

P R O S P E C T I N G 1 9 7 9 - 1 9 8 0 (partial)

CONSEQUENTIAL TO STAKING OF:

SANDY TOO #1-----1443(9)
SANDY TOO #2-----1444(9)
SANDY TOO #3-----1445(9)
NEAR #1-----1446(9)
NEAR #2-----1447(9)
NEAR #3-----1448(9)
NEAR #4-----1449(9)
NEAR #5-----1450(9)
NEAR #6-----1451(9)
NEAR #7-----1452(9)

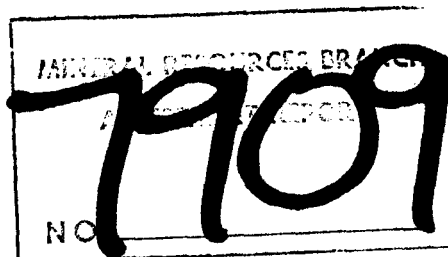
SLEPCAN
~~KASLO~~ MINING DIVISION

MAP # S 21/13 E LATITUDE: $49^{\circ} 55.8'$ LONGITUDE: $117^{\circ} 42.5'$

OWNERS: Arnold and Elaine Gustafson,
Box 10, Burton, B. C.
VOG 1EO

269 - 7455

AUTHOR OF REPORT: Ealine E. Gustafson



August 12, 1980.

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MAP SHOWING NEW TRAILPAGE 15

INTERPRETATION:

General geographic description.

The area prospected is at the headwaters of Goat Canyon Creek, between Caribou Creek and Snow Creek in an area called The Tillicum. Tillicum Mountain is about seven miles east of Burton (on the Arrow Lakes).

Access to the Tillicum area was by horse and originally on an old trail which we recut last year, but now on a new trail which we located and have partly cut out. Whereas in using the old trail it took one hour by truck and seven hours by horse, we can now reach the Tillicum after one-and-one-half hours by truck and one hour by horse.

Base camp is at the headwaters of Goat Canyon Creek. Access to our claims is by horse and by foot in steep alpine terrain.

ABOUT THE REPORT:

Because of the remoteness of the area and the mode of travel, we always try to take someone with us in the event of an accident (horses increase the possibility of this happening, the incidence of bear and horse flies increase the possibility of it happening also).

Because prospecting is now our source of income, we have averaged our costs to maximize efficiency and minimize preparation time for trips. I have come up with standard meals which I vary by changing varieties of vegetables, cold meats and cookies. They serve us well and people like them.

Because of a shortage of grass in the Tillicum this year, we have had to supplement feed for the horses, which complicated our packing in, and length of stay per trip.

INTRODUCTION:

General Description:

The area where our claims lie is shown on the accompanying map, this is actually a cirque and indeed our claims circle and extend the boundaries of the Golden Hope, Record #779 which we also own.

Reason For Staking:

In work on the Golden Hope last year, we found evidence of tungsten moving out in both directions from the Golden Hope. Because of this we staked these new claims.

We have not yet completed detailed survey work on all these properties but we have had three mining companies and their geologists accompany us into our area and with their help we have identified - generally - the rock formations.

Because of the complexity of mineralization and lack of experience in identifying minerals in the field, I erred in last years report on the Golden Hope. The platy mineral described was often what the tungsten was found laying in - but the tungsten is actually found in scheelite. Being in the field with such experienced people has been a great education for both my husband and myself.

In work done lamping these claims this year, we discovered that the tree trunks were lamping tungsten up to about 18" from the roots. We had this confirmed by Can Test of Vancouver in an assay of tree bark.

The tree bark assay leads us to believe that the main deposit of tungsten is enclosed by the cirque, which seems to be supported by the strike and dip of some of our finds on the surface. We have just completed taking soil samples and have sent them off for assay.

Cominco geologist, P. J. Santos wrote a report on our property and has recommended purchase - this has not yet happened.

We are enclosing copies of this Cominco Report as part of our report.

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ILLUSTRATIONS

- Plate 1 Index Map of Near Property, B.C.
2 Claim Map of Tillicum Mountain Area
3 Geologic Map of Valhalla Area
4 Geologic Map of Tillicum Mountain Area
5 Sample Map, Near Property, B.C.
6 Proposed Staking Map, Near Property, B.C.
- Fig. 1 Southeast View of Near Property - NOT INCLUDED.
2 Portal of Tillicum Tunnel - NOT INCLUDED.

