

GEOLOGICAL and GEOPHYSICAL REPORT

"NORKEN", "FOOL", "PEAK", and "RAIN" CLAIM GROUPS

SHELDON LAKE MAP AREA, YUKON TERRITORY

Latitude 62°15' N.
Longitude 130°43' W.

WORK PERIODS - August 18 - September 1, 1959.
- June 1 - August 4, 1960.

by

L. K. Lytle, P.Eng.

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PLANS ENCLOSED WITH REPORT

Plan - location of claim group	scale: lin. - $\frac{1}{4}$ mile
Claim Grouping for assessment work	lin. - $\frac{1}{4}$ mile
Plan - Profile along base line	lin. - 600 ft.
Plan - Showing relation of survey lines to claims	lin. - 600 ft.
Plan - EM survey	lin. - 100 ft.
Plan - Mag. survey	lin. - 100 ft.
Plan - EM and mag. survey - prospect	lin. - 200 ft.
Plan - "The Nipple" showing	1 in - 20ft.
Plan - "Copter" showing	lin. - 20ft.

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REPORT
on GEOPHYSICAL AND GEOLOGICAL WORK COMPLETED
on the "NORKEN", "FOOL", "PEAK" and "RAIN" CLAIM GROUPS
SHELDON LAKE MAP AREA - YUKON TERRITORY

PROPERTY - location and access

The claim groups is located in the Sheldon Lake Map area, Y.T. The approximate center of the group is at 62°15' north latitude and 130°43' west longitude. A small creek, tributary to the Pelly River, crosses the western portion of the claim group. The group is 177 miles N.51°E. of Whitehorse, Y.T.

Access, to date, has been entirely by aircraft from Whitehorse - 180 airmiles if weather permits a direct flight. Aircraft can land on Stall Lake (a beaver pond) at elevation 3900 ft. (approx.) located two miles directly north of the west showing on the claims and may take off from the lake with a reduced load.

CLAIM GROUP AND GROUPING

The claim group consists of 56 contiguous mineral claims. For the work which has been completed and described herein, assessment work credit is applied for only forty of the claims. These forty claims have been divided into three contiguous groups of contiguous claims, namely:-

Group A - Norkem No.1 to 4 incl. - 74451 to 74454 incl.
Gr Norkem No. 9, 10 - 74445, 74446
Rain No. 1 to 8 incl. - 74947 to 74954 incl.

Group B - Fool No. 1, 3, 4 - 74441, 74449, 74450
Peak No. 4 to 16 incl. - 74997 to 75009 incl.

Group C - Fool No. 2 - 74442
Norkem No. 5 to 8 incl. - 74455, 74456, 74443, 74444
Norkem No. 11, 12 - 74447, 74448
Peak No.1 to 3 incl. - 74994 to 74996 incl.

WORK PERFORMED - 1959

Between August 18th. and September 1st., 1959, limited work was carried out on the "Norkem" and "Fool" groups particularly the "Norkem No.1" and the "Fool No.4" claims. This work consisted of trenching, sampling and geological mapping.

Other than a limited area of broken, rusty weathering quartzites and argillites on the top of the ridge on claim "Norkem No.11" there are no outcrops on this group other than the two showings, "The Nipple" and the "Copter". These showings were mapped in detail and trenched and sampled in part. Descriptions of the showings are included under "Geology". Plans of the showings are enclosed in the binder.

Approved
[Signature]
[Signature]

WORK PERFORMED - 1960

Between June 1st. and August 4th., 1960, work was carried out on the "Norken", "Tool", "Peak" and "Rain" claim groups. This work consisted of linecutting followed by electromagnetic and magnetometer surveys. Prospect line EM and magnetometer surveys were also carried out with some follow up on the conductors that were located. The claims were also carefully prospected. Some trenching was done on a new showing "Peak". Pits were put down at various locations of interest as indicated by the surveys.

LINECUTTING

A base line was cut and chained. The zero point was taken over the heavy sulphides in the trench on "The Nipple" showing and the line extended N.75°E and S.75°W. along the apparent general strike of the formations.

Picket lines were blazed and chained at right angles to the base line. These picket lines were cut at 200 ft. intervals in the vicinity of the showings and at 300 ft. intervals elsewhere.

ELECTROMAGNETIC SURVEY

This survey was carried out using an EM5 vertical loop electromagnetic survey unit manufactured by Electronic Associates of Toronto. This unit has an effective range of at least 1000 feet.

The survey was carried out over the grid with the transmitter located on a crossover and readings taken at 100 ft. intervals along the picket lines to a maximum distance of 600 ft. from the transmitter and with a spread of up to 600 ft. The picket lines were extended as the survey was carried out so that the grid would cover the area of the principal conductor. In the case of the prospect lines the transmitter was moved approximately every 1000 ft.

Results of the survey and prospect survey are shown on two plans enclosed with this report.

MAGNETOMETER SURVEY

The survey was carried out with an Askania vertical magnetometer with a sensitivity of 26 gammas. Readings were taken at intervals of 100 ft. along the grid and prospect lines. Corrections were made for diurnal variation.

Results of the survey are shown on the plan enclosed with this report.

GEOLOGY

The rocks of the area consist principally of rusty weathering, thinly bedded argillites and quartzites with vertical to steep south dips and striking generally in an east-west direction. These are part of a very extensive chert formation striking through the region.

Outcrops are extremely limited over the claim group. Other

than the few outcrops at "The Nipple" and "Copter" showings the only outcrops are a small amount of argillite and blackish quartzite on "Norken No. 12" and "Peak" no. 12 and 13 claims.

Observation of the limited outcrops in the area adjacent to the claim group indicates that the mineralized zones are located along or bordering the south limb of an anticlinal axis.

Known intrusives consist of a gabbro sill, some 25 ft. thick, just to the north of the claim group. Also a fairly wide quartz porphyry dike was observed on claim "Peak" No. 21. This dike appears conformable to the quartzites. A band of quartz porphyry float located on the sidehill on claim "Norken" No. 11 indicates another similar dike in this area. The porphyry contains finely disseminated pyrrhotite.

