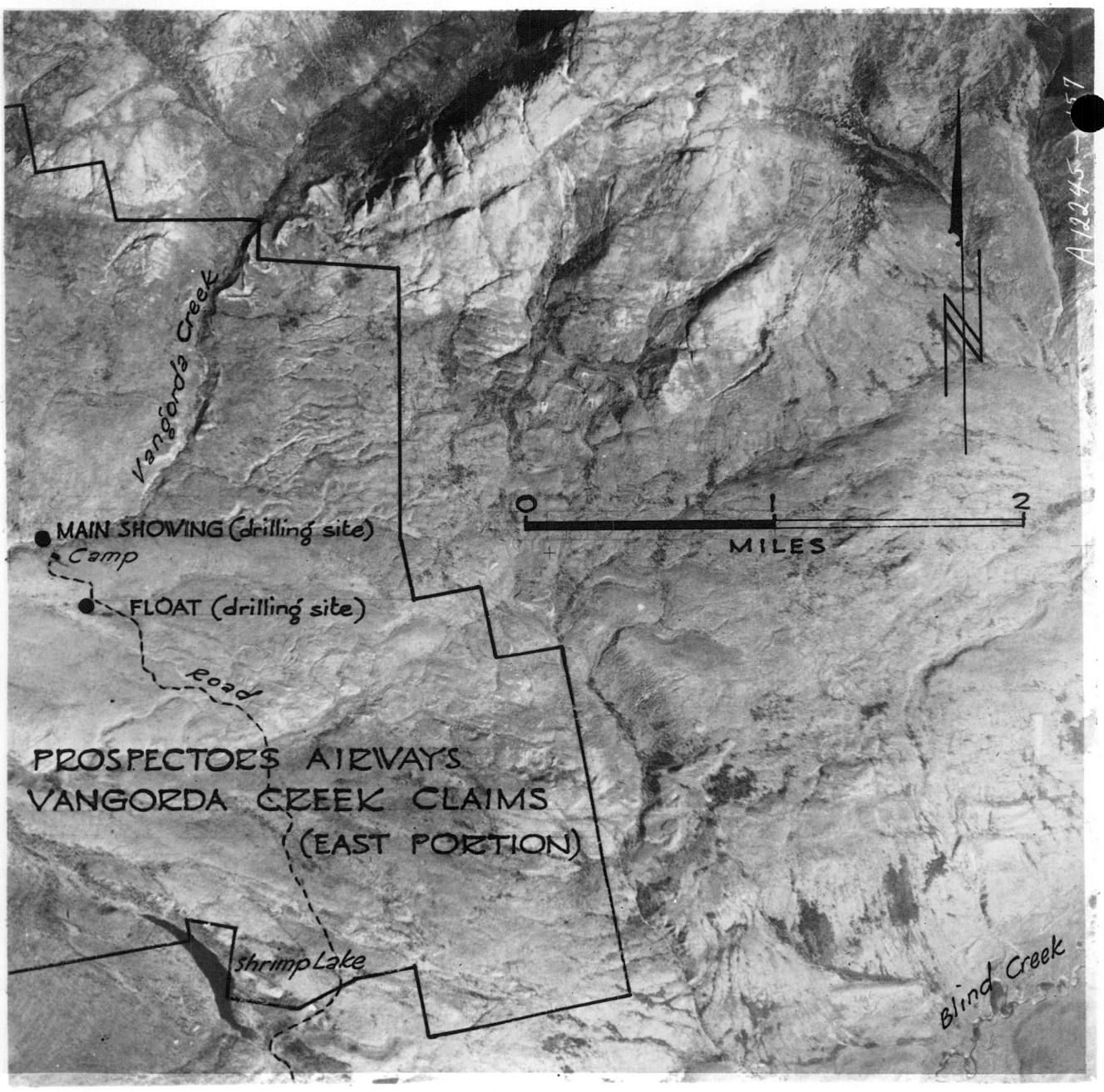


A12245-57

GEOLOGY

R.O. CHISHOLM 1953

019077

VANGORDA CREEK PROPERTY

As a result of checking a story about a rusty zone told to him by an old Indian of the Ross River tribe, A. Kulan, Whitehorse prospector, discovered an imposing outcrop of massive lead, zinc, and iron sulphides at Vangorda Creek in July. He returned to Whitehorse with samples three days later and showed them to the writer.

The samples resembled the ore of the Sullivan Mine and as no claims had been staked by Kulan and his partner to protect the discovery, arrangements were made immediately to examine the showing and acquire it for the company.

The size of the showing proved to be considerably larger than described by Kulan and suitable terms were arranged at once for optioning 48 claims.

It was apparent from the flat nature of the stratification and the widespread float that a large number of additional claims would be needed to adequately protect the showing. As all available company personnel were in the Shakwak area 400 miles distant and had to be moved through the town of Whitehorse, great pains were taken to keep news of the find from leaking out in order to prevent a rush into the area by outside interests.

Due to the co-operation of Kulan, his partner H. K. Law, and the company employees, a group of 238 contiguous claims were staked before a major staking rush developed in the area. Much credit is due to F. A. Campbell who handled this phase of the operation.

Preliminary work was started early in August and consisted of line-cutting, a self-potential survey, detailed mapping, followed by diamond drilling. The survey work continued until heavy snow fell late in September, and drilling was continued with two machines until December 12th, at which time 4,504 ft. of drilling was completed in 15 holes and the operation suspended for the winter.

A road ten miles in length had been constructed from the Pelly River to the property, a preliminary airstrip cleared at the river, winter camps constructed, and fuel and oil for drilling transported to the property.

Much of the information contained in the following description of the property has been obtained from the field reports of F. A. Campbell, R. W. Baker and H. D. McLeod, who served as resident engineers. The status of all claims staked will be found in Appendix I, detailed diamond drill results in Appendix II, and detailed recommendations in Appendix III. Large scale maps of the property are in the attached folder.

Location and Access, Communication, Power

Vangorda Creek is a tributary of the Pelly River and joins it about 36 miles downstream from the Canol Road crossing at Ross River post. The property straddles Vangorda Creek seven miles upstream from its confluence with the Pelly. The

nearest topographical feature marked on maps is Mye Mountain of the Anvil Mountain Range and the group of claims lies immediately south of this feature. It is located in the Whitehorse Mining Division of the Yukon Territory and is approximately 125 air miles northeast of the town of Whitehorse.

Access to the property may be gained by float-plane in the summer or ski-plane in winter from Whitehorse by landing on a small lake on the south boundary of the claims, locally called Shrimp Lake. The trip takes an hour and a quarter one way.

The property is reached overland from Whitehorse 75 miles down the Alaska Highway to the junction of the Canol Road at Johnson's Crossing and then by the Canol Road 150 miles to Ross River Crossing. From this point a small river boat is taken downstream 30 miles to Blind Creek. A bulldozed road 10 miles in length connects to the property. The total distance is about 265 miles from Whitehorse. A third route is by water from Whitehorse down the Yukon River to its confluence with the Pelly and then up the Pelly to Blind Creek. This distance is about 350 miles and travelling time is about six days. A fourth route as yet undeveloped would be a bulldozed road 100 miles in length due west from Five Finger Rapids, near Carmacks on the Mayo Road. The distance from Whitehorse by this route would be 200 miles.

A combination of the first three routes is used at present. Supplies are flown from Whitehorse and heavy freight is taken by truck during the summer months up the Canol Road, or by boat and barge down the Yukon and up the Pelly Rivers.

No satisfactory winter supply route is yet available due to the high passes on the Canol Road. However, the fourth route could be easily developed using a tractor train. Snow-mobiles could also be used over the Canol Road.

The Pelly River is unreliable for transport due to its varying depth and early freeze up. It averages 100 ft. in width and has many S-shaped curves and gravel bars which make it only suitable for flat bottomed boats drawing less than 16 inches. This depth of water obtains for a 5-month period from May 15th to October 15th. The current normally flows at a rate of 6 miles an hour and offers no difficulty to outboard and inboard gasoline driven craft.

There are no other mines in the district, and with the exception of a little prospecting for gold, there has been no mineral development nearer than the rich lead-zinc-silver deposits of United Keno Hill Mines 135 air miles northwest. The nearest community is Ross River Post located at the junction of the Canol Road and the Pelly River, 35 miles from the Vangorda camp. The Post is populated by a score of Indian families and a few white people.

