

5554

A REPORT
on the
MAGNETOMETRIC SURVEY
on the
MOUNT NELSON PROPERTY
WELLS AREA
CARIBOO MINING DIVISION
PROVINCE of BRITISH COLUMBIA

93H/4E

For:

GOLDEN ARK EXPLORATIONS LTD. (NPL)

by

C.T. Pasteka, P.Eng.

August 16, 1975

93H/4E

Claims

Wonder

Wonder Fraction

Garbo

Burn 14 - 16

Chisholm 1 - 4

Chisholm Fraction

Oslo Fraction

Gloria 2

Garbo Fraction

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5554 MAP _____

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SUMMARY

At the request of Golden Ark Explorations Ltd. a magnetometric survey was carried out over a group of mineral leases hereinafter referred to as the Mount Nelson property. The property is situated some 1½ miles NNE of Van Winkle and some 8 miles SW of Wells, B.C. The area of the property is underlain by members of the Cariboo Formation, early Precambrian in age and represented by Limestones, Phyllites, and Quartzites, frequently cut by later quartz veins. These later quartz veins may be barren or may contain the relics of sulphide mineralization, which in turn may or may not be associated with gold mineralization. It is these quartz veins that are of primary consideration in the area in that they are thought to be the sources of the gold derived from placer operations throughout the area. The attitude of these quartz veins tend to be either sympathetic or normal to major structural features such as faults. The purpose of the magnetic survey was an endeavor to trace some of these major structural features and in turn possibly trace related structures of smaller size and possibly derive a structural system. Due to the lack of contrast in magnetic susceptibility of the various rock types encountered on the property it was found that these suspected structural trends could not be delineated. In view of this fact, any further work to be done on the property will be restricted to detailed geological mapping where possible and to physical work such as bulldozer stripping and possibly drilling. In some areas such work may be carried on with minimal disturbance where previous logging operations have been carried out and where topography allows.

PROPERTY

The property under discussion consists of the following fourteen contiguous mineral leases, (reverted Crown Granted Claims): Wonder, Wonder Fraction, Garbo, Burn 14 - 16 inclusive, Chisholm 1 - 4 inclusive, Chishom Fraction 7, Garbo Fraction, Oslo Fraction, Gloria 2. The above claims are filed under certificate Nos. 69397 to 69408 inclusive in the mining records office in Quesnel, B.C., Cariboo Mining Division, Province of British Columbia.

LOCATION AND ACCESS

The group of 14 mineral leases under discussion will hereinafter be referred to as the Mount Nelson Group. The property is situated on the SE slope of Mount Nelson some 1½ miles NNE of the Village of Van Winkle and some 8 miles SW of Wells, B.C. Facile access is available by means of the Barkerville highway extending some 48 miles in a westerly direction to Quesnel, B.C. This is a paved all-weather road and runs along a portion of the eastern boundary of the claim group. A walking trail extends from the confluence of Oregon and Chishom Creeks extending to the northern boundary of the Foster Ledges claim, i.e. south boundary of the Mt. Nelson Group. Oregon Gulch which occupies the south central portion of the property would have the co-ordinates of 53° 121° SW.

TOPOGRAPHY AND VEGETATION

The surface presented by the property is that of an inclined plane facing south easterly and broken only by the canyon walls of Oregon Gulch and its tributaries which drain in a southerly direction. The slopes are generally moderate to steep with elevations extending from 4000' ASL to the SE to 5400' ASL to the NW. Vegetative cover is generally dense, consisting mainly of Alder and Cedar in the lower areas with marketable Balsam, Fir and Pine on the upper slopes. Overburden cover of variable depth is extensive with the exception of water eroded areas

and man - made features such as placer operations, and highway construction. Sufficient water for exploration purposes is available from numerous minor seepage streams and Oregon Creek itself.

GEOLOGY

The area of the property is underlain by members of the Richfield Formation of the Cariboo Series. These rocks are early Precambrian in age and consist of limestones, phyllites and quartzites, all metamorphosed to a greater or lesser extent. Deformation is widespread and complex. A major fault trending NNE - SSW is projected as traversing the west central portion of the property, however extensive overburden cover precludes its examination in the field within the limits of the property.

A series of quartz veins occurring either sympathetic to or normal to major structural features occur on the property. These are sometimes discordant to the lineation of the metasediments and occasionally they appear to be intraformational.

MINERALIZATION

The quartz veins transgressing the older rocks tend to occur in minor swarms and may consist of pure white apparently barren quartz or may be highly stained due to the weathered remains of former sulphide mineralization. It is thought that the gold mineralization is associated with the sulphides and is in fact the source of gold derived from placer operations on the lower slopes as well as gold found in massive quartz veins as mentioned in early literature. An outcrop examined at line 00 12 + 50 W yielded gray quartz containing relics of what is thought to have been pyrite. Assays of this material yielded .03 ounces of gold per ton.

