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REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSE	SSMENT REPO	RT NUMBERS:	13252, 16315, 2433	36, 35651, 36548, 37034
ROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy Snowshoe Group, Hardscrabble, Barkerville Terrane, rep	<b>y, structure, alte</b> lacement, quartz	ration, mineralization,	size and attitude):	
IAILING ADDRESS:				
PERAIOR(S) [who paid for the work]: )	2)			
Houston, BC V0J1Z0				
IAILING ADDRESS: PO Box 100				
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AIM NAME(S) (on which the work was done): 339096&	363918			
GOLD PANNERS PARADISE				
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Photo interpretation			
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Topographic/Photogrammetric			
(scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail		-	
Trench (metres)		-	
Underground dev. (metres)		-	
OtherRE	PORT	-	1650.00
			3482.60

## **Technical Report**

## VLF-EM Geophysical Survey at Goldin Rock's Claim Group

## Cariboo Mining Division NTS 093H/04 TRIM 93H.002 53°04'26" North Latitude, 121°39'23" West Longitude Tenures 339096, 363918

Prepared for Goldin Rock Resources Inc (owner/operator) c/o PO Box 100 Houston, British Columbia V0J 1Z0



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APPENDIX I: Data and Figures

## Introduction

Goldin Rock Resources Inc is the registered owner of their 1067 hectare mineral property at Mount Burns. The property consists of six ground staked legacy claims originally staked in 1995 through to 2001.

Tenorex GeoServices was contracted to complete assessment work and complete a ground geophysical survey southwest of Tucker Lake and at the Blue Lead target areas in effort to define conductive zones at or adjacent to mineralized bedrock and soil anomalies. A total of 2.3 line kilometers was prepared and 0.8 line kilometers was surveyed. The data along with results are presented in this report. 1.5 line km of grid line was prepared for the self potential survey prior to increased fire risk and subsequent Protection Order/ extension of time granted under S.66 of the Mineral Tenure Act). A VLF survey over the Blue Lead area was conducted in favor of SP due to snow conditions and accessibility and additional field work is planned early in the Spring. The details of the initial survey is outlined in this report.

## **Property Description and Location**

Goldin Rock's mineral claim group, also known as Gold Panners Paradise, is located on the northern flank of Mount Burns, about six kilometers southeast of Wells, BC on TRIM map 093H002. The property is owned by Goldin Rock Resources and consists of six legacy mineral claims covering an actual area of 1067 hectares on the map; whereas, Mineral Titles Online states the legacy claims total 1100 hectares (as originally staked) and is the total area by which the required assessment value or work credits is calculated.

Title Number	Claim Name	Owner	Title Type	Issue Date	Area (ha)
339096	GOLD PANNERS PARADISE 2	145955 (100%)	Mineral Claim	1995/aug/17	500.0
363918	GEO - # ONE	145955 (100%)	Mineral Claim	1998/jul/08	500.0
388841	KETCH 1	145955 (100%)	Mineral Claim	2001/jul/27	25.0
388842	KETCH 2	145955 (100%)	Mineral Claim	2001/jul/27	25.0
388843	KETCH 3	145955 (100%)	Mineral Claim	2001/jul/27	25.0
388844	KETCH 4	145955 (100%)	Mineral Claim	2001/jul/27	25.0

A statement of mineral claims is shown below.

\*Owner 145955 is the Free Miner Certificate belonging to Goldin Rock Resources Inc.

# Location Map showing access from the nearest town



## <u>Tenure Map</u>



- 20m elevation contour interval creek or brook

#### Access, Physiography, Climate and Physiography

(partly from Reid and Justason, 2007)

The Goldin Rock Claim Group of mineral tenures is located about 70 kilometres east of the junction of Highway 97 North and Highway 26 at Quesnel, British Columbia. Access to the property is made by travelling approximately 70 kilometres east from Quesnel along Highway 26, also locally known as the Barkerville Highway. The closest populated community is centred about 5 kilometres further east along Highway 26 and is situated at the north east end of the Jack of Clubs Lake. A one kilometer section of the highway passes through the northern portion of the claim group and numerous historical mining trails and forest service roads provide access through portions of the property, as mapped.

