

Rozan  
887249

LOG NO: JUL 11 1988 VAN

ACTION:

MAWATHA RESOURCES INC.

BY

FILE NO: ROZAN (new)

P.H. SEVENSMA, Ph.D., P.Eng.

I INCORPORATED

B.C., December 9th, 1987. Reg. No.: 337416

II EXAMINATIONS

From September 29th, 1987 to October 11th, 1987, the writer examined a dozen properties of base and precious metals in the East and West Kootenays, where he has worked extensively as both mine and exploration geologist for Cominco and since independently for a number of years.

A gold property South of Nelson B.C. was found to have outstanding merit for its precious metal potential and was optioned when available later in February 1988, after an examination at the end of October.

III LOCATION

The Rozan property is located 9 kms SSW of Nelson, B.C. on claim sheet 82-F-6-W/2, at 49° 24' N and 117° 20' West, at elevations of 4500' to 7165' on the height of land between two old placer creeks, Hall Creek and Fortynine Creek. There are now about 28 metric units or about 700 ha = 1730 acres, including 25 metric units and 6 two-post claims with some internal overlaps. (See figure 3).

#### IV ACCESS

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15 kms gravel road from highway 3 at Blewett to a large cabin on the Rozan. 4 W D advisable.

Alternate access: 4 kms bushroad up Hall Creek from a point 12 road km South of Nelson, on highway 6, followed by an old wagon trail of about 2 kms to the East edge of the present group, on Hall Creek, followed by trails from elevation 5000' to the top.

#### V HISTORY AND WORKINGS

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Showings on the Golden Eagle Claim (Lot 4215) were discovered in 1928 by Rozan, who followed placer gold in Hall Creek and Rozan Creek ultimately to the height of land. There are half a dozen trenches and a shaft on the slope to the present cabin, and above the cabin a 160' drifts with a second 300' drift forking of the first one and following a narrow (0 - 3') gold-bearing quartz vein past a 30' long stope at about the 250' mark. Out of all these workings, P.J. Santos, P. Eng., August 1983 reported a total production between 1928 and 1958 of 146 tons @ 1.47 oz/t gold, .74 oz/t silver and about 1200 lbs of each lead and zinc, based on B.C. government records and reports.

There is abundant lamprophyre dyke rock lying on the dump, and higher near a caved portal and an extensive pit. The vein is believed to be quite steep with an East dip and the country rock of the vein(s) and the lamprophyre dyke is granodiorite. Vein strike is about N-S; the lamprophyre dyke strikes 300° and another vein zone lies along it, carrying magnetite.

Sampling by examining engineers has mostly given low grade ( $\pm$  0.016 to 0.112 oz/t Au along the drift, but good grades in the area of the stope (0.2 to 1.024 oz/t gold).

In 1937 - 1940, an unknown author alludes to an Electric Radiore Survey having traced the vein for several hundred feet and "indicating the presence of large bodies of heavy sulphide ore". There are also references to tungsten and molybdenum values on the Golden Eagle claim.

The present owners have rehabilitated the drift and the trails, cut a 5.175 kms grid and taken 194 soil samples.

VI EXAMINATION

On October 24th, 1987, the writer visited the property and endeavoured to take representative samples in six locations.

Results were as follows:

(F = Loose Pieces; P = In Place; M = Magnetic).

	TYPE	Mo ppm	Cu ppm	Pb ppm	Ag ppm	Fe %	As ppm	B ppm	W ppm	Au oz/t
588	F	230	29	19	2.3	9.77	12	10	1	.77
589	P	31	19	6	.6	4.90	8	3	2	.175
M 590	F	251	452	29	13.8	56.51	129	6	1	.47
M 591	P	11	359	28	15.3	20.38	102	2	14	.29
592	P	123	24	117	3.2	3.54	9	2	12	.15
593	P	12	163	7	.5	4.17	5	6	21	.003

Location

- 588: Lower portal of drift.
- 589: Upper portal, caved.
- 590: Pit above upper portal.
- 591: Vein along lamprophyre dyke at face of 590 pit.
- 592: West Trench.
- 593: Road on strike of trench. Volcanic - Intrusive contact?

