

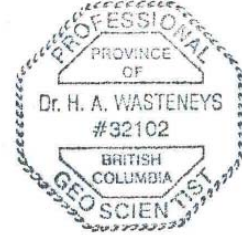


ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Technical Report on the Yreka Mineral Claims, Vancouver Island, BC

TOTAL COST: 14025

AUTHOR(S): Hardolph Wasteneys
SIGNATURE(S):



NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):
STATEMENT OF WORK EVENT NUMBER(S)/DATE(S) : 5672946: November 8, 2017

YEAR OF WORK: 2016

PROPERTY NAME: Yreka

CLAIM NAME(S) (on which work was done): 943990, 944052, 954784, 1010698, 1011334, 1011538, 1011539, 1011540, 1011541, 101206, 1012793, 1012960, 1013518, 1017384, 1026664, 1029041(FEKK8).

COMMODITIES SOUGHT: Copper, Silver, Gold, Molybdenum

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092L-052; 092L-105; 092L-336; 092L-236

MINING DIVISION: Alberni Mining Division

NTS / BCGS 92L/5

LATITUDE: 50° 27' 30"

LONGITUDE: 127° 34' 00" (at centre of work)

UTM Zone: 9

EASTING: 5590250

NORTHING: 601600

OWNER(S): Karmamount Mineral Exploration Inc.

MAILING ADDRESS: 1703 West 5th Avenue, Vancouver, BC V6J 1P1

OPERATOR(S) Karmamount Mineral Exploration Inc.

MAILING ADDRESS: 1703 West 5th Avenue, Vancouver, BC V6J 1P1

REPORT KEYWORDS: Yreka, Port Alice, Bonanza group, LeMare Volcanics, Quatsino Limestone, Parsons Bay Formation, Clyde workings, skarn, crystal tuffs

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:
Baldys 1999, 25797; Eden & Li 2016, 36110; Hicks, 1999, 26040; Bradshaw, 1993, 22804; Ball 1980, 07981; Crossley 1972, 4425

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping	1:1000 100 ha	943990, 1012506, 944052, 1012793, 954784, 1012960, 1010698, 1013518, 1011334, 1017384, 1011538, 1026664, 1011539, 1029041(FE KK8), 1011540, 1011541	9000
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil			
Silt			
Rock			
Other			
PROSPECTING (scale/area)			
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (scale, area)			
Legal Surveys (scale, area)			
Road, local access (km)/trail			
Trench (number/metres)			
Underground development (metres)			
Other			
		TOTAL COST	9000

Technical Report on the Yreka Mineral Claims

Statement of Work Event Numbers: 5672946
(Geological),
Period: July 1, 2016 to May 31, 2017

Location:
Northern Vancouver Island,
Alberni Mining Division

NTS 92 L/5E
Latitude: 50° 27' 30" N, Longitude: 127° 34' 00" W
NAD 83

Field Project Period:
July and September, 2016

Owner and Operator:
Karmamount Mineral Exploration Ltd
1703 West 5th Avenue, Vancouver, BC V6J 1P1

Author:
Hardolph Wasteneys, Ph.D., P.Geo.
Campbell River, BC

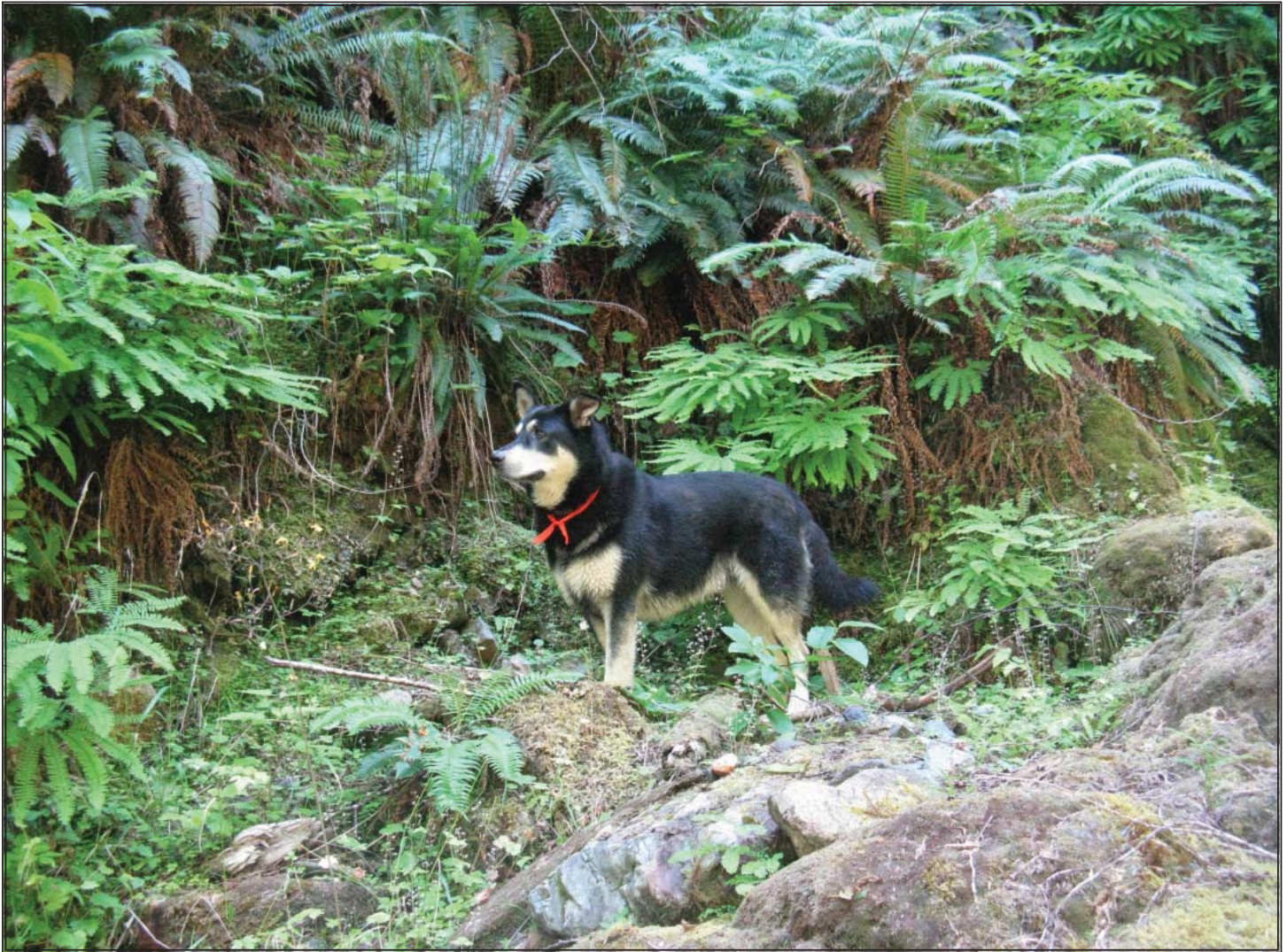
March 23, 2018

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Frontispiece

Exploring in Canyon Creek below the old Yreka Mine

INTRODUCTION

The Yreka mineral claims cover an area around a copper skarn mineral deposit from which about 150,000 tonnes of copper-gold-silver mineralization was mined by Noranda in the 1960s. The property is located on the west side of Neroutsos Sound of northern Vancouver Island near Port Alice. The property has high potential for concealed skarn and possibly stockwork porphyry mineralization within the host stratigraphic sequence, which dips moderately to the west in an undeformed homocline capped by the Le Mare Lake volcanics of the Bonanza Group.

Property Description and Location

The Yreka Property is located on northern Vancouver Island on the mountainous west slope of Neroutsos Sound and west of the old logging town of Port Alice, British Columbia. The property is centred at Latitude: 50° 27' 30" N, Longitude: 127° 34' 00" W NAD 83 datum, UTM Zone 9, 42 E, 6050518 N, in the NTS map sheet 92 L/5, BCGS Map 092L043 in the Nanaimo Mining Divisions (Figure 3). It consists of 16 variously named cell claims listed in Table 1 issued between January 2012 and July 2014 and currently all with Good To Dates of July 9, 2018. The total area of the tenures is 1357.9 hectares. Several Crown Granted claims are within the area of the claim group.

Access, Climate, Local Resources, and Physiography

The main access to the Yreka property is via the Vancouver Island Highway system to Port Alice and thence via logging roads controlled by Western Forest Products based out of a division in Port McNeill. Driving time to the property from Campbell River was about 3.5 hours. From Port Alice access is via Marine Drive south around the inlet and then north to Marine Drive "zero" at a log loading terminal where rafts are assembled. Marine Drive is coextensive with Teeta Main from which Yreka 500 leads to the property. The logging road network along the west shore of Neroutsos Inlet branches from the Yreka 500 main line that runs parallel; to the shore north to Kultus Cove on the south shore of Quatsino Sound. Alternate access is via

OWNER_NAME	CLIENTNUM	CLAIM_NAME #	TNRNMBRD	ISSUE_DATE	GDDT	RNHCTRS
KARMAMOUNT MINERAL EXPLORATION INC.	258348		943990	20120129210654	20180708000000	82.3
KARMAMOUNT MINERAL EXPLORATION INC.	258348		944052	20120130100228	20180709000000	41.1
KARMAMOUNT MINERAL EXPLORATION INC.	258348		954784	20120302100126	20180709000000	61.7
KARMAMOUNT MINERAL EXPLORATION INC.	258348	CLYDE	1010698	20120703174653	20180709000000	82.3
KARMAMOUNT MINERAL EXPLORATION INC.	258348	CLIMAX	1011334	20120720100229	20180709000000	41.1
KARMAMOUNT MINERAL EXPLORATION INC.	258348	BLUEGROUSE	1011538	20120531100219	20180709000000	20.6
KARMAMOUNT MINERAL EXPLORATION INC.	258348	YREKA	1011539	20120531100219	20180709000000	41.1
KARMAMOUNT MINERAL EXPLORATION INC.	258348	TUSCADORA	1011540	20120703101642	20180709000000	20.6
KARMAMOUNT MINERAL EXPLORATION INC.	258348	RGS 3180 ppm CU	1011541	20120703101642	20180709000000	41.1
KARMAMOUNT MINERAL EXPLORATION INC.	258348	COPPER CANYON	1012506	20120902102501	20180709000000	246.9
KARMAMOUNT MINERAL EXPLORATION INC.	258348	Y KNOT	1012793	20120912100106	20180709000000	41.2
KARMAMOUNT MINERAL EXPLORATION INC.	258348	ANVIL	1012960	20120918100117	20180709000000	185.1
KARMAMOUNT MINERAL EXPLORATION INC.	258348	MAHWIECLAS PORPHY	1013518	20121003151431	20180709000000	185.1
KARMAMOUNT MINERAL EXPLORATION INC.	258348	FEKK3	1017384	20130301123806	20180709000000	164.7
KARMAMOUNT MINERAL EXPLORATION INC.	258348	FEKK5	1026664	20140313081558	20180709000000	20.6
KARMAMOUNT MINERAL EXPLORATION INC.	258348	FEKK8	1029041	20140616123901	20180709000000	82.3

Mineral Cell Claims held by Karmamount forming the Yreka Property; Claim Name, Tenure numbers (TNRNMBRD), Issue dates, current good to dates (GDDT) and area in hectares (RANHCTRS) are shown

logging roads from Mahatta River on Quatsino Sound and water accessible from Coal Harbour. Personnel from LeMare Logging commonly travel by a short boat ride to Mahatta River rather than by the long winding Highway 30 from Highway 19 to Port Alice. From Mahatta River the Koochlimmis Valley is traversed by the K500 logging road which connects on a 604 meter alti-



Figure 1: The Yreka claim group on northwestern Vancouver Island. The claims are on the western slope of Neroutsos Inlet, which is a south branch of Quatsino Sound.

tude pass to the Teeta 500 road which descends by switchbacks to Teeta Main. Branch roads from the K500 main have accessed logging areas on the west side of the ridge near the Yreka deposit and might be useful for exploration either on the west slope or to access some of the higher parts of the slopes on the Yreka side (Figure 2). Helicopter access is recommended in the higher parts of area.

