018276

CERTIFICATION

I, Leonard George White, of the City of West Vancouver, in the Province of British Columbia hereby certify as follows:

1. That I am a Registered Professional Engineer of the Provinces of British Columbia and Ontario and reside at 704 Parkside Road, West Vancouver, B. C.

2. That I am a graduate of Washington State University with a Bachelor of Science in Mining Engineering having practiced my profession for twenty years.

3. That I have no interest either directly or indirectly in the Redwing property held under option by Magnum Consolidated Mines Ltd.

4. That my report is based on an examination of the property on August 6th-11th, 1963, and reference to Government publications.

L. G. White, P. Eng.

Vancouver, B. C.
August 14, 1963

103P024 RedWing

CONTENTS

INTRODUCTION

At the request of Mr. D. Little, President of Magnum Consolidated Mines Ltd., 700 Burrard Building, Vancouver, B. C., the writer completed an examination of the "Red Wing" property located near Anyox, B. C., during the Period August 6th to 11th, 1963.

Purpose of the examination was to substantiate descriptions of the showings and general geological features of the area as previously compiled by Government personnel. Excerpts from publications prepared by the Geological Survey and the B. C. Minister of Mines Annual reports were supplied by the Company and proved useful for study and reference on site.

The precipitous nature of the locality in which the showings occur made access for proper detail mapping and sampling very arduous. However, through the able assistance of Mr. L. McLellan entry into the prospect adit was accomplished for sampling of the mineralized zone.

SUMMARY AND RECOMMENDATIONS

The Red Wing property is located within two miles of tide water at Granby Bay, near the former Granby Mining & Smelting operation at Anyox, B. C.

Mineralization was discovered in the area and the original claims staked over the showings during 1909. Minor underground development and prospect drilling were completed in 1911. No further exploratory work was done after that date.

The area is extremely rugged and precipitous in the vicinity of the showings. Surface examination and sampling of the silicified mineralized zone are limited to the lower 20% of the exposure. Helicopter reconnaissance along the upper cliff exposures and examination of the talus accumulation in the ravine below the showings, indicated that the better grade of mineralization occurred on the inaccessible outcrop areas.

The showing consists of a well defined oxidized and stained zone striking in a general N. 35°W direction with average easterly dips of 60° to 70°. It follows the precipitous slope of the mountain forming the NE side of a glacier cirque valley at the head of Tauw Creek.

Surface observations were made along the zone up to the location of the tunnel approximately 125 feet above the talus cover.

SUMMARY AND RECOMMENDATIONS (cont'd)

Estimated strike length above the tunnel on the slope of the mountain was 600 feet. Vertical extent from bottom to the top of the surface cliff exposures was judged at 500 feet.

Mineralization consisting of pyrite, pyrrhotite, chalcopyrite and minor sphalerite occurs as disseminations and narrow streaks in a silicified section of the sheared band of greenstone forming the "S" shaped surface trace of the zone. Cross fracturing within the main band of silicification has created structural conditions for the formation of lens type enriched ore bodies as evidenced by the one exposed in the prospect tunnel.

Width of the silicified sheared band ranges from 20 to 50 feet with mineralization appearing to favour the hanging wall side of the zone.

The replacement type mineralization observed in the sulphide body exposed by the adit exhibited typical banded fine grained texture. The South end of the lens terminated against a lamprophyre dyke. The North end narrowed to two feet between sparsely mineralized parallel bands of silicified zone material.

Sample returns across the North and South walls of No. 1 X-C East gave averages of 2.26 ounces per ton silver and 2.34 percent copper over 10.5 feet and 2.54 ounces per ton silver and 2.85 percent copper over 10.3 feet respectively.

SUMMARY AND RECOMMENDATIONS (Cont'd)

The sample taken across the sulphide zone as intersected by the main crosscut returned 2.10 ounces per ton silver and 1.65 percent copper along a width of 14.7 feet.

Results of sampling across mineralized bands forming the foot and hanging walls of the sulphide body ranged up to 1.0 ounces per ton silver and 1.0 percent copper.

The 1:1 ratio of silver to copper was remarkably consistent.

Massive blocks of sulphide liberally distributed in the talus below the showings carried more visible chalcopyrite and sphalerite than was observed in the relatively small lens exposed in the tunnel. It appeared reasonable to assume that additional sulphide bodies of probably better grade and greater magnitude occur at inaccessible locations above the tunnel elevation.

Study of Government geological records detailing structural characteristics, average tenor and type of mineralization, degree of silicification and rock types in which the extensive Hidden Creek ore bodies occurred indicated a marked similarity between the two showings.

