

# ASSESSMENT REPORT TITLE PAGE AND SUMMARY

# TITLE OF REPORT: REPORT ON GEOLOGICAL MAPPING ON THE SON OF CAPTAIN MINERAL CLAIMS

TOTAL COST: \$4,400.00

AUTHOR(S): S. Kennedy

SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): STATEMENT OF WORK EVENT NUMBER(S)/DATE(S):5652340

YEAR OF WORK:2017

PROPERTY NAME: SON OF CAPTAIN

CLAIM NAME(S) (on which work was done): 1052453, 1052451, 1052453

COMMODITIES SOUGHT: PB ZN AG

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: NELSON

NTS / BCGS:82G063

LATITUDE: ° ' "

LONGITUDE: " (at centre of work)
UTM Zone:11 EASTING:558000 NORTHING:5445000

OWNER(S): C KENNEDY

MAILING ADDRESS: 2290 DEWOLFE AVE KIMBERLEY, BC

OPERATOR(S) [who paid for the work]: C KENNEDY

MAILING ADDRESS:

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

A sulphide rich lens occurs within the lower portion of the Middle Aldridge Fm and is related to a larger zoned alteration system.

### REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

Anderson, D. 1999. Geological assessment on the Sky, Sky2 and Sky3 claims, British Columbia Ministry of Energy and Mines, Assessment Report 25817, 19pp.

Kennedy, C. 2013. Rock Geochemistry and sampling program, Son of Captain, British Columbia Ministry of Energy and Mines, Assessment Report 34224, 61pp.

Kennedy, C. 2014. Rock Geochemistry and sampling program, Son of Captain, British Columbia Ministry of Energy and Mines, Assessment Report 35027, 21pp.

Cook, C. 2016. Integration of Geophysical and Geological Data in the Vicinity of the Son of Captain Property, British Columbia Ministry of Energy and Mines, Assessment Report 36208, 35 pp.

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS  APPORTIONED (incl. support)
GEOLOGICAL (scale, area) 1:1500	500X500	1052453, 1052451, 1052453	\$3400
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for)			
Soil			
Silt			
Rock			
Other			

DRILL	ING (total metres, number of holes, size, storage location)			
	Core			
	Non-core			
RELATED TECHNICAL				
	Sampling / Assaying: 18 core samples Assay prep			
	Petrograp hic			
	Mineralographic			
	Metallurgi c			
PROS	PECTING (scale/area)			
PREP	ATORY / PHYSICAL			
	Line/grid (km)			
	Topo/Photogrammetric (scale, area)			
	Legal Surveys (scale, area)			
	Road, local access (km)/trail			
	Trench (number/metres)			
	Underground development (metres)			
	Report Other		\$1000	
		TOTAL COST	\$4400.00	

#### REPORT ON GEOLOGY

# SON OF CAPTAIN MINERAL CLAIMS

BC Geological Survey Assessment Report 36723

**NELSON MINING DIVISION** 

HAZEL CREEK AREA

**SOUTHEAST BC** 

82F 01019

558000 E/5445000 N

**WORK PERFORMED SPRING 2017** 

OWNER: CRAIG KENNEDY

OPERATOR: CRAIG KENNEDY

KIMBERLEY, BC

REPORT WRITTEN BY SEAN KENNEDY, PROSPECTOR

OCTOBER 2017

# SON OF CAPTAIN: GEOLOGY REPORT 2017

# Table of Contents

	Page
Introduction	3
Location and Access	3
Property	3
Physiography	5
History	5
Geology	5
Geological Mapping	5
Conclusions and Recommendations	8
Statement of Costs	10
Statement of Qualifications	11
List of Illustrations Claim Map	4

#### INTRODUCTION

This report details geological mapping conducted on the Son of Captain mineral claims primarily near the 'Edmunds' showing during the field season of 2017.

# **LOCATION AND ACCESS**

The property is located 23 km east of the city of Creston in southeast British Columbia. Access to the property is provided by the Hazel Creek FSR which turns north off of highway 3 approximately 27 km east of Creston.

#### **PROPERTY**

The property is owned by Craig Kennedy of Kimberley BC and consists of four mineral tenures covering 127.01.