The project area lies in the forested mountain region located southwest of the Jack of Clubs Lake and is situated within the Quesnel Highlands on the eastern margin of the Interior Plateau. Elevations range from 1200 meters above sea level near the highway at Slough Creek to approximately 1700 meters at the mountain tops. Mountain summits in the region and at the property are generally rounded, having been glaciated by continental ice sheets during the Pleistocene Epoch. Although the property has had limited geological mapping conducted the author has observed that rock exposures are generally limited to road cuts, excavated placer pits, rare bluffs, incised creek beds and mountain summits. It has been found that, at least locally on Mount Burns, that most overburden exists as a thin veneer at elevations over 1550-1600m. Natural drainage of the area is mostly within mossy draws which in several places lead into gold bearing placer creeks: these placer bearing creeks have been extensively worked and hydralicked in the past. Water also collects in historical hand trenched ditches located along near flat contours (usually less than about 0.5% grade) of the mountainside. These ditches were used to collect runoff or divert water to and from historical placer mining operations. The area is in a moist climatic belt, subject to heavy snowfall in winter and generally rainy conditions in summer. The District of Wells can see winter accumulations of snow from about eight to over twenty feet. The project area is usually snow free from late May to early November, providing a four or five month window for an exploration season where the ground can be readily accessed. The Wildlife Habitat Area (WHA) 5-100 encumbers 225.09 hectares (21%) of the property, generally located above the 1500m elevation contour on the southern most portion of the property. An exemption is required to conduct exploration activities within this area and certain exploration activities, once permitted and bonded, can begin after mid-June and have specific conditions attached to the work program. The Wells area is generally well forested; hillside slopes are dominated by spruce, pine, sub-alpine fir, accompanied by alders and other deciduous foliage on lower, wetter slopes flanking river valleys. The destructive nature of Mountain Pine Beetle has had significant impacts on the forests surrounding the property, however the property is generally located on the north slope of Mount Burns and, initially, it appears that the devastating impacts of the beetle readily observed on the south facing slopes adjacent the property are not as obvious here. Prior to 2002, no 'pine beetle kill' was observed in the immediate area.

The community of Wells is home to a population of about 215 permanent residents (pers. comms. District of Wells staff, 2017). The town houses one gas station, one Canada Post postal outlet, two small grocery stores, an elementary school, several art galleries, a public library with publicly accessible high-speed internet computer kiosks, an RCMP detachment, an ambulance station, a volunteer Fire Brigade, one hotel, one motel, several restaurants and several other privately owned businesses. No cell service is available here, although pockets of service are available intermittently at some higher elevations. Even though a broad range of amenities can be found here, the City of Quesnel, located about a 55 minute drive to the west, provides a more complete range of services, such as a hospital, medical clinics, banking services and larger commercial stores. The economy of Wells is mainly supported by summer and winter tourism, followed by mining activities, mineral and placer exploration, forestry and other recreational activities.

A helipad is located next to the Wells RCMP detachment and a small airstrip is located at the junction of Highway 26 and the Bowron Lake Road, approximately 4 kilometers east of Wells. Float planes can access the Jack of Clubs Lake at Wells. A regional airport is also located in Quesnel.

## **Geological Setting**

## Regional Geology: Quesnel Highlands

The geology of the Cariboo mining district has been presented in various reports / memoirs and maps presented by geologists such as Bowman (1889, 1895), Dawson (1894), Johnston and Uglow (1926), Hanson (1935), Sutherland Brown (1957), Struik (1988), Levson and Giles (1993) and Schiarizza (2004). Many mineral assessment reports of the area also state the regional geology of the area typically see paraphrasing of the region's geological setting by the above noted geologists.

Struik (1988) describes the northern Quesnel Highlands as underlain by four geological terranes, three of which are fault bounded. The terranes are defined by their unique stratigraphic successions. The easternmost is the Cariboo Terrane consisting of sedimentary rocks in fault contact with the western margin of the Precambrian North American Craton along the Rocky Mountain Trench. The Barkerville Terrane consists of mostly sedimentary rocks and is west of, and in fault contact with, the Cariboo Terrane. The Barkerville and Cariboo Terranes are overthrust by the Slide Mountain Terrane [which is] composed of basic volcanics and intrusives [as well as] generally fine grained clastic rocks. The root zone of the Slide Mountain Terrane is considered to be serpentinite and sheared mafic rocks that exist locally at the western boundary of the Barkerville Terrane. West of that root zone is the Quesnel Terrane composed of volcanic, volcaniclastic and fine grained clastic rocks.

The property occurs within the mapped boundaries of the Barkerville Terrane.



## Local Geology: Barkerville Terrane

The Barkerville Terrane is dominated by folded and overturned Precambrian and Paleozoic varieties of grit, quartzite, black to green pelite or argillite with lesser amounts of limestone and volcaniclastic rocks (Struik, 1988). The Barkerville Terrane is regionally metamorphosed to low and middle greenschist facies, sometimes making it difficult to define the original fabric of the rock. The intrusive rocks of the Barkerville Terrane occur sporadically as diorite, rhyolite or rhyodacite dykes and sills. Also, fossiliferous units within the Barkerville Terrane are few and are, for the most part, limited to the crinoidal and fossilized algae limestone units, though, to date, none of these units have been mapped at the property; however, limestone bodies have been noted by the author immediately adjacent the property, to the west and also to the east within the Jack of Clubs Creek valley.

