

2735

GEOLOGICAL REPORT

ON THE

SPECTRUM CLAIMS

Liard Mining Division

58° 132° S.E.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2735 MAP _____

By

James S. Dodge

for

Spartan Explorations, Ltd. (NPL)

October 29, 1970

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	2
INTRODUCTION	3
PROPERTY AND OWNERSHIP	4
LOCATION AND ACCESS	4
GEOLOGY	
Regional Geology	5
Detailed Geology	5
MINERALIZATION	7
GEOCHEMICAL SURVEY	7
MAGNETOMETER SURVEY	8
CONCLUSIONS	8
#1 INDEX MAP	
#2 GEOLOGICAL MAP	
#3 GEOCHEMICAL MAP ^{ASD FROM}	
#4 GEOCHEMICAL MAP (COPPER)	
#5 GEOCHEMICAL MAP (MO)	
#6 MAGNETIC SURVEY MAP	
#7 MAGNETIC SURVEY MAP	
	<u>APPENDICES</u>
Appendix "A"	Statement of Expenditures
Appendix "B"	Statutory Declaration in Support of of Expenditures
Appendix "C"	Assay Certificates

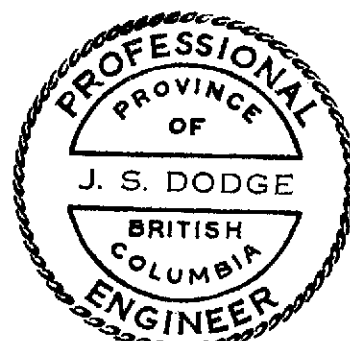
GEOLOGICAL REPORT ON THE
SPECTRUM CLAIMS

Liard Mining Division
58° 132° S.E.

Located mineral claims on which assessment credits are requested:

<u>Name of Claim</u>	<u>Credit Requested</u>	<u>Total Years</u>
Spectrum 1-4	2 years each	8
Spectrum 7-18	2 years each	24
Spectrum 20-30	2 years each	20
	TOTAL	52 Years

Work was done on the Spectrum Claims between July 15 and October 28, 1970.



Expiry Date: August 4, 1971

Report By: James S. Dodge, P. Eng.

A handwritten signature in cursive script that reads "James S. Dodge".

Date: October 29, 1970

SUMMARY

During the course of prospecting in the Kinaskan Lake District in 1970, Messrs. Arnold C. Racicot, David Racicot, and James S. Dodge discovered a new copper prospect on the east side of Mountain 5821 located approximately 3 miles west-northwest of the north end of Kakkidi Lake (57° 40', 130° 30'). The showings comprise talus slides and limited bedrock exposures of granodiorite, quartz monzonite porphyry, and meta-andesites containing chalcopyrite as disseminations and blebs, and in quartz veinlets in a crackled zone. Grab samples of disseminated type talus graded 0.26% copper, while 3 grab samples of bedrock and sub-crop talus from quartz stringered material ranged 0.40-0.76% copper. Molybdenum content ranged 0.004-0.008 MoS₂. Forty-six Spectrum Claims (Nos. 1-4, 7-18, and 21-50) were staked.

Geological mapping was completed and a geochemical program of silt and soil sampling, together with a magnetometer survey, was carried out to assist in delineating target areas for systematic exploration of the copper potential of the prospect. This work was completed on September 17, 1970.

Results of detailed prospecting and geological, geochemical, and geophysical surveys delineate an arc-shaped area 600 feet wide and 3,500 feet long in which numerous mineralized talus slides, sub-crop float trains, and outcrops are coincident with a broad geochemically high anomaly. Moreover, the width dimension of the area of potential copper mineralization is 'open' to the west, since the inner side of the arc-shape generally conforms to the basal boundary of a cliff-forming basalt promontory.

Diamond drilling is recommended.

INTRODUCTION

A conventional ground prospecting party comprising Messrs. Arnold Racicot, David Racicot, and James S. Dodge, in early July, 1970, discovered a new prospect containing disseminated chalcopyrite mineralization high on the east side of Mountain 5821, 3 miles northwest of Nuttlude Lake. During the summer 46 contiguous claims were staked as the Spectrum Claims for Spartan Explorations, Ltd.

Detailed prospecting revealed several widely spaced areas of mineralized quartz monzonite porphyry in outcrops, and in sub-crop float trains and talus slides. Initial assays of grab samples confirmed the presence of important amounts of copper in float and bedrock.

Geological mapping was completed and, subsequently, a geochemical sampling program and magnetometer survey were undertaken.

PROPERTY and OWNERSHIP

The Spectrum Claims, comprising 46 contiguous full size lode claims, Spectrum Nos. 1-4, 7-18, and 21-50, inclusive, were staked during July, August, and September, 1970 by Arnold C. Racicot and James S. Dodge.

The Spectrum claims are held by:

Spartan Explorations, Ltd. (NPL)
303-1035 West Pender Street
Vancouver, British Columbia

LOCATION and ACCESS

The Spectrum Claims are located approximately 3 miles west-northwest of the north end of Kakkidi Lake and 2 miles southwest of Nuttlude Lake, roughly centered at $57^{\circ} 41' 30''$, $130^{\circ} 28' 30''$. Altitudes on the claims range from 2,950 feet to 6,000 feet, with the important copper showings situated in the 4,700'-5,400' interval. Location of the Spectrum Claims is shown on the 1:50,000 scale map, Kinaskan Lake, 104 G/9 West Half, enclosed in pocket of report.

Access to the claim group is made on foot from a float plane landing at Nuttlude Lake, or by a 15-mile helicopter flight from the Stewart-Cassiar highway in the vicinity of the north end of Kinaskan Lake.

REGIONAL GEOLOGY

The Spectrum Claims area lies in the southeastern sector of the Stikine Arch, a tectonic province comprising Mesozoic eugeosynclinal meta-sediments and meta-volcanics lying east of the Coast Batholith and wedging easterly between the Atlin Horst on the north and the Bower Basin on the south. The claims are on the eastern flank of the northern half of the Spectrum Range covering copper showings in Triassic meta-volcanic rocks just beneath the base of the Late Tertiary to Recent olivine basalt flows originating in the vicinity of Mt. Edziza.

North-south regional structural lineaments are indicated by the trends of the valleys of Kakkidi Creek and Mess Creek on either side of the north-south trending Spectrum Range of young volcanics. On the claims a major north-south structural trend is suggested by the elongation of the intrusive body.

DETAILED GEOLOGY

The geology of the Spectrum Claims has been mapped only above the 3,100-foot altitude (see Geological Map in pocket). Although overburden masks 95% of the area below brushline, several steep ravines afford good bedrock exposures. A veneer of overburden covers much of the rolling, but steep, terrain from brushline to the base of active scree slopes leading to bedrock exposures on cliffs.

The geologic sequence of events may be summarized as: A Triassic(?) meta-andesitic volcanic pile has been invaded by a complex stock ranging from granodiorite to quartz monzonite and, following erosion, was capped by gently dipping Late Tertiary to Recent olivine basalt flows. Copper mineralization occurs as disseminations and in veinlets in a crackle brecciation zone principally within two varieties of quartz monzonite porphyry. Pyritization of the intrusive complex and the meta-volcanics is widespread surrounding the area of copper mineralization.

The andesitic bedded volcanics comprise flows, agglomerates, augite porphyry, tuff, and thin-bedded argillites. Bedding planes are difficultly discernable except in the case of the argillites. The thickness of the pile can only be estimated to be in excess of 3,000 feet. Strike of these volcanics is generally north-south, with gentle dips (15° - 25°) westerly along the northern boundary of the claims. In the vicinity of the main showings, dips range 40° - 60° east and west on the limbs of poorly defined structures, perhaps folds.

