claims, situated at the southeast end of the Anvil Range, were staked in July, 1971, over an area of phyllitic rocks bearing quartzose sections similar to those hosting sulphide deposits in the Anvil area. The staked area exhibits numerous conductive and magnetic structures as derived from both airborne and ground geophysical surveys carried out in 1965 by Dynasty over the former Cub and Nasty Claim groups

Previous work in the area, between 1964 and 1969, by Dynasty Explorations, as well as Anvil Mining Corporation, involved airborne geophysical surveys, limited gravimetric, ground magnetic and soil sampling surveys as well as drilling of 7 rotary drill holes on geophysical targets.

A large-scale detailed regional mapping program carried out by Dynasty in 1970 and 1971, coupled with a re-evaluation of all previous exploration work, contributed to Dynasty's renewed interest in the area. New interpretations involving the position and extent of the quartzose-phyllite host north of Swim Lakes led to the staking of the Echo-Delta and Capa Claims.

The quartzose-rich sequence of phyllite is in part masked by overburden cover and overlying phyllites. Deep penetrating electromagnetic surveys (C.E.M.) were therefore completed during

1971 to aid in mapping structure and positioning deep conductors. Ground magnetometer surveys were used to locate aeromagnetic anomalies.

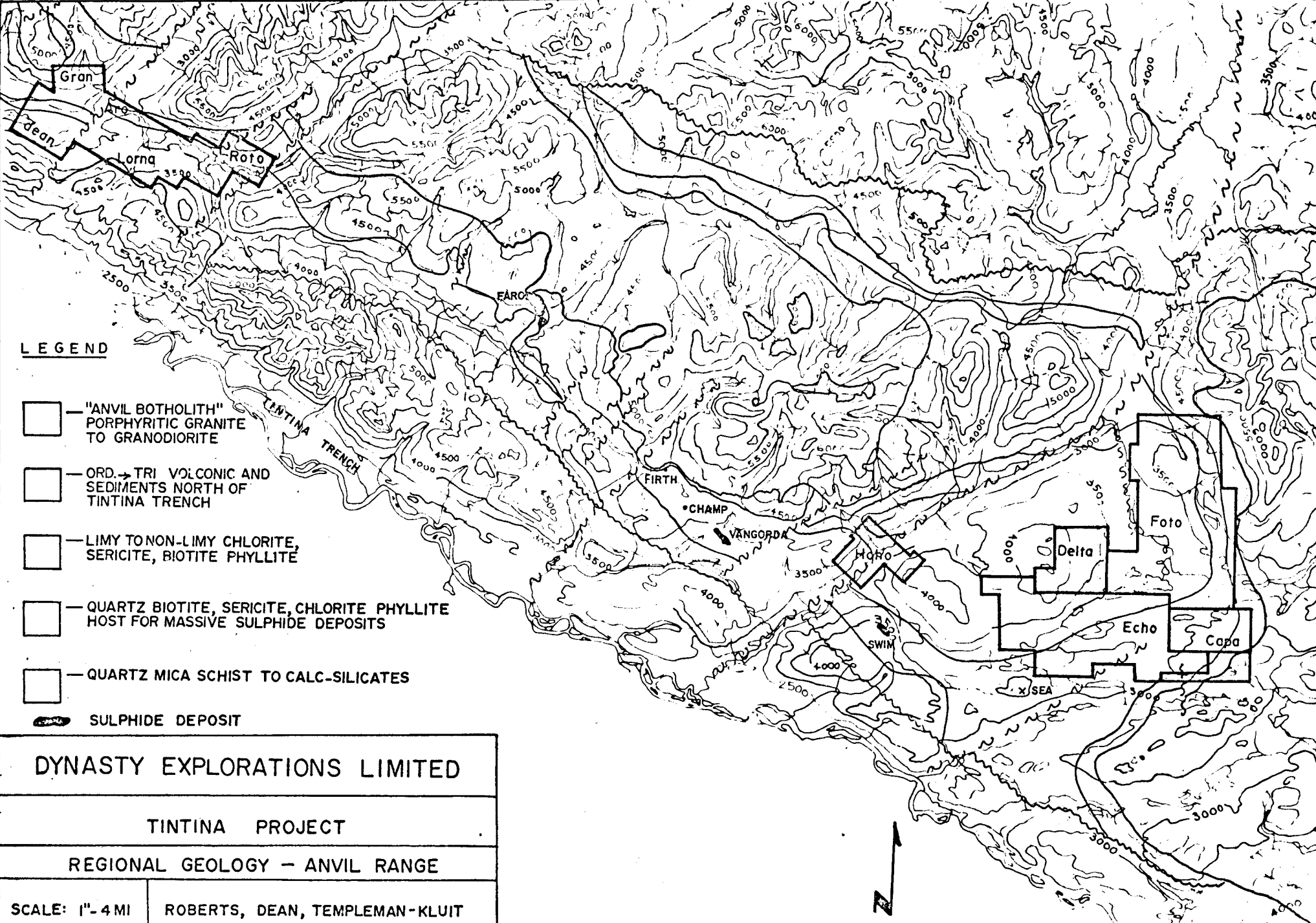
During the 1972 field season, electromagnetic (C.E.M.) and magnetic "fill-in" surveys, as well as limited soil sampling and geologic mapping, were completed. Roughly 60 line miles of gravimetric survey and 16 miles of deep penetrating E.M. (Turam) were also completed. Compilation of all geophysical surveys outlined seven targets which were diamond drilled during the period August 1st - October 10th. Total footage was 3,566 feet.

Proposed work for the 1973 field season includes limited additional Turam and gravity survey coverage followed by contingent diamond drilling.







CLAIMS LOCATION AND ACCESS

The Capa-Delta-Echo claims are immediately adjacent to each other and are considered as one group. The property is centred amongst the Swim Lakes, 18 miles east of Faro and 20 miles northwest of Ross River. Access to the area is best made by float-equipped aircraft from Ross River to any of five lakes in close proximity to the property. Alternatively, helicopter charters can usually be arranged from either Faro or Ross River to the claim groups.

Access within the area is good. Numerous tote trails exist, all of which are passable by 'bombardier' type tracked vehicles. It is possible to use such vehicle support for transport to Faro, however, the distance and time involved makes fixed-wing aircraft support from Ross River less expensive and time-consuming.



LEGEND

-  — "ANVIL BOTHOLITH" PORPHYRITIC GRANITE TO GRANODIORITE
-  — ORD. → TRI VOLCANIC AND SEDIMENTS NORTH OF TINTINA TRENCH
-  — LIMY TO NON-LIMY CHLORITE, SERICITE, BIOTITE PHYLLITE
-  — QUARTZ BIOTITE, SERICITE, CHLORITE PHYLLITE HOST FOR MASSIVE SULPHIDE DEPOSITS
-  — QUARTZ MICA SCHIST TO CALC-SILICATES
-  — SULPHIDE DEPOSIT

DYNASTY EXPLORATIONS LIMITED

TINTINA PROJECT

REGIONAL GEOLOGY - ANVIL RANGE

SCALE: 1" = 4 MI

ROBERTS, DEAN, TEMPLEMAN-KLUIT



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. Chloritic tuffaceous greenstone grading to massive amphibolite occurs as concordant to discordant lenses throughout the Eocambrian section. 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 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 and pyrrhotite content. An elongation of deposits paralleling deformational fabrics adds evidence to the fact that the sulphides were affected during regional metamorphism. The three major deposits are thought to be of syngenetic origin as indicated by stratigraphy, similar average metal content, uniform lead-zinc ratio, similar textures and mineralogy. The irregular SiO_2 -Al rich envelope surrounding the deposits is possibly explained by chemical changes during deformation or metamorphism of originally rhyolitic material.

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.
	)	3c	Thinly laminated silty limestone, alternating laminae of phyllite and silty fine-grained grey limestone
	)	3d	"Greenstone" - light to dark green foliated to massive chlorite schist to andesite to amphibolite.
EOCAMBRIAN)		
	)	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

In the Swim Lakes area, Cretaceous intrusions are not restricted entirely to the core of the main Anvil antiform but also occur as a batholith about 12-15 miles in diameter, located east of Cub Lake and the C.E.D. Group. Intrusion emplacement was accompanied by local uplift, resulting in a basin-like structure between the eastern batholith and the Anvil batholith, with older rocks occurring on the perimeter.

Outcrop is sparse within the Capa-Delta-Echo group but a reliable interpretation of bedrock geology was obtained by projecting geologic contacts from surrounding areas; logging previous rotary drill holes and present diamond drill holes; locating conductive marker zones by geophysical surveys; and detailed surface mapping of outcrop and float.

Virtually all of the Capa and southern Echo claims are underlain by quartz-rich phyllite, Unit 3a. Graphite-rich bands in Units 3a and 3b have been well traced by electromagnetic (C.E.M.) survey methods. The south-western portion of the Echo claims, north of Moose Lake, is on strike with the quartz-rich phyllite band that encloses the copper-lead-zinc mineral showings on the Sea Claims, southeast of Swim Lake. The northwest portion of the Echo claims are underlain by graphite-sericite phyllite, Unit 3b. In the topographically lower areas, near Echo and Nasty Lakes, Unit 3a underlies Unit 3b at relatively shallow depth as may be noted in the log for Drill Hole 72-3. Surface bedrock geology on the Delta claims consists of phyllitic rocks that are higher in the section than the favourable quartz phyllite unit.

The following is a description of rock units noted within the C.E.D. Group.

Unit 2

Unit 2 consists of a medium to coarse grained quartz biotite garnet schist with variable porphyroblasts of staurolite and andalusite. Porphyroblasts are generally subhedral to euhedral, 1 mm. to 7 mm. in size, and commonly in bands paralleling the major foliation S_2 . Sericite (muscovite) grains are silvery-grey to cream coloured, less than 1 cm. in size and generally parallel to S_2 . Biotite occurs as large dark brown to black grains predominantly parallel to a later foliation than S_2 . All evidence of bedding in this unit has been obliterated by the complex deformational history but since it is more highly metamorphosed than the adjacent phyllites, it is thought to be older. True stratigraphic thickness is unknown due to intense minor folding but it is estimated that the schist is over 1000 ft. thick in this area. Contacts with the batholith are very sharp with little thermal effect in evidence. The schist-intrusive contact appears to be sub-vertical. The conformable contact with the "phyllites" to the north and west is characterized by a decrease in deformation shown by a decrease in grain size and absence of porphyroblasts. This gradational contact generally occurs over 10 to 100 ft. This contact appears to be related to a change in metamorphism rather than a change in chemical composition and is, therefore, thought to be roughly paralleling the major structural element, the S_2 foliation.

Unit 3

The phyllites, Unit 3, are subdivided into 3 major rock types, quartz-rich phyllite (3a), the lower member, non-quartz-rich phyllite (3b), the middle member, and limy phyllite (3c), the upper member. Greenstone (3d) occurs as lenses throughout the section. This phyllite series probably represents an original silty shale regionally metamorphosed up to a green-schist facies. The "greenstones" are likely of volcanic origin. Original bedding is present in areas of low metamorphosis but

in most cases is obliterated by D_2 deformation producing the well-developed S_2 surfaces. Later deformations are indicated by well formed lineations and small to large scale folds. Size comparison of individual mica grains was used to differentiate fine grained schists from phyllites. Under a hand lens, no individual mica grains can be observed in the phyllite.

Unit 3a - consists of a well-foliated quartz sericite, biotite, chlorite, graphite phyllite. Colour varies according to predominance of mica and graphite content. Quartz and mica are segregated and form alternating folia generally less than 1 cm. thick. Thickness of the quartz-rich folia generally is in proportion to the total amount of quartz present and often contains minor pale green chlorite. Alternating darker folia consisting of mica generally are thinner and can contain a combination of muscovite, biotite, chlorite or graphite. Sericite-rich phyllite predominates and has a silvery-grey sheen on mica-rich folia parallel to S_2 . Green colouration generally reflects high chlorite content, dark brown indicates biotite and black phyllite usually is graphite-rich. The quartz-rich phyllite generally consists of over 50% quartz in hand specimen and has a conformable contact with the underlying quartz biotite-sericite schist. Overall thickness of this unit is variable, depending on amount of folding, but is thought to be 800-1500 ft.

Unit 3b - consists of sericite, chlorite and graphite phyllite with minor quartz content. Compositionally, micas and graphite make up 50 to 80% of the unit, quartz and calcite comprise less than 30%. Individual folia of aligned micas are much thinner than those of Unit 3a. Colouration is due to prominence of mica, i.e. sericite phyllite appears silvery-grey, chlorite phyllite is pale green and graphite phyllite is black. The major foliation S_2 is well developed and since low quartz content decreases competence, many F_2

isoclinal folds, as well as D₃ and D₄ crenulations and lineations, are present.

Carbonate content gradually increases in the sericite phyllite towards a conformable contact with the overlying limy phyllite, Unit 3c. This unit, due to its exceptionally high calcite content and low grade of metamorphism, may also be called a silty limestone. Calcite content varies between 30 and 90% as pale yellow, grey and white laminae approximately 1 mm. to 2 cm. thick. Average thickness is roughly 1 cm. Alternating thinner laminae (1-5 mm. thick) consist of dull silvery-grey sericite phyllite to grey silty slate. Foliation S₂ is again predominant with later D₃ and D₄ lineations and crenulations superimposed. Although no thicknesses were measured, this uppermost unit of the phyllites likely is in excess of 1000 feet.

Greenstone, Unit 3d, occurs throughout the phyllite section. Greenstone is found as small lenses of Unit 3a, in Units 3b and 3c large tabular greenstone bodies several hundred feet thick are found. The greenstone is more resistant to weathering than the enclosing phyllite and consequently may form the more prominent exposures. The greenstone is a fine grained amphibolite made up of fine grained actinolite and minor chlorite, epidote, plagioclase and calcite.

The greenstone bodies generally have well-foliated margins with coarser grained massive centres. Field terms such as "chlorite schist" or "actinolite schist" have been used to describe the foliated variety, whereas "amphibolite" describes the more massive type. Colouration varies from pale green well foliated chlorite-rich schist to dark green amphibolite. The greenstone likely represents extrusive andesite and volcanic tuffs.

Unit 11 - Quartz-monzonite to granodiorite forms a large arcuate-shaped intrusion along the southeastern border of the C.E.D. Group. Limited mapping was done within the batholith since it post-dates major sulphide mineralization in the Anvil area.

ECONOMIC GEOLOGY

No economic mineralization was discovered within the C.E.D. claims. Mapping and prospecting was hampered by thick overburden and less than one percent outcrop.

LINECUTTING

Approximately 50 line miles of picket-line was contracted by Eastern Associates Ltd., Yukon, to complete grid coverage of the C.E.D. Group. The grid consists of north-south trending corss lines of 800 ft. spacing, controlled by east-west baselines with 3000-4000 ft. spacing. Picket stations were chained every 100 ft., slope corrections were made in areas of steep topography. Final grid control was surveyed by stadia methods during the gravity survey.

GEOCHEMICAL SURVEYS

Soil Sampling

In general, the presence of permafrost and deep transported overburden in much of the Anvil Range makes soil sampling surveys unreliable. For these reasons, soil sampling is not considered to be a totally reliable exploration method in the Anvil Range.

Geochemical soil sampling was attempted over two selected areas, on the Echo and Delta claims, northwest of Nasty Lake, and on the Capa claims, east of Moose Lake. Previous soil sampling surveys were carried out over various parts of the Echo and Delta claims. For the 1972 survey, samples were taken from the "B" horizon and analyzed using a HClO_4 (total extraction) leach.

No well defined geochemical anomalies were outlined as a result of the soil sampling program or by previous surveys. All anomalies indicated on the "Geochemical Soil Sampling Values Map" are either very weak or very spotty, involving at most a few "spot highs".

GEOPHYSICAL SURVEYS

To obtain a complete geophysical picture, Dynasty, in 1971, initiated a program of ground magnetic and electromagnetic (Crone C.E.M.) surveys over most of the Capa-Delta-Echo claims. During the 1972 field season 'fill-in' ground magnetic and electromagnetic surveys were undertaken to achieve complete coverage of the grid area. Approximately 60 line miles of gravimetric survey and 16 line miles of deep penetrating electromagnetic (Turam) survey were also completed. Compilation of geophysical results indicated significant coincident anomalies and major structures that required drill testing.

(a) Magnetic Survey

The ground magnetic survey was done with a Sharpe MF-1 fluxgate magnetometer. This instrument is hand-held and measures the vertical component of the magnetic field. The Gamma Values and Profile Map covering the Echo and Capa claims is included in the accompanying pocket. Although no major magnetic anomalies were found during the 1972 program, some small isolated magnetic "highs" were discovered. It is thought this positive magnetic response could result from either massive or disseminated pyrrhotite mineralization.

(b) C.E.M. Electromagnetic Surveys

The Crone C.E.M. instrument consists of two coils which can be utilized in a variety of configurations. For this survey, the "horizontal shootback" method was used, with the coils transmitting and receiving in a horizontal position. Coil separation was 500 ft., thus theoretically having a depth penetration of just under 500 feet.

The 1971 survey detected major bands of E.M. conductors which can be correlated with graphite-bearing lenses in Units 3a and 3b. Several min or C.E.M. anomalies

occurring over favourable quartz-rich phyllite were outlined during the 1972 "fill-in" survey. The most interesting of these was a small conductor at the southern end of line 64E close to a rust stained creek.

(c) Turam Electromagnetic Survey

A contract for 16 line miles of Turam survey was completed by Seigel Associates Ltd., of Vancouver. The survey area is outlined on the "Geophysical Compilation Map." The Turam method was used because of its deeper penetration capabilities and allowance for more accurate interpretation of anomaly characteristics. The following "Description of Method and Instrumentation" and "Presentation of Results" is taken, in part, from a report by Seigel Associates.

"Description of Method and Instrumentation"

A scintrex SE-71 instrument was employed for the survey. The receiver coil separation was 100. Six transmitting loops of the following dimensions were utilized:

3000' x 3200' (4 loops)
3000' x 4000' (2 loops)

An energizing frequency of 400 Hz was employed throughout. The Moose Grid consisted of six north-south trending grid lines laid out at 800 ft. intervals east of a common Base Line. The Capa grid contains six grid lines spaced 800 ft. apart and oriented N10^oW. Readings were taken every 100 ft.

"Presentation of Results"

The results of the present survey are presented on the uniform scale of 1"= 400'.

The Field Strength Ratios are plotted on the vertical scale of 1"= 20%; the Phase Differences have a vertical scale of 1"= 10^o.

Where anomalous field distortion occurs on the electromagnetic profiles the location and the depth of the main current flow has been derived from the curve shapes. This location is noted by a circle at the appropriate point.

Anomalies have, where appropriate, been connected between lines to obtain the projection of the current pattern. These "conductor axes" are chosen on the basis of depth, values and other characteristics of the electromagnetic curve.

Conductivity X thickness (ρt) values have been determined where possible. Highly conducting bodies (massive sulphides or graphite) generally have high (ρt) values (> 100 mhos.). Poorly conducting bodies (overburden, etc.) usually have low (ρt) values (< 10 mhos.).

To facilitate the final evaluation of the geophysical data the electromagnetic distortions are classified as weak, moderate or strong. Strong anomalies are first priority exploration targets and are represented by well defined conductors of good conductivity. Weak anomalies, on the other hand, are generally poorly defined and are targets which, on the basis of the geophysical data, are of questionable merit."

Electromagnetic Test Surveys

Anvil Mining Corporation undertook several electromagnetic test surveys over the deepest sections of the Faro No. 3 deposit to determine which method had the most effective depth penetration and ability to define deeply buried massive sulphides. Depth to the top of the deposit at its deepest level is between 500 and 600 ft. The tests indicated that large vertical loop and "shootback" techniques were not suitable while Turam methods gave good results. Anomalous response indicating poor to moderate conductivity was registered over the edges of the deposit. Although the 800 Hz frequency gave better response, it is recommended that 400 Hz be used to eliminate geologic noise. Insert "Faro No. 3 Deposit, Line 48W" demonstrates Turam results over the Faro. No. 3 Deposit.

Discussion of Results

Three anomalous electromagnetic zones were discovered on each of the Capa and Moose grids. All zones consist of multiple conductors and appear to reflect weakly conducting material.