Yreka is located on the eastern flanks of the 12 km long ridge that runs NW from Teeta Creek to Kultus Cove with 1300 m peaks at Mount Wolfenden and Comstock Mountain (Figure 2). The ridge is steep sided with slopes up to 40 degrees and intermittent cliffs. However, a few intervals at the northern extent and on the backside of Comstock Mountain have steep easterly and much shallower westerly aspects possibly reflecting the moderate westerly dip of cliff-forming sedimentary and volcanic strata. Creeks in the Yreka property are all steep with canyon-like forms in many places inhibiting access.

The lower slopes above Neroutsos Inlet along the Yreka 500 mainline have been mechanically logged typically by feller bunchers and in steeper parts, for example just south of the Yreka mine, using spar pole systems. Logging debris greatly inhibits traverses especially in the steeper terrane and in particular along creeks where logging debris combined with natural deadfall across the creek has created a nearly impassable maze of large trunks and brush.

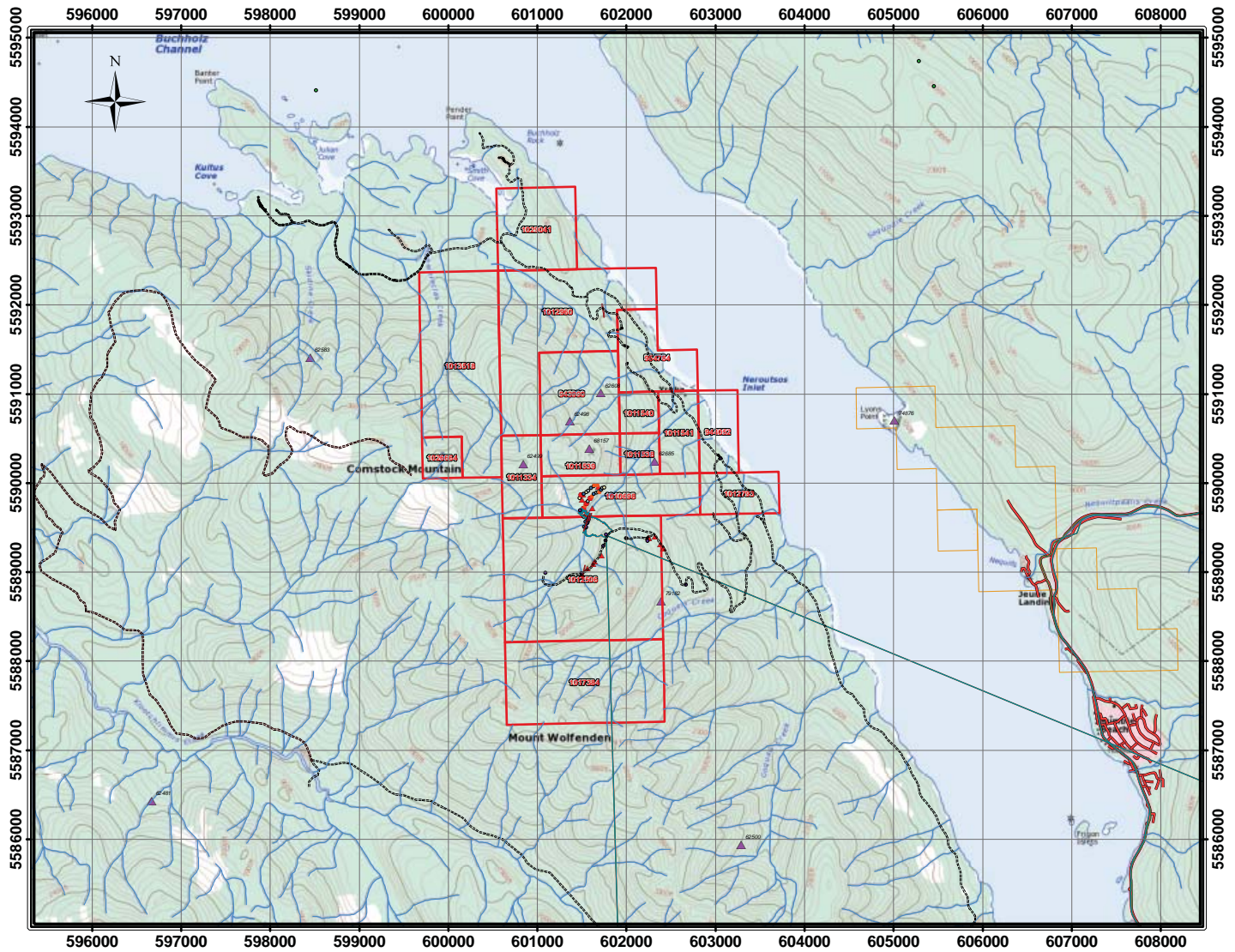


Figure 2: Physiography of the Yreka area

Map base is Toporama with elevations and contours in feet. Yreka claims and tenure numbers are show in red; other claims in orange. Quatsino Sound is the water body in the NW opening to the west into the Pacific. Jeune Landing and Rumble Beach are a few km north of the community of Port Alice on the east side of the inlet

The area is heavily forested within the Coastal Hemlock Zone and most of it is old growth hemlock and fir trees. Annual precipitation is up to a few meters mainly as rain. Winters are mild, but snowfall accumulation can be several meters above 600 meters altitude.

Property History

The area of the Yreka claim group has a history of exploration, development and production dating back to the late 18th century. The first claims were recorded in 1898 and by 1903 a few thousand tonnes of copper silver ore was shipped from the Clyde workings, which lie just south of the main Yreka orebody. This mining operation, like others that followed utilized an aerial tramway to transport ore from adits, at 700 meters altitude, into the steep face of the ridge running between Mount Wolfenden and Comstock Mountain down to Neroutsos Inlet, at sea level. However, production ceased until 1917 when high copper prices during the First World War provided incentive to ship another 900 tonnes, although from new facilities.

Noranda Exploration Company Ltd. took over the property in 1952 and initiated the

first diamond drilling programs on the property, which eventually led to the discovery of the main Yreka deposit. Underground development and drilling continued through 1956 with over 40 thousand feet of core and 6 thousand feet of drifting. Between 1958 and 1964 the property was dormant, but was reactivated by Minoca Mines in 1965 based on reserves of about 150,000 tonnes of 3.7% copper and 41 g/t silver plus some additional indicated resources. Production over the period from 1965 to 1967 was 133,000 tonnes grading 2.9% C, 32.8 g/t Ag and 0.36 g/t Au mainly from the “A” zone, a lens measuring 15 by 49 and 60 meters high.

Thereafter, although significant exploration programmes were conducted both locally around the deposit and peripherally on new showings involving EM and magnetic geophysical surveys, geochemistry and geological mapping no further production was recorded. A series of option arrangements occurred from 1970 with Green Eagle Mines and ISO Explorations Ltd.

Much of the exploration work was focused on defining the limits of the skarn horizon that hosted the Yreka deposit. In 1971 and 72, 1844 feet of diamond drilling tested copper silver showings near the Yreka deposit at the Comstock-Edison and North Arm Creek prospects. Work ceased until 1979 when Uke Resources drilled 300 feet in 3 holes on the Tuscarora prospect. In 1988 Teck Exploration expanded the exploration area using regional stream silt surveys that reveal anomalous gold and zinc southwest of Mt Wolfenden leading to detailed anomalous zones on the northeastern slopes of that mountain along the same slope as Yreka. In 1998 Talltree Re-

sources



Figure 3: Upper Canyon Creek near the Yreka and Clyde workings. Dead fall and logging debris jam the creek bed below recent logging clear cuts.

initiated a reassessment of the resource potential of the area mainly by prospecting, rock assaying and soil sampling.

Since the late 90s no significant development work or exploration work has been completed on the property. The present mineral tenures were acquired by Eden Investment on Decem-

ber 13, 2012 and transferred to Karmamount Mineral Exploration on March 16, 2015. Karmamount has completed a couple of evaluation programs (Eden and Li, 2016) including the present work, which took place in July and September of 2016. By the summer of 2016, Western Forest Products, which hold a TFL in the area, had completed several new logging roads along the lower parts of the claim group towards Quatsino Sound that have provided new exposures of rocks

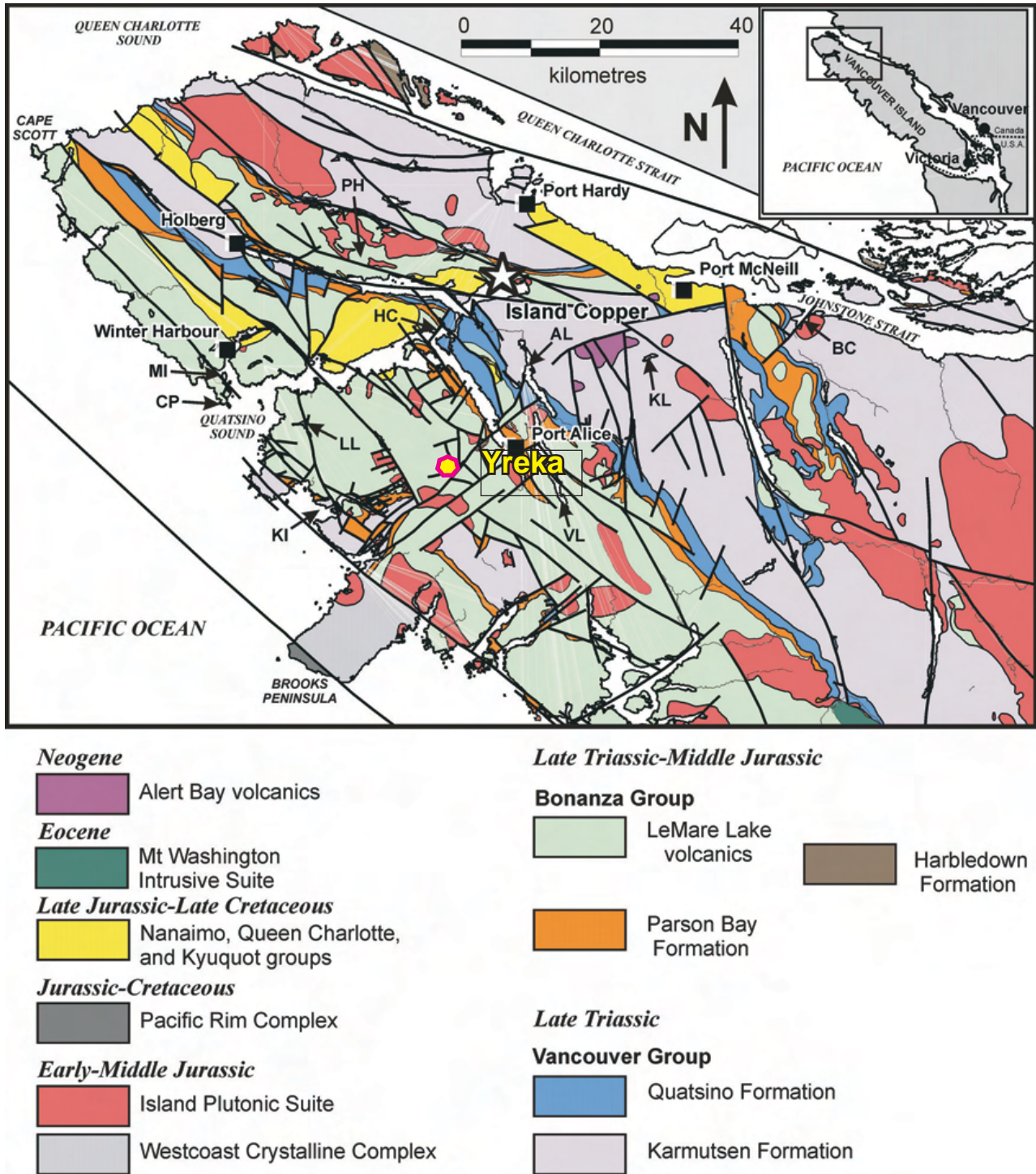


Figure 4: Regional Geology of northern Vancouver Island (from Nixon & Orr, 2007, after Massey et al. 2005)