In the writer's opinion further exploratory work on the property is fully justified. Since it is impractical to consider drilling from the surface the following work programme is recommended to explore the ore making possibilities of the zone.

SUMMARY AND RECOMMENDATIONS (Cont'd)

(1) Advance the present adit approximately 200 feet and provide drill crosscuts aggregating about 300 feet on both the foot and hanging wall sides of the zone.

(2) Explore the zone at -say- 50-foot sections within a vertical range of 300 feet by underground drill holes totalling an estimated 5,000 feet.

The above preliminary programme will involve 3-1/2 months work and is estimated to cost $70,000.

GENERAL CONDITIONS

1. LOCATION

The Red Wing property is located at the head of Tauw Creek about two miles West of Granby Bay on Observatory Inlet. Distance to Anyox, B. C. is approximately 5 miles.

The property lies about 85 airline miles from Prince Rupert.

2. ACCESSIBILITY

The property is easily accessible by helicopter from the beach or dock at Anyox. A rough trail leads across the divide separating Tauw and Bonanza Creeks a distance of about 2 miles.

A tote road could be constructed to the property by switch-backing up the hogsback between the creeks and bypassing the canyon at the lower end of Tauw Creek.

Preliminary exploration and development of the property can best be done by airlifting the equipment and supplies by large helicopter.

3. TOPOGRAPHY & SURFACE FEATURES

The topography in the immediate area of the showings is rugged. Elevations range from 1800 to 3500 feet A. S. L. within short distances.

GENERAL CONDITIONS (Cont'd)

3. TOPOGRAPHY & SURFACE FEATURES (cont'd)

Precipitous cliffs parallel the narrow U-shaped glacial cirque valley and snowslide ravines are numerous.

The smooth cliff bench left by the receding glacier makes access to the extreme head of the creek above the showing very difficult.

4. CLIMATE

Climatic conditions are not severe. The lower end of the showings is at 1800 feet above sea level and within two miles of tide water.

Snow conditions in the late winter would be difficult due to slides. However, the working season would extend to at least eight months during the year.

5. WATER AND TIMBER

There is plenty of water but the valley is devoid of timber. The smelter at Anyox and subsequent forest fires levelled all timber in the area.

GENERAL CONDITIONS (cont'd)

6. FACILITIES

There are no facilities on the property. The talus slope below the showings can be levelled for a temporary camp site and a heliport.

BRIEF HISTORY OF AREA

The area was active from the turn of the century through the 1930's during which time Granby Consolidated Mining, Smelting and Power Company developed and mined ore bodies aggregating some 30,000,000 tons of copper ore.

The main ore bodies were located on Hidden and Bonanza Creeks within a 4-mile radius of the town of Anyox.

Joseph McGrath staked the Redwing property in 1909. During 1911 the Pacific Metals Company completed about 120 feet of tunnel work on the mineralized zone. Three short flat drill holes were put in to explore the deposit from near the base of the cliff front. Results of the drilling were not recorded.

No systematic exploratory work has been done on the property since that time.

PROPERTIES AND OWNERSHIP

The property consists of three (3) Crown Granted mineral claims under surveyed lot numbers 1991 to 1993. Recent staking surrounding the original claims comprises twenty-four (24) located claims making a contiguous group of twenty-seven.

Magnum Consolidated Mines Ltd. holds an examination option to acquire the claims.

PREVIOUS DEVELOPMENT WORK

The only development work completed on the property to date consists of 65.0 feet of main prospect adit driven into the centre of the silicified mineralized zone and three short crosscut stubs totalling 51.0 feet.

The elevation of the adit is about 1950 A. S. L. and is 125 feet vertically above the talus slope on a cliff face.

No footages for the three diamond drill holes have been recorded. Two of the hole collars were located during the examination and are shown on the attached surface plan.

GENERAL GEOLOGICAL FEATURES

The host rock in which the mineralization occurs is a silicified sheared greenstone classified locally as amphybolite.

A prominent argillite-amphybolite contact was observed about 400 feet East of the mineralized zone. General attitude of the contact roughly parallels the surface expression of the silicified band of greenstone containing the mineralization and appears to have a similar steep dip to the East. Some oxidation (probably included pyrrhotized segments of argillite) was noted where bulges occurred along the contact on the cliff faces.

GENERAL GEOLOGICAL FEATURES (cont'd)

Both acid and basic dykes are numerous in the area cutting the greenstones and argillites at steep angles. The dykes have a rough E-W pattern normal to the general N-S strike of the main rock formation.