An irregular mass of limestone crops out on Claims Nos. 2 and 9 above the andesites and below basalt flows. It appears to grade north-easterly into a poorly exposed thin bed of calcareous siltstone, float from which has been found intermittently along the 5,500-foot contour for several thousand feet to the north.

Granodiorite is exposed on Claims Nos. 14 and 16 in the steep sided ravine which drains northeasterly across Claims Nos. 13, 14, 16, and 39. Granodiorite grades imperceptibly into quartz monzonite porphyry over an interval of less than 300 feet in the northern part of Claim No. 13 near the junction of two steep tributary gulches at the head of the main ravine. This porphyry (Type "A") is characterized by slender plagioclase phenocrysts about 5 mm long with their long axis directionally oriented in a nearly vertical north-south plane. The Type "B" quartz monzonite porphyry crops out in small separated sites on Claims No.s 9 and 11, and is found in float in the southwestern part of Claim No. 13. This porphyry is characterized by generally coarser groundmass than Type "A" and by its plagioclase phenocrysts which are generally roughly square to rectangular. The boundaries between the intrusives and the meta-andesites appear gradational and suggest passive granitizing diffusion-front invasion.

Late Tertiary, or Recent, gently dipping (5° southeast) olivine basalt flows, from 200 to 250 feet thick, blanket the entire area southwest of the area of known intrusive outcrops, and form a prominent plateau.

Mineralogic zoning is evident and at least three broad hypogene alteration assemblages may be distinguished in the field: an outermost zone (propylitic), and intermediate zone (phyllic), and an inner zone (potassic). These zones, as outlined in a horizontal plane, represent segments of three concentric elliptical bands. Importantly, the zones are defineable across various andesitic units and the intrusives as well, although the zonal boundaries may be gradational and possibly distorted where they cross rocks of contrasting composition.

The propylitic zone is characterized by chlorite, epidote, and carbonates with minor disseminated pyrite. This broad and extensive band is at least 3,000 feet wide and is primarily noted in the andesitic volcanics along the lower slopes east of the area of intrusives. This zone is distinguished from regionally metamorphosed andesites only on the basis of above-average pyrite content.

The phyllic zone is evidenced by the presence of hypogene quartz, sericite, and impressive amounts of pyrite, often ranging 5-10 percent by weight. This zone may have a width of about 1,000 feet straddling the projected north-south boundary between the andesites and the granodiorite through the east half of Claim Nos. 9, 11, and 13, and, as perhaps as its mirror image on the western side of the north-trending zoned alteration ellipse, a band at least 2,000 feet wide centered roughly along the western boundary of Claim Nos. 8 and 26. The phyllic zone appears to close the north and south ends, completing the elliptical form, within the claim boundaries.

The potassic zone occupies the core of the alteration ellipse and is distinguished by quartz, K-feldspar, and biotite, with or without sericite. This inner zone appears to be nearly 2,000 feet wide, roughly half of its probably concealed beneath the basalt flows west of the main showings.

The limestone and calcareous siltstone, referred to above, have been altered to a skarn of marbelized limestone and an epidote-calcite

The copper anomalous areas closely correspond to the broad area in which mineralized showings had been located in prospecting. Considering a background value of perhaps 40 parts per million, values above 200 ppm appear significant as a reflection of an area underlain by rocks containing important copper mineralization. This consideration is reinforced by the fact that the east-west trending zone of 200-400 ppm (green) north of Mt. 5821 is overlain by silt and cirque moraine derived from the basalt cliffs.

The molybdenum anomalous areas do not appear to be sympathetically related spatial to areas of either known copper mineralization or geochemically high copper anomalies. There is a tentative suggestion, from the location and elongation of the molybdenum anomalies, that molybdenum mineralization may have been controlled by the two most prominent fault lineaments - one set north-south and the other northwest-southeast.

MAGNETOMETER SURVEY

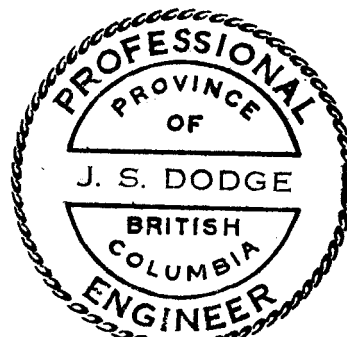
A ground magnetometer survey was conducted in conjunction with the soil sampling program, using the same stations, as well as frequent closer spacing, along the same 300-foot spaced grid lines. A Scintrex MF-1 fluxgate magnetometer was used, with diurnal variations obtained by base station check-ins. Resulting raw field data were adjusted accordingly and plotted on Magnetic Survey Map in the pocket. A contoured anomaly map was prepared on vellum as an overlay to the Geological Map, also in pocket.

The significance of the magnetic anomalies is unclear, as there are several features of the geology which pose situations capable of producing anomalously high, and low, magnetometer readings. Among these are the presence of at least one basalt plug; screens of andesite septa in quartz monzonite porphyry, hypogene alteration halo zoning, and the magnetite mineralization associated with areas of quartz-veinlets. Late telethermal or fumarole flushing along brecciated fault zones may have contributed to an anomalously low magnetic response in those areas.

CONCLUSION

The geologic setting; alteration mineralogy; the type, mode, and grade of copper mineralization; and the extent of anomalously high copper geochemical results, all reinforce the conclusion that a porphyry-type copper deposit is indicated on the Spectrum Claims. Further exploration is recommended to include several diamond drill holes to test continuity and grade of the deposit.

James S. Dodge



Expiry Date: August 4, 1971

hornfels, suggestive of the propylitic zone mineral assemblage. This may well represent an instance where the symmetry of the zoned hypogene alteration has been distorted, as only 100 feet to the southwest a small plug of quartz monzonite, K-feldspar rich, porphyry Type "B" crops out.

MINERALIZATION

Mineralization consists primarily of chalcopyrite, pyrite, and minor molybdenite as disseminations, fracture coatings and, within several outcrop areas, in quartz veinlets bordered by magnetite. Better grade copper mineralization is found in the Type "A" and Type "B" quartz monzonite porphyry as finely disseminated grains. Coarse grained to blebby chalcopyrite occurs in the Type "B" porphyry. So far only minor zones of chalcopyrite mineralization have been noted in the andesitic septa near the intrusive boundary. Outcrops of quartz monzonite porphyry and their near-subcrop sites, evidenced by concentrations in float trains, containing chalcopyrite in amounts estimated to exceed 0.1% copper, are scattered (in areas 50 feet to 400 feet in diameter) over an arcuate area roughly 3,500 feet long and some 600 feet wide. Poorly exposed outcrops, and much basalt talus on the upper slopes, makes a determination of the continuity of copper mineralization impossible now.

A single outcrop displaying sphalerite in a calcite vein was noted near the northeast corner of Claim No. 29.

Two grab samples were taken from the broad fan of subcrop talus in Area #1 shortly after discovery of the showings. These contained disseminated chalcopyrite and minor pyrite in Type "A" quartz monzonite porphyry and graded 0.26% copper with 0.008% MoS₂. Three grab samples of quartz-veinlet material from Areas #1, #2, and #3 graded 0.76, 0.68 and 0.40% copper, respectively. These samples were obtained to assist in a quantitative grade estimation of various showings on the property. Assay certificates are attached as Appendix "C".

GEOCHEMICAL SURVEY

Geochemical silt and soil sampling was conducted on the Spectrum Claims with 266 samples analyzed for both copper and molybdenum. Silt samples were obtained along the main ravines during the course of geological mapping. Soil samples were taken in most cases from the "B" horizon at stations spaced 150 feet apart on east-west lines established at 300-foot intervals. Initially, every other samples has been analyzed the results of which are plotted on the "Geochemical Map Cu/Mo" enclosed in the pocket.