SHOWINGS

Two showings, the "Copter" and "The Nipple" were known in 1959 at the time of the staking of the first portion of this group. Further prospecting this season has uncovered three more zones, namely the "Peak", "Peak South" and "Claim Line" zones. In addition, frost heaved float, with sulphide mineralization has been located in a number of places over or adjacent to conductors and anomalies shown in the EM and magnetometer surveys.

The principal mineralization at all the showings occurs in fractured quartzite which is quite fine grained and varies from light to dark gray in colour. The sulphides occur finely disseminated and as small blebs, also as coatings and seams along fractures. The principal sulphides noted to date are pyrite, pyrrhotite, chalcopyrite, sphalerite and galena. Patches and seams of malachite and azurite occur widely.

At the showings the rocks are rusty weathering where exposed on steep faces with varying amounts of malachite and azurite. At the top of the faces and on the top of flat outcrops much of the rust from the oxidation of the sulphides has been leached out leaving a gray coloured weathered outcrop - not indicative of the underlying mineralization. A good portion of the mineralization is not evident until the rock has been broken into underneath the leached zone.

"THE NIPPLE" SHOWING

This showing is located along the north side at the top of a small nipple-like hill at an approximate elevation of 4200 feet. Several small outcrops occur in an area 35 ft. wide by 105 ft. long as shown on the plan enclosed with this report. The rock is light to dark gray coloured quartzite, thinly bedded, fractured and dipping from vertical to 82° south. The general strike is N. 75° E. and shows gentle folding. The quartzites are mineralized throughout in varying amounts as shown on the plan. The showing is open at both ends and the lateral limits of mineralization are covered by overburden.

Blasting in trenches to a depth of four feet in the more heavily oxidized material did not expose fresh rock.

"COPTER" SHOWING

This showing strikes N.75°E. from a small creek at the southwest corner of claim "Fool" No.4. Scattered outcrops occur for a distance of 310 feet to the east over a width of 100 feet. The showing is open at both ends and the lateral limits of the mineralization are covered by overburden.

The rocks are light to dark gray quartzites with some interbedded argillites and limey beds. All are thinly bedded, fractured, and dipping from 80° to 87° to the south. There is gentle folding along the strike with minor dragfolding in sections. Argillites outcrop a short distance north of the showing. Blasting and trenching of some of the more heavily mineralized sections did not get below the oxidized and leached material. There is mineralization throughout in varying amounts, particularly in the quartzites, as shown on the plan enclosed with this report.

"PEAK" SHOWING

This showing is located on the top of the high ridge some 600 feet south of the base line at elevation 5500 ft. (approx). It consists of oxidized and leached quartzite with some malachite and azurite over a width of 100 feet. Thinly bedded argillites border this zone. The dip is vertical to steeply south as noted in the trench put down across a portion of the showing. The surface rock is highly weathered and broken up. The quartzites and mineralization are similar to that at "The Nipple".

"PEAK - SOUTH" SHOWING

This showing is similar to that of the "Peak". It has a width of 30 feet and is located 300 feet south of the "Peak".

"CLAIM LINE" SHOWING

This showing consists of frost heaved gray quartzite extending in a narrow band for several hundred feet parallel to the claim line of "Peak" No.5 and some 300 feet from it. This quartzite contains mineralization similar to that in the other zones. Due to heavy overburden nothing is known of the zone width or adjoining rock.

Other than the few outcrops described under "Geology" and "Showings", no other outcrops have been located on the claim group despite intensive prospecting.

MAGNETOMETER AND EM SURVEY RESULTS

Based on the 1959 examination of the "Copter" and "The Nipple" showings it appeared that these two showings were probably parts of the same mineralized zone. These two showings are one mile apart and all the area between and on projected strike of the zone is covered by overburden. It was therefore decided to carry out an EM and magnetometer survey to trace out the zone, assuming a conductor might be located over or bordering the zone. The results would also be of assistance in determining the most favourable sections of the zone if drilling were carried out later.

The survey was started over "The Nipple" showing and carried in both directions along strike. Contrary to preliminary thoughts, no conductor was obtained over the heavy mineralization in the trench on the showing but was located 140 feet north. This conductor was then traced 1000 feet west, where it terminates and 7400 feet east where it becomes weak. It shows a gently folded structure along the general N.75°E. strike. The conductor is slightly displaced at several points by cross faults.

The "Peak" showing, similar to "The Nipple", lies to the south of the conductor. These two showings would appear to be part of the same mineralized zone both with regards to their relation to the conductor and similar rock types and mineralization.

The "Copter" showing is part of a zone parallel to and lying north of the "Peak-Nipple" zone. The "Copter" showing similarly lies to the south of a conductor. This conductor has been traced for 800 feet without terminating. The parallel conductor, some 500 feet north of "The Nipple" showing, may be the continuation of the same conductor located north of the "Copter" showing.

Several other parallel conductors are indicated.

Test pits over the principal conductor, in places where the overburden appeared lightest, failed to reach bedrock. Thus the cause of the conductor is not known. There are no outcrops along or bordering it. From mineralized float located in the conductor areas it is indicated that there is mineralization associated with the conductors. This helps confirm the mineralization suggested by the magnetic anomalies which are associated with the conductor. The high magnetic anomalies which lie to the north of the conductor zones and which are not associated with any EM conductors suggest areas of mineralization which may be similar to that at "The Nipple" showing which lies off from the EM conductor.

The prospect lines carried across the property in the vicinity of Stall Creek and on the "Rain" group show several parallel conductors with associated magnetic anomalies. Several of these were traced up to 800 feet in length to determine continuity and strike. They are all in an area covered by overburden.

Considerable additional EM and magnetometer survey work could be done on the property. This work however is not warranted at present and not until some assessment has been made as to the extent and concentration of mineralization along the principal conductor. This can only be done by diamond drilling.

Respectfully submitted,



L. K. Lytle, P.Eng.

Toronto, Ont.
September 13, 1960.