Yreka is indicated by yellow polygon and label along a northwesterly trending belt of Quatsino Parson Bay and Le Mare Lake Formations that form homoclinal blocks copping the edge of Karmutsen basalts.

within the host stratigraphic section.

REGIONAL GEOLOGY

Vancouver Island is a significant transect across the southern part of the Mid-Paleozoic to Early Mesozoic Wrangellian tectonostratigraphic terrane that extends northward through the Queen Charlotte Island into southern Alaska. On Vancouver Island Wrangellia is intruded to the east rocks of the Coast Plutonic Complex and tectonically sliced to the west by the Pacific Rim Terrane and the Westcoast Crystalline Complex (Wheeler and McFeely, 1991). The Wrangellian terrane on Vancouver Island is essentially composed of two oceanic volcanic arcs separated by voluminous flood basalts that formed an oceanic plateau. The earliest arc, forming the basement of the island geology is exposed in several fault bounded tectonic uplifts in the central part of the island, most notably around Buttle Lake where the prolific massive sulphide deposits of Myra Falls are located in felsic volcanics of the Devonian to Early Permian Sicker and Buttle Lake Groups. The basement uplifts are engulfed by the voluminous flood basalts of the Karmutsen Formation, the lower part of the Vancouver Group, that dominates the alpine skyline of much of the central Vancouver Island. A return to volcanic arc magmatism came in the Triassic with the onset of the Bonanza Group that deposited a series of increasingly volcanic dominated strata on the Quatsino Formation limestones that mark the upper part of the Vancouver Group that capped the Karmutsen flood basalt plateau. The Bonanza Group is mainly composed of the basal Parson Bay Formation and the Bonanza Volcanics. The Parson Bay Formation is mixed carbonate-clastic-volcanic succession with a significant island-arc volcanic and volcanoclastic affinity that separates it conformably from the earlier limestone strata of the Quatsino Formation and indicates the onset of the Bonanza volcanic arc volcanism culminating in the volcanic dominated LeMare Lake Volcanics. Coeval granitoid intrusions of the Island Plutonic Suite cut rocks of the Karmutsen Formation as well as those of the Bonanza Group and result in both porphyry copper deposits and, where intruding limestones, significant skarn deposits of magnetite and at Yreka, copper sulphides.

The stratigraphy of northern Vancouver Island is founded upon the Triassic tripartite sequence of Karmutsen flood basalt dominating the northeastern side of the island and overlain to the west in series of homoclinal fault blocks by Quatsino limestone, Parson Bay Formation and LeMare Volcanics, which are diagnostic of Wrangellia.

The Bonanza Arc rocks were eroded following a major Jurassic contractional event and covered unconformably by clastic sedimentary rocks of the terrigenous Nanaimo Group that include coal bearing conglomerates in places along the eastern side of Vancouver Island. The history of faulting on northern Vancouver Island is complex and embodies Cretaceous transpression and Tertiary extension. The present crustal architecture exhibits a dominant northwesterly-trending structural grain manifested by the distribution of major lithostratigraphic units and granitoid plutons (Figure 3). Numerous fault-bounded blocks of homoclinal, Early Mesozoic strata such as that around Yreka on the east shore of Neroutsos Inlet, generally dip to the southwest and west whereas Jura-Cretaceous clastic strata are preserved as disparate fault bounded remnants of formerly more extensive Cretaceous basins on the north side of Quatsino Sound, to the north of Yreka (Nixon and Orr, 2007).

YREKA GEOLOGY

The 2016 Exploration Program

Previous work in 2015 by Karmamount on the Yreka claims involved soil sampling south of the old Yreka and Clyde portals and rock sampling along the Y400 logging road ((Eden and Li, 2016). New logging roads branching from Yreka Main have exposed significant outcrops on Banter and Pender Points at the north end of the claims that are along strike with the stratigraphic section underlying the property. Other branch roads north of the Yreka deposit also expose new outcrops that have not previously been examined or mapped.



Figure 5: Tyler Ruks surveying a traverse route in upper Canyon Creek This September 7, 2016 traverse took 5 hours to complete a 1 km circuit through logging slash and a debris choked creek bed. Felsic dykes form the east wall of canyon sections of the creek. Strata mapped are in upper parts of the Volcaniclastic-Sedimentary Unit of the Parson Bay Formation.

Two property visits were completed in 2016: The first involved geological mapping on the new logging roads at the north end of the property over a two day period on July 27th and 28th. This work has not changed the existing geological contacts or unit designations on maps of Nixon et al. (2007), although several dikes have been recorded. The trip was made by road from Strathcona Park Lodge on Upper Campbell Lake west of Campbell River with overnight camping on the property. The second visit was made over 3 days on September 5th to 7th to more closely examine stratigraphic units exposed on the Y400 road on the recommendation of Graham Nixon (pers. comm. 2016). This later work was done accompanied by Tyler Ruks, a geologist from Seven Devil's Exploration, in a collaborative effort on the geology of the area. Accommodation was provided in the Seven Devil's camp on the Teeta Main road. The highlight of the work took place in wet weather on September 7th, 2016, when a one kilometer return traverse was completed

from the Y400 road to the major junction in Canyon Creek about one kilometer south of the old Yreka mine. The objective was to evaluate reported showings of porphyry style mineralization in upper Canyon Creek, but terrane obstacles and dense regrowth of logging slash caused extremely slow progress and prevented extending the traverse to examine the North Arm showings upstream from the creek junction in the time available. Large tree trunks, up to 4 feet in diameter, blocked the southern branch creek bed in places causing jams of debris while the northern creek branch was nearly impassable with mesh of interwoven tree tops either from blow downs or dropped in the logging operations. However, some well exposed outcrop was mapped in the creek bed including felsic dykes.

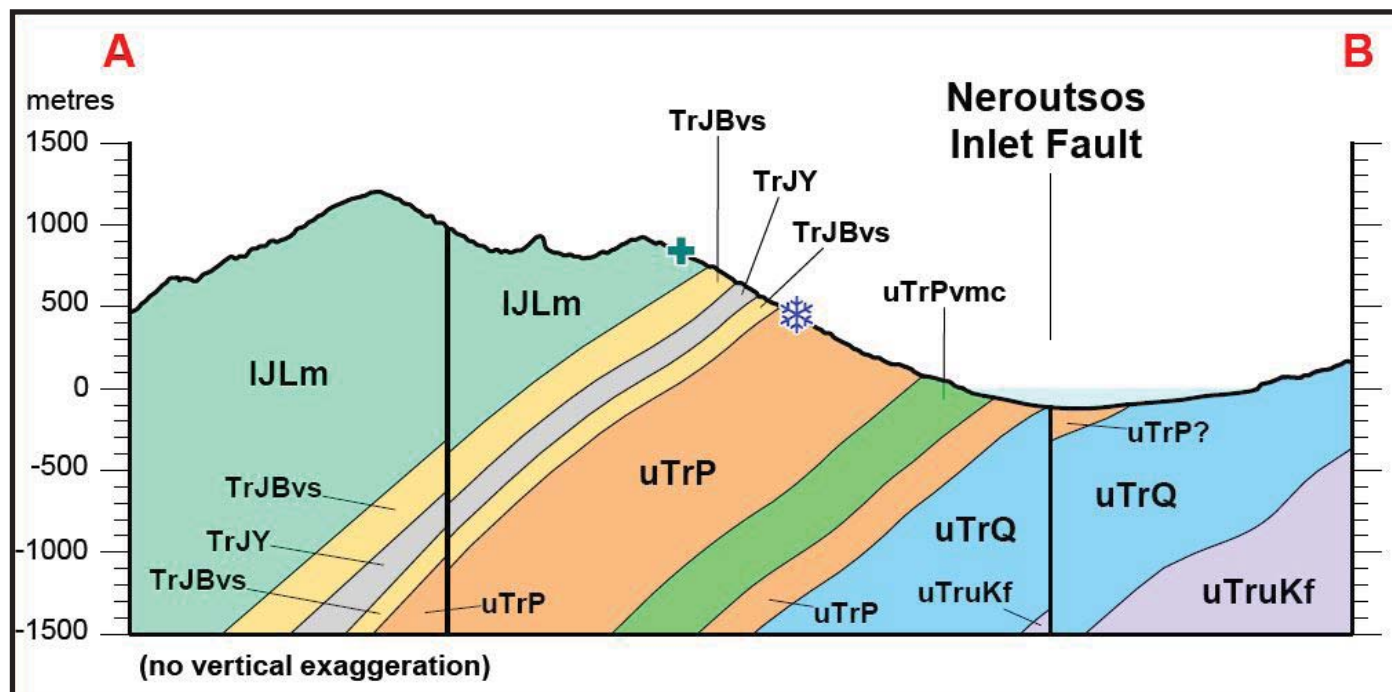


Figure 6: Cross section through homoclinal sequence at Yreka from Map GM2011 (Nixon et al., 2011)

Geology of the Yreka Property

The eastern slopes of the Comstock- Wolfenden Ridge from the shores of Neroutsos Inlet to the ridge crest is underlain by a homoclinal sequence (Figure 6) consisting in ascending order of the Quatsino Limestone, Parson Bay Formation and LeMare Lake volcanics. The base of the sequence is presumably laid on Karmutsen Formation that is not exposed within the inlet, but forms much of the outcrop on Vancouver Island and is the major unit in the Vancouver Group. The Quatsino Formation Limestone caps the Karmutsen Formation that forms the major volume of the Vancouver Group. It underlies much of the east side of Neroutsos Inlet and outcrops in the Yreka area in a few fault bounded blocks along the coast. Unconformably overlying the Vancouver Group, the Bonanza Group consists in the Parson Bay Formation sedimentary rocks, the Volcaniclastic-Sedimentary Unit and the LeMare Lake Formation volcanics. The Parson Bay Formation occupies about half of the slope up to the Wolfenden - Comstock ridge crest. It is subdivided into volcanic- and limestone-dominant units. The Volcaniclastic-Sedimentary Unit and LeMare Lake Formation volcanics complete the section to the crest of the ridge and hosts the skarn deposits at Yreka. The LeMare Lake volcanics range in composition from felsic to mafic with pyroclastic and coherent flow dominated units.