Widths:

- 589: 6' Gold and molybdenite are significant.
- 591: 18" Samples with magnetite carry
- 592: 18" silver, copper, arsenic and
- 593: 4' some tungsten. This suggests skarn-type.

High grade samples have been reported by government geologists, from 1 to 13.09 oz/t gold.

The samples indicate that ground-magnetics and EM or IP should be able to pinpoint high-magnetite and high-pyrite zones.

## VII SOIL SAMPLING

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194 Soil-samples were taken on a grid from the top of Red Mountain (600 m N) to a line 150 m below the cabin (Point 00). Line Spacing: 50 m. Sample spacing: 25 m. Lines East-West. 107 of these samples outlined a gold anomaly from 250 N to 0 N on lines 425 m long, as follows:

57 Samples over 40 ppb.  
21 Samples over 100 ppb.  
7 Samples over 200 ppb.  
1 Sample over 1000 ppb.: possible contamination  
near main portal.

Peak sample: 430 ppb. disregarding the 1730 ppb. one.

High grade samples line up, more or less at 300°, i.e.: parallel to the lamprophyre strike but 200 m South of it.

The writer considers these results encouraging and demonstrating the requirement of an orientation survey further down the hill to Hall Creek.

## VIII REGIONAL GEOLOGY

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Geological studies of the Nelson area by government agencies have gradually increased in intensity over the years and a detailed mapping project is now in progress in our area of interest by the B.C. Ministry of Mines, following up map 1988 - 1 to the East at 1:20,000.

The area is underlain by the Rossland Volcanics of Lower Jurassic age. This group is composed of the older clastic Ymir formation, the Elise volcanics and the overlying Hall clastic formation. All are intruded by large and small plugs of the late Jurassic Nelson granodiorite intrusions.

Recent studies (Ray & Spence, 1988) suggest that the Elise volcanics, predominantly augite-porphyrries, may be part of a belt of shoshonitic basalts also present in the Tillicum area and extending into the Toadogone area. This belt is thought to be associated with high-potassium calc-alkaline and alkaline volcanism in an island-arc type environment. To the explorationist, the interest of this concept is the possible genetic relationship between significant precious metal belts in B.C., i.e.: the Rossland, Nelson, Tillicum Mountain, Horsefly and Toadogone camps.

## IX LOCAL GEOLOGY

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An outstanding geological anomaly occurs in the Red Mountain area, where a folded dome of older Ymir clastic rocks pierces the Elise volcanics, with several small intrusives near the East plunging "nose" of the fold. This is an array of favorable factors, one or more of which contribute to the control of important ore bodies in many mining districts: doming, nose of fold, small intrusives, abundant oxidized pyrite, commercial grade showings. In fact, any place called Red Mountain or Red Dome warrants close examination, as they are prime quality exploration targets.

In the Rossland gold-copper-molybdenite camp, production of 6 million tons of .47 oz/t gold, .58 oz/t silver and 1% copper, originated in a small area of 2000' x 4000' adjacent to a molybdenite bearing Red Mountain and on the flank of an elongated dome of older Pennsylvanian Mount Roberts clastics piercing the same Elise volcanics, with several types of small intrusives and a "halo" of some 40 small uneconomic(?) showings. The whole occupies an area of about 5 x 6.5 kms = 33 kms<sup>2</sup>.

The Rozan property covers an area of 3 x 2.5 kms = 7.5 kms<sup>2</sup> in a Nelson belt of some 10 x 20 kms = 200 kms<sup>2</sup>.

## X AEROMAGNETICS

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The 1" = 1 mile Nelson aeromagnetic map 8480G shows that most gold deposits lie near or along elongated zones of low magnetic susceptibility, as indicated on figure 3 for the Hall Creek - Fortynine Creek belt. The present Rozan group covers a possibly significant bend in one of these zones (figure 3), for a length of some 3 kms.