EXPENSES APPLICABLE FOR ASSESSMENT WORK

The following expenses are applicable to the three groups of claims totalling 40 claims.

The claim groups have been so divided that the total amount of work done on each group, on a per claim per group basis, is equal. Therefore one-fortieth of the total costs should apply to each claim. The total costs of work for each group on the Applications to record assessment work are on this basis.

SUMMARY OF COSTS

Wages	- as detailed below	-----	\$ 4186.45
Supplies	- as detailed below	-----	1268.87
Equipment rental	- as detailed below	-----	650.00
Miscellaneous	- as detailed below	-----	179.68
Air transportation	- as detailed below	-----	2100.00
Transportation	- as detailed below	-----	501.47
Plans and report	- as detailed below	-----	283.50
			<u>\$ 9169.97</u>
			(\$229.24 per claim)

WAGES

J. J. Johnson	- Flin Flon, Man. ; operator; May 24 - Aug. 4, 1960	-	1046.45
N. A. Gallant	- Edmonton, Alta. ; May 28 - July 30, 1960	-	640.00
P. D. Johns	- Whitehorse, Y.T.; June 1 - June 30, 1960	-	375.00
A. R. Dickson	- Whitehorse, Y.T.; June 1 - June 30, 1960	-	375.00
L. K. Lytle	- Toronto, Ont. ; May 24 - Aug. 4, 1960	-	<u>1750.00</u>
			4186.45

SUPPLIES

Explosives Ltd.	- Whitehorse, Y.T.	-	\$ 26.63
Taylor & Drury	- "	-	35.84
N.C. Co.	- "	-	315.96
Husky Bldg. Supplies	- "	-	50.31
Yukon Brg. & Equip Co.	- "	-	30.00
Lunde Metal Co.	- "	/	20.00
Campbells Ltd.	- "	-	3.15
Tourist Services	- "	-	671.39
Sportmens Store	- Toronto, Ont.	-	42.40
Aikenheads Hdwre.	- "	-	1.84
Taylor, Pearson Case	- Edmonton, Alta.	-	37.58
T. Eaton Co.,	- "	-	25.95
Army & Navy	- "	-	<u>25.82</u>
			1286.87
	less food supplies to other s		<u>1800</u>
			\$ 1268.87

EQUIPMENT RENTAL

EM equipment rental	- two months	-	\$ 300.00
Magnetometer	" - " "	-	<u>350.00</u>
			\$ 650.00

MISCELLANEOUS

Air photos		-	\$ 19.90
Whitehorse assay office		-	141.00
Misc.		-	<u>18.48</u>
			\$ 179.68

AIR TRANSPORTATION

Pacific Western Airlines - Whitehorse to Stall Lake
7½ trips - \$ 2100.00

TRANSPORTATION

C. N. Express - survey equip. - \$ 51.47
L.K. Lytle - Toronto to Whitehorse, return - 390.00
- travelling and Whitehorse living expenses - 60.00
\$ 501.47

PLANS AND REPORT

L. K. Lytle - wages - \$ 210.00
- living expenses - 73.50
283.50

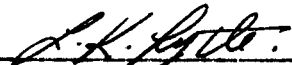
Above expenses certified correct


L. K. Lytle, P. Eng.

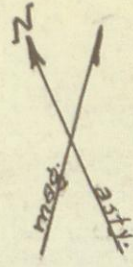
The following expenses incurred in 1959 re the two following claims are applicable for assessment work credit.

<u>August, 1959</u>	<u>re claim Fool No. 4</u>	<u>re claim Norcken No. 1</u>
Wages - N. A. Gallant, Edmonton, Alta	39.00	65.00
- L. K. Lytle, Toronto, Ont.	75.00	125.00
Food and Supplies	<u>36.00</u>	<u>60.00</u>
	150.00	250.00

Above expenses certified correct


L. K. Lytle, P. Eng.

/lk1



			RAIN #16 75121	RAIN #15 75120	RAIN #14 75119	RAIN #13 75118							
RAIN #3 74949	RAIN #2 74948	RAIN #1 74947	NORKEN #8 74444	NORKEN #6 74456	NORKEN #7 74443	NORKEN #12 74448	FOOL #2 74442	FOOL #4 74450	PEAK #12 75005	PEAK #13 75006	PEAK #14 75007	PEAK #15 75008	PEAK #16 75009
RAIN #5 74961	RAIN #4 74950	NORKEN #10 74446	NORKEN #5 74455	NORKEN #1 74451	NORKEN #2 74452	NORKEN #11 74447	FOOL #1 74441	FOOL #3 74449	PEAK #11 75004	PEAK #10 75003	PEAK #9 75002	PEAK #8 75001	
RAIN #8 74954	RAIN #7 74953	RAIN #6 74952	NORKEN #9 74445	NORKEN #3 74453	NORKEN #4 74454	PEAK #1 74994	PEAK #2 74996	PEAK #3 74996	PEAK #4 74997	PEAK #5 74998	PEAK #6 74999	PEAK #7 75000	
RAIN #12 75117	RAIN #11 75116	RAIN #10 75115	RAIN #9 75114	PEAK #24 75069	PEAK #23 75068	PEAK #22 75067	PEAK #21 75066	PEAK #20 75065	PEAK #19 75064	PEAK #18 75063	PEAK #17 75062		