Communication between the camp and Whitehorse is maintained by shortwave radio-phone at present, but is

ineffective about 50% of the time due to atmospheric conditions. A telephone line was once erected along the Canol Road to Whitehorse but is now useless due to lack of maintenance. It could be rehabilitated at considerable expense, if needed.

The only power sources in use at present are diesel and gasoline engines, although a plentiful power supply could be developed on the Pelly River for future operations by erecting a dam at Houle Canyon, 14 miles upstream from Ross River Crossing. Coal has been reported in this section also, although its possibilities are as yet unknown.

Physical Conditions

Relief and Elevation - The immediate area of the claims (see photograph) is one of gentle, rolling plateau topography, cut by shallow creek depressions up to 50 ft. in depth. The ground rises gradually towards Mount Mye on the north and the elevation within the claim boundaries varies from 3500 to 4000 ft. To the south of the group, the upland plateau drops off steeply to the Pelly River valley at elevation 2500 ft. in a series of glacial benches. The trend of the topographical ridge and depressions is northwest-southeast parallel to the course of the Pelly River.

Drainage - The headwaters of Vangorda Creek cross the central part of the property in an east-west direction and provide a year-round source of water for drilling and mining operations. The creek itself is fed by springs and snow on the high land to the northeast and though only 20 to 30 ft. in width for the most part, it has a rapid flow with a good volume all year round. Shrimp Lake is drained by one of the smaller tributaries of Vangorda Creek. The northwestern claims are drained by a similar creek, named Rose Creek. Most of the bedrock exposures on the property lie along these creek valleys.

Superficial Deposits - The property is for the most part covered with a shallow mantle of unconsolidated glacial clay, sand and gravel varying in thickness from a few inches to about fifty feet. The general trend of the glaciation appears to be east-west locally. An unusual feature is the absence of permafrost.

Vegetation - The Pelly River valley contains good stands of spruce up to two feet in diameter suitable for mine and construction needs. Trees up to 50 ft. in height are commonplace. Smaller stands of good timber grow on the claims themselves in the low ground near Shrimp Lake and Vangorda Creek. Some poplar and allied deciduous trees are also present. The brush is open and there is plentiful fodder for horses in river valleys.

Regional Geology

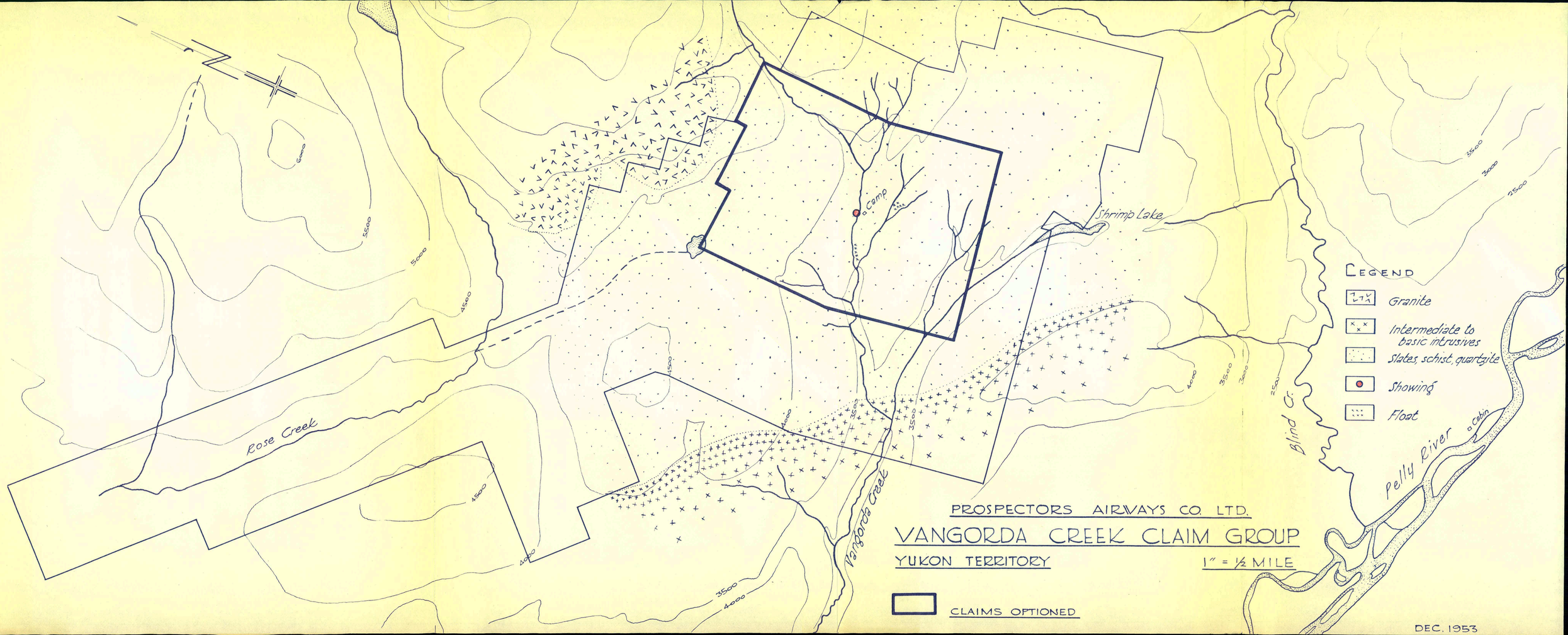
The regional geology of the area is described by Johnston[1] and is summarized as follows:

1 - Johnston, J.R.: "A Reconnaissance of Pelly River Between Macmillan River and Houle Canyon, 1936" Geol. Surv. Canada, Mem. 200, pp. 6

"The oldest rocks of the Pelly River area are quartzites, argillites, and limestones which are everywhere schistose and show little of their original character. This assemblage of sediments is placed in the Yukon group. Apparently overlying the Yukon group is a great thickness of sediments believed to be of Palezoic age. These strata are divided into three cartographic divisions: a lower group of thin and massive-bedded quartzites, argillites, cherts, tuffs, and limestones, which may be, in part, equivalent to members of the Yukon group; a middle group of crystalline limestone, cherty quartzites, and argillites, which conformably overlies strata of the preceding group but may itself include an unconformity; and an upper group, of squeezed conglomerate and grit beds. The division of the Palezoic sediments leaves much to be desired, but represents as exact a degree of stratigraphic division as the information obtained warrants. Associated with the Yukon group and the Palezoic strata are greenstone schists that are probably volcanic rocks contemporaneous in age with the sediments. The Mesozoic era is represented by a group of altered basic igneous rocks, two great bodies of granitic rock - the batholiths of Glenlyon and Anvil mountains - and a series of clastic beds believed to be of Upper Cretaceous age. The youngest rocks are undisturbed conglomerates, basic and acidic dykes, and lava flows, all probably Tertiary age. Overlying all these rocks are Pleistocene and Recent superficial deposits."

Table of Formations

Modern	Recent and Pleistocene	Superficial deposits, alluvium, volcanic ash, and glacial drift
Tertiary		Basalt, andesite, dacite, trachyte, rhyolite
Tertiary		Conglomerate Quartz-feldspar porphyry
	Upper Cretaceous	Conglomerate, grit, sandstone, shale
Mesozoic		Granodiorite, syenite, monzonite
Mesozoic		Andesite, basalt, tuff, breccia, diorite, serpentine, gabbro, and hornblendite
Paleozoic		Upper group: conglomerate and grit Middle group: crystalline limestone, cherty quartzite and argillite Lower group: quartzite, cherty tuff, limestone, argillite, slate, phyllite and greenstone schist.
Precambrian and/or Paleozoic		Yukon group: quartzite, mica schist, chlorite schist, and crystalline limestone.



PROSPECTORS AIRWAYS CO. LTD.

VANGORDA CREEK CLAIM GROUP

YUKON TERRITORY

1" = ½ MILE

CLAIMS OPTIONED

DEC. 1953

Local Geology

The rocks underlying the Vangorda claims may be divided into two broad lithological groups, intrusives and sediments. The sedimentary division contains intercalated greenstone-schist horizons that may be of volcanic origin and are tentatively classified as sedimentary-tuff on the basis of preliminary microscopic examination. Their distribution as known to date is shown on the generalized geological map on Page 22.

Intrusives - A mass of granite and granodiorite with a gneissic border phase lies on the northeast boundary and a parallel mass of diorite gabbro and other associated basic rocks lies on the southwest boundary. Very little is yet known of the composition or age of these intrusives locally, although they have been assigned to the Mesozoic by Johnston[1].

