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[ARIS11A]

ARIS Summary Report

Regional Geologist, Kamloops

Date Approved: 1999.05.12

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ASSESSMENT REPORT: 25855

Mining Division(s): Similkameen

Property Name: Rainbow

Location: NAD 27 Latitude: 49 34 01 Longitude: 120 50 00 UTM: 10 5492520 656668
NAD 83 Latitude: 49 34 00 Longitude: 120 50 05 UTM: 10 5492705 656564
NTS: 092H10W

Camp: 012 Nicola Belt

Claim(s): Rainbow 4

Operator(s): Lisle, Thomas E., Ostensoe, Erik A.
Author(s): Lisle, Thomas E.

Report Year: 1998

No. of Pages: 17 Pages

Commodities
Searched For: Copper, Gold

General
Work Categories: GEOL

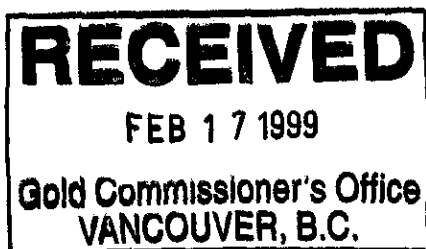
Work Done: Geological
GEOL: Geological (50.0 ha:)

Keywords: Andesites, Dacites, Nicola Group, Pyrite, Skarns, Triassic, Tuffs

Statement Nos.: 3131515

MINFILE Nos.:

Related Reports: 15315, 16016, 17271, 24934



GEOLOGICAL REPORT
ON THE
RAINBOW 4 MINERAL CLAIM

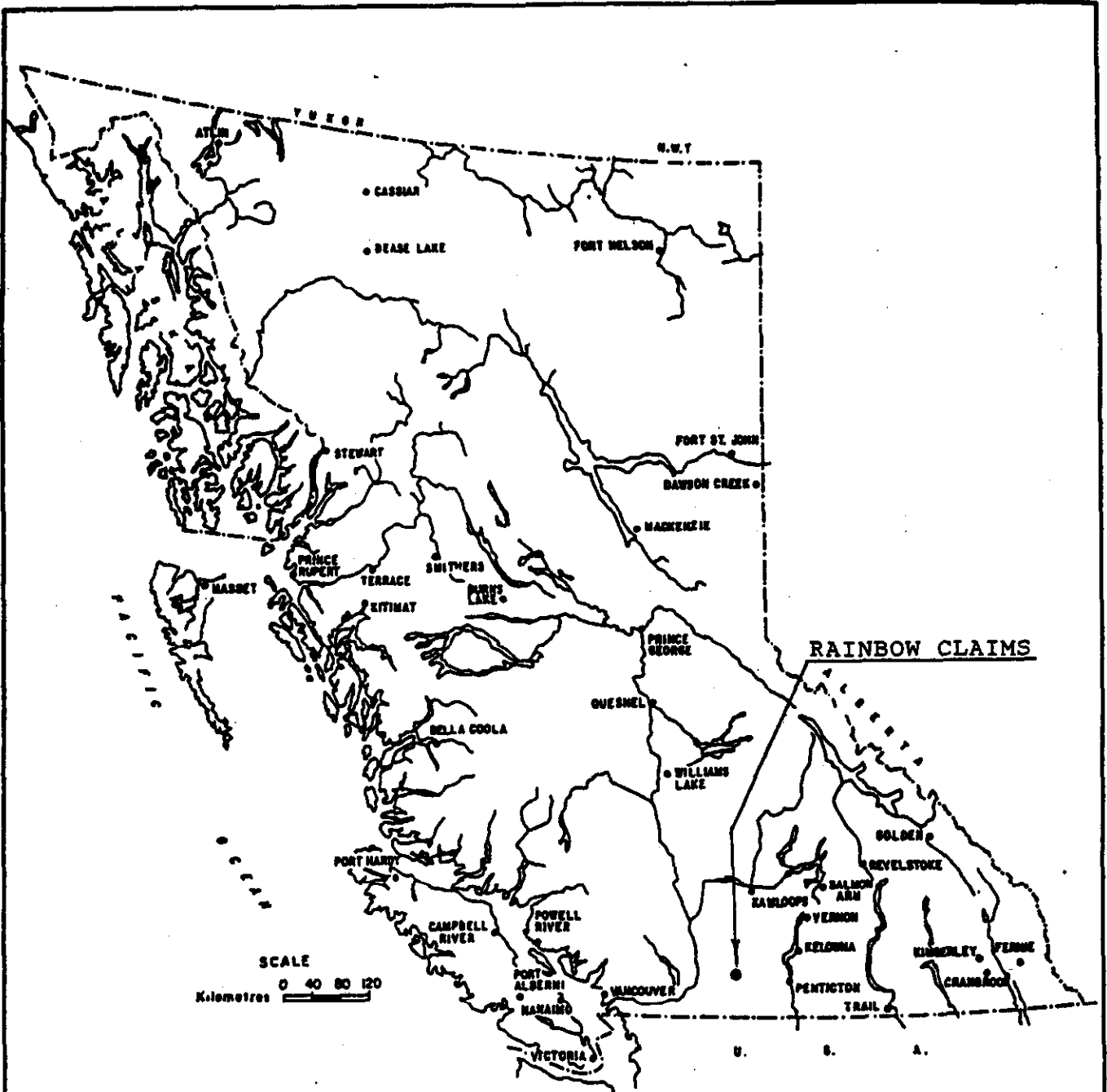
TULAMEEN
SIMILKAMEEN MINING DIVISION
LAT. 49 34' LONG. 120 50' NTS 92 H/10W.