Tenure Number	Issue Date	Good To Date	Area (h)
4053454	NA: 45 2042	0.1.40.2040	42.5
1052451	May 15 2012	Oct 10 2019	<u>42.5</u>
1052453	May 15 2012	Oct 10 2019	21.13
1019229	May 4 2013	Oct 10 2019	42.25
<u>1052455</u>	June 26 2014	Oct 10 2019	21.13

Table 1. Mineral titles details

### **PHYSIOGRAPHY**

The property covers the lower, moderate to gentle slopes of the north side of Hazel Creek from 1000-1300 m elevation. Outcrop is scarce on the property and generally restricted to open patches, some ridgelines and in road-cuts. Precipitation is moderate with a marginal snowpack which varies depending on the openness of slopes. The area is generally tree-covered with a mix of species including cedar-hemlock in wetter draws. Much of the area has seen various vintages of logging.

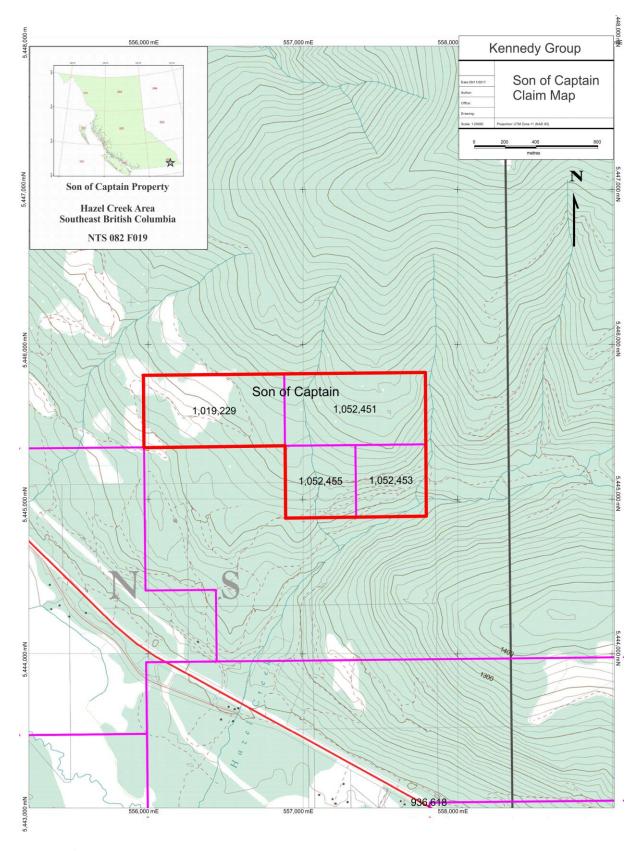


Figure 1. Claim Map

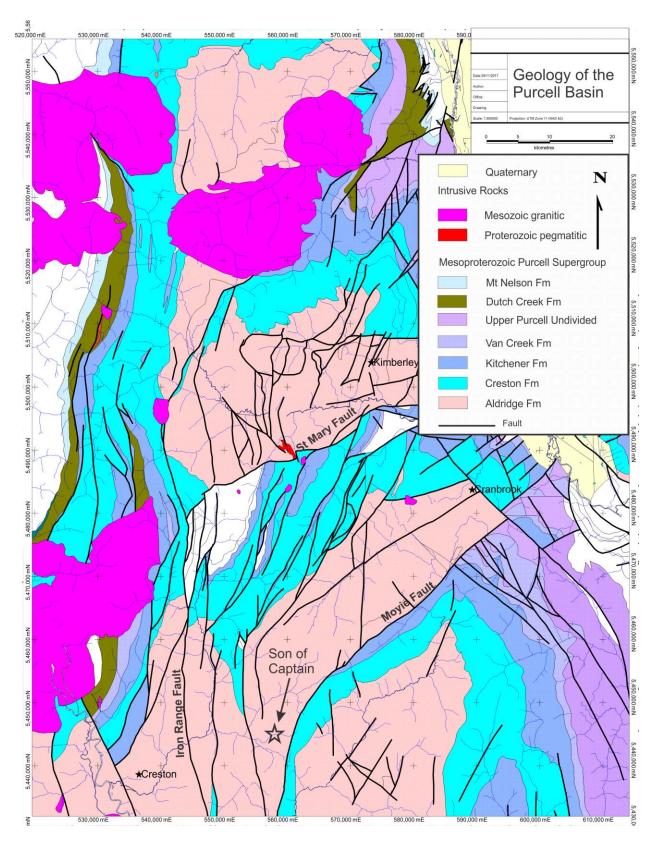
#### **HISTORY**

The current property has been explored in the past for Pb-Zn-Ag mineralization analogous to the SEDEX Sullivan deposit at Kimberley.

