



Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

015432

093L 003 (Grubstake)

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S) Prospecting - Geochemical TOTAL COST \$3005.

AUTHOR(S) Tom Richards SIGNATURE(S) T.A. Richards Box 436, Hazelton B.C.

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED YEAR OF WORK 1988

PROPERTY NAME(S) Tsalit Property

COMMODITIES PRESENT Ag, Pb, Zn

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN 003; NTS 93L

MINING DIVISION Omineca NTS

LATITUDE 59° 09' LONGITUDE 126° 52'

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

OWNER(S) (1) New Nadina Exploration (2)

MAILING ADDRESS # 305 - 700 W. Pender St. Vancouver, B.C.

OPERATOR(S) (that is, Company paying for the work) (1) New Nadina (2) No Statement or other instructions

MAILING ADDRESS as above PROFILE T.K.

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude): Rhyolites & andesites flows, breccias and tuff of probable Cretaceous age are intruded by Cretaceous Granites. Mineralization is galena, sphalerite and pyrite associated with breccias.

REFERENCES TO PREVIOUS WORK: Church; BN; 1970; BCDM; GEM; pp. 141-149.

LOG NO: 0207	RD.
ACTION:	
19 p	
FILE NO:	

PROSPECTING - GEOCHEMICAL REPORT

TSALIT 1 CLAIM

OMINECA MINING DIVISION
93L/2

54 09'N 126 52'W

FOR

NEW NADINA EXPLORATION LTD.
#304-700 WEST PENDER ST.
VANCOUVER, BC
V6C 1G8

BY

THOMAS A. RICHARDS
BOX 4186
SMITHERS, BC
VOJ 2N0

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TSALIT MOUNTAIN

PROSPECTING REPORT (93L/2)

INTRODUCTION:

Work has been done on the Tsalit Property by a number of operators since 1929, when copper-moly mineralization was just discovered. Descriptions are given under the name of "Grubstake Group" in relevant Annual Reports to the Minister of Mines in British Columbia and Geological Survey of Canada Publications.

Key claims in the showings area were held by E. Westgarde, of Houston, BC, during the mid-60's. A deep drill hole was completed by New Nadina Explorations in the 70's. This hole was collared in mineralization. Unfortunately, the hole was cased through Cu-Ag mineralization at surface, and thereafter drilled through a series of barren andesitic pyroclasts.

The 1988 work done on these claims was for the present owners, New Nadina Exploration Ltd. This work consisted of, in part, prospecting by Mr. Pat Suratt. These traverses and subsequent sampling form the basis for this report.

LOCATION AND ACCESS:

Tsalit Mountain is located about 25 km southwest of Houston, BC. The property is on the north side of the upper part of Tsalit Mountain. It is accessible with difficulty using all terrane vehicles on unmaintained trails from logging slashes, north of Puport Creek. Some use was made of road based access, but in order to facilitate effective usage of time, a helicopter, based from Houston was used for mobilization and demobilization of a fly-camp.

The property is centered at 54 09' north latitude and 126 52' west longitude.

CLAIMS AND OWNERSHIP:

The property comprises one claim, Tsalit 1, of 12 units, record no. 811, expiry date is on September 30, 1991.

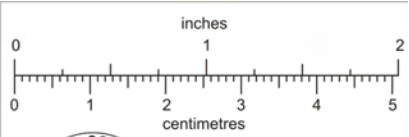
The claim was staked by Mr. Ronald R. Blusson, and sold by Bill of Sale # 4995, to New Nadina Exploration Ltd, on February 16, 1983.

REGIONAL GEOLOGIC SETTING:

The region is situated along the west-central part of the Stikine Terrane. Stratified and plutonic rocks range in age from Upper Paleozoic to Early Tertiary, with rocks of Jurassic age and younger being dominant (Figure 3, Table 1).



**PROPERTY
LOCATION**



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.



<p>NEW NADINA EXPLORATION LOCATION MAP TSALIT 1 Mineral Claim</p>	
Nov 21/88	DATE
SCALE AS SHOWN	FIGURE NO. 1

Four major tectono-stratigraphic elements dominate the region.

The Lower and Middle Jurassic Hazelton Group comprises a marine and non-marine arc assemblage that is the preponderant rock assemblage in the area of interest. These strata are mainly non-marine rhyolitic to andesitic flows, pyroclastics and hypabyssal intrusives comprised of interfingering assemblages of flows, ignimbrites, lahars, air fall tuffs and breccias, volcaniclastic sediments and high level intrusive units. Consanguineous with the volcanics are diorite to granite plugs and stocks of the Topley Intrusions.

The interval between Upper Jurassic and Early Upper Cretaceous time is occupied by two sedimentary assemblages that appear to have little bearing on mineralization in this area.

To the immediate north of the area of interest, Upper Jurassic to mid-Lower Cretaceous Bowser Lake Group comprise a northwardly thickening wedge of deltaic-foredeep deposits. The source of the sediments was the Hazelton Group to the south and the depositional basin is known as the Bowser Basin. The locus of the strand lines across the southern limit of the Bowser Basin defines a structure known as the Skeena Arch, one of the most intensely mineralized belts in the Canadian Cordillera.

