

MAP NO. ASSESSMENT REPORT X
PROSPECTUS
CONFIDENTIAL
115 G 6 OPEN FILE

1.S.N. 134665

DOCUMENT NO.: 092019
MINING DISTRICT: WHITEHORSE
TYPE OF WORK: Geology, Geophysics,
Trenching

REPORT FILED UNDER: Prospector Airways Co. Ltd.

DATE PERFORMED: 1953

DATE FILED: November 13, 1953

LOCATION: LAT.: 61°29'N

AREA: *Quill Creek*

LONG.: 130°35'W

VALUE \$:

CLAIM NAME & NO.: CHISHOLM, BELL, BLAIR, ENGER, A. SMITH, ANDRE, ENOCH, MAC, GENNIS,
BAK, CAMPBELL

WORK DONE BY: G. Ehrlich

WORK DONE FOR: Prospector Airways Co. Ltd.

DATE TO GOOD STANDING | REMARKS: #19 AIRWAYS

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OPERATIONAL REPORT ON QUILL CREEK PROPERTY, 1953.



Introduction:

The writer accompanied by three assistants ascended Quill Creek on May 16, 1953, and a camp was established at approximately the same position as that of the 1952 season, which was on a small lake in the Arch creek valley. The ascent was difficult at that time of year due to a valley glacier on Quill Creek, but we were able to get a four-wheel drive jeep all the way to the proposed camp site.

As laid down in the operational schedule for the Quill Creek property the following tasks were completed:

- (1) Preliminary survey and tagging of claim.
- (2) Geological mapping and prospecting.
- (3) Stripping and trenching main showing.
- (4) Magnetometer survey.

On July 21st, the writer was moved to the Pelly River area. The continuation of the work at Quill Creek was left in charge of Mr. J. Gauvin for the remainder of the field season which terminated early in September.

Location and Extent of Property:

The property is located on the Quill-Arch Creeks divide in the Kluane mountains. It is reached by a bulldozed road, 12 miles in length, that commences at mileage 1111.6 on the Alaska Highway. During the 1952 season, 77 claims were staked for Prospectors Airways Company. Ten more claims were staked, in a gap found to exist between the Company's ground and a property under option to Teck Exploration Co., in the summer of 1953.

092019

The entire group was surveyed by chain, compass and barometer and tied into the topography as shown on the prepared contour map. The claim posts were tagged.

Geology:

The property straddles an anticlinal structure with the axis trending in an east-westerly direction. Within this major structure, minor faults and shear zones are common and more detailed investigation is necessary if these complexities are to be clarified. (See accompanying section A.A.1.)

The general sequence of geological events in the area, however, appears to be fairly straight forward.

Older Volcanics:

Before the mountain building activity commenced, this area was underlain by a series of andesitic lavas and tuffs. These rock types are now exposed in places along lower portions of the Arch-Quill Creeks valley. The lavas vary from red to green, and andesitic in composition and exhibit an amygdaloidal texture in places. The tuffaceous horizons, specifically the one along our boundary with the Hudson Bay Company's property are red and purple in colour. They are complexly altered and weather readily.

Marine Sedimentary Series:

A series of marine sediments was deposited on the older volcanic horizon. It consists of arenaceous horizons, composed mainly of sandstone; argillaceous types, varying from bedded shales to very fissile black slates; and limestone horizons, some of which are fossiliferous. The fossils are principally ceolenterates of the cup corral type and although no specific identification was made there appeared to be *Heliophyllum Halli*, and/or *Zaphrentis* both

being Tetracoralla that reached their acme during Paleozoic time. In one place, a brachiopod of the spirifer type was noted. The corals were found in the limestone horizons on both limbs of the anticline.

Volcanic Series:

It appears that a period of uplift terminated the marine sedimentation. At this time volcanic activity commenced. The initial deposit of this type is an agglomerate. It is of an extremely heterogeneous type composed of andesitic fragments and detrital material consisting of slates and other members of the marine series that were swept up with the initial lava flows. This horizon underlies the huge thicknesses of red and green andesite that followed. The andesites are amygdaloidal and vesicular in places, are fairly recent and relatively unaltered. Included with this series are thin tuffaceous horizons.

Intrusions:

After the volcanic series was laid down the area underwent a period of mountain building resulting in intense folding and faulting. It is with this period, or shortly after it, that the intrusive rocks appear to be associated.