As summarized from Aris Report 25817 the history for the area includes:

- 1960s trenching of pyrite and scheelite bearing quartz veins which locally contained high values for gold and silver (west of the current property)
- Small soil geochem grids completed west of the property that identified weak Zn values in a narrow northwest trend, a second soil survey identified a linear Pb-Zn anomaly immediately south of Hazel Creek
- Geological mapping by Chevron Minerals located a sulphide-tourmaline rich body on the north side of Hazel Creek (the Edmunds showing). This mapping also identified Middle Aldridge Fm marker units to help determine stratigraphic position relative to the Lower-Middle Aldridge Fm contact. Mapping also identified a number of NNW striking faults and occurrences of gabbrodiorite sills belonging to the Moyie Intrusive suite
- Soil geochemistry was completed south of the current property failed to define any anomalies for Pb-Zn
- In 1990 Formosa Resources completed a mapping, soil geochemistry, and geophysical survey (HLEM, VLF-EM, Mag). Two holes were drilled based on weak HLEM conductors coincident with soil geochemical anomalies. One of the holes drilled across the Hydro Fault coring gabbro and Middle Aldridge sediments, the other hole drilled 700 m south of the first one was collared west of the Hydro Fault failed to intersected significant mineralization
- In 1993 Arbor Resources completed some mapping and rock/soil sampling and drilled one short hole near Hazel Creek. The hole intersected a fault breccia with massive pyrite over 30 cm
- In 1998 prospecting and geological mapping were conducted

After this work the property lay dormant until it was staked by the current operator who conducted programs of rock geochemical sampling, prospecting, and geophysical compilation (Aris 34224, 35027, 35949, 36208).



**Figure 2 Regional Geology** 

#### **REGIONAL GEOLOGY**

The area is underlain by the Mesoproterozoic Purcell Supergroup, an intracontinental rift-fill basin which hosts a number of world-class base/precious metal deposits including Sullivan (Pb-Zn-Ag), the Western Montana Copper Sulphide Belt (Cu-Ag-Pb), and the Coeur d'Alene Camp (Pb-Zn-Ag-Cu).

The lowest most sequence of the Purcell-Supergroup is the quartzite/siltite rich Aldridge Fm which can be subdivided into three members (Lower, Middle, Upper). The Aldridge records the rifting/extensional phase of the basin which was accompanied by the injection of a voluminous gabbroic complex (Moyie intrusions). The Aldridge is overlain by shallow water clastic rocks of the Creston Fm and clastic and carbonate rocks of the upper Purcell series including the Kitchener Fm.

Purcell-Supergroup rocks core the Purcell anticlinorium, a major northerly plunging fold structure which contains numerous parasitic folds. The Purcell anticlinorium has been dissected by NE and NNW faults, many of which were syn-depositional extensional faults re-activated during Mesozoic compression and Tertiary extension.

### **PROPERTY GEOLOGY**

The property is underlain by moderate to steeply east dipping Middle and Lower Aldridge Fm rocks which have been intruded by gabbro-diorite sills. The area is dissected by a number of northerly, and north-northwest striking normal faults.

# **GEOLOGICAL MAPPING**

Geological mapping was completed in the central portion of the property near the 'Edmunds' showing, a tourmaline-sulphide rich body discovered by previous workers.

### LITHOLOGIES/STRATIGRAPHY

Outcrop in the area is dominantly comprised of rusty to grey/tan weathering quartz-wacke units. Bed thicknesses vary from thin to thick. Minor occurrences of thinly bedded argillaceous siltite crop out in the area. Bedforms are generally tabular, however there are some outcrops of massive units and disrupted and slumped siltite with rip-up clasts.

No marker units have been identified proximal to the Edmunds showing. However, marker projections from the south side of Hazel Creek place the Edmunds near the 'Falls' horizon within the lower portion of the Middle Aldridge Fm.