Each sample was dried, sieved to obtain an 80-mesh fraction from which a 2-gram portion was analyzed by the atomic absorption method for total copper, and by the colorimetric method for total molybdenum. Analytical results were contoured separately for copper and molybdenum on vellum overlay maps on the same scale as the Geological Map; these are enclosed in the pocket.

STATEMENT OF EXPENDITURES
ON SPECTRUM CLAIMS Nos. 1-4, 7-18, and 21-30

EXPENSE DISTRIBUTION

	<u>Claims 1-14</u> <u>7-18</u>	<u>21-30</u>	<u>TOTAL</u>
<u>SALARIES</u>			
J. S. Dodge, Geologist July 15; July 31-Aug. 6; and 20-27; Oct. 25-28 (office) 20 days @ \$50	\$ 500	\$ 500	\$1,000
H. Kido, Geologist July 31-Aug. 2; Sept. 7-10, Oct. 28 (office) 9 days @ \$40	120	240	360
T. Shibata, Geological Assistant July 31-Aug. 6; Sept. 9-15, Oct. 26-28 (office 17 days @ \$30	210	300	510
C. Quock, Field Assistant Sept. 9-15 7 days @ \$20	140		140
Stenographic Service	30	20	50
<u>SUPPLIES and MISCELLANEOUS</u>			
Printing and Office Supplies	25	10	35
Assays:			
7 rock samples Cu, Mo. @ \$5	35		35
Geochem silt/soil, Aug. 6, Cu, Mo 94 @ \$2.25	212		212
Geochem soil, Sept. 15 Cu, Mo 172 @ \$2.25	281	140	421
Equipment Rental:			
Magnetometer MF-1 @ \$309/month July 20-Aug. 17	309		309
Sept. 6-24	150	75	225
Food: 46 man days @ \$7/man day	155	167	322
<u>TRANSPORTATION</u>			
Bell 47G3B Helicopter 4½ hrs. @ \$135		607	607
Bell 204 Ranger Helicopter 4½ hrs. @ \$230	<u>1,035</u>		<u>1,035</u>
Total Claims 1-4, 7-18	<u>\$3,202</u>		
Total Claims 21-30		<u>\$2,059</u>	
Total Expenditures			<u>\$5,261</u>

AFFIDAVIT

DOMINION OF CANADA

Province of British Columbia

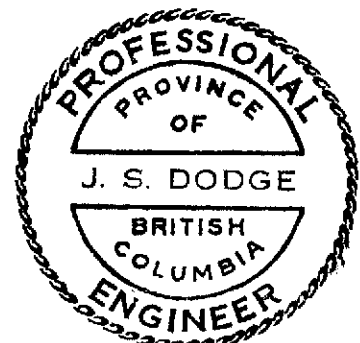
To Wit:

In the matter of the Statement of Expenditures for geological work on the Spectrum Mineral Claims in the Liard Mining Division, I, James S. Dodge, of Spartan Explorations, Ltd. (N.P.L.), 303-1035 West Pender Street, Vancouver, in the Province of British Columbia, do solemnly declare that:

1. The geological, geochemical, and geophysical investigations of the Spectrum Claim Group were carried out under my supervision.
2. The Statement of Expenditures set out in Appendix "A" of my report "Geological Report on the Spectrum Claim Group", dated July 12-October 29, 1970, truly represents the amounts expended on geological, geochemical, and geophysical work on the said claim group.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the
of _____, in the
Province of British Columbia, this
day of October, 1970, A.D.



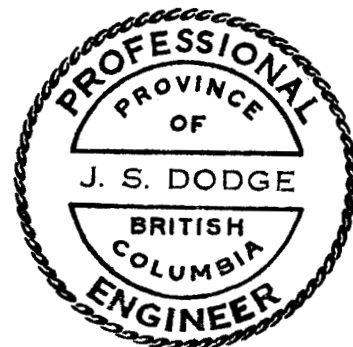
Expiry Date: August 4, 1971

James S. Dodge

STATEMENT OF QUALIFICATIONS

1. I am a geologist-pro prospector residing on Red Mountain, P. O. Box 409, Aspen, Colorado, U.S.A.
2. I graduated as a mining engineer from the Missouri School of Mines, B.S., 1941; received the degree of Master of Science in economic geology from Stanford University, 1951; and attended Albert-Ludwigs University, Freiburg, Germany during 1952.
3. I am a certified member of the Association of Professional Engineers of British Columbia, and am a registered professional engineer in the State of Colorado. I am a member of the Society of Economic Geologists.
4. I am the author of this entire report.
5. I supervised the geological mapping, geochemical sampling, and magnetometer survey performed on the Spectrum Claims.

October 29, 1970
Vancouver, B.C.



Expiry Date: August 4, 1971

Signed: James A. Dodge

TO:

Mr. James S. Dodge

392 Royalmore Street

Richmond, B.C.



Certificate of Assay

WARNOCK HERSEY INTERNATIONAL LIMITED

COAST ELDRIDGE PROFESSIONAL SERVICES DIVISION

125 EAST 4TH AVE. VANCOUVER 10, B.C., CANADA



PHONE: (604) 876-4111
TELEX: 54-50353
CABLE ADDRESS: ELDRICO

Canadian Testing Association

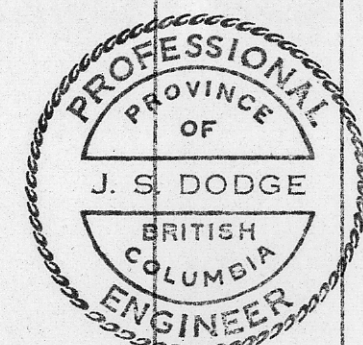
FILE NO. 461 - 12271

DATE July 28, 1970

SPECTRUM CLAIMS

We Herby Certify that the following are the results of assays made by us upon submitted ORE samples

MARKED	GOLD		SILVER	Copper (Cu)	Molybdenite	PER CENT.	PER CENT.	PER CENT.	PER CENT.
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER CENT.	(MoS ₂) PER CENT.				
5076		\$							
5077	Grab			0.26	0.008				
5078	samples			0.26	0.008				
5079				0.14	0.006				
				0.17	0.006				



Expiry Date: August 4, 1971

James S. Dodge

Note. Rejects retained one week.
Pulps retained one month.
Pulps and rejects may be stored for a maximum of one year by special arrangement.