HISTORY

The entire Barkerville area including the area of the property under discussion has had an illustrious history with regards to gold production, however the majority of literature is concerned with placer gold production. The major exception to the above statement is that of the underground operations, Cariboo Gold Quartz Ltd., operating until recently on Cow Mountain. Also mentioned in the literature is a supposed 5' lens of quartz containing gold values occurring immediately to the south of the property under discussion, namely the Foster Ledges. The workings are now inaccessible due to flooding, however evidence of recent placer operations were observed.

MAGNETIC SURVEY

A. Method

Preparatory to the magnetic survey a line grid consisting of a N - S baseline with normal cross lines at 400' intervals was laid out. Magnetic readings were taken at 100' intervals along the cross lines using a Sharp MF2 fluxgate magnetometer. This instrument measures the vertical component of the magnetic field. The limited size of the grid permitted the use of a single reference base station located at 0+00. All readings were corrected, i.e. diurnal variation, relative to this point which was assigned an arbitrary value based on readings taken over a given period. The readings for each station were then plotted in their appropriate geographical position in profile form on a grid plan at a scale of 1" to 200'. The vertical scale is 1" to 1000 gammas.

B. Discussion of Results

The contrasts in magnetic susceptibility offered by the different rock facies present and observed proved to be extremely limited. The arithmetic average of the corrected readings was calculated to be 706 gammas. The lack of contrast, i.e. 550 - 870 gammas was considered to be too low

to apply any analytical technique to the results. Further, the total lack of continuity of even minor features in strike length precludes any correlation with the limited geological information currently available. It must be said then, that the use of magnetic techniques in this area are of very limited if any use in attempting to delineate structural lineations. The minor variations in magnetic intensity experienced could be attributed to the normal variations one would expect with the varying depths of overburden, topographical effects, and insignificant variations in magnetic susceptibility of the underlying rocks.

CONCLUSIONS AND RECOMENDATIONS

The recently conducted magnetic survey of the Mount Nelson Property failed to yield any significant contrast in the magnetic susceptibility of the underlying rocks that could be used to interpret or to be correlated with underlying structural features on the basis of limited geological information available. On the basis of the character and extent of any mineralization observed, i.e. minor disseminated and knotty sulphides, contained in quartz veins, it is doubtful if any other geophysical technique could yield significant results under these circumstances. In view of the abundant evidence of gold mineralization occurring at lower altitudes, and the observed mineralization in situ, set in a suitable geological environment, it would be in order then to continue exploration on the property using other methods. It is recommended therefore, that a detailed geological mapping programme be undertaken concurrently with a programme of physical work, namely bulldozer stripping. Such a programme would facilitate a more realistic economic evaluation. Detailed geological mapping on a scale of at least 200' to the inch coupled with bulldozer stripping with a machine of at least the capacity of a Caterpillar D8 would entail an initial expense of some \$8,000.

Respectfully submitted,



C.T. Pasieka, P.Eng.

CERTIFICATION

I, Clemens Terence Pasieka, of the City of Kamloops, in the Province of British Columbia, hereby certify that:

1. I am a geologist and maintain offices at 7A - 293 Arrowstone Dr. Kamloops, B.C.
2. That I am a graduate of the University College, Dublin, Ireland, with a degree in Geology, B.Sc., 1963.
3. That I have been practicing my profession as a geologist for twelve years.
4. That I am a member of the Associations of Professional Engineers in the Provinces of Alberta, Saskatchewan, and British Columbia.
5. That I have no interest directly or indirectly in the property of Golden Ark Explorations Ltd. (NPL), nor do I expect to receive such interest or in the securities of Golden Ark Explorations Ltd.
6. That this report is based on the data derived from work carried out under my supervision on the property, from personal experience in the area, and from Government publications relevant to the area.

Dated this 16th day of August, 1975, in the City of Kamloops, Province of British Columbia.



PERSONELL

C.T. Pasleka	August 2-8 incl.	Geologist	—	7A - 293 Arrowstone Kamloops, B.C.
Steve B. Bablak	August 2-8 incl.	Line Cutter Magnetometer Operator	\$50/day	Kamloops, B.C.
William J. Bablak	August 2-8 incl.	Line Cutter	\$50/day	Kamloops, B.C.

