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PROSPECTING & PRELIMINARY GEOLOGICAL REPORT
COPE MINERAL CLAIMS
DOME MOUNTAIN, OMINECA M.D., B.C.
MAPS 93L/10,15, LAT. 54° 45'N, LONG. 126° 37'W

OWNED BY: A. L'ORSA

ANTHONY L'ORSA

Smithers, B.C.
28 Sept. 1982

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SUMMARY AND CONCLUSIONS

The Cope mineral claims on the southeastern side of Dome Mountain were prospected and mapped during September, 1982.

The claims are underlain by northwest to northeast-striking volcanic rocks of the Hazelton Group. Most of the outcrops, which occupy only about 1% of the claims area, comprise pyroclastic rocks of intermediate composition.

Disseminated and fracture filling tetrahedrite and local zones of moderate carbonatization and pyritization were found on Cope 5. Minor disseminations and fracture fillings of pyrite and a very little galena were found in sheared and carbonatized tuffs on Cope 1.

More work is required on these claims in view of the proximity of this mineralization to the Forks prospect and other gold and silver occurrences on Dome Mountain.

INTRODUCTION

Six days were spent prospecting and doing preliminary geological mapping on the Cope 1 to 5 mineral claims.

Outcrops occupy approximately 1% of the claims area but overburden appears to be shallow (i.e. less than 2m) over most of the claims. The overburden comprises till and a few swamp deposits.

Pace and compass traverses were run along old surveyed claim lines, along the location line and across the claims group at about 100 metre intervals.

LOCATION AND ACCESS

The Cope mineral claims are situated approximately 33 km east of Smithers, between about 1525 m and 1310 m elevation on the southeastern slopes of Dome Mountain. The claims group is bounded in part on the south by the No. 2 Crown-granted claim of the Forks gold prospect. The old Dome Babine Mines road, suitable for 4-wheel drive vehicles only, passes through Cope 4 and 5. This road connects Highway 16

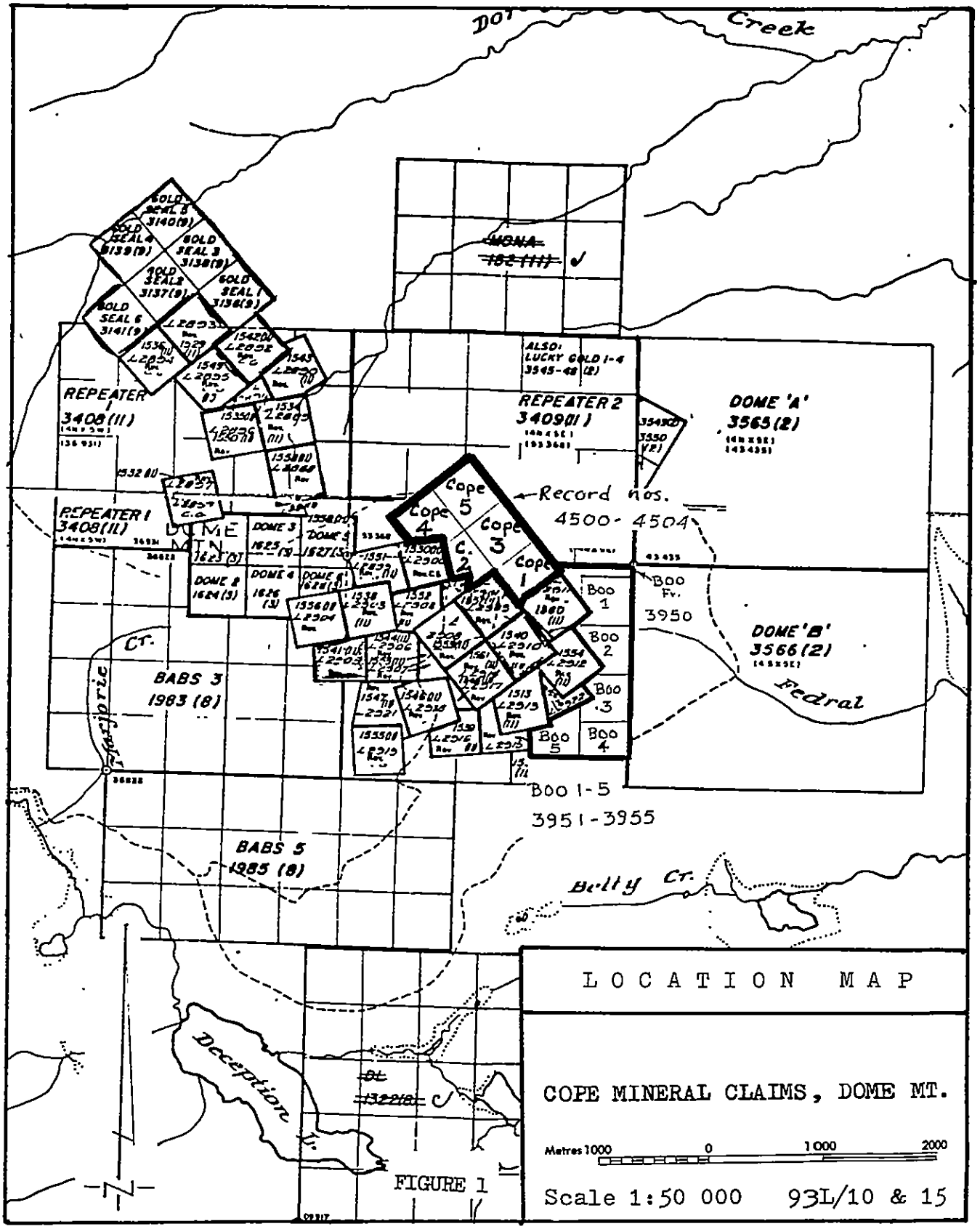
Creek
MONA
ALSO: LUCKY GOLD 1-4
REPEATER 1 3408(II)
REPEATER 2 3409(II)
DOME 'A' 3565(2)
Record nos. 4500-4504
Cope 1
Cope 2
Cope 3
Cope 4
Cope 5
DOME MTN.
REPEATER 1 3408(II)
DOME 'B' 3566(2)
Boo 1
Boo 2
Boo 3
Boo 4
Boo 5
Boo Fr. 3950
Boo 1-5 3951-3955
BABS 3 1983 (8)
BABS 5 1985 (8)
Ct.
Belly Ct.
Redral
Deception
LOCATION MAP
COPE MINERAL CLAIMS, DOME MT.
Metres 1000 0 1000 2000
Scale 1:50 000 93L/10 & 15

