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COMPILATION REPORT
ON THE
RDN 1-4 MINERAL CLAIMS

Located in the Eskay Creek Area
Liard Mining Division
NTS 104B/15E
56° 58' North Latitude
130° 38' West Longitude

-prepared by-
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May, 1993

COMPILATION REPORT ON THE RDN 1-4 MINERAL CLAIMS

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1.0 INTRODUCTION

The RDN 1-4 mineral claims were staked in October 1987 over a prominent gossan in the Iskut River-Eskay Creek area of northwestern British Columbia (Figure 1). The claims were staked and optioned to Noranda prior to the discovery of the gold-rich Eskay Creek volcanogenic massive sulphide deposit located forty kilometres to the south-southeast. Noranda carried out exploration on the RDN claims and their wholly-owned, adjoining GOZ claims from 1989 to 1991. Their work focused primarily on structurally-controlled gold mineralization. Stratigraphy equivalent to that which hosts the Eskay Creek deposit underlies approximately half the RDN property but has never been properly evaluated for its stratabound gold potential.

2.0 LIST OF CLAIMS

The RDN property consists of four contiguous mineral claims comprising 40 units in the Liard Mining Division of British Columbia, as summarized in Table 3.0.1. The legal corner post was located in the field by Noranda Exploration personnel and the government claim map amended to show its correct position (Figure 2). The RDN claims predate and take precedence over all adjoining claims; there have been no legal challenges to their title. Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that the claims are owned by Neil Debock. Separate documents indicate that they are held on behalf of Mr. Debock, Rockie Saliken and Equity Engineering Ltd..

TABLE 2.0.1
CLAIM DATA

Claim Name	Record Number	No. of Units	Record Date	Expiry Year
RDN 1	4341	10	November 9, 1987	1994
RDN 2	4342	10	November 9, 1987	1994
RDN 3	4343	10	November 9, 1987	1994
RDN 4	4344	<u>10</u>	November 9, 1987	1994

40

3.0 LOCATION, ACCESS AND GEOGRAPHY

The RDN mineral claims lie at the headwaters of a tributary of the Iskut River in the Coast Range Mountains, approximately 120 kilometres northwest of Stewart, British Columbia and 120 kilometres east of Wrangell, Alaska (Figure 1). The property lies within the Liard Mining Division, centered at 56° 58' North latitude and 130° 38' West longitude.

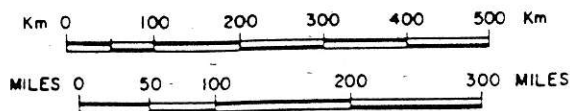


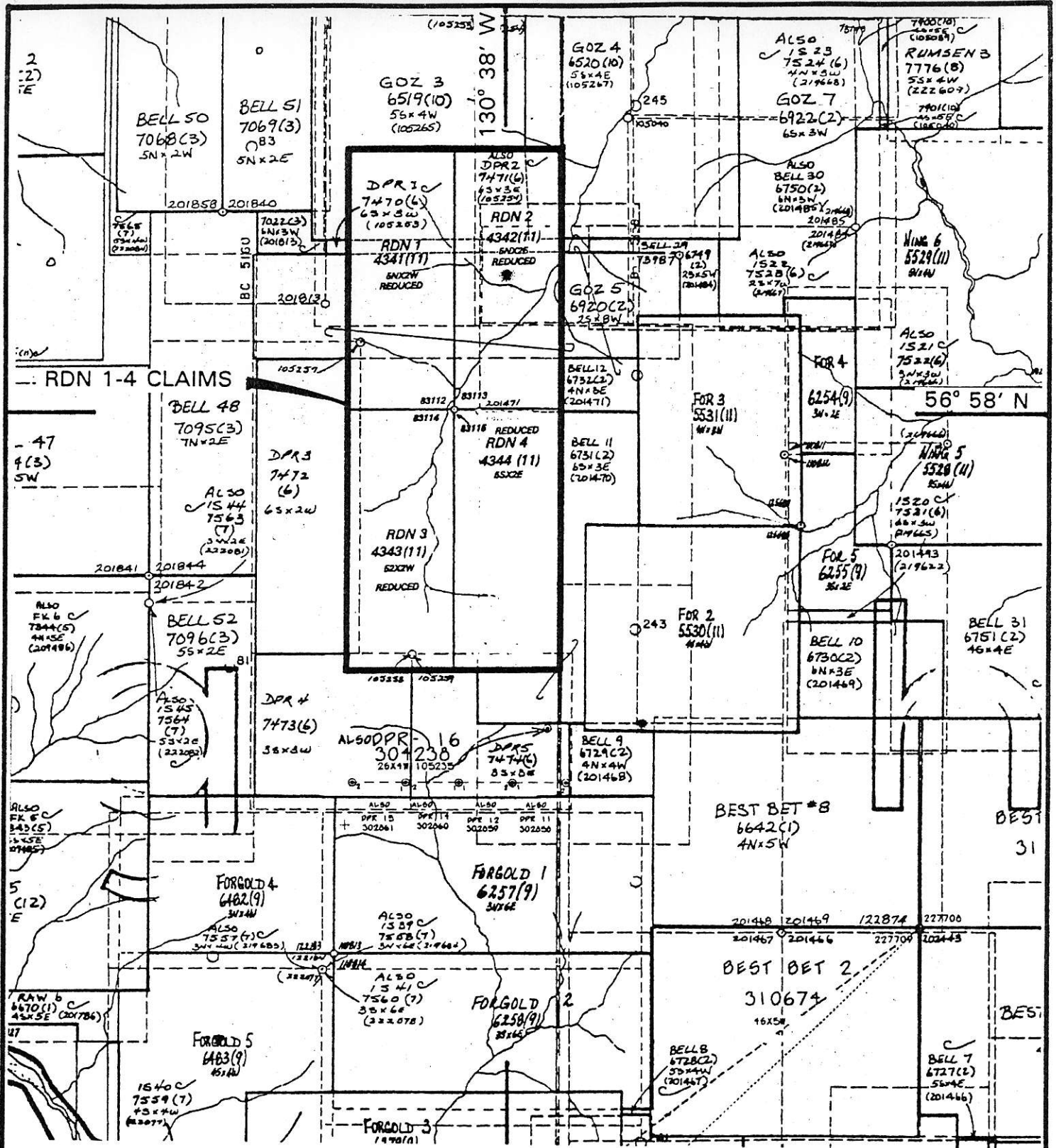
RDN 1-4 CLAIMS LOCATION MAP

BRITISH COLUMBIA

EQUITY ENGINEERING LTD.

DRAWN	MINING DIV Liard	FIGURE
NTS 104B/15E	SCALE AS SHOWN	1
DATE May 1993	REVISED	





RDN 1-4 CLAIMS CLAIM MAP BRITISH COLUMBIA EQUITY ENGINEERING LTD.		
DRAWN:	MINING DIV.: Liard	FIGURE
N.T.S.: 104B/15E	SCALE: 1:50000	2
DATE: May 1993	REVISED:	

The best access to the property is by helicopter from Bob Quinn airstrip, 24 kilometres to the east, which lies on the Stewart-Cassiar highway. Bob Quinn airstrip is suitable for fixed-wing aircraft of any size. The Eskay Creek access road passes within fifteen kilometres to the south of the RDN property.

The RDN group covers the headwaters of "Downpour Creek", a broad northerly-trending tributary of the Iskut River. Topography is rugged, typical of mountainous and glaciated terrain, with elevations ranging from 1040 metres above sea level on Downpour Creek to over 2000 metres on an unnamed peak on the RDN 4 claim. Outcrop exposure is limited to ridges, cirque faces and creeks, with valley sides covered by thin talus and poorly-developed, slumping soils which thicken downslope. Alluvium and outwash fill the bottom of Downpour Creek valley.

Most of the property lies above treeline, covered by open alpine vegetation. Both summer and winter temperatures are moderate although annual rainfall may exceed 200 centimetres and several metres of snow commonly fall at higher elevations.

4.0 PREVIOUS WORK

The RDN claims were staked in November 1987 to cover a prominent gossan on which no work had previously been reported. At the time, the Iskut River district was receiving intensive exploration for gold-bearing quartz-sulphide veins similar to those which were later developed into the Skyline and Snip mines. The following September, Neil Debock carried out three days of prospecting on the claims, taking ten silt samples and 27 rock samples. Two rock samples exceeded 50 g/tonne silver, with the best assaying 207.6 g/tonne (6.1 oz/ton) silver (DeBock, 1989).

Noranda Exploration Company staked their GOZ claims immediately north of the RDN property in October 1989 and optioned the RDN property. That year, Noranda collected two heavy mineral concentrates, 13 silt samples, 10 talus fine samples and 23 rock samples from the RDN 1-4 claims. Gold and silver values were generally low in rock and talus fine samples, but rock samples from two gossans contained anomalous arsenic and antimony, with up to 1196 ppm Sb and 831 ppm As. A heavy mineral concentrate from Downpour Creek returned 2410 ppb gold and a silt sample taken upstream from one of its tributaries contained 164 ppb gold (Savell, 1990).