I ACKNOWLEDGEMENT

Elaine and Arnold Gustafson of Brouse, B.C., owners of the Near Property, accompanied P.J. Santos on the property investigation.

II SUMMARY

A property investigation was conducted on the Near Property, which is located on the south side of Tillicum Mountain 8-1/2 aerial miles (13-1/2 km) east of Burton, B.C. in Slocan M.D. of B.C. The property contains interesting tungsten mineralization and the potential is good.

III INTRODUCTION

The Near Property consists of 10 units (Near 1-8 and Sandy 1-2) and one crown grant (Golden Hope) located on the headwaters of Goatcanyon Creek 8-1/2 air miles (13-1/2 air km) east of Burton, B.C. in the Slocan M.D., B.C. (See Plate 1 & 2). The property elevation is at 6000-7400 feet above sea level, mainly above the tree line on alpine terrain in the northern part of the Valhalla Range. The topography is moderately rough, typical for this part of B.C. Access is by helicopter from Nakusp, B.C., or by logging road and packhorse trail from Burton, B.C.

This property is owned by Arnold and Elaine Gustafson of Brouse, B.C. (Tel. 265-4386), who staked (two-post staking) the Near and Sandy claims in September, 1979 and purchased The Golden Hope from a prospector in Nakusp. The Golden Hope was staked in 1902 by Michael Shea, some work was apparently done, but the workings can no longer be located. The northern part of the property was staked, as the Tillicum, about 1917 by J.G. Reveler and Lawrence Robson of Brouse, B.C. They drove a drift (Tillicum Tunnel) and shipped ore containing galena, Au and Ag. The last record of production was in 1921 (4 tons, \$40.00 Au, 100 oz/ton Ag), after which the Tillicum lay dormant. Aside from the prospecting done by the oldtimers and by the Gustafsons, no detailed exploration work has been done on this area.

After the discovery of tungsten mineralization by the Gustafsons, a property investigation to assess the potential of this property was conducted, on September 12, 1979, by P.J. Santos, Sr. Geologist of Cominco Ltd., accompanied by Arnold and Elaine Gustafson. A helicopter from Okanagan Helicopter Ltd. was leased for transportation.

IV DETAILED TECHNICAL DATA AND INTERPRETATION

a) Geology

The area southeast of Burton (Valhalla Range) is regionally underlain by granite and grandiorite of the Valhalla Plutonic Rocks intruding older igneous rocks (Nelson Plutonics) and older meta-sedimentary rocks (Slocan Group and Milford Group).

Plate 3 is a portion of H.W. Little's map showing the aerial distribution of the various formational units in the area.

A more detailed map, Plate 4, by D.W. Hyndman, depicts the geology of the area southeast of Burton, B.C. in the vicinity of Tillicum and Grey Wolf Mountain. The meta-sedimentary rocks mapped by H.W. Little as part of the Slocan Group (lower Jurassic and Triassic) were mapped by D.W. Hyndman as part of the Milford Group (Pennsylvanian to Triassic). These rock units are actually calc-silicate meta-sediments consisting essentially of cream-coloured, silicified, coarse-grained limestone, green, fine-grained limestone, quartzite, and green, coarse-grained skarn that are tightly folded. Lithologically these rocks are more correlatable to the Milford Group meta-sediments to the north, (Trout Lake Area) rather than to the Slocan Sediments to the east. The degree and type of alteration are not those normally found in the Slocan sediments. The calc-silicate meta-sediments are the host rocks to the tungsten mineralization discovered by the Gustafsons on the Near property. These calc-silicates are sandwiched between intrusions of the Nelson Plutonics and the Valhalla Plutonics. Lamprophyre dykes cutting through the meta-sediments trend generally E-W and dip at 70° to the north. At Tillicum Mountain the beds trend at 225° azimuth and dip at 65° to the southeast.

Tungsten mineralization occurs in the calc-silicate on the E-W trending ridge west of Grey Wolf Mountain (Fig. 1) on the headwaters of Goatcanyon Creek and in the calc-silicates of Tillicum Mountain over an area of about four units. The tungsten mineralization consists of scheelite in altered greenish limestone. Samples taken (Plate 5 and Fig. 1) from the ridges west of Grey Wolf Mountain assayed from .02% to .77% W₂O₃, at thicknesses of more than 5 feet (see Appendix). The mineralization appears to follow the E-W trend of the ridge. The talus below where these samples were taken contained numerous boulders with scheelite and some boulders with galena, sphalerite, tetrahedrite, pyrite, quartz, calcite, and epidote. The Golden Hope (No. L1797) which covers the crest of the ridge above was staked in 1902 and though no record exists on the work done there, some of the above mentioned boulders may have come from workings in the Golden Hope.