Diorite sills and stocks were intruded during or shortly after the folding. This rock type is particularly abundant along the south slope of the Arch Creek valley. It is buff to grey in colour, consists of quartz feldspar, biotite, muscovite and hornblends. It is questionable if all the rocks mapped as diorite are intrusive, some of them may be reworked arenaceous sediments. Contacts are rarely evident so genesis of the rock type could not be clarified by study of the same.

Peridotite sills were injected contemporaneously with the folding or later. This rock type appears to have practically all the olivine altered to serpentine. It is highly fractured exposing slickensided surfaces. Frequently associated with these slip planes is the development of picrolite and amphiboles in the form of tremolite and actinolite. The peridotites bear a direct genetic relationship to the nickel copper mineralization in this area. It is significant to note that the peridotites occur only along the north limb of the anticline. This indicates that these intrusions may be associated with an adjacent synclinal axis or to a fissure associated with the shakwak fault pattern at depth.

Quartz-Feldspar porphyry dikes are the youngest intrusive rock type on the property. An altered variety was observed cutting the main peridotite sill in the gully west of the main showing. This type consists of quartz and feldspar with an almost aplitic texture. It is not unlike some of the fine grained quartz diorites observed. This porphyry is the only rock type on the property that exhibits a defined cross cutting relationship in places, to the rest of the strata.

Economic Geology:

As detailed prospecting of the peridotite contacts failed to reveal any new mineralized zone of note, work was concentrated on the showing discovered late in the 1952 field season. Stripping and rock trenching of this showing were undertaken.

At the close of the 1952 season, the showing consisted of a zone of massive sulphides 27" wide and ten feet in length. When this season's trenching was terminated, lenticular zones of massive sulphides, up to 5 feet in width had been exposed for a length of 40 feet.

The massive sulphide, on a megascopic examination, consists of pyrrhotite containing blebs and stringers of Chalcopyrite. The pyrrhotite is nickeliferous and may have pentlandite intimately associated with it. This sulphide body was deposited in sheared argillite near the contact of the peridotite sill. Fine nickeliferous sulphides are disseminated throughout the peridotite for a distance of ten feet from the contact. A carbonaceous alteration halo is found in the argillites adjacent to the sulphide zone.

The showing was sampled as indicated on the accompanying plan. This work was done by Mr. J. Gauvin in August, 1953. The results of his samples, taken across the showing intermittently for a length of 38' gave an average of 2.03% nickel and 1.79% cu. over an average width of 3.5'.

Magnetometer Survey:

As indicated on the accompanying plan a magnetometer survey using a Sharpe D-I-M instrument was carried out for 4,000 feet along the strike of the peridotite sill. An anomalous condition is present due to the magnetic characteristics of the peridotite. The contours also indicate that the dip is to the north, (i.e. the peridotite tends to conform to the marine series which, at this point dips at 55 degrees to the north). As the sulphides present are non-magnetic for all practical purposes, no indications of sulphide zones can result from such a survey. The peridotite sill may extend for some distance east of the showing as indicated by the extension of the anomaly in this direction. No outcrops of peridotite have been found in this area, although occasional pieces of float were picked up.

Conclusion and Recommendations:

In this area, the sulphides occur in small high grade lenses that are intimately associated with the periphery of the peridotite sill. The sulphides are quite massive and appear to have been squeezed out of the peridotite magma into fissures in the argillites and along the peridotite contact. This is also true of the Hudson's Bay Company's showings on the adjoining property.

The following recommendations are made to guide further exploratory work.

- (1) Self potential and/or electro-magnetic survey of the magnetic anomalous area along the peridotite to test favourable area for sulphide deposits.
- (2) Diamond drilling to test downward extension of sulphide zone at main showing.

By these two methods the approximate potentialities can be determined within 2 months.

F. A. Campbell, P. Eng.

November 23, 1953.

Toronto, Ontario.