Gold calculated at \$ _____ per ounce

[Signature]

Provincial Assayer



Certificate of Assay

WARNOCK HERSEY INTERNATIONAL LIMITED
COAST ELDRIDGE PROFESSIONAL SERVICES DIVISION
125 EAST 4TH AVE. VANCOUVER 10, B.C., CANADA

copy for Jim Dodge
ETA
PHO: (604) 876-4111
TELEX: 04-50353
CABLE ADDRESS: ELDRICO
ELDRICO
Member Canadian Testing Association

TO:
Spartan Explorations Ltd.,
303 - 1035 West Pender Street
Vancouver, B.C.,
ATTENTION: Miss Dorothy Hamar

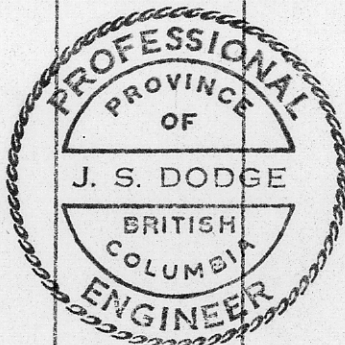
FILE NO. 461 - 12529
DATE August 27, 1970

SPECTRUM CLAIMS

We Herby Certify that the following are the results of assays made by us upon submitted samples

MARKED	GOLD		SILVER	COPPER (Cu) CENT.	Molybdenite (MoS ₂) CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON						
5080		\$		0.76	0.003				
5081	Grab-Samples			0.68	0.003				
5082		0.03	1.05	0.2	0.40	0.006			

qtz stringered qtz. monz. por. subcrop float Area #1
qtz stringered qtz. monz. por. subcrop float Area #2
qtz stringered qtz. monz. por. subcrop float Area #3



Expiry Date: August 4, 1971

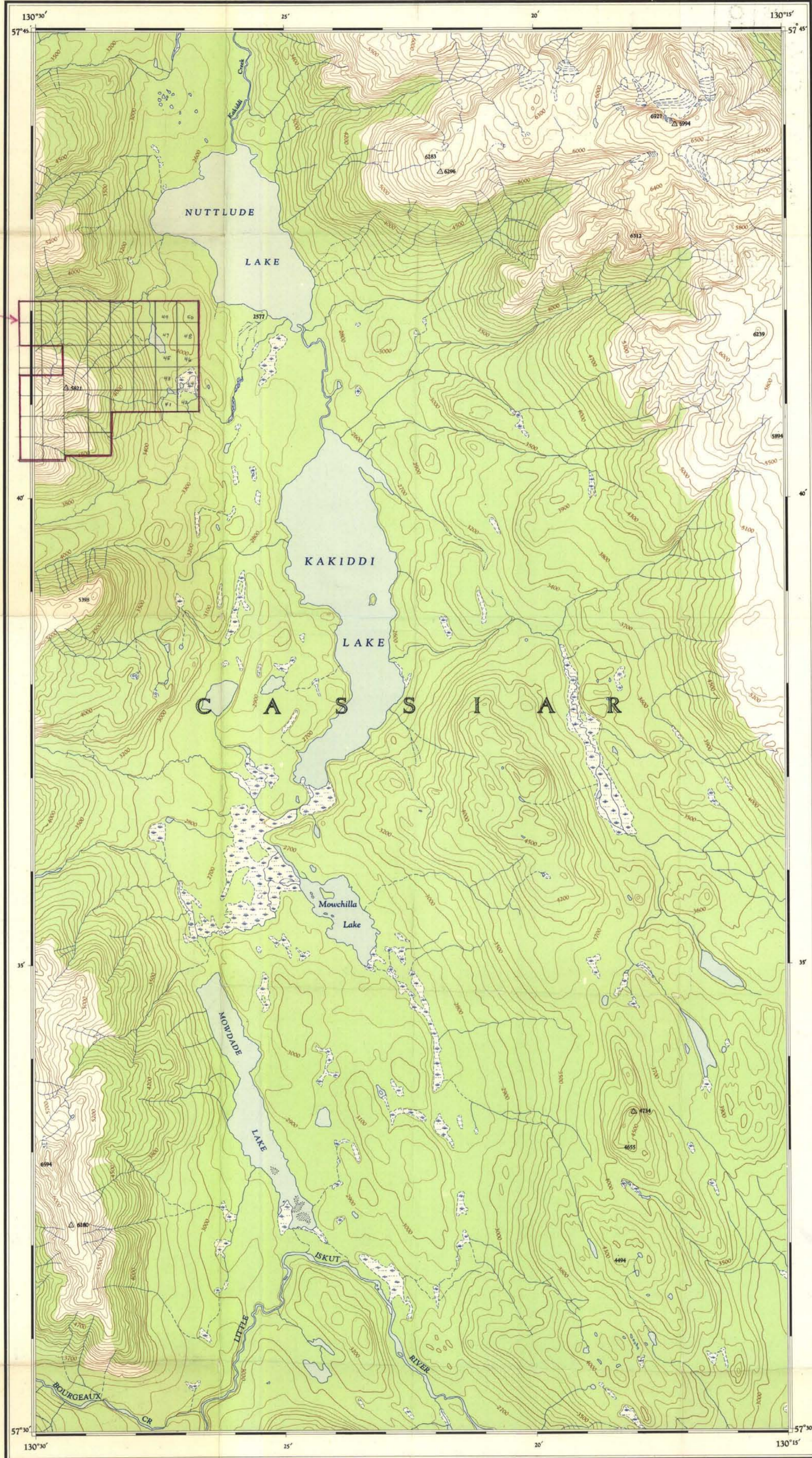
James A. Dodge
Gold calculated at \$ per ounce

[Signature]
Provincial Assayer

Note. Rejects retained one week.
Pulps retained one month.
Pulps and rejects may be stored for a maximum of one year by special arrangement.

Unless it is specifically stated otherwise, gold and silver values reported on these sheets have not been adjusted to compensate for losses and gain inherent in the fire assay process.

[Handwritten initials]



SPECTRUM CLAIMS

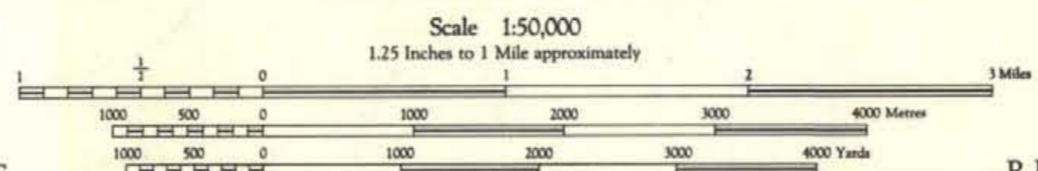
Department of
Lands and Petroleum Resources
ASSESSMENT REPORT
NO. 2735 MAP #1



James A. Dodge

KINASKAN LAKE
BRITISH COLUMBIA

MAGNETIC DECLINATION 30°12' EAST
AT CENTRE OF MAP, 1955
Annual magnetic change 4' westerly



REFERENCE

Roads: hard surface, all weather hard surface, all weather low surface, all weather less than 2 lanes all weather, 2 or more lanes Cott. Track, Trail Cott. Track, Trail	Boundary, International Province County or District Township or Parish City or Town Reservation, Indian, Military, etc. Power Transmission Line Telephone or Telegraph, trunk route Horizontal Control Point Boundary Marker Bench Mark Spot Elevation, (in feet) Mine or Pit	Contour Interval 100 Feet All Elevations in Feet above Mean Sea Level. Universal Transverse Mercator Projection North American Datum 1927
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REFERENCE