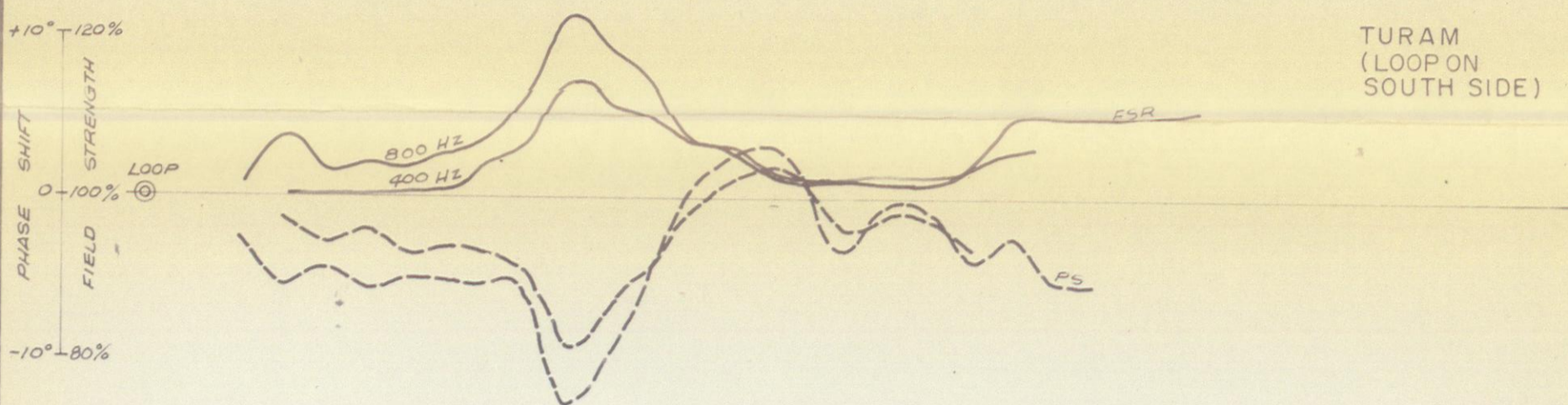
RESIDUAL GRAVITY



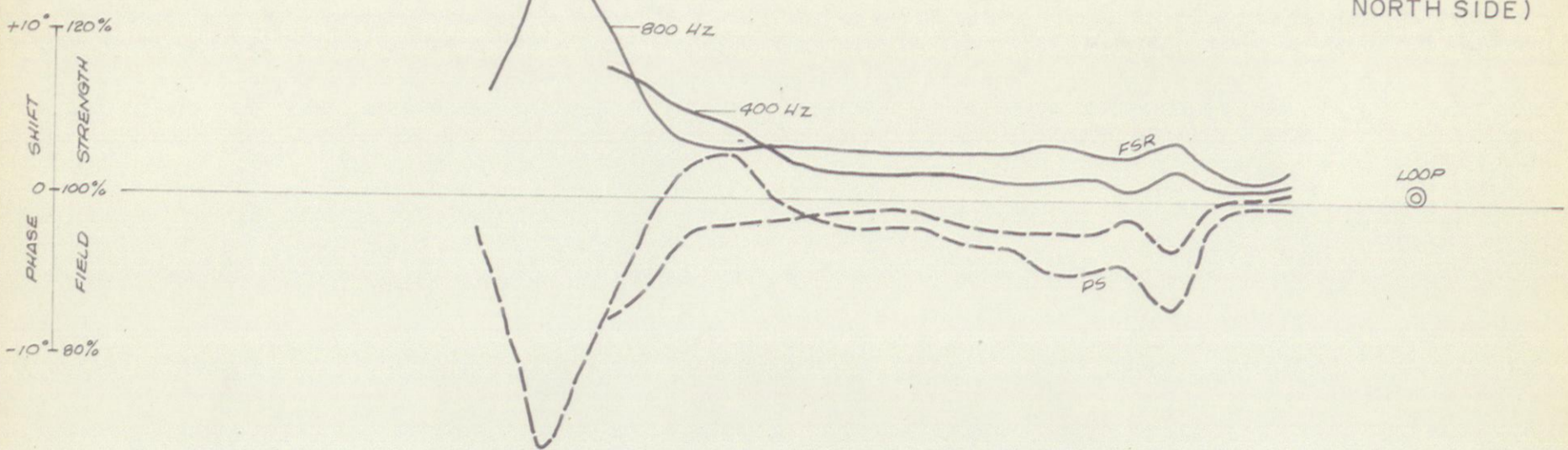
GROUND MAGNETOMETER



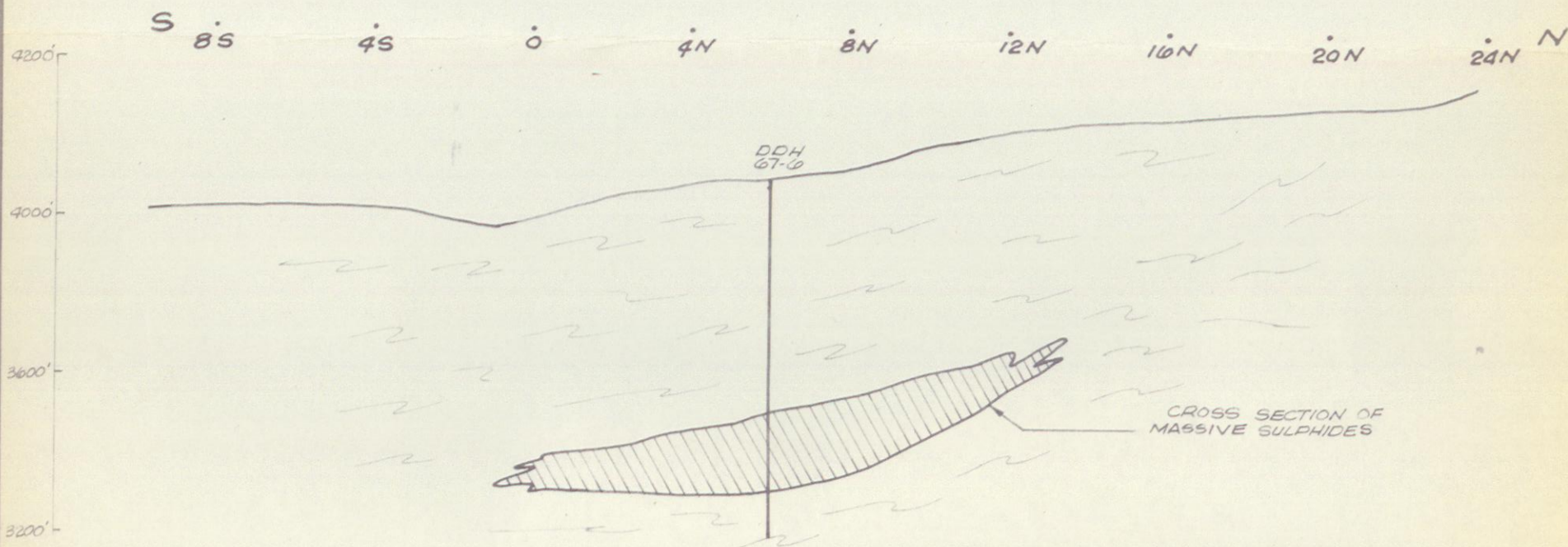
TURAM (LOOP ON SOUTH SIDE)



TURAM (LOOP ON NORTH SIDE)



TOPOGRAPHY



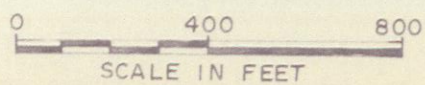
FARO No. 3 DEPOSIT

GEOPHYSICAL PROFILES AND
TURAM TEST SURVEY

DDH 67-6

LOCATION

LINE 48 W



Within the Moose grid; "Zone I", the most extensive anomaly, contains multiple conductors showing (ρt) values from 6-8 mhos. (weak conductors) and depths of 200 to 300 ft. Zone 2, contains reversed anomalies probably caused by swampy conditions. Zone 3, also contains multiple conductors with depths from 175 to 250 ft. and (ρt) values between 4 and 6 mhos. (poor conductors).

Zone I, on the Capa grid, extends for over 2000 ft. with (ρt) values of approximately 10 mhos. and depth to conductor 250 ft. Zone 2, a "Y" shaped anomaly contains multiple conductors with (ρt) products of 3-6 mhos. and depths to current axes of over 250 feet. Zone 3, noted on line 104 East contains a (ρt) value of 4 and depth of 400 feet. All anomalies appear to be weak to poor conductors.

(d) Gravity Surveys

Gravity surveys over the Capa-Echo grids and southern portions of the Delta grid were completed by August 30th, 1972. Approximately 60 line miles of gravimetric survey were contracted to Airborne Geophysical Surveys of Calgary, Alberta.

The horizontal and vertical survey was conducted with a T-IA Theodolite to establish elevations and grid closure. The gravity readings were taken with a La Coste temperature controlled meter and stations were metered on a two and one-half hour run from base to base intervals. The base station plots were used for graphing the diurnal gravity drift which in turn was applied to all station readings. Each gravity station run had several repeat stations from preceding runs in order to prove the repeatability of the gravity meter. The repeats were all within a 0.00 to 0.08 milligal range. All gravity readings were corrected for diurnal tidal drift, Bouguer Free-Air Correlation and latitude correction. A density factor of 0.060 for a surface density of 2.70 has been used in this interpretation.

The following description of the "Residual Map" has been taken from a report by R. B. Galeski.

"Residual Map

Bouguer values and elevations were plotted in profile form. These profiles accompany this report. On prints of the profiles, smoothed Bouguer lines were run. Regionals were also run, tied and adjusted. The residual map accompanying this report represents a contoured presentation of the difference values between smoothed Bouguer and regional. Contour interval is 0.1 mgal. It should be noted that the Bouguer values were smoothed to remove very sharp, small, near-surface effects; and the regional (subtracted from Bouguer) is designed to remove very deep-seated effects. The regional will also include (and remove from Bouguer) very gradually-changing near-surface features. What are left in the residual are shallow gravitational changes caused by density changes in masses having rather abrupt edges. The residual map should be used with care at the limits of data acquisition, as regional values (and hence residual values) are under poor control in these areas.

On the residual map, every local positive indicates the presence of a mass which is heavier than surrounding rocks. The mass may be a bedrock topographic high covered by overburden. It may be an injected dike or a local, vertically oriented heavy layer in a metamorphic sequence. It may be a greenstone lens. Or it may be a mass of heavy mineralized material. In evaluating the various positives, the writer relies primarily on amplitude and flank gradient. It should be noted that sulphide accumulations have been found in this region beneath positives as small as 0.5 mgal. On the other hand, some positive anomalies over 1.0 mgal. in amplitude have not been associated with mineralization.

Following are the prime anomalies in the prospect lettered consecutively in order of importance:

- A. (intersection of Capa B.L. 0 and 136E).
0.7 mgal. amplitude. Causative mass 500' x 1200' in areal extent and 60' thick. Maximum depth to top 200'. Well developed anomaly with apex near the intersection of the two lines.
- B. (63S of Capa B.L. 0 on 64E)
0.8 mgal. amplitude. Causative mass 1300' x 5000' in areal extent and 70' thick. Tilted SSE. Maximum depth to top near updip edge 110'.

- C. (14S to Moose B.L. 0 to 24E to 50S of Capa B.L. 9 on 48E)
0.8 mgal. amplitude. Causative mass appears to be a long, rather narrow slab extending some 7000' from near 8E to 64E. Width varies from 400' to 1000'. Maximum thickness is about 70'. Maximum depth to top is 195' on 24E and 145' on 48E. The anomaly has been downgraded somewhat because of the wide line spacing over the western two-thirds (Moose part).
- D. (intersection of Capa B.L. 85S and 80E)
1.1 mgal. amplitude. Causative mass 2000' x 3000' in areal extent and 95' thick. Maximum depth to top is 380'. Discounted because of the lack of a steep flank gradient. Although the causative mass may be a slab of heavy mineralization, at the relatively great depth of 380' there remains the suspicion that it is a buried stock.
- E. (6N of Capa base line 0 on 120E)
0.5 mgal. amplitude. Possibly similar to "A" but causative mass parameters unknown because of the paucity of data. Downgraded for that reason.
- F. (155E on Capa base line 0)
0.6 mgal. amplitude. May be a narrow, vertically oriented slab extending to the base of overburden. Seen on only four stations on one line.

The various positives in the western part of the prospect are left ungraded because of a general lack of strong amplitude and strong flank gradient. All may be overburden effects. The lone possible exception was found on the northern part of line 72W. This is essentially a single point high and downgraded for this reason.

Of interest, note that anomalies "C", "B" and "D" lie on subparallel northeasterly Bouguer trends which merge in the vicinity of the "A" and "E" anomalies and that a fault probably separates the "B" and "C" trends."

DIAMOND DRILLING

Overburden problems, coupled with soft muskeg ground, and equipment breakdowns hampered the C.E.D. group drilling program. A total of 3,566 feet was drilled in 80 days for an overall average of 45 feet per day.

Further drilling in this area should take place during the period October 1st to May 1st. Frozen ground conditions would improve mobilization logistics and water supply could be provided by tank vehicles. Overall cost of the winter drilling program is expected to be comparable to a summer program.

Detailed descriptions and cross-sections of all drill holes follows:

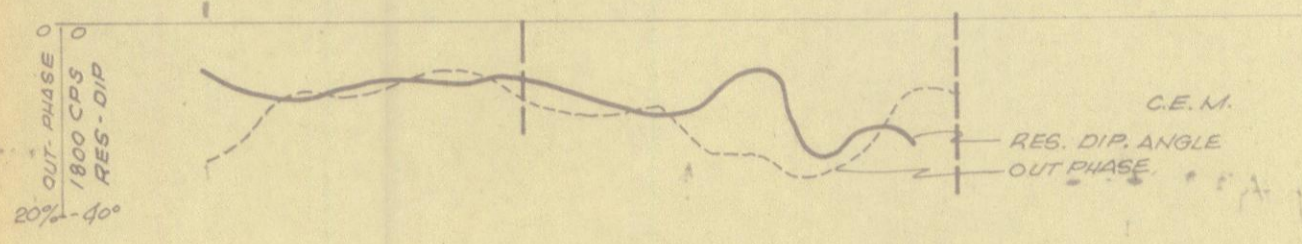
D.D.H. 72-1

Location: Moose Lake Grid Line 88W 3S
Target: - 0.6 milligal residual anomaly
- Weak C.E.M. conductor
- 20 gamma vertical field profile
- Causative mass expected at 320 feet.

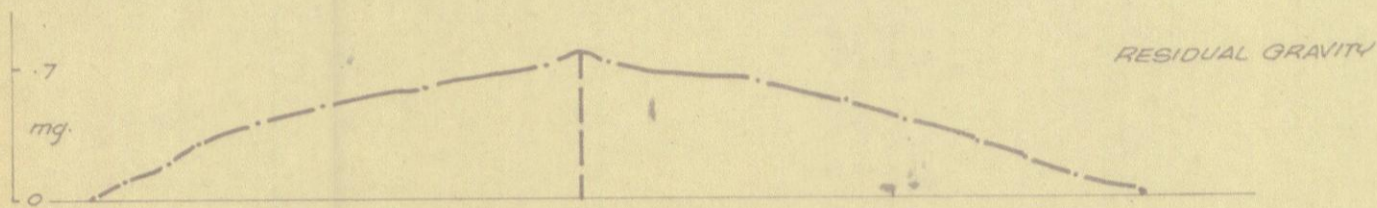
Results: 72-1 intersected bedrock at 261 ft. and encountered quartz sericite phyllite throughout most of the hole. Note the accompanying cross-section. Geochem results from both overburden and bedrock are surprisingly low. There is a general downward decrease in values through the overburden. No geochemically high stratigraphic horizons were intersected.

Mineralization consisted of minor pyrite and pyrrhotite within the S_2 foliation, later pyrrhotite and chalcopyrite in discordant quartz veins at general intervals. Phyllite appeared to be slightly altered in the bottom section of the hole. Possible silicification and clay alteration is associated with increased quartz veining. The gravity anomaly remains unexplained although this may be a bedrock "high".

LOCATION:
NASTY GRID L 88 W
3 S



SCALE: 1" = 400'



16 S 3 S B.L. 8 N LINE 88 W

GEOCHEMICAL ASSAY

PPM

Depth (ft)	Pb	Zn	Notes
0 - 261'			OVERBURDEN
261 - 370'			QUARTZ SERICITE CHLORITE PHYLITE
370 - 378'			"ALTERED" QUARTZ SERICITE CHLORITE PHYLITE
378 - 395'			QUARTZ SERICITE CHLORITE PHYLITE
395 - 464'			"ALTERED" QUARTZ SERICITE CHLORITE PHYLITE
464 - 473'			"GREENSTONE"
473 - 539'			"ALTERED" QUARTZ SERICITE CHLORITE PHYLITE

Depth (ft)	Pb (PPM)	Zn (PPM)
3062	136	250
	72	150
	44	96
	60	100
	30	72
	33	72
	25	70
	25	67
	30	86
	21	63
	22	58
	20	80
	20	78
	21	70
	34	94
	19	63
	19	58
	16	58
	17	54
	15	68
	14	53
	15	68
	18	61
	14	51
	14	53
	13	88
	55	84
	31	72
	17	73
	15	72
	20	68
	9	64
	9	73
	10	80
	28	80
	35	74
	15	84
	15	102
	10	105
	18	97
	18	104
	12	94
	16	90
	15	100
	17	113
	18	90
	16	90
	17	106
	20	390
	16	88
	18	84
	12	80
	16	80

D.D.H. 72-2

Location: Nasty Grid Line 72W Station 12S
Proposed Depth: 300 ft.+
Target: - .9 milligal residual gravity
- C.E.M. conductor
- Broad vertical field 40 gamma profile
- Expected causative mass 180 ft. down

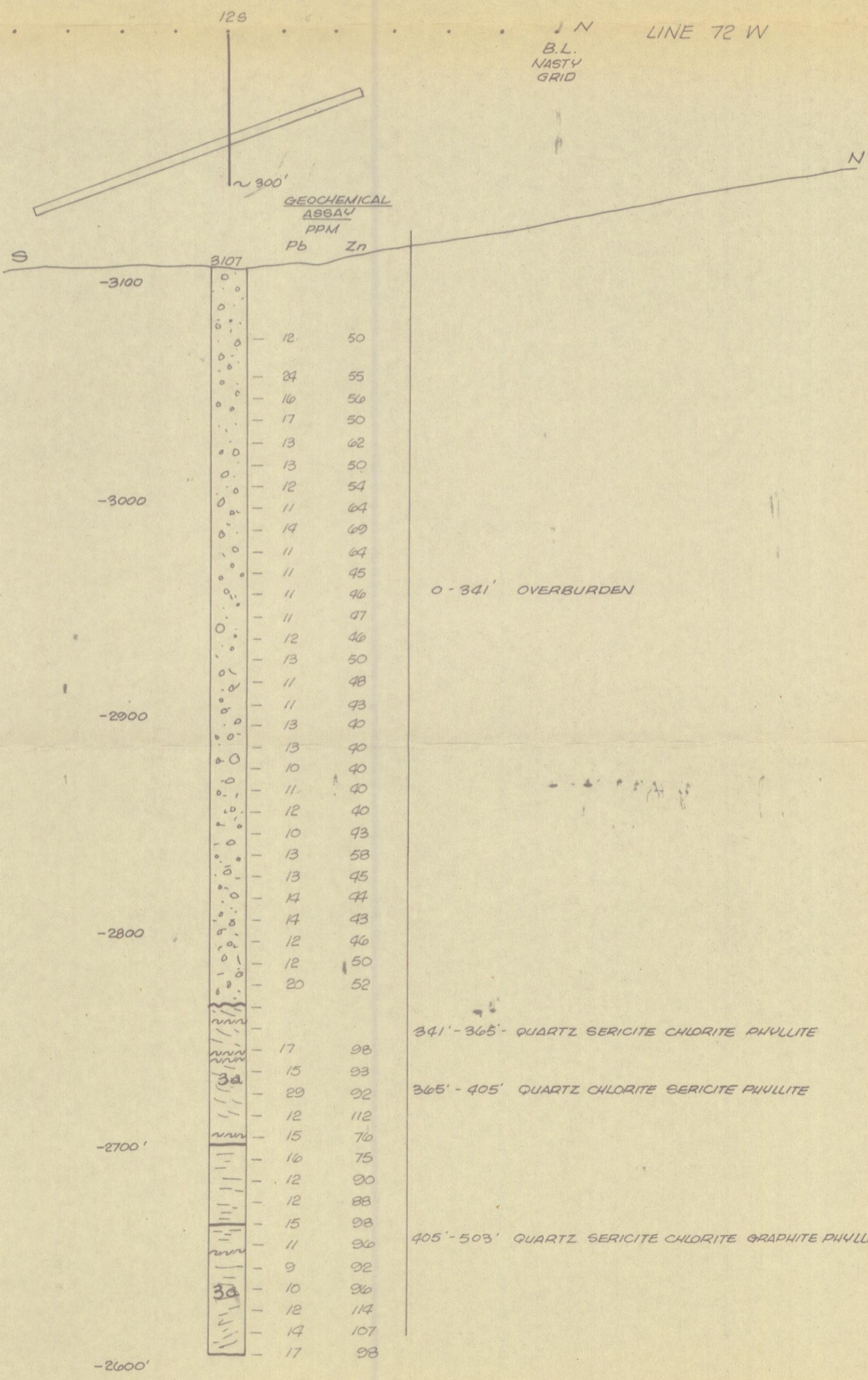
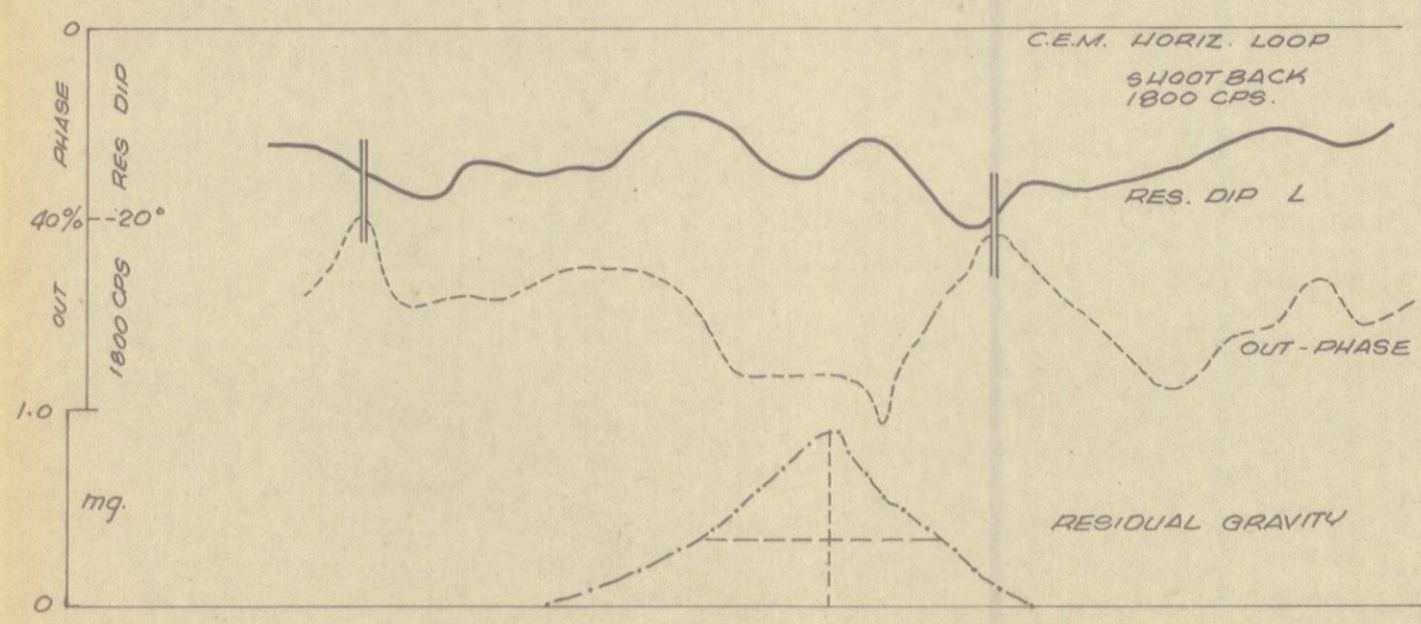
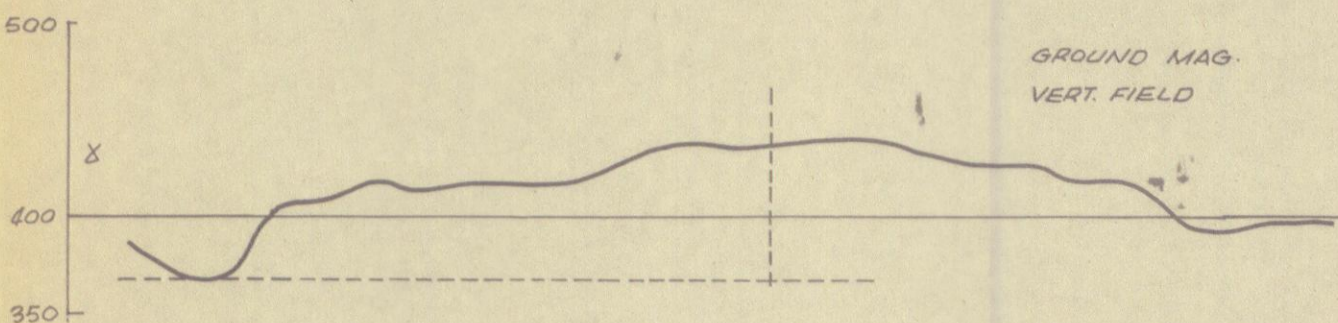
Results: 72-2 went through 341 ft. of overburden before reaching quartz sericite chlorite phyllite (3a). Very minor pyrite and pyrrhotite mineralization. Later pyrite, pyrrhotite and chalcopyrite in quartz veins. Chlorite content increasing with depth possibly leading to a greenstone. Gravity anomaly unexplained. E.M. possibly due to conductive overburden. No geochemical response obtained in either overburden or bedrock.