Observation stations by the writer along road cuts in through the Parson Bay Formation are plotted in Figure 11 and 14 and described below. The geological boundaries and units

UPPER TRIASSIC TO LOWER JURASSIC

BONANZA GROUP

Lower Jurassic (Hettangian to Upper Sinemurian)

LE MARE LAKE VOLCANIC UNIT

- IJL** Undifferentiated basaltic to rhyolitic flows and pyroclastic rocks (mainly subaerial); includes ash-flow and rare airfall tuff and reworked equivalents, minor pillow lava, pillow breccia, hyaloclastite and rare pyroclastic surge deposits, locally intercalated with marine to non-marine volcanic conglomerate, sandstone, siltstone, mudstone, impure limestone and debris-flow deposits
- IJLm** Dark grey-green, basaltic to andesitic flows with minor intercalated volcanoclastic and sedimentary lithotypes similar to unit IJLvs; locally includes minor pillow lava/breccia; may include minor rhyolitic flows and pyroclastic rocks

VOLCANICLASTIC-SEDIMENTARY UNIT

- TrJBvs** Interbedded volcanoclastic and sedimentary strata (predominantly submarine): buff to grey-green, thin to very thickly bedded, calcareous to non-calcareous, volcanic breccia, lithic and feldspathic wacke, siltstone and limestone, locally coralline; lithic-crystal tuff, lapilli tuff and reworked equivalents; and minor vitric tuff, pebbly sandstone, siltstone, and volcanoclastic debris-flow deposits; may include black carbonaceous shale, mudstone, siltstone and limestone (locally coralline) equivalent to unit TrJY
- TrJY** Yreka shale-limestone unit: black carbonaceous or graphitic shale passing upward into black to medium grey, thin to medium-bedded, variably carbonaceous, silty limestone with shale partings, concretionary limestone, mudstone and siltstone; locally fossiliferous; may be included in unit TrJBvs where not mapped separately (or pass laterally into coarser-grained clastic deposits)

Upper Triassic (Carnian to Rhaetian)

PARSON BAY FORMATION

- uTrP** Medium grey to black, thinly laminated to medium bedded, impure limestone, calcareous to non-calcareous mudstone, siltstone and shale intercalated with variable proportions of grey-green lithic feldspathic/tuffaceous wacke, minor crystal-lithic tuff and reworked equivalents, volcanoclastic breccia and debris-flow deposits, and rare vitric tuff, pebbly sandstone and conglomerate; shale locally yields abundant thin-shelled bivalves (*Halobia* sp., *Monotis* sp.); limestone locally contains rare algal structures; may include coralline limestone (Sutton limestone equivalent in part; see below) near the top of the succession
- uTrPvmc** Dark grey-green, basaltic tuff-breccia, lapilli tuff and reworked equivalents; aphanitic to coarsely clinopyroxene-plagioclase±olivine-phyric; may include minor limestone, wacke, siltstone and mudstone
- uTrPvfmc** Dark grey-green tuff-breccia, crystal-lithic lapilli tuff and lesser basaltic flows; aphanitic to coarsely clinopyroxene-plagioclase±olivine-phyric; may include minor limestone, wacke, siltstone and mudstone

UPPER TRIASSIC

VANCOUVER GROUP

Upper Triassic (Carnian to Lower Norian)

QUATSINO FORMATION

- uTrQ** Medium to pale grey, thinly bedded to massive micritic limestone and locally bioclastic limestone; minor silica replacement and chert nodules; rare laminated interbeds, oolitic layers and algal structures; locally fossiliferous; unit is very thin (<40m) on the west coast of northern Vancouver Island

Upper Triassic (Carnian; possibly Middle Triassic (Ladinian) at the base)

KARMUTSEN FORMATION

Upper Karmutsen Formation: Flow Member

- uTruKf** Dark grey-green, aphanitic to plagioclase-phyric and minor plagioclase-megacrystic basalt flows, commonly amygdaloidal and locally exhibiting laminar flow features (vesicle trains) and pipe vesicles; may include minor pillow lava and hyaloclastite

Figure 7: Geological Units on cross section A-B

Unit descriptions are from GM2011-3 Map by Nixon et al. (2011)

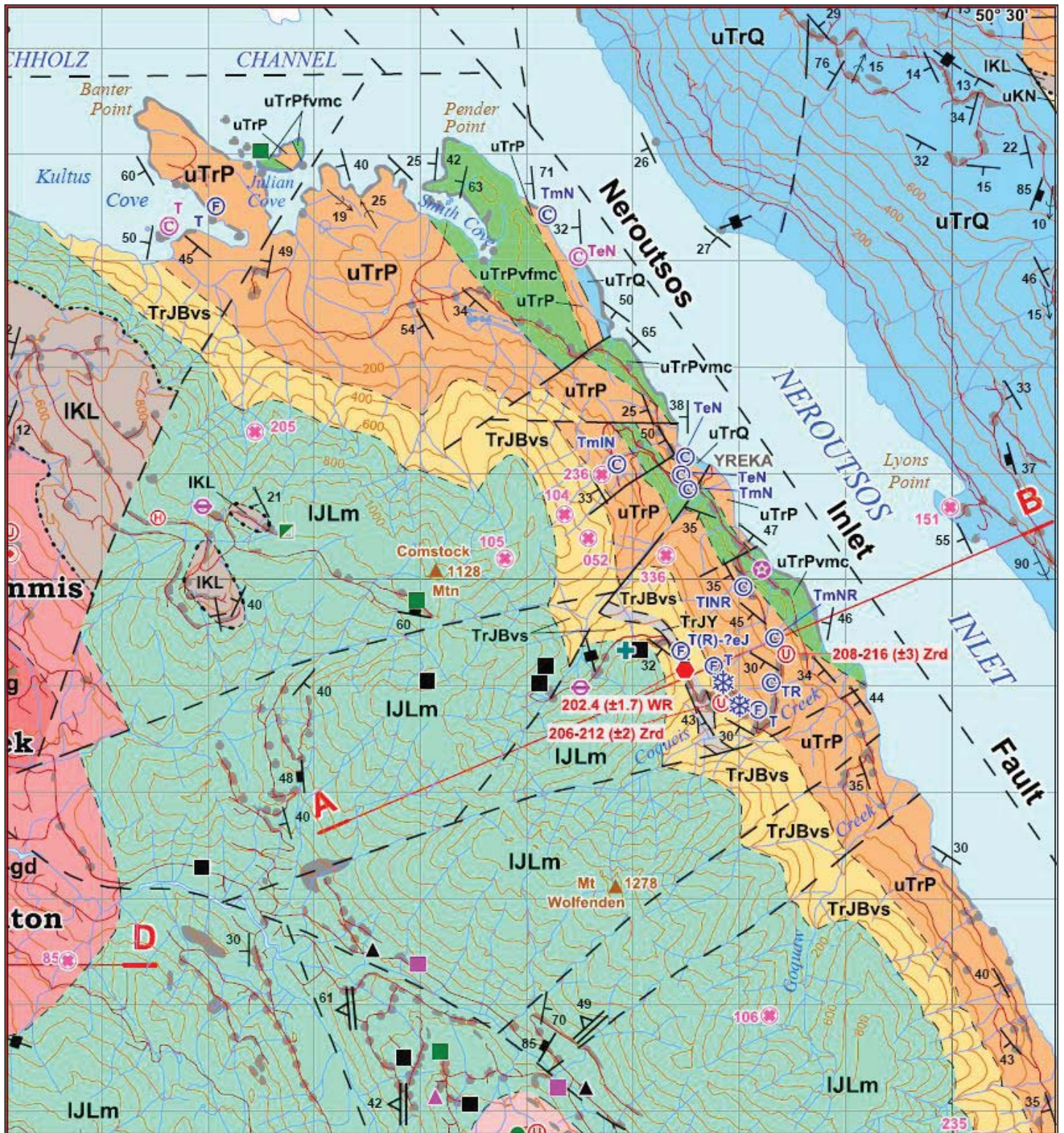


Figure 8: Part of Map GM2011-3 of Nixon et al. (2011) showing Yreka area along Neroutsos Inlet. Location of cross section in Figure 3 is shown at red line A-B. Symbols: back and green squares; basalts unaltered and altered; blue circles with letter fill: C = conodont date, U = U-Pb zircon date, F = macrofossil. Pink circles with pink X; Minfile localities with code number

on the map are from the digital geological polygon files for the GM2011-3 map (G. Nixon, pers comm. 2017) and are used as a basis for comparison with the new observations within each unit.

Quatsino Formation (uTrQ)

The Upper Triassic, Carnian to lower Norian Quatsino Formation was only mapped by Nixon et al. (2011) at two restricted shoreline locations in the Yreka area and none overlap with new geological stations from this work. Quatsino Formation is the upper-most formation in the Vancouver Group, which largely consists of the voluminous basalt flows and volcanoclastics of the Upper Triassic Karmutsen Formation. The Quatsino caps the flood basalts of the Karmutsen oceanic flood basalt plateau that itself is built on island arc volcanics of the Permian Sicker Group, now exposed only in structural uplifts at the south end of Buttle Lake and near Port Alberni. The Quatsino is described by Nixon et al, as a medium to pale grey, thinly bedded to mas-



Figure 9: Road cuts in new logging areas within Parson Bay Formation
Dark weathering limestones and calcareous crystal tuffs are poorly bedded through much of the section that dips into the foreground.

sive micritic and locally bioclastic limestone with minor silica replacement and chert nodules. It has rare laminated interbeds, oolitic layers and algal structures and is locally fossiliferous. Its restricted occurrence in the area corresponds to its lack of thickness (<40m) on the west coast of northern Vancouver Island.

Bonanza Group: Parson Bay Formation (uTrP)

The main unit of the Parson Bay Formation uTrP was mapped by Nixon et al. (2011) in a near continuous band along the coast of Neroutsos Inlet from Kultus Cove south. It is subdivided into two additional volcanic dominated units, uTrPvfmc and uTrPvmc that form a series of fault delimited blocks within the main formation from Smith Cove south to the coast a few km

south of Yreka. The main Parson Bay Formation described by Nixon et al. (2011) consists of medium grey to black, thinly laminated to medium bedded, impure limestone, calcareous to non-calcareous mudstone, siltstone and shale intercalated with variable proportions of grey-green lithic feldspathic/tuffaceous wacke, minor crystal-lithic tuff and reworked equivalents, volcanoclastic breccia and debris-flow deposits, and rare vitric tuff, pebbly sandstone and conglomerate. Shale units locally yield abundant thin-shelled bivalves (*Halobia* sp., *Monotis* sp.), and limestone locally contains rare algal structures; may include coralline limestone described as the Sutton limestone equivalent, near the top of the succession.