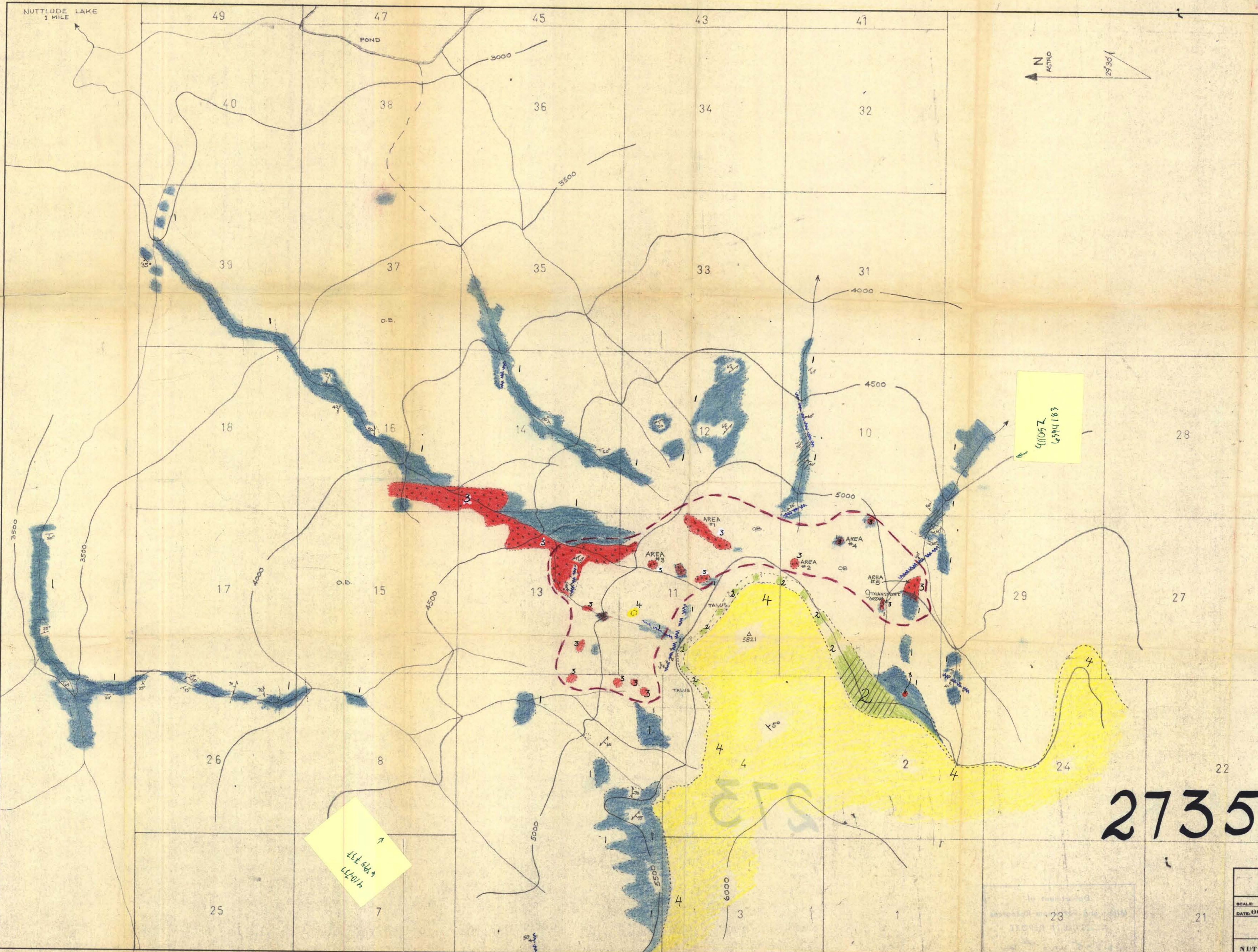
House, Building School Church Tower, Radio Mast, Lookout, etc. Cemetery Quarry Sand or Gravel Pit Camping Embankment Dry River Bed	Lighthouse Wharf or Pier Foreshore Flats Swamp or Marsh Lake or Pond, intermittent Glacier or Snowfield Stream, intermittent, indicated Irrigation Canals, Ditches Inundated Land, seasonal Contours, elevation Contours, depression approximate Forest, undisturbed, Scrub
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Copies of this map showing lot lines may be obtained from the Survey and Mapping Branch, Department of Lands and Forests, Victoria, B.C., at 25 cents each.

INDEX TO ADJOINING SHEETS

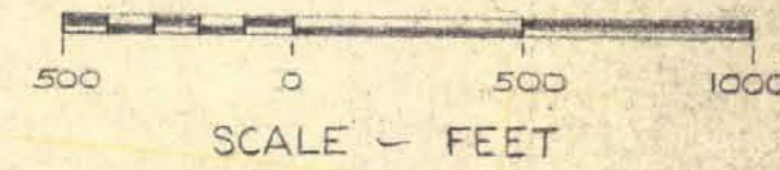
104 G/8 BUCKLEY LAKE	104 G/9 KINASKAN LAKE	104 G/10 KLUER LAKE
104 G/7 REFUGE LAKE	104 G/9 KINASKAN LAKE	104 G/10 KLUER LAKE

2735
M-1



- BASALT 4
- QUARTZ MONZONITE 3
Includes quartz monzonite porphyry and septa of mineralized andesitic volcanics (qv)
- HORNFELS AND SKARN 2
Includes marbelized limestone (ls)
- ANDESITIC META-VOLCANICS 1
Agglomerate, aogite porphyry, tuff, argillite (ar)
- BOUNDARY of area of mineralized outcrops of quartz monzonite and andesitic volcanics estimated to grade >0.1% Copper