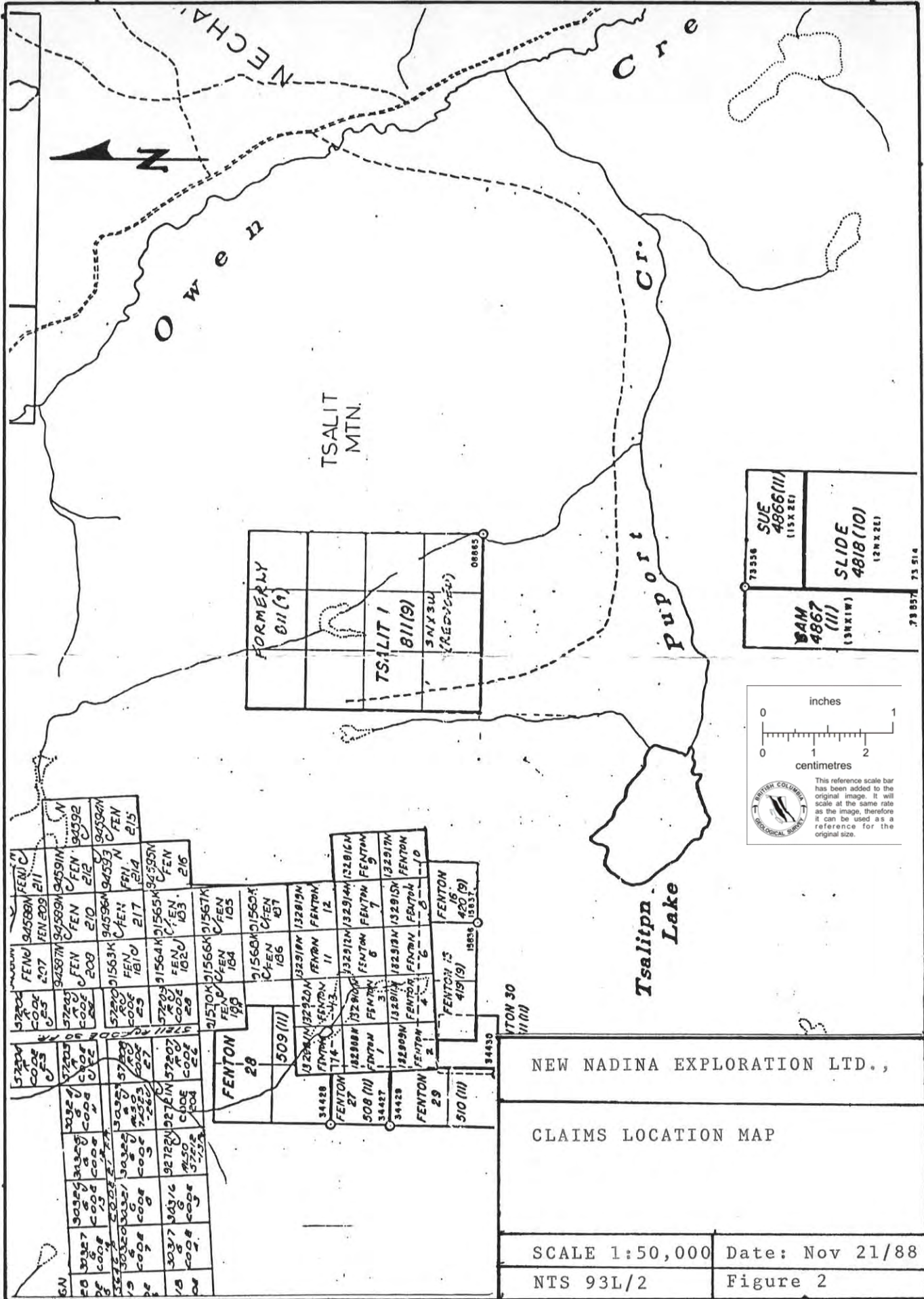
Between the mid-Lower Cretaceous and early Upper Cretaceous, the Skeena Group sediments were deposited across the entire region. This unit represents a continental margin clastic wedge, whose sediments were derived from the east, off the Omineca Terrane.

The late Upper Cretaceous to Eocene time is represented by a suite of continental transtensional arc volcanics that were deposited in an array of down-drop volcanic basins within the Stikine Terrane from latitude 55 30'N southward. These volcanics (the Kasalka and Dotsa Lake Groups) and their coeval intrusives (Bulkley, Babine, Nanika) are associated with the development of basin and range geomorphology that typifies this segment of the Stikine Terrane.

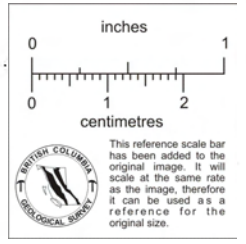
Post-Eocene time was one of uplift, erosion and local deposition of basalt. It served to expose mineralization.