CONFIDENTIAL

October 23, 1953

(A)

QUILL CREEK

<u>Claim Name</u>	<u>Record No.</u>	<u>Group</u>	<u>Work Recorded</u>	<u>Record Date</u>	<u>In Good Standing Till</u>
Chisholm	1-2 63086/87	1 - 1582	\$ 248.98	July 29, 1952	July 29, 1955
Chisholm	3-6 63088/91	5 - 1622	"	"	"
Chisholm	7 63092	3	"	"	"
Bell	1-2 63079/80	1	"	"	"
Bell	3-6 63081/84	5	"	"	"
Bell	7 63085	3	"	"	"
Blair	1 63072	3	"	"	"
Blair	2-5 63073/76	5	"	"	"
Blair	6/7 63077/78	1	"	"	"
Enger	1 63064	3	"	July 28, 1952	July 28, 1955
Enger	2-5 63065/68	5 -	"	"	"
Enger	6/7 63069/70	1	"	"	"
A. Smith	1-4 63279/82	4 -	561.48	Aug. 12, 1952	Aug. 12, 1957
A. Smith	5-8 63283/86	1	238.98	"	Aug. 12, 1955
Andre	1-6 63160/65	4 -	561.48	Sept. 8, 1952	Sept. 8, 1957
Andre	7-8 63174/75	4 -	"	Sept. 11, 1952	Sept. 11, 1957
Enoch	1-4 63176/79	3	248.98	Sept. 5, 1952	Sept. 5, 1955
Enock	5-8 63180/83	4 -	561.48	Sept. 5, 1952	Sept. 5, 1957
Mac	1-8 63152/59	2	248.98	Sept. 8, 1952	Sept. 8, 1955
Gennis	1-4 63166/69	1	248.98	Sept. 8, 1952	Sept. 8, 1955
Gennis	5-8 63170/73	3	"	"	"
Bak	1-5 63273/77	2	248.98	Sept. 3, 1952	Sept. 3, 1955
Bak	7 63278	2	"	"	"
Bak	6&8 64357/58	2	"	Sept. 24, 1952	Sept. 24, 1955
Campbell	1 63184	3	248.98	Sept. 24, 1952	Sept. 24, 1955

Total amount of work filed:

June 10th, 1953 against all 5 groups	\$ 11,197.64
August 10, 1953 " " " "	8,006.60
August 10, Represent. work applied to Group 4 only	<u>5,000.00</u>
	<u>\$ 24,204.24</u>

Groups Works Certificate received. These show only the work recorded on June 10th, New Works Certificates have to be applied for before July 29th, 1954 and reference should be made to additional work filed August 10th. All claims transferred to P.A. Copies of Transfers on file. Grants for Blair and Bell claims not received. All others on file.

~~Work done in 1953:~~

Rec. No. 66060 - 66065 Rec. Date June 26, 1953
 Rec. No. 66066 - 66069 Rec. Date June 29, 1953

G. EHRLICH

2 copies to OS

October 23rd, 1953

QUILL CREEK

<u>Claim Name</u>	<u>Record No.</u>	<u>Group</u>	<u>Work Recorded</u>	<u>Record Date</u>	<u>In Good Standing Till</u>
Ghisholm 1-2	63086/87	1	\$ 248.98	July 29, 1952	July 29, 1955
Ghisholm 3-6	63088/91	5	"	"	"
Ghisholm 7	63092	3	"	"	"
Bell 1-2	63079/80	1	"	"	"
Bell 3-6	63081/84	5	"	"	"
Bell 7	63085	3	"	"	"
Blair 1	63072	3	"	"	"
Blair 2-5	63073/76	5	"	"	"
Blair 6/7	63077/78	1	"	"	"
Enger 1	63064	3	"	July 28, 1952	July 28, 1955
Enger 2-5	63065/68	5	"	"	"
Enger 6/7	63069/70	1	"	"	"
A. Smith 1-4	63279/82	4	561.48	Aug. 12, 1952	Aug. 12, 1957
A. Smith 5-8	63283/86	1	248.98	"	Aug. 12, 1955
Andre 1-6	63160/65	4	561.48	Sept. 8, 1952	Sept. 8, 1957
Andre 7-8	63174/75	4	561.48	Sept. 11, 1952	Sept. 11, 1957
Enoch 1-4	63176/79	3	248.98	Sept. 5, 1952	Sept. 5, 1955
Enoch 5-8	63180/83	4	561.48	Sept. 5, 1952	Sept. 5, 1957
Mac 1-8	63152/59	2	248.98	Sept. 8, 1952	Sept. 8, 1955
Gennis 1-4	63166/69	1	248.98	Sept. 8, 1952	Sept. 8, 1955
Gennis 5-8	63170/73	3	"	"	"
Bakk 1-5	63273/77	2	248.98	Sept. 3, 1952	Sept. 3, 1955
Bak 7	63278	2	"	"	"
Bak 688	64357/58	2	"	Sept. 24, 1952	Sept. 24, 1955
Campbell 1	63184	3	248.98	Sept. 24, 1952	Sept. 24, 1955

