

008946

DYNASTY EXPLORATIONS LIMITED

GEOLOGY REPORT

ANVIL PROPERTIES

Pelly River, Y.T.

DOUGLAS D. CAMPBELL

December 10, 1964

Douglas D. Campbell

INTRODUCTION

Dynasty Explorations Ltd. presently hold 610 mineral claims and fractions in eleven groups located between the southwest flank of the Anvil Range of mountains and the Pelly River, approximately 100 miles northeast of Whitehorse, Yukon Territory. The claim groups are distributed over an area eight miles in width and sixteen miles in length, in an east-west direction, with the southwest corner of the area lying on the Pelly River near the mouth of Blind Creek, six miles due south of the Kerr-Addison property on Vangorda Creek. The area is accessible by float or ski plane to the Swim Lakes, in the middle of the area, and by barge or river boat down the Pelly River from Ross River. Ross River can be reached via the Canal Road. The Ross River-Carmacks road is presently brushed out from Ross River to Vangorda Creek on the southwest side of the Pelly River.

HISTORY: The Vangorda deposit was discovered in 1953 and drilled by Prospector's Airways Ltd. to reveal ten million tons of metal-bearing rock grading 8 percent combined lead and zinc, 0.3 percent copper and 2 ounces of silver per ton. The deposit is a gently plunging replacement body comprised principally of pyrite, pyrrhotite, arsenopyrite, sphalerite and galena in graphitic-chloritic schist. It lies beneath a few feet of cover. The area of the deposit is 3000 x 400 ft.

Magnetometer reconnaissance and prospecting revealed many similar anomalies to that of the Vangorda deposit to the south and east of it and in 1963-64 most of these anomalies have been staked by Dynasty Explorations. The entire area has been surveyed by aerial magnetometer; most of the anomalies have been prospected and checked by ground magnetometer and geochemical surveys.

PROPERTY:

The eleven claim groups of Dynasty Explorations are:

INTRODUCTION (Cont'd):

				<u>Claims</u>
DY	CLAIM GROUP	1 - 148	Tag Nos. 85882 - 86029	148
SUN	CLAIM GROUP	1 - 20	Tag Nos. 86030 - 86049	20
SEA	CLAIM GROUP	1 - 72	Tag Nos. 86133 - 86204	
		73 - 88	Tag Nos. 90397 - 90412	96
		88 - 96	Tag Nos. 90475 - 90482	
	SEA FRACTIONS	1 - 8	Tag Nos. 90413 - 90420	
		10 - 16	Tag Nos. 90422 - 90428	15
DEA	CLAIM GROUP	1 - 55	Tag Nos. 86205 - 86259	55
LEA	CLAIM GROUP	1 - 20	Tag Nos. 86260 - 86279	20
PEA	CLAIM GROUP	1 - 44	Tag Nos. 86296 - 86339	44
BEA	CLAIM GROUP	1 - 16	Tag Nos. 86117 - 86132	16
NASTY	CLAIM GROUP	1 - 16	Tag Nos. 86280 - 86295	16
ACE	CLAIM GROUP	11 - 44	Tag Nos. 90965 - 90998	
		47 - 88	Tag Nos. 90999 - 91040	76
BETA	CLAIM GROUP	1 - 92	Tag Nos. 90873 - 90964	92
CAM	CLAIM GROUP	1 - 12	Tag Nos. 90483 - 90494	12
				<hr/>
				610

INTRODUCTION (Cont'd):

All of the claims have been covered by an aerial magnetometer survey and many of the resulting anomalies have been checked by ground magnetometer and geochemical soil surveys. They have been generally prospected as well. Most of the work in 1964 was concentrated on the SEA Group of claims located between the Swim Lakes, four miles north of the Pelly River and eleven miles southeast of the Kerr-Addison deposit on Vangorda Creek. To the end of November about ten miles of bulldozer road had been put on this group of claims. Six bulldozer trenches and three diamond drill holes had been completed to investigate magnetic highs of the main Sea anomaly.

REFERENCE:

The Dynasty property is new with only government field mapping as reference. The writer visited the property on September 12 and November 21-23, 1964, and saw the trenches and logged most of the diamond drill core from the first three holes. All maps and survey results have been made available to the writer by Dynasty Explorations.

SUMMARY AND CONCLUSIONS

Eleven aerial magnetometer anomalies have been discovered and staked by Dynasty Explorations in the Vangorda Creek area in 1964. All of these anomalies are similar in character, and most are larger in size, than that over the proven Vangorda Creek base metal deposit on the Kerr Addison property. All anomalies occur within quartz-sericite-chlorite schists similar to the Vangorda host rock.

Preliminary drilling of the Sea anomaly revealed three layers of pyrite-pyrrhotite replacement at depths of 50 - 100 ft., 190 - 220 ft. and 300 - 325 ft. The base metal content in four drill holes is low but could possibly be high enough to be economic in other parts of the anomaly.

Of the remaining Dynasty anomalies the Dea and the Dy should be investigated next because; they are closer to the Vangorda deposit than any others, they are closer to the Tintina Fault than the others, and also, geochem silt anomalies over the Dea anomaly suggest a possible encouraging base metal content.

The most practical method for quickly investigating all of these anomalies is with dry percussion drilling with spot checks of values by diamond drill. If values are intersected on an anomaly in this reconnaissance the intersections can be confirmed and delimited by closer spaced diamond drilling.

The discovery of one or two more base metal bodies comparable in size and grade to the Vangorda deposit would probably be enough to make this area exploitable. It is evident from available data and geological features that the chances are very good of finding such orebodies among the eleven magnetic anomalies on Dynasty property.

The writer recommends a program of 30,000 feet of dry drilling and 3000 feet of diamond drilling to initially check the better anomalies. The total cost of this program to the company would be about \$200,000.

GEOLOGICAL SETTING

GENERAL: The Vangorda deposit and all the Dynasty anomalies occur within moderately dipping schistose rocks which locally grade into skams, andesitic volcanics and granulites etc. These metamorphic rocks comprise the central portion of a belt of Mississippian formations that trends west-northwesterly along the northeast side of the Tintina Fault trench along which flows the Pelly River. The belt of Mississippian rocks is about 10 - 20 miles in width and extends for at least 40 miles to the northwest and southeast. Included with the aforementioned metamorphic rocks in this belt is a wide section of andesitic flows and a relatively thin slice of micaceous quartzites and schists. The entire belt of Mississippian formations appears to be an anticline with the metamorphic rocks being deepest and central, the andesites lying above them and appearing intermittently along the flanks of the belt, and the quartzitic rocks being uppermost and appearing only as slices along the southwest side of the belt against the Tintina Fault.

In surface outcrop the central portion of the above-described belt is occupied discontinuously by irregularly shaped bodies of intrusive quartz monzonite and granodiorite up to eight miles in width and 20 miles in length. East of Swim Lakes the intrusives are porphyritic and appear to be younger than the other intrusives. Thus the anticline is in effect formed by the draping of the Mississippian formations over the intrusive core which erosion has exposed. Most of the central peaks of the Anvil Range are underlain by granodiorite. In most exposures in the Vangorda area the intrusive rocks are in contact with the central metamorphic rocks. It could be that these rocks are more metamorphosed than the flanking andesites, on a regional scale, by reason of their proximity to the intrusives.

PROPERTY AREA: The Anvil Range is broken at Blind Creek by a low-lying basin entirely underlain by metamorphic or andesitic rocks. This subdued basin of rolling hills is host to the Swim Lakes and is drained by the Blind Creek system. All of the known sulphide bodies and anomalies occur in two rude belts about five miles apart that trend eastward from the Tintina Trench across the Blind Creek - Swim Lakes basin. The most continuous belt of anomalies lies to the north, along the south slope of Mt. Mye between elevations of 3000 and 4000 feet, from Vangorda Creek to nearly the headwaters of Blind Creek. The Kerr-Addison deposit is the westernmost of this string of six anomalies. The south string of anomalies lies along the Swim Lakes area and is not as well defined in that eight anomalies are very irregularly distributed along a broader belt and the individual anomalies are considerably different in shape and orientation one from another. A central anomaly of this belt, the Sea, has been the target of the Dynasty drilling to date. Four anomalies, at the west end of the belt, are on Kerr-Addison claims, the remaining anomalies are on Dynasty claims.

All of the anomalies occur within very gently southwesterly dipping schistose rocks of the metamorphic suite which lie between the two main masses of intrusive bodies that form the core of the Anvil Range to the northwest and to the southeast. The anomalies appear to be localized in more granulitic bands of the schistose sequence of rocks.

GEOLOGICAL SETTING (Cont'd):

MINERALOGY: The Kerr-Addison sulphide deposit on Vangorda Creek is comprised of disseminated pyrite, galena, sphalerite and minor chalcopyrite replacing bands in locally skarnized sericitic schists. The average metal content of the orebody is 8% Pb-Zn, 2 oz. Ag and 0.3% Cu per ton. Similar mineralization has been found as float, and in place, at or near the Dynasty anomalies. The Sea anomaly, which has been drilled and trenched, centres on a replacement body that is apparently comprised predominantly of pyrrhotite and pyrite with minor sphalerite, galena and chalcopyrite. Magnetite is locally concentrated in this body as well. (These features have been determined from only four drill holes therefore their validity must remain debatable pending further investigation.)