BY

T.E.LISLE, P.ENG.
NOVEMBER 30, 1998

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

25,855



LOCATION MAP, RAINBOW CLAIMS
TULAMEEN AREA
SIMILKAMEEN MINING DIVISION
BRITISH COLUMBIA

Fig 1

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SUMMARY AND CONCLUSIONS

A geological survey was carried out between September 21 and September 25, 1998 on the Rainbow 4 mineral claim located near Tulameen in the Similkameen Mining Division. The program was a continuation of exploration work started in 1994 that was targeted at evaluating the precious and base metal potential of a package of Nicola Group rocks underlying the Rainbow 2-4 mineral claims lying adjacent to the Tulameen ultramafic complex.

The geological work completed continues to indicate the presence of a felsic rhyolitic (feldspar porphyry?) horizon adjacent to a Tertiary-aged Otter granite stock on the southern sections of the Rainbow 4 mineral claim to the north of the Tulameen River. Like the limonitic unit mapped further to the north, the rhyolite-dacite rocks also appears to trend northwest.

Previous exploration work in this area (Assessment Report 16016) showed the presence of a gold and related element soil anomaly and a VLF-EM conductor trending north northwest. It should be pointed out that significant occurrences of gold were identified in felsic volcanic rocks at the El. Alemein prospect immediately southwest of the Rainbow 4 mineral claim, and at the Rabbitt prospect near the southwest corner of the Rainbow 2 mineral claim.

Due to budget constraints, the owners have not completed further soil geochemistry in this area, however geochemistry, geophysics and detailed geological work would be particularly useful in the further evaluation of the property.

RECOMMENDATIONS.

- 1) Analyze all (334) soil samples remaining from the 1994 and 1995 geochemical surveys and continue coverage south along the lines mapped in 1998.
- 2) Map in detail the felsic alteration zone identified on the Rainbow 4 claim, extending coverage northwest to include the breccia zone noted on lines 6+00N and 7+00N.
- 3) Complete magnetic survey coverage over all lines, and run VLF-EM (2 channel) surveys over the entire grid.
- 4) Continue geological mapping on the south and southwest section of the Rainbow 2 mineral claim.

INTRODUCTION

The author, along with E. Ostensoe, P. Geo., initiated an exploration program on the Rainbow mineral claims in 1993 and 1994. This work included geological, geochemical and geophysical surveys that progressed southerly through the eastern sections of the Rainbow 3, 2 and 4 mineral claims. The results of the technical surveys were submitted for assessment purposes to the provincial Ministry of Energy, Mines and Petroleum Resources, and add to a large and increasingly important database on the Tulameen area.

The results of the previous surveys were deemed to be sufficiently encouraging to warrant further work. Between September 21 and September 25, 1998, the writer, accompanied by E. Ostensoe, P. Geo, visited the property and continued mapping on the southern sections of the Rainbow 4 mineral claim.