Early and Middle Jurassic age arc-related mineralization is widespread and precious metals based. Included within this epoch is the Toodoggone gold silver camp, and the major deposits of Silbak-Premier, Big Missouri and Granduc along the east flank of the Coast Range. Mineralization in the Smithers-Whitesail area likely of this epoch includes the Dome Mountain deposits and those of the Topley-Richfield area.

Late Cretaceous - Early Tertiary aged mineralization in the Skeena Arch is presently the most varied, widespread and significant of the



73536	SUE 4866(III) (115 X 221)
73857	SLIDE 4818(10) (128 X 221)
73857	BAM 4867 (138 X 117)



NEW NADINA EXPLORATION LTD.,	
CLAIMS LOCATION MAP	
SCALE 1:50,000	Date: Nov 21/88
NTS 93L/2	Figure 2

two epochs. All the copper, molybdenum, tungsten and gold-bearing porphyries belong to this stage. Precious metals properties include Equity Silver, New Nadina, Silver Standard, Cronin and a host of smaller properties. Most of these deposits are related to the evolution of down-drop basins and calderas associated with volcanism, related plutonism and the development of a basin-and-range geomorphology. These deposits range from low temperature epithermal to high temperature mesothermal types.

PROPERTY GEOLOGY:

The area has been mapped and reported on by Church (1970 and 1972) and Tipper et al (1976), and the description of the geology is taken from these references.

The claims are underlain by andesite, basalt and minor rhyolite of probable Jurassic age, although rhyolite dykes and sills have been dated (K/Ar: 76.5±3.0 M.Y.) as Upper Cretaceous. Bed rock is restricted to prominent bluffs along the flanks of the hill, and isolated bed-rock knolls in the upper surface. Stratigraphic rocks include argillite overlain by rhyolite at lower elevations (Figure 4), overlain by basalt and andesitic lavas and tuff-breccias.

MINERALIZATION:

The main zone of mineralization on Tsalit Mountain is named the Grubstake Occurrence (Figure 5). The original showing was in a sheared and sericitized rhyolite with little azurite staining. A 10 foot sample across the zone gave 6.8oz/t Ag and 0.9% Cu (Ministry of Mines Rept., 1929, C175). Trenching showed this zone to consist of pyrrhotite, chalcopyrite, pyrite and sphalerite cementing, replacing and veining a tuff breccia composed of an andesitic matrix and rhyolitic breccia fragments.

Other showings on the mountain comprise the Summit Showing (Figure 5), comprising pyrite, pyrrhotite, molybdenite and chalcopyrite associated with a hornfelsed, amygduloidal basalt. Off the north slope of Tsalit Mountain, chalcopyrite, molybdenite and pyrite are found scattered in granitic rocks.

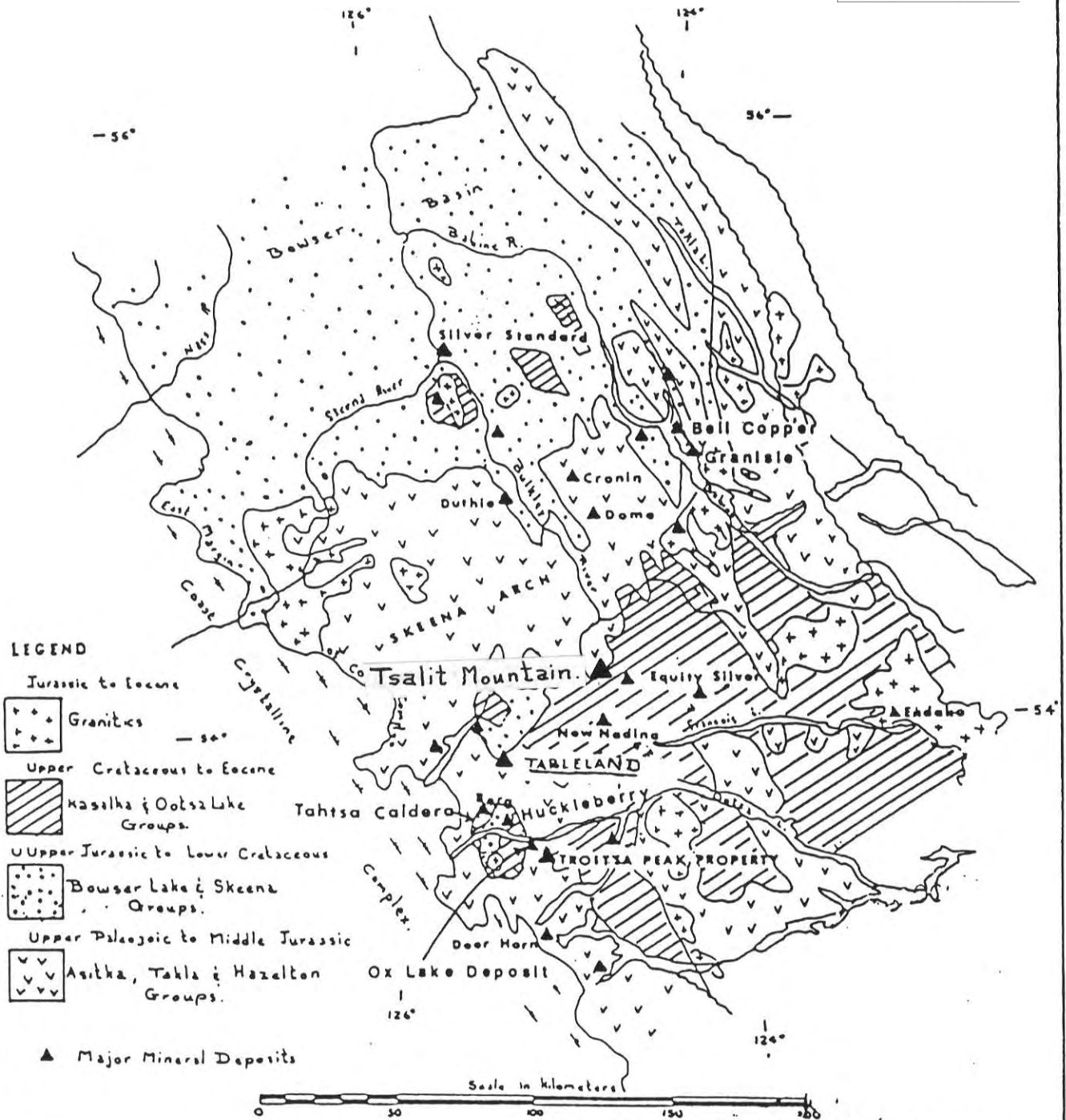
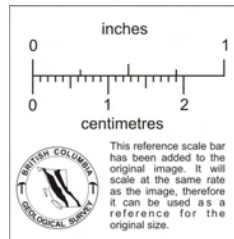
PROSPECTING 1988:

In order to assess the area for the presence of further showings, Mr. Pat Suratt in August, 1988 completed four prospecting traverses across the Tsalit Mountain area, on and adjacent the claims (Figure 6). Eight rock samples and four silt samples were collected.

None of these samples are from areas of mineralization with any known areal extent. Further prospecting is not likely to be effective in finding further mineralization. Dashed lines (Figure 6) roughly outline the traverses, and although well covered, things could be missed. The showings were not sampled, as they have been

Figure 3A

GEOLOGIC SETTING, MINERAL DEPOSITS
West-central British Columbia



(MODIFIED AFTER: TIPPER ET AL, 1981)

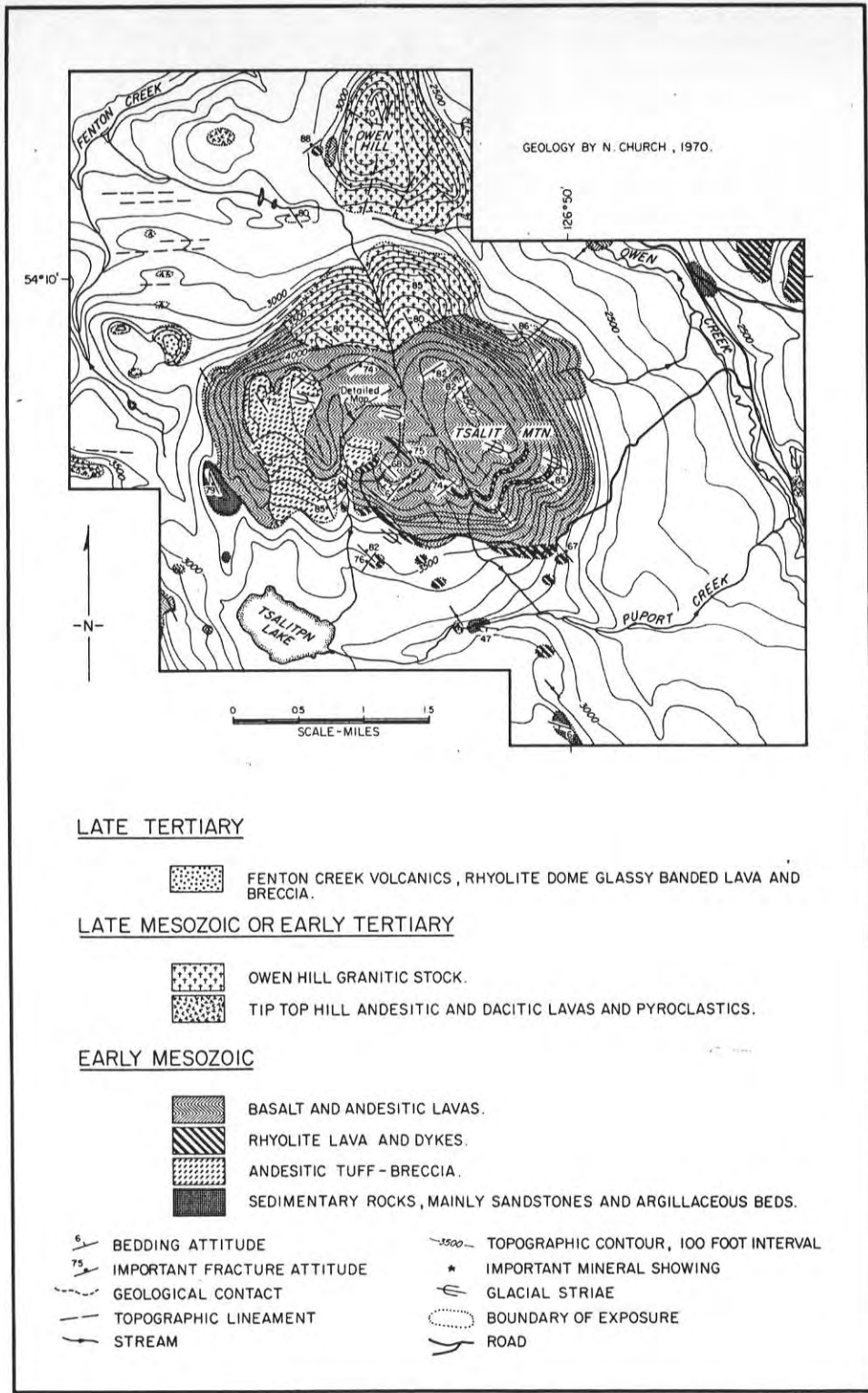
previously covered.