Struik (1988) describes the Barkerville Terrane as containing one structural package; defined as a deformed sequence of rock separated from others by an angular unconformity. This package has been named the Snowshoe Group and contains several subunits.

Structures of the Snowshoe Group are divided into three categories: from oldest to youngest they are shear/ductile shortening, brittle shortening and extension (Struik, 1988). The subunits separated by conformable and non-conformable contacts. Common to the Barkerville Terrane are compressional strike faults which parallel the Terrane's northwest-southeast trending stratigraphy which are further cut and displaced by the younger extensional, north and northeast trending, steeply dipping faults. The gold bearing quartz veins of the Barkerville Terrane are generally found to be within the extensional, north and northeast trending faults and are prospective targets found at the property.

## **Property Geology**

Goldin Rock's mineral property lies in a package of rocks mapped by Struik as mainly containing the Eaglesnest and Harveys Ridge successions, with a sliver of the Agnes succession occurring on Mount Amador. At present, mapping of the property at local scale is generally limited.

It is known that the majority of the property is covered in glacial drift which typically limits outcrop exposures to the steep slopes of hydraulicked creeks, tops of elongate ridges, road cuts and already worked, stripped and/or trenched ground. Some areas of glacial drift are defined in historic placer records as being over 150 feet thick in places and sporadic with no consistent depth such as at the Jack of Clubs Creek drainage.

Local to the property, the Barkerville Terrane contains two gold bearing belts: The Barkerville Gold Belt and the Hixon Creek-Stanley-Yanks Peak Gold Belt also called the Nelson-Yanks Gold Belt. A third belt is described further south and is named the Likely-Horsefly Belt. In 1932, Galloway introduced the term 'Barkerville Gold Belt' to describe this zone of intermittent mineralization which is defined by Holland (1948) as being less than 1.5 kilometres wide and extending over a distance of 15 kilometres. The Nelson-

Yanks Gold Belt, which may be up to seven kilometres wide, parallels the Barkerville Gold Belt. Each belt generally follows the larger northwest-southeast regional structures of the geologic terranes. The two belts contain significant vein systems which are cited in Hedley and Watson's 1945 Bulletin 20 to follow favorable stratigraphy within the Barkerville Gold Belt while the veins of the Nelson-Yanks Gold Belt generally follow close to and slightly east of the anticlinorium. The property is located on the northern edge of the Nelson-Yanks Gold Belt.

The rocks found at the property, as based on property visits and review of historical mapping of Burns Creek, generally consist of foliated, gritty to fine grained quartzites  $\pm$  sericite and finely laminated siltstone and phyllite  $\pm$  sericite. Alteration of the country rock can be spotty and generally chloritic. Silicification of the country rock is apparent in areas usually adjacent to fault structures. Carbonaceous to calcareous siltstones have also been observed. Holland's description of the local area's geology, taken partially out of context, is quoted as follows:

"The Stanley area is underlain by a succession of metamorphosed sedimentary rocks belonging to the Precambrian Richfield formation...The area straddles the regional anticlinal axis which has been mapped previously (Johnston and Uglow, 1926 p. 31) as running between Mount Amador and Mount Nelson". [NOTE: Struik has moved the anticlinal axis slightly to the southwest and has differentiated the main units as the Eaglesnest succession and Harveys Ridge succession within the Paleozoic Snowshoe Group of the Barkerville Terrane].

"Quartzite, [the most common rock found on the property to date]...displays variations in colour from white and light grey, through medium grey, brown, to black; in granularity from fine quartzite to coarse grits...; in composition through admixture with varying amounts of dark argillaceous material; and in fissility either through variations in amount of mica developed in the rock or through the rock's relation to the axial plane and minor folds. Individual beds, ranging from a fraction of an inch to several tens of feet in thickness, are interbedded with others which may vary in colour, granularity, and general composition."

"Dominantly argillaceous rocks are considerably less common than quartzites. They are present as black slate and dark schistose quartzitic argillite, grey argillaceous schists, and as thin partings and interbeds of dark argillaceous material in a dominantly quartzitic succession. The grey colours of most quartzites are due to the variable content of dark argillaceous and, in some instances, graphitic material."

"For the most part the rocks are not calcareous. The few thin limestone beds could not be traced for any great distance and their correlation was not possible. Many of the rocks have a low to moderate amount of carbonate mineral which, when determined, was found to be ankerite." The author has not yet located limestone or otherwise calcareous units on the property but has observed exposures on the west and east side of the property. "Green chloritic schists, some weathering brown and some exceedingly brightly coloured, are also present... In several places pale, greenish-grey quartzite schists are exposed; their green caste evidently is a result of the development of small amounts of chlorite."