This report describes exploration work carried out during the September mapping program. All technical observations are presented and discussed in the report in the context of the data acquired through the ongoing program. Maps showing this data are included or are referenced to the earlier reports. Because the work is ongoing, the interpretations and conclusions are preliminary and may change significantly with results of proposed additional work.

LOCATION AND ACCESS

The Rainbow claims lie on the north slope of the Tulameen River Valley some six to ten kilometers west and northwest of the village of Tulameen in south-central British Columbia. (Figure 1). The geographic coordinates are Latitude 49 34' ; Long.120 50'. NTS Map sheet 92H/10W.

Elevations range from 840 meters at the Tulameen River to 1646 meters above sea level in the central part of the Rainbow 3 claim. The terrain is relatively subdued, but near Lawless Creek and it's tributary streams, slopes are steep and locally precipitous.

Access to the claims is by the Lawless Creek Forest Service Road that runs easterly from the Coquihalla highway to Tulameen; or from Princeton on the southern Provincial highway. A logging road along the Tulameen River provides access to the south part of the Rainbow 4 claim.

3W 3

4W
10558

Lockie

L.282
REV CG
BOULDER 2
18 949
6NX3W

BOULDER
18 9
6NX2E
12464

LCP

DEER #1
18 2370
MT. 6NX2E
+
RABBIT

RABBIT 1
18 944
6NX3W

LAWLESS CREEK
FORESTRY ROAD

95645 VER

W 2

4W

10557

LCP
TAG
120142

RAINBOW 4
55 28

RABBIT 3
18 946
35X3W

RABBIT
18
6NX2E

RABBIT
18
25X2E

10UNT
340

VER
13549

RAINBOW PROJECT
SIMILKAMEEN MINING DIVISION.
CLAIM MAP 92H/056
OCTOBER, 1998 fig. 2

PROPERTY

The Rainbow Group comprises three claims aggregating 46 units (Table 1). They are located in the Similkameen Mining Division and are jointly owned by T.E. Lisle and E.A. Ostensoe.

Claim Name	Units	Record	Located	Anniversary.
Rainbow 2	20	309158	May 6, 1992	May 6, 2001
Rainbow 3	16	309159	May 6, 1992	May 6, 2001
Rainbow 4	10	323956	March 1, 1994	March 1, 1999