In 1990, Noranda and High Frontier Resources Ltd. carried out a joint exploration program over the RDN and GOZ claims, taking 32 heavy mineral concentrates, 91 silt samples, 1384 soil samples and 464 reconnaissance rock samples (Savell, 1990). They laid out sixty kilometres of grid over the gossanous felsic tuffs, with a baseline oriented at 010° and crosslines every 100 metres. North

of line 8700N, soil samples were taken at 25 metre intervals from baselines and crosslines, with most analyzed geochemically for gold and by ICP for 30 additional elements. The samples from the eastern ends of lines 9500N-10200N were analyzed geochemically for just copper, zinc, silver and gold. They carried out 20 line-kilometres of ground magnetic and 14.9 line-kilometres of HLEM and VLF-EM surveys, detailing anomalies reported from an airborne magnetic and electromagnetic survey (Savell, 1991). Prospecting resulted in the discovery of several gold-bearing showings, mainly of quartz-sulphide veins within the felsic tuffs on the GOZ claims. Fifteen holes totalling 1546 metres of BGM core were drilled on the GOZ claims. All holes were drilled within the felsic tuffs and their subvolcanic intrusives, except for two which were abandoned in overburden before reaching their target in the overlying sediments (Savell, 1990).

In 1991, Noranda and High Frontier continued exploration on the RDN and GOZ properties (Savell and Grill, 1991). A new grid was established, almost entirely within the felsic tuffs and subvolcanic porphyries, which straddled the northern boundary of the RDN 2 claim. Its baseline was oriented at 155°; five crosslines were run at 065° from it, spaced 200 metre apart. All lines were surveyed with HLEM and two were surveyed with induced polarization techniques. Fifteen holes, totalling 2087 metres of BGM core, were drilled on the GOZ and RDN properties. Of this, 345.3 metres was drilled from two sites on the RDN 2 claim.

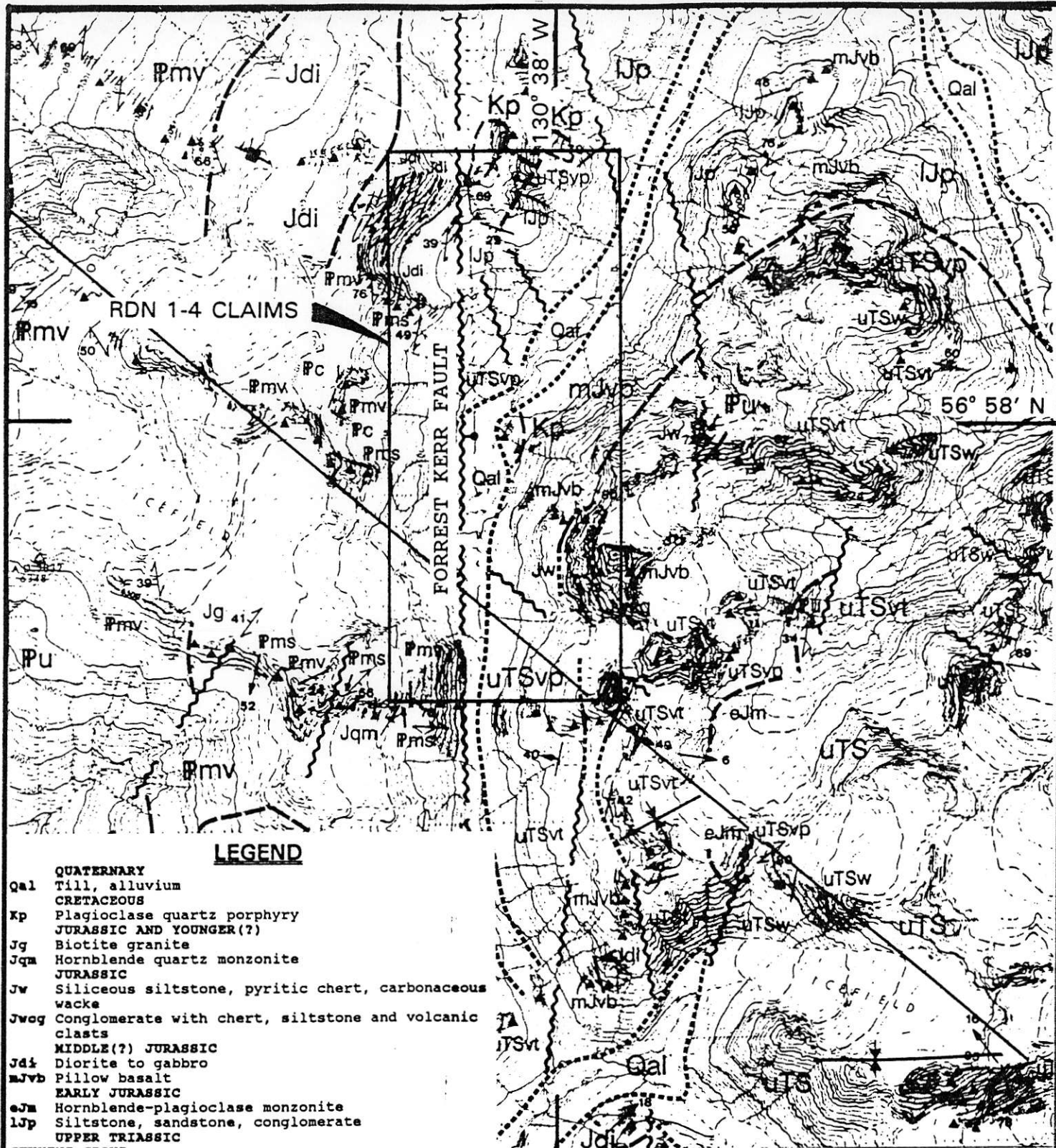
Following the 1991 program, Noranda terminated their option on the RDN claims and has not carried out further work on their GOZ claims.

5.0 REGIONAL GEOLOGY

The area around the RDN claims is underlain by mid-Paleozoic and Mesozoic island arc successions which are overlapped to the east by clastic sediments of the Bowser Basin. Regional mapping has been carried out at a scale of 1:50,000 by Logan, Koyanagi and Drobe (1990a,b) of the British Columbia Geological Survey (Figure 3). Their interpretation of ages and lithologies of rocks on the RDN claims varies somewhat from that of Noranda geologists.

The Paleozoic Stikine Assemblage in the vicinity of the RDN claims comprises foliated mafic to intermediate metavolcanics (Unit Pmv), fine clastic metasediments (Unit Pms) and massive Permian limestone (Unit Pc).

The Stikine Assemblage is unconformably overlain by island arc volcanics and sediments of the Upper Triassic Stuhini Group. At the base of the Stuhini Group is a thick package of fine-grained volcanoclastics and sediments (Unit uTsw), dominated by volcanic wackes, arenites and interbedded siltstone and argillite. These



LEGEND

- QUATERNARY**
- Qal Till, alluvium
- CRETACEOUS**
- Kp Plagioclase quartz porphyry
- JURASSIC AND YOUNGER(?)**
- Jg Biotite granite
- Jqm Hornblende quartz monzonite
- JURASSIC**
- Jw Siliceous siltstone, pyritic chert, carbonaceous wacke
- Jwog Conglomerate with chert, siltstone and volcanic clasts
- MIDDLE(?) JURASSIC**
- Jdi Diorite to gabbro
- mJvb Pillow basalt
- EARLY JURASSIC**
- eJm Hornblende-plagioclase monzonite
- lJp Siltstone, sandstone, conglomerate
- UPPER TRIASSIC**
- STUHINI GROUP**
- UTS Undivided volcanics and sediments
 - UTSvt Plagioclase-augite lapilli tuffs and epiclastics
 - UTSvp Plagioclase-phyric flow breccias
 - UTSw Tuffaceous wacke, argillite, limestone
- PALEOZOIC STIKINE ASSEMBLAGE**
- Pu Undivided metavolcanics and metasediments
- PERMIAN AND OLDER**
- Pms Metasediments and minor limestone
- Pc Limestone
- Pmv Mafic to felsic volcanics

Geology adapted from Logan, Koyanagi and Drobe (1990)



RDN 1-4 CLAIMS REGIONAL GEOLOGY		
BRITISH COLUMBIA		
EQUITY ENGINEERING LTD.		
DRAWN:	MINING DIV.: Liard	FIGURE
N.T.S.: 104B/15E	SCALE: 1:50 000	3
DATE: May 1993	REVISED:	

are overlain by green plagioclase-phyric flows (Unit uTSvp) and lapilli tuffs (Unit uTSva). The volcanic succession is overlain by maroon to dark green tuffs and homolithic augite-plagioclase-phyric fragmentals (Unit uTSvt).

The Early to Middle Jurassic Hazelton Group unconformably overlies the Stuhini Group, comprising four formations: Unuk River, Betty Creek, Mount Dilworth and Salmon River (from oldest to youngest). The Unuk River Formation is a thick sequence of Hettangian andesitic pyroclastics and flows with tuffaceous turbidite, wacke and conglomerate interbeds. The Betty Creek Formation, of Upper Pliensbachian age, consists of andesitic to dacitic tuffs and flows interbedded with volcanoclastic sediments and columnar-jointed dacites. The Mount Dilworth Formation is a thin but regionally extensive felsic unit which disconformably overlies the Betty Creek Formation. It is overlain by the Salmon River Formation, a thick sequence of Toarcian to Bajocian siltstones and fine sandstones with minor conglomeratic, tuffaceous or volcanic interbeds.