Sediments - Sedimentary rocks underly most of the property and are comprised of three major types: (1) graphitic schist; (2) sericite-chlorite schist; (3) quartzite. On the basis of their extreme alteration and recrystallization into quartzite and schist, they are tentatively assigned to the Yukon Group of Precambrian schists described by Johnston, although the possibility exists that the Yukon Group may represent in part the metamorphased equivalent of basal sections of the Paleozoic Group. Structure in the sediments appears to be complex and no detailed relationships with the enclosing rocks have been worked out.

The sedimentary group and in particular the quartzite member appears to be the most important rocks in the area economically, since all the mineralization found to date on surface and in diamond drill holes has been areplacement in this series. In the area tested by diamond drilling, no intrusive rocks whatever have been encountered.

Graphitic schist is the most common rock type in the few outcrops encountered. It appears on surface as a soft-black, greasy and highly schistose rock. Considerable fine pyrite and pyrrhotite is often found in the bedding planes of the schist. A few of the outcrops along the baseline to the northwest are a mucher harder, and more evenly bedded, slatey schist. The strikes and dips within this formation vary considerably from outcrop to outcrop and often change radically within individual outcrops due to folding or slumpage. However, the trend appears to be southeast to east and dip relatively flat to the south.

A thin section of this rock type was examined by W. W. Moorhouse[2] and yielded the following information.

1. Johnston, J.R. "A Reconnaissance of Pelly River Between MacMillan River and Houle Canyon, Yukon, 1936" Geol. Surv. Canada, Mem. 200, pp. 6.

2. Dr. W. W. Moorhouse, Professor of Geology, University of Toronto.

"A specimen, from the main zone, is a grey-black, finely laminated graphitic schist.

"In thin section, the principal minerals present are quartz, generally very fine grained, also coarser, in veinlets and patches; graphitic or carbonaceous material is the other principal constituent. The quartz veinlets have associated with them small amounts of carbonate, a little pale brownish chlorite, a number of grains of iron sulphide (pyrrhotite) and a few tiny grains which may be sphalerite.

"The rock is believed to be a rather fine grained, carbonaceous siltstone."

Sericite-chlorite schist has been intersected in drill holes where it appears to be the second most plentiful rock type. It is white to medium grey when encountered in near surface positions but is characteristically dark greenish grey at deeper horizons unaffected by surface leaching. It is soft, greasy schistose rock. Talcose alteration is encountered near sulphide masses and quartz veins.

"In thin section, the principal minerals present are quartz, in coarse, lenticular grains, chlorite, talc and biotite, which occurs only in certain streaks, and appears to be altering to chlorite. Accessory minerals include tourmaline, rutile, epidote and graphite and/or magnetite.

"Texturally, this is a very shreddy, sheared, patchy rock, with a vague suggestion of fragments. It is probably a tuffaceous, argillaceous sandstone."

Quartzite appears to be the most important horizon from an economic point of view in that most of the mineralization is a replacement within it.

One outcrop of leached quartzite blocks was located 200 ft. south of the baseline near line 44 + 00 east . The rock is rust stained, granular in texture and finely laminated. It resembles the iron formations so common in the PreCambrian Shield.

Quartzite is present in the drill holes but in every case is wholly or partially replaced by sulphides. Here it is often dark-grey in colour and is cut by black carbonaceous streaks in contact with strongly deformed, and bedded grey-black argillite.

In thin section, the principal mineral is quartz, rather coarse-grained. It is separated into lenses by wavy, irregular streaks of white mica and graphite, possibly with a little chlorite associated and some carbonate. Pyrite is abundant and there are varying amounts of lead and zinc sulphides and chalcopyrite.

Inclusions in the quartz locally suggest the outlines of fairly well rounded quartz grains, but these grains appear to have been largely destroyed by granulation and recrystallization. The rock is interpreted by Moorhouse as an argillaceous, carbonaceous sandstone which has been sheared, recrystallized, and mineralized.

There are long sections of core logged as "interbedded-quartzite-and-black-schist" which are interpreted by thin-section examination to be finely interbedded siltstone and argillite which may contain some tuffaceous material. This interbedded horizon appears to be an intermediate stage of sedimentation between the black schist and the quartzite.

Conglomerate was mapped in several localities but was not identified as such in the drilling. This consists of two general types: (1) rounded plates of graphitic schist and quartz-pebbles cemented by red hematite; (2) granite boulders and pebbles, quartz pebbles, and some schist, cemented by red hematite. The granite boulders are often large, some being 24" to 30" in diameter. This rock is localized in the vicinity of sulphide deposits and the cementing material is believed to have originated from surface weathering of the sulphide. It is possibly of recent origin.

Mineralization - The mineralization consists of pyrite, pyrrhotite, sphalerite, galena, and chalcopyrite in varying proportions and modes of occurrence.

Massive sulphides which consist of quartzite 50 to 90% replaced by pyrite, galena and sphalerite, are common. The galena and sphalerite often form streaks or beds within massive pyrite but appear also as a fine dissemination throughout the pyrite. In the latter case the galena and sphalerite are present in an extremely fine-grained state.

A second mode of occurrence is massive stringers and blebs of pyrite and galena along with some disseminated mineral 20 to 50% replacing quartzite or quartzite interbedded with schist.

Sphalerite and galena with varying amounts of pyrite replace much of the quartzite in some of the horizons of interbedded quartzite and schist. Very little mineral is seen in the schist in these sections.

Galena and sphalerite, usually in much larger grains than normal, are present in small quartz and white carbonate stringers which are common in the more massive phases of the mineralization.

The usual type of sphalerite is the black, iron-rich, marmatite variety although rarely light brown sphalerite is present in stringers, and blebs and in disseminated grains in both the graphitic and sericite schist.

Chalcopyrite is present as a dissemination throughout the other mineralization, particularly the pyrrhotite. It commonly occurs as tiny fracture fillings and scattered rounded grains. Concentrations of this mineral were not seen.

Polished sections were made of better grade material from the surface showing and drill holes and Moorhouse reports the following:

"A specimen of the surface outcrop material was examined. A thin-section of this specimen indicates that the only gangue materials present are barite, which predominates, and carbonate. No quartz was noted. Sulphides observed were pyrite, sphalerite and galena. The sphalerite is yellow in colour in thin-section. Yellow to red-brown oxidation products were noted in this section, but were not further identified.

"A polished section revealed pyrite in crystals and grains from .01 to .3 mm. in diameter, the most frequent size being around .1 mm. Galena is very abundant in this specimen, ranging from less than .01 to .3 mm., although some aggregates reach a diameter of 2 mm. or more. Inclusions of galena in pyrite range from less than .01 to .08 mm. Sphalerite is less abundant than galena in this specimen, ranging from .01 to .2 mm.; inclusions in galena and pyrite range from .01 to .15 mm. A little chalcopyrite is present, ranging from .01 to .1 mm.

"The pyrite is obviously the earliest mineral to crystallize, and is corroded and replaced by the other sulphides. The relationships between the galena and sphalerite are not clear, as usual in this type of mineralization. A few grains which may be arsenopyrite were noted in specimens 7 and 8, but there was not enough to permit positive identification by optical methods."

A spectrographic analysis of a specimen of massive sulphide from the discovery zone showed trace amounts of cadmium, tin, nickel, chromium, titanium, vanadium, zirconium, cobalt, molybdenum, and manganese. None of these minerals are present in sufficient quantity to be identified by eye.

Structural Geology

Due to the widespread overburden very little has been learned of the structural geology. The dips and strikes of bedrock exposures present a confused picture, and it is assumed that surface weathering and slumpage of the schists masks their true attitude. The drilling done to date is not sufficient to clarify the local structural conditions, as no reliable marker horizons that can be traced with confidence from hole to hole have been established.

Folding - A study of the air photographs in the vicinity of the property indicates that the prevailing striations of the sedimentary rocks is in an east-westerly direction parallel to the margins of the enclosing granitic rocks to the north and the diorite series to the south and that dips are relatively flat. If this is a reflection of bedding, it is assumed that the sediments occupy a broad trough at least two miles in width crossing the claims in a northwest-southeast direction. It is reasonable to suppose that many minor synclines and anticlines of similar trend are also present.

One such minor anticline is exposed on the discovery outcrop on Vangorda Creek. The axis strikes northwest and appears to be slightly overturned to the northeast, although its true attitude is still partly conjectural. It is possible

that the mineralization has some association with this feature.