CAPA, DELTA, ECHO
CLAIMS

D.D.H. 72-2

LOCATION :

NASTY GRID L 72 W
12 S



D.D.H. 72-3

Location: Nasty Grid Line 104W Station 8N
Target: - .5 milligal residual anomaly
- 150 gamma vertical field profile
- Aeromagnetic expression
- Causative mass at ~ 400 ft.

Results: 72-3 encountered bedrock between 30 and 40 feet. Contact of 3a and 3b is close to 461 feet. 240 to 461 feet consists of alternating intervals of sericite graphite phyllite and quartz sericite graphite phyllite. Few minor greenstone lenses were intersected. Both chlorite and quartz content increase with depth; graphite content decreases downward. Two stages of mineralization noted:

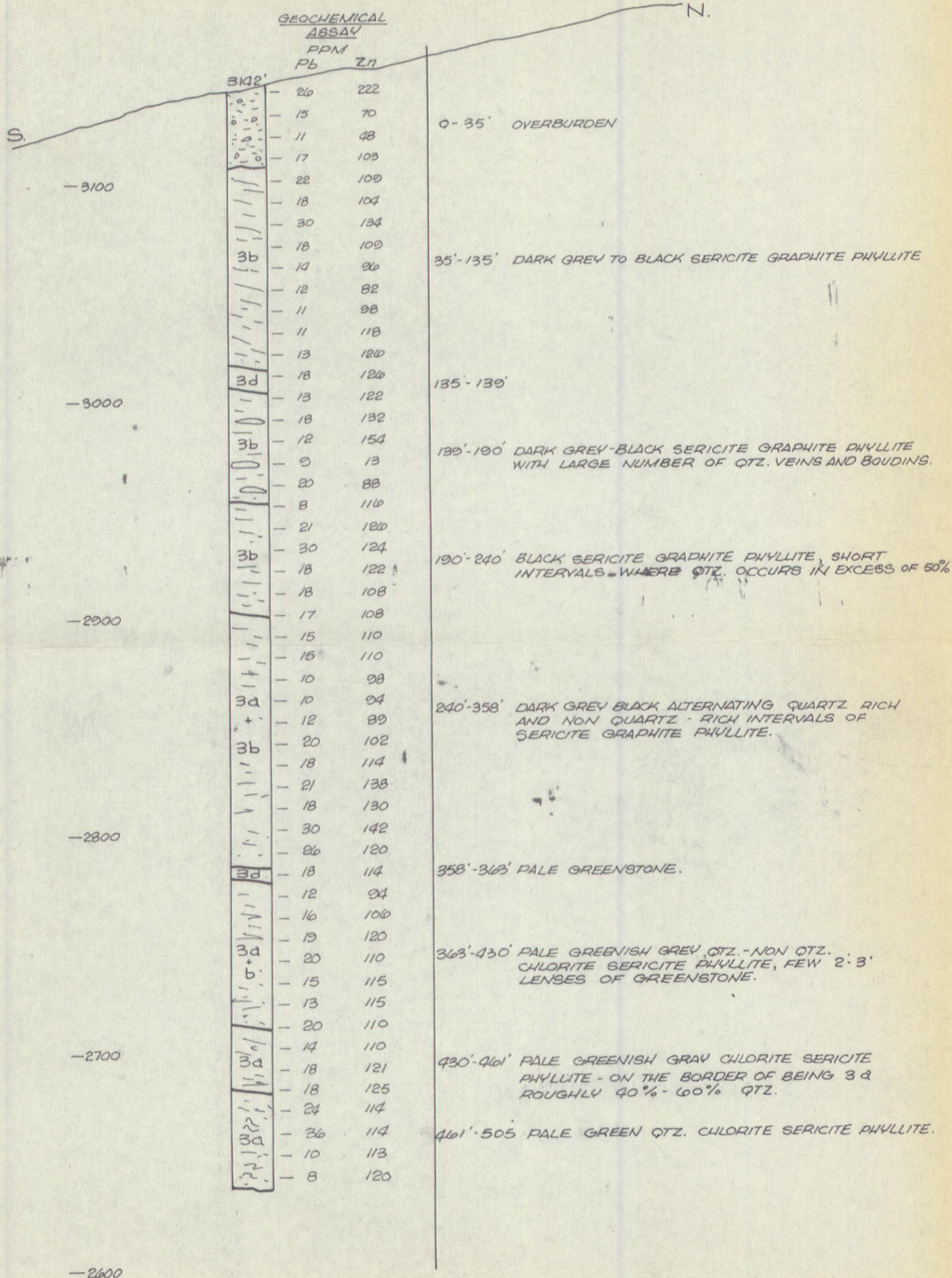
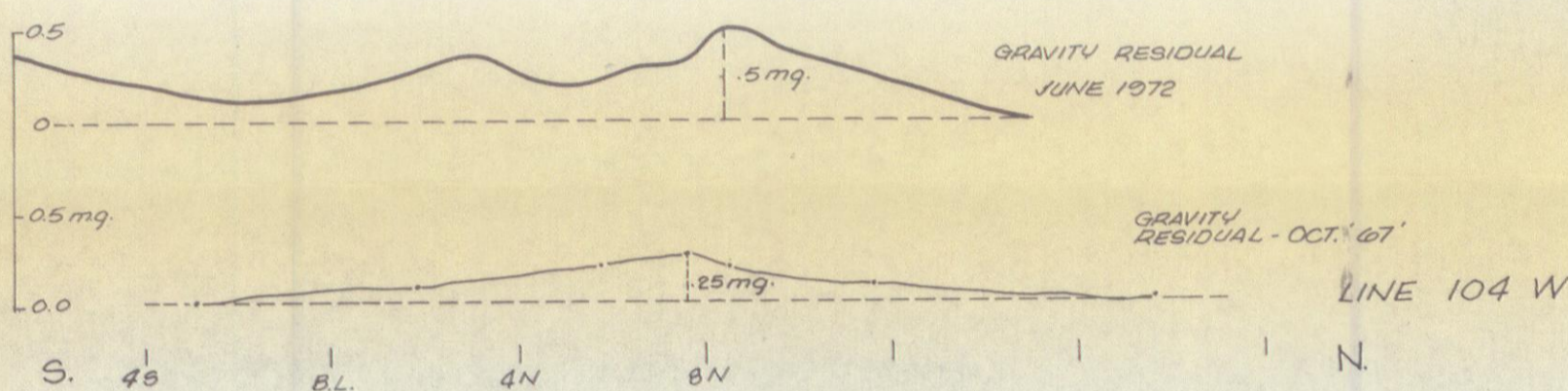
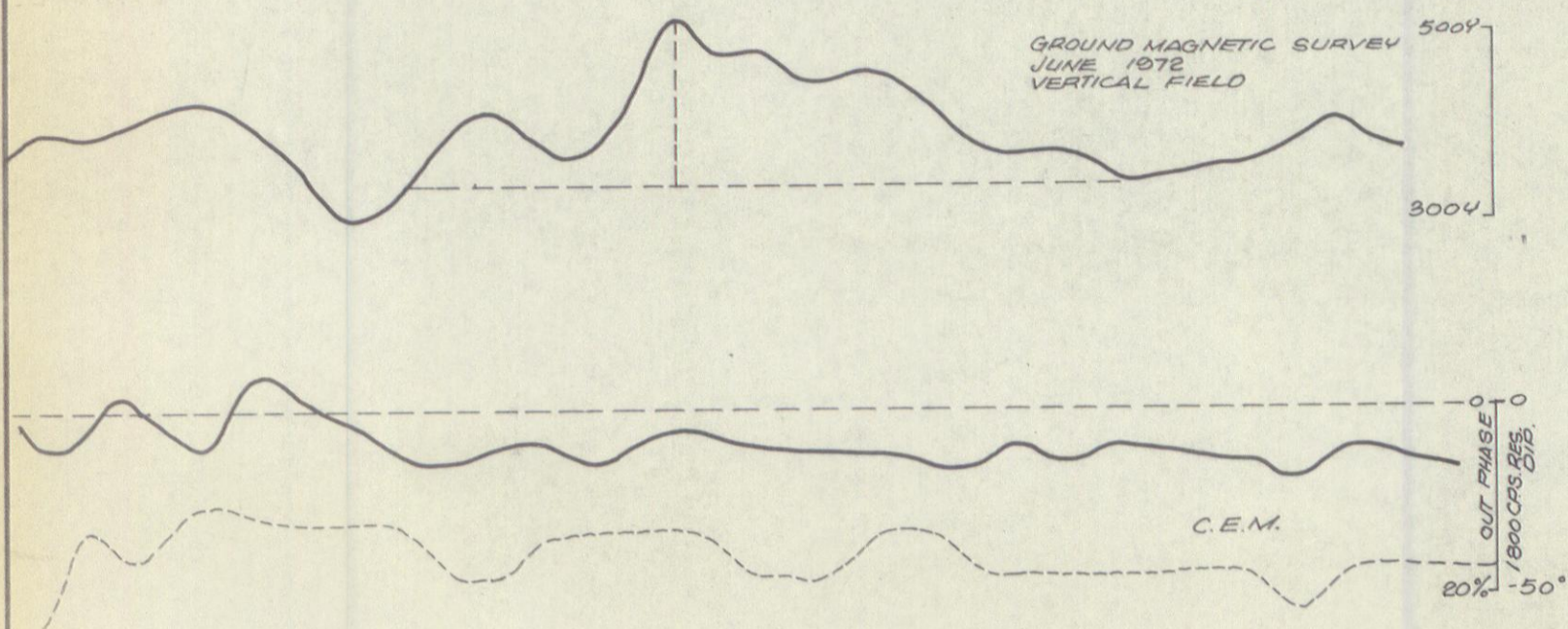
- (1) Disseminated pyrite and pyrrhotite in S_1 and S_2 laminae, and
- (2) Disseminated pyrrhotite, pyrite and chalcopyrite in quartz fillings (late stage)

Sufficient pyrrhotite in surface bedrock to produce magnetic anomaly. Gravity anomaly may be explained by local thin overburden cover, signifying bedrock ridge. Lead and zinc content of 3a and 3b is very similar.

CAPA, DELTA, ECHO CLAIMS

D.D.H. 72-3

LOCATION:
NASTY GRID L 104 W
8 S



D.D.H. 72-4

Location: Delta grid Line 108N 39+00E
Target: - Very strong C.E.M. conductor
- Weak magnetic anomaly
- Anomalous Cu and Zn geochem in soils
- No gravity coverage

Results: 72-4 was terminated at 371 ft. in Unit 3b. The greenstone lens noted near surface is the probable cause of the weak magnetic anomaly. The sheared black graphitic phyllite (133-202 feet) accounts for the high C.E.M. anomaly. Lead and zinc content is higher in the sheared graphite phyllite. Slightly anomalous soil geochemistry probably originates from the greenstone or graphite phyllite. Visible mineralization generally consists of disseminated pyrite and pyrrhotite.

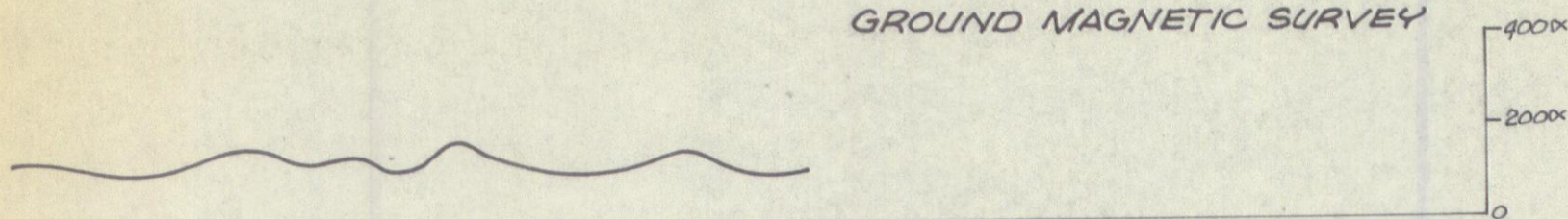
CAPA, DELTA, ECHO CLAIMS

D. D. H. 72-4

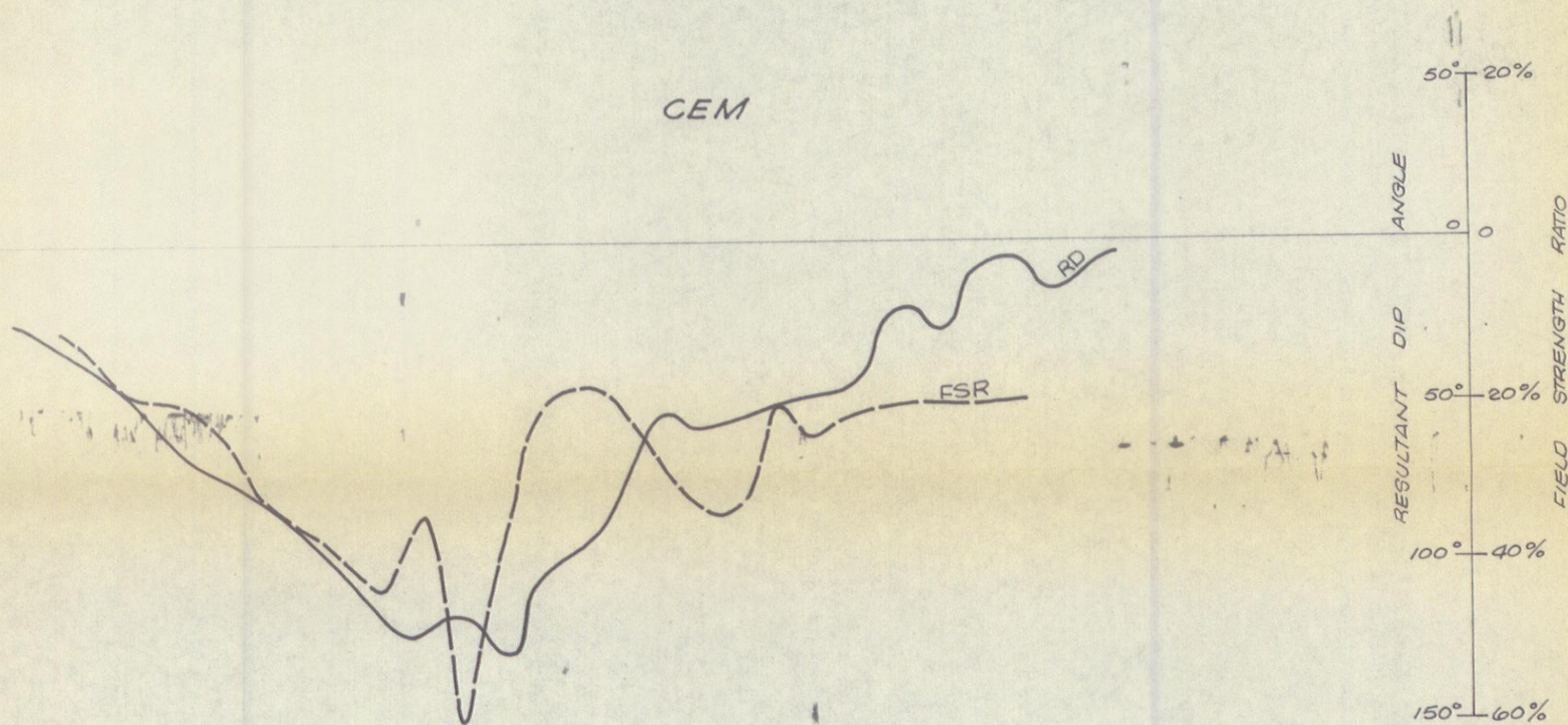
LOCATION:

DELTA GRID L 108 N.
39+00 E

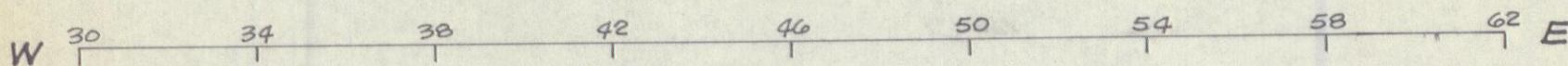
GROUND MAGNETIC SURVEY



CEM



TOPOGRAPHY



GEOCHEMICAL ASSAYS

Depth (ft)	ppm		Interval (ft)	Description
	Pb	Zn		
0	36	88	0-8'	OVERBURDEN
8	30	94	8'-28'	GREY SERICITE GRAPHITE PHYLLITE
22	22	84		
28	24	75	28'-102'	"GREENSTONE"
100	28	89		
102	23	70	102'-119'	BRECCIA
119	27	121		
119	25	189	119'-133'	BLACK GRAPHITE PHYLLITE.
133	27	160		
133	32	140	133'-202'	SHEARED GRAPHITE PHYLLITE.
202	30	162		
252	32	166		
252	27	177		
202	30	97	202'-252'	BLACK GRAPHITE PHYLLITE
252	26	92		
252	66	76	252'-320'	BLACK-GREY SERICITE GRAPHITE PHYLLITE.
280	28	100		
300	28	86		
320	30	109		
320	28	100		
320	34	100		
320	48	105	320'-371'	GREY SERICITE CHLORITE GRAPHITE PHYLLITE.
371	22	84		
371	20	88	371'-388'	GREY SERICITE CHLORITE GRAPHITE PHYLLITE.
388	18	83		
406	21	86		
424	22	89		
424	30	92	424'-441'	GREY SERICITE CHLORITE GRAPHITE PHYLLITE.
441	18	104		
459	24	106		
459	17	96	459'-476'	GREY SERICITE CHLORITE GRAPHITE PHYLLITE.

D.D.H. 72-5

Location: Capa grid Line 144E 9+00S
Target: - Aeromagnetic anomaly
- Strong negative on vertical field
- Strong H.E.M. 4000 Hz conductor
- Strong C.E.M. -90° out of phase
- 0.8 milligal Residual Anomaly (1965 survey)
- Depth to target ~ 400 ft.
- Close to CRH-2 which has good zinc rock geochem at depth.

Results: 72-5 terminated in a graphitic shear zone. Graphite phyllite was encountered throughout the hole. Graphitic shear zones appear to explain the strong electromagnetic anomaly. The strong magnetism noted in the interval 181 - 250 feet, due to magnetite and/or ilmenite, possibly explains the strong negative magnetic anomaly. Minor disseminated pyrite was noted along S_1 and S_2 planes. Although lead content remains roughly constant, zinc content increases with depth.