FIGURE 1

to the west with the Chapman Lake Forest road to the east of Dome Mt. An old road to the Forks gold workings goes through Cope 2 and 3. This road is impassible for wheeled vehicles at present.

The Dome Babine Mines road may be reached from Smithers by way of either the Chapman Lake Forest road or the Woodmere road and the Paradise (Guess) Lake road.

HISTORY AND OWNERSHIP

The Cope claims cover the old Bisbie and Ruby claims. The Bisbie claim was known as the "Cabin Group extension" (Gaul, 1922) and was believed to contain the eastern continuation of the Cabin vein which was explored on the adjacent Grizzly Crown-granted claim.

The Cope claims also cover parts of the following mineral claims surveyed by J. A. Rutherford in 1923:

Chance	L 2864
Chance Fr	L 2875
Palfrey Fr	L 2868
Pine	L 2869
Polly Fr	L 2873
Prince Fr	L 2874
Rand	L 2871
Spruce	L 2870

The survey lines can still be followed and most of the posts are still legible. There are a few small prospect pits and trenches on the claims.

The Cope 1 to 5 mineral claims (record nos. 4500 to 4504) were recorded by me on 2 October 1981. They are named in remembrance of Arthur Cope, a prospector who held the Free Gold prospect on Dome Mt. for many years.

GEOLOGY

The Dome Mt. area is underlain by generally northwest-striking eugeosynclinal volcanic and sedimentary rocks of the Jurassic Hazelton Group (Tipper, 1976). These rocks are intruded by a few dykes and stocks which range in composition from granitoid to diabase. The outcrops on

Dome Mt. comprise mainly pyroclastic rocks of intermediate composition, including volcanic breccias and a great variety of tuffs. The rocks range from green and grey to red in colour, with red volcanic rocks predominating on the lower eastern slopes of the mountain.

Sedimentary rocks are locally exposed on Dome Mt., notably along the southwest, south and lower southeastern slopes. These rocks include very thin-bedded tuffs and siltstones, limestones and minor sandstones.

A diabase outcrops on the lower southeastern side of the mountain (L'Orsa, 1982) and a small granitic stock with conspicuous quartz is associated with gold veins at the Free Gold prospect on the eastern side of Dome Mt.

All outcrops seen to date on the Cope claims are volcanic rocks. These include tuff-breccias, lapilli tuffs, tuffs with numerous (but less than 50%) about 1 mm plagioclase crystals, lithic tuffs, ash tuffs and massive and amygdaloidal andesite flows. On Cope 1 and 3 the rocks are generally green or grey in colour. Red and grey-red tuffs appear to predominate elsewhere on the claims.

The rocks strike northwest and dip steeply to the east in the southern claims, as do local shears. In the northern sector of the Cope claims at least some of the rocks strike northeasterly and dip northwest or southeast. Both northwest and northeast-trending shears have been observed in the northern sector. The rocks on this part of the mountain tend to form shear zones rather than faults.