Only one station appears to be within the lowermost section of mapped Parson Bay Formation, but no outcrop was observed. In the upper part of the formation above the volcanic dominated units, which will be dealt with below, numerous geological stations were established. In the Kultus Cove block, stations HW16-402 to HW16-407, show a mix of grey massive limestone and gritty limestone with zones of dark green calcareous crystal tuffs that weather brick red. All are cut by E-W calcite veins. To the east along the road, stations within the formation



Figure 10: Moderately west dipping conglomerates in the Parson Bay Formation. Station HW16-414 on logging roads in central part of property. Clasts are porphyritic volcanics. Rock weathers brown as in the photo, but is dark green on fresh surfaces.

revealed non-calcareous sediments with rusty tuffaceous zones, dark grey, finely fractured massive limestone interbedded with calcareous volcanic grit and limestone conglomerate. One station (HW16-407) shows a white weathering hornblende feldspar porphyritic felsic dyke cutting the limestone steeply at 160 degree strike.

In an adjacent fault block of the upper Parson Bay Formation 16 geological stations described the formation in outcrops within a logging slash: HW16-413 to HW16-429. Predominantly these stations show this block to consist of calcareous tuffs, commonly massive bedded with some beds up to 10 m thick and grading upward to agglomerates with rounded porphyritic clasts. In places limestone occurs as a host to dark grey calcareous crystal tuffs and crystal-lithic breccias with vesicular lapilli, but the units surveyed are predominantly volcanic origin within the 20 hectare area traversed by new logging roads. Two felsic dykes were observed cutting the calcareous tuffs and limestones: one dyke was up to 10 meters wide with a N-S strike and steep dip and the other about 3 to 5 meters wide with a 160 strike. Both contain altered hornblende laths partially replaced by pyrite. Thin veins of pyrite were observed in the region of the dykes cutting the tuffs. One set consisted of quartz and pyrite with pyrite forming a core zone.

Parson Bay Formation volcanic units (uTrPvfmc and uTrPvmc)

The mapped volcanic dominated sections within the Parson Bay Formation included units uTrPvfmc and uTrPvmc and are described by Nixon et al. (2011) as follows: uTrPvfmc is a dark grey-green tuff-breccia, crystal-lithic lapilli tuff and lesser basaltic flows that are aphanitic to coarsely clinopyroxene-plagioclase±olivine-phyric. The unit may include minor limestone, wacke, siltstone and mudstone. The unit uTrPvmc consists of dark grey-green, basaltic tuff-breccia, lapilli tuff and reworked equivalents that is aphanitic to coarsely clinopyroxene-plagioclase±olivine-phyric and may include minor limestone, wacke, siltstone and mudstone.

Geological stations were established in two fault blocks of this unit, one near Smith Cove, which also includes occurrences of subunit uTrPvfmc on some small islands in the cove. This subunit (uTrPvfmc) is described as “dark grey-green basaltic flows and lesser volcanoclastic breccia and lapilli tuff; aphanitic to coarsely clinopyroxene-plagioclase±olivine-phyric,” which differs from the uTrPvfmc unit in predominance of flows over tuffs.

Stations in the Smith Cove uTrPvmc block included HW16-408 to HW16-412. On the peninsula overlooking Smith Cove four stations record variations from predominantly dark grey gritty limestone varying to lithic and crystal lithic tuffs. Epidote alteration and pyrite and chalcopyrite mineralization are common, but sporadic forming veinlets and disseminations. The epidote generally indicates the presence of altered plagioclase feldspar crystals in volcanics in this case tuffs and helps differentiate the calcareous tuffs from gritty limestones.

The southern block of uTrPvmc was observed at 3 stations along the main Yreka Road north of the Yreka site at HW16-431 to HW26-433. These outcrops all consist in crystal-lithic lapilli tuffs that are generally calcareous and display sporadic epidote and chlorite alteration.

Generally, these new observations corroborate the designation and description of the units on the GM2011 map of Nixon et al. (2011)

South of Yreka, one roadside outcrop at HW16-400 within the mapped boundaries of uTrPvmc consists of grey weathering, well bedded siltstone to sandstone, but varying over 30 meters to the north to amygdaloidal feldspar-phyric intermediate flows.

Bonanza Group: Volcanoclastic-Sedimentary Unit (TrJBvs)

The Parson Bay Formation is stratigraphically overlain by the Volcanoclastic -Sedimentary Unit of which exposures are found along the Y400 logging branch road that winds about 600 meters upwards into the valley south of the old Yreka workings. The main unit is described by Nixon et al. (2011) as “Interbedded volcanoclastic and sedimentary strata (predominantly submarine): buff to grey-green, thin to very thickly bedded, calcareous to non-calcareous, volcanic breccia, lithic and feldspathic wacke, siltstone and limestone, locally coralline; lithic-crystal tuff, lapilli tuff and reworked equivalents; and minor vitric tuff, pebbly sandstone, siltstone, and

volcaniclastic debris-flow deposits; may include black carbonaceous shale, mudstone, siltstone and limestone (locally coralline) equivalent to unit TrJY “. Only one station within the unit was located along Y400 logging road, but a traverse down into the valley below the historic Clyde workings south of Yreka is within the unit. The road outcrop at HW16-299 consists of brown weathering, coherent volcanics with fine grained epidote chlorite alteration.

The off road traverse started along the Y400 Road and descended into the creek through densely overgrown logging slash. The creek bed had good outcrops, but progress was impeded by heavy deadfall of old growth trees that created dams across the creek bed. Stations HW16-303 to HW16-310 were recorded along the creek within the mapped TrJBvs unit. Large porphyritic felsic dykes occupied much of the base of the creek and formed some of its steep banks. Two dykes of about 3 meters width were mapped for over 200 meters along the creek. Both displayed altered to pyrite-replaced acicular hornblende phenocrysts, feldspar phenocrysts in a light coloured matrix. Host rocks to the dykes were finely bedded orange to yellow weathering tuffs with moderate north and west dips. Sulphide impregnations were observed in the tuffs in places appearing bleached or varying to a white cherty tuff.

One outcrop at HW16-306 to the south of the creek junction was described as a black, variably deformed argillite with pyritic veinlets and locally rusty weathering. The unit may correspond to the TrJY - Yreka shale-Limestone unit observed along the Y400 road, and presumed to terminate against a fault farther downstream in the creek. Possibly this could be the continuation of the unit in the adjacent fault block.

The subunit TrJY named the Yreka shale-limestone unit, consists of black carbonaceous or graphitic shale passing upward into black to medium grey, thin to medium-bedded, variably carbonaceous, silty limestone with shale partings, concretionary limestone, mudstone and siltstone; locally fossiliferous. This unit occurs along Y400 within the larger Volcaniclastic-Sedimentary unit and was examined at Station HW16-300 to HW16-302. There it is described as a black slate to black argillite in contact with amygdaloidal basalt with sulphides concentrated at the contact. Dykes of feldspar porphyry cut the Yreka shale-limestone unit at these outcrops.

Bonanza Group: LeMare Lake Volcanic Unit (lJLm)

Above the volcaniclastic-sedimentary unit is the volcanic dominated LeMare Lake volcanics. This unit is described by Nixon et al. (2011) as dark grey-green, basaltic to andesitic flows with minor intercalated volcaniclastic and sedimentary lithotypes and locally includes minor pillow lava/breccia, minor rhyolitic flows and pyroclastic rocks. Within the mapped areas new stations were located along the Y400 road near its upper end in the NE trending valley south of Yreka. Four stations; HW16-295 to HW16-298 were located along a 500 meter stretch of the road and describe feldspar porphyritic volcanic flows and volcaniclastics. At one station a dyke intrudes a phyllosilicate-altered quartz-feldspar porphyritic felsic volcanic in which hornblende mafic phenocrysts are replaced by epidote and pyrite and the feldspars are altered. A nearby fault zone is mineralized with black sphalerite and pyrite-quartz in a white clay gouge.

Intrusive Rocks

Dykes constitute the only intrusive rocks evident in the area explored in 2016 and were mapped at about a dozen stations and shown on the geological map (Figure 8). Dykes dominantly have near north-south strikes (azimuths range from 190 to 160) and steep dips. It is not clear if the dykes pre or post-date the fault blocks mapped on GM2011 since they were not traced from one block into another. Dykes in the south reach of Canyon Creek appear to form a swarm and parallel fault structures mapped at the southern end of Y400.

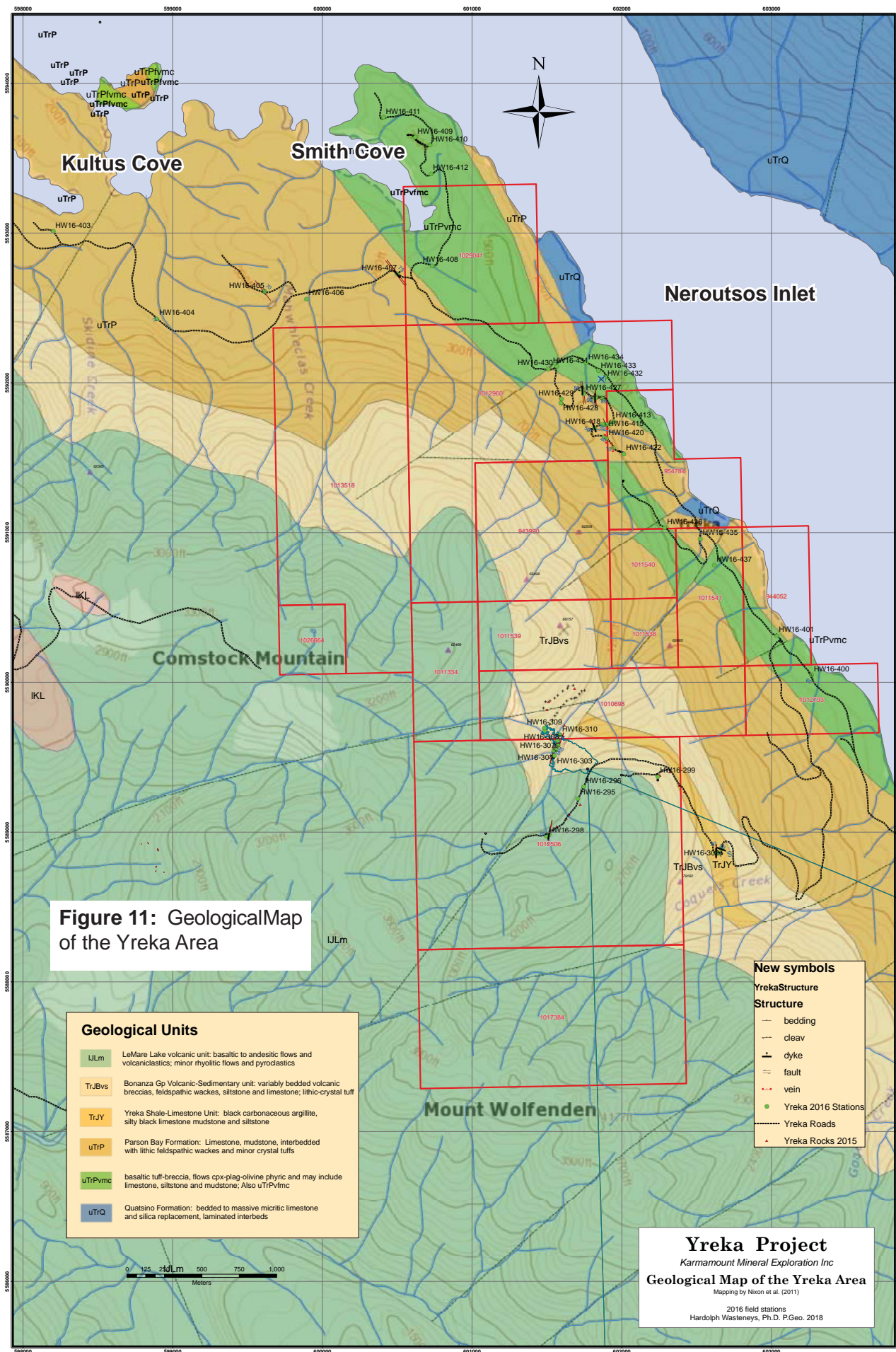




Figure 12: Dyke intruding Parson Bay Formation
Light coloured felsic dyke in center of photo

Structural Observations.