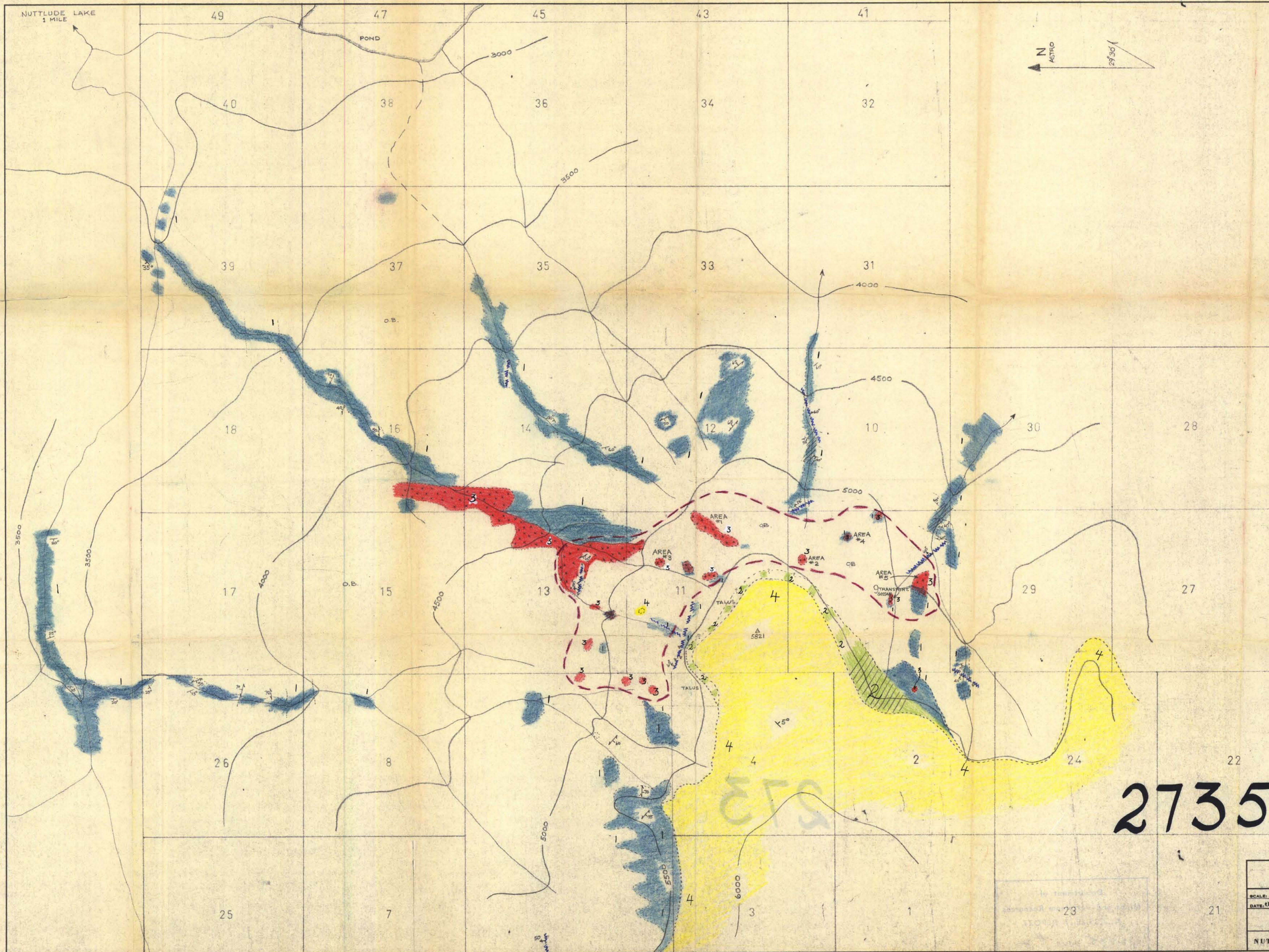
CONTOUR INTERVAL - 500 FEET



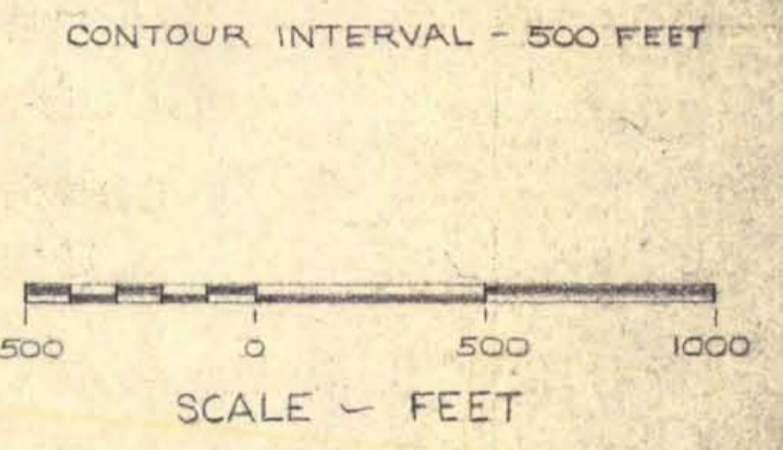
2735 M-2

James S. Dodge

GEOLOGICAL MAP		
SCALE:	APPROVED BY SPARTAN EXPLORATIONS, LTD.	DRAWN BY J. S. DODGE
DATE: OCT. 1970		
SPECTRUM CLAIMS		
NUTTLUDE LAKE, B.C.	57° 40' 130° 30'	DRAWING NUMBER SP-1-70



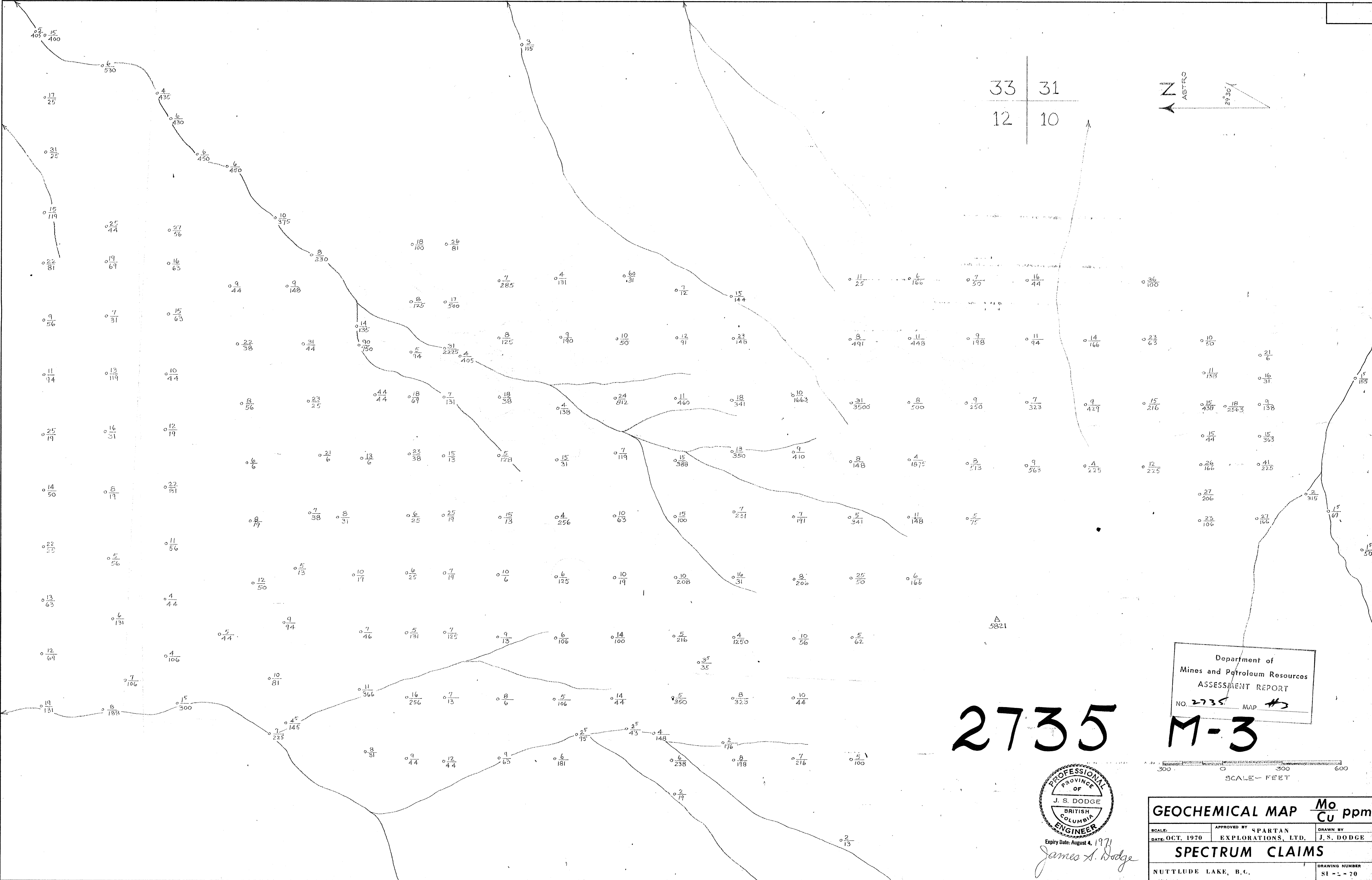
- BASALT 4
- QUARTZ MONZONITE 3
Includes quartz monzonite porphyry and septa of mineralized andesitic volcanics (qv)
- HORNFELS AND SKARN 2
Includes marbleized limestone (ls)
- ANDESITIC META-VOLCANICS 1
Agglomerate, augite porphyry, tuff, argillite (ar)
- BOUNDARY of area of mineralized outcrops of quartz monzonite and andesitic volcanics estimated to grade >0.1% Copper



2735 M-2

James S. Dodge

GEOLOGICAL MAP		
SCALE:	APPROVED BY SPARTAN EXPLORATIONS, LTD.	DRAWN BY J. S. DODGE
DATE: OCT. 1970		
SPECTRUM CLAIMS		
NUTTLUDE LAKE, B.C.	57° 40' 130° 30'	DRAWING NUMBER SP-1-70



33 | 31
12 | 10

33 | 31
12 | 10

24-15



-  >1000 ppm
 -  >400 - <1000
 -  >200 - <400
 -  >100 - <200
 -  <100
- Parts per million - copper