NORKEN, FOOL, PEAK + RAIN GROUPS

SHELDON LAKE MAP AREA

YUKON TERRITORY

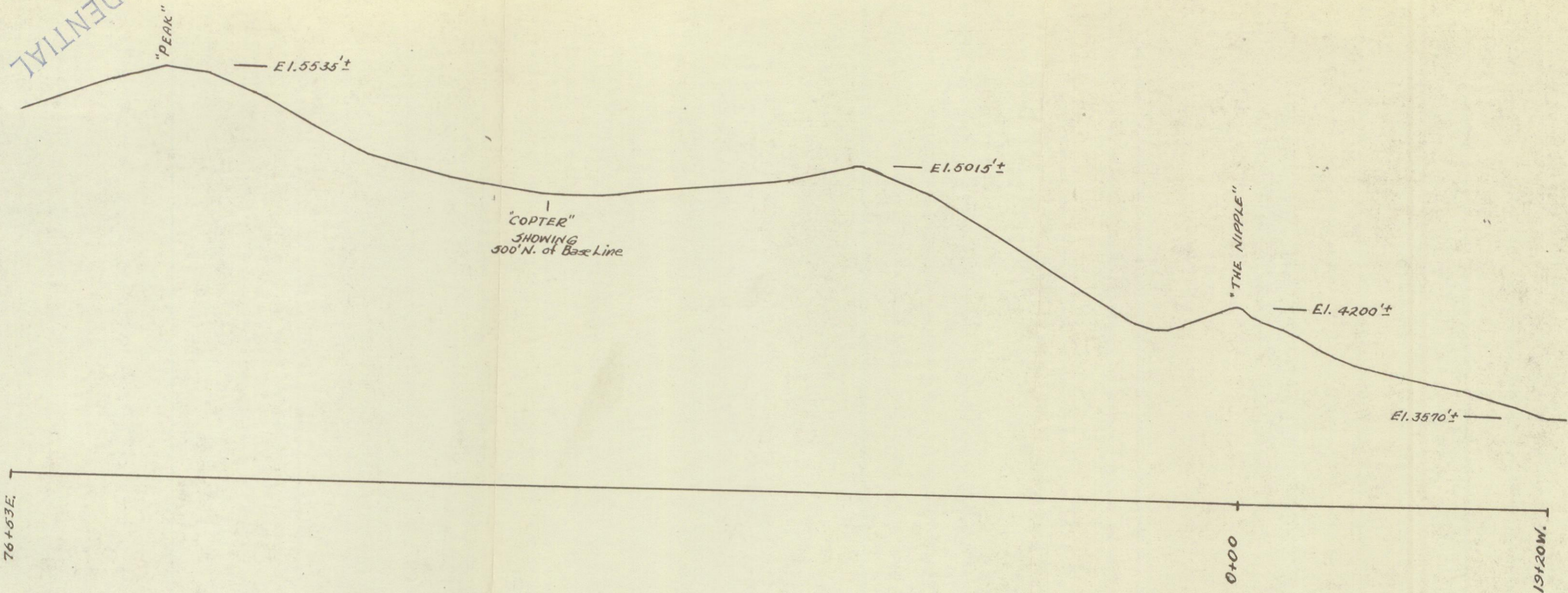
Scale: 1 in. = 1/2 mile

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August 26, 1960

L.K. Riffe

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VERTICAL SECTION ALONG BASE LINE
IN SURVEY AREA OF PART OF
"NORKEN", "FOOL" & "PEAK" GROUPS
SHELDON LAKE MAP AREA
YUKON TERRITORY

Scale: 1 in. = 600 ft.
 horl. & vert.

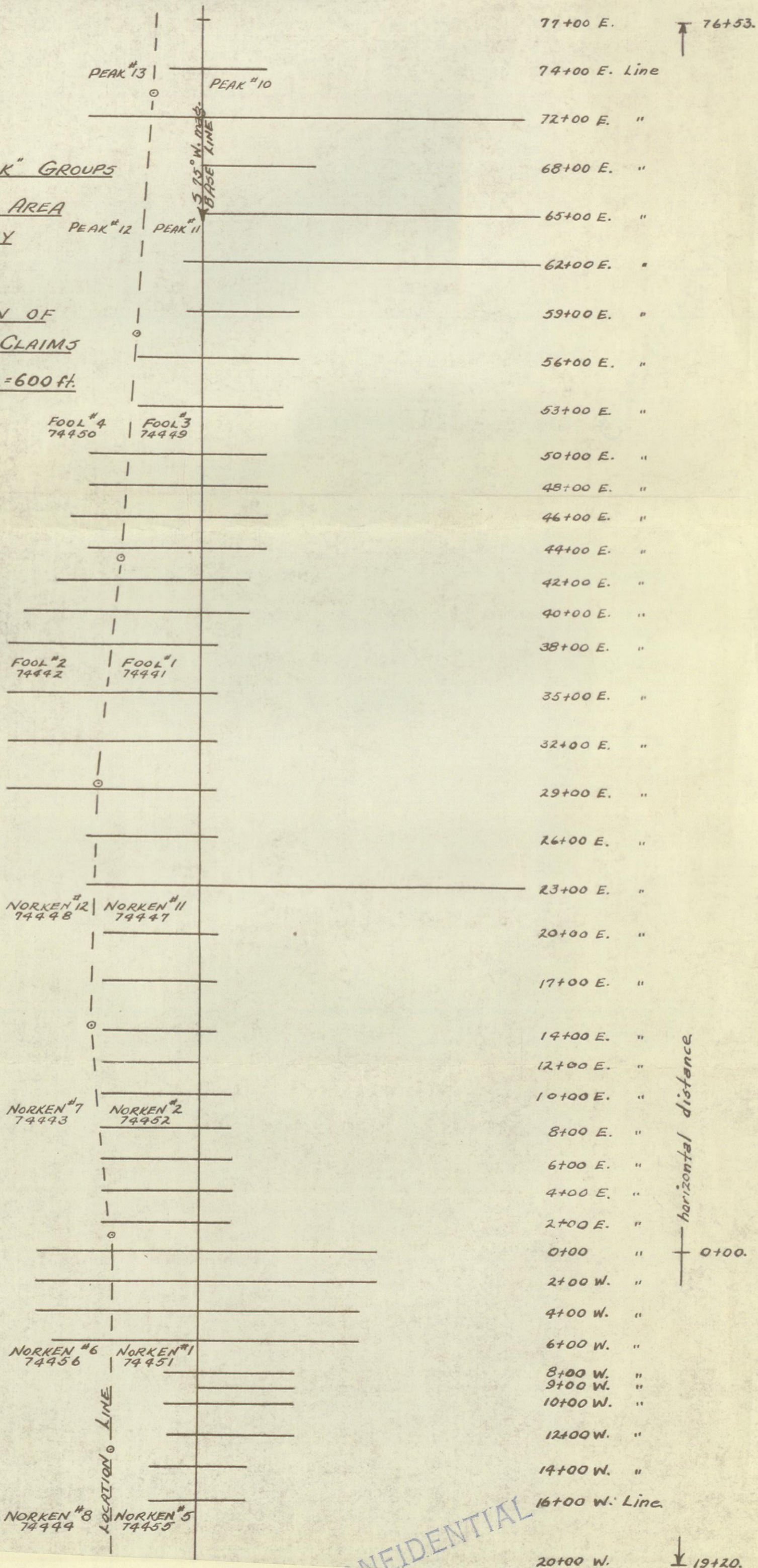
August 26, 1960.
 L. K. Little.

