

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
MINISTRY OF ENERGY AND MINES
GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR: 2001/2002

REPORT #: PAP 01-26

NAME: DERROL ANDERSON

D. TECHNICAL REPORT

- One technical report to be completed for each project area.
- Refer to Program Regulations 15 to 17, page 6.

SUMMARY OF RESULTS

- This summary section must be filled out by all grantees, one for each project area

Information on this form is confidential for one year and is subject to the provisions of the Freedom of Information Act.

Name D. WAYNE ANDERSON. Reference Number P47 2001-2002.

LOCATION/COMMODITIES

Project Area (as listed in Part A) ERIE CREEK MINFILE No. if applicable _____
Location of Project Area NTS MOB2F024. Lat 49°17.701' Long 117°23.333'
Description of Location and Access PROCEED NORTH ON LOGGING ROAD, EAST SIDE OF ERIE CREEK FOR 15.4 KM. INITIAL POST OF KODI 362 IS APPROX 75 METERS TO EAST.

Prospecting Assistants(s) - give name(s) and qualifications of assistant(s) (see Program Regulation 13, page 6)

L. WALKER, FREE MINER. ✓
R. WALKER, GEOLOGIST. ✓

Main Commodities Searched For _____

Known Mineral Occurrences in Project Area GOLD - SECOND RELIEF (OB2FSW1B7)
LARGE GOLD ENRICHED SEARN PRODUCER.
HARRIET (OB2FSW1BB) - GOLD, SILVER.

WORK PERFORMED

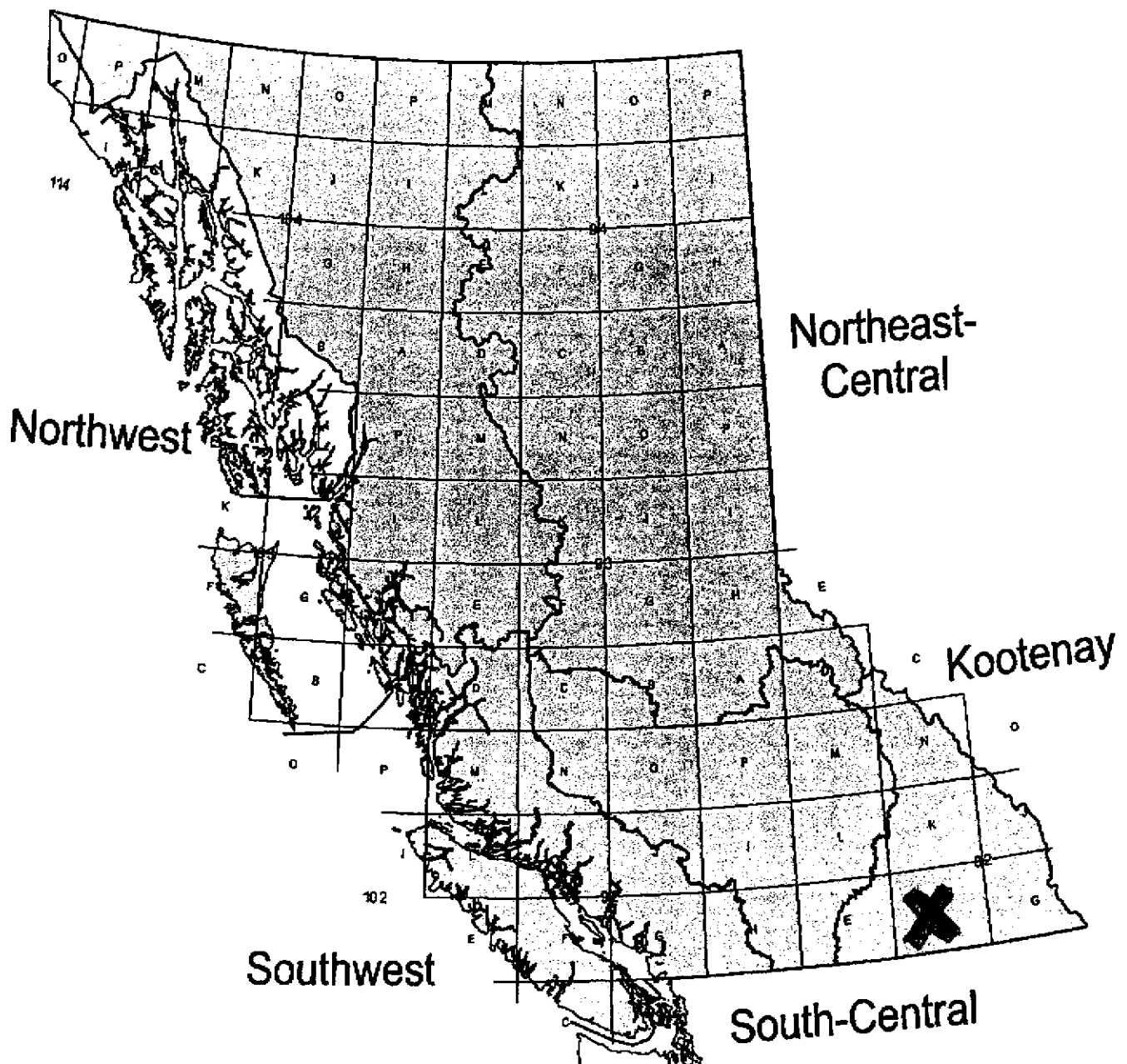
1. Conventional Prospecting (area) 600 HECTARES - KODI + 200 HECTARES - GRANITE AREA ✓
2. Geological Mapping (hectares/acre) 100 HECTARES. ✓
3. Geochemical (type and no. of samples) SOIL 74, ROCK 25.
4. Geophysical (type and line km) ELEV. GRIDS APPROX 2300 METERS.
5. Physical Work (type and amount) CLEAN OLD WORKINGS, MINE ACCESS & ADIT, STAKED 24 CLAIM UNITS.
6. Drilling (no. holes, size, depth in m, total m) _____
7. Other (specify) BRUSH & CLEAR ACCESS (ON PROPERTY)
+ ADDITIONAL ANALYSIS - 32 SAMPLES FOR AU, 7 FOR AG, 2 FOR ZN