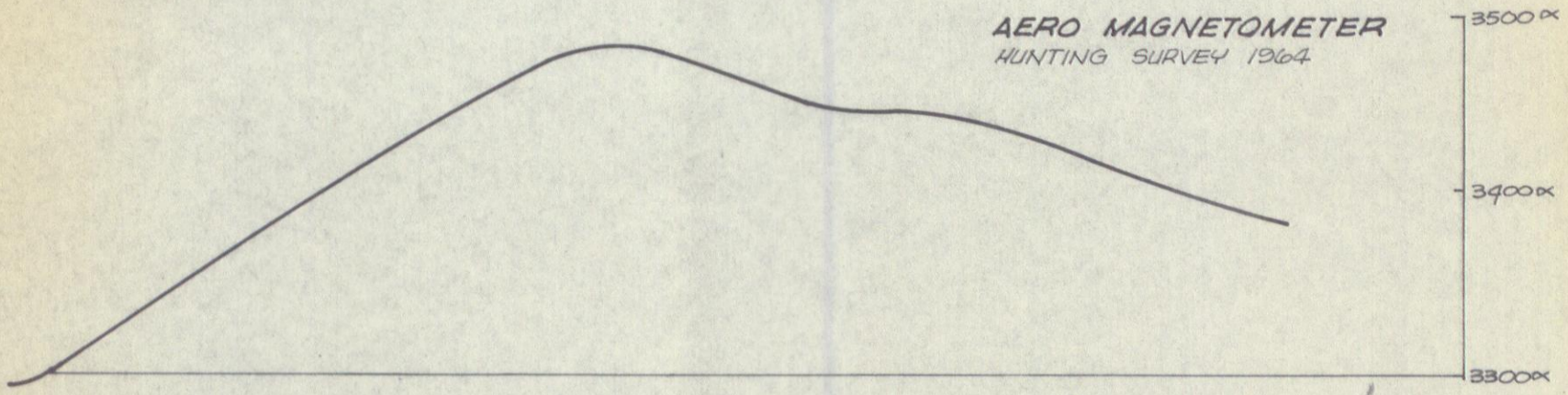
CAPA, DELTA, ECHO
CLAIMS

D. D. H. 72-5

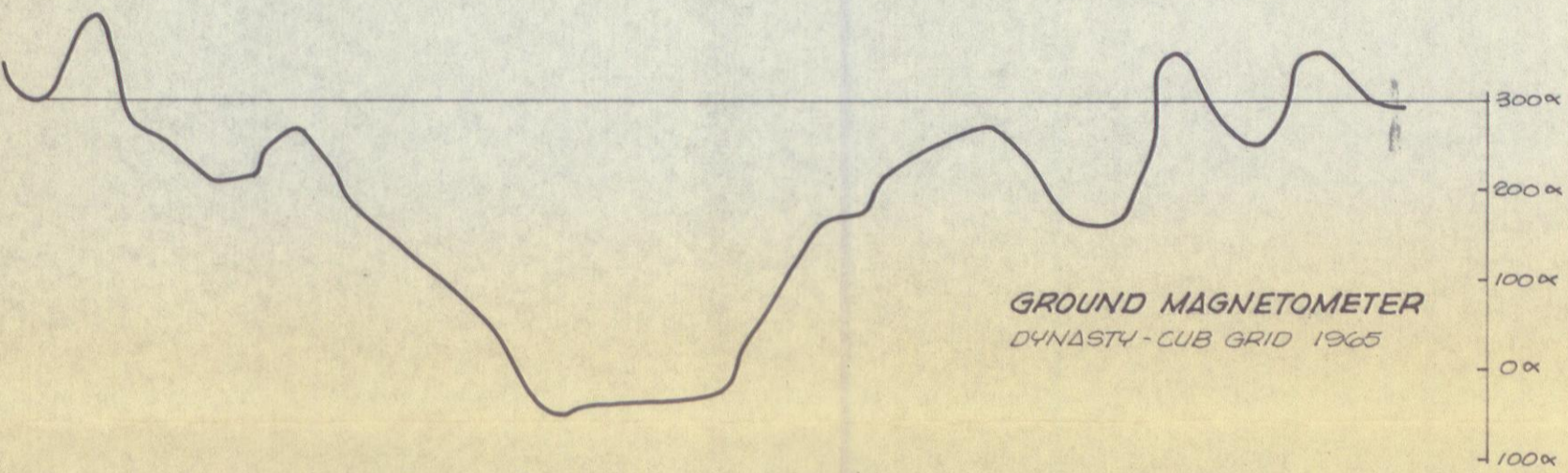
LOCATION:

CAPA GRID L144 E
L 9+00 S

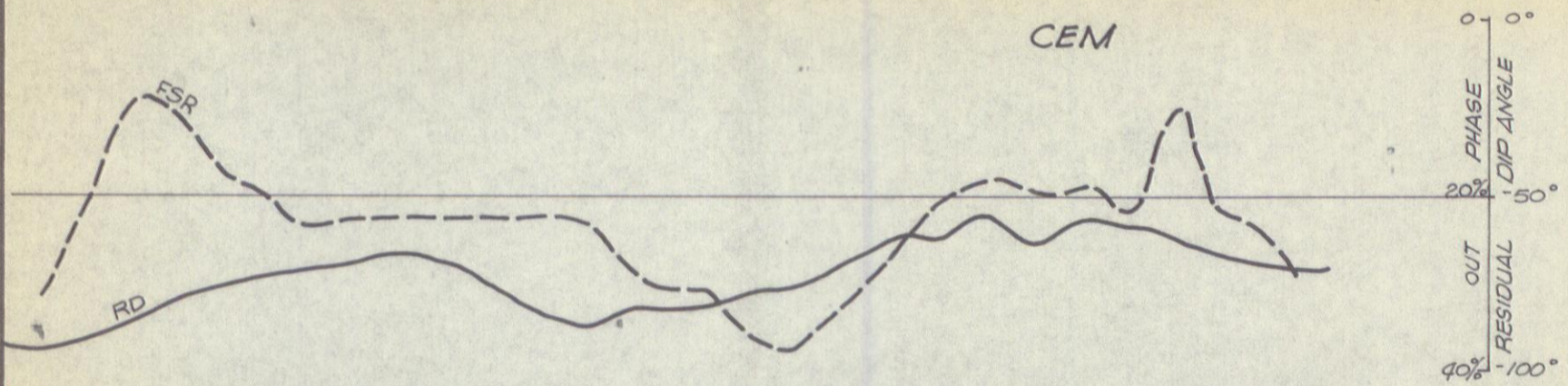
AERO MAGNETOMETER
HUNTING SURVEY 1964



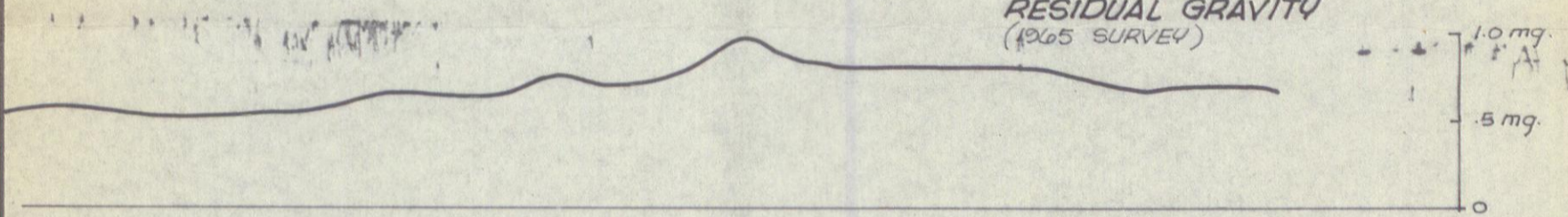
GROUND MAGNETOMETER
DYNASTY-CUB GRID 1965



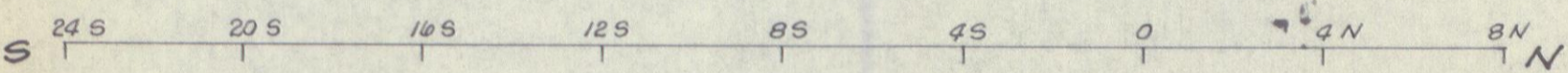
CEM



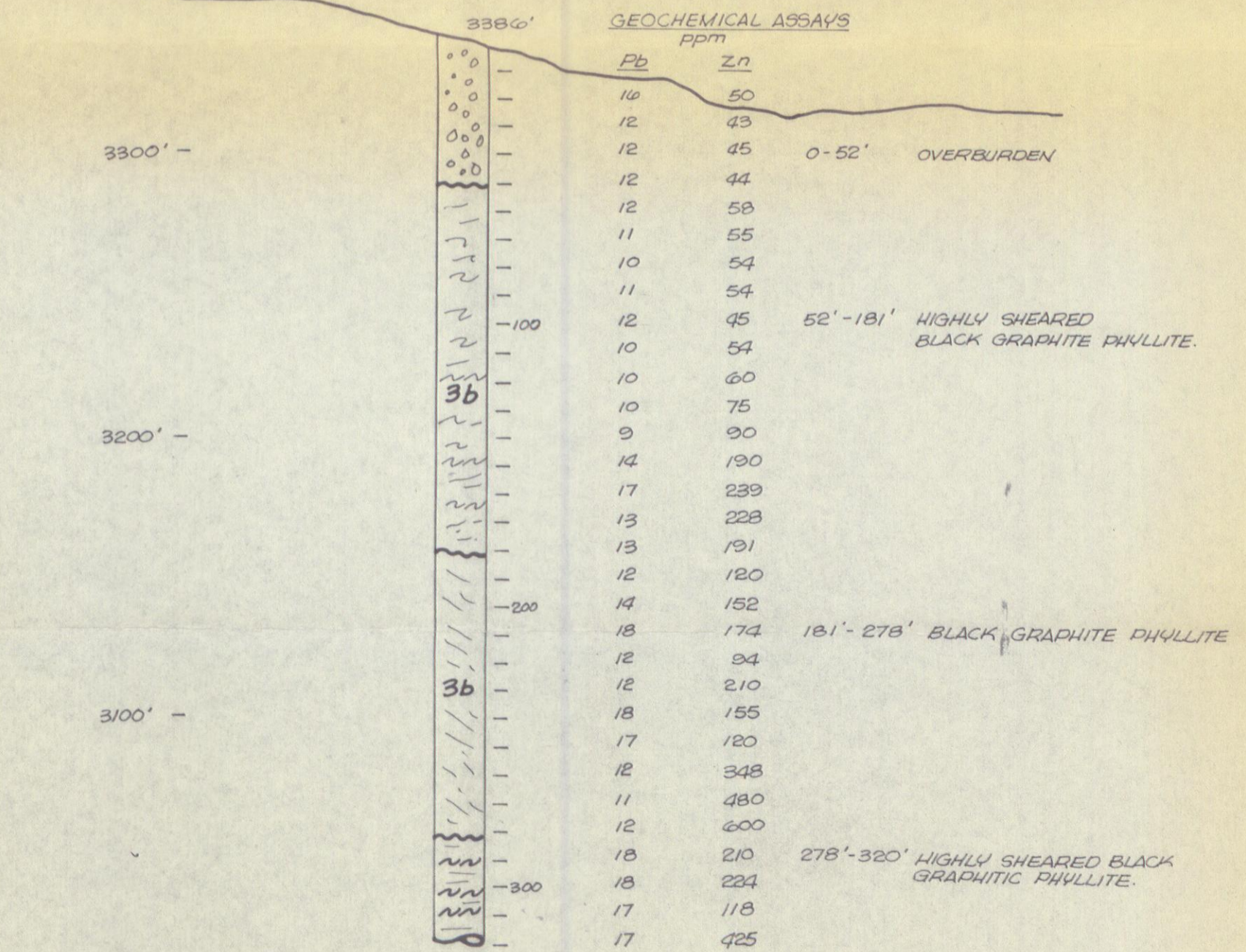
RESIDUAL GRAVITY
(1965 SURVEY)



TOPOGRAPHY



VERTICAL SCALE FOR
TOPOGRAPHY: 1" = 200'



D.D.H. 72-6

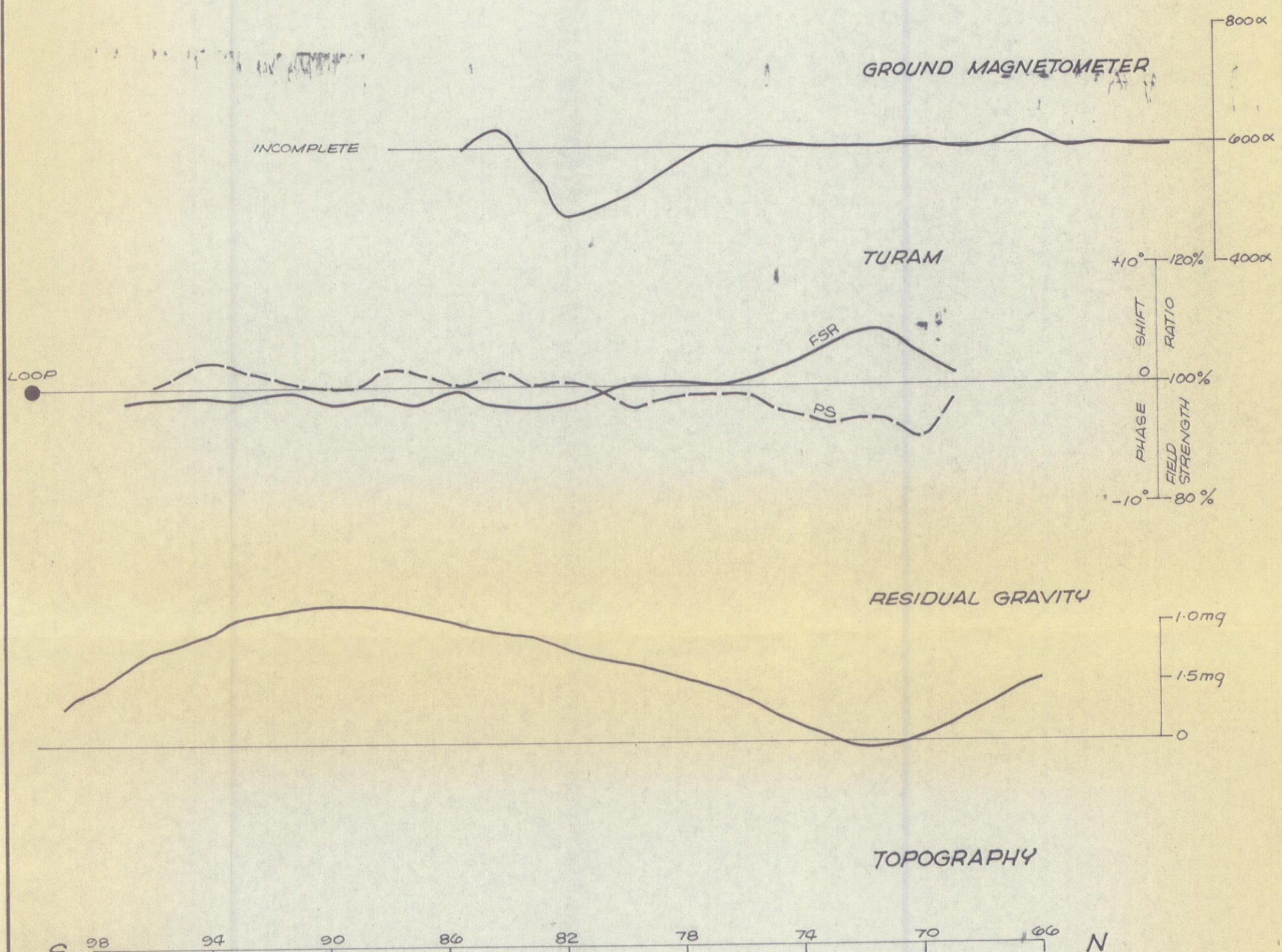
Location: Capa grid Line 80E 85+00S
Target: - 1.13 milligal residual anomaly
- 1.25 milligal from trough (depth to top
~ 450 ft.)
- Highly favourable geology

Results: 72-6 encountered quartz biotite to chlorite sericite phyllite with greenstone lenses throughout most of the hole. Contact with the underlying quartz chlorite biotite schist is at 457 feet. Both quartz and biotite content and metamorphism paralleled by grain size, increase with depth. Chlorite content decreases with depth. S_2 foliation tends to become horizontal with depth. Minor disseminated pyrite is evenly distributed. Lead and zinc content is relatively constant throughout the hole. Zinc content of "greenstone" is generally lower than that of enclosing phyllite. Large gravity anomaly probably explained by topographic bedrock 'high'.

CAPA, DELTA, ECHO CLAIMS

D. D. H. 72-6

LOCATION:
CAPA GRID L 80 E
Stn. 85+00 S



GEOCHEMICAL ASSAYS

VERTICAL SCALE FOR TOPOGRAPHY: 1"=200'

Station	Pb ppm	Zn	Interval	Description
3500	20	73	0-8'	OVERBURDEN
	12	116		
	22	90		
	19	84		
	14	84	8'-31'	TAN QUARTZ SERICITE PHYLITE
	18	84		
	17	96		
	14	73		
	12	82		
3400	12	100	31'-102'	GREEN QUARTZ CHLORITE BIOTITE SERICITE PHYLITE.
	13	72		
	26	145		
	14	96	102'-113'	PURPLISH BROWN QUARTZ BIOTITE SERICITE PHYLITE.
	17	79		
	10	108		
	10	92	113'-117'	"GREENSTONE"
	20	93		
	15	101	117'-134'	PALE GREEN QUARTZ SERICITE PHYLITE.
	12	100		
	14	108	135'-144'	"GREENSTONE"
3300	12	100		
	15	118		
	14	112		
	12	113		
	14	120		
	17	122	144'-425'	PURPLISH TO GREEN BONDED QUARTZ SERICITE PHYLITE TO SCHIST.
	13	112		
	13	120		
	14	114		
3200	14	107		
	15	116		
	18	113		
	14	112		
	16	112		
	20	108		
	14	102		
	11	102		
	12	106		
	13	99		
3100	15	100		
	12	97		
	13	108		
	56	95		
	14	60	425'-457'	"GREENSTONE"
	13	65		
	14	83		
	14	94		
	14	98		
	16	102		
3000	13	106	457'-539'	REDDISH BROWN TO GREEN QUARTZ CHLORITE BIOTITE SCHIST.
	10	84		
	13	110		
	11	84		
	12	108		

D.D.H. 72-7

Location: Capa grid Line 64E 62+00S
Target: - +.9 milligal residual gravity anomaly
- +1.2 milligals from trough (depth to
top ~ 200 ft., thickness ~ 100 ft.)
- Drop in C.E.M. field strength
- Flanked by two Turam conductors
- Highly favourable geology

Results: 72-7 encountered quartz chlorite sericite phyllite throughout the hole. Highly siliceous band possibly caused by silicification associated with porphyry dyke. Bedrock reached at 20 feet. Mineralization consists of minor disseminated pyrite and pyrrhotite. Gravity anomaly likely resulting from bedrock topology. Lead and zinc content relatively constant throughout.

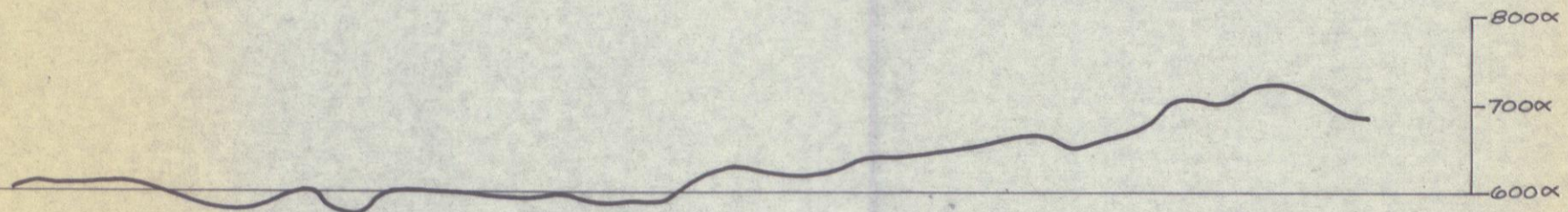
CAPA, DELTA, ECHO CLAIMS

D. D. H. 72-7

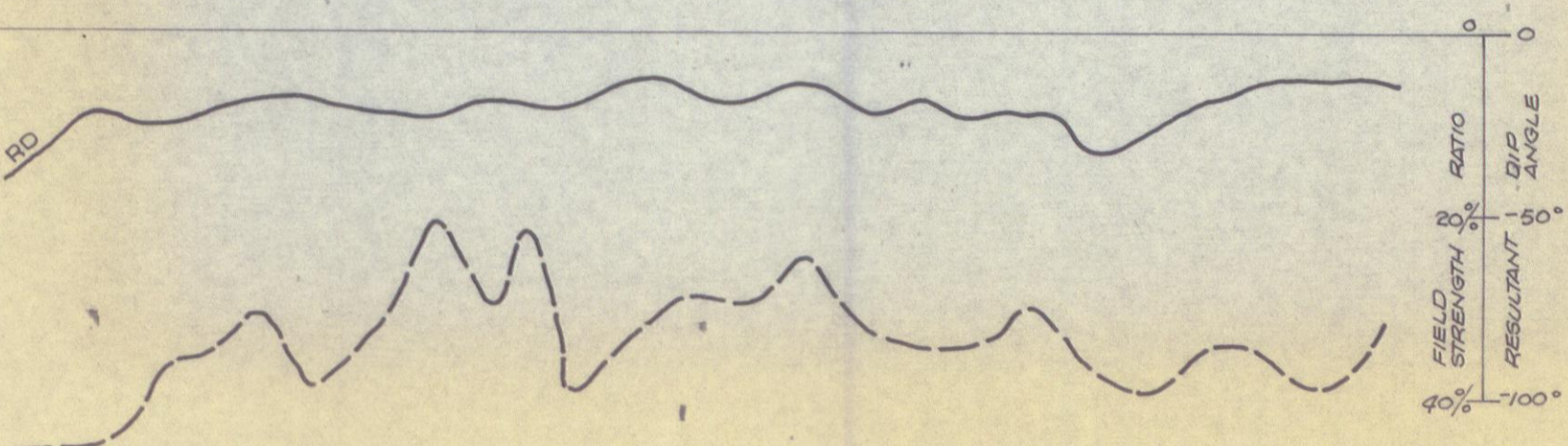
LOCATION:

CAPA GRID L 64+00 E
Sta. 62+00 S

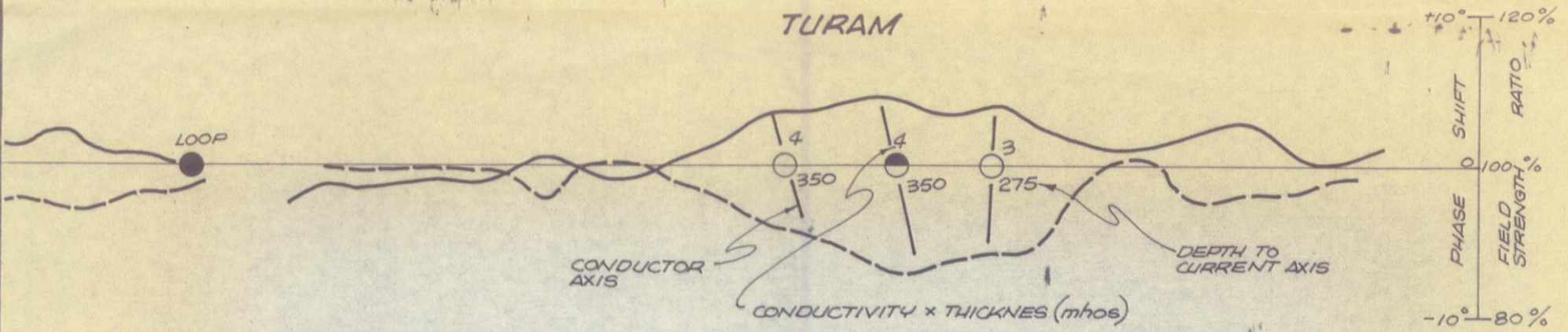
GROUND MAGNETOMETER



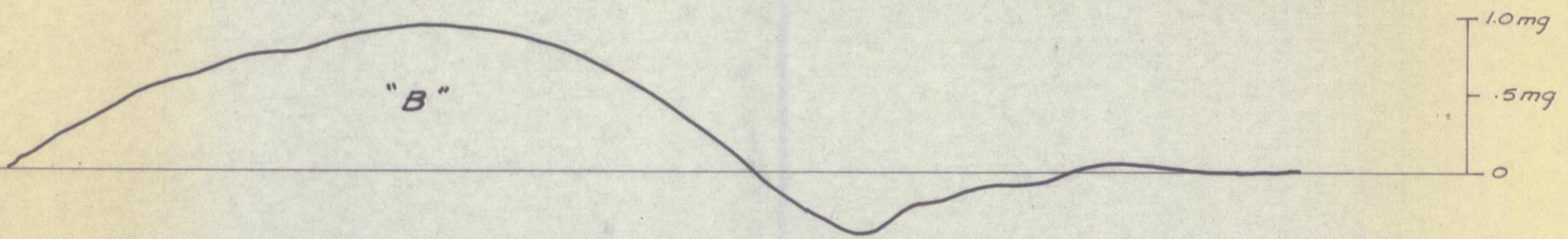
CEM



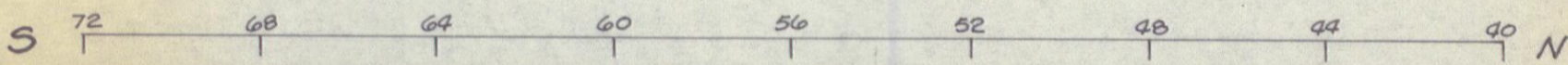
TURAM



RESIDUAL GRAVITY



TOPOGRAPHY



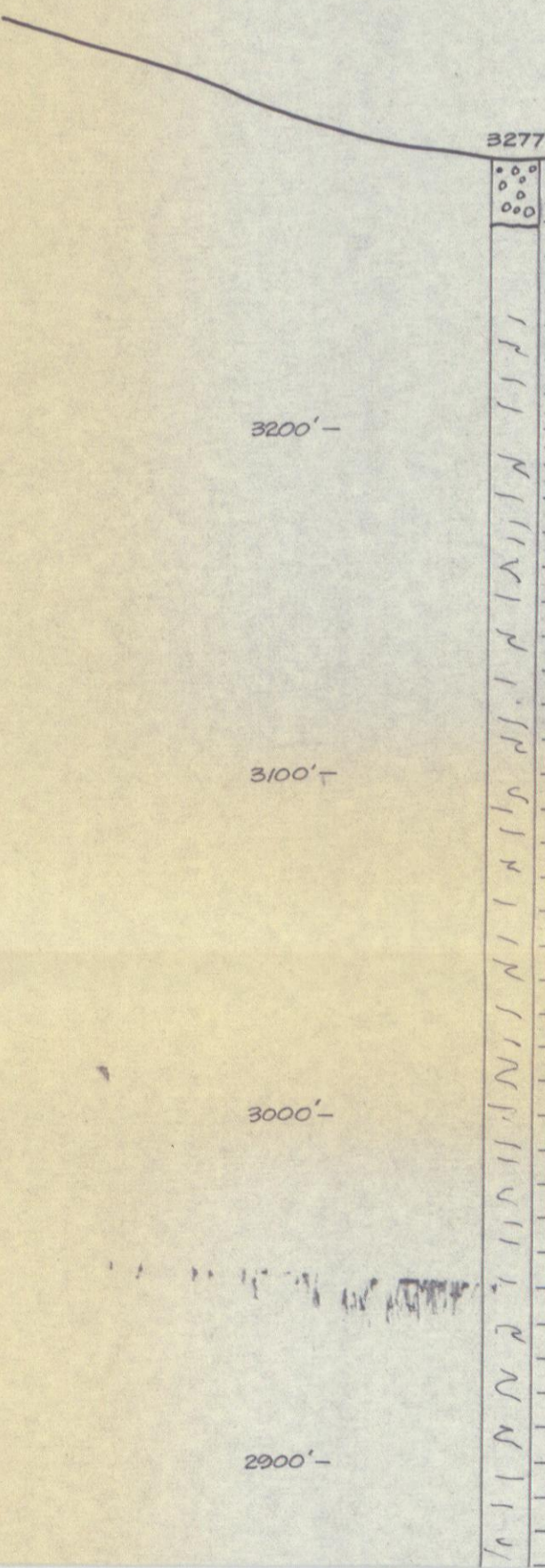
GEOCHEMICAL ASSAYS
ppm

Pb	Zn
34	76
20	124
24	105
14	108
13	105
70	109
52	120
53	111
56	125
36	120
14	106
18	120
14	98
18	129
15	115
15	172
20	119
18	124
18	112
18	114
12	108
39	120
40	124
14	116
22	104
18	116
24	185
13	112
15	680
18	100
26	128
20	88
15	105
15	118
17	120
18	160
18	136
15	120
20	120
14	118

VERTICAL SCALE FOR TOPOGRAPHY: 1" = 200'

0-20' OVERBURDEN

20'-518' DARK-LIGHT GREEN QUARTZ CHLORITE SERICITE PHYLLITE



CONCLUSIONS AND RECOMMENDATIONS

The south Capa and Echo groups cover a highly favourable belt of quartz-rich phyllite to schist. Overburden consisting of glacial till and glacial fluvial outwash obscures bedrock topology with thicknesses in excess of 300 ft. Soil sampling has proved to be an ineffective exploration tool.

Magnetic, electromagnetic and gravimetric surveys outlined coincident geophysical targets which were tested by diamond drilling. To date the most effective geophysical method has been found to be a combination of Turam E.M. and gravity. Elongate northeast-southwest trending gravity anomalies on the south Capa and Moose grids appear to reflect bedrock topography.

Diamond drilling, so far, has been unsuccessful in locating massive sulphide deposits within the C.E.D. claims. Although the possibility of discovery of massive sulphides on the C.E.D. group now appears remote as indicated by drilling, there are areas which warrant further work to completely assess the economic potential of the claim group. The most favourable area, the east Capa grid, is underlain by the host unit and has residual gravity anomalies apparently unrelated to glacial trends, as well as some high zinc rock geochem results in nearby rotary drill holes.

It is recommended that further gravity and Turam coverage followed by 1000 feet of contingent diamond drilling be undertaken on the eastern Capa claims. The 1973 proposed budget is estimated at \$25,000.

Jan. 1973



Respectfully submitted,

A handwritten signature in black ink, appearing to read "W. J. Roberts".

W. J. Roberts,
Staff Geologist

A large, stylized handwritten signature in black ink, likely belonging to R. E. Gordon Davis.

DIAMOND DRILL RECORD,

HOLE NO. 72-1A

PROPERTY C.E.D.

SHEET NUMBER 1 SECTION FROM 0 TO 150 STARTED July 31, 1972
 LATITUDE _____ DATUM L88W 3+25 south COMPLETED Aug. 12, 1972
 DEPARTURE _____ BEARING Moose Lake Grid ULTIMATE DEPTH 539'
 ELEVATION _____ DIP 90° PROPOSED DEPTH 400'+

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOCTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOCTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
0-12	None													
12-20	Sludge	Sandy, much qtz.							12-20			136	270	
20-30	"	Same, more phyllite fragments							20-30			72	150	
30-40	"	Same, more phyllite frag. slightly coarser							30-40			44	96	
40-50	"	Phyllite chips and qtz. pebbles (up to 1cm. diam.)							40-50			60	100	
50-60	"	Coarse sand; rounded qtz. (max. diam. ~2mm)							50-60			30	72	
60-70	"	Same as 50-60; perhaps slightly coarser							60-70			33	72	
70-80	"	Same as 60-70; perhaps more phyllite chips.							70-80			25	70	
80-90	"	Same as 70-80;							80-90			25	67	
90-100	"	Coarse gravel; much qtz. mod. rounded; many particles 1 to 1.5 cm. diam.							90-100			30	80	
100-110	"	Sand; particles 1 to 3 mm. in size.							100-110			21	67	
110-120	"	Fine sand, few particles > 1mm (most < 1mm.)							110-120			22	88	
120-130	"	Sand, much qtz. & a darker element; 1-3 mm. most grains							120-130			20	80	
130-140	"	Same as 120-130.							130-140			20	73	
140-150	"	Same as 130-140 with scattered particles up to 1 cm.							140-150			21	70	

DIAMOND DRILL RECORD,

HOLE NO. 72-1A

PROPERTY C.E.D.

SHEET NUMBER 7 SECTION FROM 378 TO 395 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
378-395	90%+	"Fresher" qtz. sericite chlorite phyllite more like interval 261-370. Still frequent <1 mm. thick laminae of altered cream sericite (₁₀ 40 per foot or less). The pale cream sericite content increases below 390'. At ~395' core returns to a similar appearance as the 380-378 interval; the cream laminae becoming much more frequent. Structure: Qtz. veining frequency decreases from that of the 370-378' interval. Magnetism: Fairly even and moderate response (80%+ response). Responses spottier and weaker below 390'. Mineralization: Similar to 370-378' interval approx. Sulphide content seems more associated with qtz; both laminae and veining.		380-395		40	15	102						
				370-400		38	16	105						

DIAMOND DRILL RECORD,

HOLE NO. _____

72-1A

PROPERTY C.E.D.

SHEET NUMBER 8 SECTION FROM 395 TO 464 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
395-464	90%+	"altered" cream coloured qtz. sericite chlorite phyllite. Core is very light compared to "fresher" (261-370) sections. In places qtz. laminae and chlorite concentrations stand out darkly giving the dry core a spotted appearance. Core from 430-435 is slightly brecciated and recemented with qtz. (probably) of a cream colour. Qtz. also is cream coloured elsewhere and may be so coloured in part, due to divided chlorite. In this section(interval) the sericite is softer as well as partially bleached and scratches somewhat like talc. Thus the cream coluration may be due to partial alteration to clay. Where the qtz. laminae are less frequent or thinner,		430-440		22	18	97						
				440-450		33	15	104						
				450-464		26	12	94						
				430-440		29	16	90						
				440-450		36	15	100						
				450-464		35	17	113						
				430-440		31	15	92						

DIAMOND DRILL RECORD,

HOLE NO. 72-2

PROPERTY C.E.D.

SHEET NUMBER 1 SECTION FROM 0 TO 114 STARTED Aug. 15, 1972
 LATITUDE _____ DATUM L72W 1200 South COMPLETED Aug. 21, 1972
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH 503
 ELEVATION _____ DIP 90° PROPOSED DEPTH 300+

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
0-16	None													
16-44	Sludge	Qtz. hornfels, intrusive rock fragments grain size 2-5 mm. rounding moderate							7-44			12	50	
44-54	"	Qtz. hornfels, some sphyllite fragments, grain size 2 mm. or less, rounding mod.-well							44-54			24	55	
54-64	"	Qtz. hornfels, some phyllite frag. chert also grain size 2 mm. or less, rounding mod.							54-64			16	56	
64-74	"	Qtz. hornfels, phyllite fragments grain size 2-3 mm. rounding mod.-poor.							64-74			17	52	
74-84	"	Mostly qtz. and hornfels frags. grain size 2-3 mm. rounding mod.-poor.							74-84			13	62	
84-94	"	Same as 74-84. grain size 3 mm. or less, rounding moderate.							84-94			18	58	
94-104	"	Qtz. assorted mafic rock constituents, grain size 3 mm. or less, rounding poor,							94-104			12	54	
104-114	"	Same as 94-104, grain size 3 mm, mostly less rounding moderate-poor.							104-114			11	64	

DIAMOND DRILL RECORD,

HOLE NO. _____

72-2

PROPERTY _____

C.E.D. _____

SHEET NUMBER 2

SECTION FROM 114 TO 196

STARTED _____

LATITUDE _____

DATUM _____

COMPLETED _____

DEPARTURE _____

BEARING _____

ULTIMATE DEPTH _____

ELEVATION _____

DIP _____

PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
114-124		Sludge Same as 94-104; with some phyllite chips. grain size 3 mm, mostly less, rounding poor.								114-124			14	69
124-134	"	Same as 114-124, grain size 2 mm. or less, rounding moderate.								124-134			11	62
134-144	"	Qtz. phyllite fragments, lesser amounts of other mafic rocks. grain size <1 mm. or less, rounding moderate.								134-144			11	45
144-154	"	<50% mafic rock fragments, with qtz. grain size <1 mm. or less, rounding poor								144-154			11	46
154-164	"	Qtz. and assorted rock fragments, grain size 2 mm. or less, rounding poor.								154-164			11	47
164-174	"	Same as 154-164, grain size 2 mm. or less, rounding poor.								164-174			12	46
174-186	"	Same as 154-164, grain size 2 mm. mostly less, rounding moderate-poor.								174-186			13	52
186-196	"	Same as 154-164, grain size 3 mm. mostly less, rounding moderate.								186-196			11	48

DIAMOND DRILL RECORD,

HOLE NO. 72-2

PROPERTY C.E.D.

SHEET NUMBER 3 SECTION FROM 194 TO 280 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
194-210		Sludge Same as 154-164, grain size <1 mm. rounding moderate							194-210			11	40	
210-220	"	Same as 154-164, grain size <1 mm. rounding moderate-poor.							210-230			13	40	
220-230	"	Qtz. percentage higher(?), grain size <1 mm. rounding moderate-poor							220-230			10	40	
230-240	"	Same as 154-164, grain size <1 mm. rounding moderate-poor.							230-240			11	40	
240-250	"	Same as 154-164, grain size <1 mm. rounding moderate-poor.							240-250			12	40	
250-260	"	Same as 154-164, grain size <1 mm. rounding moderate-poor.							250-260			10	43	
260-270	"	Larger rock fragments (up to 5 mm) with qtz. grain size <1 mm. rounding mod.-poor.							260-270			13	37	
270-280	"	Same as 154-164, grain size 1 mm. or less, rounding poor.							270-280			13	45	

DIAMOND DRILL RECORD,

HOLE NO. 72-2

PROPERTY C. E. D.

SHEET NUMBER 8 SECTION FROM 365 TO 405 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
365-405	60%	Qtz. chlorite sericite phyllite (core noticeably rich in chlorite). Other distinguishing features of this interval; recemented brecciation that appears like quiltwork in places and the incidence of large (several inches thick) qtz. veins containing patches of deep green diss. chlorite(?). Sericite laminae show a higher percentage of chlorite than previously (ex. 270'). Altered beige coloured veinlets of sericite and qtz. become more frequent as do occasional dark, broken laminae or bands rich in graphite (1/16" wide). At 294' is a sheared and recemented (with qtz.) former qtz. vein rich in disseminated chlorite. 398-400' is very chlorite rich interval.												
				270-381			29	92						
				380-390			12	112						
				390-400			15	76						
				400-410			16	75						

DIAMOND DRILL RECORD,

HOLE NO. 72-2

PROPERTY C.E.D.

SHEET NUMBER 11 SECTION FROM 405 TO 503 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
405-503	95%+	Qtz. sericite chlorite graphite phyllite.												
		Sections of pure sericite containing		411-421			12	96						
		appreciable graphite become somewhat frequent.												
		Within such sections, the rock type approaches		422-430			12	88						
		that of Unit 3b. The graphite-rich laminae		430-440			15	98						
		may be full or partial bands. Qtz. laminae		440-450			11	96						
		are still plentiful; sericite-chlorite-												
		graphite laminae "accumulate" for up to		450-460			9	92						
		inches thick with the absence of any inter-												
		laminated qtz. At 412' (for ~1 ft.) occurs		460-470			16	96						
		a beige coloured "altered" zone reminiscent												
		of much of the "altered" qtz. sericite		470-480			12	114						
		chlorite phyllite of Hole 72-1A. The sub-												
		interval 428-438' contains especially		480-490			14	104						
		frequent "pockets" of graphite rich sericite												
		laminae. Veinlets and laminae throughout		490-500			17	98						

DIAMOND DRILL RECORD,

HOLE NO. 72-3

PROPERTY C.E.D.

SHEET NUMBER 2 SECTION FROM 91 TO 135 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
		Began coring at 91 ft.												
91-135	+90%	Thinly laminated dark grey to black sericite-graphite phyllite. Est. 70% sericite and <30% graphite. Laminae generally <1/32" wide except in section 123-126 which is qtz. rich and the latter are up to 1/2" wide. In short qtz. rich section qtz. rich bands are coloured pale green due to est. <10% chlorite. Interval becomes black near 135' due to increasing graphite content. Qtz. content on the whole is much less than 30%. <u>Magnetism</u> :- interval is strongly magnetic. <u>Structure</u> : Individual laminae appear to be formed as S ₁ surfaces or perhaps bedding. Am considering S ₁ is quite close or parallel to bedding. S ₁ is ~80-90° to core axis.		91-100			11	98						
				100-110			11	118						
				110-120			13	126						

DIAMOND DRILL RECORD,

HOLE NO. 72-3

PROPERTY C.E.D.

SHEET NUMBER 7 SECTION FROM 190 TO 240 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
190-240	+90%	Black sericite graphite phyllite with minor intervals of more than 50% qtz. in laminae. Generally less than 30% qtz. throughout. Graphite predominant over sericite.		190-200			21	126						
		Structure: Laminae appearing still as S ₁ surfaces although S ₂ surfaces starting to transpose previous bands. S ₁ generally 80-90°/C.A. S ₂ is approx. 10-20° to S ₁ . Both variable over 30°. Some instances S ₂ is parallel to S ₁ . Fracturing is low with generally <1/ft. Filling always qtz. with minor chlorite and specks of pyrite & pyrrhotite.		200-210			30	124						
		Magnetism: Moderate magnetism, generally in more graphite rich material		210-220			18	122						

DIAMOND DRILL RECORD,

HOLE NO. 72-3

PROPERTY C.E.D.

SHEET NUMBER 9 SECTION FROM 240 TO 358 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
240-358	+90%	Dark grey to black graphite sericite phyllite. Intervals of up to 1 ft. contain enough qtz. to be called quartz rich. Generally find density of 1 qtz. rich band <2" wide per fot. Rock type pytically		240-250			15	110						
		3b _{sg} . Qtz. content overall est. at 20-30%		250-260			15	110						
		292-296 - 4 ft. lens of pale green greenstone with white bull qtz. veins, contact with phyllite is parallel to S ₁ .		260-270			10	98						
		Structure: Laminae generally 2-3mm. wide rarely up to 1/2". S ₁ still prominent roughly 90° to the C.A. S ₂ approx. 30° to S ₁ .		270-280			10	94						
		Fracture density low < 1/ft. all qtz. filling.		280-290			12	89						
		Magnetism: Highly magnetic throughout the interval.		290-300			20	102						
				300-310			18	114						

DIAMOND DRILL RECORD,

HOLE NO. 72-3

PROPERTY C.E.F.

SHEET NUMBER 11 SECTION FROM 358 TO 430 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
358-363	80%	Pale green andesite to "greenstone". Contact is parallel to S ₁ and gradational over 6". Grain size is aphanitic unlike larger lenses. Little mineralization or magnetism.		360-370			12	94						
363-430	95%	Pale greenish-grey chlorite sericite phyllite. Qtz. content varies between 20 and 50% with qtz. rich intervals increasing with depth. Still classes as 3b _{sc} . Greenstone lenses found at 385-387', 389-390', 391-393' and 394-399'. Structure: S ₁ to 90°/C.A. S ₂ 60°/C.A. generally two foliations dip in opposite directions. S ₂ becoming more prominent and transposing S ₁ . F ₂ folds on millimeter scale common. Laminae thickness generally increasing due to increasing qtz. content.		370-380			16	106						
				380-390			19	120						
				390-400			20	110						

DIAMOND DRILL RECORD,

HOLE NO. 72-3

PROPERTY C.E.D.

SHEET NUMBER 14 SECTION FROM 461 TO 505 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
461-505	+95%	Pale green qtz. chlorite sericite phyllite to qtz. sericite chlorite phyllite.		460-470			18	125						
		Chlorite content varies considerably. Small porphyroblasts (< 1/4" in dia.) contain chlorite and qtz??? with minor pyrrhotite and pyrite mineralization. Qtz. content also varies considerably, often highly chlorite rich.		470-480			24	114						
		Structure: Fracturing very low, S ₂ approx. 10-30°/C.A. S ₁ absent or highly folded and contorted between S ₂ laminae. Laminae generally 1/16"-1/4" thick.		480-490			36	114						
		Magnetism: - low to moderate		490-500			10	113						
		Mineralization: Minor disseminated pyrite and pyrrhotite in qtz. rich laminae.		500-505			8	120						

DIAMOND DRILL RECORD,

HOLE NO. 72-4

PROPERTY C.E.D.

SHEET NUMBER 2 SECTION FROM 28 TO 102 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
28-102	80-85%	Pale green fine grained to medium grained meta volcanic ("greenstone"). Generally aphanitic and highly foliated along the contacts and more coarse grained and massive in the central portion. Contains up to 20% white barren qtz. veins or boudins, generally less than 1 ft. thick. Structure: S ₂ - defined by chlorite and/or actenolite, is roughly 60-70°/C.A. Fracture generally filled with qtz. and calcites. No preferred orientation of fractures. Magnetism: Interval is very weakly magnetic. Mineralization: Interval mineralized with coarse grained euhedral pyrite. Est. 5% pyrite overall. No visible chalcopyrite, galena or sphalerite.		30-40			38	118						
				40-50			14	87						
				50-60			22	84						
				60-70			22	87						
				70-80			24	75						
				80-90			25	87						
				90-100			28	87						
				100-109			23	70						

DIAMOND DRILL RECORD,

HOLE NO. 72-4

PROPERTY C.E.D.