Total amount of work filed:
 June 10th, 1953 against all 5 groups \$ 11,197.64
 August 10th, 1953 " " " " 8,006.60
 August 10th, Represent. work applied to Group 4 only. 5,000.00
\$ 24,204.24

Received

TRIR

Groups Works Certificate received. These show only the work recorded on June 10th, New works Certificates have to be applied for before July 29th, 1954 and reference should be made to additional work filed August 10th. All claims transferred to P.A. Copies of Transfers on file. Grants for Blair and Bell claims not received. All others on file.

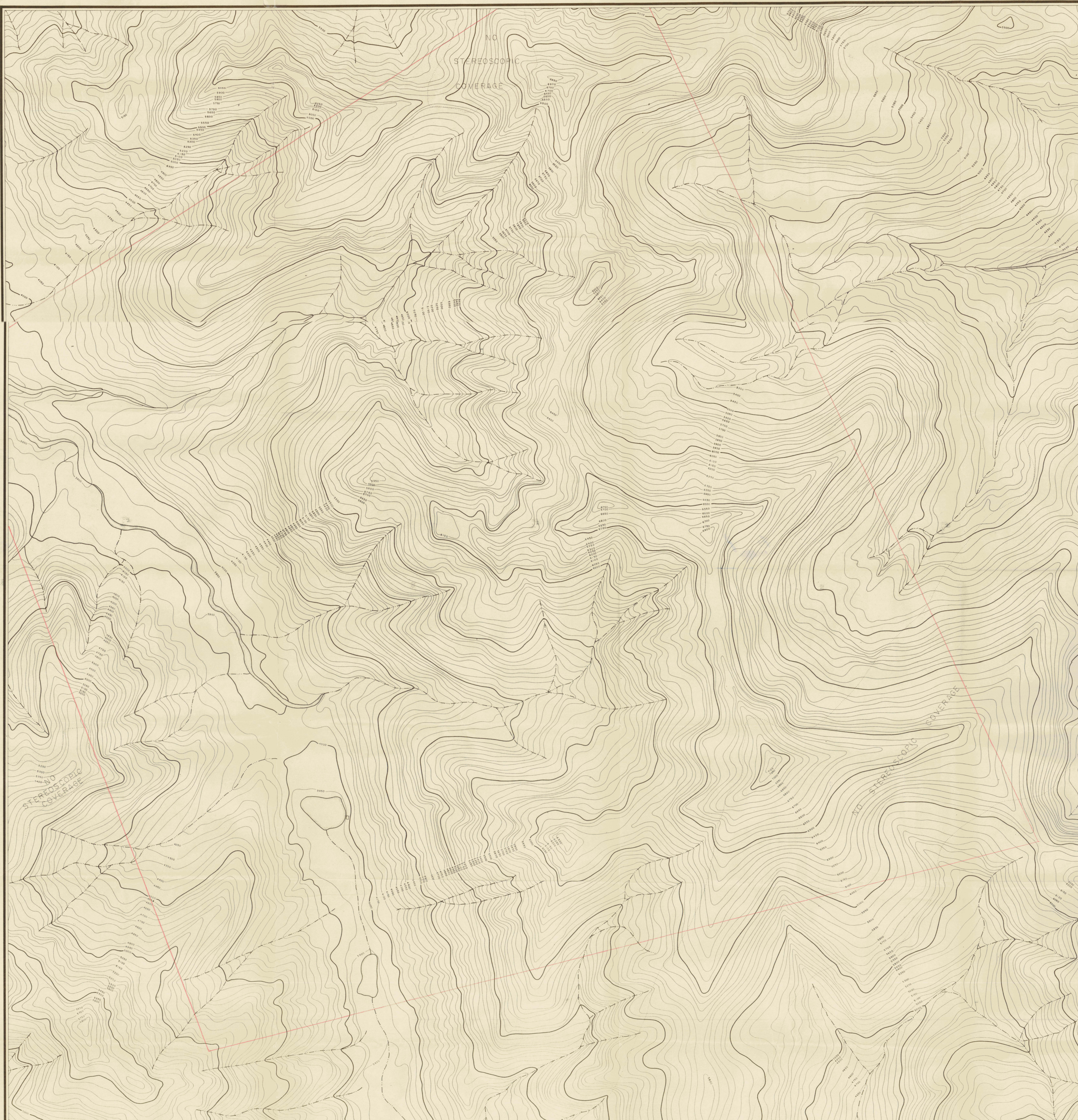
New Claims Staked in 1953:
 Jack 1-6 Rec.No. 66060 - 66065 Rec. Date June 26, 1953
 Mike 1-4 Rec.No. 66066 - 66069 Rec. Date June 29, 1953