FEEDBACK: comments and suggestions for Prospector Assistance Program _____

PROGRAM PROPOSAL - PART B

Location of Proposed Project(s)

Indicate on this map (using an "X") the general location of each of the projects covered by this proposal.



Assessment Report for the

KODI Claims

Nelson Mining Division

B.C.G.S. 082F 024

Latitude: 49° 19' 20" N, Longitude 117°, 23', 44" W

for

Wayne Anderson

Castlegar, BC

Submitted by:

Richard T. Walker, P.Geo.

of

Dynamic Exploration Ltd.

656 Brookview Crescent

Cranbrook, BC

V1C 4R5

Submitted: January, 2002

SUMMARY

INTRODUCTION

The following report is submitted in support of a Prospectors Assistance Program grant (P47) received by Wayne Anderson for use in the Erie Creek drainage. A total of 58 Prospecting days were expended in the Erie Creek area, 10 days along Granite Creek immediately west of the former Second Relief Mine and 48 days staking, prospecting and sampling in and around the KODI claims, comprised of 24 contiguous two-post claims located immediately east of Erie Creek and south-southeast of the Second Relief Mine.

In the course of researching previous work completed around the KODI claims, numerous Assessment Reports pertaining to the DOG, STEWART and E.CLAIRE claims (the Denny Property) were reviewed. Several different types of mineralization have been proposed and documented on these claims (located south-southeast of the KODI claims). Strongly anomalous gold has been documented on this property, with or without anomalous copper. It is believed similar potential exists on the KODI claims, particularly with the proximity of the Second Relief Mine immediately to the north.

In the course of initial prospecting in the Granite Creek and Erie Creek drainages, an old adit (previously reported as the Robb Adit (Santos 1986) was re-located and examined. The KODI claims were staked to cover the Robb Adit, mineralization identified surrounding the adit and ~~the~~ to cover the mapped intrusive contact of the Bonnington Pluton (Nelson Intrusive Suite) with the host Rossland Group strata. No mineralization was identified during a total of five traverses in the Granite Creek valley which, according to mapping, has similarly incised into an intrusive contact between the Bonnington Pluton and the Rossland group (Höy and Andrew 1988).

Physical work included limited work to brush out an old trail to enable ATV access to the Robb Adit, work to access and clean out the adit itself and survey the adit. Sampling consisted of 25 rock samples (predominantly from the Robb Adit) and 74 soil samples along extending roughly north-south from the Robb Adit along contours (approximately perpendicular to the mapped trace of the intrusive contact).

25 Rx
74 Soils

All samples were analyzed for 42 element ICP, using a four acid digestion at Acme Analytical Laboratories Ltd in Vancouver. In addition, a subset were analyzed for gold and silver based on moderately to strongly anomalous copper, arsenic and/or bismuth. Several samples were analyzed for zinc and silver as they exceeded the ICP detection limits.

A total of \$11,329.93 was expended on the KODI claims for the purposes of the Prospectors Assistance Program.

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LOCATION AND ACCESS

The study area is located immediately east of Erie Creek (Fig. 1 and 2) on BCGS mapsheet 082 F024, (NTS Mapsheet 082FSW06W) approximately 16 km west-northwest of the community of Salmo. The claims are centred at approximate coordinates:

Latitude: 49° 19' 20" N, Longitude 117°, 23', 44 W
UTM 471250 E, 5463133 N

The claims can be easily accessed from Highway 3 by turning north off the highway at Second Relief Road. A well maintained logging road can be followed for approximately 16 kilometres to a short trail leading to the ROBB adit (Santos,) in the core of the KODI two post claim block.

Deactivated logging and old mine trails (associated with the Second Relief Mine, a Past Producer) provide ATV access throughout much of the western and northern portion of the claims. These road networks provide access to the remainder of the claims for foot traverses.