Logging of DDH #2 on the Sea anomaly, plus a study of six thin sections of specimens from that hole, indicate the existence in this area of two general types of schistose rock;

- 1) A grey-white, medium to coarse crystalline, hard and soft, irregularly laminated phyllitic schist comprised principally of quartz, sericite and/or talc with variable amount of calcite. The calcite equals the quartz in quantity in some bands.
- 2) A black-green, fine grained, soft, finely and evenly laminated schist comprised principally of quartz, sericite-talc and chlorite with minor carbonate. An important constituent of this rock is extremely fine grained magnetite disseminated throughout all the laminae. In the sections examined, the magnetite comprises up to ten percent of the rock. This amount of magnetite in the chlorite schists probably contributes to the magnetic effect of the anomaly.

Thin section study indicates that the sulphides replace the coarse crystalline quartz and the calcite preferentially. In the fine grained, finely laminated quartz-sericite or chlorite schists sulphide replacement is negligible. The best host for sulphide replacement is the grey-white, quartz-calcite (minor sericite) schist. Generally the sulphides (pyrite and pyrrhotite) are more concentrated and more coarsely crystalline in the calcite-rich bands of the host rock. Because of the high quantity of quartz and calcite versus sericite, chlorite etc., in this type of host rock the rock has a granular texture, in contrast to the more laminated schists.

One specimen of sulphide-schist taken from a pit each of DDH 2 exhibited considerable galena and sphalerite with the pyrrhotite and assayed 6.9% Zn, 4.8% Pb and 0.74 oz. Ag per ton.

A semi-quantitative spectrographic analysis of two specimens of the sulphide-rich schist from DDH 2, (copy in appendix), indicates a matrix of silica and iron along with six percent aluminum and one percent calcium. The principal metals ancillary to these major constituents are: copper (0.5%), lead (0.03 - .15%) and zinc 0.10 - 0.70%).

ECONOMIC GEOLOGY

The objective of exploration of the Dynasty claim groups is to locate sulphide replacement bodies of comparable or better size and grade than the Kerr-Addison deposit on Vangorda Creek. Of the ten anomalies occurring on the Dynasty claims all but three are considerably larger than the anomaly over the Vangorda deposit but only one, the Sea anomaly, has been seriously investigated. Preliminary exploration of this anomaly has revealed a sulphide replacement body almost identical with the Vangorda deposit except for a lack of galena and sphalerite as well as an abundance of pyrrhotite. These differences may be only local within the body or they may represent the entire body. If they indicate a different type of deposit the difference may be due to an areal zoning pattern or to a different host rock. The occurrence of one belt of anomalies to the north, trending very roughly along the strike of the enclosing schists, and another belt to the south suggests the possibility of two general bands of favourable host rock, which may in turn give rise to two different types of sulphide deposits. The fact that the Vangorda deposit occurs in the northern belt suggests that the other anomalies in this belt, all on Dynasty ground, are most worthy of investigation. The fact that each of these five anomalies is considerably larger than the Vangorda anomaly is doubly encouraging. Another possible areal zone control of economic mineralization may be proximity to the Tintina Fault, in which case the westernmost anomalies will be the most promising.

Investigation of the Sea anomaly has indicated that the sulphides have preferentially replaced granular quartz-carbonate schists, as opposed to fine-grained quartz-sericite schists. From this it would appear advisable to attempt to correlate such rather gross differences in the types of schist along the belts of anomalies in order to direct exploration to the apparently more favourable bands. (It should be noted that the quartz-calcite schist, where replaced by sulphides on the Sea anomaly, has also been considerably impregnated by late hydrothermal chlorite. This chlorite is a different generation than that in the chlorite schist and is either contemporaneous with or later than the sulphide mineralization.)

NORTH BELT OF ANOMALIES:

This belt of anomalies includes, from west to east, the Vangorda, the Dy, and five Beta anomalies extending eastward for a distance of eight miles. The size and character of the Vangorda deposit is known. A summary of the data on the remaining anomalies is as follows:

DY ANOMALY: The Dy anomaly is about 4000 x 1000 feet in plan area and is located three miles due east of the Vangorda deposit. The country rock is schist, with possibly the extension, in the vicinity, of the porphyry sill that underlies the Vangorda deposit. There is a possible fault cross-cutting the schists at the anomaly. The general trend of the anomaly is east-west, along the schistosity. The original magnetometer anomaly has been corroborated by geochemical soil (zinc) sampling and a gravity survey. It would appear that from the available data this is one of the more promising anomalies. Its promise is further enhanced by

ECONOMIC GEOLOGY (Cont'd):

the fact that it is the closest anomaly to the Vangorda deposit, it is the same distance from the intrusive to the north as the Vangorda and nearly the same distance from the Tintina Fault.

The topography on the Dy anomaly is relatively gently sloping hillside. Drill testing of the anomaly will present no physical difficulties.

BETA ANOMALIES: Two miles east of the Dy are five aeromagnetometer anomalies straddling Blind Creek and trending parallel to it. Three are two miles in length and approximately 2000 feet in width, trending easterly in line with a gap between them of 1/2 mile. Due north of the westernmost anomaly about 1/2 mile is an anomaly approximately equal in size to the Dy. Two miles east of these anomalies is the fifth one, three miles in length.

All of these anomalies are underlain by schists similar to those at Vangorda and all trend more or less parallel to the foliation of the schists. The foliation dips 10 - 20° to the north. Galena occurs in schist float that has been found near the western Beta anomalies. No work has been done on these anomalies but they would appear to be of considerable interest, ranking below the Dy anomaly in priority for investigation.

ACE ANOMALY:

Not heretofore mentioned is an anomaly, the Ace, which is the largest in the area. It is an aeromagnetometer anomaly five miles in length and up to 2000 feet in width and lies parallel to the Beta anomalies but six miles north of them. It was discovered by the aeromag survey made of the schist belt by Dynasty Explorations this year. It lies on the north slope of Mount Mye on the northeast limb of the anticline which straddles the intrusive core of the mountain. The anomaly is parallel to the trend of the schists which, on this limb, dip 20 - 40° to the north. Unmineralized schist is exposed in the creek that cuts across the east end of this anomaly and specimens of the schist are nonmagnetic, implying that the anomaly is caused by something below the schist. If this is a chlorite schist similar to that of the Sea anomaly it may be that the fine dispersion of magnetic is giving a mass aerial magnetic anomaly whereas individual pieces are only very weakly magnetic.

An exposure of drag folded crystalline schist 1500 feet south of the main Ace anomaly has produced abundant float mineralized with chalcopyrite and pyrrhotite.

Because of inconvenience of access, at an elevation of 4500 ft., the Ace anomaly will not be as easy to explore as those in the two belts on the south limb of the anticline.

SOUTH BELT ANOMALIES:

In the south belt two anomalies occur under the westernmost of the Swim Lakes, on Kerr-Addison claims, and another one, 1-1/2 miles in length, occurs between this lake and Blind Creek, also on Kerr-Addison

ECONOMIC GEOLOGY (Cont'd):

property. One mile south of the western Swim Lake a fourth anomaly occurs on Kerr-Addison claims. The Dynasty claims encompass four anomalies in this general belt, one, the Dea, two miles west of the Kerr-Addison anomalies, another, the Sea, immediately east of them, and two, the Nasty and the Cub, north and east of the Swim Lakes. These anomalies are described below:

DEA ANOMALY: This magnetic anomaly is approximately the same size as the Vangorda and occurs in a gabbro body on the outer edge of the anticline. It trends parallel to the enclosing formations, SE, and may be due to magnetite in the gabbro; however, silt geochem samples reveal anomalous zinc contents in the area, therefore the anomaly warrants further investigation. This anomaly has the added geological features of being: (1) closer to the Tintina Fault than any other, (2) close to the cross-lineament down which Blind Creek flows and, (3) only four miles from the Vangorda deposit.

SEA ANOMALY: This anomaly is about 1-1/2 miles in length and up to 1000 feet in width and trends easterly between the two main Swim Lakes. It occurs within a band of schists 3000 feet west of outcrops of porphyritic quartz diorite. One trench near the centre of the anomaly exposed slabs of schist mineralized with pyrrhotite, chalcopyrite, sphalerite and galena. Outcrops near the east end of the anomaly reveal phyllitic skarn irregularly and sparsely mineralized with chalcopyrite, galena and sphalerite, a specimen of which assayed: 7% Cu and 3 oz. Ag. Several soil samples in the vicinity produced up to 1000 ppm of heavy metals.