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PART OF
"NORKEN", "FOOL" & "PEAK" GROUPS
SHELDON LAKE MAP AREA
YUKON TERRITORY

PLAN
SHOWING RELATION OF
SURVEY LINES TO CLAIMS

Scale: 1 in. = 600 ft.



August 26, 1960.

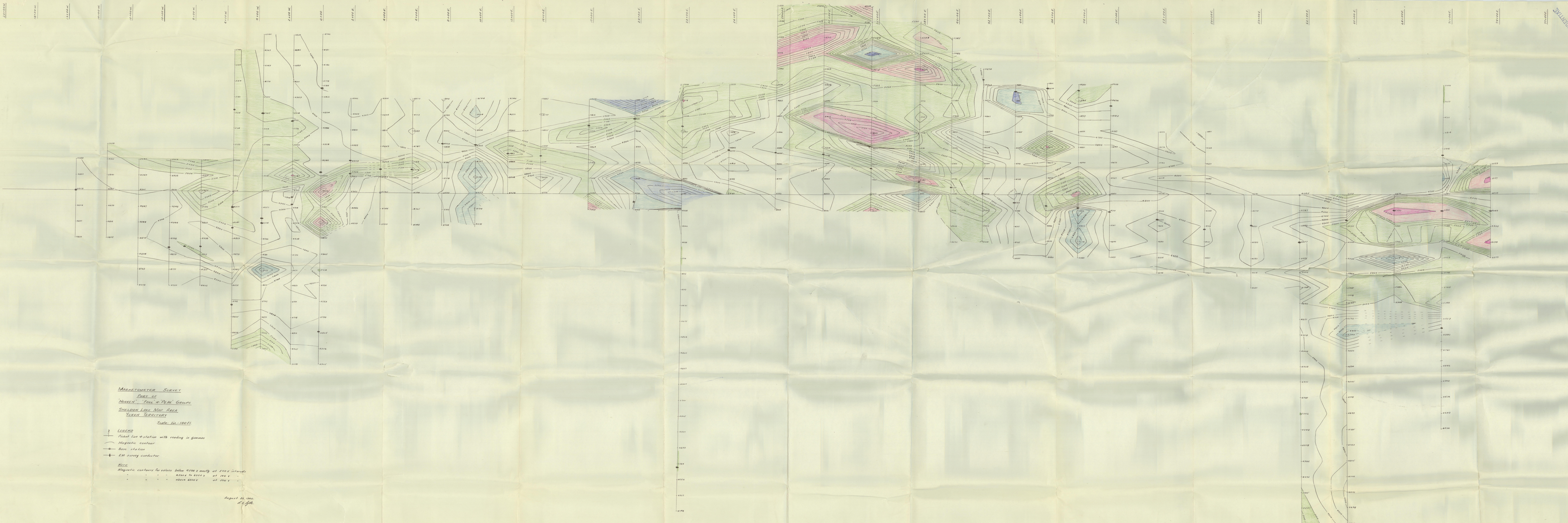


ELECTROMAGNETIC SURVEY
 PART OF
 "NORREN", "TOL" & "PEARL" GROUPS
 SHELDON LAKE MAP AREA
 YUKON TERRITORY
 Scale: 1 in. = 100 ft.

LEGEND
 Picket line & reading - dip angle in degrees
 and value shown in brackets
 as a off-stake reading
 EM profile. Vertical scale: 1 in. = 10'
 Transmitter location
 Conductor

August 24, 1960
 J.K. Giff.

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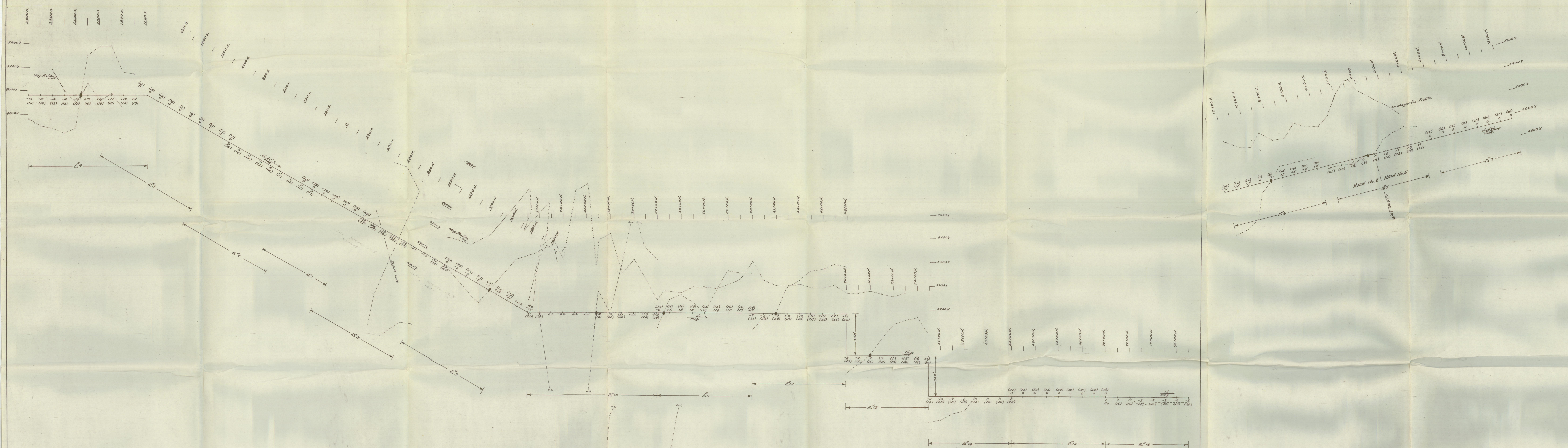


MAGNETOMETER SURVEY
 PART OF
 "NOBEN" "FOOT" + "PEAK" GROUPS
 SHELDON LAKE MAP AREA
 YUKON TERRITORY
 Scale 1 in. = 100 ft.