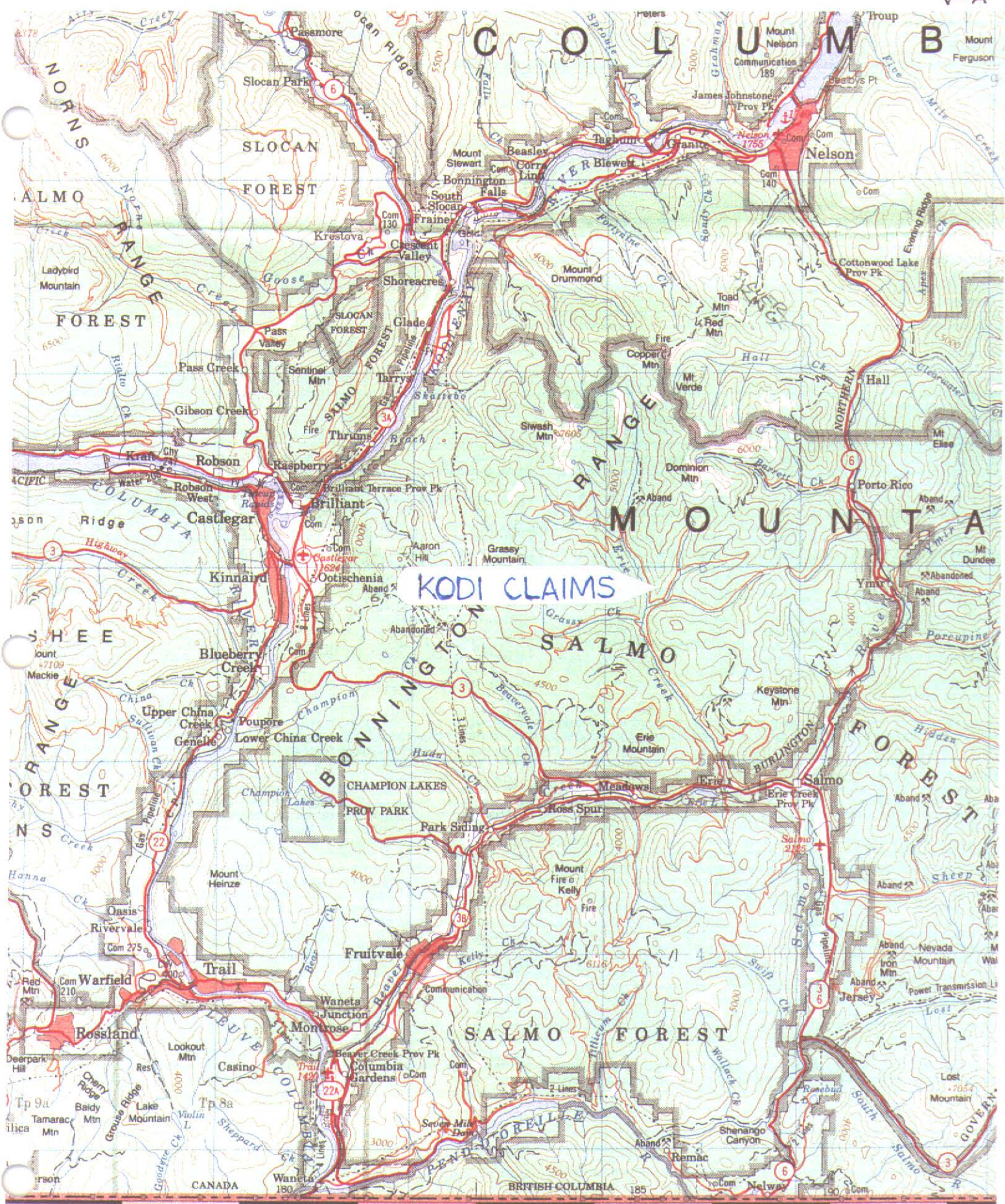
PHYSIOGRAPHY AND CLIMATE

The claims lie west of the confluence of the Columbia and Kootenay rivers and along Erie Creek which extends into the core of the Bonnington Range, a local topographic high. In addition, the claims lie west of the Nelson Range (and Kootenay Lake) and is therefore subject to relatively heavy snowfall in the winter months.

The claims are located within moderately rugged, glaciated terrain with elevations ranging between 1065 metres (3500 feet) and 1675 metres (5500 feet). Outcrop is limited and is usually exposed to a greater degree along ridge tops. Vegetation can be quite dense along the mountain slopes, particularly along creek beds.

The creek valleys tributary to Erie Creek flow essentially east-west and so have extensive north facing slopes which retain snow pack well into the field season. Field work on the claims can commence as early as May, with work on north facing slopes commencing somewhat later.

The property can be worked from mid-May to late October.