Bedding, cleavage, contacts and dyke orientations and widths were recorded wherever observed and are shown on the geology map (Figure 8). In general, bedding in the Parson Bay and Bonanza Group strata dip into the ridge at moderate angles forming a homocline.

Discussion

The stratigraphy of the Yreka area between the shoreline of Neroutsos Inset and the Compstock Peak-Wolfenden Mountain ridgeline is dominated by Lower Jurassic and Upper Triassic age units of the Bonanza Group. Most of the section is characterized by limestones and calcareous rocks including limy crystal tuffs and volcanoclastics although the top of the section along the ridgeline displays coherent volcanic flows and tuffs. Geological mapping of new road cuts in the Yreka area during the 2016 field season has contributed to the stratigraphic description of units within the Parson Bay Formation and possibly to minor revision of geological boundaries on the existing BCGS map. Many of the outcrops included crystal tuffs interbedded or varying to limestones and limey sediments even within the main limestone unit of the Parson Bay Formation as well as in the designated uTrPvmc and uTrPvfmc units that are described as dominated by pyroclastic and volcanoclastic rocks principally crystal tuffs.

Further geological mapping at Yreka should focus on the upper slopes within the LeMare Lake volcanics. Considerable previous work has been completed on tracing out skarn rocks within the Volcanoclastic-Sedimentary Unit and Yreka Shale- Unit of the Bonanza Group during and

after the mining operations on the main Yreka deposit and these have been thoroughly reviewed in Baldys (1998) along with projection of the underground resources. More surface delineation work on skarn horizons in the immediate vicinity of the Yreka and Clyde working will not likely lead to any significant increase in understanding of resource potential as this work has been substantially completed. Instead, the focus should be on the source of mineralizing fluids and the intrusive rocks assumed to be associated with the skarn mineralization with the objective of finding either significant skarn deposits or related porphyry copper stockwork mineralization. The westerly dip of the stratigraphic section into the Comstock-Wolfenden Ridge without structural disruption obscures significant volumes of the potentially skarn hosting units as well as intrusive rocks associated with them. Although it is tempting to assume that felsic dyke swarms in the Yreka area might be associated with the skarn generating intrusives, there is no evidence to support this possibility.

Exploration down dip along the stratigraphic section should initially involve evaluation of the LeMare Lake volcanics for evidence of porphyry mineralization such as alteration within

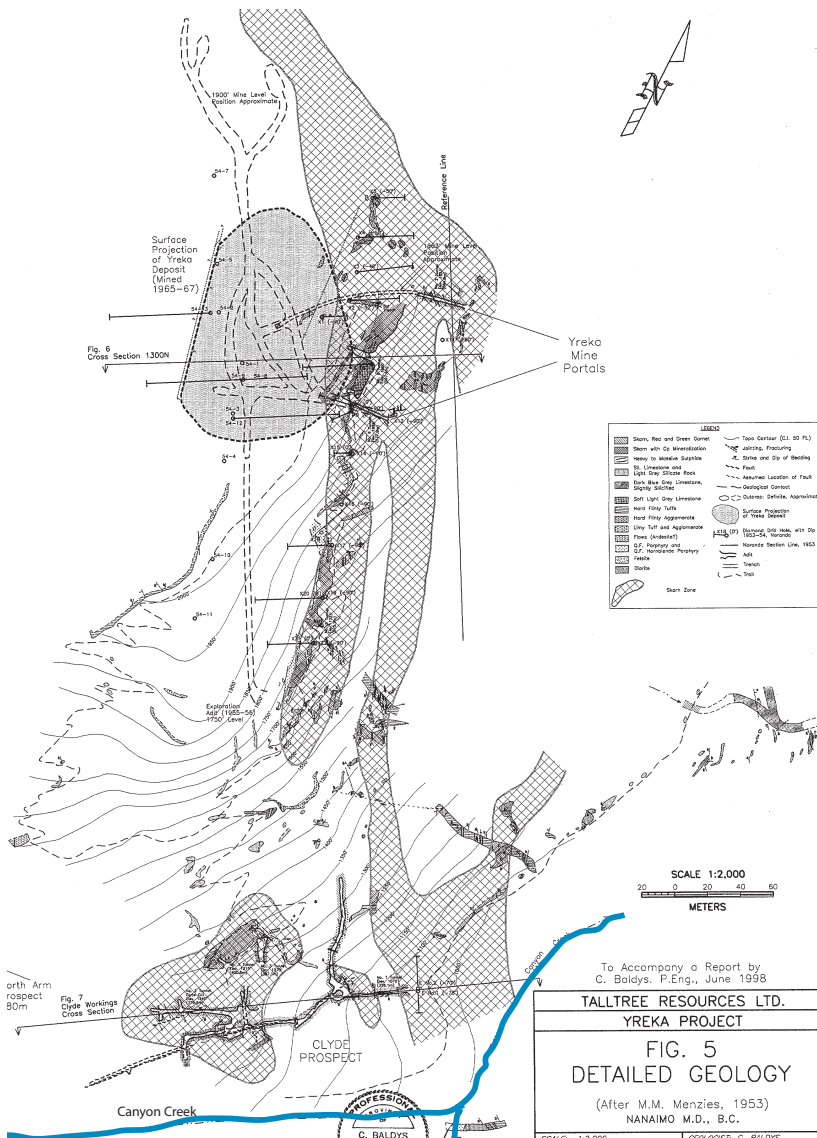


Figure 13: Historical Geological map of the Yreka Mine and Clyde Workings area. Map is from Baldys (1998) after sections and plans in internal Noranda reports by Menzies (1953). The map shows the surface extent of the skarn horizon (diagonal hatched area) north of Canyon Creek and the vertical projection to surface of the mine developments and skarn sulphide mineralization. The traverse of September 7, 2016 reached the southern edge of the skarn zones at the junction of the west and south reaches of the creek (Figure 14). Sections through the Clyde and Yreka zones show the skarn dipping west within the stratigraphic units.

the volcanics, breccias of magmatic hydrothermal origin and stockwork fracturing. Logistically this is challenging as it involves mapping the forested, steep upper slopes of the ridge, where the volcanics form a cuesta resulting from cliff-forming competency of the volcanics, and on the dip slope of the volcanic into the valley to the west. Deep penetrating geophysical surveys such as Induced polarization with long array spacing may be required to sense through the LeMare Lake

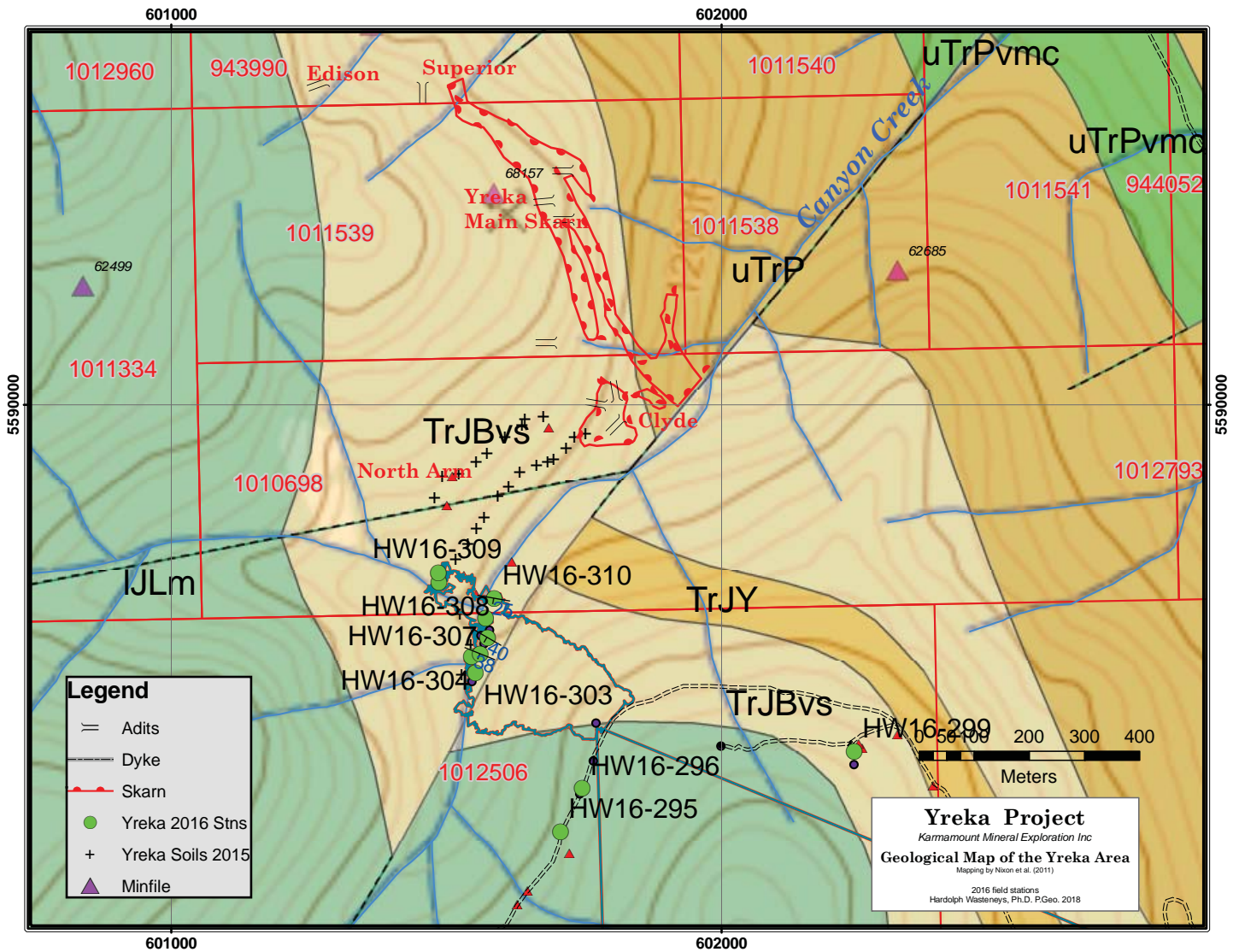


Figure 14: Geology of the Yreka Mine area.

Red line with half circles encloses surface area of mapped skarn assemblages in the main skarn area surrounding the Yreka sulphide lens. Adits from old working indicate other areas of mineralization. New map stations are shown in green circles. Geological Units are explained in text and legend of map in Figure 8 and Appendix B (full size).

volcanics if mineralization is restricted to the underlying calcareous units. Steep slopes near the ridge crest on both sides may impede such a survey, but perhaps some success can be found farther down slope although the thickness of the volcanics is uncertain. Magnetic surveys on the dip slope would mostly be overwhelmed by the high magnetic susceptibility of mafic volcanics of the LeMare Lake Formation, which might obscure pyrrhotite bearing skarn units in the Volcaniclastic-Sedimentary Unit. Existing Geoscience BC aeromagnetic surveys (GDS, 2013) show a broad, unrelieved magnetic high west of the top of the ridge.