"The rocks represent a sedimentary succession that has been subjected to regional metamorphism. Cleavage, in varying degrees of perfection, is developed in all rocks and is the result of the oriented development mainly of sericite and less commonly of chlorite. The perfection of the cleavage depends primarily on the initial composition of the rock and the amount of argillaceous material that was available to form mica. To a lesser extent the position of the rock in relation to the axial plane of a fold contributes to the degree to which the cleaner, more massive quartzites are cleaved."

## **Deposit Types**

There are currently three well known types of gold bearing hardrock deposits within the Barkerville Terrane of the Cariboo Mining District:

- 1. Quartz pyrite veins
- 2. Pyritic replacement in limestone
- 3. Pyritic replacement in metasedimentary rocks

#### Quartz-Pyrite Veins

Quartz-pyrite vein deposits within the Barkerville Terrane are described in detail by Dunne and Ray (2001) and are quoted from their report as follows:

Vein ore typically comprises dominantly massive, white to translucent quartz, lesser dolomite/ankerite, muscovite (as sericite) and pyrite and rarely minor arsenopyrite, galena, sphalerite and/or scheelite (Skerl, 1948). Pyrrhotite and chalcopyrite have been reported as accessory minerals (Skerl, op. cit.; International Wayside Gold Mines Ltd., 2000). Wide veins, such as the BC Vein, can be greater than 15 metres in width and may have sheared graphitic margins. Sericite from quartz veins in the Cariboo Gold Quartz mine, Mosquito Creek Gold mine and Cariboo Hudson mine have been dated using the [potassium-argon] method at 140 Ma (International Wayside Gold Mines Ltd., 2000). Vein textures in the Wells-Barkerville Belt are highly variable. Massive, white to translucent 'bull' quartz veins comprise subhedral to anhedral crystals from less than 0.5 mm to approximately 2 mm in size. Sutured grain boundaries have been noted in some samples. Many of the massive veins are highly fractured and in some cases the abundance of microfractures results in a texture described by Reynolds (1991) as 'wispy quartz'. Reynolds (op. cit.) suggests that this texture is characteristic of deep vein environments (> 4km and possibly > 8km). In contrast, breccia textures indicative of brittle crushing reflecting higher level emplacement are observed in other veins. Skerl (1948) reports that approximately one percent of the veins at the Cariboo Gold Quartz deposit have vugs containing well terminated quartz crystals. These vugs indicate open-space filling late in the vein history... Even fractured and wispy quartz veins have vugs...

Four distinct, structurally-controlled vein orientations occur in the Wells-Barkerville Belt: strike, bedding-parallel veins (NW-SE/45-70NE), northerly (N-S/40-70E), orthogonal (030-040/70SE) and diagonal (070-090/subvertical) (Hanson, 1935; Benedict, 1945; Richards, 1948; Skerl, 1948; Robert and Taylor, 1989). Orthogonal veins are most abundant and these contain the highest concentrations of gold (Benedict, 1945, Robert and Taylor, 1989, International Wayside Gold Mines Ltd., 2000).

In addition, quartz veining within the District has historically been designated as either "A' veins, those being sub-parallel the north westerly trending strata and are usually of greater extent, or "B" veins which are either transverse (right angles to stratigraphy) or oblique, cut stratigraphy and are at right angles to the northerly trending faults. The "B' veins have been interpreted as tension fracture filling possibly explained geologically by the Riedel shear model. Skerl (1948) states that continued movement along the northerly trending faults opened up both groups of these fractures enabling mineral solutions to invade the broken zones near both the north – south and the "bedded" faults and produce auriferous quartz-pyrite veins. Some mineralization is found within the faults themselves.

## Pyritic Replacement in Limestone

Dunne and Ray (2001) describe that pyritic replacement orebodies at the Mosquito Creek and Island Mountain Gold Mines as occuring within or adjacent to limestone units and are commonly associated with fold hinges. Stope dimensions for the orebodies in fold hinges are commonly less than 10 metres thick and several hundred meters in the down plunge direction (Benedict, 1945). Pyrite lenses at Mosquito Creek can either be parallel to the strong foliation or parallel to bedding (Robert and Taylor, 1989). Dunne and Ray go on to explain:

Pyrite orebodies at Mosquito Creek typically comprise fine to medium-grained crystalline pyrite forming individual or stacked lenses (Robert and Taylor, 1989). At the Cariboo Gold Quartz mine, massive crystalline pyrite orebodies contain little or no quartz but grey and white carbonates, galena, sphalerite and scheelite are reported around the margins of the ore (Skerl, 1948).