45° UNITED STATES OF AMERICA 30° WASHINGTON 15°
title Falls 67 km Kettle Falls 69 km Lone 48 km 1:250000

Produced by the SURVEYS AND MAPPING BRANCH,
DEPARTMENT OF ENERGY, MINES AND RESOURCES
Updated from large scale maps. Information current as shown in

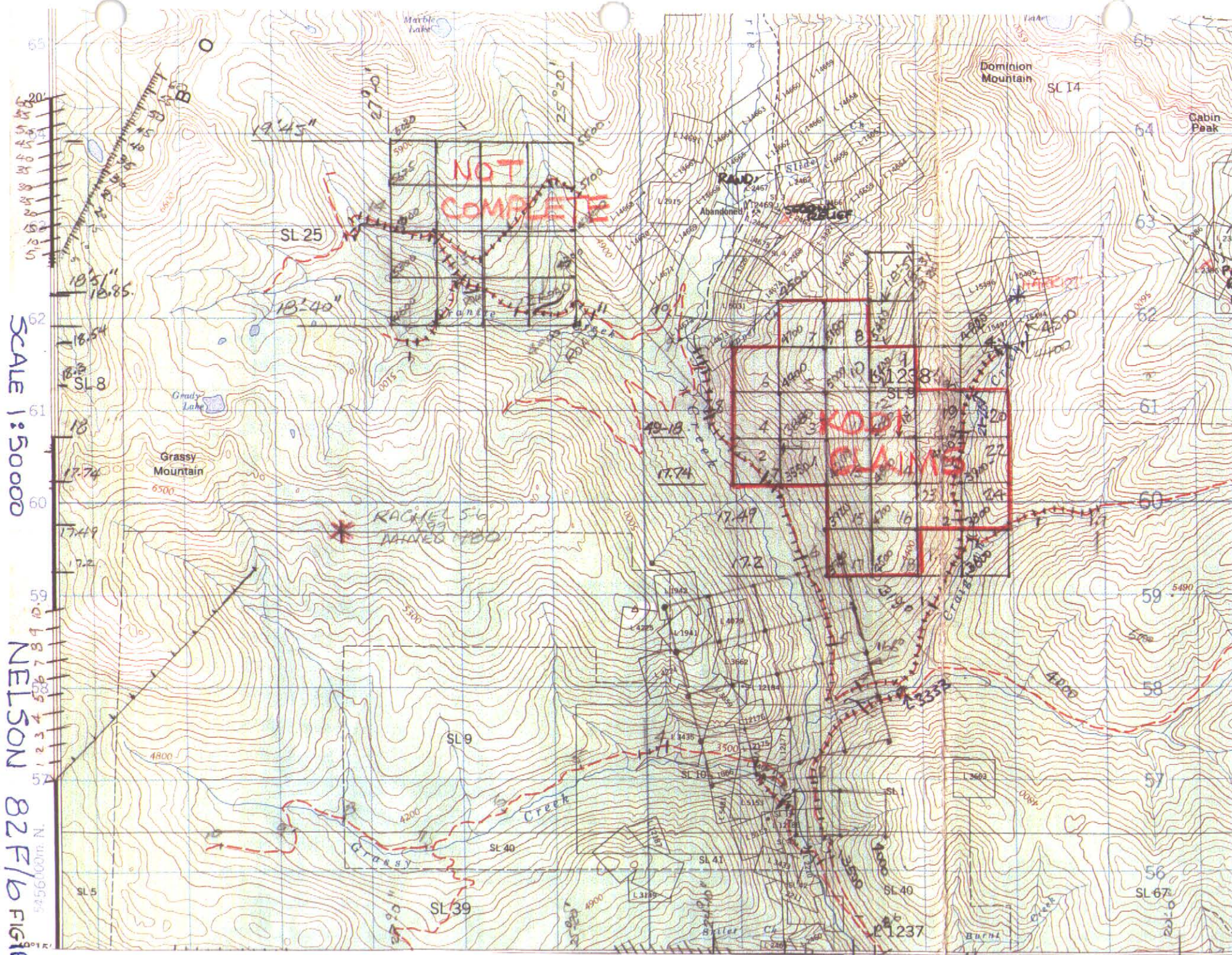
LOCATION MAP FIGURE 1A

SCALE 1:50000

NELSON

82F/6 FIG 18

5456100m. N.



CLAIM STATUS

The property consist of 24 2-post claims (see Figure 2), staked in accordance with existing government claim location regulations. Significant claim data is summarized below:

Tenure Number	Claim Name	Work Recorded To	Status	Units
386741	KODI 1	2002/06/02	Good Standing	1
386742	KODI 2	2002/06/02	Good Standing	1
387056	KODI 3	2002/06/08	Good Standing	1
387057	KODI 4	2002/06/08	Good Standing	1
387058	KODI 5	2002/06/08	Good Standing	1
387059	KODI 6	2002/06/08	Good Standing	1
387609	KODI 7	2002/06/26	Good Standing	1
387610	KODI 8	2002/06/26	Good Standing	1
387611	KODI 9	2002/06/26	Good Standing	1
387612	KODI 10	2002/06/26	Good Standing	1
387613	KODI 11	2002/06/26	Good Standing	1
387614	KODI 12	2002/06/26	Good Standing	1
387615	KODI 13	2002/06/26	Good Standing	1
387616	KODI 14	2002/06/26	Good Standing	1
387617	KODI 15	2002/06/26	Good Standing	1
387618	KODI 16	2002/06/26	Good Standing	1
387619	KODI 17	2002/06/26	Good Standing	1
387620	KODI 18	2002/06/26	Good Standing	1
390445	KODI 19	2002/10/23	Good Standing	1
390446	KODI 20	2002/10/23	Good Standing	1
390447	KODI 21	2002/10/23	Good Standing	1
390448	KODI 22	2002/10/23	Good Standing	1
390449	KODI 23	2002/10/23	Good Standing	1
390450	KODI 24	2002/10/23	Good Standing	1

RECORDERS SKETCH STAMP
(SUB) RECORDER'S INFORMATION

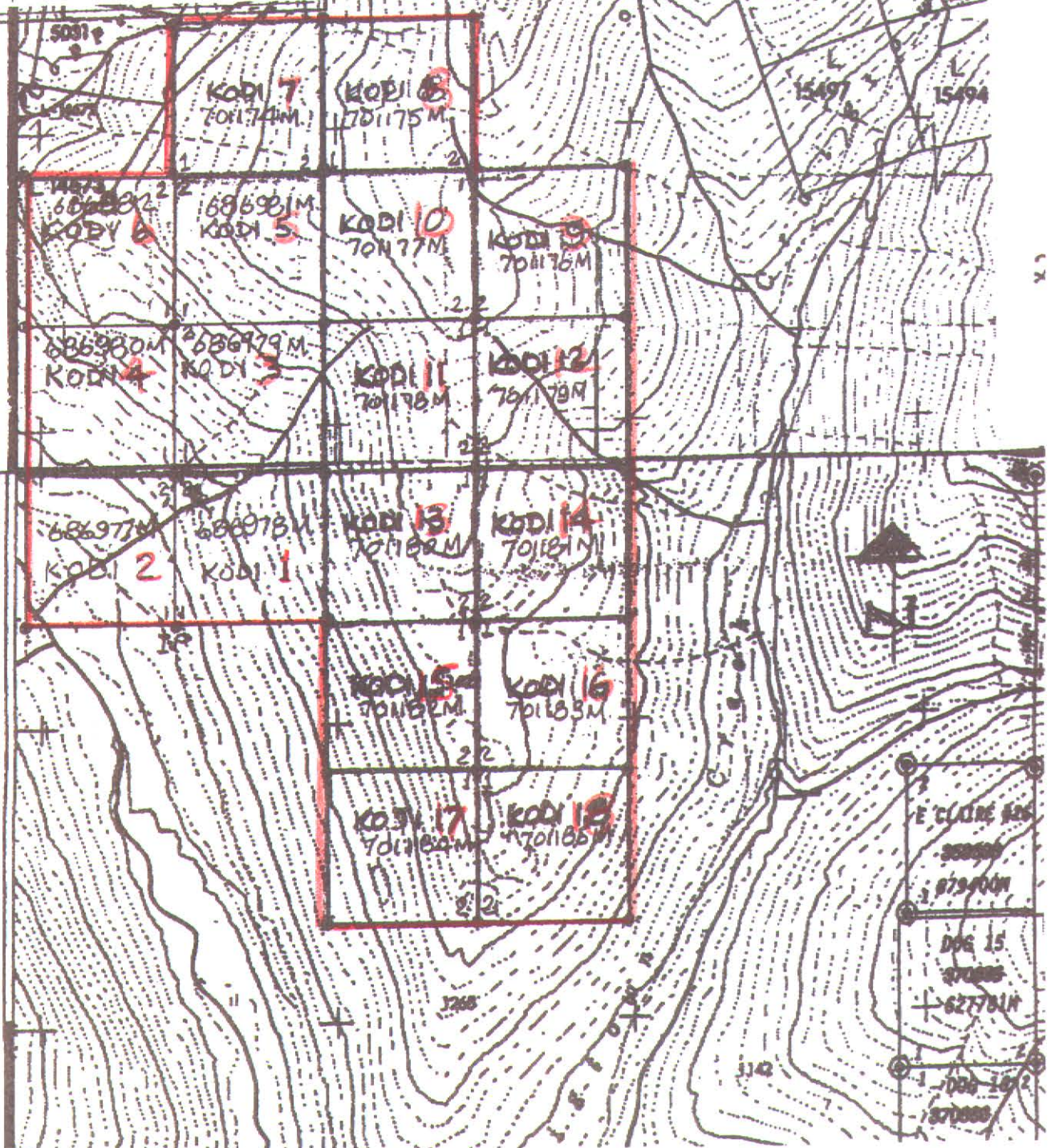
CLAIM NAMES: KODI 7-20
RECORD NUMBERS: 387609-20
MINING DIVISION: NELSON
MAP NUMBER: 82F/034 4024

MINERAL TITLES BRANCH
DRAFTING INFORMATION

DATE COMPLETED: _____
INITIALS: _____

TENURES 387609-20
NELSON M.D.