Four vertical diamond drill holes have been drilled in the vicinity of three highs near the centre of the anomaly. The easternmost hole, DH #3, was logged and sampled by the writer and six thin sections were prepared from specimens from this hole and examined by the writer. Holes 1 to 3, from west to east, are about 400 feet apart, each on magnetic highs, and all reveal the same geological structure, as follows:

Three flat-lying zones of pyrite-pyrrhotite replacement occur at depths of 50 - 100 ft., 190 - 220 ft. and 300 - 325 ft. The central hole, No. 2, is not deep enough to reach the bottom sulphide layer. The middle layer does not exist in the westernmost hole, No. 1. The rock between the sulphide layers is black-green, soft, chlorite-sericite-talc (?), quartz-carbonate schist, the rock above and below this is gray, finely banded, quartz-sericite schist. The rock within the sulphide zones is granular, grey-white quartz-calcite-sericite schist. The sulphides, pyrrhotite and pyrite, preferentially replace the quartz-calcite bands in the schist. Five foot samples from all three sulphide bands, taken from holes #2 and #3, indicate a general range of base metal contents as follows: 0.1-1% Pb, 0.2-1.4% Zn, and 0.15-0.40% Cu, with spotty, low silver contents. Although these base metal values are not economic the occurrence of the three layers of sulphide concentration of the anomaly is encouraging for closer exploration of the Sea anomaly and for exploration of the other Dynasty anomalies. It is still possible that appreciable bodies of base metal concentrations could occur beyond the four drill holes on the Sea anomaly, within the sulphide bands. At this

ECONOMIC GEOLOGY (Cont'd):

time only the near-surface sulphide layer should be explored since the deeper ones will be uneconomic to mine until the district becomes productive.

NASTY ANOMALY: This anomaly occurs three miles north and east of the Sea and is about half as long. There are no outcrops in the area of the anomaly.

CUB ANOMALY: This anomaly lies 2-1/2 miles east of the Nasty and is second to the Ace in size, being 3-1/2 miles in length and up to one mile in width. It lies within the schists at the western contact of the southeast granodiorite body. Outcrops are scarce in the area.

RECOMMENDATIONS

The eleven magnetometer anomalies on the Dynasty property in the Anvil Range are all similar in character to the anomaly over the Kerr-Addison Vangorda base metal deposit. All of the anomalies occur in the same general type of schists as the Vangorda deposit. Preliminary drilling of the Sea anomaly revealed pyrite-pyrrhotite replacement bodies of mineable size but of uneconomic base metal grade. It is possible that the anomalies are all iron sulphide bodies but only some contain commercial base metal concentrations, certainly all the anomalies warrant investigation by drilling. For ease and low cost of drilling so many large targets it has been decided to test the anomalies with dry percussion drilling initially and to follow up any encouraging results with check diamond drilling.

It is recommended that a minimum initial program consist of 30,000 feet of dry drilling accompanied by about 4000 feet of diamond drilling. The total cost of such a program will be about \$200,000.

The writer recommends that the Sea anomaly upper sulphide layer only be drilled off by the percussion drill at a minimum of 400 ft. intervals. One or two dry holes should be drilled through all three sulphide layers in the vicinity of DDH #3 for calibration purposes. Any encouraging results should be checked by closer spaced holes.

It is the writer's recommendation that following the Sea anomaly investigation the Dea anomaly be explored by enough drilling to clearly establish its character.

Following the Dea anomaly exploration should shift to the Dy anomaly, which is the closest to the Vangorda deposit.

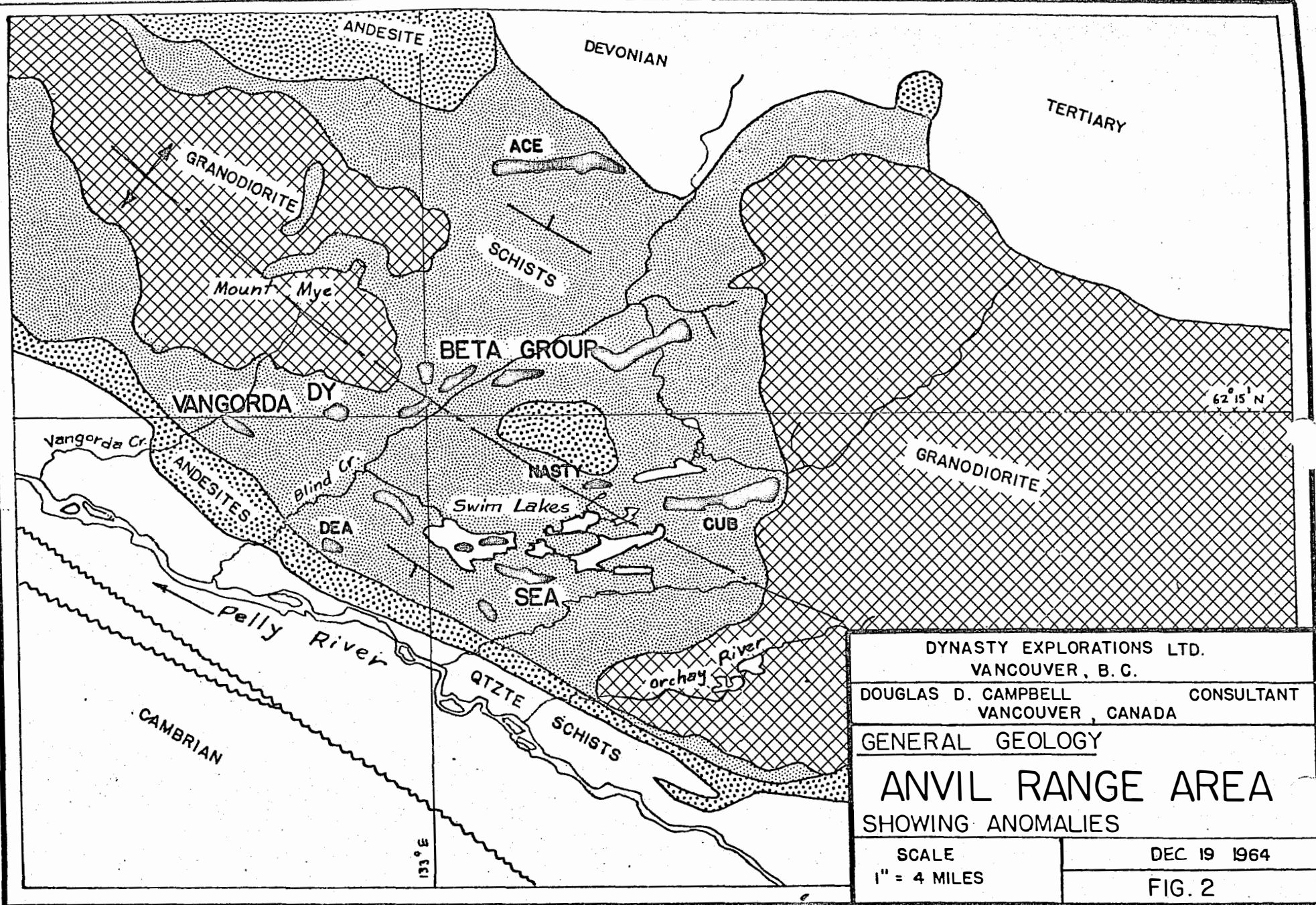
Following the Dy investigation exploration should proceed east along the Beta anomalies as results dictate.

Further bulldozer stripping will be useful on all anomalies for geological information and provision for this has been made in the \$200,000 program already described.

Respectfully submitted,

"Douglas D. Campbell"

Douglas D. Campbell, P.Eng., Ph.D.



July 6, 1964

PROGRESS REPORT NO. 64-1

DYNASTY EXPLORATIONS LIMITED

By Dr. A.E. Aho

PROGRESS OF WORK

Field work on Dynasty Explorations Vangorda Creek properties was started in May 1964 during which time some line cutting was done. However, an exceptionally late spring breakup, high water, and frozen ground hindered effective geologic, magnetic, and geochemical surveys and prospecting until about mid-June. To date about 2/3 of the Nasty Group of claims has been covered by a magnetometer and geologic survey; geologic, magnetic, and geochemical surveys have been largely completed on the Sea group of claims, and the Rose Mountain area is being prospected.

The crew consists of the following personnel:

R.E. Gordon Davis - Manager (Geological Engineer)
Alan Kulan - Prospector in charge
John Fairley - Geological Engineer
Dave Barclay - Prospector's Assistant
Andy Harman - Magnetometer Operator
Jacob Hundere - Prospector
Ken Willison - Prospector
Scott Cameron - Geochemical Sampler
Bill Barclay - Geochemical Sampler
Clarence Campbell - Cook
William Peter and John Olie - Line Cutters

Work is progressing well and successfully, but in order to complete surveys of the DY group of claims it appears that an additional magnetometer operator and a geochemical sampler should be added to the crew.

RESULTS TO DATE (See Claim Map and Magnetic Survey Map of Sea's Nos. 67 and 69 claims).

Although only a fractional portion of Dynasty's 391 claims have been covered to date, significant and encouraging results have already been obtained. Most of the property consists of gently undulating terrain with extensive but shallow overburden underlain by favourable phyllite terrain.

Nasty Group

This group of 16 claims (Nasty 1 - 16) were staked to cover a magnetic anomaly near a rust area 2 miles NNE of Swim Lakes.

Geologic and magnetic survey work has shown that limestone and phyllite striking about N 60°W/65°SW (Unit 7 on GSC map) strikes southeast into a N 80°W - trending magnetic anomaly 2000 feet long near which the rust zone occurs. The attitude of these favourable rocks suggest that, if the magnetic anomaly is caused by a sulphide replacement deposit it may be steeply dipping.

Geochemical surveys, postponed because of frozen ground, will be completed in the near future. This will be necessary before making any evaluation of the possible merits of this locality.