## XI REGIONAL GEOCHEMISTRY

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In 1981, Open File Report 736 published by the G.S.C. covers stream sediment anomalies located on map sheets 82-E.F.K.L. and M., on a scale of 1:2,000,000, in values of ppm for

13 metals, excluding gold. The Rozan area shows a relatively strong copper anomaly of 82-116 ppm copper as far as Hall & Fortynine Creeks. Both these Creeks are reported as the only placer creeks outside of the Pend d'Oreille and Salmo Rivers. At least one 3 ozs. nugget has been reported from Fortynine Creek. Both Creeks produced several hundred ounces of gold.

The Rossland camp anomaly shows strong mercury and a weak copper anomaly, but there is not much drainage.

### XIII ECONOMIC POTENTIAL

The Rozan property covers an area that is an outstanding exploration target because of the number of favorable economic geology factors converging here. The size of the property is large enough to contain several million tons of gold-ore, and even if only 300 - 500,000 tons are found, extraction costs would be very low if production could proceed by level mining, as there is about 2000' of backs available if a low level tunnel at creek level were justified.

Considerable work has been carried out for several years by U.S. Borax and associates immediately North of the Rozan where the old silver-copper, Silver King is, only about 4 kms from Red Mountain and in general most open ground in the Nelson area has now been staked.

In general, the potential in Red Mountain areas is excellent; in Rossland 6 million tons of high grade gold-silver-copper ore have been mined, as well as about 1 million tons of about 0.2% molybdenum, and there may be a similar quantity of molybdenum ore still available. (Fyles, 1984).

In the Southern Yukon, the writer directed an exploration program on Red Mountain, near Boswell River that led to the discovery of 187 million tons @ 0.167 Mo S<sub>2</sub> by Amoco Canada in the early 1980's.

The potential in these geological environments can therefore not be considered as insignificant.

XIV PROPOSED PROGRAM

PRELIMINARY MINIMUM 1988 SUMMER BUDGET

1. <u>Property Acquisition</u>	\$10,000.-	
Additional Staking	2,000.-	
Travelling, Examinations	<u>5,000.-</u>	
		\$ 17,000.-
2. <u>Fieldwork</u>		
Airphoto Map	\$ 2,000.-	
Linecutting 10 kms	4,000.-	
Soil Sampling, 400 Samples	2,000.-	
Assaying	5,000.-	
Geological Mapping	3,000.-	
Magnetic Survey	2,000.-	
EM Or IP	<u>8,000.-</u>	
		\$ 26,000.-
Road, 4. WD, 4 kms		
100 Hrs. @ 80.-	\$ 8,000.-	
Trenching, 50 Hrs. @ 80.-	4,000.-	
Supervision	4,000.-	
Contingencies	<u>6,000.-</u>	
		\$ 22,000.-
3. <u>Administration</u>		
Office, 6 months @ \$500.-	\$ 3,000.-	
Secretarial, Assistant	8,000.-	
Engineers Report	<u>4,000.-</u>	
		\$ 15,000.-
4. <u>Outside Examinations, Staking</u>	<u>\$ 5,000.-</u>	
		\$ 5,000.-
	Total	<u>\$ 85,000.-</u>
	General Contingency	<u>\$ 15,000.-</u>
	TOTAL	<u>\$100,000.-</u>

This is a minimum program. If success is encountered, the fieldwork program may justify at least doubling the amount of \$48,000.- and a substantial provision for drilling will be required, as well as a provision for a second option payment and the cost of going public.

A second budget may therefore look as follows:

Additional Fieldwork	\$ 50,000.-
Second Option Payment	10,000.-
Administration	20,000.-

TOTAL \$ 80,000.-

Drilling would be a third stage, but cannot be estimated at present. A minimum of 3000' is likely estimated at \$200,000.-.