#### Pyritic Replacement in Metasedimentary Rocks

The most recently mined gold deposit, Bonanza Ledge, is located 6 kilometres east of the Goldin Rock's property and belongs to Barkerville Gold Mines Ltd. Historical documents refer to the historically named Bonanza Ledge as the gold bearing quartz ledge which is now referred to as the BC Vein, but today's named Bonanza Ledge refers to the ore body located within a package of quartzitic and phyllitic rocks of the Lowhee unit. Rhys (2000) describes folded high-grade pyrite mineralization that is discordant to stratigraphy and locally more than 30 metres thick over a strike length of 130 metres. Pyritic ore at Bonanza

Ledge comprises veinlets, concordant laminations and massive bands of pyrite, often with trace chalcopyrite and galena, in a gangue of muscovite, dolomite/ankerite and quartz. To date, approximately 80,000t have been extracted with over 12,000 oz gold produced.

At Goldin Rock's property, the present exploration focus is mainly on the north trending faults and proximal quartz veining. The north striking faults are an important control for the gold vein mineralization (Hall, 1999). Favorable stratigraphy for replacement deposits may exist at the property as well. The main commodities historically found at and immediately adjacent the property are gold, silver and lead.



## LEGEND

## INTRUSIVE ROCKS

Early Mississippian

EMg Foliated muscovite-biotite granite or granodiorite

## METASEDIMENTARY ROCKS

## Proterozoic and/or Paleozoic Snowshoe Group Paleozoic?



Black to dark grey phyllite and silitie; light to dark grey limestone and marble; locally includes medium to dark grey phyllitic quartzite and light grey or green phyllite. May be largely equivalent to unit PShr, or may be younger; southeastern exposures may include rocks equivalent to unit FPSd. Includes Bralco and Hardscrabble Mountain successions of Struik (1988).

Light grey, variably micaceous, massive to thick-bedded feldspathic quartzite and grit; includes interbeds of light grey-green or dark grey phyllite and siltite; locally includes quartzite-clast conglomerate. Mainly Goose Peak succession of Struik (1988), but includes equivalent(?) rocks within Struik's Eaglesnest succession.

PSa

PSg

Light to medium grey, granule to boulder quartzite-clast conglomerate; locally includes grey quartzite, light to dark grey phyllite, and calcareous conglomerate. Occurs internally within unit PSht. Equivalent to Agnes succession of Struik (1988).

PSht Medium to dark grey and black phyllite, siltite, quartzite and grit; locally includes green phyllite, light grey quartzite and grit, conglomerate, medium to dark grey limestone, and medium to dark green chloritic schist derived from mafic volcanic rocks. Includes Harveys Ridge succession and parts of Eaglesnest succession of Struik (1988), and transitional Harveys Ridge of Ferri and O'Brien (2003).

PShr Black to dark grey siltite and phyllite. Interfingers with the lower part of unit PSht. Includes rocks mapped as Harveys Ridge and Hardscrabble Mountain successions by Struik (1988).

## Late Proterozoic and/or Paleozoic?

PPSd

Light to medium green and grey-green phyllite, siltite and variably phyllitic quartzite and grit; light to medium grey limestone that commonly weathers orange, brown, or dark-grey; medium to dark green chloritic schist derived from mafic volcanic, volcaniclastic and intrusive rocks; locally includes light to dark grey quartzite and grit, dark grey to black phyllite, grey to green calcareous quartzite, and conglomerate. Includes an eastern belt mapped as Downey succession by Struik (1988) and a western belt correlated with the Downey succession by Ferri and O'Brien (2003) and Schiarizza and Ferri (2003) but mapped as Ramos and Keithley successions by Struik (1988).

modified by A.Justason from Open File 2004-12 by Paul Schiarizza

# SYMBOLS

Geological contact (defined, approximate, inferr
Fault (inferred)
Bedding; tops known (inclined, overturned)
Bedding; tops unknown (inclined, vertical)
Phyllitic cleavage or schistosity (inclined, vertica
Crenulation cleavage (inclined, vertical)
Stretching or mineral lineation
Crenulation lineation
Axis of mesoscopic fold (early, late)
Lode mineral occurrence with reference number
Axial trace of late upright antiform
Topographic contour (100m interval)
River
Road (highway, gravel)
Map limit
Lake

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## **History**

Interest in the region dates back to the early 1860's when a surge of hopeful prospectors and miners arrived to the area in search of placer gold, after significant reports of gold discoveries were reported at Keithley Creek, then Antler Creek, Williams Creek and Lightning Creek. Interest in the hard rock located at and adjacent to the property dates back to 1864 when road engineers located visible gold in quartz veins they cut during road construction near Chisholm Creek, west of Mount Burns, at a time when quartz 'excitement' was just beginning in the region. A summary of the property's known work history conducted by all known previous owners and operators is outlined below in detail. The following time line of historic hard rock exploration activities details only what is known to the author at the time of writing of this report and may not be an absolute history to the hard rock exploration and mining activities which occurred at or near the Goldin Rock Resources claim group. *Note: select activities conducted at the Burns Mountain Mining Company's shafts and drifts are listed below because they are located immediately adjacent to and on trend with prospective areas at Goldin Rock's property. Descriptions of projects located outside the bounds of Goldin Rock's property is italicized.* 

## Select Mineral Exploration Timeline for the Property

**1861** Michael Burns mined in the area before continuing north to Germansen Landing with partner, Vital LaForce, and making significant gold discoveries there in 1869. Mount Burns (or Burns Mountain) and Burns Creek are named after Michael Burns.