In the vicinity of the RDN property, the Salmon River Formation can be divided into three members: a lower fine olastic member (Unit lJp), a middle pillow basalt member (Unit mJvb) and an upper tuff/wacke member (Unit Jw) with conglomerate interbeds (Unit Jwcg). Northeast of the RDN claims, in Downpour Creek, Logan et al (1990a,b) mapped "at least 1000 metres of interbedded shale and siltstone [Unit lJp]...the shales are fissile; siltstones and thin sandstone beds contain abundant carbonaceous wood fragments...Fossils from interbedded limestone horizons located north of the map area indicate an Early Jurassic (late Toarcian) age". These are conformably overlain by pillow and flow breccia basalts (Unit mJvb) and their associated dioritic to gabbroic feeder sills and dykes, interbedded with silicious argillites and pyritic siltstones. Silicious siltstones, pyritic cherts, conglomerates and tuffs of Units Jw and Jwcg overlie and interfinger with the pillow basalts. Anderson and Thorkelson (1990) divided the Salmon River Formation into three facies, with both Eskay Creek and the RDN property lying within his medial Eskay Creek Facies. Middle Jurassic Bowser Lake Group sediments conformably overlie the Salmon River Formation.

Logan et al (1990a,b) mapped several small feldspar-quartz porphyry plugs and dykes (Unit Kp) near the Forrest Kerr Fault, the largest of which occurs along the northern boundary of the RDN property. Without age dating, he tentatively assigned a late Cretaceous to early Tertiary age to them; based upon Bartsch' (1993) work on similar feldspar porphyry intrusives at Eskay Creek, they probably form part of a rhyolitic flow dome complex at the base of the Salmon River Formation and would be Early Jurassic (Toarcian?) in age.

5.1 Eskay Creek Deposit

The Eskay Creek deposit is a gold- and silver-rich volcanogenic massive sulphide (VMS) deposit which occurs near the base of the Salmon River Formation, approximately forty kilometres south of the RDN property. Rye et al (1993) believe the deposit to have formed within a shallow marine environment during the waning stages of rhyolitic volcanism near the top of the Hazelton Group. Geological reserves are 4.74 million tons grading 0.84 oz/ton gold and 30 oz/ton silver (Edmunds et al, 1992). Mineable reserves within the 21B Zone are "slightly more than one million tons grading 2.1 oz. gold and 94.2 oz. silver per ton plus 5.7% zinc, 0.77% copper and 2.89% lead" (Northern Miner, March 8/93).

At Eskay Creek, the Betty Creek Formation has been divided into two informal members (Rye et al, 1993). The lower East Ridge Member comprises andesite-derived conglomerates, tuffs, lithic wackes and debris flow breccias. The upper Eskay Creek Member consists of coarse intermediate epiclastic rocks with minor mudstone, limestone and conglomerate. The overlying Mount Dilworth Formation at Eskay Creek forms a sequence of dacitic pyroclastic flows, tuffs, vesicular dacite fragmentals and flows ("Footwall Dacite"). These are overlain by silicified and autobrecciated, locally massive, flow-banded and spherulitic, low-Ti rhyolite flows ("Eskay Rhyolite") which were formerly included within the Mount Dilworth Formation. Based upon their distinct geochemical signature and their intercalated Salmon River Formation sediments and basaltic flows, Rye et al (1993) now believe that the rhyolite forms an areally restricted rhyolitic flow-dome complex within the Salmon River Formation. In a roughly circular area 400-500 metres in diameter and underlying the 21B Zone, the upper 0-15 metres of the Eskay Rhyolite consists of intensely chloritized, coarse rhyolite fragmentals and finely bedded ash-crystal tuffs.

Felsic feldspar porphyry intrusives, chemically equivalent to the Eskay Rhyolite and thought to be comagmatic, crosscut stratigraphy and reach their highest level directly beneath the 21A and 21B Zone deposits. Two related phases of felsic intrusive are present: the oldest is highly altered, with only ghosts of feldspar phenocrysts remaining, while a minor late phase is less altered and contains potassium feldspar phenocrysts. The felsic intrusives, especially the older phase, are pervasively altered to a quartz-sericite-potassium feldspar-pyrite assemblage and form conspicuous gossanous ridges.

The Contact Unit of the Salmon River Formation overlies the Eskay Rhyolite, ranging from 0-60 metres in thickness. Its basal member is a rhyolite-mudstone breccia consisting of a wide variety of rhyolite, chert and mudstone fragments supported in an argillaceous matrix which is commonly cherty, graphitic or calcareous. The upper member is a carbonaceous, pyritic, locally tuffaceous, laminated black mudstone. Belemnites and radiolaria

occur within the Contact Unit.

Overlying the Contact Unit is an andesitic flow/sill complex ("Hanging Wall Andesite") exceeding 150 metres in thickness with thin intercalated mudstone beds. This is overlain by a thick sequence of thin-bedded siltstone, shale and fine sandstone.

The bulk of economic mineralization at Eskay Creek is hosted within the Contact Unit as stratiform, synsedimentary fragmental-hosted semi-massive ore and as clastic sediments formed from sulphide-sulphosalt detritus. Mineralogy within the 21B Zone consists of sphalerite, tetrahedrite, boulangerite, bournonite with lesser pyrite and galena; the 21A Zone consists of stibnite, realgar, arsenopyrite and cinnabar. The immediate footwall to each zone is intensely fractured, altered to a chlorite-potassic feldspar-sericite assemblage and contains both vein and disseminated mineralization. Portions of the immediate footwall are included in the ore reserves. Deeper in the system, both the Footwall Dacite and the Eskay Rhyolite are silicified, sericitized and pyritized and contain scattered gold-silver-lead-zinc veins and disseminations. These footwall veins, occurring within prominent gossans, were the focus of exploration from 1932 to 1988 before the discovery of stratabound VMS mineralization.

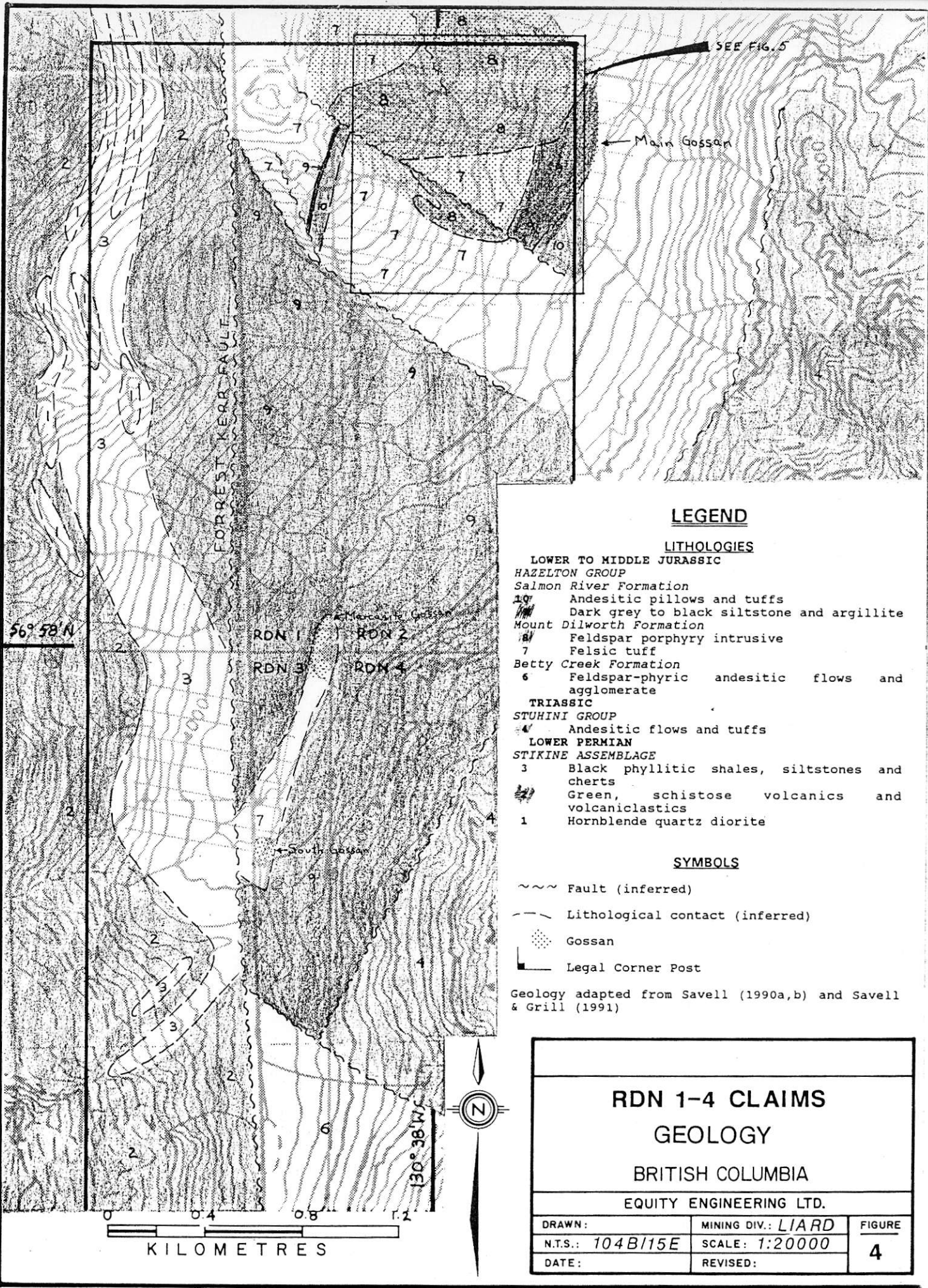
The 21A Zone is 280 metres long, up to 100 metres wide and averages about 10 metres thick. It is separated by 140 metres of weak mineralization from the 21B Zone, which is about 900 metres long, 60-200 metres wide (Britton et al, 1990) and averages 5-6 metres thick (Northern Miner, March 8/93). The plunge and surface extent of each zone have not been published.