2735 M-4

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2222 M-4



Expiry Date: August 4, 1971
James A. Dodge

OVERLAYS GEOLOGICAL MAP

GEOCHEMICAL MAP - COPPER

SCALE:	APPROVED BY SPARTAN EXPLORATIONS, LTD.	DRAWN BY J. S. DODGE
DATE: OCT. 1970		

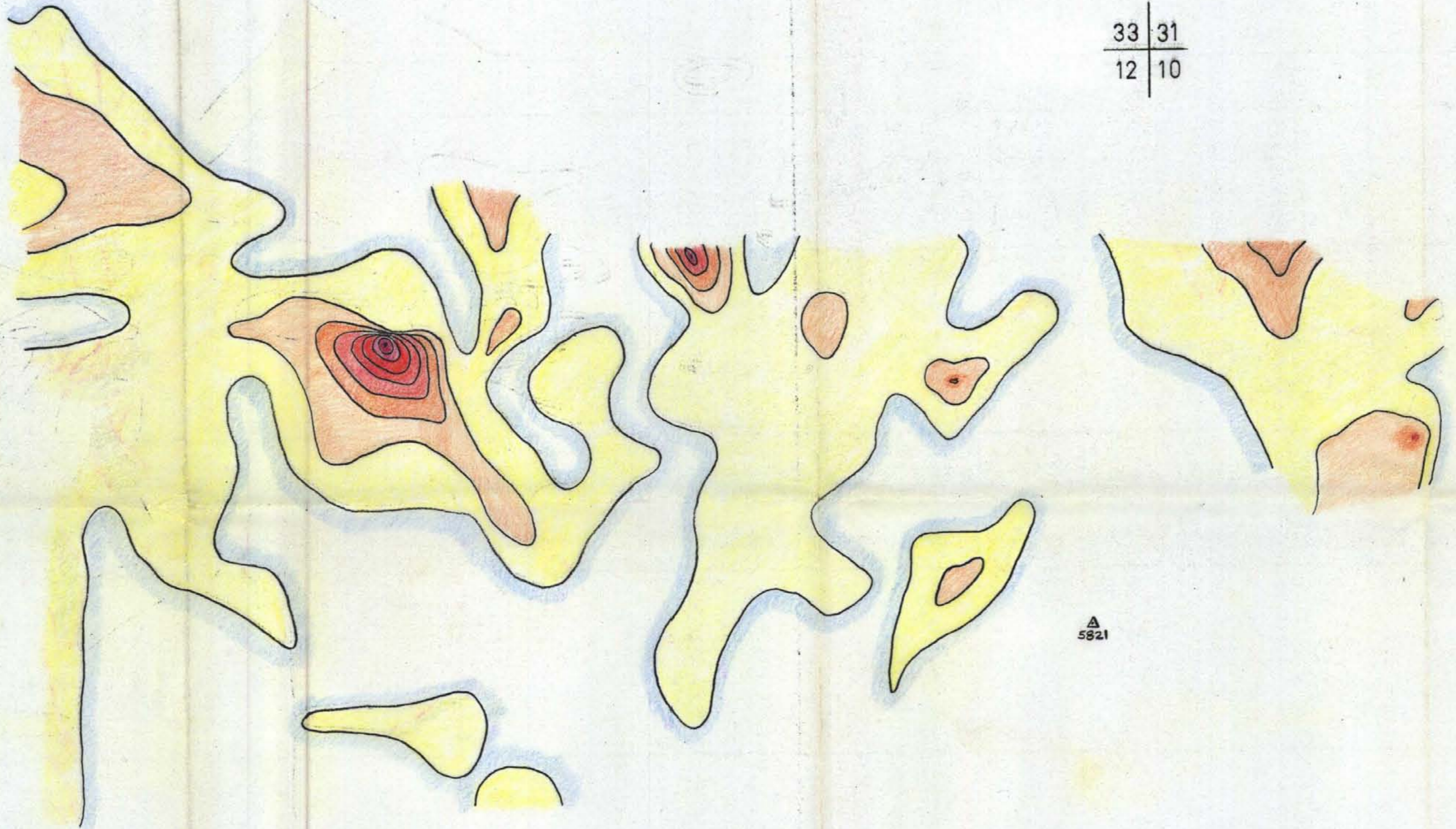
SPECTRUM CLAIMS

NUTLUDE LAKE, B.C.	57° 40' 130° 30'	DRAWING NUMBER SP-3-70
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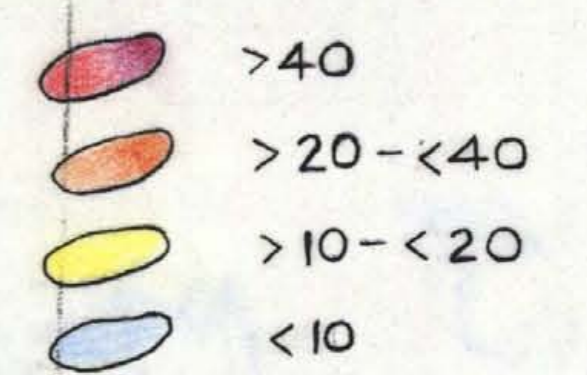
BRITISH COLUMBIA
 DEPARTMENT OF MINES AND PETROLEUM RESOURCES
 GEOCHEMICAL MAP