No grants received yet, nor copies of transfers. Including the 10 claims staked in 1953. The total of Quill Creek Claims is 87.

received in the meantime

G. Ehrlich

Copies made



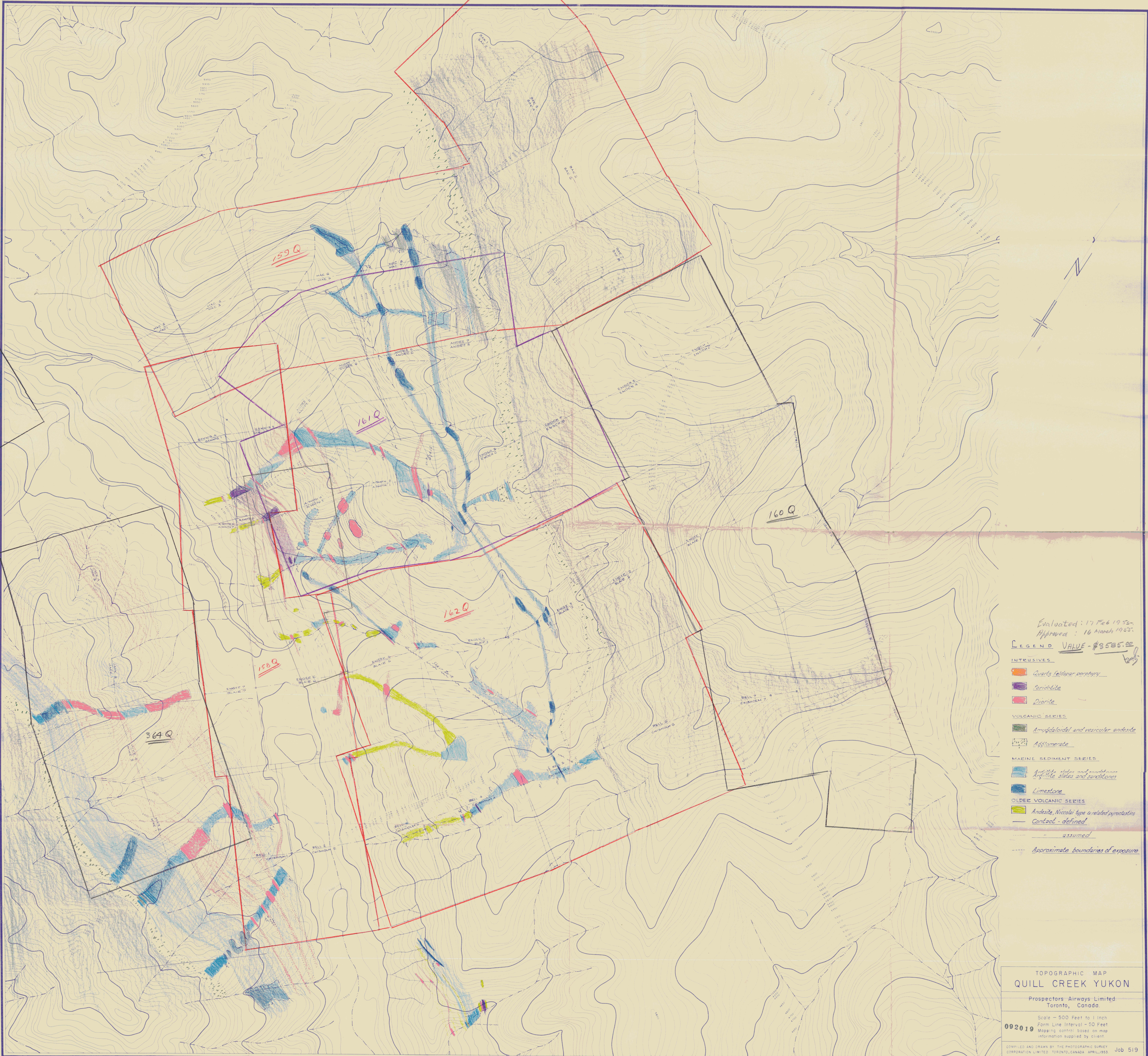
PROSPECTORS AIRWAYS
BOUNDARY

*Approved
F. G. Stewart
13 Nov 58.*

TOPOGRAPHIC MAP
QUILL CREEK YUKON
Prospectors Airways Limited,
Toronto, Canada

Scale - 500 Feet to 1 Inch
Form Line Interval - 50 Feet
Mapping control based on map 092019
Information supplied by client

COMPILED AND DRAWN BY THE PHOTOGRAPHIC SURVEY
CORPORATION LIMITED, TORONTO, CANADA, APRIL, 1953. Job 519



Evaluated: 17 Feb 1953
 Approved: 16 March 1953
 LEGEND VALUE - \$3585.00

INTRUSIVES
 Quartz felsic porphyry
 Peridotite
 Diorite

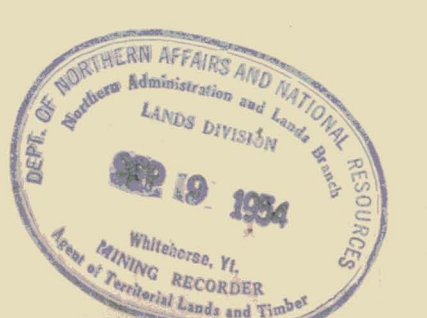