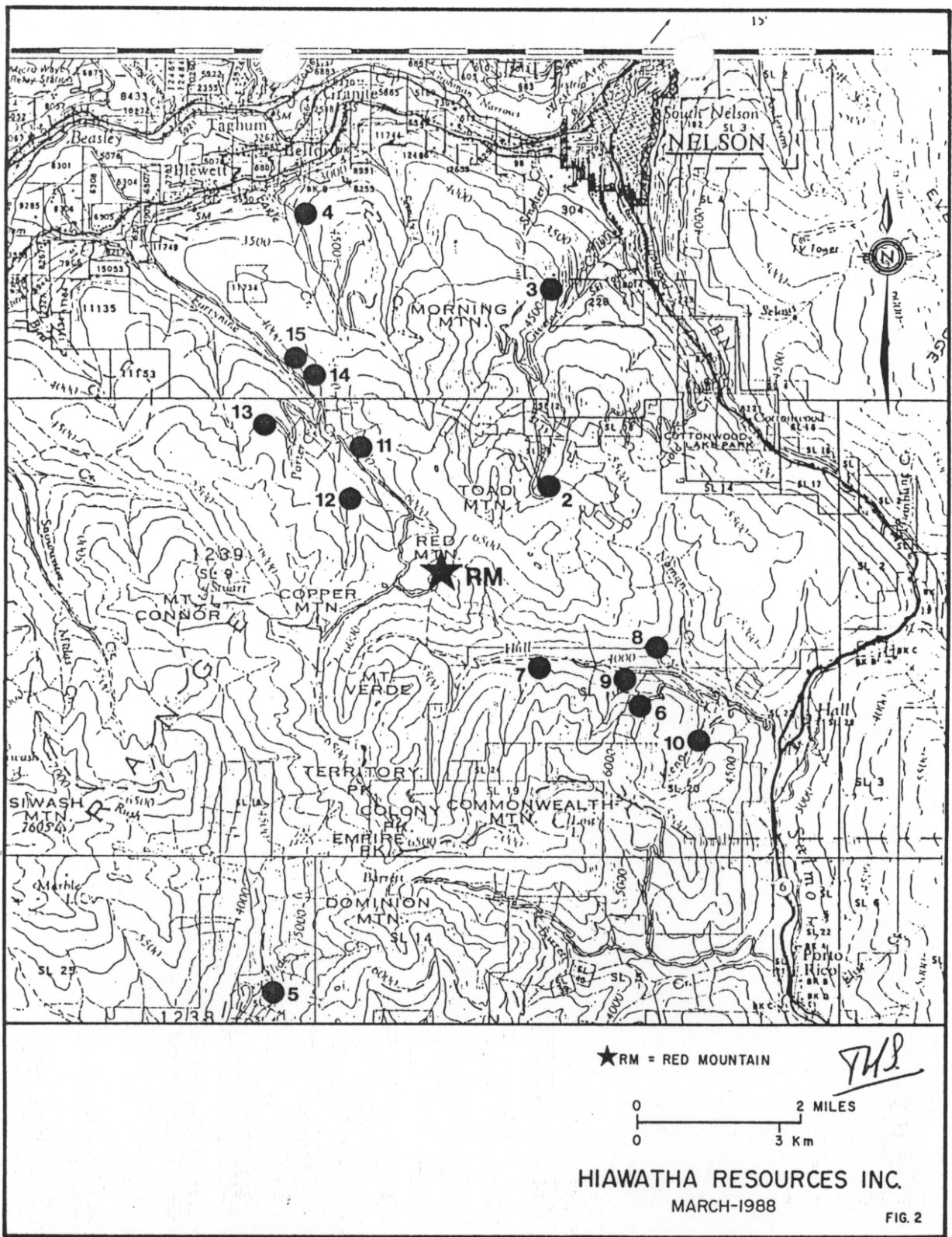
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P.H. Sevensma, Ph.D., P.Eng.