IV Detailed Technical Data and Interpretation

a) Geology - cont'd

On Tillicum Mountain, a drift (Tillicum Tunnel) was driven for about 75 meters, more or less following the beddings of an altered limestone. Records show that the Tillicum was staked around 1917 and some production was made from a vein containing galena and pyrite with gold and silver values (1921, 4 tons @ \$40.00 Au, 100 oz./ton Ag). During this property investigation, scheelite fluorescence was found 45 meters from the portal and some scattered fluorescent specks elsewhere in the drift. No samples were taken due to the hardness and toughness of the rock face at that point in the drift.

The Gustafsons prospected in the area in the fall of 1979 and did not use geochemical techniques. They said there were other indications of scheelite in parts of the property which was not visited during the investigation for the lack of time.

b) Potential

This is a new tungsten discovery and very little exploration for tungsten has been done on the property. In view of the fair area of mineralization (about 4 units) and the favorable geological setting, this property has good potential as a target for tungsten exploration. Because no soil sampling has ever been done on this area, it is a very good property in which to use geochemical techniques.

The area was prospected in the past for silver and gold as indicated by the work done at the Tillicum Tunnel, hence the Ag-Au potential may not be as economically attractive.

V CONCLUSION

Definite tungsten (scheelite) mineralization has been found in calc-silicate meta-sediments sandwiched between intrusions at the Near Property, located 13-1/2 km east of Burton, B.C. The extent of the mineralization and the favorable geology show this property to have good potential for tungsten exploration. A soil sampling program would be an inexpensive way to evaluate the property further.