There are many minor crenulations and changes in dip present in the diamond drill core at certain sections and the repetition of narrow horizons of black schist, sediments, and greenstone indicate complicated folding of the ore sections.

Faulting - The air photographs exhibit several strong lineaments that indicate local shear faults. One of these, located one mile southeast of the main showing, strikes N65°E. This direction is repeated in minor lineaments and may represent a late regional faulting direction.

Minor displacements were noted in the diamond drill core but their significance has not yet been established.

It has been postulated that the Pelly River depression represents a large scale fault feature that divides the Precambrian rocks to the northeast from the later sediments and intrusives so evident to the southwest of the Pelly. No marked unconformity has been encountered in the Vangorda section, however, it is possible that the valley marks a line of weakness along which the rocks to the northeast have been uplifted and, subsequently eroded down to Precambrian rocks. If this is the case, it would be reasonable to expect minor faults and folds to lie parallel to the Pelly River valley. This is suggested by the limited work done to date.

Economic Geology

Discovery zone - The original discovery on the property consists of an exposed face of massive lead-zinc-iron sulphides on the north bank of Vangorda Creek near No. 1 post of mining claim Wynne No. 1. An almost continuous series of mineralized patches varying from a few inches up to 10 ft. in diameter are exposed over a horizontal distance of 170 ft. at the water's edge and extend over a vertical range of 10 ft. The intervening spaces are covered with sand and gravel from the creek bank.

A composite sample of representative pieces of sulphide taken across the exposure averaged 6.82% lead; 10.82% zinc; 0.51% copper; 3.22 oz. per ton silver; and 0.05 oz. per ton gold.

Due to the position of the exposure at the edge of the creek and the mantle of overburden, the total extent of the mineralization here could not be determined. The sulphides show a fine granular texture typical of replacement deposits and sedimentary rocks and are well laminated locally. The laminations appear to represent bedding in the sedimentary host rock that has been almost completely replaced by sulphides.

Judging from the dip of these laminations in the exposed face, the sulphides lie in a gentle dipping anticlinal or monoclinal structure with an apparent northwesterly strike. The strike direction to the northwest is covered by overburden and to the southeast by gravel and boulders in the creek bottom.

The first drill hole was put down vertically in the centre of this outcrop and encountered the following intersections:

Depth	Core Length	Cu	Pb	Zn	Ag	Au
14 - 55'	41'	0.70%	6.38%	7.54%	3.96 ozs.	0.055 ozs.
55 - 88	33	0.24	2.98	3.12	1.15	0.025
131 - 155	24	0.28	3.22	4.82	1.68	0.01

Eight additional holes were drilled in this section at centres from 100 to 200 ft. apart as shown on the accompanying drill plan of Vangorda Creek. All but two of these holes intersected varying widths of sulphides and the detailed results are tabulated in Appendix II.

The weighted average of intersections obtained in the discovery zone is: 3.55% lead; 4.92% zinc; 0.42% copper; 1.91 oz/ton silver; 0.03 oz/ton gold.

There has not been sufficient drilling done to establish the true width of the sulphide body or its attitude, but it is encouraging to note that No. 15 hole, the last completed, intersected 122 ft. of almost massive sulphide containing variable amounts of lead-zinc sulphides, lying between well-defined walls.

Float Zone - Six angle holes were drilled at a location 2500 ft. southeast of the discovery in the vicinity of some high grade float. The results are tabulated in Appendix II. The weighted average of intersections obtained in the float zone is 3.23% lead; 6.23% zinc; 0.25% copper; 1.95 oz/ton silver; and 0.03 oz/ton gold. As in the discovery section, the true width and attitude of the mineralized zone cannot be established from the information obtained so far.

A low ridge of glacial overburden lies between the discovery zone and the float zone and it was not possible to test the ground last season. There is considerable speculation as to whether these two zones are continuous and the gap will be drilled when heavier drilling equipment is available this spring.

It may be pointed out, that the projections of planes formed by the basal points of the mineralization in Holes 1, 4, 6 and 7 in the discovery zone, have an average strike of N29°E and dip at 50° E. Subsequent Holes 10, 13 and 15 indicate that the dip flattens eastward from the initial drilling. This does not agree with an assumed southeast strike needed to make the zones join up. However, the northeast strike is based on very limited information and subject to change from hole to hole.

Other Surface Indications - (1) Mineralized float was discovered on Wynne No. 2, 750 ft. W-SW of the campsite and extends downhill in a westerly direction for a distance of about 900 ft. The bedrock source may be close to surface at the brow of the hill, at location 29,300N and 29,300E.

(2) An outcrop of leached quartzite was located 200 ft. south of the base line, 4400 ft. SE of the discovery zone. This consists of blocks of rusty float which, although not bedrock, must indicate a mineralized quartzite horizon in this area. There is no recognizable mineral remaining in the rock.

(3) Very heavy gossan and rust were located in the branch of the Vangorda Creek passing through claims Wynne Nos. 3 and 4. It gave a positive dithzone test for zinc. The rust may have been carried as colloidal iron hydroxide and precipitated as hydrated iron oxide along the edges of the creek. Heavy rust similar to the above occurrence was located on two other creek bottoms; (i) on the north boundary of claim Champ No. 8 one mile northwest of the discovery; and (ii) on the north boundary of claim Insurance No. 6 one-and-a-half miles southeast of the discovery.

(4) A small piece of float, well mineralized with lead-zinc sulphides, was picked up on claim Firth No. 8 three miles northwest of the discovery.

Geophysics

A magnetometer and geophysical survey was made in a zone encompassing the main showings. In addition an airborne magnetometer was flown over the area. The results follow.

Self-potential survey - Readings were taken at 50-ft intervals along lines 200 ft. apart and tied in to a base reading of zero on the base line at Station 2000 east. This base station was chosen arbitrarily and ensures that anomalous readings are high positives in relation to normal base level values.

The correction of readings in to the base reading was determined on the potential of the roving contact of the instrument. A negative reading on the instrument, indicating that the roving pot was at a higher potential, was added to the base reading or value of the station on which the instrument was set up; a positive reading, or lower potential, was subtracted.

The contoured results of the survey on the accompanying plan, show several large and continuous high anomalies, one of which starts immediately over the discovery zone.

To date, no drilling has been done to test these high anomalies but one anomaly does cross outcrops of black graphitic schist with no recognizable sulphides. This suggests that the graphitic schist may have caused some or possibly all of the anomalies. Sulphides were found under part of the low anomaly along line 20 plus 00 East immediately south of the base line. The higher section, however, lies over rusty graphitic schist or schist-conglomerate.

The area of deep overburden between the two zones of drilling was one of low readings, and it is possible that the overburden blanketed out currents generated in this section.

It is too early to say how effective this method of exploration will be here, as most of the work was done in the

vicinity of what appears to be an extensive mineralized zone. However, if the survey is successful in tracing out the black schist marker horizon, it will be a valuable method of eliminating ground in future work, when used in conjunction with other methods of exploration.

Magnetometer Survey - Specimens of the mineralization from the main showing and from the float area, as well as many sections of the drill core contained pyrrhotite. To determine whether or not the sulphide zones could be traced magnetically, a magnetometer survey was run over part of the mineralized zone.

A Sharpe DIM magnetometer was used and readings were taken at 50-ft. intervals on lines 200 ft. apart from line 4 plus 00 East to 30 plus 00 East inclusive.

The results obtained were inconclusive. Small irregular anomalies were outlined but nothing could be lined up into definite zones. The level of the readings taken over the float zone is somewhat higher than the rest but does not indicate anything definite.

The sensitivity of the instrument used is not high, and it is probable that a more sensitive magnetometer might be effective in outlining the pyrrhotite zones. This work will be continued next year with an Askania type of instrument.

Aeromagnetic Survey - A series of lines approximately 50 ft. apart were flown over the central part of the claims at a height of 500 ft. to test the effectiveness of this type of instrument for reconnaissance. No anomalies were obtained over the mineralized zone but a general higher level of readings was noted over the basic intrusives to the southwest of the claims. It is concluded that the airborne-instrument is not sensitive enough to be of any use in outlining this type of mineralization.

Conclusions and Recommendations

Several factors indicate that an extensive deposit of sulphides containing good values in lead and zinc occurs in the vicinity of the original discovery on Vangorda Creek. These factors include the long sections of massive sulphides intersected in several of the holes; the replacement nature of the sulphides; the widespread distribution of mineralized float; and the extensive alteration encountered in the rocks surrounding the mineralized zone.