Soil samples in the area of rock sample PS504 and 505, and northward, should show whether mineralization is confined to the southpart of the mountain. Silt-3 (2.1ppm Ag, 897ppm Zn and 12ppb Au) further points to the area of potential immediately north of PS505R.

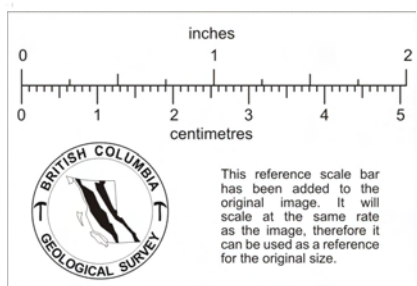
TABLE 1

STRATIGRAPHIC AND TECTONIC ELEMENTS
STIKINE TERRANE ; BRITISH COLUMBIA

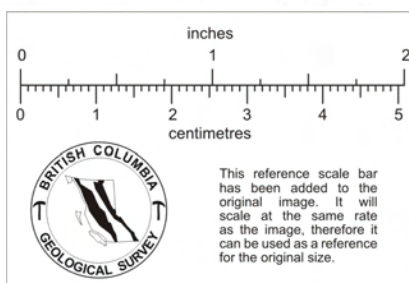
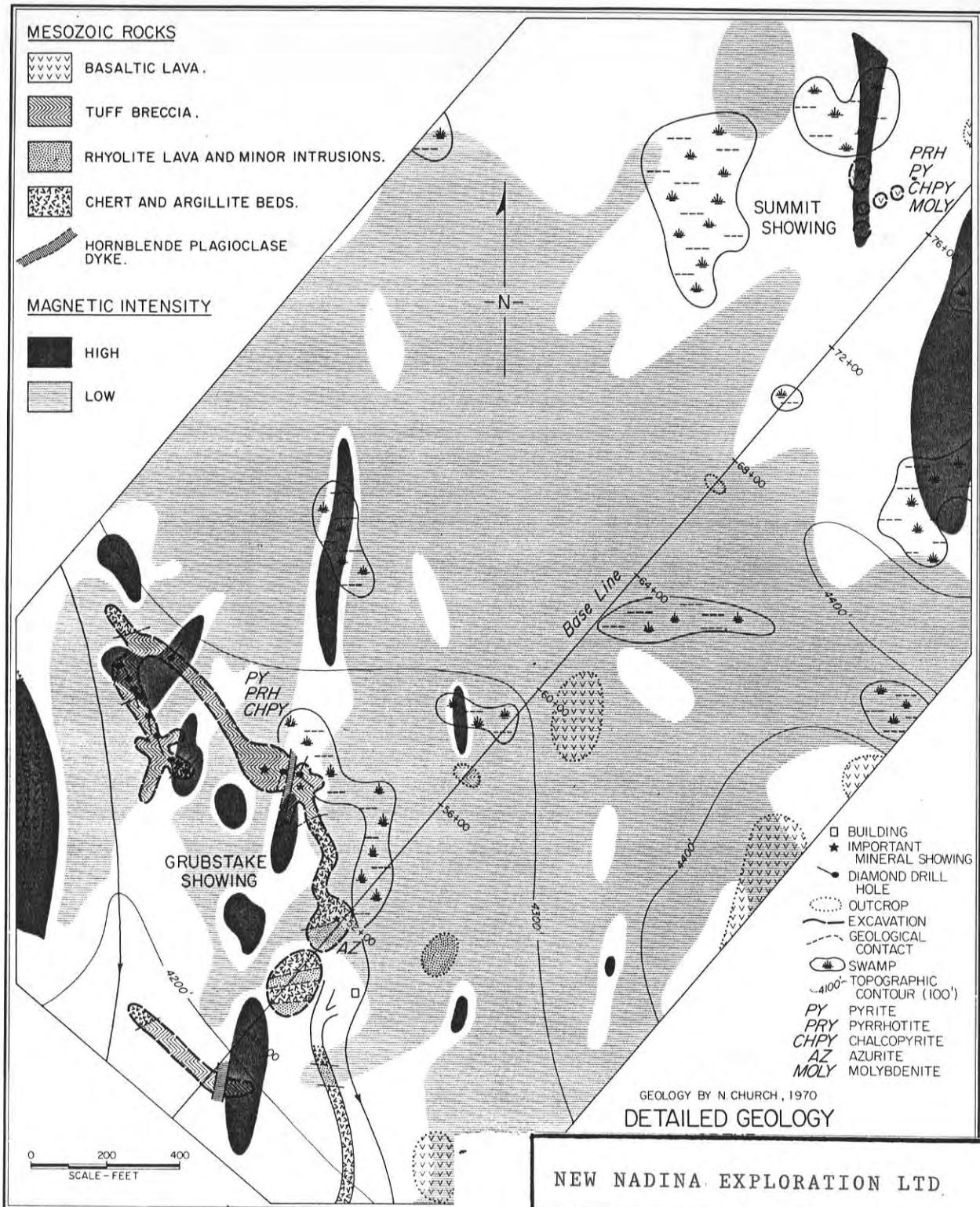
Island ARC Assemblages	Molasse Assemblages	Transitional Volcanic Assemblages	Post Drogenic	CENOZOIC		Late Tertiary	Mio	PLIO	PLIE						
				Early Tertiary											
PALEOZ.	MESOZOIC	Molasse Assemblages	Post Drogenic	CENOZOIC	Early Tertiary	Late Tertiary	Mio	PLIO	PLIE	Anahim Volcanics Chilcotin Lavas	BASALT	Development of Basin and Range Morphology, Regional Cordilleran Uplift			
										Poplar Butte Volcanics	BASALTIC				
										ENDAKO GROUP	Buck Creek Volcanics		BASALTIC, ANDESITE	KASTBERG INTRUSIONS QUANMUE INTRUSIONS BABINE INTRUSIONS MANIKA INTRUSIONS	Epoch of Development of Down-Drop Volcanic Basins.
										OOTSA LAKE GROUP	Goosly Lake Volcanics Babine Volcanics		RHYOLITIC TO BASALTIC		