Pea Group

A few silt samples from this claim group showed high heavy metal values. Geologic mapping has shown presence of favourable flat-lying rusty phyllite with altered greenstone lenses. No other work has yet been done on these claims.

Sea Group

The North part of the Sea Group of claims that are situated over Swim lakes were covered by magnetic survey on the ice before breakup. No significant anomalies were found, but this part of the Sea Group has not yet been completely covered.

The South part of the Sea Group has been almost completely covered by geologic, magnetic and geochemical surveys and by prospecting, with significant encouraging results.

On Sea Nos. 67 and 69 claims a zone of magnetic anomalies trending N80-90°E has been found about 500 feet south of Kerr Addison's adjoining BS group of claims. The anomaly zone is at least 2700 feet long, and up to 600 feet wide, still open to the west but flattening out slightly, with a maximum of 3600 gammas high above average background.

On or near the east end of the anomaly, skarn mineralized irregularly and sparsely with chalcopyrite, galena, and sphalerite is exposed in three small outcrop areas at a maximum of about 700 to 800 feet apart along strike. One select sample of copper mineralization assayed 7% copper, 3 oz/ton silver and a trace of gold showing a favourable silver content. Minor ~~ph~~rite occurs in the skarn but no magnetite or pyrrhotite were identified. Similar mineralization occurs about 400 feet to the south in a small gossan outcrop. Except for small exposures of associated flat-lying rusty phyllite in the same outcrops, no other exposures of bedrock are visible in the anomaly area.

A few successful test pits in shallow overburden east of these exposures showed flat-lying rusty-weathering phyllite on both magnetic highs and lows. This type of rusty phyllite is characteristic of the altered wall rocks at the main Vangorda Creek lead-zinc deposit, but contains no visible pyrrhotite or magnetite which would cause the magnetic anomaly.

Rock exposures in the general area consist of bare and small outcrops of flat-lying phyllite striking about N75°E and dipping 5° to 15° north with one gentle dip to the south, very similar in lithology and structure to those around the main deposit. Of particular geologic significance is an outcrop of medium-grained, slightly porphyritic quartz diorite or grano-

diorite 3000 feet to the east of the mineralized outcrops. Beyond this a N60°E air photo linear suggests a major fault zone which, along with granite rocks, probably constitutes the southwest limit of the favourable terrain.

Several soil samples taken in the vicinity of the magnetic anomaly showed up to 1000 parts per million total heavy metals. Geochemical samples covering the entire area have been sent out for testing.

Prospecting in the Rose Mountain area has yielded no results to date, but the crew are now moving into a favourable phyllite area.

SIGNIFICANCE OF RESULTS

Initial field work to date has resulted in discovery of a sizeable zone of magnetic and geochemical anomalies with associated copper-lead-zinc mineralization in favourable flat-lying phyllites on the southeastern-most end of the staked properties in the Vangorda Creek area.

The size, intensity, and character of the magnetic anomaly is very similar to the magnetic anomaly associated with the main Vangorda Mines deposit, which is about 3000 feet long and 400 feet wide.

Mineralization of copper, lead, and zinc exposed in bare outcrops around the east end of the anomaly zone differs from the main deposit in that it is associated with skarn. Proximity to granitic rocks exposed 3000 feet to the east may result in a skarn type deposit on this end of the anomaly and lower temperature replacement-type mineralization in the main broader part of the anomaly which is open to the west.

Flat-lying phyllite and rusty phyllite typical of the altered wall rocks at the main Vangorda deposit also occur along the anomaly zone. The presence of rusty phyllite without visible magnetic minerals of sulphides suggests that this broader western part of the anomaly may be caused by a mineralized zone covered by a phyllite capping.

The anomaly is still open and may extend for a considerable additional distance to the west under an area of overburden cover in which no rock outcrops have yet been found. Work is now being extended to cover this area.

The marked coincidence of favourable geologic environment, magnetic anomaly zone, and mineralization strongly warrants further exploration to determine if a large flat-lying lead-zinc-copper-silver deposit similar to that of the main Vangorda mines deposit exists on Dynasty's Sea Group of claims.

The extensive overburden cover in this locality could easily mask any such major mineral deposit.

Electromagnetic, or possibly induced polarization, or gravity surveys could be run over the anomaly zone to determine the positions of maximum sulphide concentrations prior to diamond drilling. However, if the sulphides are disseminated or graphitic rocks occur in the vicinity, results of geophysical survey could be inclusive or misleading. However, correspondence of positive geochemical results or mineralization, and magnetic anomalies such as have already been discovered are the most conclusive. It is therefore strongly recommended that the present magnetic anomaly zone be drilled on the basis of present and forthcoming data.

The presence of geochemical silt anomalies and favourable geology on the Pea Group 2 miles to the west suggests a possibility of similar mineralization on these claims.

Exploration is being started on additional possibilities on the DY and Sun groups of claims.

Respectfully submitted,

Dr. A.E. Aho,
Director of Exploration.

July 6, 1964
Whitehorse, Yukon Territory

September 23, 1964.

PROGRESS REPORT NO. 64-2

DYNASTY EXPLORATIONS LIMITED

By Dr. A.E. Aho

PROGRESS OF WORK

Since the last progress report dated July 6, 1964, considerable field work has been completed with a larger crew, an aeromagnetic survey has been flown, 168 new claims have been staked, a gravity survey is being conducted on the SEA anomaly, and other follow up work is being done.

Geologic, geochemical, and magnetic surveys have been completed on the Nasty, Pea, and Dea groups of claims and have been partially completed on the DY and SUN groups.

Prospecting has been completed northwest along the schist belt toward Rose Mountain and is now being concentrated near a belt of aeromagnetic anomalies up Blind Creek.

An aeromagnetic survey was conducted for Dynasty by Hunting Survey Corporation (Harold Sandau, operator) using a Hiller 12E helicopter from Klondike Helicopters. In total about 1200 line miles were flown at 1000-foot spacing to cover the entire schist belt from Anvil Creek 35 miles southeast to Orchay River and from Swim Lakes 14 miles north to a tributary of Tay River, making a total of about 220 square miles of favourable terrain covered.

As a result of the survey 168 new claims were staked to cover two new E-W magnetic anomaly belts, one up Blind Creek (Beta Group) and one six miles farther north across the headwaters of the tributary of Tay River (Ace Group).

Minor crew changes have been made, some students have returned to University, John Brock has been engaged as geophysical operator and Robert Chaplin as geologist. A total crew of about 20 persons including

line cutters and geochemical samplers were engaged in early September; this number is being progressively decreased but work will be continued on as long as feasible into October.

SEA ANOMALY

Since the last report, work on the SEA anomaly has shown it to be much larger and geochemical results and test results and test pits have greatly strengthened the conclusion that the anomaly is probably caused by lead-zinc-copper-silver mineralization similar in character to that which outcrops on the east end of the anomaly.

A complete magnetic survey has shown the main magnetic and geochemical anomaly to be 8000 feet long and 200 to 1100 feet wide, and flatter in profile to the west where the mineralized zone apparently plunges under a deeper cover of schist and/or overburden. The average width of anomaly is 600 feet and about 20% of it lies on Kerr Addison's adjoining B.S. group of claims.

The east end of the magnetic anomaly itself shows local variations related to the mineralized outcrops which dip underneath a capping of altered rusty schist. To the east this altered schist and geochemical anomalies have been found in test pits over the anomaly, yet the schist itself is nonmagnetic, supporting the conclusion that the mineralized horizon lies underneath. The general broadening of the magnetic anomaly to the west also suggests a gently westerly pitch.

Prospect pits dug to test geochemical anomalies showed bleached and highly altered schist with a rusty soil or gossan capping along the eastern 3000 feet of the anomaly, up to the mineralized outcrops. The rusty capping appears to be derived from sulfides. Further prospect pitting is planned or is in progress. Complete geochemical results now confirm the presence of zinc and copper over the entire anomaly, although sampling in most cases is not deep enough.

In addition, a gravity survey is being conducted over the anomaly to determine if any unusually dense concentration of mineralization occurs, which would provide an immediate diamond drill target.

Considering the size possibilities, especially if gravity anomalies exist, this anomaly is a most favourable target for further exploration by drilling. In particular, if a suitable gravity anomaly target is found, drilling should be started immediately. The anomaly should be drilled off in its entirety so that any deposit of economic size and grade in the vicinity of the anomaly will not be missed.

DEA GROUP

One magnetic anomaly on the Dea Group of claims, southwest of Kerr Addison's main Swim Group, was eliminated on the basis that in spite of presence of schist and porphyry, magnetite-bearing gabbro was found in place on the anomaly and no sign of mineralization was evident.

Since this claim group appears to be along the gabbro-greenstone-serpentine belt that forms the southwest flank of the favourable schist belt, further work has been suspended in favour of more promising targets.

DY AND PEA GROUPS

Magnetometer surveys and geochemical sampling over part of the DY and PEA Groups has begun to show up part of a magnetic anomaly, and also some positive geochemical results.

It is too early to say whether results in this vicinity will prove to be significant.

DY GROUP

In the center of the DY claims the aeromagnetic survey showed a sizeable, irregular-shaped magnetic anomaly identical in character and

intensity, and similar in size, to the anomaly over the main Vangorda deposit.