Insufficient drilling has been done to give foundation to any theories on the attitude of the mineralization. It is possible that the sulphides occur in tabular, flat-lying masses, which have been guided in their deposition to some extent by local contortions in the host rocks. Sharp changes in the strike and dip of the mineralization are indicated in the drilling done in the southeast zone and can be expected elsewhere.

The following work is recommended:

1. A regular grid pattern of vertical diamond drill holes not closer than 200 feet to expand the area of mineralization cut by Holes 10 and 15 towards the north and east.

2. Additional drilling with a large machine to close the gap between the "float zone" and the "discovery zone".

3. Additional drilling towards the southeast from Hole No. 9 to extend the zone in this direction. Vertical holes at 200-ft. centres in an equilateral triangle are recommended at first to find the attitude of the zones.

4. A bulldozer trench at approximately 29,250N and 29,250E to check on the possibility that mineralized float in this section has emanated from a source lightly covered with overburden. If perma-frost is encountered, drilling would be more effective.

5. Bulldozer trenches on some of the outlying claims for assessment work.

6. A detailed Askania magnetometer survey of the ground on which mineralized float has been found and on which self-potential anomalies have been obtained. This work should outline zones of pyrrhotite encountered in the drilling and could be done on snowshoes at the resumption of operations early this Spring, to guide drilling.

7. A detailed geological survey of all claims in conjunction with geochemical testing of the soil for trace amounts of lead-zinc mineralization.

8. A reconnaissance self-potential survey of all claims to trace the black schist marker-horizons.

Toronto, Ontario,
January 15th, 1954.

E. O. CHISHOLM, P. Eng.,
Chief Geologist.

APPENDIX A

STATUS OF PROSPECTORS AIRWAYS YUKON CLAIMS AS OF JANUARY 1st, 1954

QUILL CREEK PROPERTY - 87 CLAIMS

Name of Claim	No.of Claim	Grant No.	Staker	Staking Date	Recording Date	Owner	Date Optioned	Work Done Until	Remarks
Chisholm	1--7	63086-92	E.O.Chisholm	10 Jul 52	29 Jul 52	P.A.		29 Jul 55	
Enger	1-7	63064-70	H.Enger	"	"	"		"	
Blair	1-7	63072-78	W.A.Blair	"	"	"		"	
Bell	1-7	63079-85	J.Bill	"	"	"		"	
A.Smith	1-4	63279-82	A.J.Smith	5 Aug 52	12 Aug 52	"		12 Aug 57	
A.Smith	5-8	63283-86	"	"	"	"		12 Aug 55	
Andre	1-6	63160-65	A.Baranowski	17 Aug 52	8 Sep 52	"		8 Sep 57	
Andre	7-8	63174-75	"	"	"	"		11 Sep 57	
Enoch	1-4	63176-79	J.Enoch	15 Aug 52	8 Sep 52	"		8 Sep 55	
Enoch	5-8	63180-83	"	"	"	"		5 Sep 57	
Mac	1-8	63152-59	M.MacMillan	27 Aug 52	"	"		8 Sep 55	
Gennis	1-8	63166-73	C.Gennis	23-24 Aug 52	"			8 Sep 55	
Bak	1-5	63273-77	R.W.Baker	15 Aug 52	3 Sep 52	"		3 Sep 55	
Bak	7	63278	"	"	"	"		"	
Bak	6-8	63257-8	"	"	24 Sep 52	"		24 Sep 55	
Campbell	1	63184	F.A.Campbell	21 Sep 52	"	"		"	
Jack	1-6	66060-65	J.Gauvin	26 May 53	26 Jun 53	"		26 Jun 54	
Mike	1-4	66066-69	M.Cleary	26 May 53	"	"		"	

Summary: 88 Claims in good standing; 16 to Fall of 1958, 52 to Summer, 1956 and 10 to 26 June, 1954; additional work to be done in summer preceding due dates; application for Work Certificates to be made each year before 29 July.

WHITE RIVER PROPERTY - 88 CLAIMS

Fin	1-8	63185-92	F.A.Campbell	15 Sep 52	24 Sep 52	"		27 Sep 55	
Charlie	1-8	63193-200	C.Gennis	19 Aug 52	22 Sep 52	"		2 Sep 55	
Jimmie	1-8	63201-08	J.Enoch	19 Aug 52	2 Sep 52	"		2 Sep 55	
Henry	1-8	63209-16	H.Enger	24 Aug 52	3 Sep 52	"			Claims dropped
Eric	1-4	63225-28	E.Marchbank	24 Aug 52	2 Sep 52	"		2 Sep 55	"
Eric	5-8	63229-32	"	"	"	"			" "
John	1-8	63233-40	J.Bill	"	"	"			" "

WHITE RIVER PROPERTY

Name of Claim	No.of Claim	Grant No.	Staker	Staking Date	Recording Date	Owner	Date Optioned	Work Done Until	Remarks
Ted	1-8	63241-48	E.O.Chisholm	23 Aug 52	2 Sep 52	P.A.			Claims dropped
Slim	1-8	63249-56	M.MacMillan	"	"	"			" "
Alex	1-8	63257-64	A.Sobovitch	"	"	"			" "
Star	1-8	63265-72	R.W.Baker	15 Sep 52	22 Sep 52	"		22 Sep 55	
Andre	1-8	63217-24	A.Baranowski	24 Aug 52	2 Sep 52	H.Enger	6 Sep 52		Option dropped 1 Oct 53

Summary: 44 out of 88 claims dropped; Andre 1-8 option abandoned; Balance of 36 claims in good standing until Sep. 1956 but additional work to be done summer of 1956; applications for Work Certificates to be made each year before 2 Sept.

MILES CREEK PROPERTY - 62 Claims

Caribou	1-8	64432-39	F.Hickey	25 Mar 53	26 Mar 53	H.Enger	24 Mar 53	26 Mar 58	Option dropped 14 Oct 53
Caribou	9-16	64230-37	J.Chouinard	14 Mar 53	21 Mar 53	J.Chouinard	24 Mar 53	26 Mar 57 & 58	" "
Wolverine	1-8	64222-29	W.Theriault	15 Mar 53	21 Mar 53	W.Theriault	24 Mar 53	26 Mar 58	" "
White	1-8	64212-21	P.Eiklund	1 Mar 53	21 Mar 53	P.Eiklund	24 Mar 53	26 Mar 58	" "
Pete	1-8	64329-36	P.Johnson	25 Mar 53	26 Mar 53	P.Johnson	5 Aug 53	26 Mar 58	" "
Rex	2-8	64250 & 64351-56	Geo.Karens	22 Mar 53	24 Mar 53	G.Karens	7 Apr 53	26 Mar 54	" "
Polaris	1-6	64238-43	D.Taylor	21 Mar 53	22 Mar 53	D.Taylor	7 Apr 53	22 Mar 54	" "
Bell	1-6	64244-49	J.Paradis	22 Mar 53	22 Mar 53	J.Paradis	7 Apr 53	22 Mar 54	" "
Albert	3-4	64337-38	A.Topham	25 Mar 53	26 Mar 53	P.A.		26 Mar 58	In good standing
Hope	5	65182	R.W. Baker	25 Mar 53	26 Mar 53	P.A.		26 Mar 58	" " "

Summary: Options on 60 claims abandoned; balance of 3 claims in good standing until 26 March, 1959; applications for Work Certificates to be made each year before 26 March.