**1864** Gold bearing quartz veins, or "quartz excitement", was found at Chisholm Creek during road construction. To date, this is the earliest mention of mineralized bedrock in the vicinity of Mount Burns (generally, about 3km southeast of the property).

**1882** More tunnel work carried out on Mount Burns (Report of the Minister of Mines 1882, pg 357). ) <author note, assumed to by the Lucky Cap Tunnel near the summit of Mount Burns> Fellows of California is running a tunnel into Burns Mountain to intersect the quartz vein. He sunk upon the vein from the surface to a depth of 40 feet, and was so encouraged by the result that he has concluded to run a tunnel 800 feet into the mountain (Daily Colonist, May 20, 1882)

**1883** Burns Mountain Gold Quartz Mining Co. [begins work] on tunnel which is to be 600-700 feet when completed (Johnston and Uglow Memoir 149, pg 183). Also noted, is that C.P. O'Neil was awarded the contract for continuing the Lucky Cap Tunnel 600 feet further (Daily Colonist, May 22, 1883) <author note, this implies that the tunnel had 200' worked prior to May 1883 and may or may not include drifting>

**1884** The Burns Mountain Mining Co. is reported to be making good progress on their Lucky Cap Tunnel (Daily Colonist, March 6, 1884) but halt work when they fail to hit the ledges (Johnston and Uglow Memoir 149, pg 184). The company applies for Crown Grants 62, 63 and 64 (BC Archives Survey Map and Daily Colonist, September 1884)

**1885** The 1884 season finished with the Burns Mountain Co's Lucky Cap Tunnel at 750 feet total length, 50 feet short of their target but plans are to resume work when the 1885 season advances. Mr Dodd has a piece of gold and quartz taken from the tunnel-a rich and pretty specimen (Daily Colonist, April 12, 1885)

**1886** *Mr. Jacques drove* [to] 800 feet [on the Lucky Cap Tunnel] with good indications (Johnston and Uglow Memoir 149, pg 184). Surface exploration for lode continues to south and northeast and drifting was conducted at different locations in the main tunnel (Jacques correspondence to the Directors of the Company, 1886)

**1933** BC Cariboo Gold Fields Ltd publish a map of their mineral property (EMPR Property File ID 47506) which partly overlaps into today's Goldin Rock ground.

**1948** The BC Department of Mines geologist, Stuart Holland, published a geological report on the Stanley Area (Bulletin 26) and includes bedrock mapping conducted at and near O'lally Creek and Burns Creek. Harold McGowan, a later well-known local prospector, was his field assistant (pers.comms, McGowan, 2001, 2013). A portion of his studies were conducted within Goldin Rock's present day property, and his map has been georeferenced and provided in Appendix I.

**1985** Clifton Resources Ltd. Conducted a geochemical and geological survey over Devils Canyon, Mount Burns and Mount Nelson including detailed mapping along Burns Creek (Assessment Report 13252).

**1987** Lightning Creek Resources carried out an airborne mag, electromag, VLF survey over and area including the summit of Mount Burns (Assessment Report 16315).

**1991** Tom Hatton and Gunner Tjener unearth an 8.5oz gold nugget during placer operations east of Burns Creek (pers.comms, Hatton, 2002)

**1996** Gold City Mining Corp. conducted a Dighem Airborne survey with report and includes a small sliver of the north portion of Mount Burns (Assessment Report 24336).

**1997** Don Sutherland conducted a self potential geophysical survey on his family's placer claim located north of Tucker Lake. The southern half of the survey area lies within the bounds of Goldin Rock's current (2018) mineral property. *Note: the data from this survey may be worthy of reinterpretation for exploration of the mineral claim group.* 

**2013** Trenching conducted southwest of Tucker Lake exposed little to no bedrock for sampling.

2015 130 vegetation samples over 7.0 line kilometers are ashed and analyzed.

**2016** 21 vegetation samples over 0.8 line kilometers are ashed and analyzed to infill the 2015 sampling program and 43 MMI samples were taken over 1.8 line kilometers were

analyzed and sulphide rich quartz exposures were noted. Also this season, the adjacent mineral claim owner conducted a large helicopter borne versatile time domain electromagnetic, horizontal magnetic gradiometer and aeromagnetic geophysical survey on their property. The imagery from this survey was made available in Assessment Report 36697 and includes about a 270 hectare overlap of data into Goldin Rock Resources property and may be useful in future, especially in the Blue Lead area.