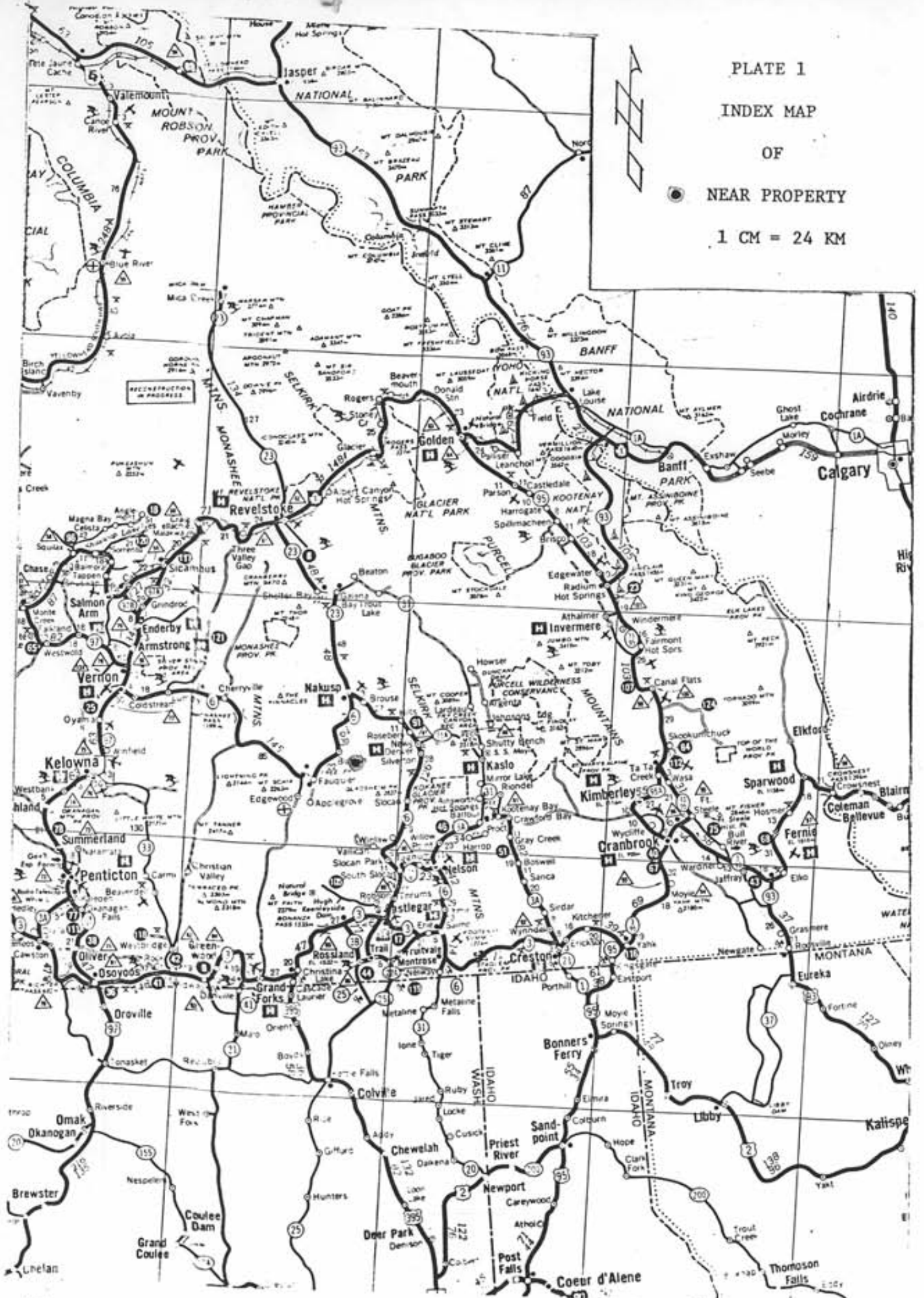
VI REFERENCES

- Hyndman, D.S. - 1968 - Petrology and structure of Nakusp map-area, B.C., GSC Bull. 161.
- Little, H.W. - 1960 - Nelson map-area, west half, B.C., (82F W 1/2), GSC Memoir 308.
- Minister of Mines, 1901-1921 - Annual reports, B.C. Ministry of Mines; 1901, P. 1224, 1036; 1903 P. 242; 1917, P. 175; 1919, P. 160; 1920, P. 135; 1921, P. 174.