VANGORDA CREEK PROPERTY - 238 CLAIMS

Name of Claim	No. of Claim	Grant No.	Staker	Staking Date	Recording Date	Owner	Date Optioned	Work Done Until	Remarks
Sally	1-4	66708-11	Joe Ladue	24 Jul 53	1 Aug 53	Kulan & Law	21 Jul 53		
Elle May	1-4	66680-83	H.K.Law	15 Jul 53	25 Jul 53	Kulan & Law	"		
Wynne	1-8	66684-91	A.Kulan	"	"	"	"		
Rocky	1-8	66672-79	Joe Etzel	28 Jul 53	1 Aug 53	"	"		
Alice	1-8	66692-99	Arthur John	25 Jul 53	"	"	"		
Champ	1-8	66700-07	Robt.Etzel	27 Jul 53	"	"	"		
Jack	1-8	66664-71	Jack Ladue	28 Jul 53	"	"	"		
Tony	1-8	66712-19	Tony Eberts	14 Aug 53	15 Aug 53	P. A.			
Mac	1-8	66720-27	H.D.McLeod	7 Aug 53	17 Aug 53	"			
Hull	1-8	66744-51	D. A. Hull	13 Aug 53	14 Aug 53	"			
Firth	1-8	66736-43	Norman Firth	"	"	"			
Tim	1-8	66728-35	T.Bakker	6 Aug 53	16 Aug 53	"			
Slim	1-8	66768-75	V.Papezik	14 Aug 53	15 Aug 53	"			
Chuck	1-8	66760-67	C.L.Coleman	1 Aug 53	3 Aug 53	"			
Crum	1-8	66752-59	P.L.Gordy	6 Aug 53	17 Aug 53	"			
Art	1-8	66656-63	A.Mailman	15 Aug 53	17 Aug 53	"			
Beth	1-8	66776-83	E.O.Chisholm	1 Aug 53	3 Aug 53	"			
Winter	1-8	66784-91	J.Wise	7 Aug 53	15 Aug 53	"			
Insurance	2-8	66633-39	F.A.Campbell	27 Jul 53	10 Aug 53	"			
Mike	1-8	66640-47	M.H.Cleary	13 Aug 53	15 Aug 53	"			
Ralph	1-8	66648-55	Ralph Walsh	"	"	"			
Mill	1-8	67092-99	M.MacMillan	8 Sep 53	18 Sep 53	"			
Rom	1-3)								
	5-8)		M.Romanuck	7 Sep 53	18 Sep 53	"			
	4	67108-15	"	8 Sep 53	"	"			
Andy	1-8	67068-75	D.Andrews	7 Sep 53	"	"			
Baron	1-8	67084-91	A.Baranowski	8 Sep 53	"	"			
Irish	1-6	67076-83	M.K.O'Brien	8 Sep 53	"	"			
	7-8		"	9 Sep 53	"	"			

VANGORDA CREEK(CONTINUED)

Name of Claim	No.of Claim	Grant No.	Staker	Staking Date	Recording Date	Owner	Date Optioned	Work Done Until	Remarks
Ron	1-8	67116-23	R. L. Baker	8 Sep 53	18 Sep 53	P. A.			
Vin	1-5	67060-67	J.Galvin	"	"	"			
	6-8		"	9 Sep 53	"	"			
Hew	1-8	67100-07	T.Hewison	"	"	"			
Van	1-6	67046-51	J.VanKoughnet	30 Sep 53	5 Oct 53	"			
Hodg	1-8	67052-59	J.Hodgson	"	"	"			
Fin	1	67020	F. A. Campbell	17 Sep 53	1 Oct 53	"			

Summary: 238 Claims in good standing until July 15, 1954, 48 of which are optioned; work to be recorded before July 15th, 1954.

SUMMARY OF DIAMOND DRILLING RESULTS

MILES CREEK PROPERTY

Diamond Drill Hole S-1

Abandoned in overburden.

Diamond Drill Hole S-1A

Bearing - Due south
Dip - 45° at collar
Depth - 263 ft.
Intersections:

From	To	Width	% Cu	% Ni
39	41.4	2.4	Nil	0.58
42	45.7	3.7	Nil	1.47
48.5	53.5	5.0	Nil	0.89
54	59.0	5.0	Nil	1.04
59.3	63.0	3.7	Nil	0.63
64.	68.5	4.5	Nil	0.93
69	74	5	Nil	0.86
39	74	35	Nil	0.78
76	93	17	0.01	0.35
110	120	10	0.33	0.05
206.5	211.5	5	1.01	0.17

Diamond Drill Hole S-2

Bearing - Due north
Dip - 48° at collar
Depth - 98 ft.
Intersections:

From	To	Width	% Cu	% Ni
39	52.2	13.2	0.02	0.51
83.1	89.1	6.0	0.02	0.31

Drilled to complete a cross-section north from Hole 1-A.

Diamond Drill Hole S-3

Abandoned in overburden.

Diamond Drill Hole S-3A

Bearing - Due north
Dip - 44° 30' at collar
Depth - 373 ft.
Intersections:

From	To	Width	% Cu	% Ni
30	34.2	4.2'	Nil	2.86
35	40	5	Nil	2.54
40	45	5	0.13	1.83
45	47.4	2.4	0.03	0.49
30	47.4	17.4	0.04	2.01
50	62	12	0.44	0.16
213	221	8	0.20	0.29
283	292	9	0.55	0.52

Diamond Drill Hole S-4

Bearing - Due north
Dip - 46° at collar
Depth - 483 ft.
Intersections:

114	117	3'	0.05	0.16
118.5	123.5	5	0.10	1.58
123.5	125	1.5	0.09	0.90
127.2	132.2	5	0.05	4.20
132.2	134	1.8	0.05	1.08
114	134	20	0.06	1.63
163	167	4	0.08	1.98
167	169	2	0.11	0.92
172	177	5	0.09	2.00
177	180.5	3.5	0.08	1.41
163	180.5	17.5	0.07	1.41
346	361	15	0.56	0.08
407.6	410	2.4	2.70	0.08
419	421.3	2.3	2.05	0.03

Diamond Drill Hole S-5

Bearing - Due south
Dip - 45° at collar
Depth - 285 ft.

The hole was drilled to test a magnetic high in the peridotite south of the showing. The anomaly is due to secondary magnetite produced through serpentization.

Diamond Drill Hole S-6

Bearing - Due south
Dip - 47° at collar

Of six assays made on pyrrhotite and chalcopyrite mineralization the highest in copper was 0.29% and the highest in nickel was trace.

Diamond Drill Hole S-7

Bearing - Due north
Dip - 43° at collar
Depth 501 ft.
Intersections:

From	To	Width	% Cu	% Ni
210	215	5'	0.04	2.72
215	219	4	0.08	2.42
219.8	224	4.2	0.03	2.05
225	226	1	Tr.	0.14
226.6	228	1.4	Tr.	0.52
229.4	233	3.6	0.06	2.48
236.6	241.6	5	0.01	1.89
241.6	246.6	5	0.04	1.87
246.6	251.6	5	0.04	1.80
251.6	253.4	1.8	0.03	3.08
255	257	2	0.04	3.92
260	261.5	1.5	0.04	1.24
210	261.5	51.5	0.03	1.66

Diamond Drill Hole S-8

Bearing - Due north
Dip - 44° at collar
Depth - 429 ft.
Intersections:

110.7	118.5	7.8	0.98	Tr.

Diamond Drill Hole S-9

Bearing - Due north
Dip - 41° at collar
Depth - 385 ft.
Intersections:

From	To	Width	% Cu	% Ni
259.5	269.8	10.3	0.33	0.41
282	297	15	1.03	0.27

Thirteen other samples, taken in disseminated pyrrhotite, pyrite and chalcopyrite mineralization gave a maximum copper assay of 0.70% over 5 ft. and a maximum nickel assay of 0.36% over 1 ft.

Diamond Drill Hole S-10

Bearing - S15°W
Dip - 44° at collar
Depth - 496 ft.
Intersections:

45	47.6	2.6	1.30	0.22

Eleven other samples, taken in disseminated pyrrhotite, pyrite and chalcopyrite mineralization, gave a maximum copper assay of 0.69% over 1.5 ft. and a maximum nickel assay of 0.21 over 5 ft.

Diamond Drill Hole S-11

Bearing S45°W
Dip - 46° at collar
Depth - 496 ft.

The hole contained considerable fine pyrrhotite, pyrite and a little associated chalcopyrite from 25.7 to 217 ft. Of 33 samples taken in this section, the best in copper was 0.97% over 5 ft. and the best in nickel was 0.45% over 5 ft. The majority of the nickel assays were less than 0.10%.

Diamond Drill Hole S-12

Bearing S45°W
Dip - 52° at collar
Depth - 500 ft.

In the three samples taken in fine pyrrhotite, pyrite mineralization, the highest in copper was 0.40% over 1 ft; all were nil in nickel.

Diamond Drill Hole S-13

Bearing - Due South
Dip - 46° at collar
Depth - 433 ft.
Intersections:

From	To	Width	% Cu	% Ni
131.5	136.5	5	0.10	0.96
147.6	151	3.4	0.11	3.18
154	156	2	0.10	3.74
183.8	186	2.2	Tr.	1.15
215.6	216.7	1.2	Nil	1.30

Diamond Drill Hole S-14

Bearing - Due north
Dip - 60° at Collar
Depth - 421 ft.