CLIMATE, TOPOGRAPHY AND VEGETATION

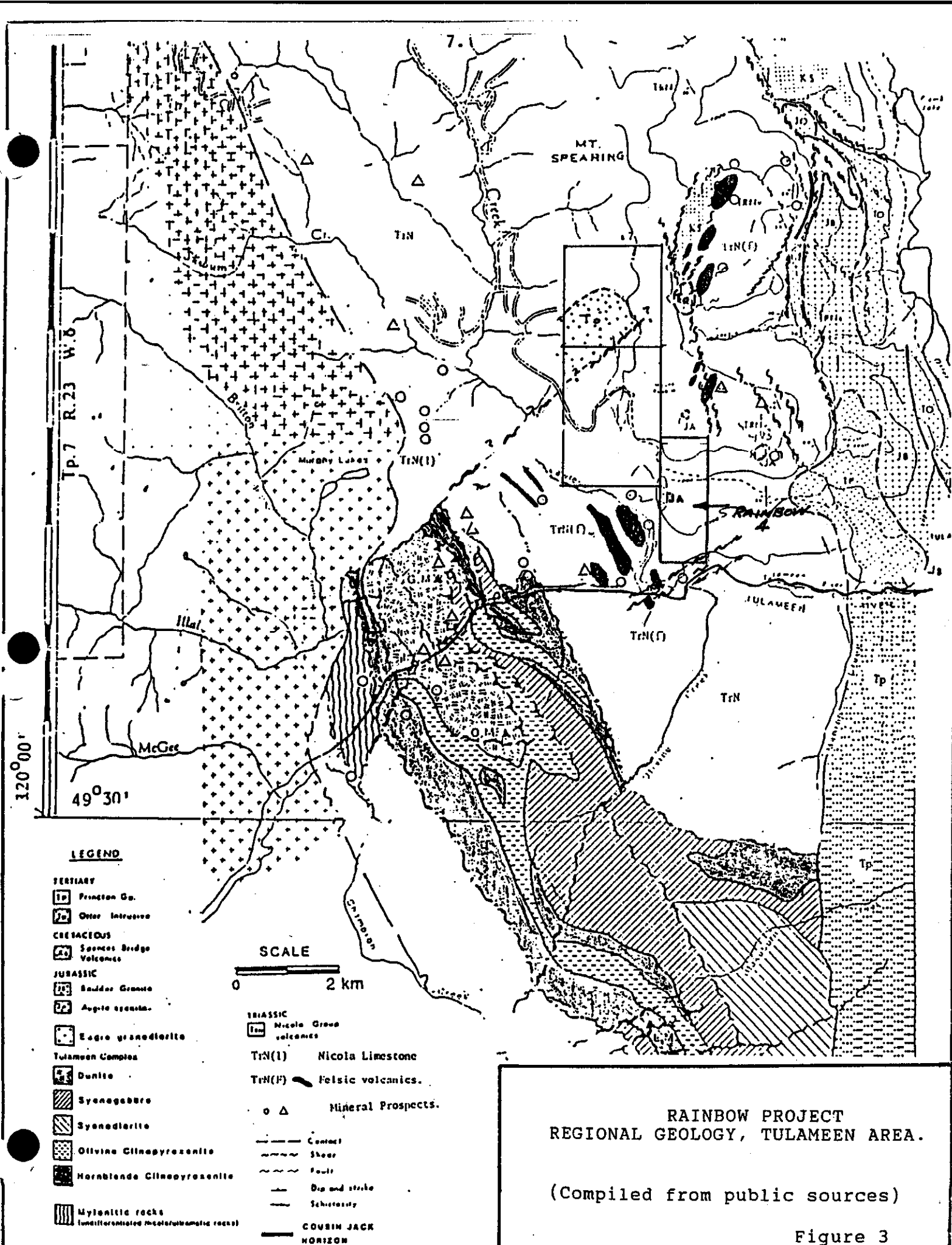
The climate in the Rainbow claim area is transitional between dry conditions of the southern Interior Plateau, and wet conditions of the Cascade Mountains. Summers are hot and dry, and winters are cold with significant snowfalls.

The Rainbow claims span a vertical range between 840 meters at the Tulameen River to 1646 meters at the upper elevations of the Rainbow 3 claim. North of the Lawless Creek Forest Access Road, the terrain is mainly forested and topography is subdued. South of the road, the topography is steep and locally characterized by bluffs and canyons. Several small streams originate on Boulder Mountain and flow either southerly to Lawless Creek or easterly to Otter Lake.

The upper parts of the claims are forested with thick stands of spruce, fir and balsam, and a few red cedars. Large yellow pine trees are present but not numerous on the south facing upper slopes. Large parts of the area north of the Lawless Creek Road have been logged in recent years.

HISTORY

The mining history of the Tulameen area is documented in numerous government publications, and in more than 120 technical reports that have been filed for assessment purposes on mineral prospects in a 300 square kilometer area centered approximately on Tulameen.



The first comprehensive geological map of the Tulameen area was included in GSC Memoir 26 authored by Charles Camsell in 1913. Camsell showed the presence of a small granite stock intruding the Nicola rocks in the area of the current Rainbow 3 claim.

Early prospectors were undoubtedly attracted to the Tulameen area by placer mining possibilities, particularly by discoveries of platinum in nearby streams and by production of large gold nuggets from Lawless and Boulder Creeks. A large gossan alteration zone now exposed near the 9 kilometer mark on the Lawless Creek road occurs along a substantial creek valley that passes southerly through the Rainbow 2 claim. Several small bedrock pits located north of the road were excavated many decades ago and expose concentrations of pyrite and locally magnetite.

Important background information on the Rainbow claim area is contained in assessment reports 16016 and 17271. A 1993 preliminary prospecting report by Lisle and Ostensoe, and their reports on the 1994 to 1997 exploration work also provide background information. (See assessment reports 22806, 23798, 24302, and 24,934).

1998 WORK PROGRAM

The following work was completed on the Rainbow claims in September, 1998.

Work	Rainbow2	Rainbow 3	Rainbow 4	Total
Grid Lines.			5.0 Km.	5.0 Km.
Geology(1:5,000) Plus reconnaissance traverses.			5.0 Km.	5.0 Km.