SHEET NUMBER 3 SECTION FROM 102 TO 133 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
102-119	40%	Mottled black to pale green to white breccia. Zone of shearing producing phyllite and qtz. blocks in matrix of qtz. and chlorite. Phyllite consists of sericite and graphite. Fragments generally less than 6 inches in size and averaging 1/2 inch in size. Zone of shearing parallel to S ₂ at 30-40°/C.A. No visible mineralization and no apparent magnetism.		109-119			27	121						
119-133	30%	Black highly fractured graphite phyllite. Core recovery poor due to high shearing parallel to S ₂ indicated by slickensided S ₂ surfaces as well as polishing. Structure: S ₂ - approx. 80-90°/C.A., quite regular. No visible mineralization or noticeable magnetism.		119-129			25	189						
				129-133			27	185						

DIAMOND DRILL RECORD,

HOLE NO. 72-5

PROPERTY _____

SHEET NUMBER 5 SECTION FROM 181 TO 250 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
181-250	70-80%	Black graphitic phyllite with short intervals <2' of over 50% qtz. rich material.		181-190			12	120						
		Overall qtz. content averages 20-30% of total composition. Qtz. laminae appear to be outlining the S ₁ foliation. Many S ₁ surfaces are polished, shearing appears paralleling S ₂ .		190-200			14	152						
		Structure: Major foliation appears to be S ₁ laminae vary from very thin (<< 1mm) composed of graphite to .5 cm. (qtz. rich). S ₁ is roughly 30-50°/C.A. generally highly uneven and folded by a D ₂ deformation. S ₂ is not as well developed but when seen is outlined by graphite generally 10-30°/C.A. S ₂ occurs at 90° to S ₁ . F ₂ folds common making S ₁ uneven. Folds generally		200-210			18	177						
				210-220			12	97						
				220-230			12	210						
				230-240			18	155						
				240-250			17	120						

DIAMOND DRILL RECORD,

HOLE NO. 72-6

PROPERTY C.E.D.

SHEET NUMBER 1 SECTION FROM 0 TO 91 STARTED Sept. 27, 1972

LATITUDE _____ DATUM L80E 85+00S COMPLETED Oct. 4, 1972

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH 539

ELEVATION _____ DIP 90° PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
0-8	0	Overburden - glacial-fluvial material							5-10			20	73	
8-22	0	Highly oxidized and weathered quartz sericite phyllite.							10-20			12	116	
22-91	80%	Light brown to tan highly weathered quartz sericite phyllite. Sericite laminae < 1/16" weathered light brown - few minor visible grains of hematite within sericite which may have been pyrite. Coluration probably due to limonite. Quartz rich laminae 1/16-1/8" wide are very light brown to white. Very minor limonite content. Some zones highly fractured with poor recovery, i.e. between 82' and 91'.		22-30			22	96						
				30-40			19	84						
				40-50			14	84						
				50-60			18	84						
				60-70			17	96						
				70-80			14	73						
				80-90			12	82						

DIAMOND DRILL RECORD,

HOLE NO. 72-6

PROPERTY C.E.D.

SHEET NUMBER 10 SECTION FROM 179 TO 323 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
179-323	95%	Dark reddish green qtz. biotite chlorite phyllite to schist. Est. 60% qtz, 20% biotite, 20% chlorite. Gradational contact with above sericite phyllite. Individual laminae - qtz. 1/8-1/4", biotite <1/8", chlorite <1/8". Alternating chlorite and biotite rich laminae give rise to reddish & greenish colour banding. Interval becoming coarse grained with depth - tending to be termed a schist. Green chlorite rich laminae often discontinuous and augen shaped. Regularity of laminae is tending to become more discontinuous with depth. Minor qtz. veins or boudins (<2" wide) contain minor pyrite and pyrrhotite. Colour bands becoming more diffuse with depth. Structure: S ₂ predominant-60%/C.A. F ₂ folds common, outlined by green chlorite laminae & reddish biotite bands. Magnetism: strong to moderate (variable) Mineralization:- Diss. fine grained pyrite-est.. 1-2%- minor pyrrhotite <1%.		180-190			12	106						
				190-200			14	108						
				200-210			12	100						
				210-220			15	118						
				220-230			14	112						
				230-240			12	113						
				240-250			14	121						
				250-260			17	122						

DIAMOND DRILL RECORD,

HOLE NO. 72-6

PROPERTY C. E. D.

SHEET NUMBER 11 SECTION FROM 323 TO 340 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
323-340	75%	Pale green qtz. sericite phyllite with minor chlorite. Thin creamy white laminae < 1/16" thick of altered sericite phyllite outline fissility. Very minor amounts of reddish brown biotite. Laminae generally < 1/8" thick. <u>Structure:</u> S ₂ prominent foliation is 70-80°/C.A. F ₂ folds uncommon. <u>Magnetism:</u> Absent <u>Mineralization:</u> Minor diss. pyrite <.5% overall.		260-270			13	112						
				270-290			13	120						
				290-290			14	114						
				290-300			14	107						
				300-310			15	116						
				310-320			18	113						
				320-330			14	112						
				330-340			16	112						

DIAMOND DRILL RECORD,

HOLE NO. 72-6

PROPERTY _____ C.E.D. _____

SHEET NUMBER 12 SECTION FROM 340 TO 425 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
340-425	95%	Alternate green and reddish banded chlorite- biotite phyllite to schist. Identical to interval 179-323 previously described. This interval as two minor "greenstone" lenses <2' wide. <u>Structure:</u> S ₂ predominant at 70-80°/C.A. F ₂ folds outlined by colour bands. <u>Magnetism:</u> Variable between weak & strong. <u>Mineralization:</u> Diss. fine grained pyrite throughout - est. 2-3%. Grains often pancake shaped. Minor amounts of pyrrhotite.		340-350			20	108						
				350-360			14	102						
				360-370			11	102						
				370-380			12	106						
				380-390			13	99						
				390-400			15	100						
				400-410			12	97						
				410-420			13	108						

DIAMOND DRILL RECORD,

HOLE NO. _____

72-6

PROPERTY C.E.D.

SHEET NUMBER 14 SECTION FROM 457 TO 539 STARTED _____
 LATITUDE _____ DATUM _____ COMPLETED _____
 DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____
 ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	CORE ASSAYS				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE ASSAYS			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
447-539	95%	Reddish brown-green biotite chlorite qtz. schist - fine grained with some phyllitic surfaces. Bands becoming more diffuse with more deformation during D ₂ . Chlorite content tends to decrease with depth. Tends to become a fine grained biotite schist with minor chlorite near bottom. Structure: S ₂ predominant, F ₂ folds up to 6" in size common. S ₂ generally 70-80°/C.A. when folding is minimum. Fine grained biotite occurs in S ₂ planes. Magnetism: Variable between strong & moderate. Mineralization: Estimate 2-3% diss. pyrite throughout - as pancake shaped grains in S ₂ planes. Minor pyrrhotite variable and is common in qtz. boudins and veins <1" wide. Minor traces of chalcoppyrite in qtz. feins.		440-470			14	94						
				470-480			14	98						
				480-490			16	102						
				490-500			13	106						
				500-510			16	84						
				510-520			13	110						
				520-530			11	84						
				530-540			12	108						

DIAMOND DRILL RECORD,

HOLE NO. 72-7

PROPERTY C.E.D.

SHEET NUMBER 2 SECTION FROM 62 TO 95 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
62-95	98%	Pale green qtz. sericite chlorite phyllite.		62-70			780	109						
		Qtz. laminae up to 1/2" wide generally 1/8"-												
		1/4" thick. Pale green chlorite and sericite		70-80			52	120						
		laminae <1/16". Minor qtz. veins and boudins												
		generally <1/2" wide.		80-90			53	111						
		Structure: S ₂ foliation predominant, S ₂												
		varys from 90° to 70°/C/A. F ₂ folds common,		90-100			56	125						
		amplitudes variable but generally <1/2",												
		wave lengths generally <1/2". No orientation												
		on S ₁ - too highly folded. Fracturing												
		post dates D ₂ , generally at small angles												
		to the C.A.												
		Magnetism: weak to moderate. Spotty due												
		to pyrrhotite in boudins and qtz. veins.												
		Mineralization: Very few grains of pyrrhotite												
		with minor pyrite associated with qtz. veins												

& boudins. No diss. mineralization in actual S₂ surfaces.

DIAMOND DRILL RECORD,

HOLE NO. _____

72-7

PROPERTY C.E.D.

SHEET NUMBER 3 SECTION FROM 95 TO 206 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
95-206	80%	Med. grey to pale green qtz. shlorite		160-110			36	120						
		sericite phyllite. Qtz. bands 1/4" are												
		highly contorted S ₁ laminae and appear		110-120			14	106						
		pale green due to minor chlorite content.												
		Also find that S ₁ surfaced defined by qtz.		120-130			18	120						
		chlorite laminae. Sericite laminae parallel												
		to S ₂ are generally 1/8" thick and dark-		130-140			14	98						
		medium grey.												
		<u>Structure:</u> S ₂ predominant - S ₂ folds very		140-150			18	129						
		common, outlined by qtz. rich intervals.												
		S ₂ ~ 60-70°/C.A. F ₂ folds small < 1/2" in size.		150-160			15	115						
		<u>Magnetism:</u> Moderate-quite evenly distributed.		160-170			15	172						
		<u>Mineralization:</u> Minor diss. pyrrhotite and		170-180			20	119						
		pyrite grains throughout. Est. < .5% overall.		180-190			18	124						
				190-200			18	112						
				200-210			18	114						

DIAMOND DRILL RECORD,

HOLE NO. 72-7

PROPERTY C.E.D.

SHEET NUMBER 5 SECTION FROM 244 TO 290 STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING _____ ULTIMATE DEPTH _____

ELEVATION _____ DIP _____ PROPOSED DEPTH _____

DEPTH FEET	CORE RECOV	DESCRIPTION	CORE SAMPLE NO.	FOOTAGE	GEOCHEM RESULTS/ppm				SLUDGE SAMPLE NO.	FOOTAGE	SLUDGE RESULTS/ppm			
					AG.	CU.	PB.	ZN.			AG.	CU.	PB.	ZN.
244-290	95%	Light to pale green qtz. and chlorite rich laminae alternatly banded with dark grey sericite and graphite laminae. Identical to interval 95-206'. Qtz. and chlorite content est. at 90%. Sericite and graphite content minor and highly variable. Individual laminae up to 1/4" common. Individual qtz.-chlorite laminae present outlining S ₁ where complete S ₂ transposition has not occurred. Structure: S ₂ predominant. est. 70-80°/C.A. F ₂ folds outlined by qtz. and chlorite. Magnetism: moderate- uniform throughout. Mineralization: Estimated <1% combined diss. pyrite and pyrrhotite distributed througout interval.		250-260			22	104						
				260-270			18	116						
				270-280			24	185'						
				280-290			13	112						

LIST OF PERSONNEL

<u>Name</u>	<u>Position</u>	<u>Address</u>
John S. Brock	Vice-Pres. Exploration	Vancouver, B.C.
Wayne J. Roberts	Geologist	Vancouver, B.C.
Glen Sargeant	Soil Sampler	Vancouver, B.C.
Brian Prochnicki	Soil Sampler	Vancouver, B.C.
Frank Charlie	Soil Sampler	Ross River, Y.T.
Albert McLeod	Soil Sampler	Ross River, Y.T.
Ted Skonseng	Prospector	Ross River, Y.T.

Contractors

Seigel Associates	Geophysical Contractor	Vancouver, B.C.
Airborne Geophysics	Geophysical Contractor	Calgary, Alberta.
Eastern Associates	Linecutters	Whitehorse, Y.T.
Arctic Diamond Drilling		Whitehorse, Y.T.

SUMMARY OF COSTS
CAPA-ECHO-DELTA CLAIMS
 (For the Period July 31, 1972 - Dec. 31, 1972)

	<u>Wages</u> (Schedule "A")	<u>Expenses</u> (Schedule "B")	
Linecutting	\$ 4.61	\$ 170.00	
Geology	\$4,737.20		
Geophysics	\$1,427.48	\$ 4,212.82	
Geochemistry	\$ 25.34		
Drilling	\$1,907.19	\$39,871.62	
Assays		\$ 1,531.79	
Camp Operation		\$ 313.07	
Transportation:			
- General		\$ 3,097.05	
- Fixed-wing		\$ 459.40	
- Rotary wing		\$ 1,002.42	
	<u>\$8,101.82</u>	<u>\$50,658.17</u>	\$58,759.99
District Expense (Schedule "C")			<u>581.14</u>
			\$59,341.13
Administration - 10%			<u>5,934.11</u>
			<u>\$65,275.24</u>

DYNASTY EXPLORATIONS LIMITED

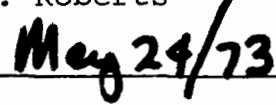
330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B. C.

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

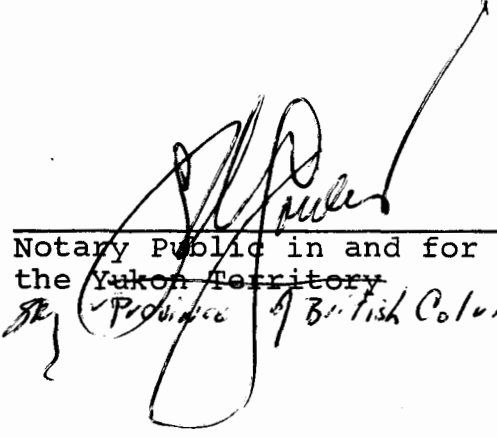
I, WAYNE J. ROBERTS, Geologist, Dynasty Explorations Limited, of Vancouver, British Columbia, do hereby state that, to the best of my knowledge and belief, the statement of costs presented in this report (Geologic, Geochemical, Geophysical and Diamond Drilling Report on the Capa-Echo-Delta Claims) is both correct and true.



Wayne J. Roberts



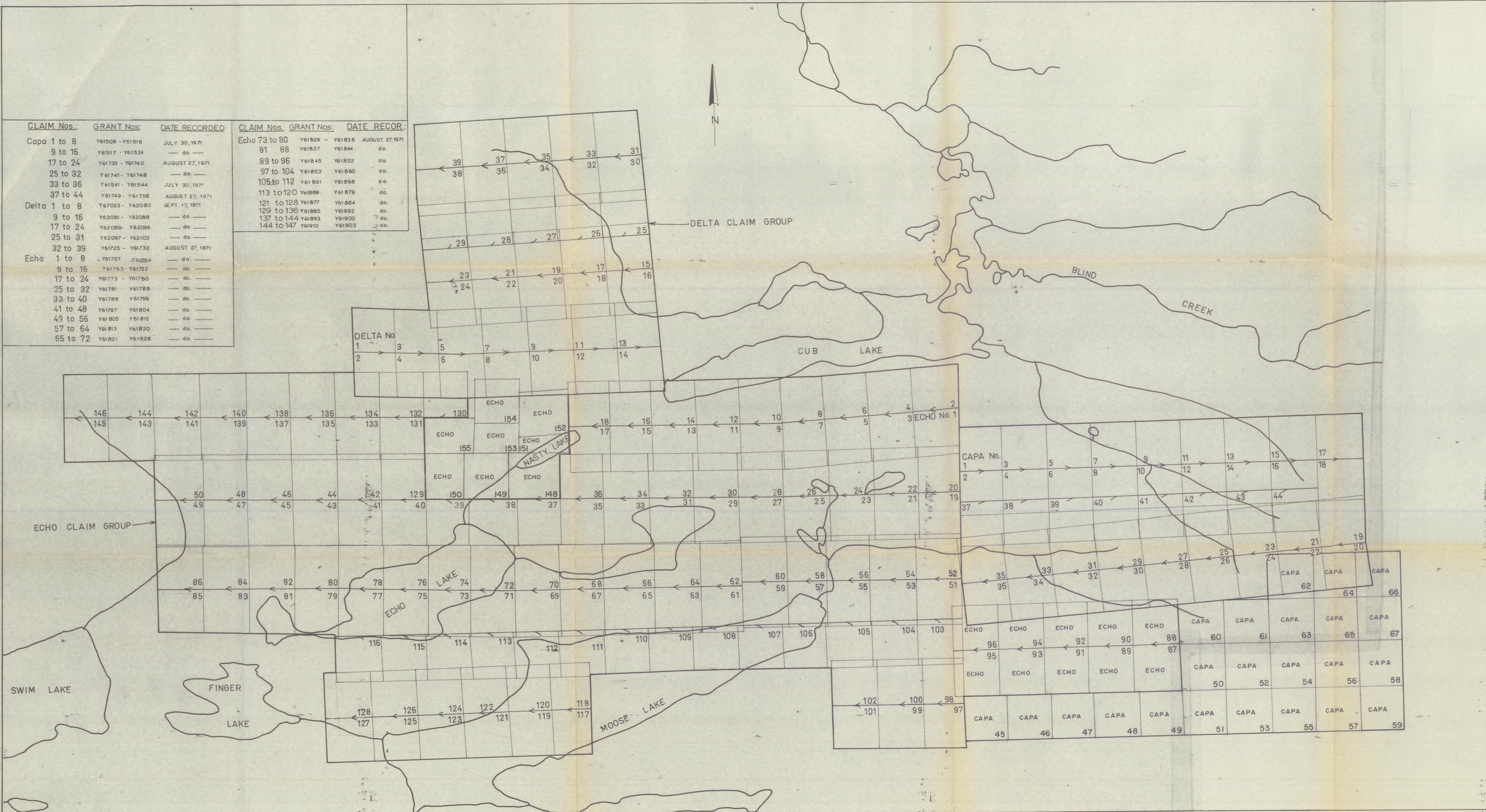
Date



Notary Public in and for
the Yukon Territory

Sty *Province of British Columbia*

CLAIM Nos.	GRANT Nos.	DATE RECORDED	CLAIM Nos.	GRANT Nos.	DATE RECOR.
Capa 1 to 8	Y61509 - Y61516	JULY 30, 1971	Echo 73 to 80	Y61829 - Y61836	AUGUST 27, 1971
9 to 16	Y61517 - Y61524	— do. —	81 88	Y61837 Y61844	do.
17 to 24	Y61733 - Y61740	AUGUST 27, 1971	89 to 96	Y61845 Y61852	do.
25 to 32	Y61741 - Y61748	— do. —	97 to 104	Y61853 Y61860	do.
33 to 36	Y61541 - Y61544	JULY 30, 1971	105 to 112	Y61861 Y61868	do.
37 to 44	Y61749 - Y61756	AUGUST 27, 1971	113 to 120	Y61869 Y61876	do.
Delta 1 to 8	Y67023 - Y62080	SEPT. 17, 1971	121 to 128	Y61877 Y61884	do.
9 to 16	Y62081 - Y62088	— do. —	129 to 136	Y61885 Y61892	do.
17 to 24	Y62089 - Y62096	— do. —	137 to 144	Y61893 Y61900	do.
25 to 31	Y62097 - Y62103	— do. —	144 to 147	Y61910 Y61903	do.
32 to 39	Y61725 - Y61732	AUGUST 27, 1971			
Echo 1 to 8	Y61757 - Y61764	— do. —			
9 to 16	Y61765 - Y61772	— do. —			
17 to 24	Y61773 - Y61780	— do. —			
25 to 32	Y61781 - Y61788	— do. —			
33 to 40	Y61789 - Y61796	— do. —			
41 to 48	Y61797 - Y61804	— do. —			
49 to 56	Y61805 - Y61812	— do. —			
57 to 64	Y61813 - Y61820	— do. —			
65 to 72	Y61821 - Y61828	— do. —			



DYNASTY EXPLORATIONS LTD.