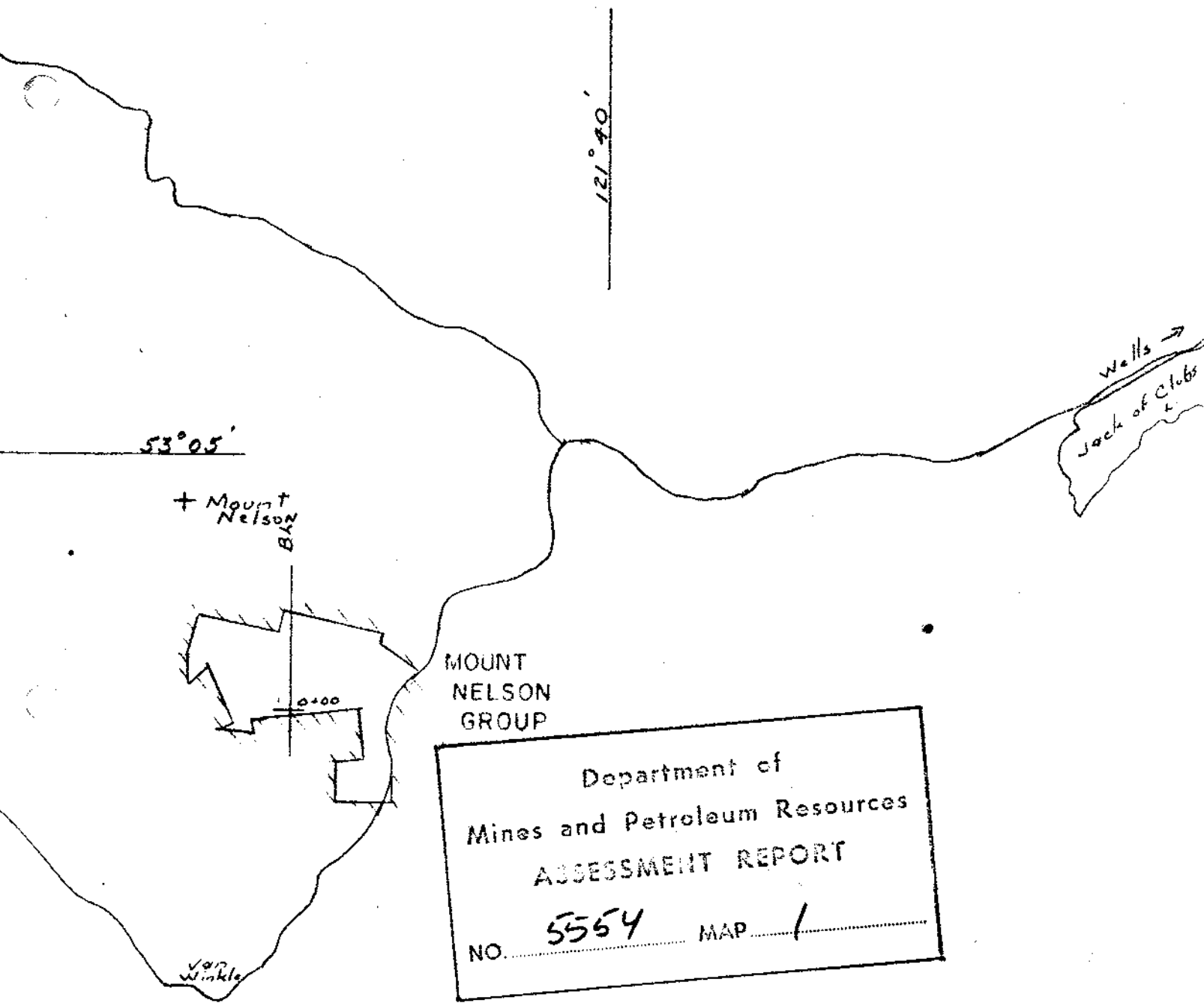
Statement of Costs

This is to certify that the following costs were incurred by and
invoiced to Golden Ark Explorations Ltd. (NPL):

Line Grid	10.2 mi @ \$100/mi	\$1,020.00
Magnetometric Survey	9.8 mi @ \$100/mi	980.00
Report		350.00
Camp and Supplies		214.00
A.T.V. Rental	5 days @ \$20/day	100.00
	TOTAL	\$2,664.00

Signed this 16th day of August, 1975 In the City of Kamloops, B.C.





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LOCATION SKETCH
MOUNT NELSON GROUP
WELLS AREA
CARIBOO MINING DIVISION
BRITISH COLUMBIA

GOLDEN ARK EXPLORATIONS LTD NPL

Scale 1:50,000

To accompany report by C T Pasieka P Eng

93H/4E

20W

16W

12W

8W

4W

Base Line

4E

8E

12E

16E

20E

24E

32 00N

28 00N

24 00N

20 00N

16 00N

12 00N

8 00N

4 00N

0 00

4 00S



To accompany report by C.T. Pasieka P.Eng.

GOLDEN ARK EXPLORATIONS LIMITED (NPL)
MAGNETIC PROFILES
NELSON MOUNTAIN PROPERTY
WELLS AREA
CARIBOO MINING DIVISION
BRITISH COLUMBIA
Scale 1" = 200' = 1000 gammas (vertical)

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MAP 2

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20W 16W 12W 8W 4W Base Line 4E 8E 12E 16E 20E 24E

32 00N
28 00N
24 00N
20 00N
16 00N
12 00N
8 00N
4 00N
0 00
4 00S



To accompany report by C.T. Pasieka P. Eng.

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MAP 3

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