VII APPENDIX

1. Sample Descriptions, Near Property, Slocan M.D., B.C.
2. Assay Certificate, Near Property

PLATE 1
 INDEX MAP
 OF
 NEAR PROPERTY
 1 CM = 24 KM

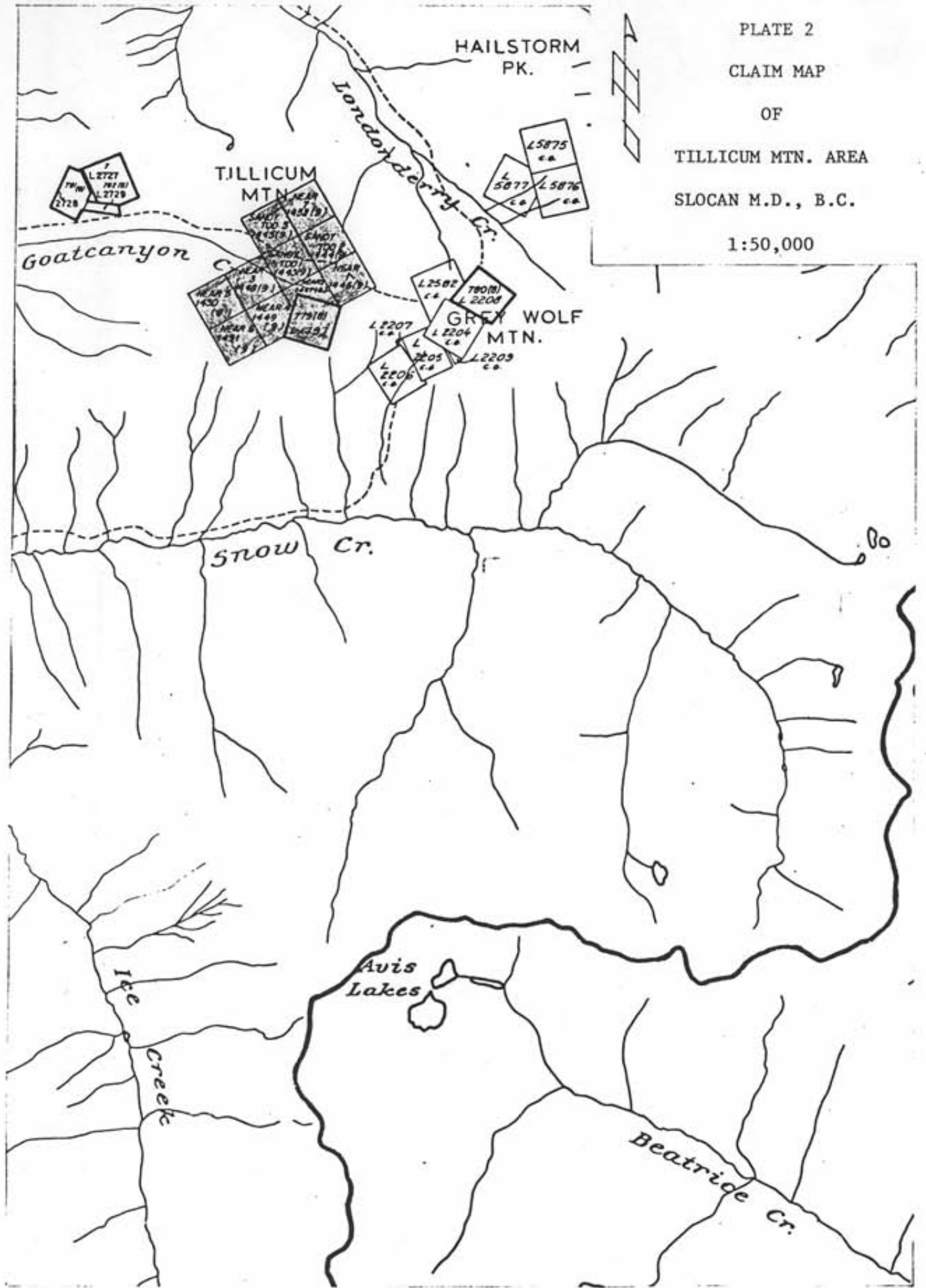


(From B.C. Road Map 1979-1980)

PLATE 2
CLAIM MAP

OF
TILLICUM MTN. AREA
SLOCAN M.D., B.C.