VOLCANIC SERIES
 Amphiboloidal and vesicular andesite
 Agglomerate

MACHINE SEDIMENT SERIES
 Argillite slates and sandstones
 Limestone

OLDER VOLCANIC SERIES
 Andesite, Niccolai type related pyroclastics
 Contact - defined
 assumed
 Approximate boundaries of exposure

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TOPOGRAPHIC MAP
QUILL CREEK YUKON
 Prospectors Airways Limited
 Toronto, Canada
 Scale - 500 Feet to 1 inch
 Form Line Interval - 50 Feet
 Mapping control based on map
 information supplied by client
092019
 COMPILED AND DRAWN BY THE PHOTOGRAPHIC SURVEY
 CORPORATION LIMITED, TORONTO, CANADA, APRIL 1953 Job 519



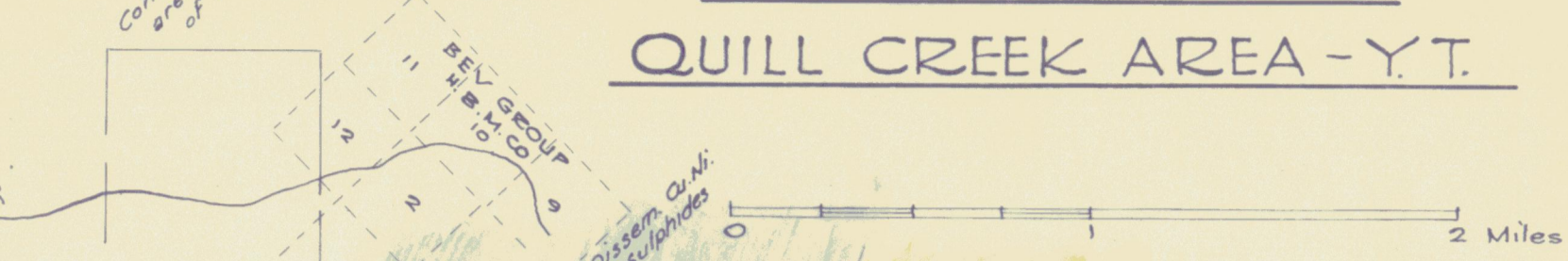
PROSPECTORS AIRWAYS CO. LTD.

RECORDED CLAIMS

QUILL CREEK AREA - Y.T.