HIAWATHA RESOURCES INC.







★RM = RED MOUNTAIN

*THS*

0 2 MILES  
0 3 Km

HIAWATHA RESOURCES INC.

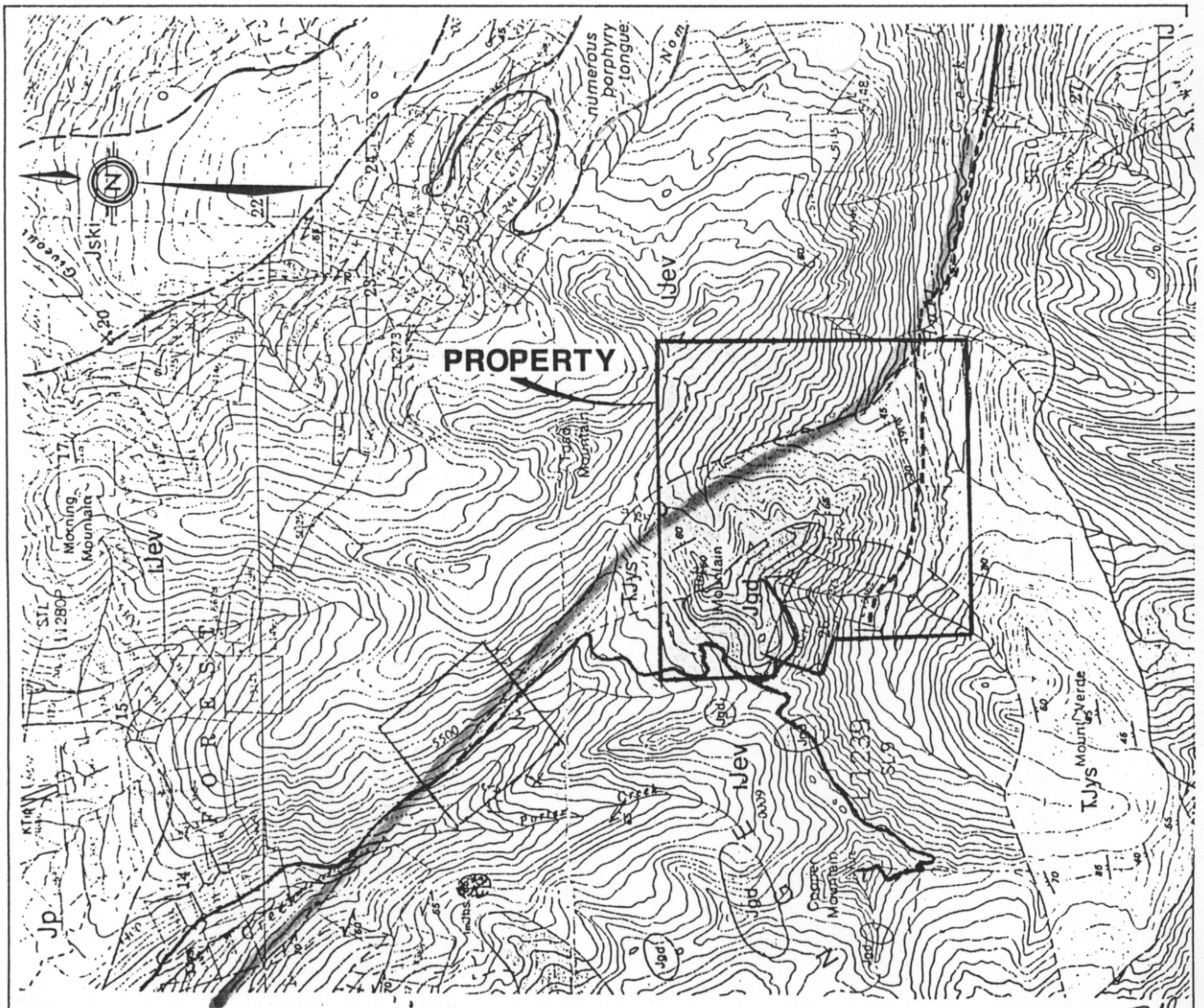
MARCH-1988

FIG. 2

ROSSLAND VOLCANICS, SELECTED PRODUCERS ON G.S.C. MAP 1090-1091A, 82F WEST HALF = NELSON WEST HALF, 1960, H.W.