6.0 GEOLOGY AND MINERALIZATION

6.1 Geology

Reconnaissance geological mapping at a scale of 1:10,000 was carried out over the RDN property by Savell (1990a,b); grid-based mapping at 1:2,500 was done over the northern half of the RDN 1 and RDN 2 claims by Savell and Grill (1991). Figure 5 was interpreted from the 1991 grid mapping and Figure 4 combines the detailed data from Figure 5 with Savell and Grill's 1991 compilation map. Ground-truthing is necessary for much of the reconnaissance mapping on the southern two-thirds of the property; different generations of Noranda compilation maps ascribe the sediments (Unit 9) to the Stuhini and Hazelton Groups and the extent and nature of the felsic volcanics/intrusives associated with the Marcasite and South gossans is not clear.

The RDN property is divided in two by the Forrest Kerr Fault, a northerly-trending, steeply-dipping normal fault of regional extent (Figure 4). The western third of the property is underlain



LEGEND

LITHOLOGIES

- LOWER TO MIDDLE JURASSIC**
- HAZELTON GROUP**
- Salmon River Formation
- 10 Andesitic pillows and tuffs
- Dark grey to black siltstone and argillite
- Mount Dilworth Formation
- 8 Feldspar porphyry intrusive
- 7 Felsic tuff
- Betty Creek Formation
- 6 Feldspar-phyric andesitic flows and agglomerate
- TRIASSIC**
- STUHINI GROUP**
- 4 Andesitic flows and tuffs
- LOWER PERMIAN**
- STIKINE ASSEMBLAGE**
- 3 Black phyllitic shales, siltstones and cherts
- 2 Green, schistose volcanics and volcanoclastics
- 1 Hornblende quartz diorite

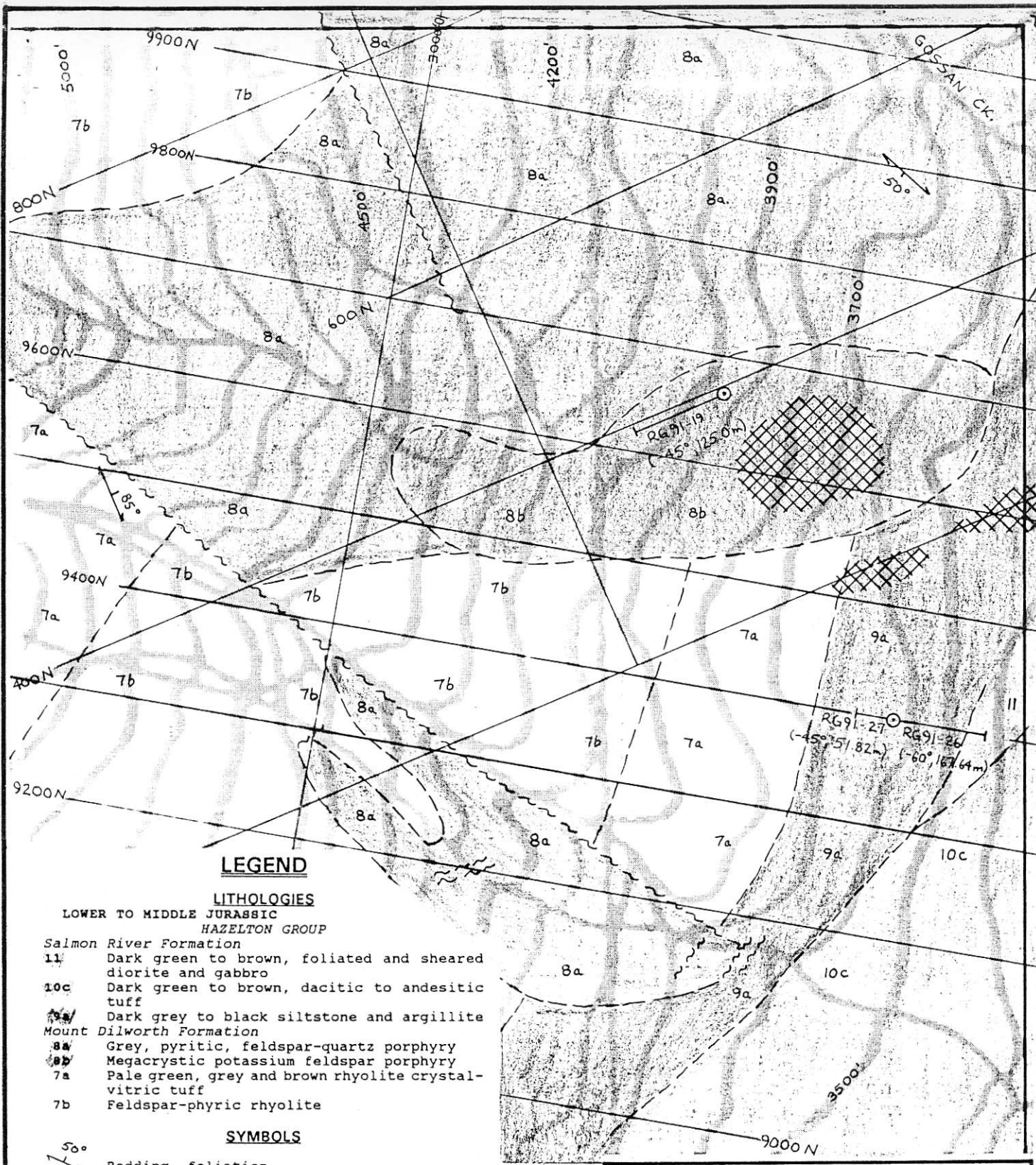
SYMBOLS

- ~ ~ ~ Fault (inferred)
- - - Lithological contact (inferred)
- Gossan
- └┐ Legal Corner Post

Geology adapted from Savell (1990a,b) and Savell & Grill (1991)

<p>RDN 1-4 CLAIMS</p> <p>GEOLOGY</p> <p>BRITISH COLUMBIA</p> <p>EQUITY ENGINEERING LTD.</p>		
DRAWN:	MINING DIV.: <i>LIARD</i>	FIGURE
N.T.S.: <i>104B/15E</i>	SCALE: <i>1:20000</i>	4
DATE:	REVISED:	

KILOMETRES



LEGEND

LITHOLOGIES
 LOWER TO MIDDLE JURASSIC
 HAZELTON GROUP

- 11 Dark green to brown, foliated and sheared diorite and gabbro
- 10c Dark green to brown, dacitic to andesitic tuff
- 9a Dark grey to black siltstone and argillite
- Mount Dilworth Formation
- 8a Grey, pyritic, feldspar-quartz porphyry
- 8b Megacrystic potassium feldspar porphyry
- 7a Pale green, grey and brown rhyolite crystallitic tuff
- 7b Feldspar-phyric rhyolite

SYMBOLS

- Bedding, foliation
- Fault (inferred)
- Lithological contact (inferred)
- Diamond drill hole (inclination, length)
- Ferricrete

Geology interpreted from Savell and Grill (1991)



RDN 1-4 CLAIMS		
GEOLOGY (NE Part)		
BRITISH COLUMBIA		
EQUITY ENGINEERING LTD.		
DRAWN:	MINING DIV.: <i>LIARD</i>	FIGURE
N.T.S.: 104B/15E	SCALE: 1:5000	5
DATE:	REVISED:	

by Paleozoic metamorphic rocks of the Stikine Assemblage which strike north-south and dip moderately to steeply to the west. A metavolcanic package (Unit 2) comprises foliated grey-green plagioclase porphyry and phyllitic to schistose, tuffaceous siltstone and wacke. It alternates with a metasediment package (Unit 1) of black, phyllitic shale, siltstone and chert. Both are intruded by a foliated, medium-grained, dark green to black, hornblende quartz diorite (Unit 1). Savell (1990b) notes a weak pyritic hornfels and barren quartz veining along its intrusive contact.

Mesozoic rocks of the Stuhini and Hazelton Groups lie east of the Forrest Kerr Fault. A fault-bounded wedge of Upper Triassic Stuhini Group has been mapped over the east-central portion of the RDN 4 claim. "Undivided Stuhini Group lithologies on the property include massive green tuff, well-bedded green tuffaceous wacke, grey argillite and minor limestone" (Savell, 1990b).

The Betty Creek, Mount Dilworth and Salmon River Formations of the Lower to Middle Jurassic Hazelton Group outcrop on the RDN claims. The Betty Creek Formation (Unit 6) is represented by grey, green and maroon plagioclase-phyric andesitic flows and pyroclastics in the southeastern corner of the property. The Mount Dilworth Formation consists of felsic tuffs, flows (Unit 7) and their subvolcanic equivalents (Unit 8), well-mapped in the northeastern quarter of the RDN property (Figure 5). The extrusive members include pale green, grey and brown rhyolitic crystal-vitric tuff (Unit 7a), feldspar-phyric rhyolite (Unit 7b) and minor aphyric flows. The felsic volcanics have been intruded by two phases of felsic feldspar porphyries. Unit 8a contains white feldspar and quartz phenocrysts in a grey, very fine-grained groundmass with 5-25% very finely disseminated pyrite. A megacrystic potassium feldspar porphyry (Unit 8b) is associated with Unit 8a and appears to post-date it. As at Eskay Creek, further investigation may allow the division of this felsic package into a Mount Dilworth Formation dacitic extrusive and a Salmon River Formation rhyolitic flow/dome complex (Rye et al, 1993).