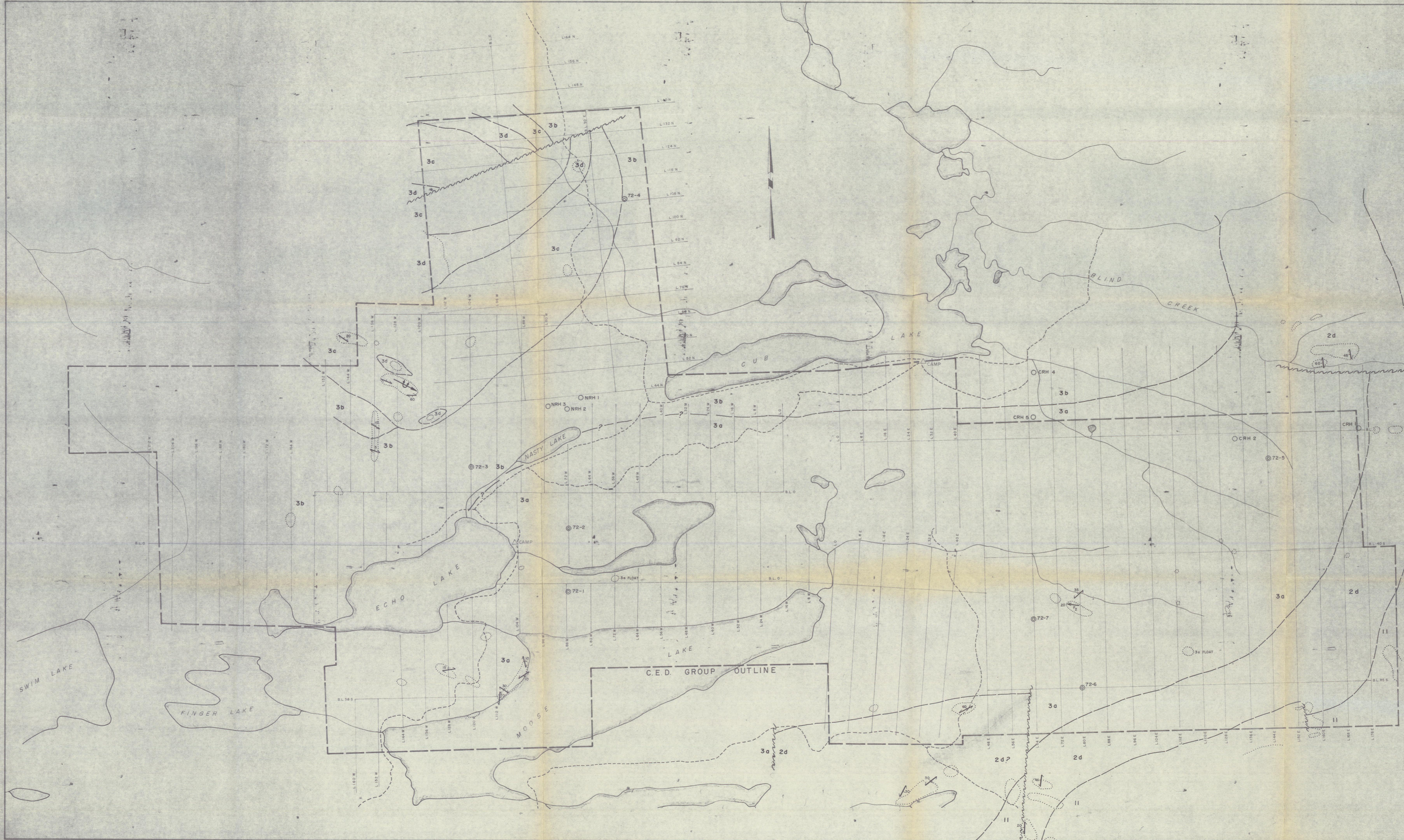
TINTINA - ANVIL PROJECT

LOCATION MAP
N.T.S. 105-K-2

DELTA, CAPA, ECHO
MINERAL CLAIMS

DATE: NOVEMBER 1972

1000 0 1000 2000 3000
SCALE: 1:1320

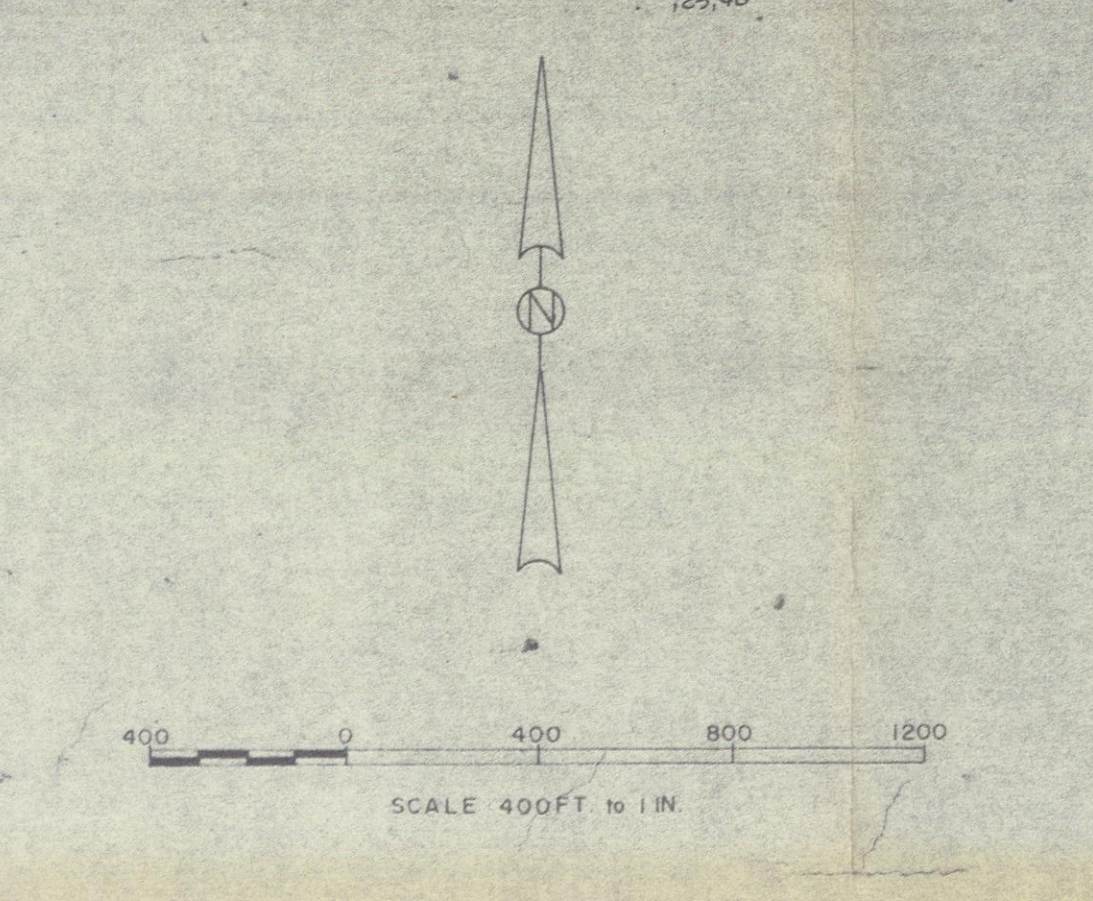
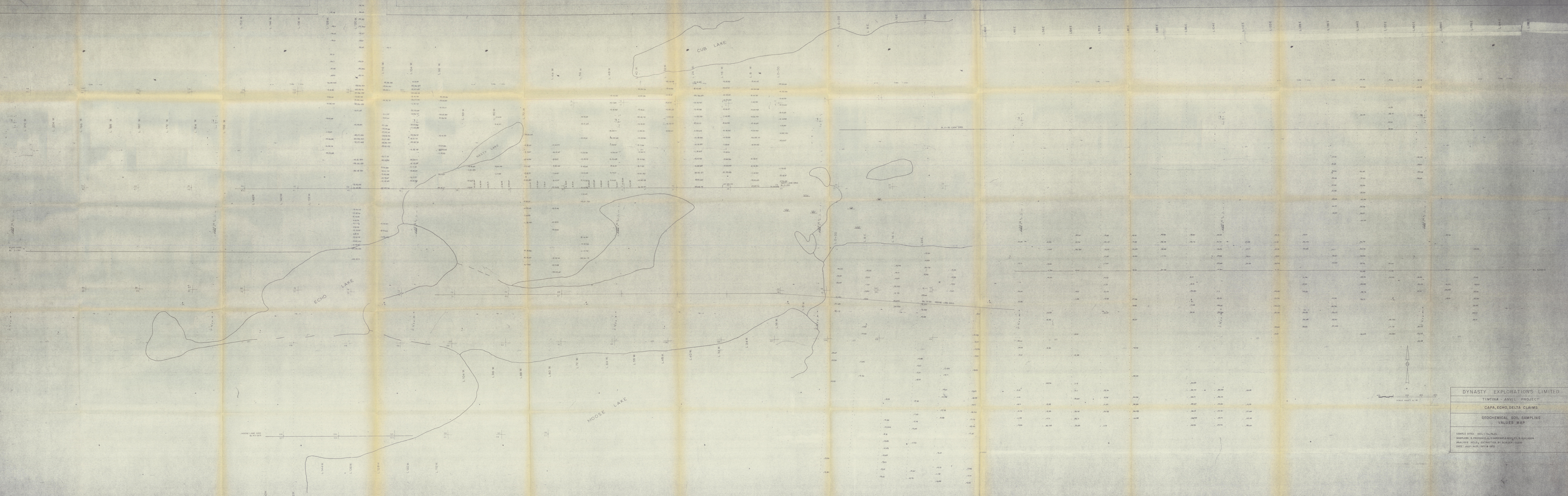


- LEGEND**
- 11 "ANVIL BATHOLITH" - MEDIUM GREY WEATHERING, EQUIGRANULAR BUT LOCALLY PORPHYRITIC AND FOLIATED, HYDROMORPHIC MEDIUM GRAINED BIOTITE QUARTZ MONZONITE TO GRANODIORITE.
 - 3c THINLY LAMINATED SILTY LIMESTONE, ALTERNATING LAMINAE OF PHYLITE AND SILTY FINE-GRAINED GREY LIMESTONE.
 - 3d "GREENSTONE" - LIGHT TO DARK GREEN FOLIATED TO MASSIVE CHLORITE SCHIST TO ANDESITE TO AMPHIBOLITE.
 - 3b SILVERY GREY WEATHERING, LIGHT GREY TO BLACK SERICITE, BIOTITE, GRAPHITE PHYLITE.
 - 3a LIGHT GREY TO BLACK QUARTZ, SERICITE, BIOTITE, CHLORITE PHYLITE. ALSO INCLUDES QUARTZ, GRAPHITE PHYLITE (3aq) AND QUARTZITE (3aq).
 - 2d TAN WEATHERING MEDIUM TO COARSE GRAINED QUARTZ BIOTITE, SERICITE, ANDALUSITE, GARNET, STAUROLITE SCHIST.
- GEOLOGICAL CONTACTS (ASSUMED)
 - LIMIT OF OUTCROP
 - S₂ - FOLIATION
 - ↗ FOLD AXES
 - ⊙ DIAMOND DRILL HOLES
 - ROTARY DRILL HOLES

1000 0 1000 2000 3000
SCALE 1" = 1320'

DYNASTY EXPLORATIONS LIMITED
TINTINA ANVIL PROJECT
CAPA-ECHO-DELTA GROUP
GEOLOGY MAP

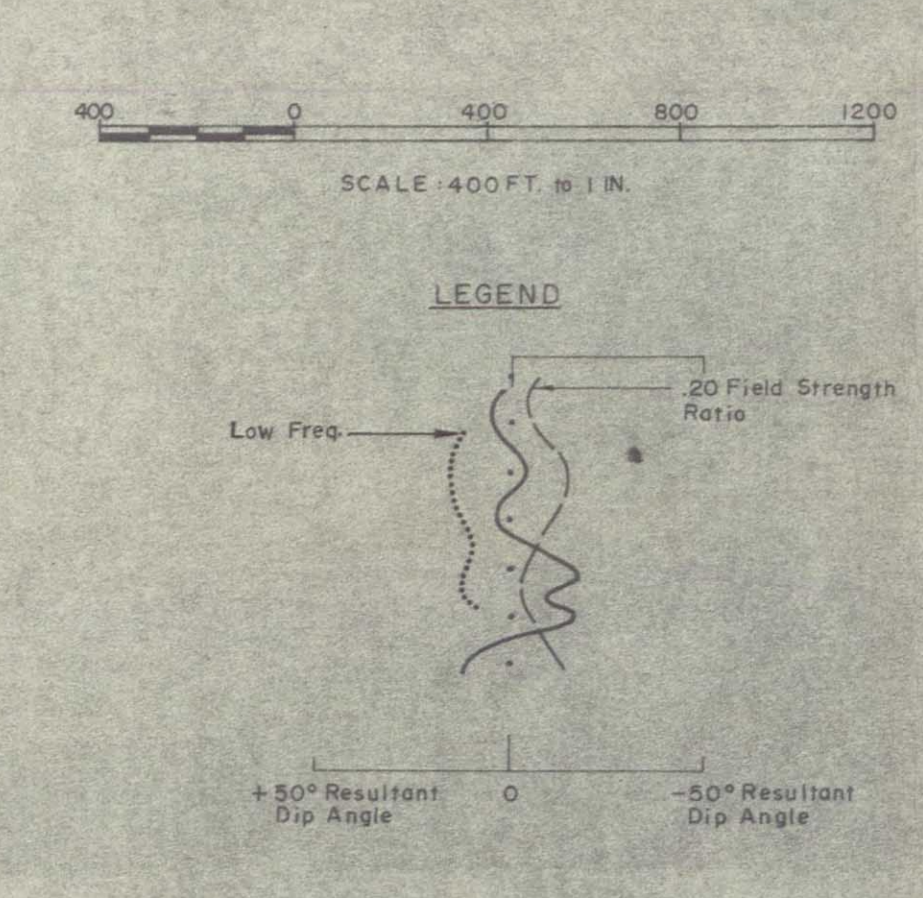
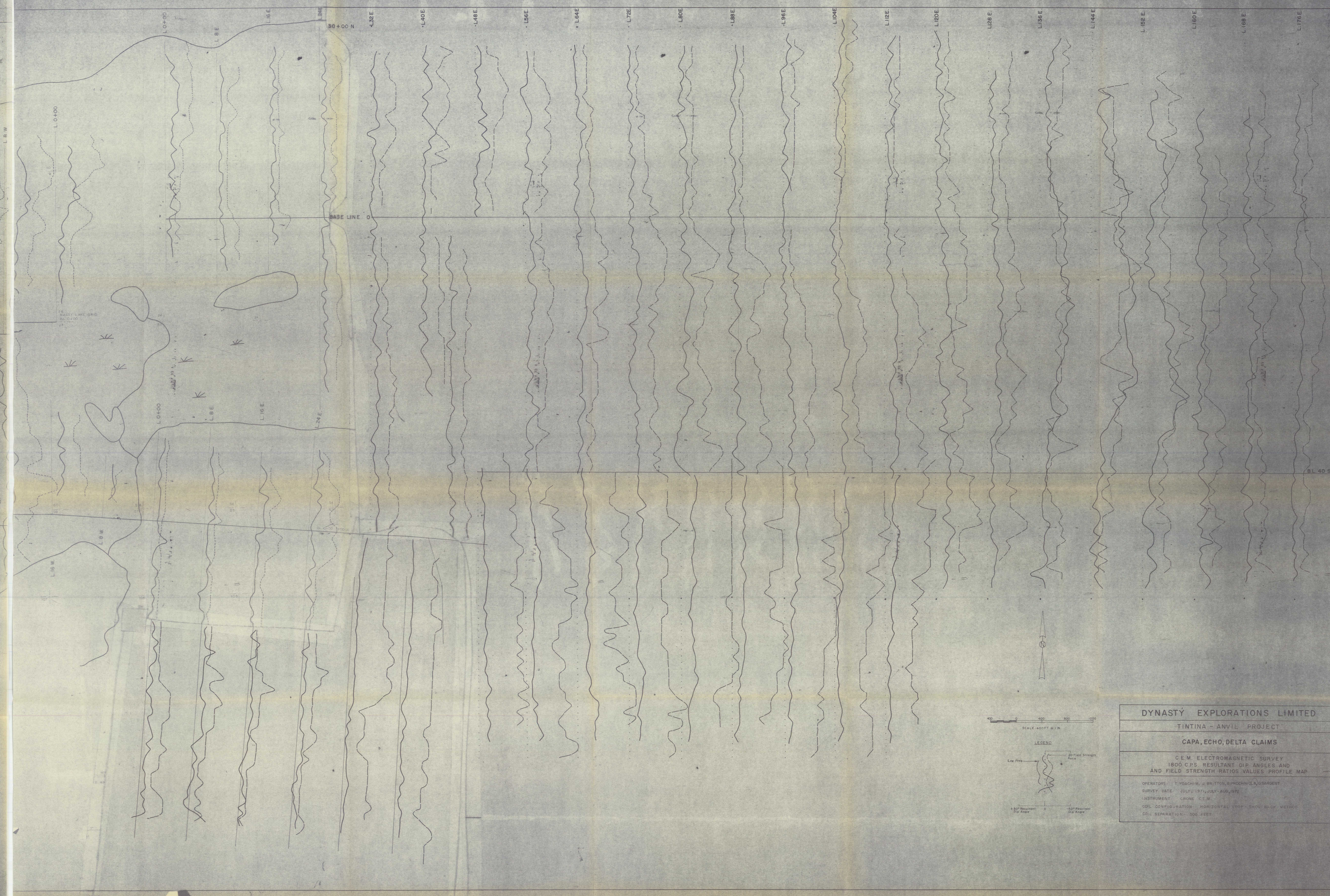
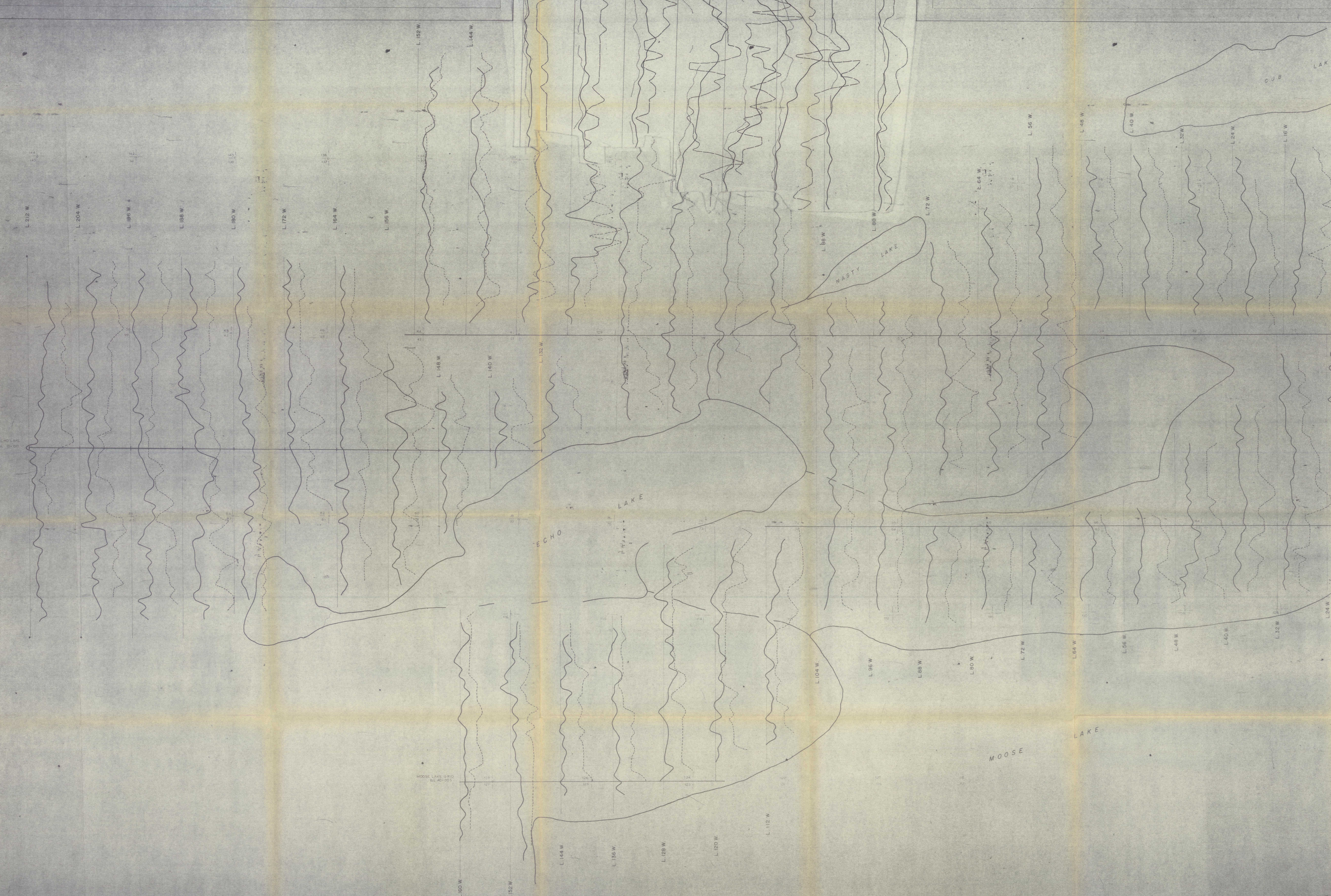
BY: W. ROBERTS NTS-105-K-2
 P. DEAN
 P. VIKRE DRAWN BY: C. GEORGE



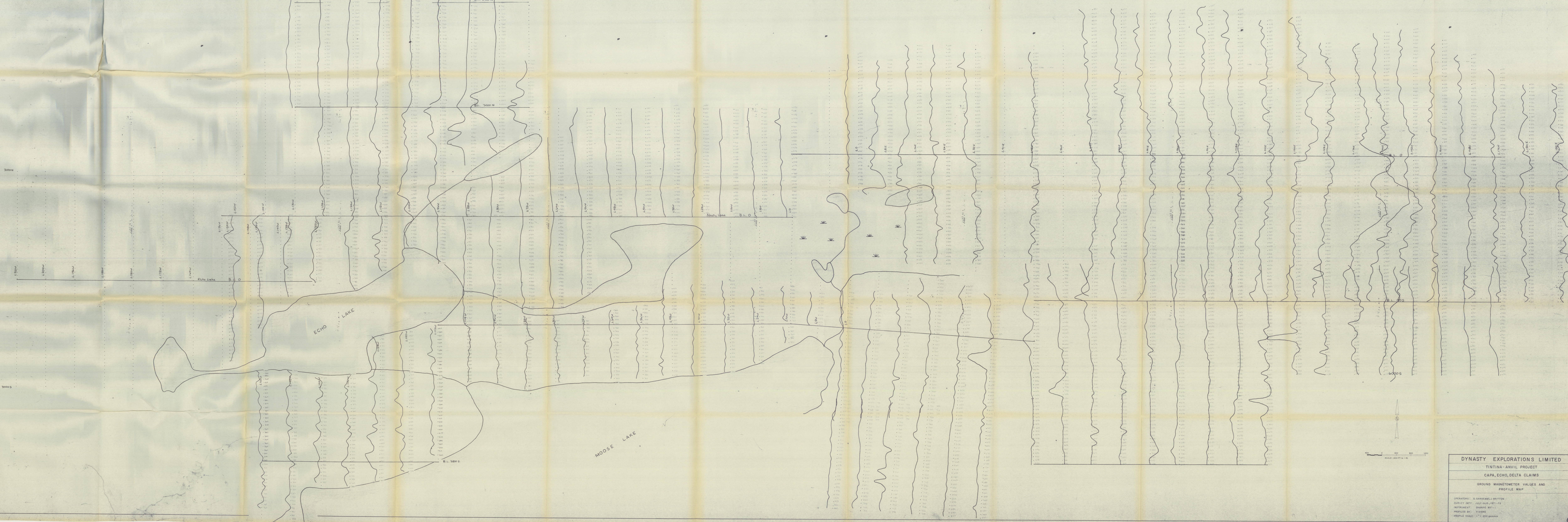
DYNASTY EXPLORATIONS LIMITED
 TINTINA - ANVIL PROJECT
 CAPA, ECHO, DELTA CLAIMS
 GEOCHEMICAL SOIL SAMPLING
 VALUES MAP
 SAMPLE SITES: SOIL - Cu, Pb, Zn
 ANALYSIS: HCLO, EXTRACTION BY BORPER-0505
 DATE: JULY - AUG, 1978 & 1979