1:50,000

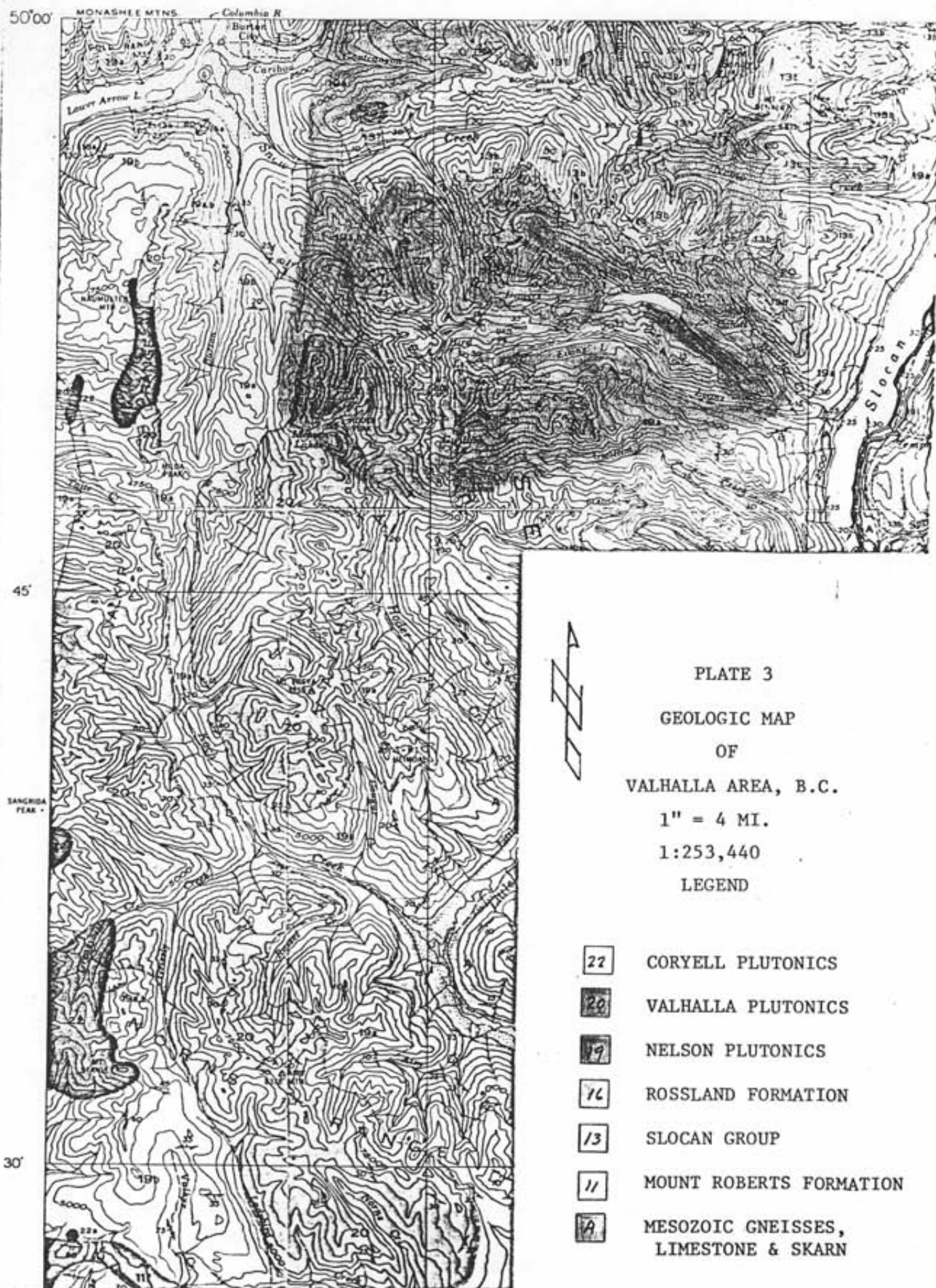


118°00'

45'

30'

50°00'



(From Map 1090A, GSC Memoir 308 by H.W. Little)

NEM-3

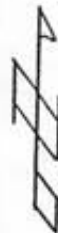














PLATE 4
 GEOLOGIC MAP
 OF
 TILLICUM MTN. AREA, B.C.

1" = 1 Mi.

1:63,360

LEGEND

-  ALLUVIUM
-  LOWER CARIBOU CREEK STOCK
-  GOAT CANYON STOCK
-  ROSSLAND FORMATION
-  ANDESITE FLOWS
-  SLOCAN SEDIMENTS
-  KASLO FORMATION
-  CALC-SILICATE METASEDIMENTS
-  BEDDING
-  SCHISTOCITY
-  FOLIATION
-  FAULT



F. No. By P.J.Santos Checked Date Oct. 1, 1979

Subject Tungsten Property - Gustafson, Brouse, B. C.

Also samples submitted by Elaine & Arnold Gustafson Sheet 1 of

Surface Samples - Chip

#10460 - Near #1
Elev. +7600' - Near peak west of Grey Wolf Mtn & SSE of Tillicum Mtn.

#10461 - Golden Hope
Elev. +7400' - 750 meters W of #10640, N side of cliff

#10462 - Golden Hope
50' below #10461, N side of cliff

#10465 - Dark coarse crystalline calcite w/ pyrrhotite, sphalerite, & minor chalco. Submitted by Elaine Gustafson.

#10466 - Quartz vein w/ Pyrite Submitted by Arnold Gustafson

#10467 - Sheared graphitic slates, Fe rust Submitted by Arnold Gustafson

REPORTING DATE 19 NOV 1979

SAMPLE NUMBER	FIELD NUMBER		Cu(1) %	Pb(1) %	Zn(1) %	Au(1) oz/t	Au(1) oz/t	Mo(1) %
R79 13222	# 10451	} Stan	0.02	<.01	0.55			.003
R79 13223	# 10452		0.39	<.01	0.69			.004
R79 13224	# 10457	} May Day						
R79 13225	# 10458							
R79 13226	# 10460	} Near #1						
R79 13227	# 10461							
R79 13228	# 10462	} Golden Hope						
R79 13229	# 10463							
R79 13230	# 10464	} Stan	<0.01	<.01	0.68			.008
R79 13231	# 10465			<0.01				<.001
R79 13232	# 10466	} Elvira Gustafson Arnold Gustafson	0.09	0.26	9.10	0.82	0.003	
R79 13233	# 10467					0.07	<0.003	<.001
R79 13234	# 10198	} Stan		<.01	0.08	0.58	<0.003	
R79 13235	# 10200			0.06	<.01	0.92		.001
			0.04	<.01	1.03			.047