Granitic tongues of the Coast Range intrusives occur as major contact areas on both sides of Tauw Creek valley. The most prominent contact appears along the SW side of the mountain and is marked by a sharp ravine which probably represents a fault zone. Talus below the contact was examined for possible mineralization. Several large boulders of siliceous skarn type material were found containing pyrrhotite and pyrite.

In the vicinity of the "S" shaped trace of the silicified, mineralized greenstone band the rocks on either side are highly sheared and altered. A dyke, classified of lamprophyre composition, cuts the mineralized zone in an E-W direction at the elevation of the prospect adit. The dyke was a width of about 8.0 feet and dips steeply to the West.

The sulphide lens exposed in the tunnel appears to terminate against the dyke. Mineralization in the silicified zone downslope from the dyke appears more disseminated and patchy.

GENERAL GEOLOGICAL FEATURES (cont'd)

Contorted quartz veining and sheared greenstone occurs on the hanging wall side of the mineralization at the adit elevation. The quartz varies in width from 10 to 20 feet and strikes in a N. 50°E direction up the cliff face opposite the tunnel. No mineralization was noted in the quartz.

MINERALIZATION AND SAMPLE RESULTS

The mineralization occurs as narrow streaks and stringers replacing the silicified greenstone along cross fractures and paralleling the shearing. In the tunnel a lens type massive sulphide replacement occurred along what appeared to be a strong cross fracture. The main part of the lens was exposed in the adit crosscut and again by the No. 1 X-C East. As exposed by underground development the ore structure would have rough dimensions of 50 feet x 15 feet.

Some control appeared to have been exerted by the lamprophyre dyke cutting across the South end of the lens. To the North the massive sulphide appeared to narrow as it assumed the general strike and dip of the main silicified zone.

Large chunks up to 4.0 feet long and 2.0 feet thick of massive sulphide were located in the talus below the showings. It was felt these did not originate from the tunnel work. Probable origination

MINERALIZATION AND SAMPLE RESULTS (cont'd)

was from large sulphide bodies partially exposed on cliff exposures above the tunnel elevation.

Mineralization consists of pyrite, pyrrhotite, chalcopyrite and varying amounts of sphalerite. The massive type of mineralization shows typical banding and original outlines of the former host rock.

Assay results from the tunnel samples showed copper, silver, and zinc values distributed in a fairly even ratio in the massive sulphide. Averages as shown in the schedule below were roughly 2.5 ounces silver, 2.5 percent copper and the one check sample returned 1.87 percent zinc.

Surface sampling across a total width of 18.0 feet at an accessible cross-section of the silicified oxidized zone below the tunnel returned an average of 1.5 ounces silver and 0.43 percent copper.

SAMPLING SCHEDULE

No.	Place	Location	Width	Description	Assays AU o/T	Ag o/T	Cu%	Zn%
1.	N. Wall #2 X-C East	Sta. U2 + 12.0'	4.0'	Silic. min. greenstone	Tr	0.50	1.05	
2.	"	Sta. U2 + 6.0'	6.0'	Silic. min. greenstone sulphides	Tr	0.40	0.78	
3.	S. Wall #2 X-C East	Sta. U2 + 11.0'	4.6'	Sulphides in silic. grnstone	0.01	0.30	0.70	
4.	"	Sta. U2 + 5.0'	6.0'	Sulphides in silic. grnstone	0.005	1.10	0.80	
5.	S. Wall #1 X-C East	Sta. U-1+ 17.0'	5.0'	Mineralized grnstone, some heavy sulphides	0.04	3.10	3.75	
6.	"	Sta. U-1+ 12.0'	5.3'	Massive sulphides	0.03	2.00	2.00	
7.	"	Sta. U-1+ 7.0'	5.7'	Some heavy sulphide in silic greenstone	0.02	1.05	1.05	
8.	N. Wall #1 X-C East	Sta. U-1+ 18.5'	3.5'	Mineralized greenstone	Tr	0.90	1.40	
9.	"	Sta. U-1+ 15.0'	7.0'	Heavy sulphides greenstone	0.02	2.95	2.80	1.87
10.	-	-	-	MISSING -	-	-	-	-
11.	S. Wall Main X-C	Sta. 7 + 15.5'	14.7'	Heavy banded sulphides	0.005	2.10	1.65	
12.	Back #1 X-C	Sta. 7 + 12.0'	6.0'	Heavy banded sulphides	Tr	1.50	1.40	
13.	Surface Zone	Sta. 4 - N. 75°W	11.0'	Silic. grnstone sparse mineral	Tr	2.15	0.30	
14.	Surface Zone	Sta. 4 - N. 75°W	7.0'	Silic. grnstone sparse mineral	Tr	0.55	0.65	