In ten samples taken on the extension of the south zone cut by this hole at depth, the best in copper was 0.64% over 2.3 ft.; all were nil in nickel.

VANGORDA CREEK PROPERTY

Diamond Drill Hole 1

Location - Discovery Site
Dip - Vertical
Depth - 198 ft.
Elevation - 4000 ft.
Intersections:

From	To	Width	% Cu	% Pb	% Zn	Ozs. Ag	Ozs. Au
14	18	4'	0.64	3.92	3.69	1.50	
18	20	2	0.98	4.47	8.57	2.24	
20	25	5	0.91	5.56	6.38	2.34	
25	30	5	0.71	8.39	10.67	3.40	
30	35	5	0.71	9.92	8.87	12.80	
35	40	5	0.78	7.63	6.98	3.20	
40	45	5	0.91	7.09	8.37	3.08	
45	50	5	0.68	6.78	12.68	4.64	
50	55	5	0.17	2.01	1.50	0.90	
14	55	41'	0.70	6.38	7.54	3.96	0.055
55	58	3'	0.22	3.46	3.29	1.34	
58	60	2	0.25	1.76	1.89	0.72	
60	62	2	0.22	1.01	2.09	0.54	
62	65	3	0.25	0.95	1.30	0.50	
65	66.5	1.5	0.17	3.30	2.59	1.00	
66.5	70	3.5	0.15	3.43	2.89	1.20	
70	75	5	0.22	3.68	3.29	1.20	
75	78	3	0.15	4.30	5.28	1.56	
78	81	3	0.15	3.16	2.49	0.94	
81	83	2	0.13	2.40	2.79	1.86	
83	85	2	0.15	1.84	1.00	0.66	
85	86.5	1.5	0.22	2.76	4.88	1.10	
86.5	88	1.5	1.32	6.23	8.27	2.60	
55	88	33	0.24	2.98	3.12	1.15	0.025
131	133	2	0.07	5.05	11.35	2.96	
133	136.5	3.5	Nil	6.58	8.97	3.30	
136.5	140	3.5	0.32	4.50	5.78	2.04	
140	145	5	0.32	2.97	4.78	1.62	
145	150	5	0.49	1.45	1.99	0.80	
150	155	5	0.29	1.26	1.49	0.74	
131	155	24	0.28	3.22	4.82	1.68	0.01

Diamond Drill Hole 2

Location - 230' N 75° W of No. 1
Dip - Vertical
Depth - 224 ft.
Elevation - 4010 ft.

No sulphide intersections.

Diamond Drill Hole 3

Location - 180' S 75° W of No. 1
Dip - Vertical
Depth - 111 ft.
Elevation - 3977 ft.

No sulphide intersections.

Diamond Drill Hole 4

Location - 100' S 80° W of No. 1
Dip - Vertical
Depth - 124 ft.
Elevation - 3987 ft.
Intersections:

From	To	Width	% Cu	% Pb	% Zn	Ozs. Ag	Ozs. Au
5	7	2'	0.35	3.92	3.19	2.94	
7	9	2	0.95	3.48	10.28	2.82	
9	11	2	0.83	5.30	10.57	3.16	
11	13	2	1.13	4.03	8.28	2.26	
13	15	2	1.75	4.11	8.77	2.62	
15	17	2	0.97	7.86	16.35	4.62	
17	19	2	2.71	4.97	8.87	3.46	
19	21	2	1.22	10.44	18.27	5.40	
21	23	2	0.78	8.57	13.42	4.36	
23	25	2	2.10	1.02	3.59	1.34	
25	27	2	0.60	Nil	1.60	0.46	
27	29	2	1.71	2.37	3.39	0.66	
29	31	2	1.36	2.40	2.69	0.66	
5	31	26'	1.27	4.50	8.41	2.67	0.06

Diamond Drill Hole 5

Location - 2000' S.E. of Vangorda Creek Discovery Site
Dip - 45°
Bearing - N 44° E
Depth - 372 ft
Elevation - 4059 ft.
Intersections:

26	28	2'	0.55	2.74	3.09	1.58	
28	31.7	3.7	0.39	2.47	2.79	1.60	
31.7	33	1.3	0.38	4.40	7.08	2.80	
33	37	4	0.18	4.83	7.48	2.64	
37	40	3	0.18	4.28	6.98	2.24	
40	42	2	0.15	0.36	1.19	0.32	
42	45	3	0.73	0.47	1.10	0.88	
45	48	3	0.35	1.22	0.90	0.96	
48	51	3	0.38	0.69	0.70	0.72	
51	55	4	0.18	3.63	7.57	1.76	
55	60	5	0.18	4.18	9.26	1.90	
60	64	4	0.20	5.28	10.68	2.66	
64	67	3	0.28	5.61	11.75	2.86	
26	67	41'	0.30	3.26	5.89	1.81	0.045

Diamond Drill Hole 5 (Continued)

From	To	Width	% Cu	% Pb	% Zn	Ozs. Ag	Ozs. Au
141.9	146	4.1'	0.28	1.68	7.97	1.92	
146	151	5	0.30	3.19	9.06	2.78	
151	156	5	0.30	3.74	7.18	2.04	
156	157.2	1.2	0.28	5.00	10.78	3.08	
157.2	162	4.8	0.30	3.96	8.28	2.30	
162	167	5	0.28	3.52	6.48	2.16	
167	170.5	3.5	0.28	7.58	5.88	2.40	
141.9	170.5	28.6'	0.29	3.87	7.68	2.30	0.03

Diamond Drill Hole 6

Location - 110' N 35° W of No. 1
Dip - Vertical
Depth - 117 ft.
Elevation - 4021 ft.
Intersections:

44	46	2'	0.35	6.48	6.38	2.84	
46	47	1	0.28	9.56	8.37	3.40	
47	49	2	0.43	8.02	13.55	3.16	
49	51	2	0.43	2.27	3.09	0.80	
44	51	7'	0.39	5.16	7.77	2.43	0.04

Diamond Drill Hole 7

Location - 100' SE of No. 1
Dip - Vertical
Depth - 300 ft.
Elevation - 3992 ft.
Intersections:

63	65	2'	0.55	7.57	10.49	3.36	
65	66	1	0.45	3.30	4.00	1.66	
66	67	1	0.15	2.19	3.43	1.18	
67	70	3	0.50	1.38	1.67	0.76	
70	71	1	0.53	1.22	2.35	0.80	
71	73	2	1.46	1.32	5.38	1.20	
73	76	3	0.53	1.66	3.62	1.10	
76	81	5	0.70	0.80	1.96	0.60	
81	84	3	0.30	2.02	3.23	0.96	
84	86	2	0.23	4.72	5.28	1.90	
86	90	4	0.30	4.61	3.52	1.66	
90	92	2	0.13	3.08	4.90	1.16	
92	94	2	0.15	3.84	4.12	1.34	
94	96	2	0.30	4.06	6.66	1.92	
96	99	3	0.38	5.38	9.80	1.96	
99	101	2	0.38	5.71	9.30	3.64	
101	103	2	0.30	4.61	7.65	2.84	
103	104	1	0.05	0.76	0.49	1.76	
104	108	4	0.15	0.83	Nil	0.38	
108	111	3	0.10	1.88	2.36	0.90	
111	113	2	0.23	3.51	6.10	1.90	
113	116	3	0.48	5.22	9.04	3.70	
116	119	3	0.38	4.08	8.75	2.92	
63	119	56	0.39	3.12	4.81	1.64	0.025

Diamond Drill Hole 7 (Continued)

From	To	Width	% Cu	% Pb	% Zn	Ozs. Ag	Ozs. Au
133	138	5	0.15	5.69	10.81	3.18	
138	142	4	0.15	2.96	7.67	1.44	
142	147	5	0.50	2.98	3.24	1.46	
147	148	1	0.15	3.41	6.49	1.56	
133	148	15	0.27	3.91	7.16	2.03	0.035
216	221	5	0.28	4.48	5.60	1.70	
221	224.8	3.8	0.25	3.59	7.57	2.48	
224.8	227.3	2.5	0.20	2.32	3.93	1.36	
216	227.3	11.3	0.25	3.70	5.89	1.89	0.033

Diamond Drill Hole 8

Location - 200' SW of No. 5
Bearing - N 44° E
Dip - 45°
Depth - 360 ft.
Elevation - 4055 ft.
Intersections:

107	111	4'	0.15	3.64	4.33	1.78	
111	113	2	0.20	3.70	4.13	1.36	
113	117.5	4.5	0.13	2.54	5.21	1.18	
107	117.5	10.5	0.15	3.18	4.67	1.44	0.02
206.8	212.1	5.3	0.07	4.03	9.63	2.50	0.03

Diamond Drill Hole 9

Location - 200' SE of No.5
Bearing - N 44° E
Dip - 45°
Depth - 401 ft.
Elevation - 4072 ft.
Intersections:

69	71	2	0.10	2.65	8.75	1.36	
71	73	2	0.08	3.29	6.19	2.20	
73	78	5	0.15	3.96	6.19	2.22	
78	81	3	0.20	5.94	4.82	2.24	
81	85	4	0.18	3.41	7.08	1.96	
85	88	3	0.33	1.32	2.06	0.96	
88	93	5	0.28	1.57	2.36	1.54	
93	94	1	0.25	0.77	1.67	0.76	
94	97	3	0.15	4.66	9.44	2.14	
97	100.5	3.5	0.18	2.70	5.80	1.50	
100.5	104	3.5	0.18	4.73	12.68	2.48	
69	104	35	0.19	3.31	6.18	1.84	0.023
136	140	4	0.18	2.98	7.27	1.54	
140	144	4	0.10	3.52	8.75	2.44	
144	147	3	0.28	6.82	4.03	2.48	
147	151	4	0.28	1.66	2.16	0.90	
151	155	4	0.23	1.90	2.26	1.22	
155	156	1	0.35	0.64	1.28	0.78	
136	156	20'	0.22	3.07	4.76	1.63	0.02

Diamond Drill Hole 10

Location - 310' SE of No. 1
Dip - Vertical
Depth - 555 ft.
Elevation - 4015 ft.
Intersections:

From	To	Width	% Cu	% Pb	% Zn	Ozs. Ag	Ozs. Au
118	120	2'		6.16	11.60	5.04	
120	121	1		6.16	7.08	3.30	
118	121	3	0.56	6.16	10.09	4.46	0.05
184.3	187	2.7		10.53	10.33	4.30	
187	192	5		3.52	7.86	2.90	
192	196	4		1.54	3.24	1.24	
196	201	5		7.70	6.39	3.00	
201	202.8	1.8		8.14	8.95	2.86	
184.3	202.8	18.5	0.20	5.69	6.93	2.77	0.06
223	226	3		1.76	2.36	0.80	
226	231	5		1.76	3.05	0.84	
231	236	5		2.09	2.46	0.94	
236	241	5		0.44	0.49	0.36	
241	246	5		4.62	4.33	2.06	
246	251	5		2.75	3.05	1.24	
223	251	28	0.51	2.27	2.64	1.06	0.02
259	262	3		2.42	3.05	1.12	
262	267	5		2.42	5.02	2.12	
267	270.1	3.1					
270.1	274	3.9		4.84	6.60	2.70	
274	278	4		4.28	5.41	1.70	
278	279.6	1.6					
279.6	284	4.4		3.85	3.93	1.50	
284	286	2		0.99	0.89	0.60	
286	291	5		3.08	1.68	0.94	
291	296	5		1.10	0.79	0.56	
296	301	5		1.54	0.79	0.61	
301	306	5		3.63	3.34	1.40	
306	311	5		2.09	6.00	2.30	
311	316	5		6.92	4.43	2.08	
316	321	5		2.42	5.22	1.76	
321	326	5		2.86	4.92	1.92	
326	331	5		2.53	4.62	1.76	
331	336	5		2.20	3.34	1.40	
336	338.2	2.2		1.98	3.34	1.50	
259	338.2	79.2'	0.39	2.78	3.58	1.47	0.03

Diamond Drill Hole 11

Location - 210' NW of No. 5
Bearing - N 47° E
Dip - -45°
Depth - 445 ft.
Elevation - 4043 ft.
Intersections:

From	To-	Width	% Cu	% Pb	% Zn	Ozs. Ag	Ozs. Au
79	84	5'	0.18	3.41	6.39	6.42	
84	87.5	3.5	0.35	2.75	4.72	1.56	
87.5	91	3.5	0.75	3.30	9.34	1.00	
79	91	12'	0.25	3.18	6.76	3.42	0.035
101	106	5	0.13	1.93	7.86	2.16	
106	111	5	0.20	4.39	8.35	1.88	
111	115	4	0.23	3.62	5.70	1.10	
101	115	14'	0.18	3.29	7.42	1.76	0.015

Diamond Drill Hole 12

Location - Same setup as No. 11
Bearing - N 47° E
Dip - 68°
Depth - 162 ft.
Elevation - 4043 ft.
Intersections:

66.7	71.7	5'		4.06	9.14		
71.7	74.2	2.5					
74.2	76	1.8		1.98	6.68		
76	81	5		2.86	6.28		
81	83.6	2.6		2.20	2.84		
66.7	83.6	16.9'	0.30	2.60	5.71	1.81	0.03
91.7	96	4.3		3.95	10.50		
96	100	4		2.86	6.77		
100	105	5		2.20	3.04		
105	108.2	3.2		1.24	1.38		
91.7	108.2	16.5'	0.33	2.63	5.57	1.48	0.08

Diamond Drill Hole 13

Location - 200' S of No. 1
Dip - Vertical
Depth - 385 ft.
Elevation - 3986 ft.
Intersections:

85	92	7	0.41	4.06	4.42	1.50	0.02
165.4	169.5	4.1		1.87	3.74		
169.5	171	1.5		2.02	3.24		
171	175	4		1.41	2.06		
175	180	5		0.99	2.16		
180	186	6		2.02	1.86		
165.4	186	20.6'	0.41	1.63	2.45	0.85	0.01

Diamond Drill Hole 14

Location - 210' SW of No. 11
Bearing - N 48° E
Dip - -45°
Depth - 371 ft.
Elevation - 4044 ft.
Intersections:

From	To	Width	% Cu	% Pb	% Zn	Ozs. Ag	Ozs. Au
70	73	3'		1.77	4.33		
73	75.3	2.3		3.55	4.27		
70	75.3	5.3	0.25	2.54	5.61	2.38	0.02
82	86	4	0.30	3.44	6.68	2.02	0.04

Diamond Drill Hole 15

Location - 290' E of No. 1
Dip - Vertical
Depth - 379 ft.
Elevation - 4007 ft.
Intersections:

65	69	4		2.70	5.80	1.32	0.01
128	130	2		3.98	6.68		
130	134	4					
134	137	3		1.89	2.26		
137	141	4		2.03	2.26		
141	144.6	3.6		7.96	5.80		
128	144.6	16.6'	0.14	3.04	3.02	1.65	0.015
164.9	169.9	5		3.08	5.90		
169.9	171	1.1					
171	176	5		1.69	5.51		
176	179	3		3.61	7.68		
179	184	5		3.78	5.61		
184	187	3		4.05	6.88		
187	192.5	5.5		3.41	5.12		
192.5	198	5.5		1.07	1.08		
198	203	5		3.28	3.44		
203	208	5		5.67	9.15		
208	213	5		3.13	6.78		
213	217	4		1.92	6.88		
217	222	5		2.17	4.23		
222	227	5		3.44	5.61		
227	231	4		2.82	7.18		
231	236	5		1.75	5.71		
236	241	5		3.41	2.66		
241	246	5		2.86	1.08		
164.9	246	81.1'	0.28	2.93	5.09	1.94	0.02
256	261	5	0.64	9.51	1.57	3.27	0.03
281	286	5	0.30	3.96	5.41	1.14	0.02

RECOMMENDATIONS REGARDING PROPERTIES

Prospectors Airways Company Limited Quill Creek Property

1. Self-potential survey to be made along the peridotite zone 5,000 ft. long by 1,000 ft. wide on traverse lines 100 ft. apart.

2. Preliminary diamond drilling if warranted by 1.

	No. of men	Time
Task 1	2	1 month
Task 2		Contract

Prospectors Airways Company Limited Vangorda Creek Property

1. Geological survey of the property.
2. Self-potential survey of the property.
3. Magnetometer survey of the property.
4. Geochemical survey of the property.
5. Claim survey of the property.
6. Stripping and trenching of localized areas.
7. Diamond drilling main zone estimated 20,000 feet.

Task	No. of men	Time
1 & 4	2	4 months
2	2	4 "
3	2	4 "
5	2	4 "
6	2	4 "
7	18 (contract)	5 "