										KASALKA GROUP	Brian Bone Formation Tip Top Hill Formation Saskwa River		CALC-ALKALINE ANDESITIC TO RHYOLITIC CONGLOMERATE, SANDSTONE, ALKALY BASALT		
										Red Bed Assemblage, Rocky Ridge Volcanics			CHERT, PEBBLE SANDSTONE, SLICE SHALE, SANDSTONE, CONGLOMERATE		
										SKEENA-SUSTUT GROUP					Begin Uplift of Omineca Crystalline Belt - welding of Stikinia to Craton.
										BOWSER LAKE GROUP	Deltaic Assemblages Trout Creek Assemblages Ashman Formation		CONGLOMERATE, SILTST. GREYWACKE, SILTST. SHALE		
										HAZELTON GROUP	Smithers Formation Nikilwa Formation Toadogone, Telkwa Formations		CALC-ALKALINE, MARINE & NON-MARINE VOLCANICS & SEDIMENTS POLYMETIC CONGLOMERATE	OMINECA INTRUSIONS TOPLEY INTRUSIONS	Development of Bowser Basin:
										TAKLA-STUHINNI GROUP	SAYNE, DEWAR & MOOSEVELL FORMATIONS		ALKALINE MAFIC VOLCANICS; SEDIMENTS & LIMESTONE		
PALEOZ.	MESOZOIC	Molasse Assemblages	Post Drogenic	CENOZOIC	Early Tertiary	Late Tertiary	Mio	PLIO	PLIE	STIKINE ASSEMBLAGE	LIMESTONE, CHERT, RHYOLITE, ANDESITE, BASALT.	Stikinia an independent Arc Terrane, Separated from Craton.			



Geology of the Tsalit Mountain area.



NEW NADINA EXPLORATION LTD.	
PROPERTY GEOLOGY (After Church, 1970)	
scale: as shown	Nov 21/88
NTS 93L/2	Figure 4



NEW NADINA EXPLORATION LTD.