Conwest staked in this area and have Ni. show of scattered sulphides

To Donjek River



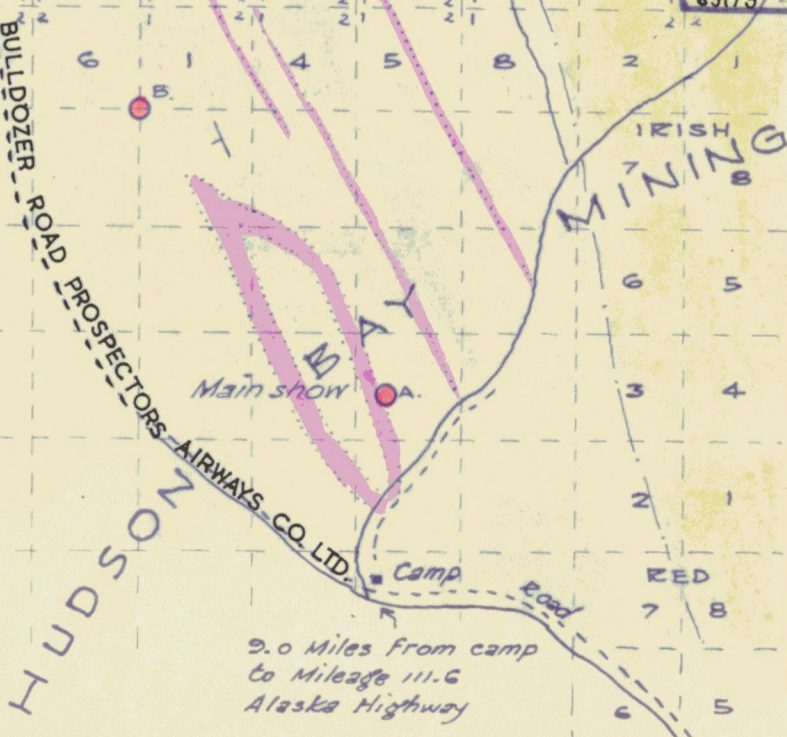
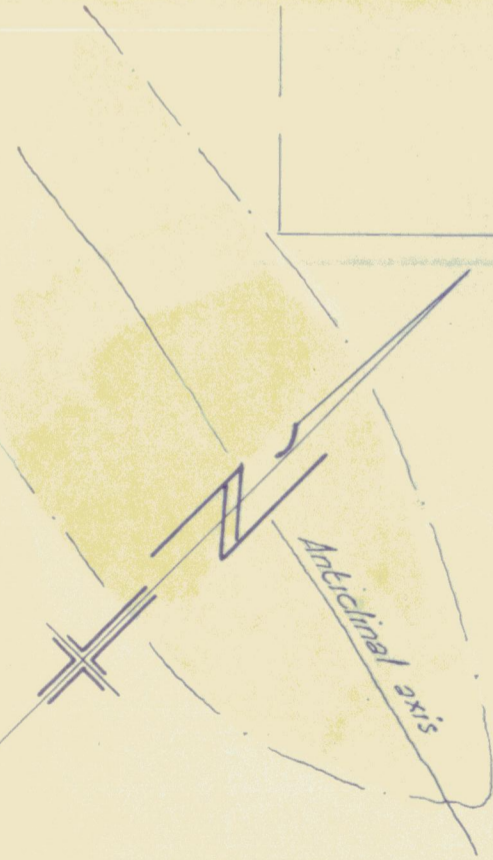
Dissem. Cu. Ni. sulphides

FLYNN INTERESTS	
PLUTO	63273, 63274, 63275, 63276, 63277, 63278
SATURN	63169, 63166, 63167, 63161, 63163, 63165, 63175, 64358
JUNO	63286, 63284, 63282, 63280, 63181, 63182, 63178, 63186
MARS	63070, 63069, 63068, 63067, 63066, 63065, 63064, 63184
VENUS	63079, 63080, 63081, 63082, 63083, 63084, 63085, 63171
HUDSON BAY	63086, 63087, 63088, 63089, 63090, 63091, 63092, 63172
JEOP	63173