LEGEND
 • Picket line station with reading in gammas
 — Magnetic contour
 — Base station
 — EM survey conductor

NOTE
 Magnetic contours for values below 9500 mostly at 500 y intervals
 4500 to 6000 at 100 y
 above 6000 at 500 y

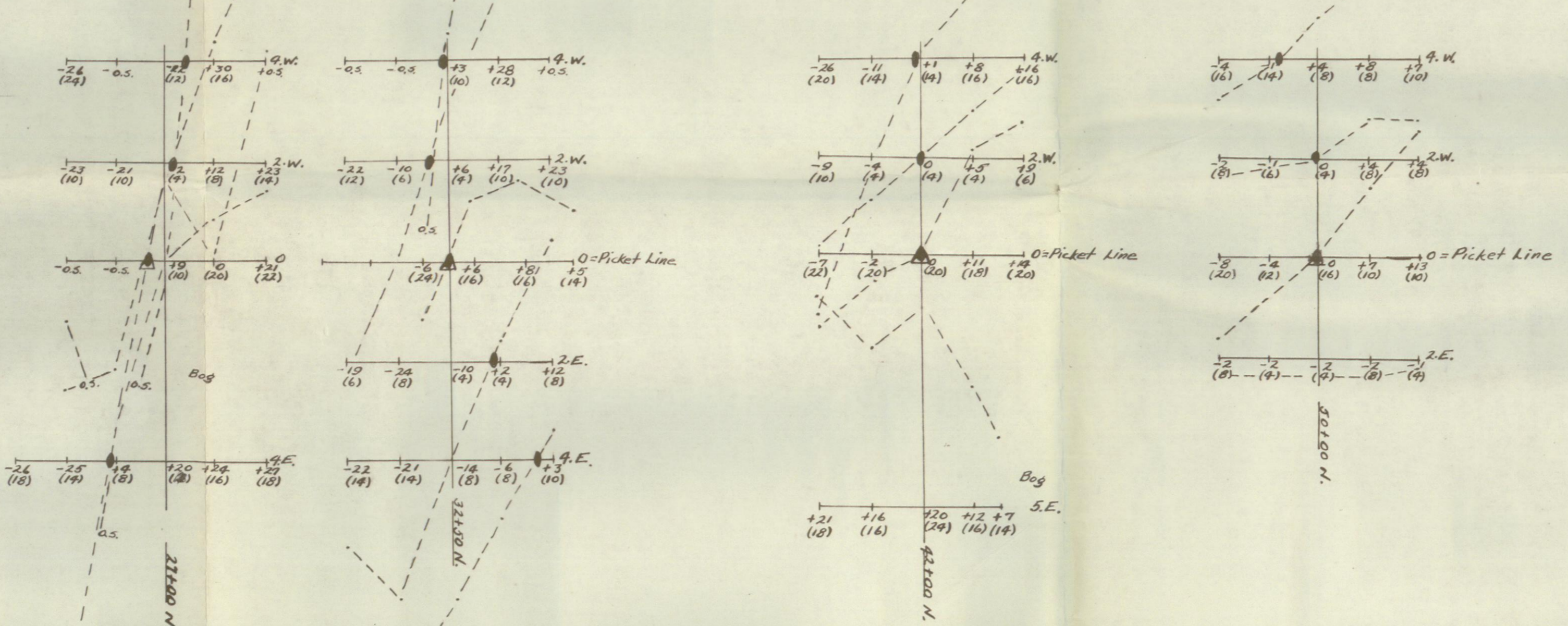
August 23, 1940
 R. H. Giff.

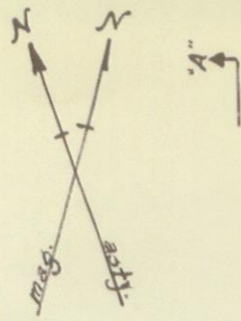


**ELECTROMAGNETIC AND MAGNETOMETER
PROSPECTING SURVEY LINES
"NORREN" AND "RAIN" GROUPS
SHELDON LAKE MAP AREA
YUKON TERRITORY
Scale: 1 in = 200 ft.**

- LEGEND**
- Picket line + EM reading - dip angle, in degrees
null value shown in brackets
a.s. = off scale reading
 - EM Profile. Vertical scale: 1 in = 10'
 - Mag. Profile. Vertical scale: 1 in = 200 gammas
 - △ Transmitter location
 - ✕ Conductor