REGIONAL SETTING

The Nicola Group in southern British Columbia is part of a linear northwesterly Cordilleran belt of volcanic and sedimentary rocks developed in an Upper Triassic island arc. In the Princeton-Merritt map area, the group is a westward younging assemblage comprising:

- a) An eastern belt of alkalic and calc-alkalic submarine volcanic rocks, lahar deposits, basaltic flows, and high-level syenite stocks.
- b) A central belt of alkalic and calc-alkalic subaerial and submarine assemblages of andesite, basalt and co-magmatic intrusions of diorite and syenite, and breccia, conglomerate and lahar deposits.
- c) A western belt of calc-alkalic flow and pyroclastic rocks ranging in composition from andesite to rhyolite, with minor interbedded limestone, volcanic conglomerate, sandstone and argillite. This assemblage appears to underlie much of the Tulameen area.

The Nicola Group to the west of Tulameen is bounded on the west by the Eagle Granodiorite, a syntectonic intrusion of apparent upper Jurassic age. Both the Eagle Granodiorite, and amphibolitized Nicola Group rocks dip westerly along a regionally developed northwest foliation. Several small intrusions are present in the Tulameen area. They include the Late Triassic to Early Jurassic Boulder Granite, the upper Triassic Tulameen Ultramafic Complex, and Tertiary Otter granite stocks.

All of the older rock units are disrupted by faults that either trend northwest along the regional trend, or by Tertiary (Eocene) ? northeast faults that appear to mark the planes of significant right-lateral and vertical displacement. One of the northeast faults marks the north boundary of the Tulameen ultramafic complex and apparently trends northeast through the Rainbow claims close to an Otter Granite Stock. Figure 3 illustrates some of the features of the regional geology in the vicinity of Tulameen.

The Nicola volcanic rocks and related intrusions in south-central British Columbia are host to a number of world-class mineral deposits including copper-gold porphyries at Princeton and Kamloops; copper-molybdenum porphyries at Highland Valley; and the large Craigmont copper-iron skarn deposit at Merritt. In addition, the belt is host to a very large number of prospects, including those at Tulameen, that continue to be evaluated.

GEOLOGY OF THE RAINBOW CLAIMS

The geology of the Tulameen area was first described by C. Camsell in 1913 in GSC Memoir 26, and was further elaborated by H.M.A. Rice in GSC Memoir 243 published in 1947. Both of these references showed the presence of a stock of Otter Granite in the area of the current Rainbow 3 claim. This stock intrudes Nicola Group rocks, and intrusive rocks variably described as either augite syenite or members of the Tulameen ultramafic complex, namely peridotite, pyroxenite or gabbro.

The oldest rocks in the area are Nicola Group flow and fragmental volcanic rocks that are mainly of andesitic composition. The assemblage is poorly to well bedded and forms a prominent belt along the east side of the Rainbow claims trending north northwest and dipping from about 55 to 75 degrees to the west. The belt is dominated by rocks provisionally mapped as augite crystal tuff, fine-grained tuff, subordinate amounts of plagioclase crystal tuff, and a variably textured tuff beccia that commonly contains distinctive pink to buff fine-grained felsic clasts. The clasts in this unit locally resemble crystals, and in places grade to pink stringers within or crossing foliation. The tuffaceous units are highly variable over narrow widths, and are interbedded with thin bands of andesite porphyry containing coarse feldspar laths. Near grid point 7+00N - 5+75E, a massive greenish-grey flow in contact with tuff may be dacitic in composition.

The andesitic unit is flanked on the west in part by a pale grey to greenish-grey rhyolite or feldspar porphyry. This unit is commonly siliceous, pyritic, in places porphyritic, and is generally poorly exposed. The western contact is obscured by overburden that covers a topographic low over a few hundred meters of width, and the trace of the horizon from 12+00N, 1+50W and 18+75N, 4+00W is obscured by drift. The section between 18+75N and 25+00N and the flanking rocks to the east are marked by a limonitic bleached siliceous zone with up to 10% pyrite, +/- magnetite and minor chalcopyrite that is partly coincident with magnetic anomalies of similar trend. Skarny propylitic assemblages of epidote, chlorite, quartz, pyrite and chalcopyrite are locally evident in the eastern segments of the alteration zone.