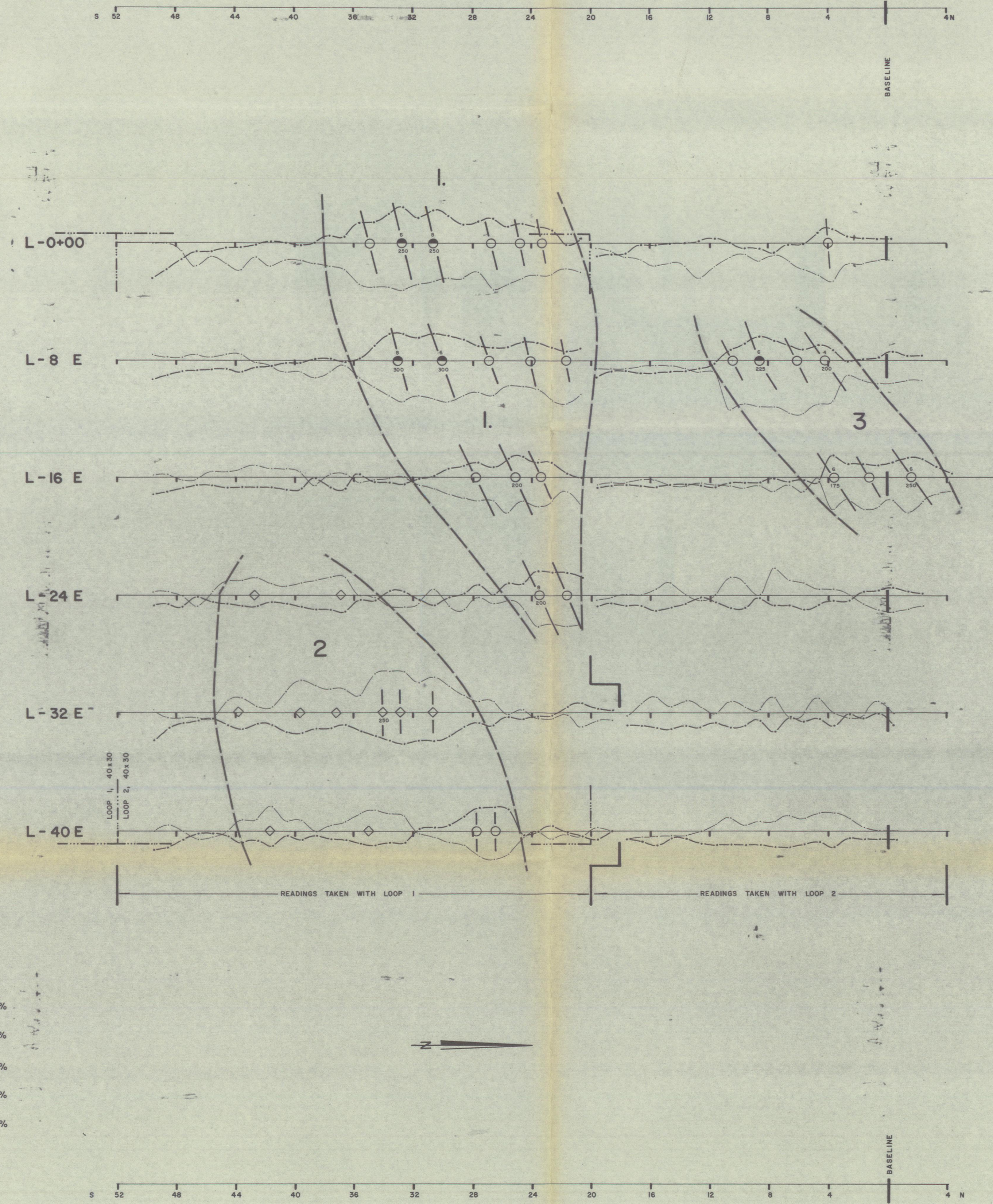
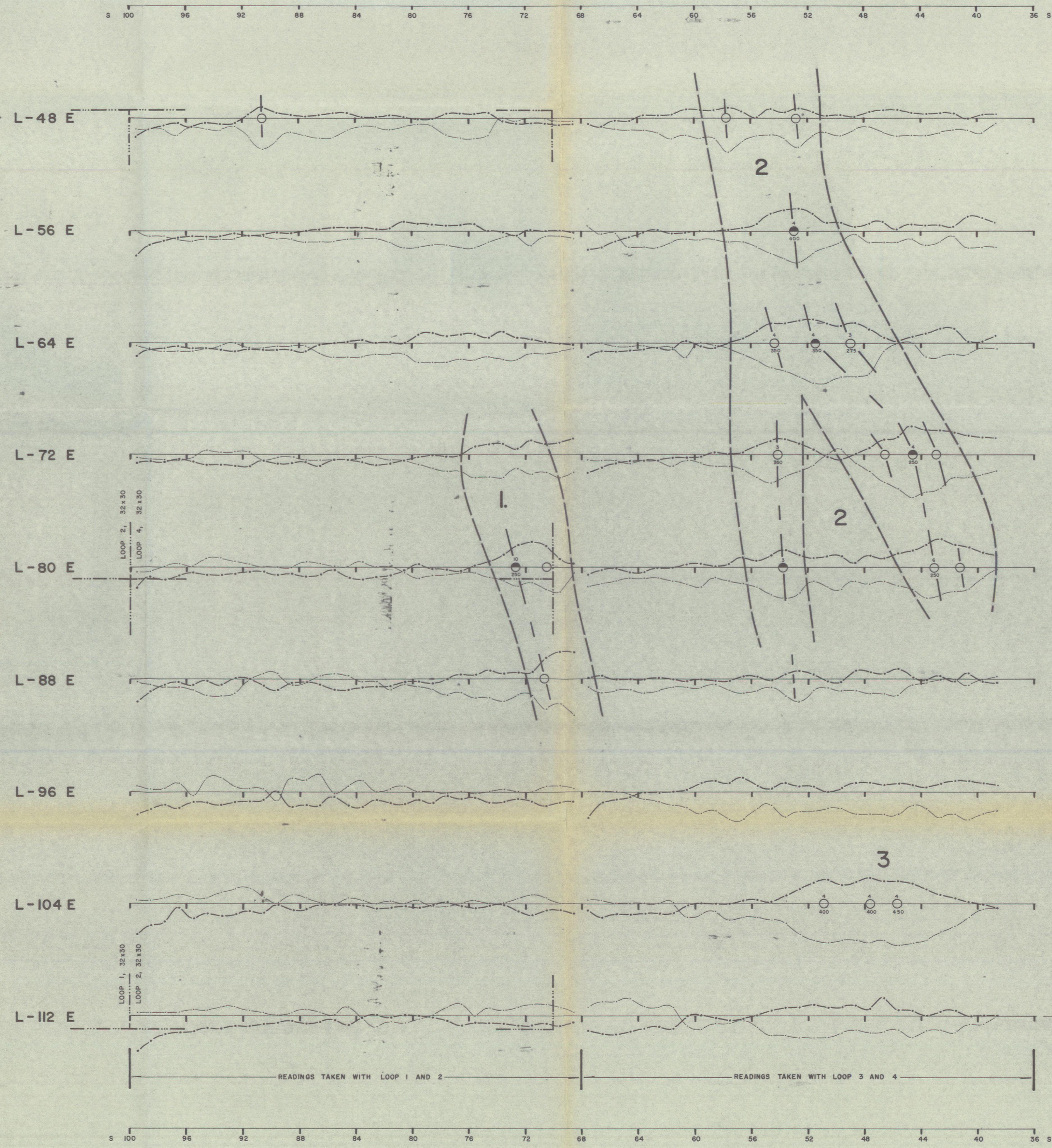
DYNASTY EXPLORATIONS LIMITED
 TINTINA-ANVIL PROJECT
 CAPA, ECHO, DELTA CLAIMS
 GROUND MAGNETOMETER VALUES AND
 PROFILE MAP
 OPERATOR: S. SARSEANT, BRITTON
 SURVEY DATE: JULY-NOV., 1971-72
 INSTRUMENT: SHARPE MF-1
 PROFILE BY: S. SARSEANT
 PROFILE SCALE: 1" = 200 FEET



DYNASTY EXPLORATIONS LIMITED
 TINTINA - ANVIL PROJECT
 CAPA, ECHO, DELTA CLAIMS
 C.E.M. ELECTROMAGNETIC SURVEY
 1800 CPS. RESULTANT D.I. ANGLES AND
 AND FIELD STRENGTH RATIOS VALUES PROFILE MAP
 OPERATORS: S. MAGNUS, J. B. PETERSON, J. G. GARDNER
 SURVEY DATE: JULY 1971
 INSTRUMENT: GEOPHYSICAL ELECTRONICS CORPORATION
 50% CONFIDENCE - HORIZONTAL 1000' - 2000' BY METHOD
 COIL SEPARATION: 100 FEET



DYNASTY EXPLORATIONS LIMITED
 TINTINA-ANVIL PROJECT
 CAPA, ECHO, DELTA CLAIMS
 GROUND MAGNETOMETER VALUES AND
 PROFILE MAP
 OPERATORS: G. SARGENT, J. BRITTON
 SURVEY DATE: JULY-AUG. 1971-72
 INSTRUMENT: SHARPE MF-1
 PROFILES BY: P. VIKRE
 PROFILE SCALE: 1" = 400 METERS



LEGEND

--- RATIO
 --- PHASE
 --- READINGS TAKEN AT 400 Hz, UNLESS INDICATED OTHERWISE.
 --- LEADING EDGE OF TRANSMITTING LOOP
 --- 100 FEET RECEIVING COIL SEPARATION, INTERLINE SPACING TO SCALE.
 --- CONDUCTOR AXIS
 --- CONDUCTIVITY x THICKNESS (91 mhos)
 --- DEPTH TO CURRENT AXIS

○ NORMAL ANOMALY:
 ○ WEAK
 ● MODERATE
 ● STRONG
 ◇ REVERSED ANOMALY

LOOP DIMENSIONS IN HUNDREDS OF FEET
 SCINTREX SE-71 INSTRUMENTATION EMPLOYED.

PLATE 1

DYNASTY EXPLORATIONS LIMITED
 FARO AREA, YUKON TERRITORY
 CAPA AND MOOSE GRID

PROFILES
 OF
TURAM ELECTROMAGNETIC SURVEY

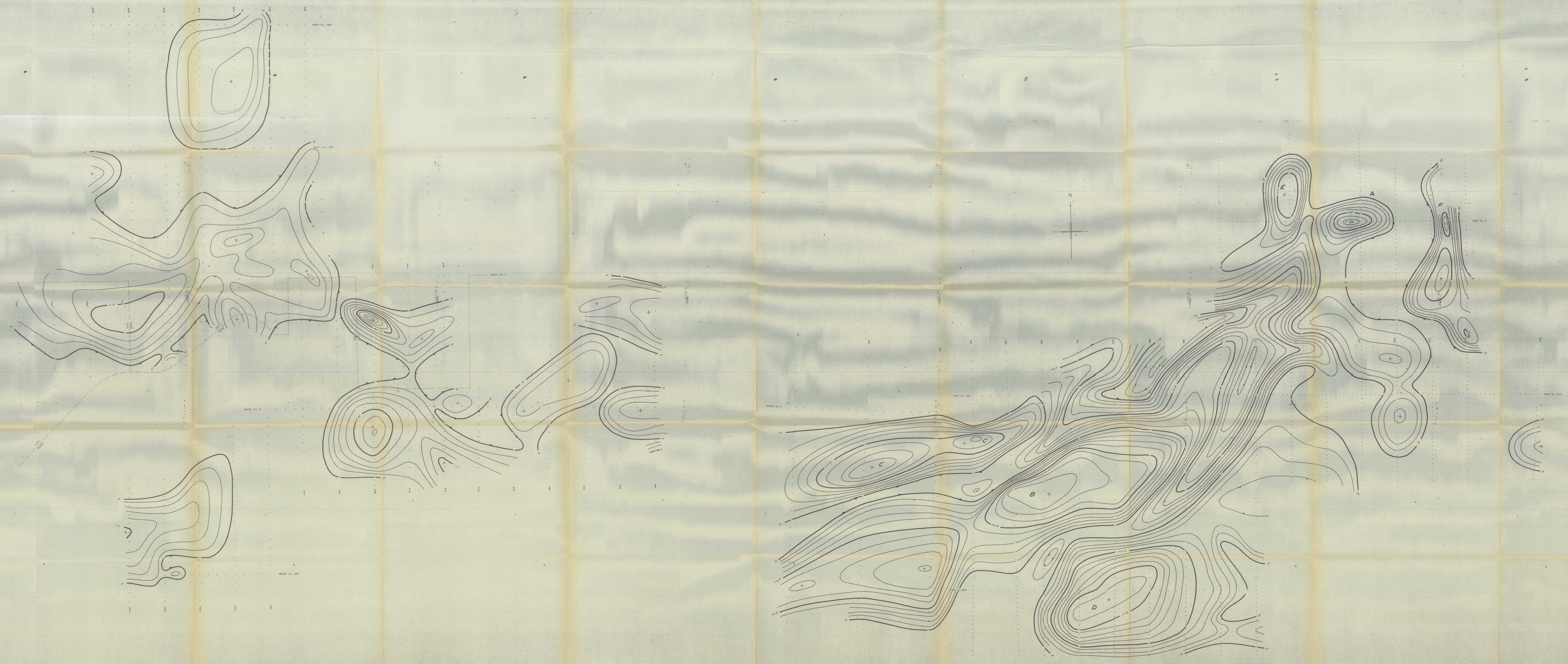
SCALE 1" = 400'
 BY
 SCINTREX SURVEYS LIMITED

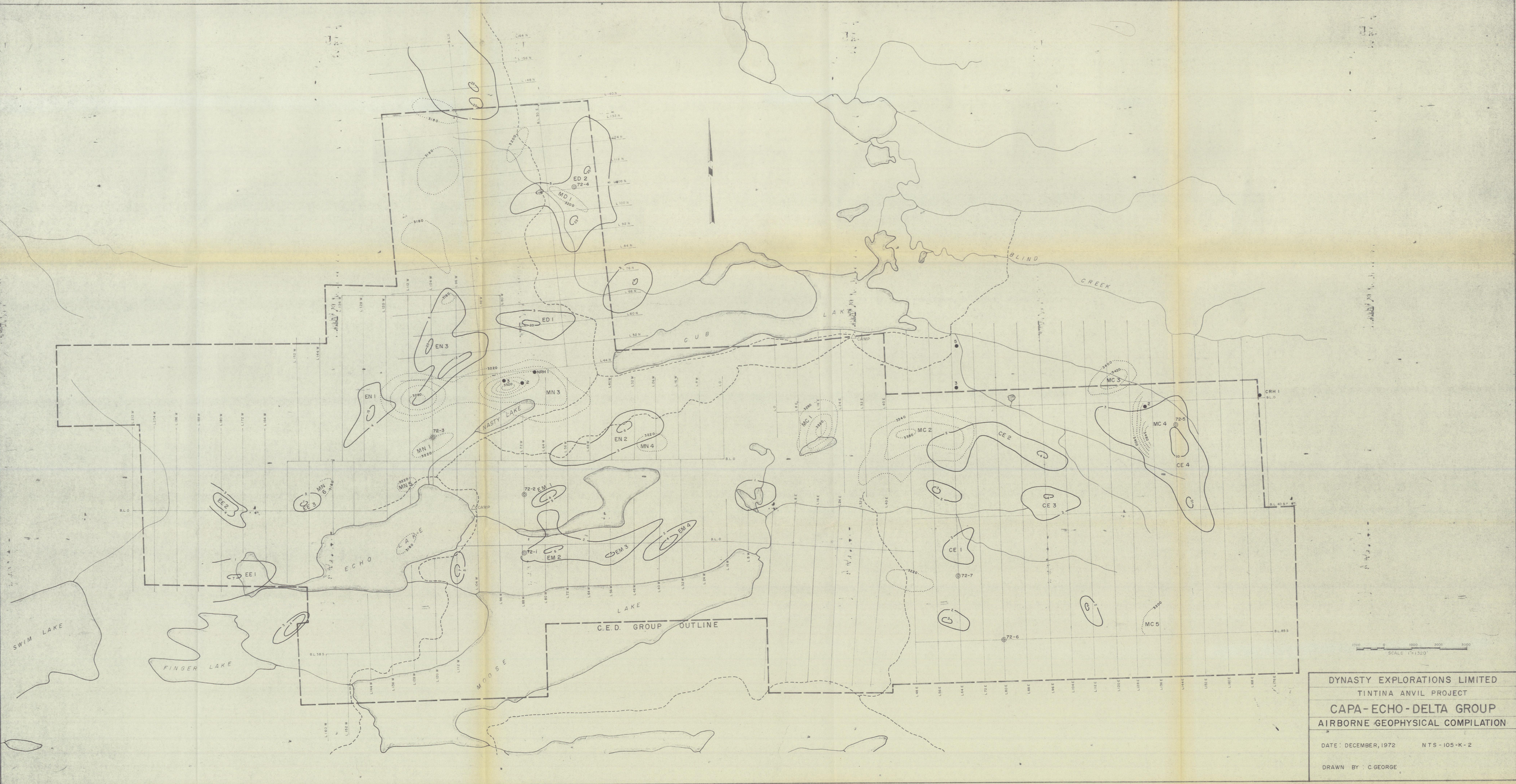
TO ACCOMPANY A GEOPHYSICAL REPORT BY
 MICHAEL J. LEWIS AND P. J. FOMINOFF
 DATED 9. NOVEMBER 1972

WORK COMPLETED: 14.9.1972
 DRAFTED: 6.11.1972
 REV.

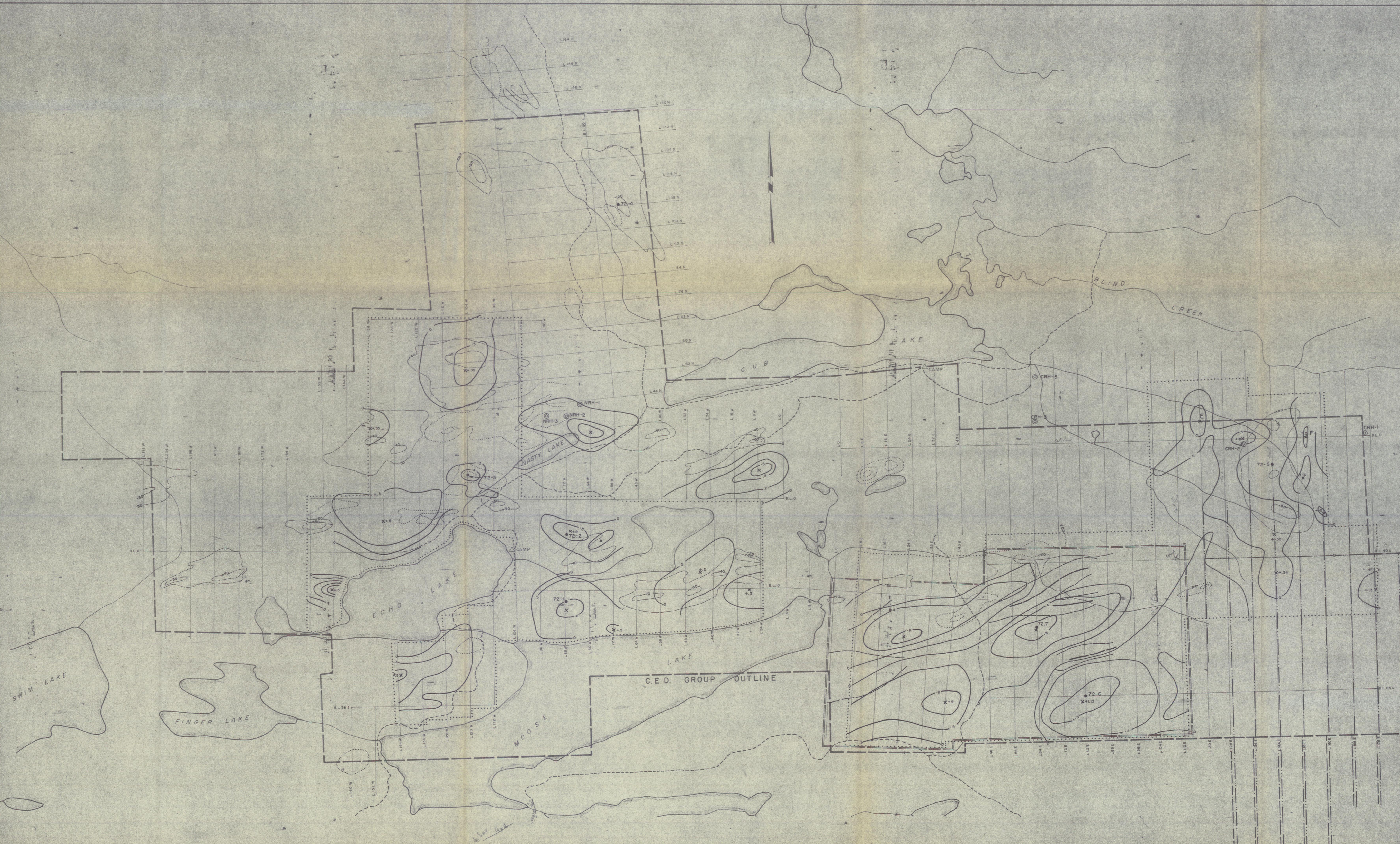
JOB NUMBER
 878
 A

SHEET NUMBER
 1 OF 1





DYNASTY EXPLORATIONS LIMITED
 TINTINA ANVIL PROJECT
CAPA-ECHO-DELTA GROUP
 AIRBORNE GEOPHYSICAL COMPILATION
 DATE: DECEMBER, 1972 NTS - 105-K-2
 DRAWN BY: C. GEORGE



LEGEND

- MAGNETIC ANOMALIES (GAMMAS)
- CEM CONDUCTOR
- CONDUCTOR OUTLINE
- CONDUCTOR PEAK
- TURAM CONDUCTIVE ZONES
- CONDUCTOR AXIS
- RESIDUAL GRAVITY ANOMALY
- OUTLINE OF 1972 GRAVITY COVERAGE
- OUTLINE OF 1972 TURAM COVERAGE (ENTIRE GRID AREA COVERED BY MAGNETOMETER AND CEM)
- ROTARY DRILL HOLES
- DIAMOND DRILL HOLES
- PROPOSED DRILL HOLES
- PROPOSED TURAM
- PROPOSED GRAVITY

SCALE 1" = 1320'

DYNASTY EXPLORATIONS LIMITED
 TINTINA ANVIL PROJECT
CAPA-ECHO-DELTA GROUP
 GROUND GEOPHYSICAL COMPILATION
 AND PROPOSED WORK
 COMPILED BY: W. ROBERTS DATE: DEC. / 72
 DRAWN BY: C. GEORGE NTS-105-K-2