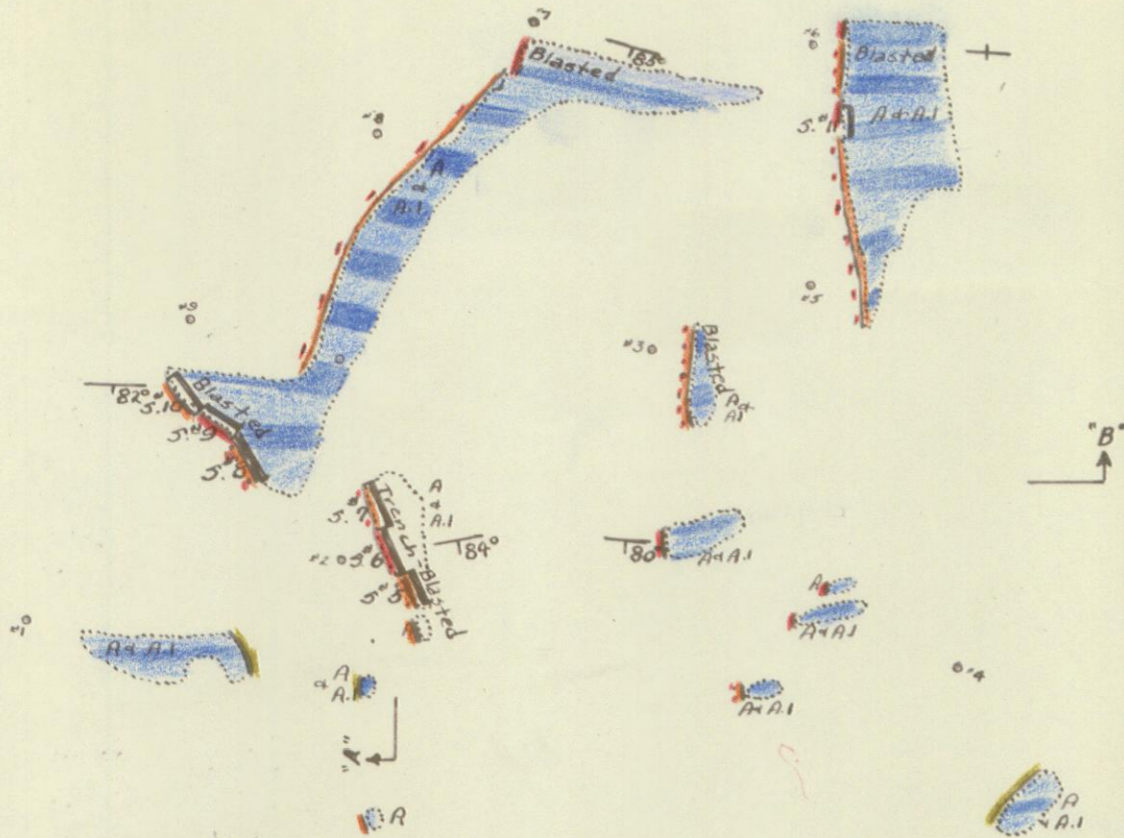
August 26, 1960
L.R. J. J.



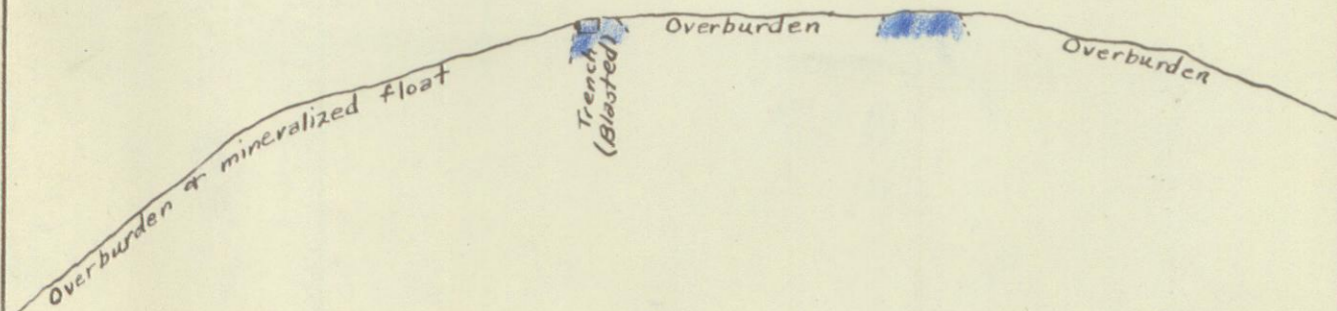


Part of
Claim "NORKEN" No. 1

E1.4200'



E1.4200'



SECTION "B-B"

LEGEND

- A- Quartzite; thinly bedded; light colour.
- A1- Quartzite; thinly bedded; dark gray.

Sulphide mineralization in outcrops shown along border of outcrop as:-

- Pyrite, pyrrhotite, occasionally slight chalc.
- Pyrite, pyrrhotite, chalcopyrite - disseminated.
- Pyrite, pyrrhotite, chalcopyrite - disseminated and as blebs and seams.

Note: The latter two types of sulphide mineralization contain some galena and sphalerite in sections.

07 Survey point

Assays

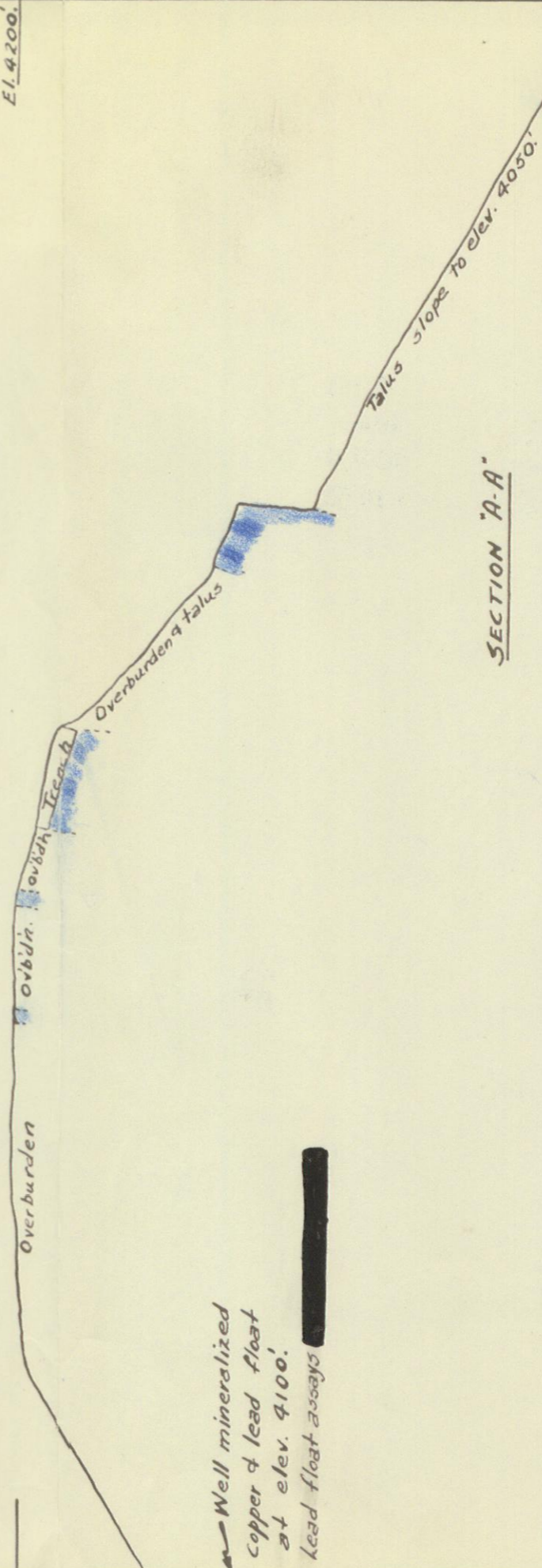
Sample No.	Width ft.	Gold oz/ton	Silver oz/ton	Copper %	Lead %	Zinc %
5.5	4.0	█	█	█	-	-
5.6	5.0	█	█	█	█	█
5.7	5.0	█	█	█	█	█
5.8	5.0	█	█	█	-	-
5.9	3.0	█	█	█	█	█
5.10	4.0	█	█	█	-	-
5.11	3.0	█	█	█	-	-