Ankerite (and/or ferroan dolomite?) commonly occurs as disseminations and, locally, as fracture fillings throughout the claims group. In places quartz and calcite are also present. In general the carbonate content of the rocks is less than 15%. However, near the southern boundary between Cope 1 and No. 2 Crown-granted claim the rocks are heavily carbonatized.

MINERALIZATION

There are several major, generally northwest-striking, shear zones on Dome Mt. The shear zones exhibit varying amounts of carbonatization and sericitization accompanied locally by quartz-carbonate veins carrying gold and silver associated with pyrite and unevenly distributed arsenopyrite, chalcopyrite, galena, sphalerite, tetrahedrite, specularite, scheelite, chromian muscovite, etc.

The Cope claims are as close as about 400 m from significant gold mineralization at the Forks prospect (Min. Mines Ann. Report). Mineral occurrences of interest found on the Cope claims thus far include small amounts of disseminated and fracture filling tetrahedrite on Cope 5, minor disseminated and fracture filling pyrite with a very little galena in sheared and carbonatized rocks in the southwestern part of Cope 1 and carbonatized and pyritized (up to 10% pyrite) rocks exposed on the Dome Babine Mines road on Cope 5. A grab sample assay of the pyritized rocks on Cope 5 by the Ministry of Energy, Mines and Petroleum Resources yielded trace amounts of gold and silver. Specularite is common in outcrops along the creek on Cope 2.

A. L'Orsa

A. L'Orsa

REFERENCES

Gaul, Alfred J., 1922, Report on Dome Mountain Extension Claims: Unpub. report for T. E. Jefferson.

L'Orsa, A., 1982, Preliminary Geological Report, Boo Mineral Claims, Dome Mountain: Report submitted for assessment.

Minister of Mines, B.C., Annual Report for 1922, p. N103-104.

Tipper, H. W., 1976, Smithers Map-area, British Columbia: Geological Survey of Canada, O.F. 351.

ITEMIZED COST STATEMENT

WORK:	
A. L'Orsa, geologist, 6 days at $250.00/day (16, 18, 19, 21, 23 & 26 Sept.)	$1500.00
A. L'Orsa, report, 2 days at $250.00/day	500.00
Typing and copying	20.00
FOOD AND LODGING:	
6 days at $50.00/day	300.00
TRANSPORTATION:	
Land-Rover, 6 days at $35.00/day	210.00
135 km at 15¢/km (one return trip to prospect)	20.25
	$2550.25

QUALIFICATIONS

I, Anthony L'Orsa of Smithers, B.C., hereby certify that:

1. I am a graduate of Tulane University, New Orleans, La., U.S.A. with the degrees of B.Sc. (1961) and M.Sc. (1964) in geology.
2. I am a Fellow of the Geological Association of Canada and a member of the Society for Geology Applied to Mineral Deposits.
3. I have practised my profession since 1962 in western Canada, Mexico and Australia.

Dated at Smithers this 28th
day of September 1982.

A. L'Orsa

A. L'Orsa
Geologist

T dark red

Red & gy
T & Lapilli T

Coarse T
Lapilli T

T red > gn

T red gy to gy

T red
A gn

Red T & Lapilli T

T gy-brown

T gy-red

Red & gy T & Lapilli T

T red & gy

Red Vol

Brick red vesicular

T red
A gn, gy, in epidote

gy T

Red T

A gn gy

Tetrahedrite

≤20% Ankerite
≤10% pyrite

Assay:
Au tr
Ag tr

A epidote

T gn

A epidote

A gn

A gn

A gn

epidote chlorite in amygdules

A gn

Dome Babine Mines road

T red
A

T red & gy

T red-gy

T & Lapilli T gy to red

T red-gy

GRIZZLY L2900

gy ? T gy Lapilli

Few red frags.

T gy gn Lapilli Blocks

A gn gy epidote

T red & gy with Lapilli & blocks Frags ≤ 15cm

T red & gy Lapilli Specularite

A gy-gy

T gy gn Lapilli

Pond

NO.2 L2909

T gy gn Blocks ≤ 11cm

T dk gy gn Lapilli

T gy gn Lapilli & blocks ≤ 1% diss. pyrite

T dark gy gn

T gy gn ≤ 15% Lapilli

Pond

T gn + gy Lapilli & blocks

T gn few lapilli

T gn diss red hematite

T gy gn Lapilli & Blocks

T gy gy

T local heavy ankerite & quartz veins minor diss pyrite speck galena

WALLACE L2911

L E G E N D

- Surveyed post
- Located post
- Bedding
- Shears
- Prospect pit
- A — Andesite, probable flow
- T — Tuff
- gn, gy — green, grey

Scale 1:5 000

0 100 200

metres

FIGURE 2

COPE CLAIMS, DOME MOUNTAIN

PRELIMINARY GEOLOGICAL MAP

A. L'Orsa 28 Sept. 1982