### GABBRO/GRANOFELS

A gabbro and granofels complex is exposed northwest of the Edmunds showing. The granofels are comprised of recrystallized biotite-quartz-feldspar with abundant biotite rich clasts. Trace amounts of pyrhottite and chalcopyrite are commonly disseminated within the granofels. The gabbro-granofels is approximately 400 m footwall to the Edmunds.

#### **STRUCTURE**

Primary, syn-sedimentary deformation has been preserved as slumps, rip-up beds, and disrupted bedding in the vicinity of the Edmunds showing.

Bedding attitudes generally strike NNW and dip moderate to steeply to the east. Metamorphic cleavage generally strikes NNE and dips steeply to the west. Tectonic fracturing (post metamorphic?) strikes NS and NW and dips to the west.

#### **ALTERATION and MINERALIZATION**

Alteration at the Edmunds showing consists of an upper siliceous/albite(?) alteration with disseminated and fracture controlled pyrite/pyrhhotite. Local biotite flooding, pale pink garnets, sericitic bleaching, and chlorite alteration are common within this alteration zone. Locally this zone contains traces of fracture controlled ZnS related to pale green sericitic alteration and traces of PbS/ZnS with chlorite and sericite in a narrow zone of disrupted beds. This alteration appears to be approximately 80 m thick and may diminish up section to the east although a lack of outcrop clouds this interpretation.

Underlying this alteration is a sequence of tourmaline needle and biotite rich siltite and quartz wacke. Minor whitish garnet porphyblasts locally occur in argillaceous bed tops within this zone.

The Edmunds showing is a brecciated/deformed biotite, tourmaline needle, and sulphide (Po/AsPy/Py+/-PbS/ZnS/Cpy) rich lens approximately 3-4 m thick that is poorly exposed for approximately 30 m along strike. The zone is sub-parallel to bedding and has a sericitic envelope. It is underlain by a disrupted, flinty zone of medium bedded siltite and quartz wacke. The underlying zone is subparallel to bedding and contains sericite alteration in fractures and as replacement, increased sulphide (Po), and specularite.

# **CONCLUSIONS AND RECOMMENDATIONS**

A brief program of geological mapping was conducted near the Edmunds showing on the Son of Captain mineral claims in the early part of the 2017 field season. Mapping successfully identified a large, zoned, alteration system with anomalous base metals related to the semi-conformable Edmunds sulphide lens. Mapping identified syn-depositional deformation indicating that the sulphide showing is likely related to an Aldridge-age system.

Further detailed mapping and prospecting is needed on the property, especially footwall and along strike of the Edmunds showing. It should be determined if there is a structural explanation for the focus of the sulphide lens at the Edmunds. This work would be needed to develop a drilling scenario for the property.

# **REFERENCES**

Anderson, D. 1999. Geological assessment on the Sky, Sky2 and Sky3 claims, British Columbia Ministry of Energy and Mines, Assessment Report 25817, 19pp.

Kennedy, C. 2013. Rock Geochemistry and sampling program, Son of Captain, British Columbia Ministry of Energy and Mines, Assessment Report 34224, 61pp.

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# **STATEMENT OF COSTS**

# Geological Program Summer 2017

Craig Kennedy: May 8, Jun 3, 8	3 Man days @ 500 2 Truck days @ 100	\$ 1,500.00 300.00
Tom Kennedy: May 8	1 Man day @ 500	500.00
Mike Kennedy: May 8	1 Man day @ 500	500.00
Sean Kennedy: May 8	1 Man day @ 500 1 Truck day @ 100	500.00 100.00
Report & Maps	Total Costs	1,000.00 <b>\$4,400.00</b>

# **STATEMENT OF QUALIFICATIONS**

# I, Sean Kennedy, certify that:

- 1. I am an independent prospector residing at 107 6<sup>th</sup> Ave, Kimberley, BC.
- 2. I have been actively prospecting throughout BC, Nevada, and Mexico for the past 18 years
- 3. I have been employed as a professional prospector by junior mineral exploration companies
- 4. I have been employed as a geological mapper in BC and Mexico
- 5. I have been employed as a drill core logger
- 6. I have managed various exploration programs in BC including: drilling, trenching, geochemical surveying, and geological mapping
- 7. I own and maintain mineral claims in BC.