A thick package of dark grey to black Salmon River Formation siltstone and argillite (Unit 9a), with minor sandstone, conglomerate and rare orange-brown limestone, overlies the felsic tuffs in the northeast corner of the property. Near its contact with the underlying felsic rocks, the argillites include sections with syngenetic pyrite (e.g. "3-8% py as a fine disseminate conc'd in narrow seams and slim bands parallel to bedding..."), graphite, chert and siliceous sediments (RG91-26 drill log in Savell and Grill, 1991). The felsic/argillite contact is nowhere exposed; to the north on the GOZ property, this contact is marked by a recessive gully which hosts a reported rhodonite showing (P. Holbek, pers. comm.).

Savell and Grill (1991) show a large area in the centre of

the property to be underlain by Unit 9 clastic sediments (Figure 4). However, this area had been mapped as well-bedded Stuhini Group tuffs and Hazelton Group "dacitic to andesitic pillows, tuffs and breccias" in Savell's previous (1990b) compilation; more mapping will be necessary to clarify this. Savell's (1990b) descriptions of the Marcasite and South gossans and his 1990a mapping show that they are underlain by porphyritic rhyolite of Unit 7, the extent and contact relations of which remain undefined.

Dacitic to andesitic pillows and flows (Unit 10a), tuffs (Unit 10c) and breccias (Unit 10b) are interbedded with the fine clastic sediments (Unit 9) of the Salmon River Formation. These are accompanied by dioritic to gabbroic feeder sills and dykes (Unit 11), which are dark green to brown, foliated and sheared. In detailed mapping north of the RDN claims, Savell (1990b) shows a band of Units 10 and 11 lying 50-100 metres east of the felsic/sediment contact and paralleling it, in a similar stratigraphic position to Eskay Creek's Hanging Wall Andesite. Table 6.1.1 compares the Hazelton Group stratigraphy of the RDN property with that of Eskay Creek, using nomenclature from Britton et al (1990).

TABLE 6.1.1
HAZELTON GROUP STRATIGRAPHIC COLUMN

Eskay Creek	RDN Property
<i>Salmon River Formation</i>	
Upper Sedimentary Unit: Thick sequence of thin-bedded, turbiditic, siltstone, shale and fine sandstone	Unit 9: Thick sequence of siltstone and argillite, with minor sandstone, limestone and conglomerate
Hanging Wall Andesite Unit: 150+ metres of andesitic pillow breccia with subordinate flows, dykes and sills	Units 10 and 11: Dacitic to andesitic pillows, flows, tuffs and breccias with dioritic to gabbroic sills and dykes
Contact Unit Upper Member: <60 metres carbonaceous, pyritic and locally tuffaceous, laminated black mudstone	Unit 9: Pyritic, locally graphitic, argillite and siltstone (not completely exposed)
Contact Unit Lower Member: Areally-restricted basal rhyolite-mudstone breccia (hosts stratiform 21 Zone VMS mineralization)	Not exposed

TABLE 6.1.1 (continued)
HAZELTON GROUP STRATIGRAPHIC COLUMN

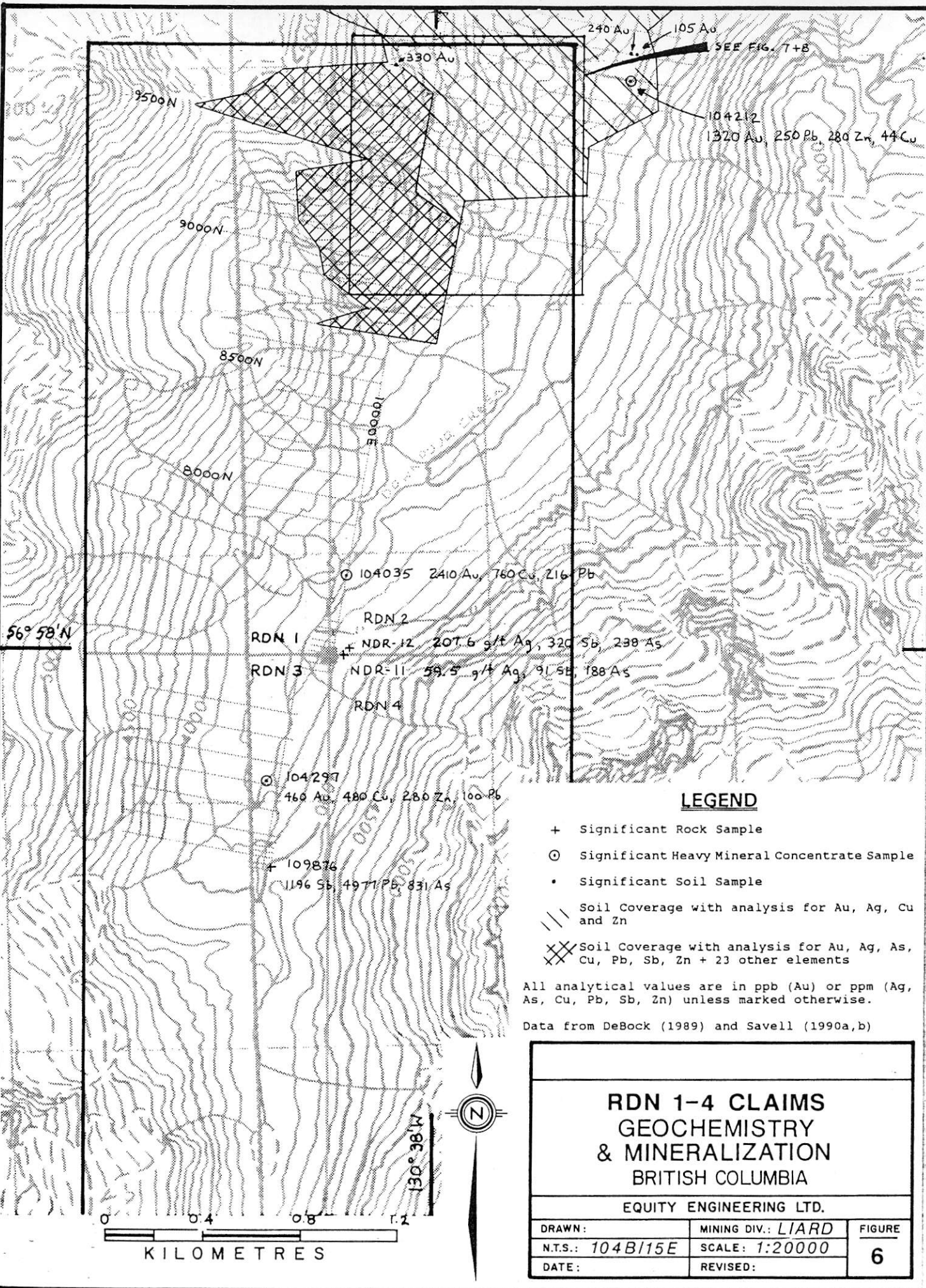
Eskay Creek	RDN Property
<i>Mount Dilworth Formation</i>	
Rhyolite Unit (included by Rye et al (1993) in the Salmon River Formation): 80 metres of rhyolitic flows, capped by 0-15 metres of areally-restricted rhyolite fragmentals and waterlain tuffs	Unit 7: Rhyolitic crystal-vitric tuff, feldspar-phyric rhyolite and aphyric rhyolitic flows (not divided into discrete felsic packages corresponding to those at Eskay Creek)
Footwall Dacite Unit: 100+ metres of dacitic flows and tuffs	
<i>Betty Creek Formation</i>	
Lower Volcano-sedimentary Unit: Andesitic to dacitic volcanoclastics and fine- to medium-grained immature clastics	Unit 6: Plagioclase-phyric andesitic flows and pyroclastics

6.2 Alteration and Mineralization

Alteration on the RDN property is largely confined to the felsic rocks of the Mount Dilworth Formation. These have been affected by widespread and pervasive silicification, accompanied by development of manganese and iron carbonates. Sericitization, argillization and pyritization is common within and adjacent to the feldspar porphyry intrusives, producing prominent yellow to rusty orange gossans. Extensive ferricrete deposits on the RDN 2 claim (Figure 5) have probably formed from iron leached from the pyritic feldspar porphyries. Despite their alteration, the feldspar porphyry intrusives have returned only background values for base and precious metals on the RDN property. However, 200 metres north of the RDN boundary, Noranda's Gossan Creek Zone yielded a 6-metre chip sample assaying 5.7 g/tonne gold from a siliceous zone within argillized feldspar porphyry (Savell, 1990b).

Also north of the RDN property on the GOZ claims, Noranda located several narrow quartz-sulphide veins within altered Mount Dilworth felsic tuffs. Chip samples from these scattered veins assayed up to 83.1 g/tonne gold across one metre (Savell, 1990b). No comparable mineralization has yet been found on the RDN claims.

The only significant precious metal values found to date on the RDN property (Figure 6) come from the Marcasite Gossan, a "strongly silicified body of porphyritic rhyolite with numerous narrow veins and anastomosing stringers of coarse marcasite after pyrite, with grey to black chalcedonic quartz and minor pyrobitumen" (Savell, 1990b). Grab sample NDR-11, taken 50 metres east of the common RDN legal corner post from a pyritic quartz zone within pyritic, silicified and sideritic felsic volcanics, returned



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- + Significant Rock Sample
- ⊙ Significant Heavy Mineral Concentrate Sample
- Significant Soil Sample
- /// Soil Coverage with analysis for Au, Ag, Cu and Zn
- XXX Soil Coverage with analysis for Au, Ag, As, Cu, Pb, Sb, Zn + 23 other elements

All analytical values are in ppb (Au) or ppm (Ag, As, Cu, Pb, Sb, Zn) unless marked otherwise.