MINERALIZED SHOWINGS,
TSALIT 1 Mineral Claim
(After Church, 1970)

Scale: as shown nov 21/88

NTS 93L/2 Figure 5

REFERENCES:

- Church, B.N., (1970); Far (Grubstake) Property, in Geol. Explor. and Mining, 1970; BC Dept. of Mines & Petrol. Res.; pp 141-149.
- Church, B.N., (1972); Geology of the Buck Creek Area; in Geol. Exploration and Mining in British Columbia; BC Dept. Mines and Petrol. Res; pp 353.
- Silversides, D.A., (1966); Property Examination of Tsalit Mountain Cu-Mo Prospect; (93L/2); Internal Report for Normant Copper Ltd. (N.P.L.).
- Tipper, H.W. and Richards, T.A., (1976); Geology of the Smithers Map Area, G.S.C. Open File Map No. 351 .


STATEMENT OF COSTS:

Prospector: 5 days @ \$250/day	\$1250
Assistant: 4 days @ \$125/day	500
Geochemistry (12 samples)	180
Helicopter	550
Truck & Quad rentals	200
Camp costs	100
Food \$25/day/man	200
Supplies	<u>25</u>
TOTAL	\$3005

AUTHOR'S STATEMENT:

I, Thomas A. Richards, of Box 436, Hazelton, BC, am the author of the report, " Tsalit 1 Claim, Prospecting - geochemical Report."

1. I received my B.Sc. from the University of British Columbia in 1965.
2. I received my Ph.D. from the University of British Columbia in 1971.
3. I am a Fellow of the Geological Association of Canada.
4. I have been involved in field research, and mineral exploration in British Columbia since 1963.



Thomas A. Richards
Ph.D., FGAC

November 25, 1988

APPENDIX I

GEOCHEMISTRY ROCK AND SILT ANALYSIS

COMPANY: TOM RICHARDS PROP.
 PROJECT NO: TST#402
 ATTENTION: G. STEWART

MIN-EN LABS ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

ACT:F31) PAGE 1 OF 3
 FILE NO: 81-77/P1+2
 DATE: AUGUST 19, 1988

(VALUES IN PPM.)	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
PS-500R88	1.3	23070	1	8	24	.9	15	16580	.8	49	276	84480
PS-501R88	6.4	4350	10	1	80	.6	6	7370	6.4	9	87	4360
PS-502R88	13.2	10250	46	1	16	1.0	8	52570	4.0	60	1853	34340
PS-503R88	3.5	31350	9	11	101	1.1	19	19760	2.5	81	741	90750
PS-504R87	25.4	17780	482	4	59	.8	7	11510	7.5	55	3599	69080
PS-505R88	28.1	6370	40	1	132	.7	20	5350	6.9	11	1381	5970
PS-506R88	2.6	28340	18	15	60	1.0	14	44150	2.6	20	1987	25170
PS-507R88	1.6	20020	28	6	23	1.0	19	12530	3.3	27	82	52380
PS-S1-88	1.0	16530	27	2	127	1.0	9	6540	3.1	16	23	27570
PS/S-2/88	.7	15640	24	2	200	1.0	8	13270	2.6	13	28	24210
PS/S-3/88	2.1	27290	16	6	368	1.3	7	11260	5.1	15	32	24550
PS/S-4/88	.2	23290	22	4	245	1.1	8	8590	1.7	17	21	28600