Vi - A



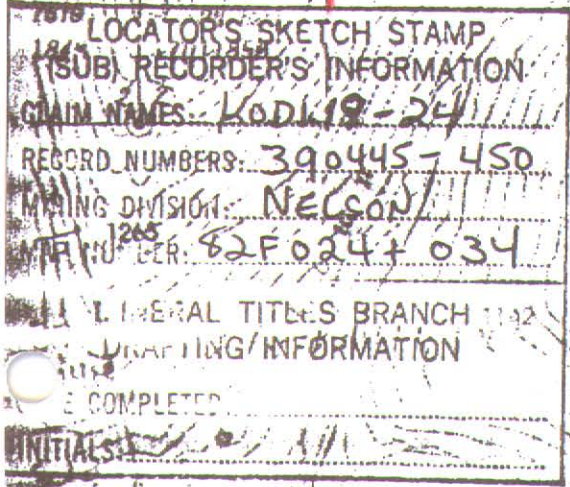
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KODI CLAIMS 1-18

FIGURE 2A

FIGURE 2A

21

$$v_i - \{$$


KODI CLAIMS 19-24

WORK HISTORY

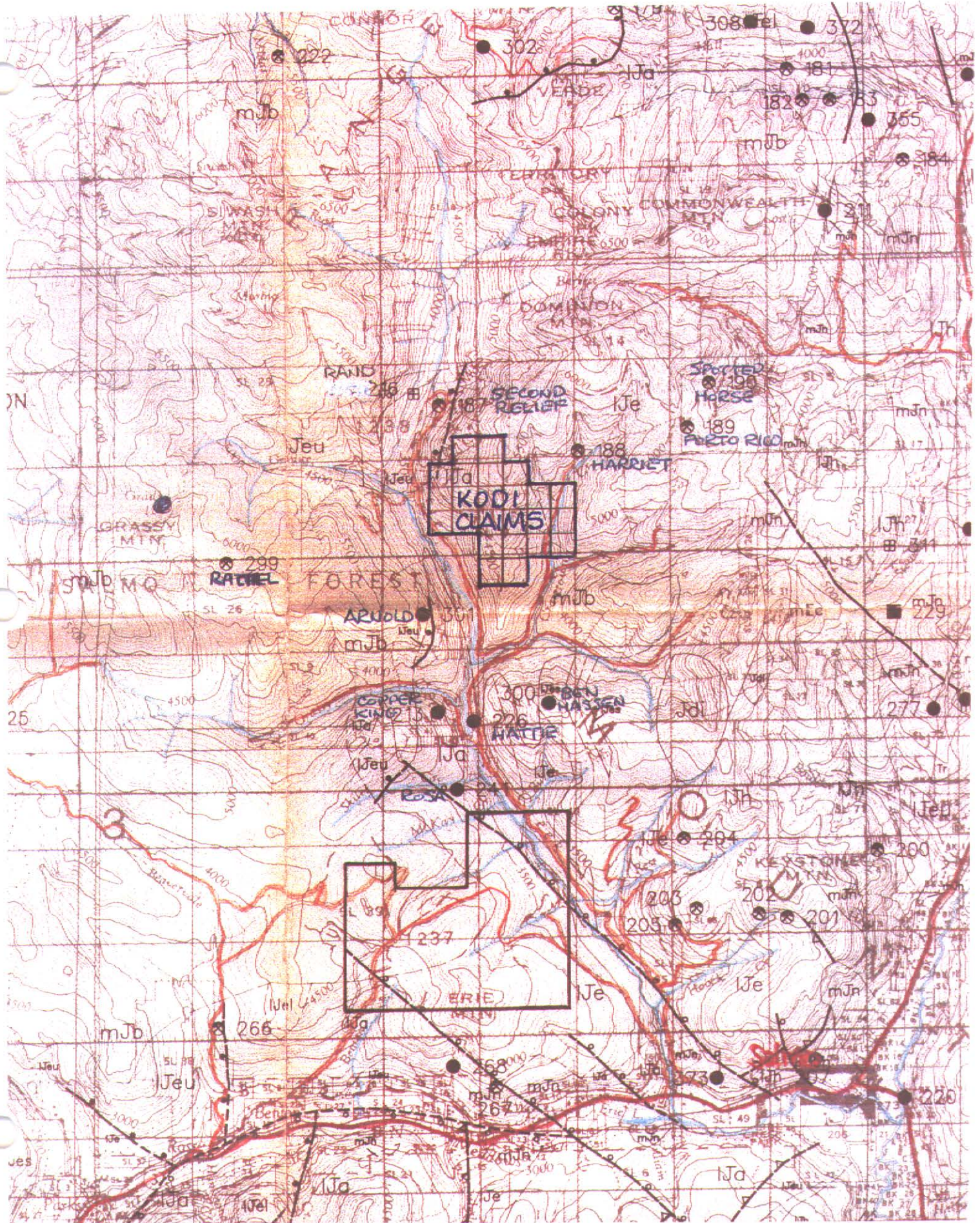
There is approximately 100 years of work documented in Assessment Reports, Minister of Mines Reports and the provincial Minfile database. Furthermore, a large number of Past Producers are documented in the area in the Minfile database, with production ranging from 10 tonnes (Second Chance - Minfile # 201, north of Salmo) to 207,022 tonnes (Second Relief - Minfile # 187, Erie Creek). Deposit types reported for occurrences identified in the area include:

- I01 - Au - quartz veins
- I02 - Intrusion-related Au pyrrhotite veins
- I05 - Polymetallic veins Ag-Pb-Zn ± Au
- I12 - W veins
- K01 - Cu Skarn
- K04 - Au Skarn
- K05 - W Skarn
- L01 - Subvolcanic Cu-Ag-Au (As-Sb)
- L03 - Alkalic porphyry Cu-Au
- L07 - Porphyry W

Minfile occurrences considered directly applicable to this proposal are tabulated in Table 1 and indicated on Figure 3. More detail regarding the stratigraphy and structure have been reproduced in the following pages, with specific reference to the Second Relief, Porto Rico and Spotted Horse Past Producers.

Considerable work has been done on the area immediately south of Nelson to Hall Creek and the height of land with the headwaters of Erie Creek. This work has tested porphyry and fault/fracture/fissure mineralization within and associated with the Rossland Group and the Silver King intrusions. However, it is believed there is, apparently, markedly less work along the trace of the Red Mountain Fault, to test this structure as a possible control on mineralization. Therefore, it is proposed to stake the available open ground south of the current existing claims in the headwaters of Fortynine and Rover Creeks along the surface trace, and in the hangingwall, of the Red Mountain Fault.

See Minfile Reports in Appendix 1.



KODI CLAIMS FIGURE 3
MINFILE MAP 082.FSW.

Table 1 - Compilation of Minfile occurrences located along or in the immediate vicinity of the Red Mountain Fault. Production data has also been compiled and average grades determined from production records.

Name	Minfile # 082FSW	Tonnes Mined	Au (grams)	Silver (grams)	Lead (kg)	Zinc (kg)	Copper (kg)	Au oz/t	Ag oz/t	Lead %	Zinc %	Copper %
Miracle	90	24	311	778				0.38	0.95			
May and Jennie (L. 3943)	91	272	1213	933				0.13	0.10			
Gold Hill	92	115	9424	7837			1558	2.39	1.99			1.4
Northern Light	178	31	62	1835			124	0.06	1.73			0.4
Golden Eagle	179	104	3951	4385	2028	1082		1.11	1.23	2.0	1.0	
Second Relief (L. 2463)	187	207022	3117637	858347	1057	147	20210	0.44	0.12	0.0	0.0	0.0
Harriet	188	144	10265	1772				2.08	0.36			
Porto Rico (L. 2385)	189	5740	178470	46405	138	51	322	0.91	0.24	0.0	0.0	0.0
Spotted Horse (L. 5375)	190	47	1649	2083				1.02	1.29			
Copper King (L. 5153)	213							0.01	0.59			
Rand (L. 14666)	216							6.97	1.11			
Rosa (L. 2480)	241							0.00	6.22			
Ben Hassen (L. 3663)	300							0.01	7.58			
Arnold (L. 4079)	301							0.00	1.96			
Rhea	302							0.48	46.25	0.8	0.0	0.2

In addition to the mining activity associated with the Second Relief to the north, considerable work has been completed on the Denny Property to the south-southeast of the KODI claims as well as limited work (as documented in Assessment Reports) on the KODI claims themselves.

A summary by Santos (1986) is as follows:

"There is no known record of any work done of the property prior to 1980. A drift, 150 metres long was driven following a quartz vein. Markings with a carbide lamp on the wall of this drift reads" A. Holm, Oct. 14, 1934. Robb?

The property was originally owned by Ray Clark, John Beaulieu, and Tom Brown of Salmo who staked the claim in 1980. A geochemical soil profile and VLF-EM profile were conducted on the property by the author for Cominco Ltd. ... in 1980".

During the 1985 field season, P.J Santos completed a limited program on the Robb Adit and the immediately surrounding area (Santos 1986). A geochemical soil survey, comprised of 170 B-horizon soil samples on lines spaced 100 metres apart with a 25 metre station interval, and underground mapping and sampling were completed in October, 1985. The samples were analyzed for Au, Ag, Pb, Zn and As. The rock samples were analyzed for Au and Ag, and returned low values.