The known skarn ore deposits indicate probable proximity to a mineralizing granitoid intrusion that either underlies the Wolfenden-Comstock Ridge or has been eroded away updip of Yreka on the Neroutsos Inlet side. Assuming the downdip scenario there appears to be a high potential for additional deposits at least of skarn if not larger porphyry stockworks hidden under the extensive area of LeMare Lake volcanics to the west. The volcanics form the dip slope covering the host rocks of the Yreka skarn namely the Volcaniclastic-Sedimentary Unit and the Parson Bay Formation as well as any trace of a mineralizing granitoid intrusive. The potential

is enhanced by the extensive area that remains unexposed to the west. The challenge is to find indications of buried mineralization on the present exposures of the Le Mare Lake volcanics such as dyke swarms and phreatomagmatic breccias that might indicate the locus of a buried intrusive. Alteration zoning in the volcanics may also create a vector towards an intrusive if the volcanics are not too thick. In the absence of direct geological indicators, reconnaissance scale geophysics might be useful in target generation.

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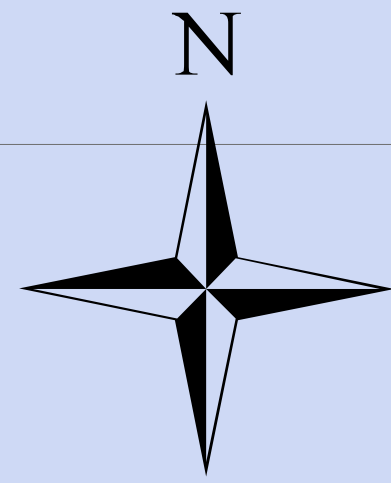
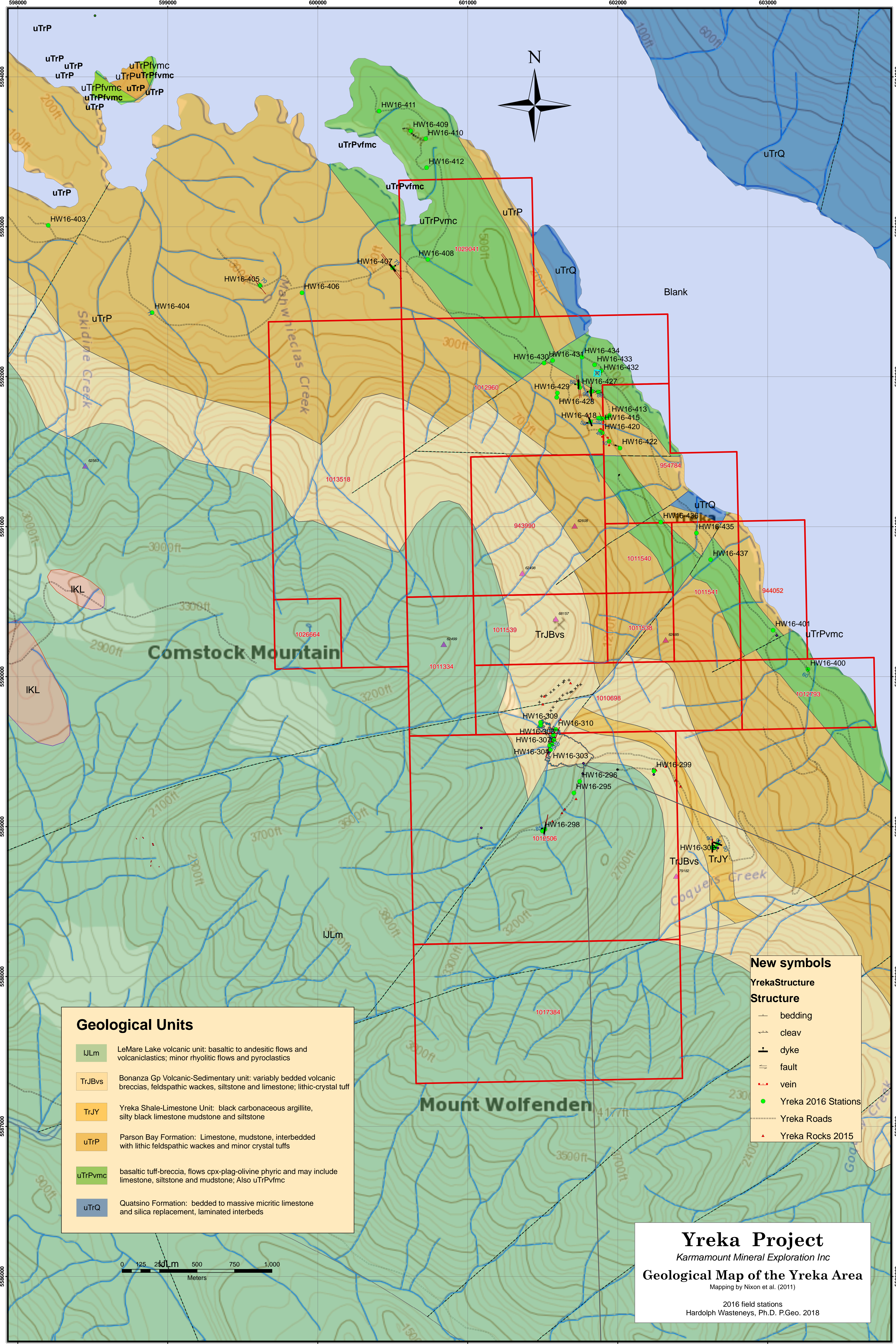
Appendix A Costs Statements

Yreka2016

Exploration Work type	Comment	Days			Totals
Personnel (Name)* / Position					
Hardolph Wasteneys / Chief Geo	Field Days (list actual days) July 26, 27 2016; September 6-8, 2016	Days	Rate	Subtotal*	
		5	\$800.00	\$4,000.00	
		0		\$0.00	
				\$4,000.00	\$4,000.00
Office Studies					
List Personnel (note - Office only, do not include field days)					
Literature search		0.0	\$800.00	\$0.00	
Database compilation	Hardolph Wasteneys	0.0	\$800.00	\$0.00	
Reprocessing of data		0.0	\$800.00	\$0.00	
General research	Hardolph Wasteneys	2.0	\$800.00	\$1,600.00	
Report preparation	Hardolph Wasteneys	3.0	\$800.00	\$2,400.00	
Other (specify)					
				\$4,000.00	\$4,000.00
Remote Sensing					
Area in Hectares / Enter total invoiced amount or list personnel					
Aerial photography			\$0.00	\$0.00	
LANDSAT			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
				\$0.00	\$0.00
Ground Exploration Surveys					
Area in Hectares/List Personnel					
Geological mapping	480 / HW				
Reconnaissance					
Prospect					
<i>20 should be captured in Personnel</i>					
<i>30 field expenditures above</i>					
Geochemical Surveying					
Number of Samples					
		No.	Rate	Subtotal	
Stream sediment			\$0.00	\$0.00	
Soil			\$0.00	\$0.00	
Rock			\$0.00	\$0.00	
Whole rock			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	
				\$0.00	\$0.00
Transportation					
		No.	Rate	Subtotal	
Airfare			\$0.00	\$0.00	
truck rental			\$0.00	\$0.00	
kilometers	2 trips SPL to Port Alice and Yreka	1,620	\$0.50	\$810.00	
fuel			\$0.00		
Helicopter (hours)			\$0.00		
Fuel (litres/hour)			\$0.00	\$0.00	
BC Ferries	Vehicle from Gibsons to Vancouver Island	2.00	\$73.00	\$146.00	
				\$956.00	\$956.00
Accommodation & Food					
Rates per day					
Hotel			\$0.00	\$0.00	
Camp	Camp supplies		\$350.00	\$350.00	
Meals	groceries mainly and some meals		\$0.00		
				\$350.00	\$350.00
Miscellaneous					
Telephone			\$0.00	\$0.00	
Other (Specify)					
				\$0.00	\$0.00
Equipment Rentals					
Field Gear (Specify)	Radios VHF	2	\$25.00	\$50.00	
	InReach satellite comms	1	\$75.00	\$75.00	
Other (Specify)				\$0.00	
				\$125.00	\$125.00
Freight, rock samples					
			\$0.00	\$0.00	
			\$0.00	\$0.00	
				\$0.00	\$0.00
<hr/> TOTAL Expenditures <hr/>					
					\$9,431.00

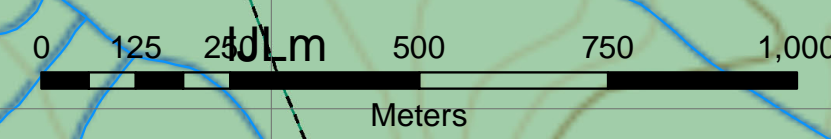
APPENDIX B: GEOLOGICAL MAP OF THE YREKA AREA

Figure 15: Geological Map at 1:10,000 and 100% pdf scale



Geological Units	
IJLm	LeMare Lake volcanic unit: basaltic to andesitic flows and volcanoclastics; minor rhyolitic flows and pyroclastics
TrJBvs	Bonanza Gp Volcanic-Sedimentary unit: variably bedded volcanic breccias, feldspathic wackes, siltstone and limestone; lithic-crystal tuff
TrJY	Yreka Shale-Limestone Unit: black carbonaceous argillite, silty black limestone mudstone and siltstone
uTrP	Parson Bay Formation: Limestone, mudstone, interbedded with lithic feldspathic wackes and minor crystal tuffs
uTrPvmc	basaltic tuff-breccia, flows cpx-plag-olivine phyric and may include limestone, siltstone and mudstone; Also uTrPvmc
uTrQ	Quatsino Formation: bedded to massive micritic limestone and silica replacement, laminated interbeds

New symbols	
YrekaStructure	
Structure	
	bedding
	cleav
	dyke
	fault
	vein
	Yreka 2016 Stations
	Yreka Roads
	Yreka Rocks 2015



Yreka Project
 Karmamount Mineral Exploration Inc
Geological Map of the Yreka Area
 Mapping by Nixon et al. (2011)
 2016 field stations
 Hardolph Wasteneys, Ph.D. P.Geo. 2018