Data from DeBock (1989) and Savell (1990a,b)

<h2 style="margin: 0;">RDN 1-4 CLAIMS GEOCHEMISTRY & MINERALIZATION BRITISH COLUMBIA</h2>		
EQUITY ENGINEERING LTD.		
DRAWN:	MINING DIV.: LIARD	FIGURE
N.T.S.: 104B/15E	SCALE: 1:20000	6
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59.5 g/tonne (1.7 oz/ton) silver, 188 ppm arsenic and 91 ppm antimony. Grab sample NDR-12, taken 30 metres further northeast from a vuggy quartz breccia, contained 207.6 g/tonne (6.1 oz/ton) silver, along with 320 ppm antimony, 722 ppm lead and 238 ppm arsenic (DeBock, 1989). Several other samples taken nearby and from the South Gossan 1,000 metres to the south also contained anomalous arsenic and antimony. The most anomalous sample (109876) reported from the South Gossan, with 1196 ppm antimony and 831 ppm arsenic, was taken from weakly silicified, sulphide-poor [felsic?] volcanic (Savell, 1990a).

7.0 GEOCHEMISTRY AND GEOPHYSICS

7.1 Stream Sediment Geochemistry

Noranda collected a total of 34 heavy mineral concentrate samples from larger streams on the GOZ and RDN claims (Savell, 1990a,b). These were sieved and panned in the field from 20 litre stream gravel samples. The most gold-rich sample (104035) in the entire survey was taken from Downpour Creek approximately 330 metres north of the RDN 1-4 LCP, with 2410 ppb gold, 760 ppm copper, 216 ppm lead and 260 ppm zinc. No gold-bearing mineralization has yet been found upstream in this drainage. The next highest gold value in this survey was returned from sample 104212 in Gossan Creek, which passes through the northeastern corner of the RDN 2 claim. It contained 1320 ppb gold, 44 ppm copper, 250 ppm lead and 280 ppm zinc, and could be due to reported gold-bearing mineralization a few hundred metres north of the RDN claims in the Gossan Creek Zone. However, in part it may also reflect a still undiscovered source for the gold-bearing soil samples nearby. The fourth highest gold value (460 ppb) was returned from sample 104297, taken 300 metres north of the South Gossan on the RDN 3 claim. This anomaly is confirmed by silt sample 104042, taken from the same stream the year before, which yielded 164 ppb gold. No mineralization has been reported from this drainage. It should be noted that all of these anomalous samples were taken from streams draining the felsic/sediment contact, where Eskay Creek-equivalent VMS mineralization could be expected.

A total of 104 silt samples were taken in 1989 and 1990 by Noranda, but the "overall silt geochem response from the [GOZ/RDN] property was poor even from areas in which mineralization is found. There are elevated levels of Cu (50-100 ppm), Pb (20-47 ppm) and Zn (200-600 ppm) in streams draining the felsic volcanics, main gossan and extensive black argillites. Samples from the altered and mineralized areas are distinguished by higher As (30-62 ppm) and Sb (4-11 ppm) levels" (Savell, 1990b).

7.2 Soil Geochemistry

In 1990, Noranda took 375 soil samples from the northeastern corner of the RDN 2 claim (Figures 6-8) and a further 1,009 from the GOZ claims to the north (Savell, 1990b). All of the RDN samples were analyzed geochemically for Au, Ag, Cu and Zn; most were also analyzed for Pb. Only the westernmost samples were analyzed by ICP for a wider range of elements, including arsenic and antimony.

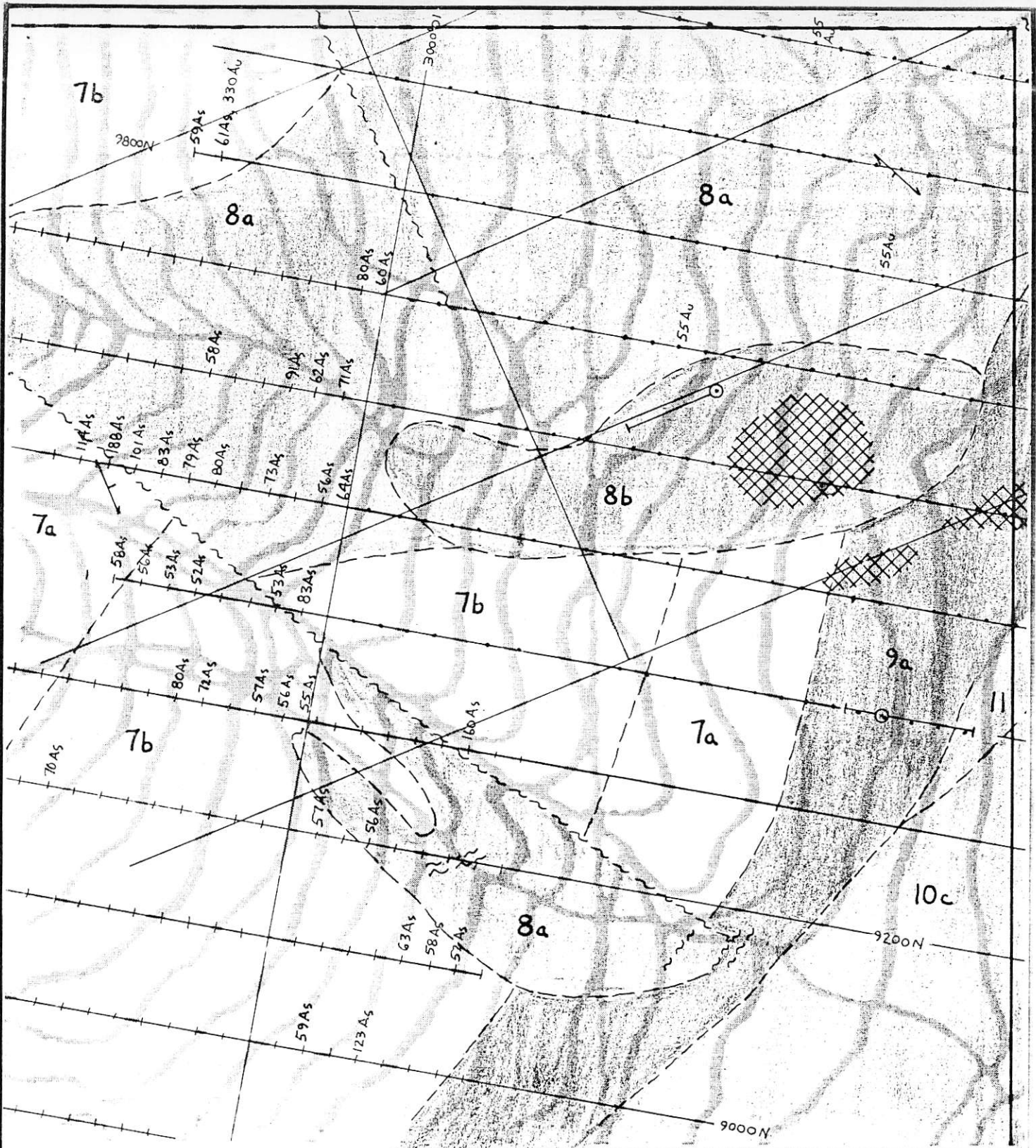
Throughout the GOZ and RDN properties, soil samples over the Mount Dilworth felsic volcanics and feldspar porphyry intrusives returned generally high lead (>50 ppm) and zinc (>200 ppm) values. Gold-bearing quartz-sulphide veins within the felsic rocks are marked by higher lead and zinc values accompanied by anomalous gold, silver and arsenic. Maximum values for soil sampling from the two properties were: 4900 (330) ppb Au, 13.2 (5.0) ppm Ag, 369 (285) ppm As, 3881 (532) ppm Pb, 51 (20) ppm Sb and 2272 (1208) ppm Zn (maximum values for RDN in parentheses).

On the RDN property, two soil lines tested the felsic volcanic/argillite contact (equivalent to the contact which hosts Eskay Creek's syngenetic mineralization) with analysis for Au, Ag, Cu, Zn \pm Pb (Figures 7 and 8). Soil results were generally low over this contact, but this could be due to masking by thick overburden, which measured 11-15 metres in nearby holes RG91-26 and -27. However, a few hundred metres east of the RDN 2 boundary, several anomalous soil samples, with up to 240 ppb gold and 13.2 ppm silver, were taken from an area "underlain by brecciated, sheared and bleached argillite and fine tuffs" without apparent mineralization (Savell and Grill, 1991). Clearly, this unexplained soil anomaly, in an area of better outcrop exposure, could reflect gold-rich syngenetic mineralization along the felsic/sedimentary contact.

7.3 Geophysics

An airborne magnetometer/VLF-EM survey was carried out over the RDN/GOZ property in 1990 by Noranda (Savell, 1991). The total magnetic field survey showed a magnetic relief of less than 300 nT over the RDN property (Figure 9). West of the Forrest Kerr Fault, the magnetics effectively separate the metasediments (magnetic lows) from the metavolcanics (magnetic highs). The Betty Creek andesites which outcrop on the southern part of the RDN 3 and 4 are also represented by a magnetic high. However, the Stuhini Group andesites, the Mount Dilworth felsic volcanics and intrusives and the Salmon River sediments cannot be separated on the basis of their magnetic signatures.