The southwest side of the Rainbow 2 claim is underlain by a dark-grey fine-grained dioritic unit that may grade from gabbro to syenite. While separated from the above, it also appears to trend northwest. Xenoliths of Nicola andesitic rocks are present, and alteration includes epidote, chlorite, magnetite and minor pyrite. The diorite has been intruded on the north by a stock of Otter Granite. Pink granite stringers, dykes and disseminations are common in the diorite, around which the composition varies widely. The boundaries of the diorite are poorly defined. The distribution of outcrops indicates that it may join a diorite-syenite mass shown on regional maps to lie a short distance to the southeast.

The Otter Granite stock underlies a large western segment of the Rainbow 3 claim. The stock is complex in that it contains highly variable concentrations of poor to well assimilated xenoliths of Nicola volcanic rocks. Compositionally the stock grades from granite to granodiorite with border zones more basic, in some areas reported to grade to gabbro. Typically, the contacts are irregular and the granite occurs in stringers, dykes and irregular masses. It is commonly pink to grey in colour, fine to medium-grained, and locally porphyritic. Altered biotite and hornblende are locally evident. The area north of the rhyolitic unit contains up to a few percent pyrite.

A poorly defined ± 15 meter zone of intense argillic alteration occurs at line 25+00N, 5+50 W, near the interpreted boundary between the granite and rhyolite. Argillic alteration, in part related to northeast fractures, is also evident in a road cut near 19+50N, 4+50W.

Camsell showed the contact between the diorite-syenite and Otter granite to trend northeast. Assessment report 15,315) shows a large area near the headwaters of Lockie Creek immediately east of Rainbow 3 claim also to be underlain by granodiorite and diorite, and assessment report 16016 notes the presence of an area of Red granite in the eastern sections of the Rainbow 4 mineral claim. These occurrences suggest the possibility of a much larger area of Otter Granite.

A number of small basaltic dykes related to the Eocene Princeton Group, cut all of the older units. Typically they are black to dark-grey, magnetic, and locally porphyritic with fine hornblende, biotite or feldspar. These exposures are commonly accompanied by strong northeast fracture sets, that are thought to relate to Eocene faults that also trend northeast.

Exposures in the southern section of the Rainbow 4 mineral claim are limited to a prominent topographic ridge trending south southeast and flanking on the east, the steep and locally precipitous valley of Lawless Creek. Mapping in this area revealed:

- a) A continuation to the south of a siliceous fine to medium-grained Otter Granite stock with inclusions and poorly assimilated xenoliths of Nicola rocks.
- b) Altered andesitic volcanic rocks of the Nicola Group, in places granitized and cut by stringers of granite.
- c) Dioritic rocks similar to those noted north of Line 7+00 South.
- d) Outcrops of rhyolite and dacite that appear to correlate to with the felsic volcanic rocks mapped further to the north, at Lawless Creek to the east, and at the El Alemein gold prospect located on the Tulameen River to the south.

Alteration within the map area ranges from weak to moderate and commonly includes quartz veining mainly in the areas of intrusive contacts and felsic volcanics. Chlorite +- epidote with weak pyrite and chalcopyrite are locally evident in the same areas.

Approximately 125 metres west of line 10+00 south at 0.00E at Lawless Creek, a dacitic assemblage of tuffaceous rocks with minor argillite has been shattered and is marked by moderate to strong carbonate alteration. Stockworks of quartz and quartz carbonate (Listwanite) occur where a number of veins trending about 130° intersect a northerly trending fault with shallow dips to the west.

DISCUSSION.

The mapping undertaken on the Rainbow 4 mineral claim during September, 1998 completes geological coverage of a strip approximately 1 by 6 kilometres stretching from the Tulameen River north to the Rainbow 3 mineral claim. There is a need to continue mapping along the west section of the rainbow 2 and 3 claims to obtain better coverage.