Appendix B: Geology

Station	Northing	Easting	Altitud	Structur	Strik	Dip	Descript	LTIME
HW16-295	5589225	601707	618				LeMare Lake volcanics; lithic frags to 1 cm, feldspar porphyritic and finely vesicular frags to a few mm [GPSunit3] odd intermediate porphyry pale green matrix with plagioclase phenos 1 to 2 cm ; large amyg or repl mafic phenos	2016/09/06 10:49:55
HW16-296	5589302	601747	626				Dyke 190/85 west two felsic to tint porphyry dykes cutting QFP black phyllosilicate altered mafic volcanic porphyry w pale matrix; most phenos replaced by epidote-pyrite; feldspars altered	2016/09/06 11:03:36
HW16-297	5588982	601515	639	dyke	190	85	Fault zone vein in black sphalerite and pyrite-quartz in white clay gouge	2016/09/06 12:05:34
HW16-298	5588971	601497	636				PIT highly fxd brown wx volcanic rocks med green fg epidote chlorite altered basalt; coherent flow.	2016/09/06 12:27:44
HW16-299	5589370	602241	681				roadside OC: Dyke porphyry QFP 2 m wide 360 N-S; deformed black argillite in contact w amygdaloidal basalt, sulphides	2016/09/06 14:56:14
HW16-300	5588862	602632	543	dyke	360	90	at contact where sheared	2016/09/06 16:24:50
HW16-301	5588861	602648	541	cleav	330	90	OC black slate cleavage 330/90 sheared contact 290/85N between slate and amyg basalt	2016/09/06 16:27:20
HW16-302	5588886	602666	530	dyke	290	90	FP Dyke cutting slaty seds 290/90 ; black argillite inclusion in dyke	2016/09/06 16:33:09
HW16-303	5589513	601552	483				Traverse w Tyler into Clyde Porphyry: Unit 3 horrible slash and deadfall-filled creek at bottom of steep slash slope; possible volcanic in place w chl-py veins	2016/09/07 10:43:53
HW16-304	5589542	601545	487				Hb-feldspar porphyry Dyke: pale green wx w white matrix; Hb some alt some black; feldspar partly altered pyrite disseminated 1%	2016/09/07 10:56:14
HW16-305	5589547	601562	487	bedding	112	38	b 112/38 finely bedded orange yellow wx tuffs vfg in 1 to 2 cm beds	2016/09/07 11:05:16
HW16-306	5589577	601575	487	bedding	120	40	graphitic argillite b 120/ 40 to 60 variably deformed; Dyke 020/90 black argillite contacts 1 mm pyrite veinlets; black and dark rusty wx locally b	2016/09/07 11:13:46
HW16-307	5589611	601571	487				orange wx dyke OC forms walls on south side of creek moss covered; bleached matrix w diss pyrite and po veinlets locally	2016/09/07 11:22:54
HW16-308	5589678	601487	485				crossed corner to creek below Clyde mostly staying in creek bed; pyritic in white cherty argillite	2016/09/07 11:54:53
HW16-309	5589695	601486	494				parallel creek 20 me more sulphide impregnated f tuff; patches of vfg pyrite in bleached matrix	2016/09/07 12:32:22
HW16-310	5589648	601587	466	bedding	100	25	confluence of creeks: OC in south, banded tuffs dipping 25 100/25; massive dyke 3 m thick 194/86; tuffs appear cross-bedded	2016/09/07 13:19:00
HW16-400	5590048	603269	19	bedding	155	60	OC of well bedded ss-siltstone dipping west along roadcut b 155/60 variably rusty dk grey; Amygd feld phyric and. msv along rod 30 m north varies to feldspar phyric diabase andesite	2016/07/27 13:51:37
HW16-401	5590309	603036	61				Spur road branch from Yreka Main	2016/07/27 14:12:56
HW16-402	5593109	597894	43				OC Calcareous brick red and dk green crystal lithic tuffs separated by calcite veins. Mostly brick red w minor green streaks in rock to north; pred dk grn to S across 10 m gap also more msv spor round amygd; gritty lst at north end	2016/07/27 14:38:34
HW16-403	5593009	598203	71				Large OC grey msv lst w vert E-W calcite veinlets	2016/07/27 16:45:00
HW16-404	5592428	598896	57		111	11	high bluff 50 m above road; non-calcareous sediment rusty sporadically tuffaceous fg msv limestone; finely fxd locally dk grye; interbedded w calcareous volc grit and lst conglomerate; fault zone 320/70	2016/07/27 17:00:24
HW16-405	5592609	599616	99	fault	320	70	w 20 n plunging slicis; faults 001/88 10 E dipping slips	2016/07/27 17:10:43
HW16-406	5592560	599895	78				Mawinder Creek; Boulders 1. grey silicious/cherty w vfg pyrite clacaresou buff wx; 2. feldspar phyric diorite w crowded fuzzy felds phenos; 3. banded cherrt - siltstone	2016/07/27 17:35:45
HW16-407	5592726	600499	71	dyke	320	75	OC roadside: white wx dyke; fine hb pale green scattered in fg altered matrix felsic possile feldspar porphyry jnts 160/83; intrudes med grey gritty limestone msv w <1 mm gritty text contact sharp and curves 320/ 75 W dyke 10 m wide.	2016/07/27 17:57:51
HW16-408	5592782	600733	67				on new road spur abundant OC of fxd limestone overlooking Smith Cove	2016/07/27 18:18:36
HW16-409	5593639	600620	82				Mostly dk grey lst w zones of pyrite diss of ? alt mineral in calcareous epidote-pale green chl matrix; zones of epid alt in gritty lst trace cpy on epid veinlets. epido i common alt in this lst and cpy-py occur sporadically	2016/07/27 18:33:05
HW16-410	5593586	600720	78				1 cm pyrite in dk green calcareous grit/ gritty lst coarser to the east; appearance a lithic tuff w calcareous matrix	2016/07/27 18:48:21
HW16-411	5593771	600409	60				distinct pink calcite patches like amygdulous/ altered mafic phenos ? replacement in sediment OR vesicular basalt	2016/07/27 19:03:53
HW16-412	5593395	600725	48				calcareous rusty wx grit dk grey green 2 mm grain size crystal lithic tuff	2016/07/27 19:28:50
HW16-413	5591741	601945	139				Camp; OC clacite filled amygdules in med green agglomerate- tuff bx; lapilli surrounded by calcite alt matrix pale wx calcareous tuff - grit:massive bedding b180/25 varies upward to agglomerate w round porphyritic clasts rock is dark green fresh pale br wx	2016/07/28 08:27:12
HW16-414	5591727	601928	142					2016/07/28 08:32:21
HW16-415	5591721	601897	141	bedding	150	50	b 150/50 10 m tuff beds friable in massive bedded dk green calcareous coarse tuff	2016/07/28 08:34:37
HW16-416	5591723	601881	140				dark grey calcareous crystal tuff in massive limestone grit	2016/07/28 08:39:13
HW16-417	5591724	601872	140				dark grey calcareous crystal tuff-grit vesicular frags and crystal frags; buff rusty wx felsic dyke parallel to bedding in well bedded tuffs; buff wx pale on fresh surf; pyrite replaces mafics / hb; 5 m thick tuff	2016/07/28 08:41:22
HW16-418	5591700	601818	136	dyke	160	50	is non- calc. bedding // lenses of friable sandy tuff.leached cement DYKE160/50 a	2016/07/28 08:55:36
HW16-419	5591641	601885	153				Massive bedded tuff ; pale green fresh; white wx; coarse frag widely dispersed lenses or filaments of calcareous replacements ... varies ot calcareous crystal tuff	2016/07/28 09:03:46
HW16-420	5591626	601897	154	vein	170	40	thin qtz-pyrite veins sets 170/40 and shallower 4 mm thick w pyrite crystal core	2016/07/28 09:14:43
HW16-421	5591568	601943	152	vein	170	10	continuation of qtz pyrite veins 170/10 5 thin veins in OC face in photo	2016/07/28 09:21:34
HW16-422	5591524	602015	153				masive med gr crystal tuff feldspars mush, minor epidote veining	2016/07/28 09:51:56
HW16-423	5591898	601871	134	fault	250	80	cont OC of fx xtl tuff to corner; massive felds crystal tuff w flattened lenses of dk chloritic ? lapilli rusty ornage zonerusted out clay gouge fault 250/80	2016/07/28 10:08:40
HW16-424	5591902	601829	136				thin py veinlets in rusty wx dk grn tuff-bx	2016/07/28 10:11:30
HW16-425	5591899	601822	136	dyke	180	90	adjacent to 424 dyke; lt wx pale tan white buff; felsice w altered hb laths chlorite fine diss py throughout 3 m wide	2016/07/28 10:18:58
HW16-426	5591949	601740	143	dyke	180	80	180/90	2016/07/28 10:24:31
HW16-427	5591927	601747	141				Dyke: felsic 180/80 10 m wide forms topo ridge line contact w dk calcite amygdaloidal basalt	2016/07/28 10:38:25
HW16-428	5591862	601593	123				more extent of dyke	2016/07/28 10:46:56
HW16-429	5591891	601598	121				banded crystal tuff light grey altered diss pyrite replacing mafics pervasively	2016/07/28 10:57:32
HW16-430	5592091	601509	101				east side of road; black limy tuff massive calcareous fine diss pyrite throughout	2016/07/28 11:06:09
HW16-431	5592108	601566	100				black dk wx mix of crystal and lapilli tuffs andesitic massive bedded sporadic diss pyrite calcite cement calcareous massive calcareous crystal lithic tuff ranging to lapilli w calcite amygdules epidote alteration of feldspars.	2016/07/28 11:39:59
HW16-432	5592039	601890	80	bedding	173	30	Long roadside OC; b 173/30 massive friable sequence of tuffs calcareous generally crumbly dk grey chlorite slips	2016/07/28 11:44:39
HW16-433	5592079	601846	79				thick bedded msv pale grey crystal tuff lithic lapilli < 1 cm dark	2016/07/28 11:51:33
HW16-434	5592131	601762	78				?	2016/07/28 12:05:32
HW16-435	5590958	602525	56				Yreka Trail: overgrown	2016/07/28 12:30:23
HW16-436	5591031	602287	144				OC lighter than prev. possible coherent feldspar porphyritic flow varying to xtal tuff upstream massive	2016/07/28 13:51:04
HW16-437	5590779	602619	71				Copper Canyon various boulders of tuffs; cpy rich cobble rusty rxd porphyry; py didd semi-msv matrix of feldspar porphyry or xtal tuff; 5% of sulphide cpy plus magnetic min or po	2016/07/28 15:39:04
HW16-438	5577595	601567	371				End of Teeta Main	

Table of Geological Observations in the Yreka area. Northing and Easting are in UTM Zone 9 NAD 83. Coordinates and altitude are by Garmin 62s GPS units. LTIME is Pacific standard time.

Statement of Qualifications

Hardolph Wasteneys Ph.D., P.Geo.

I, Hardolph Wasteneys, Ph.D, P.Geo. resident at Strathcona Park Lodge, Campbell River BC, do hereby certify that:

I am a self employed Professional Geoscientist and have worked primarily in mineral exploration, mining, geological and U-Pb geochronological research, and geological education since 1976.

I am a registered member of the Association of Professional Engineers and Geoscientists of British Columbia.

I graduated with the degree of Bachelor of Science in Geological Engineering, Mineral Resources option from the Faculty of Applied Science, Queen's University, Kingston in 1979.

I graduated with the degree of Doctor of Philosophy (Geological Sciences) from Queen's University, Kingston in 1990 in the field of economic geology with research specialized in the study of epithermal ore deposits of southern Peru under the supervision of Prof. Alan H. Clark.

I conducted U-Pb geochronological research at the Jack Satterley Geochronology Laboratory in the Royal Ontario Museum directed by Dr. T. E. Krogh from 1990 to 1997 and completed numerous studies on the timing of ore deposition and regional metamorphism in collaboration with university and government survey geologists and resulting in several publications in peer reviewed international journals.

I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "Qualified Person" for the purposes of NI 43-101.

I have no beneficial interest in Karmamount Mineral Exploration Inc.

I am familiar with the Yreka property held by Karmamount Mineral Exploration Inc having completed geological mapping on the property in August and September, 2016.

signed at Upper Campbell Lake,
March 23, 2018



Hardolph Wasteneys, PhD, PGeo.

