Ministry of Energy, Mines and Petroleum Resources
GEOLOGICAL SURVEY BRANCH

001046

MINFILE

NEW ☐ REVISION ☒ MODIFIED ☐

IDENTIFICATION

MINFILE NO. 082ESE152 NAT'L MINERAL INV. NO. 82E2 AU3

CANMINDEX NO.

NAME(S) 1. North Star (L.1165)

2.

3.

4.

STATUS: ☐ SHOWing ☐ PROSpect ☐ DEveloped PRospect ☐ O ☐ U PRODucer ☐ O ☒ PAst PRoducer

LOCATION:

NTS MAP: 082E02E

BC MAP:

MINING DIVISION: GRWD Greenwood

UTM ZONE: 11 NORTHING: 5447125 EASTING: 383375

LATITUDE: ° ' " LONGITUDE: ° ' "

ELEVATION: 1448 (metres)

LOCATION CERTAINTY: ☒ within 500 m ☐ 2 within 1 km ☐ 3 within 5 km

Comment on Identity: No.1 (Upper) adit, 1.25 kilometres south-southwest from the summit of Mount Pelly, east of Jewel Lake, 10.25 kilometres north-northeast from the town of Greenwood. EMPR AR 1933-A159; 1936-D24

MINERAL OCCURRENCE

COMMODITIES: AG AU PB ZN CU

MINERALOGY:

SIGNIFICANT Minerals: PYRT GLEN SPLR CLCP TLRD SLVN

Comment:

ASSOCIATED Minerals: QRTZ

Comment:

ALTERATION Minerals:

Comment:

ALTERATION Type:

DEPOSIT CHARACTER			DEPOSIT CLASSIFICATION		
(1) ☒ 01 Vein	08 Stratabound		01 Replacement	11 Skarn	
02 Stockwork	09 Stratiform		02 Magmatic	12 Pegmatite	
03 Breccia	10 Concordant		03 Volcanogenic	13 Placer	
04 Pipe	(2) ☒ 11 Discordant		04 Sedimentary	14 Precipitate	
05 Unconsolidated	12 Massive		05 Syngenetic	15 Exhalative	
06 Podiform	13 Disseminated		(2) ☒ 06 Epigenetic	16 Diatreme	
07 Layered	** Unknown		(1) ☒ 07 Hydrothermal	17 Epithermal	
			08 Residual	18 Mesothermal	
			09 Porphyry	19 Fossil Fuel	
			10 Igneous-contact	** Unknown	

AGE OF MINERALIZATION: ??? ISOTOPIC AGE:

MATERIAL DATED: DATING METHOD:

SHAPE OF DEPOSIT: 1 Regular 2 Tabular ☒ Cylindrical 4 Bladed 5 Irregular

SHAPE MODIFIER: 1 Folded 2 Faulted ☒ Fractured 4 Sheared 5 Other

DEPOSIT DIMENSION: X X (metres)

ATTITUDE: STRIKE/DIP 030 40E TREND/PLUNGE

Comment: Strike and dip are variable.

DATE CODED: Y M D CODED BY FIELD CHECKED ☐ YES ☐ NO

Y 89 M 02 D 21 REVISED BY GO ☐ YES ☒ NO

MINFILE NO. 082ESE152

HB-936

Gold Rod quartz vein is the northern extension of the adjoining

HOST ROCK

DOMINANT HOST ROCK: [1] Sedimentary [2] Plutonic [3] Volcanic [X] Metasedimentary [5] Metaplutonic [6] Metavolcanic [7] Metamorphic

FORMAL HOST:

1. Group: 365 Anarchist Group — Formation: _____
   Strat-Age: 329 Pennsylvanian-Mississippian (Carboniferous or older) — Isotopic Age: _____
   Dating Method: _____ — Material Dated: _____
2. Group: _____ — Formation: _____
   Strat-Age: _____ — Isotopic Age: _____
   Dating Method: _____ — Material Dated: _____

INFORMAL HOST:

1. Igneous/Metamorphic/Other: — Name: 390 Unknown
   Strat-Age: 120 Tertiary (Lower) — Isotopic Age: _____
   Dating Method: _____ — Material Dated: _____
2. Igneous/Metamorphic/Other: — Name: _____
   Strat-Age: _____ — Isotopic Age: _____
   Dating Method: _____ — Material Dated: _____

Comment on Host Rock: _____

ROCK TYPE/LITHOLOGY:

MODIFIER CODE(S)			ROCK CODE	ROCK NAME
		QRTZ	WCKE	quartz wacke
		LTHC	WCKE	lithic wacke
		LMPP	DYKE	lamprophyre dyke
		PLSK	DYKE	pulaskite dyke

GEOLOGICAL SETTING

TECTONIC BELT: [IN] INsular [CC] Coast Crystalline [IM] InterMontane [X] OMineca [EA] EAstern

TERRANE: 1. M Undivided Metamorphic Assemblages 2. CPC Plutonic Rocks

PHYSIOGRAPHIC AREA: OKHL Okanagan Highland

METAMORPHISM:

TYPE: [1] Contact [X] Regional

RELATIONSHIP: [X] Pre-Mineralization [2] Syn-Mineralization [3] Post-Mineralization

GRADE: [ZL] Zeolite [X] Greenschist [AM] Amphibolite [HF] Hornfels [GL] Granulite [BS] Blueschist [EC] Eclogite [AN] Anthracite [SA] Semi-Anthracite [LV] Low Vol. Bituminous [MV] Med. Vol. Bituminous [HV] Hi Vol. Bituminous [SB] Sub Bituminous [LI] Lignite

Geological Setting Comment: _____

CAPSULE GEOLOGY

The Jewel Lake area is underlain by a complex of metamorphic rocks mostly of sedimentary and volcanic origin correlative with the Carboniferous or older Anarchist Group and a large granodiorite intrusion correlative to the Juro-Cretaceous Nelson Plutonic Rocks. Small dykes and sill-like bodies, feeders to nearby Tertiary lavas, pervade these units. Four north striking and one northwest striking quartz fissure-vein structures are known in the Jewel Lake camp, all of which have received some development. Most of the production from the camp has come from what is known as the ~~Dentonia~~ Jewel (Dentonia) vein (Minfile 082ESE055).

Locally the metamorphosed volcanic and sedimentary rocks are not always distinguishable, both being fine-grained and medium or dark coloured with primary structures such as bedding and flow banding being confused with foliation or gneissosity. Generally the sedimentary rocks are brittle and quartz-rich, however compositions vary and some biotitic varieties have the same competence as the amphibole-rich volcanic rocks. These rocks are locally called quartzites but few are true quartzites and more appropriate terms would be quartz wacke or lithic wacke. The massive character of the volcanic rocks is due to a combination of intense regional metamorphism and primary structures. Field and petrographic data indicate that at least some of the original rock formed as a result of massive accumulations of lava flows and pillow lava. Crosscutting feeder dykes and sills are significant and contribute to the massive aspect of the volcanic rocks. The metamorphosed schistose volcanic rocks are compositionally basalts. These metasedimentary and metavolcanic rocks form part of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group.

Igneous intrusions in the Jewel Lake camp include a large Lower Cretaceous granodiorite pluton and a host of younger pulaskite and lamprophyre dykes. The granodiorite is correlative with Nelson Plutonic Rocks. It is a homogeneous, medium-grained grey body which intrudes the metavolcanic rocks along a northwest trending contact in the southwest part of the camp. Alteration is minor with some replacement of amphibole by epidote. The intrusive has produced little effect in both the metavolcanic and metasedimentary rocks. Granodiorite dykes occur and are compositionally similar to the main granodiorite body and are probably offshoots from it. Pulaskite dykes are numerically most important. Several types are evident including both quartz-bearing and undersaturated types. Post-vein lamprophyre dykes as well as the pulaskite dykes are of probable Lower Tertiary age and cut all other major geological units.