Apparent resistivity, calculated from the airborne survey, ranges from 140 to 3500 ohm-metres on the RDN claims (Figure 10). However, it appears to reflect topography rather than lithology or



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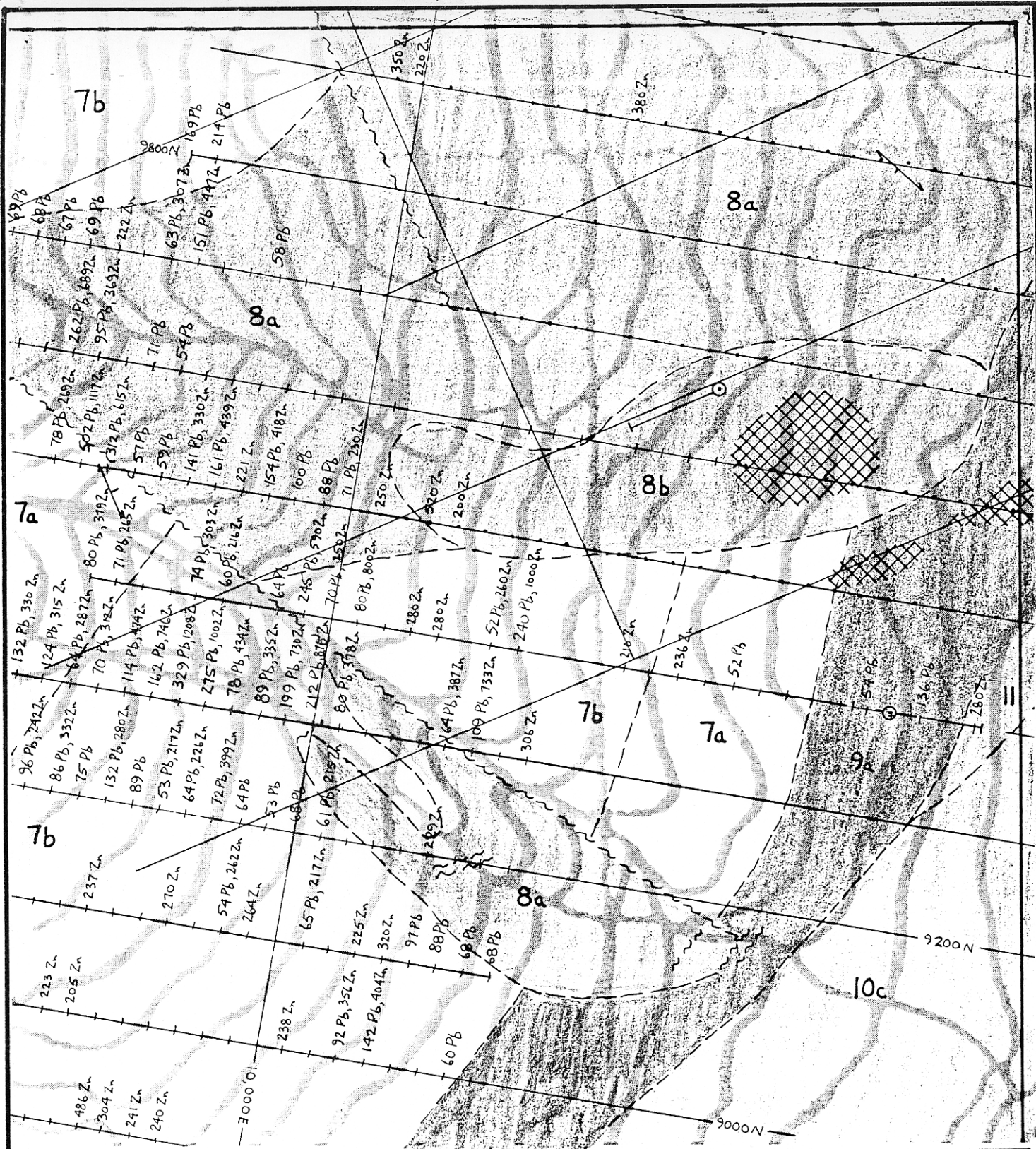
- + Soil Sample (As and Au analysis)
- Soil Sample (Au analysis only)

Values shown only for samples exceeding 50 ppm As or 50 ppb Au. As values are in ppm; Au values are in ppb.

Data from Savell (1990b), Figures 5 and 10.



RDN 1-4 CLAIMS		
AU - AS		
SOIL GEOCHEMISTRY		
BRITISH COLUMBIA		
EQUITY ENGINEERING LTD.		
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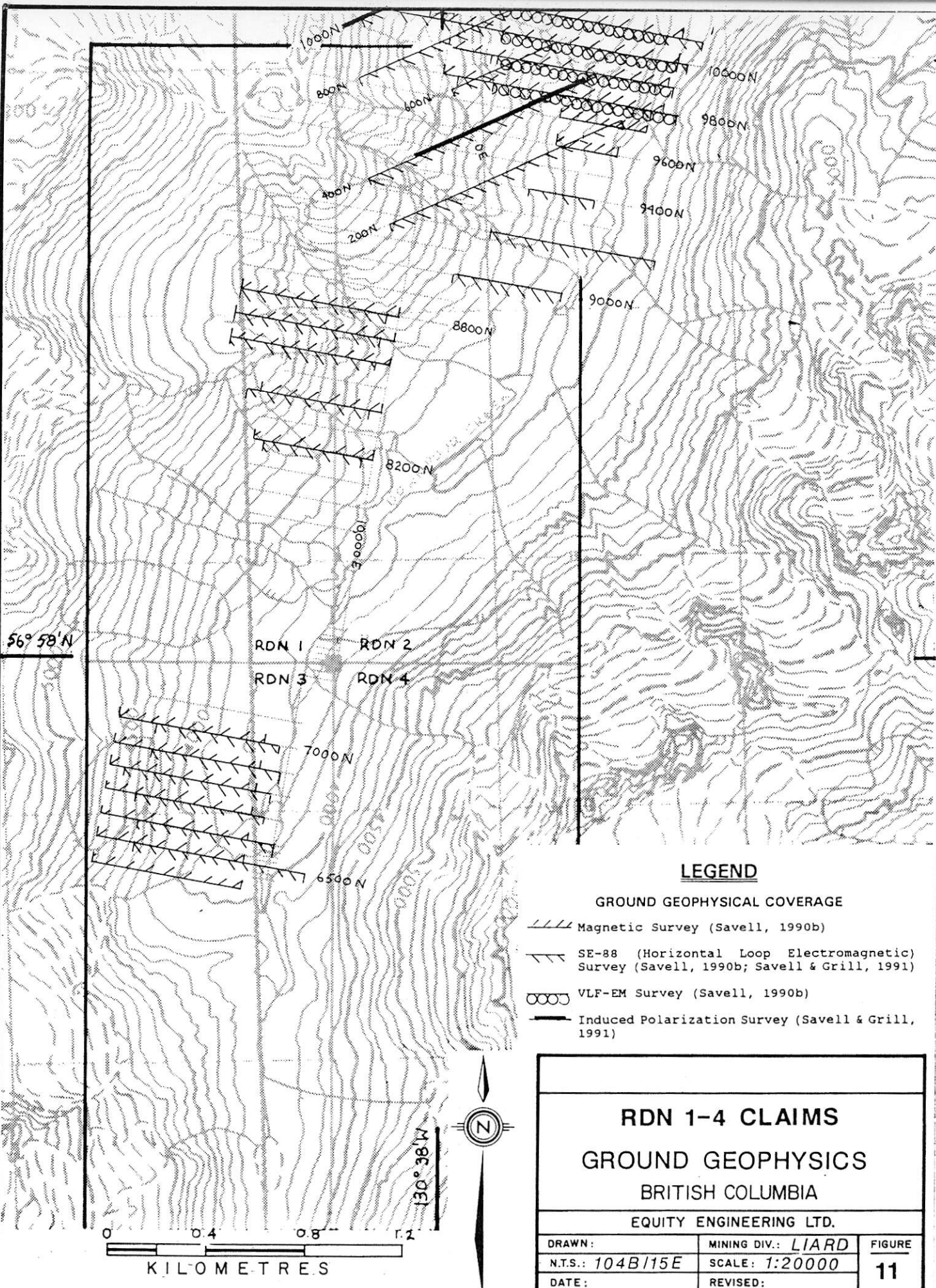
- + Soil Sample (Pb and Zn analysis)
- Soil Sample (Zn analysis only)

Values shown only for samples exceeding 50 ppm Pb or 200 ppm Zn. All values are in ppm.

Data from Savell (1990b), Figures 8 and 9.



RDN 1-4 CLAIMS		
PB - ZN		
SOIL GEOCHEMISTRY		
BRITISH COLUMBIA		
EQUITY ENGINEERING LTD.		
DRAWN:	MINING DIV.: <i>LIARD</i>	FIGURE
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GROUND GEOPHYSICAL COVERAGE

- /// Magnetic Survey (Savell, 1990b)
- SE-88 (Horizontal Loop Electromagnetic) Survey (Savell, 1990b; Savell & Grill, 1991)
- VLF-EM Survey (Savell, 1990b)
- Induced Polarization Survey (Savell & Grill, 1991)

RDN 1-4 CLAIMS		
GROUND GEOPHYSICS		
BRITISH COLUMBIA		
EQUITY ENGINEERING LTD.		
DRAWN:	MINING DIV.: <i>LIARD</i>	FIGURE
N.T.S.: <i>104B/15E</i>	SCALE: <i>1:20000</i>	11
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alteration.