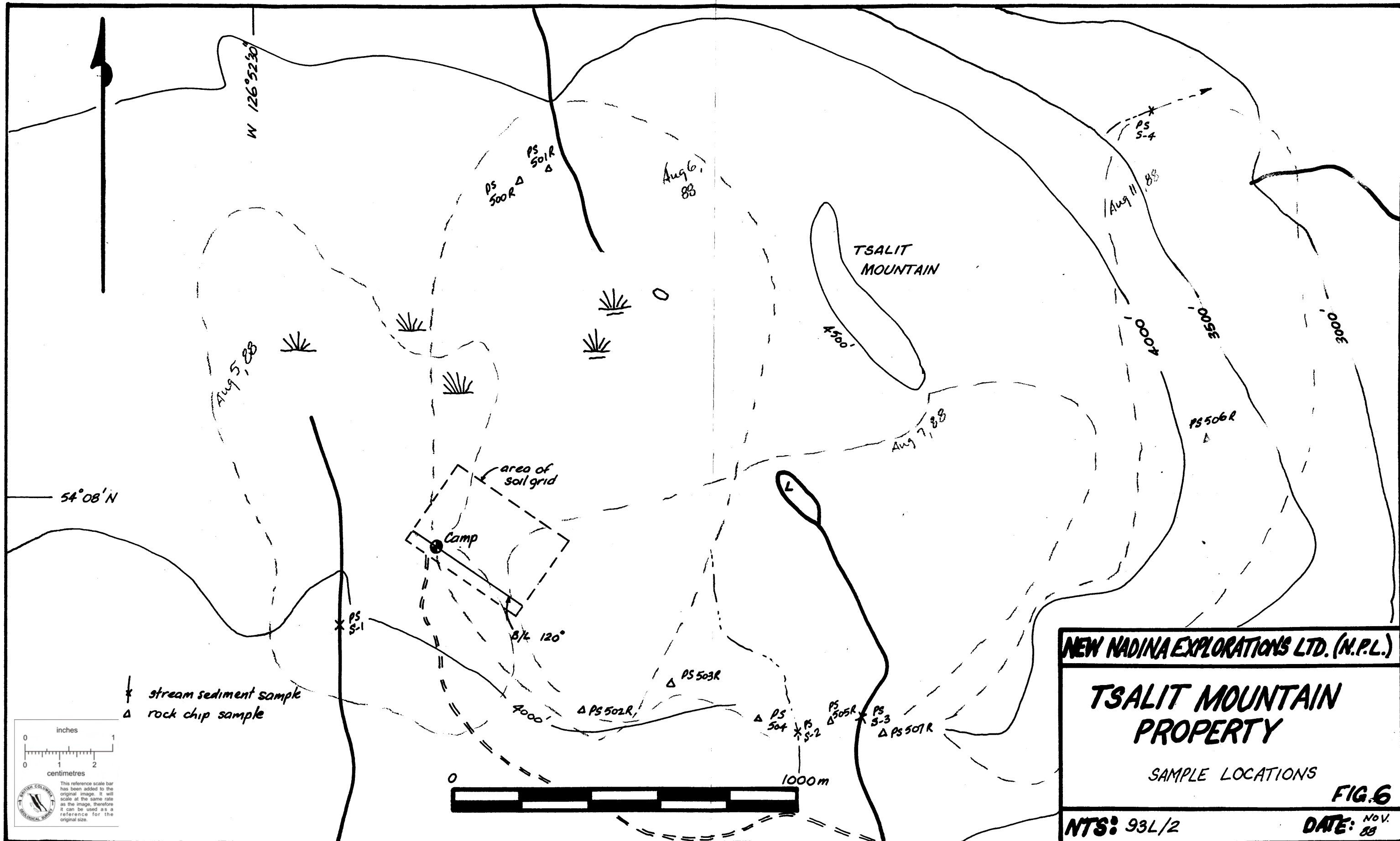
(VALUES IN PPM.)	K	LI	MG	MN	MO	NA	NI	P	PB	SB	SR	TH
PS-500R88	1860	47	6020	624	5	2820	40	1160	17	1	29	1
PS-501R88	2880	40	1330	1807	10	520	8	140	670	20	9	6
PS-502R88	2680	45	12420	1131	5	540	36	1490	1470	1	31	1
PS-503R88	2070	54	21210	1055	5	540	51	1670	30	1	6	4
PS-504R87	3140	46	8730	630	5	680	54	1060	40	1	17	1
PS-505R88	4400	42	1360	390	7	440	12	160	350	40	9	7
PS-506R88	1520	50	13600	629	5	370	38	790	22	1	125	1
PS-507R88	930	66	23050	805	10	820	56	900	23	1	12	1
PS-S1-88	1490	48	5810	565	6	460	26	780	29	1	19	1
PS/S-2/88	1230	48	4490	1632	7	430	16	1540	23	1	29	1
PS/S-3/88	1400	52	5320	642	6	440	22	1160	31	1	36	2
PS/S-4/88	1700	48	7460	657	5	570	26	890	16	1	23	1

(VALUES IN PPM.)	U	V	ZN	GA	SN	W	CR	AU-PPB
PS-500R88	1	82.4	43	1	3	32	107	1
PS-501R88	1	10.0	440	1	1	3	96	2
PS-502R88	1	49.8	77	1	1	1	78	40
PS-503R88	1	128.0	82	1	3	4	116	2
PS-504R87	1	76.6	341	1	1	1	82	270
PS-505R88	1	10.6	88	1	1	3	69	149
PS-506R88	1	121.5	22	1	2	4	107	5
PS-507R88	1	108.2	42	1	3	6	120	2
PS-S1-88	1	58.0	187	1	2	2	41	4
PS/S-2/88	1	45.6	110	1	2	1	36	10
PS/S-3/88	1	50.5	897	1	2	1	38	12
PS/S-4/88	1	62.5	72	1	2	2	42	3

APPENDIX II
ROCK DESCRIPTIONS

TABLE OF ROCK DESCRIPTIONS:

- 500R py in basaltic andes, cpy tr.
- 501R (F) bleached qtz rhy and py.
- 502R (F) proximal talus - small area cpy in prop, vesicular andes - py/cpy/gal.
- 503R cal/qtz/py/po/cpy - limited exposure.
- 504R (F) Talus - py/cpy in vesicles in flow andes.
- 505R Rhy (strike 50 dip 45 N.) cpy/py/mal rhy not consistently mineralized.
- 506R cal/qtz/epid/chalcocite - in otherwise unaltered basalt.
- 507R Rusty pyritic andes.



NEW NADINA EXPLORATIONS LTD. (N.P.L.)

**TSALIT MOUNTAIN
PROPERTY**

SAMPLE LOCATIONS

FIG. 6

NTS: 93L/2

DATE: NOV. 88