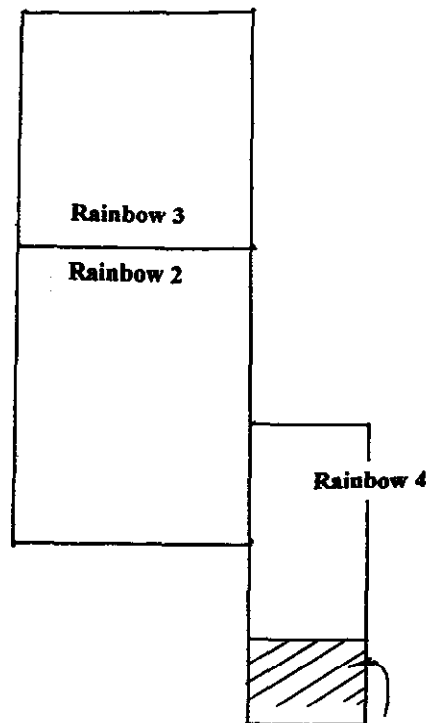
A significant amount of geological data is available on the Boulder and Rabbitt Mountain areas immediately to the east, and in the Lawless Creek area to the west of the Rainbow property. When the in fill mapping is complete, it will be necessary to correlate the new geological data with the existing database in an attempt to rationalize the structure of the area. Hopefully, some insight will be gained into the distribution of mineralization in Nicola rocks within and near the Rainbow claims.

T.E.Lisle, P.Eng.

November 30, 1998 .

REFERENCES.

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- 9) Lisle, T. Ostensoe, E. -Geochemical and Geophysical Report on the Rainbow 2 and 3 Mineral Claims, Tulameen Area, Similkameen Mining Division, January 15, 1995.
- Geological, Geochemical and geophysical report, Rainbow Project, Similkameen Mining Division, January 15, 1997.
- 10) B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Reports 15,315, 16,016 and 17,271.



Area mapped in September, 1998

LEGEND

EOCENE

1 Mafic Dykes

2 Otter Granite, Granodiorite & Diorite

UPPER TRIASSIC

3 Diorite

NICOLA GROUP

4 Andesite, b) Andesite Porphyry

5 Dacite

6 Rhyolite (Feldspar Porphyry)

7 Tuff

- a) Fine Grained Tuff
- b) Angite Crystal Tuff
- c) Plagioclase Crystal Tuff
- d) Tuff Breccia
- e) Undifferentiated

Foliation

Bedding

Fractures

Quartz veins

Ice Direction

Contact

Fault

Outcrop

Float

Old Pits and Trenches

Creek

Road

Claim Post

Logging Cleared

Sil
Q.V.
Ser.
Ch.
Ca.
Ep.
Py.
Cpy.
Mal.
Mag.
Lm.