The aeromagnetic survey also showed that this anomaly lies along the same trend or strike as the Vangorda deposit. Moreover, geologic mapping has shown that it also lies near a probable extension of the porphyry sill that overlies the Vangorda deposit.

The location along strike, similar geology and anomaly characteristics so similar to the main Vangorda deposit make the DY anomaly as attractive a drill target as the SEA anomaly.

Ground magnetometer and geochemical surveys are being run over the anomaly, and it is also planned to conduct a gravity survey. This work should be followed up by thorough testing of the anomaly by a number of drill holes.

BETA ANOMALY

East from the DY group a belt of magnetic anomalies 50,000 feet long angles up and across Blind Creek roughly along what may be considered a formational trend, from what little geologic data is visible.

Since the western end of this anomaly belt is broken up into several anomalous areas and Al Kulan has found float of galena in schist in this vicinity, 92 claims have been staked to cover the west half of the anomaly belt.

In addition, ground checking, prospecting and limited soil sampling are being carried out in this area to determine the probable cause and possible merit of this anomaly belt.

Even if individual parts of the anomalies are not caused by mineralization, the anomaly belt may reflect a series of favourable horizons, with local mineralization, much the same as the similar anomaly belt through Swim Lakes. These two belts may even be the same or similar stratigraphic horizons with unknown potential.

The entire 50,000-foot BETA anomaly belt should therefore be staked pending further investigation and probable drilling in several localities.

ACE ANOMALY

The ACE anomaly is another E-W anomaly belt similar to the BETA, dispersing to the northeast on its east end, and extending west toward a possible fault linear along which the Rox prospect lies.

Investigation of the only creek canyon which crosses this anomaly showed abundant float of low grade chalcopyrite-pyrrhotite mineralization replacing crystalline schist. The source of the float is a zone of deformation about 30 feet wide with irregularly mineralized drag folds, dipping flatly to moderately northerly toward the magnetic anomaly which lies about 1500 feet north of the showing. A grab sample assayed 0.7% copper with traces of gold and silver. Although the mineralization is magnetic, there is not magnetic anomaly over the showing and only a discontinuous belt of moderate to low magnetic anomalies along strike to the west.

At the main magnetic anomaly, undisturbed and unmineralized schist dipping about 20° north is exposed abundantly in the creek canyon. A field test with a suspended pencil magnet showed no magnetic susceptibility whatever in several schist specimens taken over the anomaly. It is therefore concluded that the main magnetic anomaly may be caused by something underlying the schist.

Local geochemical sampling, some ground magnetometer work, and collection of susceptibility samples will be done to check out the main anomaly further.

The copper mineralization shows no sign of definite limitations as to size or grade and the one fortuitous exposure in the creek canyon is almost certainly not the only deposit. Other larger and better grade

deposits may exist under the overburden associated with either the lesser or main anomalies.

Since the main anomaly remains unexplained and magnetic copper mineralization is closely associated with it along a belt of lesser anomalies, the entire belt has been covered by staking of 76 claims. Further ground work should be done in the area and all results should be placed in the hands of aeromagnetic consultants for interpretation.

OTHER

Other anomalies and results of prospecting are being compiled and checked, and will be reported on at the end of the field season.

Some claims have been staked around the Rox silver-lead showing in the valley $1\frac{1}{2}$ miles northeast of Mt. Mye. Silver-lead float assaying up to 80 oz/ton silver, and transported limonite seepages occur near the base of the northwest side of the valley, which may be a main north-east fault linear. Electromagnetic and self potential surveys have been run over the ground by Kerr Addison Mines, and anomalies are reported.

If the ground is acquired, diamond drilling should be considered to test this prospect.

GENERAL CONCLUSIONS

Exploration results to date on the Vangorda Creek area are most promising.

Several magnetic and geochemical anomalies suggestive of sizeable deposits of replacement type mineralization have been found, mineralization and float have been found, and two major anomaly belts that may be at least partly related to such mineralization have been staked and are being investigated.

The Vangorda district is definitely "Elephant Country" in the search

for mineral deposits because of (a) the flat-lying replacement-type mineralization in several localities; (b) the hundreds of square miles of favourable flat lying schist host rocks; (c) the widespread signs of mineralization and porphyry believed to be associated with mineralization and (d) the major NW and NE fault structures and transverse EW to NE fold trend in the schist belt.

There is no known limitation to the size and metal content of any of the mineralization.

The overall situation thus appears very promising for discovery of sizeable flat lying replacement deposits of lead-zinc-copper and silver of economic grade.

RECOMMENDATIONS

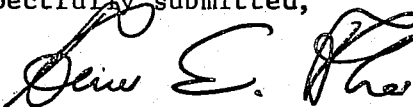
1. All areas of possible interest should be staked and covered by basic geophysical, geologic and geochemical surveys along lines followed to date.

2. All anomalous areas should be drilled unless they can be unequivocally eliminated on the basis of definite geologic or other evidence.

3. The main supplies and equipment should be taken in next March and cat-mounted drill equipment should start work as soon as feasible. (The overburden-type dry drilling method can be used at any time). At least two diamond drills should be taken in for follow up drilling.

4. A minimum of preliminary diamond drilling on select gravity targets on the SEA and DY anomalies should be considered this fall if definite enough results are available.

Respectfully submitted,



Dr. A. E. Aho
Director of Exploration.

October 26, 1964

PROGRESS REPORT NO. 64-3
DYNASTY EXPLORATIONS LIMITED

BY A. E. AHO

PROGRESS OF WORK

General

Since the last progress report dated September 23, 1964, geologic and geochemical surveys and prospecting have been completed for the season; more magnetometer and gravity surveys have been run; and a confirmed gravity anomaly that coincides with the main SEA anomaly is to be drilled.

A diamond drill on contract from Northern Diamond Drilling Co. of Whitehorse has been sent in over the Canol Road to Ross River along with about 30 to 40 tons of fuel, supplies, and other equipment including a D-6 caterpillar tractor.

The D-6 cat moved to Moose Creek last week and is now completing a 6- to 8-mile road into the SEA anomaly and connecting it with the present base camp. The rest of the equipment is being freighted down the Pelly River and within a week drilling is expected to be started and a plywood winter camp will be constructed.

The field crew now consists of geophysical operators John Brock and Andy Harman with McLeary Ecklack, John Ecklack and Alfred Charlie as helpers, Gordon Davis and John Fairley as geologists, Reg Wilson as cook, and Alan Kulan with Wm. Carson and Robert Ellis as bulldozer operators and Jack Ladue as helper. Bob Chaplin has completed his season's work but is hospitalized in Whitehorse at present with a suspected mild heart condition.

Specific Localities

The Sun Group has been geologically mapped and lines cut for soil sampling.

A check row of soil samples along the slope above the anomalous line of soils beside Shrimp Creek showed no significant values, therefore this anomaly may be caused merely by morainal float from the main Vangorda deposit. However, further checks should be made next season.

The rest of the claims have not yet been covered by geochemical and magnetic surveys in any detail.

The DY Group has been covered by geologic work and partly covered by geochemical, magnetic and gravity surveys.

The main DY anomaly is now about 4,000 feet in length and 1,000 to 1,400 feet in width with geology, magnetic characteristics and other features very similar to the main Vangorda anomaly which lies along strike. Detailed

geologic structure appears to be complex. The presence of considerable rusty altered schist, of porphyry, of traces of mineralization, and of non-magnetic greenstones supports the possibility that this anomaly could be caused by a large Vangorda-type deposit. (See attached report by R. Chaplin)

A gravity survey has been done over the main parts of the anomaly but calculations are not yet available.

On the main SEA anomaly, calculations of gravity results showed a definite gravity anomaly rising from a moderately high background on Kerr-Addison's adjoining B.S. claims to a high of about 0.8 milligals above background about 200 feet inside our claims on or near the base line at 3200 west. The same anomaly appears at 4800 west, drops off, and reappears at 5600 west, coinciding approximately with the trend of the main magnetic anomaly.

Resistivity measured by John Brock over a couple of lines across this gravity anomaly is reported to show a fair conductor whose top is about 150 feet below surface.

Diamond drill hole No. 1 will be designed to test the gravity anomaly around 3200 west. It is planned to drill four or five preliminary holes this fall if possible, then to resume next spring unless pressure of results justify drilling throughout the severest winter months. These preliminary holes will not be a conclusive test of the main SEA anomaly, nor are any holes planned this fall on any of the other anomalies, therefore any inconclusive or negative results from these preliminary holes should not be considered as any conclusive evaluation of the company's properties.

Magnetic and gravity surveys should be continued to define and test anomalies on Dynasty's other claim groups through the winter as long as reasonably feasible.

Respectfully submitted,



Dr. A. E. Aho,
Director of Exploration.

October 1, 1964

REPORT ON

GEOLOGY OF DY GROUP IN VICINITY OF

AERO-MAG ANOMALY NEAR CLAIMS DY 85, 86, 87, 88

Area covered approx. 1 sq. mile in 5 days field work

FOLIATIONS:

Most prominent foliation is schistosity which is generally east-west trending, dipping at low to moderate angles northerly and southerly.

Foliations due to bedding were observed at about a dozen places and indicate that the rock sequences strike NWN and dip at various angles easterly and westerly.