MAP NO.	NAME	N°82F-W/2	ELEV. IN FT.	PERIOD	TONS	oz/t Au	oz/t Ag	% Cu	% Pb	% Zn
<u>A ROSSLAND AREA</u>										
1	Rossland Main ore zones in area 4000' x 2000' (Le Roi, Centre Star, Josie, War Eagle)	308-312	3500'	1893-1942	5,914,476	.45	.58	1.0	-	-
<u>B NELSON AREA</u>										
2	Silver King	206	6000'	1889-1948	221,997	.0013	20	3.36	Minor	Minor
3	Athabaska	196	4500'	1898-1943	46,055	.44	.14	tr.	.02	.01
4	Granite-Poorman (Kenville)	188	3500'	1890-1953	197,749	.33	.14	Minor	.013	.008
5	Second Relief	219	4200'	1902-1948	228,107	.43	.12	.01	Minor	V. minor
6	Fern	215	5000'	1896-1942	12,430	.51	.04	-	-	-
R.M.	Golden Eagle, T.S. Sun	211	6500'	1928-1958	146	1.47	.74	-	.43	.38
<u>C OTHER, HALL CREEK</u>										
7	Baltic	212	4200'	1931-1941	2	1.0	1.0	.8	-	-
8	Gold King	213	4600'	1931-1940	7	1.57	2.86	-	-	-
9	Bear	214	4000'	1937-1942	126	1.06	.48	-	-	-
10	Cdn Belle	216	5000'	1939-1940	26	1.04	.35	.1	-	-
<u>D OTHER, FORTYNINE CR.</u>										
11	Gold Hill	209	5200'	1903-1925	127	2.39	1.98	1.35	-	-
12	Northern Light	210	5400'	1907	34	.058	1.74	.4	-	-
13	Referendum	184	5300'	1907	250	.40	-	-	-	-
14	May & Jennie	191	4200'	1906	300	.13	.1	-	-	-
15	Miracle	190	4000'	1944	26	.38	1.00	-	-	-

*JWS*



LEGEND:

Jurassic  
Jgd

Nelson intrusions  
± Granodiorite

Fossil Evidence

Lower & Middle Jurassic

ImJhs Hall formation, argillite,  
sandstone, conglomerate.  
Ijev Elise formation.  
Jski Silver King plagioclase porphyry.  
Andesite, basalt, augite porphyry.

Toarcian  
Pliensbachian  
Sinemurian

Triassic

TJys Ymir Group  
Argill. quartzite, slate,  
basal limestone.

Hettangian

— Road.

- - - Proposed 4-WD road.

Scale: 1: 50,000.