22 W-7

33 | 31
 12 | 10



A
 5821



Parts per million - molybdenum

2-M 22 2735 M-5

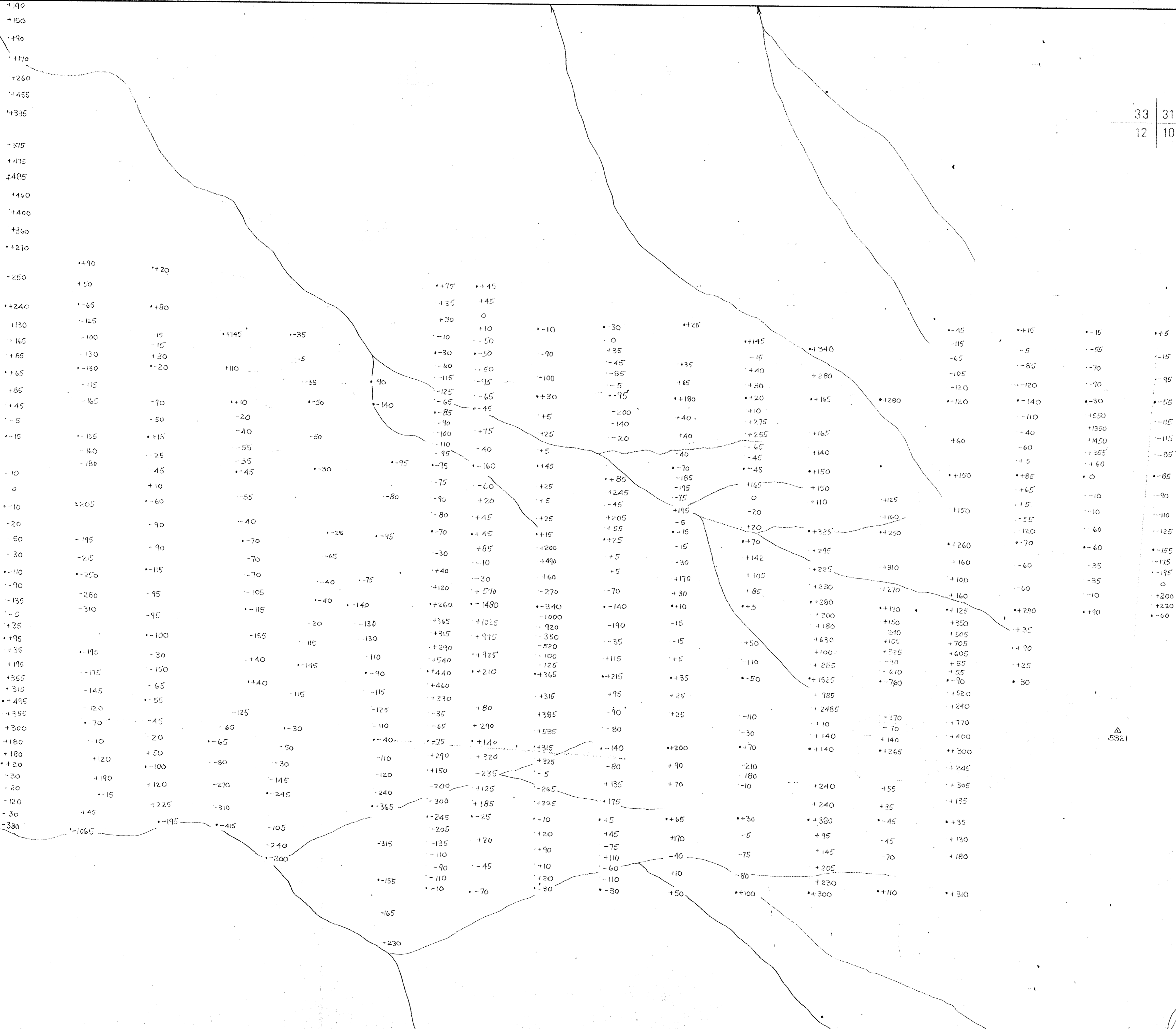
OVERLAYS GEOLOGICAL MAP

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 10-5555

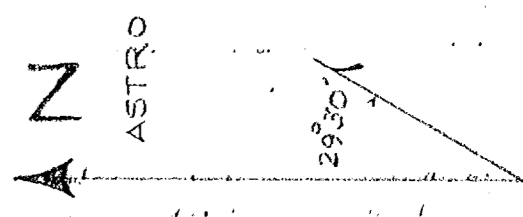


Expiry Date: August 4, 1971
 James S. Dodge

GEOCHEMICAL MAP - Mo		APPROVED BY SPARTAN EXPLORATIONS, LTD.	DRAWN BY J. S. DODGE
SCALE:	DATE, OCT. 1970	SPECTRUM CLAIMS	
NUTLUDE LAKE, B.C.		57° 40' 130° 30'	DRAWING NUMBER SP-4-70



33	31
12	10

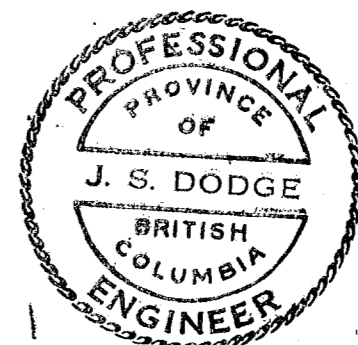


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2735 MAP #6

2735 M-6

△ 5321

0 300 600
SCALE - FEET



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Expiry Date: August 4, 1970

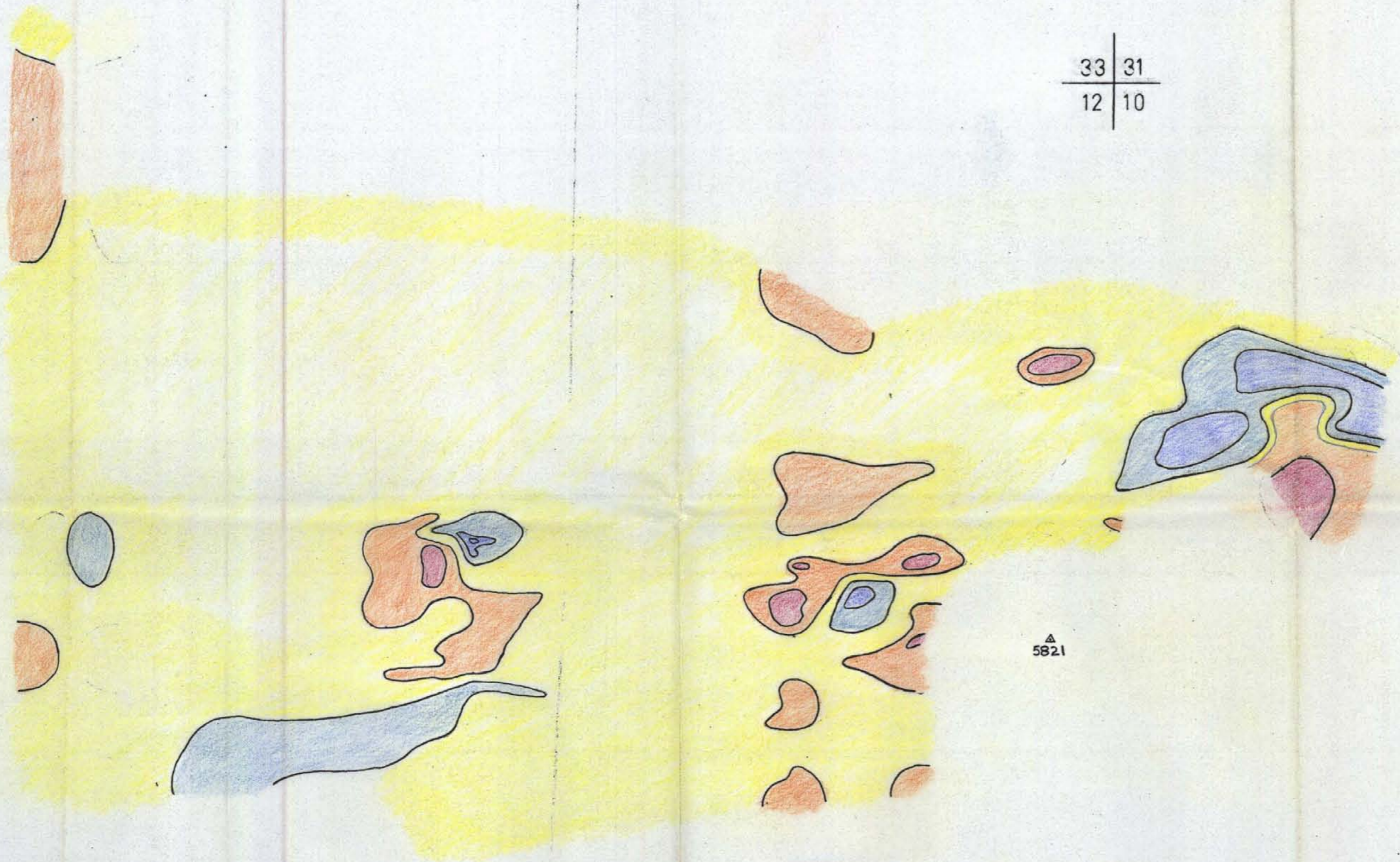
MAGNETIC SURVEY MAP

SCALE:	APPROVED BY SPARTAN EXPLORATIONS, LTD.	DRAWN BY J. S. DODGE
DATE: OCT. 1970		

SPECTRUM CLAIMS

NUTLUDE LAKE, B.C.	57° 40' 130° 30'	DRAWING NUMBER SP-5-70
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2005
3183



3183

VIEW

- >+600 γ
- >+200-<+600
- >-200-<+200
- >-200-<-400
- <-400

Gamma

2735

M-7

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 2735 M-7



Expiry Date: August 4, 1971
 James A. Dodge

OVERLAYS GEOLOGICAL MAP

MAGNETIC SURVEY MAP

SCALE:	APPROVED BY: SPARTAN	DRAWN BY:
DATE: OCT. 1970	EXPLORATIONS, LTD.	J. S. DODGE
SPECTRUM CLAIMS		
NUTTLUDE LAKE, B.C.	57° 40' 130° 30'	DRAWING NUMBER SP - 6 - 70