Mapping indicates that the bedded rocks are highly folded isoclinally forming a series of synforms and antiforms of extreme complexity (probably with relatively flat dipping axial planes). The schistosity forms domal foliation patterns around areas of massive, structureless greenstone, and more linear, synformal and antiformal structures within foliated (schistose) areas. Mr. J. Fairley describes the area as a gently easterly plunging syncline bounded by greenstone.

The air borne magnetic anomaly is located along the fold arts of the Fairley syncline, on a synformal crossfold underlain by foliated rocks resting on a greenstone sequence. This crossfold trends northerly and hence the anomaly is related to a localized fold structure.

The surface distribution of outcrop mapped to date does not show the details of the fold crests, although the minor structures and foliations indicate the presence of the folds and that they are exceedingly complex.

In the immediate vicinity of the ground magnetic anomaly, no known outcrop appears that explains the magnetic intensity obtained, south of Line C a few feet near 77 + 00 SE, an altered greenstone contains disseminated (maximum of $\pm 5\%$ sulphides were noted locally) pyrrhotite and a very little amount of chalcopyrite and pyrite. Serpentinized greenstone was noted mostly as felsenmeer outcrop at three localities within the magnetic anomaly, however these outcrops do not affect the compass needle when a typical specimen is brought close to the compass. The serpentinized rocks are thought to be related to a northwesterly trending fault that dips steeply to the northeast, and indicates the presence of hydrothermal activity.

SUMMARY:

There is geologic evidence that the magnetic anomaly may be due to sulphides contained within localized synformal folds that trend northerly, within a larger easterly-plunging synclinal belt. The indicated width of this crossfold is about 1,000 feet but of an irregular complex nature, and

offers a very interesting and tantalizing exploration possibility :

SUGGESTIONS:

The anomaly area could probably be stripped with a large bulldozer especially on the north westerly end, however, wet ground conditions may be a problem on the eastern side of the anomaly. Any drilling or stripping should be preceded by a detailed magnetometer survey (lines 200' apart and closely spaced readings in the vicinity of the magnetic highs and extreme lows). Five representative rock samples were submitted for density determinations to assist in the gravity survey interpretation.

Respectfully submitted,

Bob Chaplin.

DYNASTY EXPLORATIONS LIMITED

328-355 Burrard Street
Vancouver 1, B. C.

PROGRESS REPORT

November 3 1964

Road completed to 32W. Drill site levelled off about 34 to 35W a few feet north of baseline. A sump has been bulldozed 100 feet west of the set up and $1\frac{1}{2}$ feet of water had seeped in by yesterday afternoon (this represents 24 hours of seepage). The drill is on the site. Reg Davis and crew will start setting up late today.

If the nearby water (in sump) is satisfactory, drilling may start sometime tomorrow. Otherwise, we will have to lay hose to a pond at about 36W-12S. There is 10 feet of water below 8 inches of ice in this pond.

A road has been built from 32W to 18N-3S. A wildcat trench at 20W-2S late yesterday afternoon reached bedrock at 3 feet. More work is needed here but massive banded replacement mineralization was found in place. The bulk is pyrrhotite lesser pyrite, chalcopyrite and possibly sphalerite in quartz gangue. Oxidation is heavy with much associated altered schist. Heavy manganese and rust in overburden. The sulphides make up 80 to 100% of mineralized rock. Very encouraging.

Camp construction should be completed by tomorrow. The lake will only be open a few more days. We will scout out Finger Lake today. There has been ice on it for nearly two weeks and it may be suitable for skis soon. We will run a road to it as this will be our only supply link probably until the end of the month.

Gravity survey on DY will be completed within two days and Andy will come back here to make additions to the SEA survey.

R.E. Gordon Davis,
Exploration Manager.

PROGRESS REPORT NO. 64-4

DYNASTY EXPLORATIONS LIMITED

BY A. E. AHO

November 23, 1964

PROGRESS OF WORK

General

Since the last progress report dated October 26, 1964, the road was completed to the SEA anomaly, to Swim Lake base camp, and to a ski-plane base on Finger Lake; a winter base camp consisting of three bunkhouses, a cook house, and 4 tents has been built; several bulldozer trenches have been dug; and three preliminary diamond drill holes have been completed with hole No. 4 now drilling.

The field crew now consists of the following:

Gordon Davis - Geological engineer) General -
Alan Kulan - Prospector) Supervision, etc.
John Fairley - Geological engineer - geology
John Brock - Geophysicist
Andy Harman - Geophysical operator
Bill Carson - Cat operator
Reg Wilson - Cook
Flunkey
Wood Cutter
2 Pump-firemen
4 Diamond drillers

Total Crew: 15

Trenching

A total of 6 trenches were completed into bedrock, mostly showing rusty altered schist (apparently caused by weathering of minor sulfide content), with one trench at 2000W, 200S encountering lenses of massive sulfides up to at least 4 or 5 feet thickness. Most of the sulfide is pyrrhotite with lesser pyrite, chalcopyrite, and possibly sphalerite and traces of galena. One minor lens a few inches wide contained considerable sphalerite and galena from which a specimen assayed 6.9% zinc, 4.8% lead, 0.74 oz/ton silver, .005 oz/ton gold and a trace of copper.

Trenching has been stopped by frost which is now one foot deep.

Geophysics (see aeromagnetic maps)

Aside from gravity readings to extend a few profiles over the SEA anomaly, geophysical work has been terminated for the time being.

The gravity high on the SEA group coincides almost perfectly with the magnetic anomaly, with a marked gravity low north of the west end toward Swim Lake, probably corresponding to deep overburden.

Preliminary aeromagnetic maps of Area "A" east of the DY claims have now been received from Hunting Survey Corporation and staking is in progress to cover the eastern extensions of the Beta and Nasty anomaly trends. The eastern parts of both the Ace and Beta anomalies show favourable complexity and the eastern projection of the Nasty anomaly trend, called the Cub anomaly, shows a broad high suggestive of a highly magnetic zone under deeper overburden. Several N60-70°E-trending discontinuities suggest a possibility of right lateral faulting up Blind Creek, through the east end of the Beta anomaly, and past the west end of the Cub anomaly (along the projection of a topographic linear past the east end of the SEA anomaly.) Similar topographic linears also extend up Vangorda Creek over to the Cam group and to the west end of the Ace anomaly, and up two or three tributaries of Rose Creek northwest of Vangorda Creek. Since these northeast trends may exert control on mineralization, none of the magnetic anomalies can be discounted as being unfavourable and must be explored by some other positive means.

On the SEA anomaly, which is part of a similar belt anomalies similar to the Ace and Beta, magnetic separation of crushed sulfide mineralization, poorly mineralized schist, and unmineralized schist shows that magnetite appears to be most abundant in the best mineralized sections but that associated unmineralized dark schist also contains considerable magnetite. The magnetic anomaly trend on the SEA group is therefore caused by magnetite intermingled with, or closely associated with, the sulfides which carry lead, zinc, and copper. However, massive sulfides (pyrrhotite and pyrite) also exist in areas of moderate or low magnetic response. The other aeromagnetic anomalies would also be caused by magnetite but it is not known whether they may also contain sulfides with lead, zinc, and copper.

Additional Staking (see claim maps)

Since any of the aeromagnetic anomalies may be associated with economic mineralization, the remainder of the Beta and Nasty (Cub) anomalies are being staked.

In addition, some ground held by Dickson Yukon Syndicate has lapsed. Staking is in progress to cover the former Bob group of 12 claims strategically located next to the main Vangorda property, and part of the former Rose group of claims at the headwaters of Rose Creek. The Rose group lies on the southeast projection of a belt of magnetic and geochemical anomalies several thousand feet long found on open ground adjoining this group to the northwest. Bornite and magnetite float with 1.5 oz/ton silver content, found in one of the tributaries of Rose Creek by Alan Kulan in 1954 appears to be derived from this magnetic and geochemical anomaly belt, making it an attractive exploration target.

About 220 additional claims being staked are as follows:

Beta	- 72
Cub	- 96
Bob	- 12
Rose Creek	- 40

This makes a total of over 800 claims which will be held by Dynasty Explorations.

Diamond Drilling and Geology on SEA Anomaly (see diamond drill sections)

The three preliminary vertical diamond drill holes completed and the fourth hole now drilling are located as follows:

No.	Coordinates	Description	Depth
No. 1	3590W, 025N	gravity high on E flank of magnetic high	399'
No. 2	2600W, 100S	magnetic high	253'
No. 3	1400W, 600S	magnetic high	404'
No. 4	2200W, 600S	small magnetic high on S flank of anomaly	270'

Summarized logs of the holes are as follows:

Hole No. 1 - no sampling for assay

0-8' overburden
 8-37 sericitic schist, minor sulfides, some "qtz-feld" bands
 37-88 increased sulfides to $\pm 5\%$ more banding
 88-107 10% sulfides in "qtz-feld" banded schist
 107-108 massive sulfides
 110-260 chloritic sericitic schist decreasing sulfides 5% to 1%
 260-399 more sericitic more "qtz-feld" banding, sulfides increase to 5%.