**2017** LiDAR imagery and digital elevation data were acquired. Airborne geophysical imagery from Open File 6165 was also georeferenced and overlaid in part transparency with recent orthophotos. The imagery helped to define numerous target areas for further investigation on the ground.

## **2018 Exploration**

In summer 2018, preparations were made to begin a self potential geophysical survey near Tucker Lake and across the Blue Lead target. Prior to evacuation alerts and orders in Quesnel, the contractor and author of this report visited the property and prepared 1.5 line kilometers of grid. Two lines were flagged with UTM station spacing located every twenty meters. Three rock samples were taken as well but as the results were not yet available at the writing of this report, the minor time and costs related to this portion of work is excluded from this report's cost statement and will be included in the next set of reported exploration activities. Prior to being able to complete the self potential survey at this section, an evacuation alert at the contractor's home made it problematic to get to the field right away. An extension of time to complete the work was provided until spring 2019. At the very end of the typical working season access was attempted to the prepared area to complete the survey using a VLF Radem machine instead of the planned self potential survey equipment due to winter conditions. As access was not possible without snowshoeing a significant distance, the planned survey area at the Blue Lead was started. Two lines, 80 meters apart, were surveyed here. Stations were tightchained with fifteen meter spacing and flagging hung at each end. Although the snow was deeper than anticipated, slowing production, 0.8 line km was surveyed in effort to highlight any structures or zones to correlate to the Blue Lead target and located adjacent to anomalous Ag+Pb in soils, as well as the platinum noted in vegetation samples.

#### **Discussion and Conclusions**

The Crone VLF Radem is an EM radio receiver utilizing the 12 to 24 kilocycle United States Naval communications broadcast systems. The closest transmitting station to the survey area is located at Jim Creek, Washington (24.8 kHz). The receiver is essentially a specially designed and sensitice transistor radio. It is used to measure the direction of the magnetic component of the VLF (very low frequency) field. The direction of this field is distorted by the presence of a conductor within the earth. This by measuring the dip angles, the presence of a conductor can be detected and its location determined. The normal VLF field is horizontal. The receiver is capable of detecting disseminated sulphide deposits and small sulphide bodies. It is capable of deep penetration but due to the high frequency used it is affected by clay and conductive overburden. This should be

considered along with other localized factors during the interpretation of both the raw and filtered data.

While gathering the raw field data, the receiver was pointed south to the Jim Creek transmitter. The raw data is presented in the appendix and on a plan map. Noise was smoothed out with Fraser Filter calculations on each group of four adjacent readings by applying the formula  $(f_{4}+f_{3})-(f_{2}+f_{1})$ . The raw and filtered data are also presented in profile for the two surveyed lines. The data was not contoured on the map, as more survey lines are required.

It appears that the VLF-EM survey was successful in identifying both weak and strong conductive readings which may be related in part to a possible northwest trending structure and possible bedrock mineralization. In profile, there appear to be two double or weak conductors at about 589930E and 590130E on line 2 which may be related to conductive, possibly mineralized veins, which is also supported by the adjacent silver and lead in soils. Earlier soil sampling suggests the possible source here may strike to the northeast; however, addition sampling and mapping is required. The null located at 589943E on line 1 and at 589910E on line 2 appears to correlate to the regional geological trend to the northwest and may be a geologic contact. Additional VLF surveying, or self potential surveying, and bedrock mapping is highly recommended to be completed here to better define the relationship of VLF anomalies with possible bedrock geology and mineralization.

## **Recommendations**

Continued reconnaissance and detailed grassroots exploration at the property is recommended.

- The VLF-EM survey should continue along E/W lines, each at least 500m-1000m long adjacent the 2018 survey. Two to three days field work may be sufficient to better define the 2018 data. The data should be plotted on a single map with contours of the filtered data added.
- Bedrock mapping, prospecting and sampling should be conducted throughout the property as discussed in earlier reports
- A spring or summer self potential survey should continue along the prepared lines south of Tucker Lake and possibly the Blue Lead area (as alternative to the VLF survey which requires no advance grid preparation). The purpose is to determine the location and orientation of the of mineralized quartz vein/s here, potentially for immediate followup with trenching. The survey should be a minimum of 5Lkm with 300-1000 meter length lines.
- MMI soil sampling is recommended to continue with a maximum line spacing of 50-100m and 20-40m sample spacing considered.
- Depending on the above results and in anticipation of future trenching and possible drilling needs, plans for permitting should be considered so that any new targets can be exposed, mapped and sampled.