Where analysis requested but no values shown, results are to follow

ANALYTICAL METHODS

Au(1)

Au(1)

Fire assay

Cu(1)

Pb(1)

Zn(1)

Mo(1)

Assay

BREAKDOWN OF COSTS:

	Per Day
Standard meals: Breakfast: Granola, enriched. \$2.00/3people/meal -	.75
Pancakes, Eggs, Bacon \$5/3/meal	1.75
Sugar, coffee, milk/day	.75
Extras (syrup, butter)	<u>.25</u>
	3.50

Cost of three breakfasts divided by three people

AVERAGE COST PER BREAKFAST.....\$1.15

Lunch: Bread (1/2 loaf(.50
Cheese (1/2 block/meal/3 people	1.75
Meat - sausage - \$4.00/meal/3 people	<u>4.00</u>
	6.25

AVERAGE COST PER LUNCH.....\$2.10

Supper: Vegetables and ground round (Day 1)	5.00
Vegetables and steak (Day 2)	12.00
Eggs, bannock, beans (Day 3)	4.25
Cake and cookies	4.50
Tea, hot chocolate, lemonade	<u>3.00</u>
	28.75

AVERAGE COST PER SUPPER.....\$9.60

AVERAGE COST PER PERSON PER DAY FOR FOOD.....\$12.85

Trailer rental per day.....	35.00
Truck cost per day	40.00
Horse rental per day	15.00
Man days estimated at a conservative.....	60.00

DAY	MEALS	MAN DAYS	HORSES	TRAILER	TRUCK	OTHER
1 1	3P x 1D x \$12.85= 38.55	3P x 1D x \$60 = 180.00	3R x \$15 = 45.00	35.00	40.00	HF 3.00 Wipe 6.00
2 - 6	2P x 5D x " = 128.50	2P x 10D = 600.00	2R, 1P = 45.00	35.00	40.00	HF 15.00
7, 8	3P x 2D = 77.10	3P x 2D = 360.00				
9	3P x Lunch = 6.30	3P x 1D = 180.00				
10,11	3P x 2D = 77.10	3P x 2D = 360.00				
12,13,14	3P x 3D = 115.65	3P x 3D = 540.00	3R, 1P = 60.00	35.00	40.00	HF 12.00 Wipe 8.00
15	4P x 1D = 51.40	4P x 1D = 240.00	4R, 1P = 75.00	35.00	40.00	HF 20.00 5.00
16,17	4P x 2D * 102.80	4P x 2D = 480.00	4R, 1P = 75.00	35.00	40.00	HF 10.00
18,19,20	3P x 3D = 115.65	3R x 3D = 540.00	3R, 1P = 60.00	35.00	40.00	HF 12.00
	<u>\$713.05</u>	<u>3,480.00</u>	<u>\$360.00</u>	<u>\$210.00</u>	<u>\$240.00</u>	

SYMBOLISM: P = People
D = Day
HF = Horse Feed
Wipe = Animal Insect Repellant

Drill rental(3 days) 45.00
Dynamite, caps, fuses 70.00
Oil, gas for drill and power saw 25.00
Cost report preparation 60.00
Phone calls 75.00
Assays, spectrographic anal. 105.00
Postage, registration etc. 20.00
Human insect repellent 20.00
69 Soil samples @ \$3.00 207.00
Trip to Vancouver to see Placer Development, Noranda Mines and Imperial Oil 428.00

420 miles x 30¢/m x return 252.00
Lodging - 4 nights 80.00
Meals for two people 96.00
428.00

RECAP: Meals \$ 713.05 Trailer \$ 210.00
Horses 360.00 Truck 240.00 - TOTAL COST \$6,105.05
Man Days 3,480.00 Other 1,102.00

AUTHOR'S QUALIFICATIONS:

Elaine E. Gustafson has worked for twelve years with architect's and engineers writing reports and typing specifications. This has been of some help in writing this report.

Elaine E. Gustafson and Arnold A. Gustafson have both taken an advanced prospectors course from Geo. Addie, P. Eng., P. Geol., at Nelson. They have also taken a one week course on glacial geology at Okanagan College and a mineral identification course in Nakusp from Geo. Addie the spring of 1980.

Arnold A. Gustafson
Elaine E. Gustafson