Hole No. 2 -

0-30' overburden
 30-38 light grey sericite schist $\pm 5\%$ sulfides
 38-44.5 massive sulfides - assay 1.1% Pb, 1.4% Zn, 0.37% Cu
 44.5-49 altered chloritized schist - gouge at 49'
 49-63 sericite - muscovite schist $\pm 5\%$ sulfides - assay
 63-65 massive sulfides - assay 62'-68' 0.4% Pb, 0.3% Zn, 0.15% Cu
 65-72 sericite muscovite schist
 72-73 massive sulfides - assay 0.2% Pb, 0.4% Zn, 0.22% Cu
 73-86 altered sericite chlorite schist $\pm 5\%$ sulfides
 86-97 same, 15% sulfides - assay 88-97 0.2% Pb, 0.3% Zn, 0.33% Cu
 97-253 sericitic schist 5% or less sulfides, 6" bands of massive sulfides at 231.5' and 247'. Grab 3.1% Pb. 9.3% Zn at 231.5

Hole No. 3 -

0-13' overburden
 13-19 black sericitic chlorite schist with "qtz or feld" bands $\pm 5\%$ sulfides
 19-27 massive sulfides - assay
 27-80 "qtz-feld" banded dark chlorite schist $\pm 15\%$ sulfides
 80-148 sericitic chloritic schist decreasing sulfides 5% to 1%
 148-195 gradual increase "qtz-feld" bands to 5% sulfides at bottom
 195-197 same, 10% sulfides
 197-207 same, 5% sulfides
 207-220 40% sulfides
 220-294 sericitic-chloritic schist minor sulfides
 294-311 increase to 5% sulfides on "qtz-feld" banded schist
 311-319 massive sulfides, assay grab 317-318, 0.9% comb.
 319-322 5% sulfides
 322-404 sericitic chloritic schist

The following description of geology and mineralization is given by J.F. Fairley:

"Rock Types

"The phyllite (or schist, as preferred) seen in the holes is a fairly uniform type of sericite to*¹chlorite phyllite with frequent chloritization and serpentinization. Frequent very-fine-grain-granular quartzose and sericitic (or saussurite) bands*² occur and best show the rock structure. Quartz "intrusions" from inches to feet in width are usually barren but chloritization is usually associated. Foliation surfaces have a high sheen and appear as various shades of grey to black. Melanterite (?) and gypsum occur in fractures.

"Structure

"An axial plane F₂ foliation is dominant throughout with a general dip around* 10° north to NE; with the F bedding averaging a steeper dip but approximately the same strike. Isoclinal small scale dragfolds in the order of 1/2 inch amplitude are general throughout with their axes parallel to the F₂ strike. Shearing is consistently S over N. Larger two- to three-foot drags can be detected. Other lineations and crenulations are probably of a steep (but inconsistent dip) shearing which often occurs and tends to brecciate the phyllite.

e.g.

N



S

"Mineralization

"Mineralization occurs in two environments: disseminated and massive in the more quartzose bands, more massive (or none at all) in fractures filled with much the same material as the quartzose bands. Intense folding apparently aids the concentration. An area of quartz "intrusion" is generally more favourable, but not necessarily.

"The mineralization is generally very fine grained (0.0001 - 0.001 inches) with pyrrhotite or pyrite dominating. Pyrite in DDH 3 is larger, around 0.05 inches; and a rim of biotite or chlorite is evident around most grains. Chloritization often occurs with mineralization. Minerals in less quantities, unfortunately, are sphalerite, chalcopyrite, and galena perhaps only forming 5 to 10% of total sulfides. Magnetite concentration may be as much as 3% in the more chloritic phyllite, and probably increases in the massive sulphide sections.

"Susceptibilities

"Susceptibilities calculated from % magnetite and pyrrhotite

* By core remnant polarization and surface show so azimuths are subject to question.

will aid in the explanation (or lack of) of the magnetic anomaly. Some half-dozen results thus far are inconsistent therefore more will have to be done. It appears some of the dark schists may carry as much as 3% probable magnetite ($k = 9 \times 10^9$ cgs) with 1/2 to 1% being more usual. ($k = 2 \times 10^9$ cgs). The total pyrrhotite content would compare with this k value.

"Notes:*

1. D.D. Campbell believes there is probably a fair proportion of feldspar-hornblende in the darker 'sericite' phyllite.
2. Campbell again feels the 'quartz' in these bands may be largely feldspar.

"Genesis?:"

1. F_1 bedding
2. F_2 axial plane cleavage with isoclinal folding
- (3. Fracturing (and possibly another phase of folding associated.
- ((4. Filling
- (5. Replacement and alteration of favourable bands and fillings.

"The favourable rock type, then a more favourable broken open structure in folded areas are necessary for a high concentration of sulphides. It is problematical whether the present composition of the quartz (? feldspar) bands are largely a result of metasomatism."

The first three holes were located on the axis of the zone of magnetic and gravity highs, specifically on magnetic highs. The SEA anomaly is still wide open for finding considerable ore, considering (a) that the detail of the anomaly shows variations consisting of en-echelon magnetic highs flanked on the north by magnetic lows, (b) that the bulldozer trench with massive sulfides lies near a magnetic low (the best mineralization in the Vangorda Mines deposit is in a magnetic low), (c) that aside from Hole No. 4 no holes have yet been drilled on the flanks of the anomaly, and (d) that the holes are spaced about 1000 feet apart with 2000 feet of the east end and 4400 feet of the west end completely untested. Although no assays are yet available the presence of considerable sections of massive sulfides identical in appearance, flat dip, and occurrence to those at Vangorda Creek and containing some lead-zinc-copper-silver mineralization in the three preliminary holes drilled to date can be considered very encouraging.

In the present preliminary drilling it is proposed to drill more holes around Hole No. 3 to explore for better sections of ore grade and determine attitude of the mineralized horizons, and to drill one or two holes to test the western part of the anomaly.

PROPOSED EXPLORATION

In addition to the preliminary drilling, it is planned to test and sample the SEA anomaly in detail in March and to test most of the other significant anomalies before, during, and after spring breakup by means of an Atlas Copco overburden drill to depths up to 200 feet, accompanied by diamond drilling for greater depth and structural information.

Ground magnetometer location and some detail and perhaps electromagnetic and gravity surveys are proposed over the main anomalies in February and March prior to drilling. A more sensitive magnetometer should be purchased.

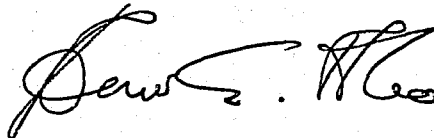
About 30,000 feet of overburden drilling is tentatively planned on the shallower anomalies with overburden being tested for geochemical anomalies and bedrock cuttings being examined by microscopic and other means. Considering the amount of overburden drill samples and surface soil samples next season it appears that a geochemical laboratory should be set up on the property.

About 10,000 to 12,000 feet of diamond drilling will also be necessary for following although shallower sulfides can be sampled with the overburden drill.

RECOMMENDATIONS

1. Diamond drilling should be continued as long as reasonably feasible.
2. All geologic, geophysical, geochemical and physical exploration results should be compiled and interpreted.
3. Geophysical and drilling programs should be planned to start in February to test the SEA and other anomalies in as complete and conclusive a manner as possible within a reasonable budget of about \$200,000.

Respectfully submitted,



Aaro E. Aho,
Director of Exploration.

PROGRESS REPORT NO. 64-5

DYNASTY EXPLORATIONS LIMITED

By A.E. Aho

December 22, 1964

PROGRESS OF WORK

Since the last progress report dated November 23, 1964 diamond drill holes Nos. 4, 5, and 6 have been completed with holes 5 and 6 stopped due to weather and drilling difficulties. Drilling was stopped December 14, camp has been locked up, and personnel have been either terminated or returned to Vancouver.

Personnel moved to Vancouver to complete compilation of maps and data include the following:

Gordon Davis
John Fairley
John Brock (on vacation to Jan. 7)
Andy Harman
Alan Kulan has remained in Whitehorse until December 27 when he plans to come to Vancouver.

DRILLING

Thin sections prepared by Dr. D.D. Campbell show that the "quartz-feldspar" banding is quartz and carbonate, and copies of his report on Dynasty's properties are now available.

Balance of the drilling results to date:

Hole No. 4 22W - 6S

0 - 10' Overburden
10 - 68' Chloritic - sericite schist
68 - 110' Quartzose - sericite schist, up to 5% sulphides pyrrhotite, pyrite, sphalerite, magnetite, chalcopyrite.
110 - 135' Sericite-chlorite schist, some quartzose banding, less than 1% sulphides.
135 - 270' Chlorite schist, no mineralization, numerous steep-angle minor faults, quartz filled.
end

Hole No. 5 18W - 3S

0 - 11' Overburden
11 - 38' Chloritic sericite schist, no mineralization.
38 - 184' All quartz banded schist mineralized with 5%[±] sulphides consisting of pyrrhotite, pyrite, magnetite, minor sphalerite, galena, chalcopyrite. Stringers of galena at 68', massive sulphides 83-87'. Hole stopped due to jamming by 2' fault gouge at 143'. Bedding foliation (F₁) locally steep. Could indicate local fold crest.
end

Hole No. 6 68W - 10N

0 - 45' Overburden, hole stopped due to equipment breakdown.