Note: - = no assay run.

Assay Averages

Samples No.	Width ft.	Silver oz/ton	Copper %
5.5, 6, 7	14.0	-	█
5.6, 7	10.0	-	█
5.8, 9, 10	12.0	-	█

SECTION "A-A"



Well mineralized copper & lead float at elev. 4100'. lead float assays

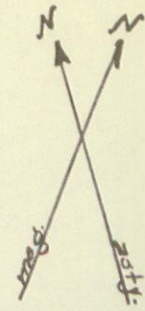
"THE NIPPLE" SULPHIDE SHOWING
CLAIM "NORKEN" No. 1

SHELDON LAKE MAP AREA

YUKON TERRITORY

Scale: 1 in. = 20 ft.

Sept. 17/59
D.K.D.



LEGEND

- A - Quartzite; thinly bedded; light colour.
- A1 - Quartzite; thinly bedded; dark gray.
- B - Argillite; thinly bedded
- C - Limey beds; thin.

- Sulphide mineralization in outcrops shown along border of outcrop as:-
- Pyrite, pyrrhotite, occasionally slight chalco.
 - Pyrite, pyrrhotite, chalcopyrite - disseminated
 - Pyrite, pyrrhotite, chalcopyrite - disseminated and as blebs and seams

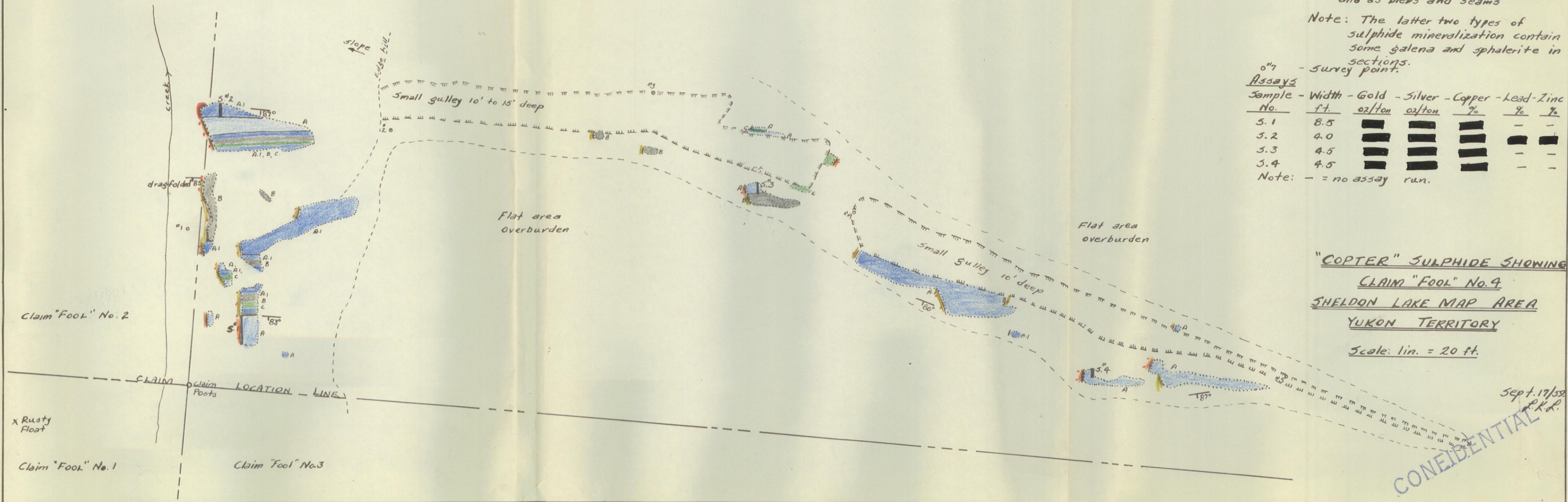
Note: The latter two types of sulphide mineralization contain some galena and sphalerite in sections.

0"7 - survey point.

Assays

Sample No.	Width ft.	Gold oz/ton	Silver oz/ton	Copper %	Lead %	Zinc %
5.1	8.5	█	█	█	-	-
5.2	4.0	█	█	█	█	█
5.3	4.5	█	█	█	-	-
5.4	4.5	█	█	█	-	-

Note: - = no assay run.



"COPTER" SULPHIDE SHOWING
CLAIM "FOOL" No. 9
SHELDON LAKE MAP AREA
YUKON TERRITORY
 Scale: 1 in. = 20 ft.

Sept. 17/58
 P.K.P.

CONFIDENTIAL