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## **Statement of Costs**

For Event 5700585 and work conducted June 3, 12 and November 24, 2018

Tenorex GeoServices (3.5 man days@\$428.57/day)	1500.00
Geophysical survey equipment rental (1 day at \$100/day)	100.00
4x4 truck (450km @ \$0.68/km)	306.00
Data processing, GIS and report (21 hours at \$60/hr)	1260.00
10% administrative support and contingency	316.60

SUBTOTAL \$ 3,482.60

Total credits applied	•••••	. \$3,028.78
<i>Total to be credited to Gold<u>in Rock Resources(145955) PAC</u> acct=</i>	\$	453.82

## **Statement of Qualifications**

I, Angelique Justason of Quesnel, British Columbia certify the following:

- I am owner of Tenorex GeoServices, a Cariboo based mineral exploration support services company.
- I have attended geology courses at Camosun College and the University of Victoria.
- I have successfully completed and received certificates for the Advanced Prospecting Course (1992) and Petrology for Prospectors Course (1993).
- I have 4 seasons work experience with the BC Geological Survey and the Geological Survey of Canada.
- I was employed in the Cariboo Region as a geotechnician and mine surveyor for over 9 years and have held a supervisory position, in that capacity, for over 6 years.
- I have been an avid prospector for over 25 years, solely managed or assisted in managing field crews and exploration programs for over 20 years and have spent over 18 years researching and conducting mineral exploration & mapping activities in the Wells/Barkerville area.
- I do not hold any interests or shares in Goldin Rock Resources Inc.

Signed,

Angelique Justason

## 2018 Work Location Map (1:10,000 scale)



#### **GOLDIN ROCK RADEM VLF**

STATION	UTM	UTM	meters	Lina	DIP ANGLE	Fraser Filter position	
STATION	Easting	Northing	from start	Line	(deg)	(m from start)	Fraser Filter
1	589875	5881370	0	1	-2	-	-
2	589890	5881369	15	1	0	-	-
3	589905	5881369	30	1	1	22.5	5
4	589920	5881369	45	1	2	37.5	3
5	589935	5881368	60	1	2	52.5	1
6	589950	5881368	75	1	2	67.5	0
7	589965	5881368	90	1	2	82.5	-2
8	589980	5881367	105	1	0	97.5	-5
9	589995	5881367	120	1	-1	112.5	0
10	590010	5881366	135	1	3	127.5	2
11	590025	5881366	150	1	-2	142.5	-5
12	590040	5881366	165	1	-1	157.5	-11
13	590055	5881365	180	1	-9	172.5	-12
14	590070	5881365	195	1	-6	187.5	-6
15	590085	5881364	210	1	-10	202.5	-4
16	590100	5881364	225	1	-9	217.5	-3
17	590115	5881363	240	1	-10	232.5	1
18	590130	5881363	255	1	-8	247.5	4
19	590145	5881363	270	1	-7	262.5	11
20	590160	5881363	285	1	0	277.5	15
21	590175	5881362	300	1	0	-	-
22	589790	5881450	0	2	-1	-	-
23	589805	5881450	15	2	0	-	-
24	589820	5881450	30	2	-1	22.5	0
25	589835	5881450	45	2	0	37.5	1
26	589850	5881450	60	2	0	52.5	1
27	589865	5881450	75	2	0	67.5	0
28	589880	5881450	90	2	0	82.5	3
29	589895	5881450	105	2	3	97.5	8
30	589910	5881450	120	2	5	112.5	5
31	589925	5881450	135	2	3	127.5	-2
32	589940	5881450	150	2	3	142.5	-3
33	589955	5881450	165	2	2	157.5	-4
34	589970	5881450	180	2	0	172.5	-8
35	589985	5881450	195	2	-3	187.5	-9
36	590000	5881450	210	2	-4	202.5	-8
37	590015	5881450	225	2	-7	217.5	-8
38	590030	5881450	240	2	-8	232.5	-7
39	590045	5881450	255	2	-10	247.5	-5
40	590060	5881450	270	2	-10	262.5	-1
41	590075	5881450	285	2	-9	277.5	3
42	590090	5881450	300	2	-8	292.5	8
43	590105	5881450	315	2	-3	307.5	11

## **GOLDIN ROCK RADEM VLF**

STATION	UTM Easting	UTM Northing	meters from start	Line	DIP ANGLE (deg)	Fraser Filter position (m from start)	Fraser Filter
44	590120	5881450	330	2	-3	322.5	7
45	590135	5881450	345	2	-1	337.5	5
46	590150	5881450	360	2	0	352.5	4
47	590165	5881450	375	2	0	367.5	0
48	590180	5881450	390	2	-1	382.5	-2
49	590195	5881450	405	2	-1	397.5	3
50	590210	5881450	420	2	3	412.5	15
51	590225	5881450	435	2	10	427.5	20
52	590240	5881450	450	2	12	442.5	3
53	590255	5881450	465	2	4	457.5	-9
54	590270	5881450	480	2	9	472.5	-2
55	590285	5881450	495	2	5	-	-

## 2018 VLF Station Location Map and Raw Data (1:2,500 scale)