The en-echelon pattern within the SEA magnetic anomaly and the presence of faulting and of locally steeper bedding foliation suggests that mineralization may be locally controlled by faulting and/or fold axes. Such variations within this mineralized zone dictates that considerably more drilling will be necessary to determine if economic lead-zinc-copper-silver deposits exist in the SEA anomaly.

In addition, if the associated carbonate is primary the favourable horizons may be limy stratigraphic members that are mineralized at fold axes or next to NE fault zones.

PROPOSED DRILLING PROGRAM

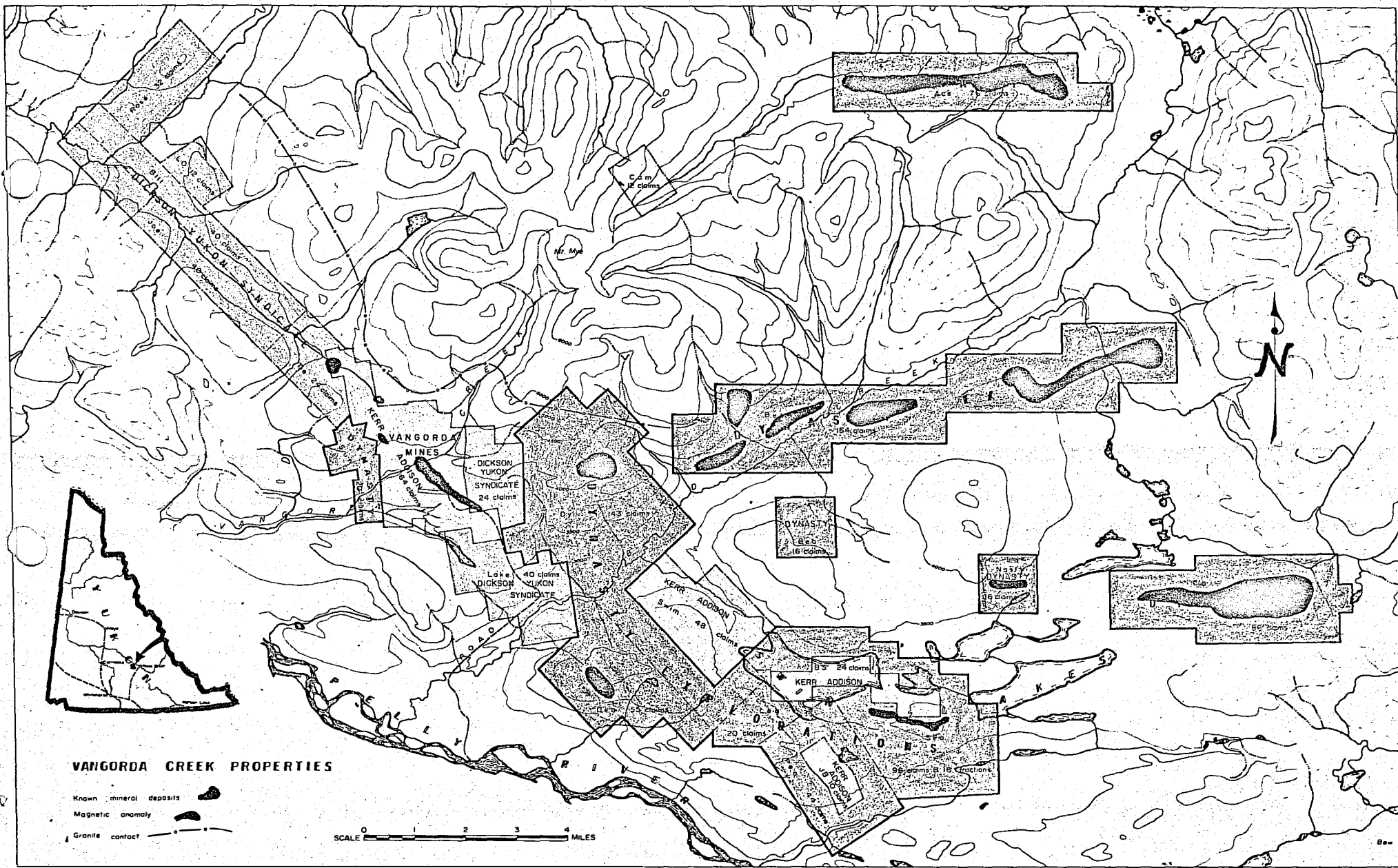
It is proposed to test most of the magnetic anomalies on Dynasty's properties beginning in February 1965 by means of limited geophysical confirmation followed immediately by an aggressive program of about 30,000 feet of dry rotary drilling. Overburden and bedrock will be geochemically sampled and sulphide intersections will be assayed and followed up by some diamond drilling. The budget for this accelerated drilling program is as follows:

1. Drilling - Rotary	\$ 50,000.00
- Diamond	40,000.00
2. Support for drilling	13,000.00
3. Transportation	12,000.00
4. Bulldozer work	15,000.00
5. Mobile Camp	13,000.00
6. Geophysical Surveys	14,000.00
7. Assaying and geochemical testing	5,000.00
8. Supervision and consulting	10,000.00
9. Access to start program	3,000.00
10. Miscellaneous	5,000.00
11. Accounting and administration	5,000.00
12. Reserve for contingencies	<u>15,000.00</u>
	\$200,000.00

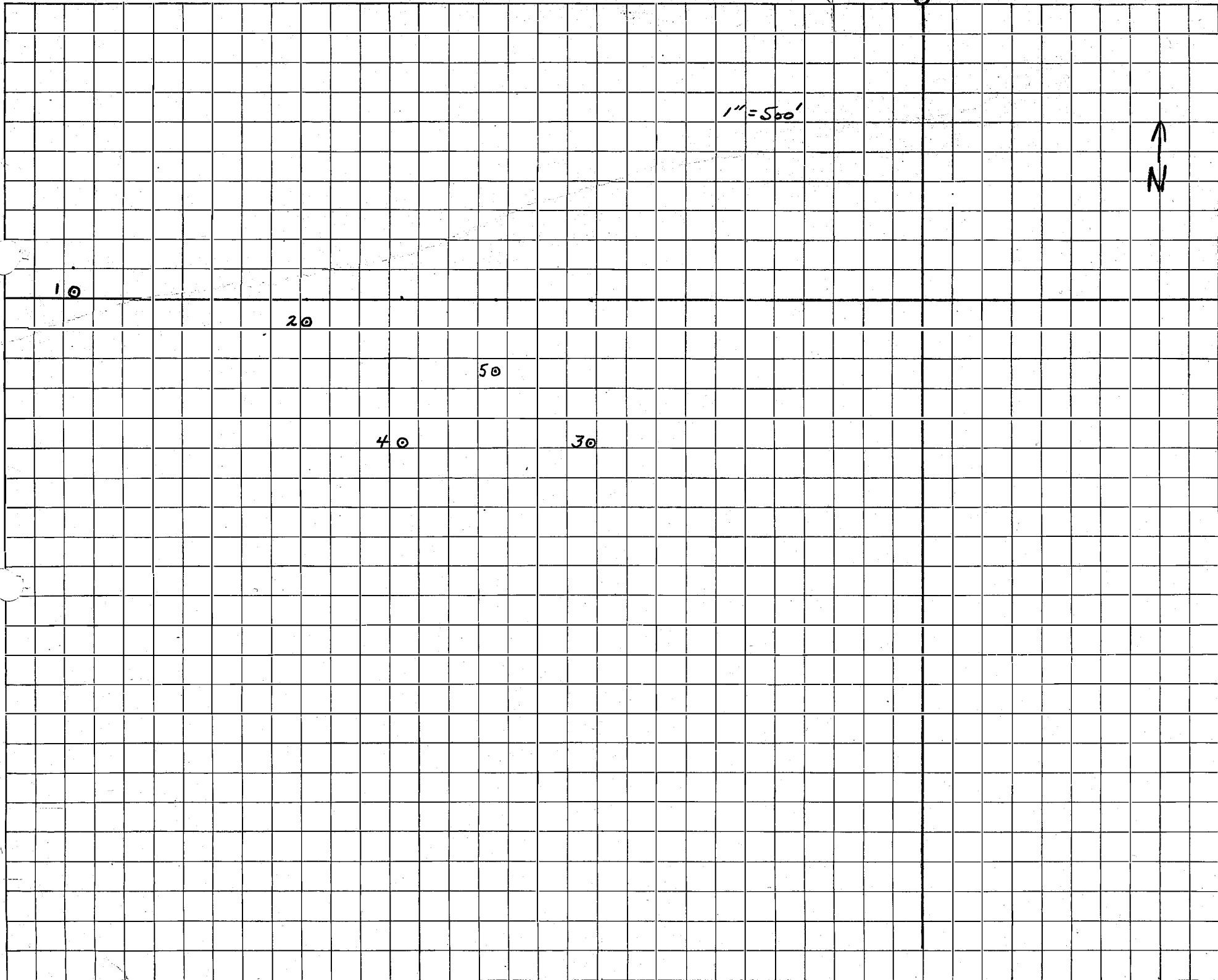
This program should provide a rapid test of most of Dynasty's major anomalies by June 1965.

Respectfully submitted,

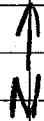
A. E. Aho,
Director of Exploration.



D
S
E



1" = 500'



10

20

50

40

30

4 SQUARES TO THE INCH

FORM 680