ASSAYS

No.	Width	Au. oz/T	Ag. oz/T	Cu. %	Zn %
1	4.0'	Tr.	0.50	1.05	-
2	6.0'	Tr.	0.40	0.75	-
3	4.6'	0.01	0.30	0.70	-
4	6.0'	0.005	1.10	0.80	-
5	5.0'	0.04	3.10	3.75	-
6	5.3'	0.02	2.00	2.00	-
7	5.7'	0.02	1.05	1.05	-
8	3.5'	Tr.	0.90	1.40	-
9	7.0'	0.02	2.95	2.80	1.87
10		Missing			-
11	14.7'	0.005	2.10	1.65	-
12	7.0'	Tr.	1.50	1.40	-

PROSPECT ADIT
RED WING GROUP
Granby Bay, Anyox Area, B.C.

Scale: 1 inch = 10 feet.

To accompany Report by:
L. G. White P. Eng.
CONSULTING MINING ENGINEER.

EXPLORATION AND DEVELOPMENT POSSIBILITIES

The property deserves further exploratory work. By careful preparation work and experienced climbers it may be possible to examine the cliff outcrops above the tunnel entry. However, to properly assess the possibilities of the showing it will be necessary to conduct a systematic programme of underground development followed by cross-section diamond drilling as recommended herein.

RECOMMENDED WORK PROGRAMME

To proceed with a planned programme of work on the property it will be necessary to establish temporary camp facilities in the valley and employ a crew of about four men, for -say- ten days, to level a heliport site and room for tent frames on the talus slide below the showings.

Equipment consisting of a portable compressor, slusher hoists and auxiliary supplies can then be airlifted by large helicopter to the site from the dock at Anyox. Barge transport can be made to Granby Bay.

It is estimated that accommodation be supplied for a crew of ten to twelve men.

By slashing and plugging the South side of the steep outcrop in the gully formed by the silicified mineralized zone, a system of

RECOMMENDED WORK PROGRAMME (cont'd)

ladders and catwalks can be installed to permit easy access to the present adit.

Work should then proceed by extending the present tunnel on strike for 200 feet and establishing crosscuts at 100-foot intervals on both foot and hanging wall sides of the zone.

Drill sections can then be made over an estimated block of ground 300 feet long and 300 feet in vertical section.

To set up a work schedule as briefly outlined above will involve a 3-1/2 month period. It is considered the major part of the programme could be instituted and completed this fall.

COST ESTIMATE

Conditions:

1. Provide camp for 10 men
2. Airlift equipment, camp and personnel by helicopter from Anyox, B. C.
3. Time period - 3-1/2 months

Costs:

1.	Mobilization of crew, transportation to site and preparation of campsite and heliport	$ 4,000
2.	Provision for main camp, plant, and preparation work at adit	6,000
3.	Tunnel Work - -say- 500' - 5' x 6' - slusher drift @ $35/foot including slushing drill stations	17,500
4.	Diamond drilling - 5000' - AX core @ $4.00 including transport to site and out	20,000
5.	General overhead, camp operation, supervision, etc. @ $4,500/month	15,750
	ESTIMATED COSTS	$63,250
	With contingencies - say -	$70,000

GENERAL CONCLUSION

In view of the preliminary results obtained by my examination and favourable observations made by Government personnel on the general geological environment of the Redwing property resembling that of the Hidden Creek deposits, it is concluded that the property deserves the systematic exploratory work as recommended in this report.

L. G. White, P. Eng.

Vancouver, B. C.

August 14, 1963

REFERENCES

1. B. C. Minister of Mines Report
   1932 - Pages 53 - 55

2. Memoir 175 - Geological Survey of Canada
   Dr. Hansen - 1935 - Page 103

3. Memoir 32 - Geological Survey of Canada
   Dr. McConnell - 1932 - Page 91

4. Memoir 175 - Geological Survey of Canada
   Dr. Hansen - 1935
   "Hidden Creek Mine" - Pages 93-99

5. Nass River 1" = 4 miles - Sheet 103P

018276

CERTIFICATION

I, Leonard George White, of the City of West Vancouver, in the Province of British Columbia hereby certify as follows:

1. That I am a Registered Professional Engineer of the Provinces of British Columbia and Ontario and reside at 704 Parkside Road, West Vancouver, B. C.

2. That I am a graduate of Washington State University with a Bachelor of Science in Mining Engineering having practiced my profession for twenty years.

3. That I have no interest either directly or indirectly in the Redwing property held under option by Magnum Consolidated Mines Ltd.

4. That my report is based on an examination of the property on August 6th-11th, 1963, and reference to Government publications.

L. G. White, P. Eng.

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