Limited ground magnetic, HLEM (horizontal loop), VLF and IP (induced polarization) surveys were carried out in selected areas (Savell, 1990b; Savell and Grill, 1991), mainly to define airborne geophysical anomalies (Figure 11). With the exception of the induced polarization survey, which was limited to one line on the RDN 2 claim and a second line 600 metres to the north, these surveys provided little useful information. The IP survey along line 400N showed a 175 metre zone of moderately increased polarization, locally accompanied by a pronounced resistivity increase. This corresponds to sericitized and argillized, pyrite-rich feldspar porphyry, tested by drill hole RG91-19.

8.0 DIAMOND DRILLING

Three diamond drill holes, totalling 345.3 metres of BGM core, were drilled by Noranda in 1991 on the RDN 2 claim (Figure 5). The descriptions and data given below are derived from Savell and Grill (1991). Drill data are summarized in Table 8.0.1.

TABLE 8.0.1
DIAMOND DRILL DATA

Hole Number	Coordinates		Azimuth	Dip	Overburden Depth (m)	Total Depth (m)
	N	E				
RG91-19	9665	10320	245°	-45°	10.4	125.0
RG91-26	9388	10517	100°	-60°	15.2	167.6
RG91-27	9388	10517	280°	-45°	11.0	51.8

Hole RG91-19 was drilled entirely within pyritic feldspar porphyry and was designed to test a combined chargeability and resistivity high uphill from a large accumulation of ferricrete. In general, the matrix and phenocrysts of the feldspar porphyry are intensely argillized, with an average of 15% pyrite in disseminations and stringers. From 62.6 to 84.8 metres, the core is variably silicified with 15 to 20% disseminated and stringer pyrite. The entire hole was split and returned very low values for all base and precious metals.

Hole RG91-26 was collared in Salmon River argillites near their contact with the underlying Mount Dilworth felsic tuffs. It was drilled east towards a weak airborne conductor which parallels Downpour Creek. It intersected fine-grained clastic sediments and minor chert which are cut by diorite dykes, but was terminated above the sediment/felsic contact. The sediments consist of interbedded grey chert, finely-bedded green siliceous siltstone and dark grey to black argillite and shale. Bedding is uniformly 40-45° to the core axis; graded bedding from 95.2-100.0 metres fines uphole. These facts, together with the surface outcrop pattern, suggest that the sediments strike roughly 010° and dip 15-20° to the east. Pyrite content increases downward from zero near surface to

3-10% for the bottom fifty metres of the hole as it approaches the felsic/sediment contact. The pyrite is at least partially syngenetic, in "slim bands parallel to bedding". Shearing and faulting are prominent below 60.5 metres, mainly oriented at 45° to core axis (parallel to bedding?). The bottom forty metres of the hole is dominated by shales with scattered graphitic shears. Core was split and analyzed from 124 metres to the bottom of the hole, returning low values for all elements.

In an effort to test the sediment/felsic contact, a second hole (RG91-27) was drilled westwards from the site of RG91-26. This hole followed a diorite dyke down from surface and was terminated at 51.82 metres without encountering either sediments or felsic volcanics.

9.0 DISCUSSION

The RDN claims lie 40 kilometres north of the Eskay Creek gold-rich volcanogenic massive sulphide (VMS) deposit in northwestern British Columbia. Approximately 50% of the RDN property is underlain by felsic volcanics and fine clastic sediments of the Mount Dilworth and Salmon River Formations of the Early to Middle Jurassic Hazelton Group. Stratiform mineralization at the Eskay Creek deposit is hosted within basal Salmon River mudstones overlying the uppermost felsic volcanics. Lithologies and stratigraphy are very similar at Eskay Creek and on the RDN property. At both, the footwall felsic volcanics have been intruded by highly altered, pyritic, feldspar porphyry intrusives. Two phases of these felsic subvolcanic intrusives are present on each property, with the later phase containing potassium feldspar phenocrysts. The Salmon River clastic sediments on each property are quite comparable, although the basal units (which host Eskay Creek's VMS mineralization) are not exposed and have never been drilled or examined on the RDN claims or the adjoining GOZ property. Especially near their base, both are pyritic and carbonaceous. Andesitic flows, tuffs and feeder sills and dykes (the Hanging Wall Andesite) lie a few tens of metres above the felsic/sediment contact on each property.

From 1932 to 1988, all exploration at Eskay Creek was directed at narrow, gold-bearing quartz-sulphide veins hosted within sericitized, silicified and pyritic footwall felsic volcanics. These veins lie up to seven kilometres laterally away from the overlying VMS mineralization of the 21 Zone, which forms the mineable reserves at Eskay Creek. On the GOZ/RDN property, all exploration to date has also been directed at narrow, gold-bearing quartz-sulphide veins which are hosted within sericitized, silicified and pyritic felsic volcanics. These showings occur 200 to 2300 metres north of the northern boundary of the RDN claims.

The potential for Eskay Creek-style stratiform mineralization

along the felsic/sediment contact has not been investigated to any extent on either the RDN or GOZ properties. The contact is nowhere exposed on surface; on the GOZ claims it appears as a recessive gully. A reported rhodonite showing along this contact on the GOZ claims could be a distal VMS exhalite. No drilling has penetrated the felsic/sediment contact; all but two holes on the GOZ and RDN claims were drilled within the footwall felsic package. Of the two holes collared within Salmon River sediments, both on the RDN 2 claim, one was terminated prior to reaching the felsic contact and the other was drilled entirely within a diorite dyke. The four heavy mineral concentrate samples with the highest gold values (two on the RDN claims) all drain the felsic/sediment contact. No gold-bearing mineralization has been found in either of the anomalous drainages on the RDN claims. The geochemical/geophysical grids are confined almost entirely to the footwall felsic rocks. Even though a grid was constructed over the Salmon River sediments south of line 8700N on the RDN 1 and 2 claims, it was not soil sampled. Thick overburden, averaging 11-15 metres, is present in the vicinity of the felsic/sediment contact near holes RG91-26 and -27 on the RDN 2 claim, masking any geochemical expression in this area. A few hundred metres further northeast along this contact off the RDN claims, no source has been found for several anomalous soil samples with up to 240 ppb gold and 13.2 ppm silver. These were taken in an area of better outcrop exposure, underlain by "brecciated, sheared and bleached argillite and fine tuffs" downslope from the felsic/argillite contact.

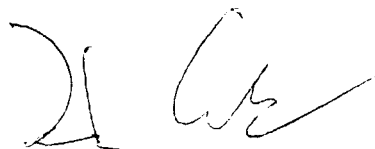
Several geophysical techniques have been tested on the RDN claims, including magnetics, VLF-EM, horizontal loop EM and induced polarization without much success. The electromagnetic techniques did not reveal any significant conductors, even across the felsic/sediment contact. However, electromagnetic techniques were not useful in defining the Eskay Creek deposit (S. Visser, pers. comm.), not surprising given the relatively low sulphide content, the abundant sphalerite and the masking presence of graphite in the overlying sediments. The felsic/sediment contact on the RDN claims was not tested by induced polarization; this probably wouldn't show much in any case, given the high pyrite content in both footwall felsics and hanging wall shales.

Only the northeastern portion of the RDN property has received more than reconnaissance geological mapping. As a result, the only defined target is the 350 metres of felsic/sediment contact indicated by grid mapping in the northeast corner of the RDN 2 claim. The large area in the centre of the claim group which is thought to be underlain by Salmon River Formation argillites and siltstones remains almost unexplored, without detailed mapping, prospecting or any soil geochemistry. The porphyritic rhyolites of the Marcasite and South Gossans on the RDN claims, with highly anomalous arsenic and antimony contents, host chalcedonic quartz and pyrobitumen. At Eskay Creek, intensely altered rhyolite immediately beneath the 21A Zone contains disseminated arsenopyrite

and stibnite (Roth, 1993), and chalcedonic silica and pyrobitumen are prominent within 21A Zone mineralization (Britton et al, 1990). The contact relationships of the Marcasite and South Gossan rhyolites with the surrounding sediments are not known. If they are sedimentary contacts, then that contact would be a highly prospective Eskay Creek-type target in the immediate vicinity of the Marcasite and South Gossans. The two highly anomalous heavy mineral concentrate samples on the RDN property both drain the felsic/sediment contacts in the vicinity of the Marcasite and South Gossans and absolutely no gold-bearing mineralization has been discovered to explain these anomalies. Elsewhere, the Unit 9 argillites and siltstones will overlies the felsic volcanics and their contact will be a favourable target, but mineralization will be deeper and drill targets will be more difficult to define.

The Eskay Creek deposit is a very high-grade precious metal-enriched volcanogenic massive sulphide deposit containing over four million ounces of gold, mainly hosted within stratiform mineralization deposited along a felsic/sedimentary contact. The RDN property covers approximately three kilometres strike length of identical stratigraphy at the locus of another felsic flow-dome complex forty kilometres to the north. Footwall alteration and mineralization are very similar between the two properties. Highly favourable stream geochemistry draining the felsic/sedimentary contact has never been explained. The excellent potential of the RDN property for hosting Eskay Creek-style mineralization requires further investigation.

Respectfully submitted,



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Vancouver, British Columbia
May, 1993

APPENDIX A

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