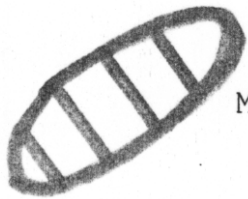
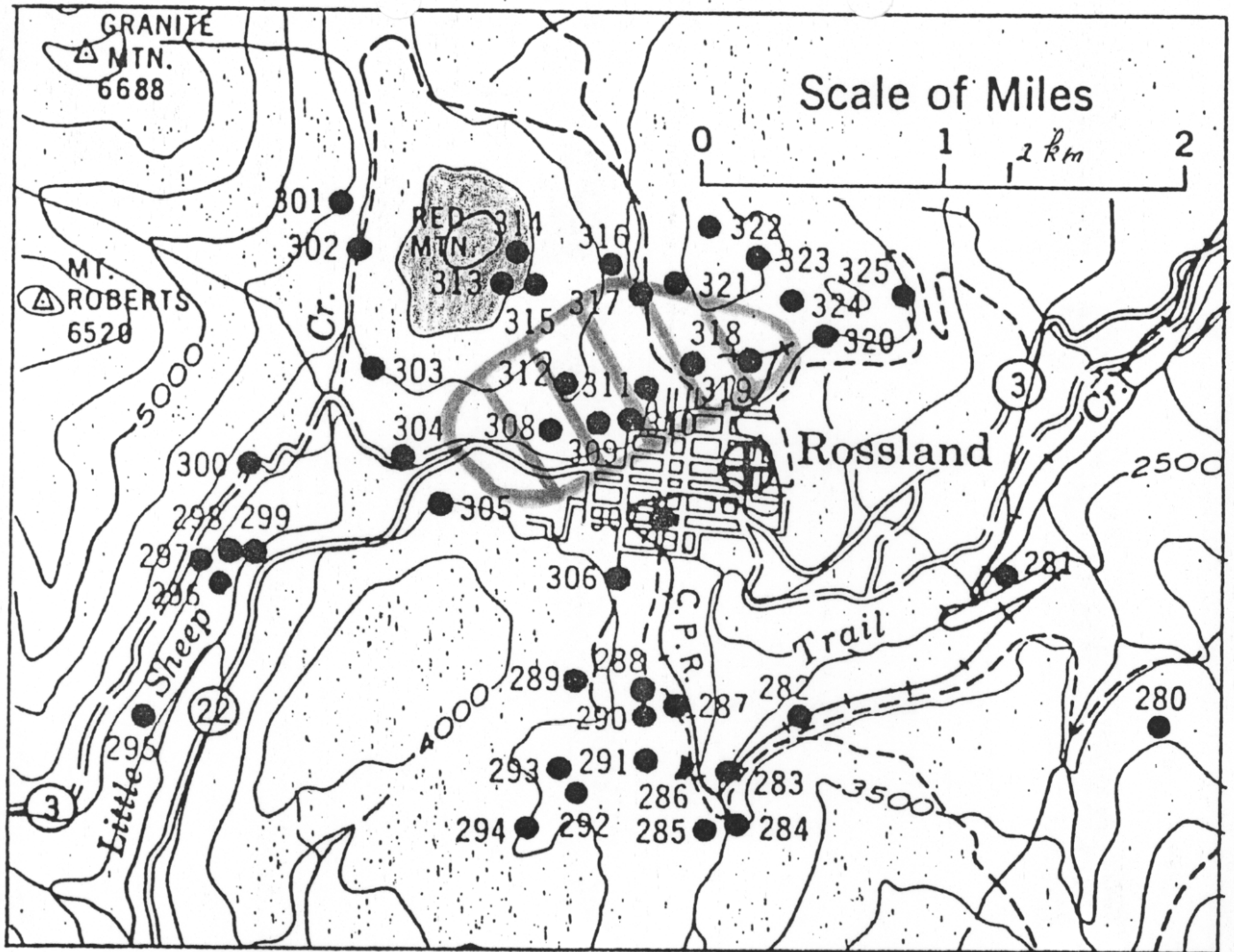
— Aeromagnetic Low.

Hiawatha Resources Inc.

Red Mountain = Eagle property 82-F-6-W/2

Peter H. Sevensma Consultants Ltd., Vancouver, B.C.

Nelson M.D., B.C. Scale: 0 1 km Fig: 3



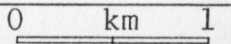
Main Productive area. 6 million tons @ .47 Au, .58 Ag, 1% Cu



Red Mountain.

Compare to figures 2 and 3. Red Mountain - Nelson, B.C.

*THS*

Hiawatha Resources Inc.	
Map of Rossland Camp, 82-F-6-W/2	
Peter H. Sevensma Consultants Ltd., Vancouver, B.C.	
Trail Creek, M.D.	Scale: 0  1 Fig: 4