On the North Star claim (L. 1165), the North Star quartz fissure-vein crosscuts northwest striking metasedimentary rocks comprised of quartz wackes and lithic wackes which form part of the Carboniferous (Pennsylvanian-Mississippian) or older Anarchist Group. The quartz vein strikes 030 degrees across the metasedimentary rocks and dips 40 to 60 degrees southeast. The vein is highly irregular and disjointed with widths ranging from 10 centimetres to 1.2 metres and locally to 3.4 metres. The quartz vein has a tendency to either increase or decrease in width or split at the changes in attitude of the vein. Lower Tertiary pulaskite and lamprophyre dykes cut both the metasedimentary rocks and vein and locally has shattered or displaced the vein.

Mineralization consists of pyrite, galena, ~~chalcopyrite~~ sphalerite, chalcopyrite and tellurides (possibly sylvanite). Some ore shoots average 20 centimetres, and are localized at abrupt changes in attitude of the vein and are generally not continuous.

The North Star quartz vein is the northern extension of the adjoining Gold Drop quartz vein (L 1415, Minfile 082ESE153) to the south.

(2)

CAPSULE GEOLOGY

Past development consists of two shafts and two adits with considerable drifting, crosscutting and stoping. In addition, numerous open cuts have traced the surface expression of the vein.

WORK HISTORY

YEAR FROM	TO	WORK TYPE	AMOUNT (m/km/ha/No.)	COMMENT (Owner/Operator/Results)
1983		SOIL	292	Kenar Res. EMPR ASS RPT 11932
		ROCK	12	
		GEOL	1:5000	
		ROAD	1.0 km	
		TREN	50 m	
		EMGR	2.5 km	
1981		DIAD	483 m; 6 holes	Kenar Res. EMPR ASS RPT 9961
		SOIL	75	

CAPSULE GEOLOGY

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RESERVES

ORE ZONE NAME: North Star YEAR: 1987

CATEGORY: [MR] Measured Recoverable [IN] Indicated Ore [UN] Unclassified
[MG] Measured Geological [IF] Inferred Ore [BA] Best Assay

SAMPLE TYPE: [CHIP] Chip [GRAB] Grab [CHNL] Channel [BULK] Bulk [DIAD] Drill Core [ROCK] Rock

CALCULATION A: QUANTITY: _____ (tonnes)

Commodity	Grade	Commodity	Grade	Commodity	Grade
AU	37.7		.		.
	.		.		.

(Precious metals in grams, others in per cent)

Comment: _____
Reference: GCNL #172, September 8, 1987

CALCULATION B: QUANTITY: _____ (tonnes)

Commodity	Grade	Commodity	Grade	Commodity	Grade
	.		.		.
	.		.		.

(Precious metals in grams, others in per cent)

Comment: _____
Reference: _____

PRODUCTION

YEAR: _____ ORE MINED: _____ (tonnes) ORE MILLED: _____ (tonnes)

Commodity	Quantity	Commodity	Quantity	Commodity	Quantity

(Precious metal quantities in grams others in kilograms)

Comment: _____
Reference: _____

BIBLIOGRAPHY

(place * before significant references)

EMPR AR 1896-578; 1897-590; 1898-1124; 1899-765; 1901-1056; *1931-A125; 1932-A130; 1933-A159, A160; *1934-A25, D5, D6; [illegible] *1935-A25, D3-D5, G52; *1936-D23-D25; 1937-A30, A36, D32; 1938-A34, D37; 1939-A37, A77

EMPR BULL 1 (1932), p. 85

EMPR BULL 20, Part III, p. 12

EMR MP CORPFILE (Askalta Oil Company Ltd., Superior Gold Mines Ltd., Greenbridge Gold Mines Ltd.)

CANMET IR 1937, No. 785, p. 146

GSC MAP 828; 6-1957; 10-1967

GSC P 79-29

GSC OF 1969

EMPR ENG INSP (Geological plan, 1936)

EMPR EXPL 1981-166; 1983-9

EMPR ASS RPT 9961, 11932

EMPR PF (*082ESE0S5, Hedley, M.S. (1941): Geology of the Jewel Lake Comp (Eastern Part) and of the Dintonia Mine, Boundary District, 40pp.; *082ESE153; 082ESE152)