MAC GROUP		BAK GROUP	
4	6	2	1
63153	63155	63157	63159
1	3	5	7
63152	63154	63156	63158
CENNIS GROUP		ANDRE GROUP	
4	3	3	5
63169	63168	63160	63162
1	2	2	4
63166	63167	63161	63163
8	6	4	2
63286	63284	63282	63280
A. SMITH		ENOCH GROUP	
6	4	7	3
63285	63283	63281	63279
7	5	3	1
63070	63069	63068	63067
BLAIR		CAMPBELL	
7	6	5	4
63078	63077	63076	63075
2	3	4	5
63079	63080	63081	63082
BELL		GENNIS	
2	3	4	5
63079	63080	63081	63082
CHISHOLM		GENNIS	
1	2	3	4
63086	63087	63088	63089
RAM		EAGLE	
8	7	2	3
63086	63087	63088	63089

MUSKATEER GROUP
E. BLEILER
(24 CLAIMS)

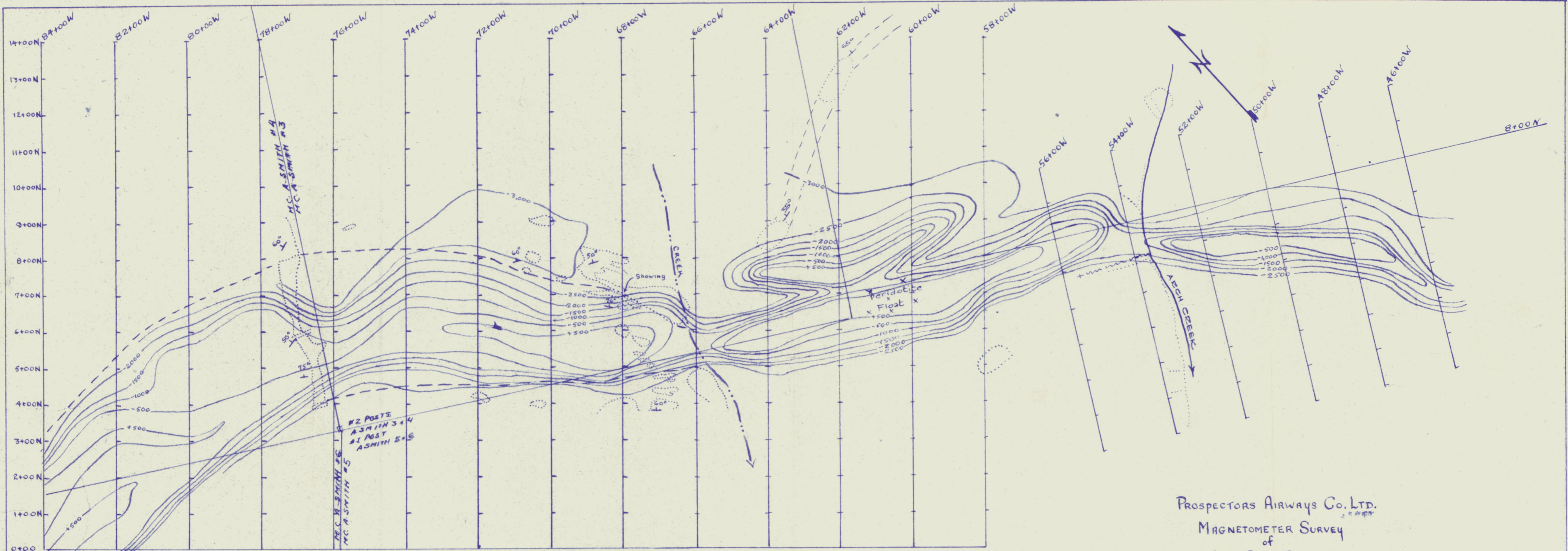
**PROSPECTORS
AIRWAYS**



9.0 Miles from camp to Mileage 111.6 Alaska Highway

- Peridotite sill
- Predom. lava
- Predom. Sed.
- Mineralized zone
- Geol. contact assumed
- Motor road

Approved
[Signature]
13 Nov. 53.



#2 POSTS
 ASMITH 3 & 4
 #1 POST
 ASMITH 5 & 6

PROSPECTORS AIRWAYS CO. LTD.
 MAGNETOMETER SURVEY
 of
 QUILL CREEK PROPERTY
 Scale 1" = 200'

- LEGEND
- Sulphides
 - Qtz. Feld. Porphyry & Diorite
 - PERIDOTITE
 - ARGILLITE □ LIMESTONE
 - GREENSTONE (Niccolai Type)
 - ANDESITE

F.A.C. Nov. 20/53.

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