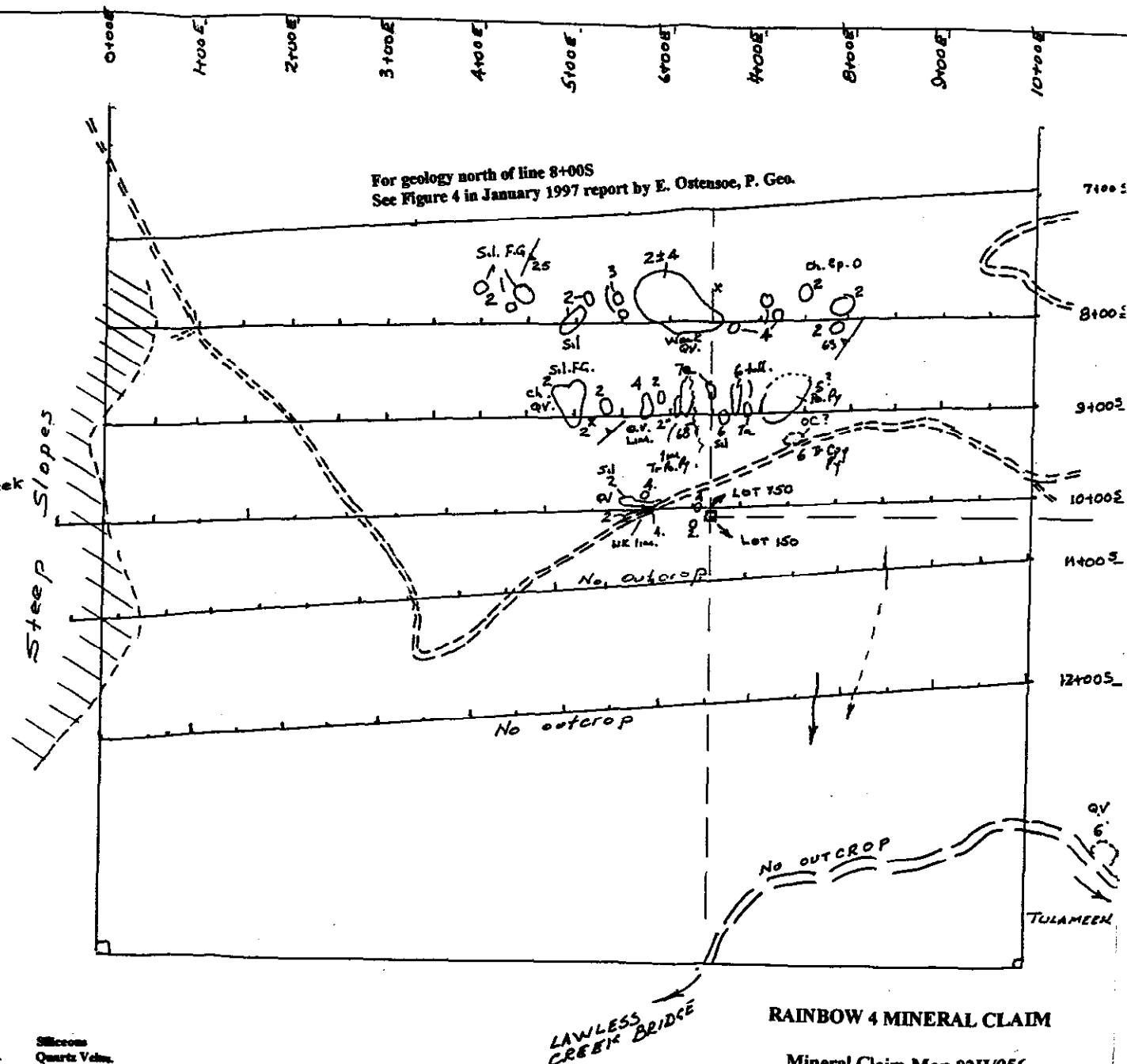
Silicons
Quartz Veins
Sericite
Chlorite
Calcite
Epidote
Pyrite
Chalcocopyrite
Malachite
Magnetite
Limonite

0 100 200 300
Scale (Metres)

Lawless Creek
Tuff
Angite

Steep Slopes

For geology north of line 8+00S
See Figure 4 in January 1997 report by E. Ostensoe, P. Geo.



RAINBOW 4 MINERAL CLAIM

Mineral Claim Map 92H/056

Geology

Scale 1:5,000

October, 1998

To accompany report by T. E. Lisk, P. Eng.

FIG 4.

APPENDIX 1

LIST OF PERSONNEL

The following persons carried out the field work described in this report:

1) Thomas E. Lisle. P. Eng. -geologist, (UBC, 1964)

- Extensive exploration in all phases of mineral exploration, principally in western and northern North America.
- Member 08528 of the Association of Professional Engineers and Geoscientists of British Columbia.
- Worked on the Rainbow Project claims intermittently from 1992 to 1998.
- Co-owner of the rainbow 2, 3 and 4 mineral claims.
- Prepared this geological report for Assessment purposes.


2) Erik A. Ostensoe, P. Geo. Geologist, (UBC, 1960).

- More than thirty years experience in mineral exploration principally in western and northern North America.
- Member 18727 of the Association of Professional Engineers and Geoscientists of British Columbia.
- Worked intermittently on the Rainbow mineral claims between 1992 and 1998.
- Co-owner of the Rainbow 2, 3 and 4 mineral claims.

APPENDIX 2

STATEMENT OF EXPENSES.

Wages:	Ostensoe, E. Sept. 21-25, 1998. 5 at \$250.00/day.	\$1,250.00
	Lisle, T. Sept. 21-25, 1998. 5 at \$250.00/day.	\$1,250.00
Truck.	Sept. 21-25, 1998. 5 at \$50.00/day	\$ 250.00
Camp and Groceries.	Five days at \$50.00/day	\$ 250.00
Gasoline.	73.67 + ??	\$ 100.00
Report.		\$ 250.00
<hr/>		
Total		\$3,350.00



T. E. Lisle, P. Eng.