The Denny Property, comprised of the DOG, E.CLAIRE and STEWART claims, is located to the southeast of the KODI claims. Work has been completed on these claims since 1988, including several thousand geochemical samples, B-horizon soils samples along both contour and grid, rock samples and silt samples, as well as ground geophysics. In addition, a total of four diamond drill holes (totaling 448.8 meters) have been completed north of the south fork of Craigtown Creek. A summary of the work is as follows (from Kaufman 2000):

"The first known exploration of this area was during the late 1970s and early '80s, when B.P.-Selco surveyed the whole Stewart Claim Group with an aerial Input EM and mag survey. Neither these results nor their ground follow up inspired them to carry out further work here. Portions of these gold anomalies were first recognized by Minnova during the late '80s simultaneous with discovery of western portions of it by myself working as a contractor for Lacana/Corona. Reassaying of previously gathered government survey samples released by the B.C.D.E.M. in the early '90s also indicated significantly anomalous gold in the sediment of the south branch of Craigtown Creek. Minnova subsequently carried out soils geochemical surveys followed by an I.P./mag. Geophysical survey. This work delineated extensive areas of anomalous gold with coincident I.P. highs which were

designated by Minnova as the "North" and "South" anomalies. Corona carried out a geological and sampling program west of the Stewart Property on the original Dog Claims. Corona found sporadically anomalous gold in widespread rock samples, and interpreted it to represent "porphyry" type mineralization. Before they were able to carry out systematic sampling, corporate problems forced them to drop their claims. Similarly, Minnova in the early '90s was forced to relinquish the Stewart Property before ever drilling any targets.

During the early '90s, the Stewart Claim group was optioned by Cameco Corp. It drilled four core holes in the northern portion of Minnova's "North Anomaly", and carried out further sampling on the "South Anomaly". The holes cut significantly anomalous gold, but no meaningful ore intercepts, and Cameco pulled out. During this time I acquired the Dog Claims and expanded them. As some of the Minnova soils anomalies along with high I.P. responses appeared to be open to the west, I was prompted to carry out soils sampling south of where Corona had previously sampled. These results proved encouraging. Based upon the facts that there were still promising drill targets on the Stewart portion of the anomaly and that the target appeared to be open to the west, Orvana minerals Corp. optioned both the Stewart and the Dog Claim groups, and carried out comprehensive geological mapping, geochemical sampling and a VLF Em and Mag survey during 1996 and 1997. Orvana's work delineated additional gold anomalies on the Stewart claims, and large areas of anomalous gold on the Dog claims. These recently discovered anomalies cover an area at least as large as the original Minnova anomalies. Overall, the area of gold anomalies now appears to extend more than three km. In a NNE direction, and up to one km. Across. Some of the recently discovered gold anomalies contain coincidental copper, and/or lead. One contains coincidental arsenic. Based upon its work, Orvana selected a number of drill targets. ...

One of the main conclusions of my previous studies of the properties was that some of the I.P. anomalies detected by Minnova appeared to be open to the west. Accordingly, an important step in expanding previous work was to extend the I.P. surveys westward from the Minnova coverage. It was hoped that this work might reveal the limits of these Minnova anomalies, and that it might determine whether there are any sulfide zones in proximity to the large gold soils anomalies found on the Dog claims, never covered by Minnova's I.P. survey ...".

REGIONAL GEOLOGY

Stratigraphy

The following has been taken from Englund (1998):

"The region between Castlegar and Nelson, B.C., ... is underlain by a sequence of Early to Middle Jurassic age volcano-sedimentary rocks. This sequence is intruded by lower Cretaceous plutonic rocks which are in turn intruded by Tertiary dykes.

The area around Mount Connor ... is underlain by volcannic rocks (andesite flows) and metavolcanic rocks (greenstones) belonging to the Triassic and Jurassic (?) Elise Formation (commonly called Rossland Volcanics) and meta-sediments (black slates, argillites, argillaceous quartzites) belonging to the Middle to Upper Jurassic Hall Formation. Both formations have been grouped by recent workers as the Rossland Group. "Included in this group is an andesite porphyry which has intruded older units of the Elise Formation. Recent work has correlated this porphyry to the Silver King Porphyry." Granite, granodiorite, and diorite of the Lower Cretaceous Nelson Intrusives have intruded both of the above formations and Tertiary lamprophyre dykes have intruded all rock formations.

Rock formations form steep cliffs and valleys and the topography is determined by structural features such as faults and by past glaciation. Bedding, flow structures, lineations, and fold axes of the Hall and Elise formations, as well as most of the major faults, normally trend almost north-south".

The following was taken from Höy and Andrew (1988):

"The Rossland Group comprised a basal succession of dominantly fine-grained clastic rocks of the Archibald Formation, volcanic rocks of the Elise Formation and overlying clastic rocks of the Hall Formation. These rocks are Early Jurassic in age The Ymir Group underlies the Elise Formation in the Nelson area. Based on lithologic similarity and superposition, the upper part of the Ymir Group is correlated with the Archibald Formation, and its lower part with the Late Triassic Slocan Group exposed on north side of the Nelson batholith (Little, 1960). The Rossland and Ymir Groups are intruded by numerous small stocks that are probably correlative with the Middle to Late Jurassic Nelson Batholith, by many Tertiary rhyolite and lamprophyre dykes, and by Coryell alkalic intrusions of Eocene age".

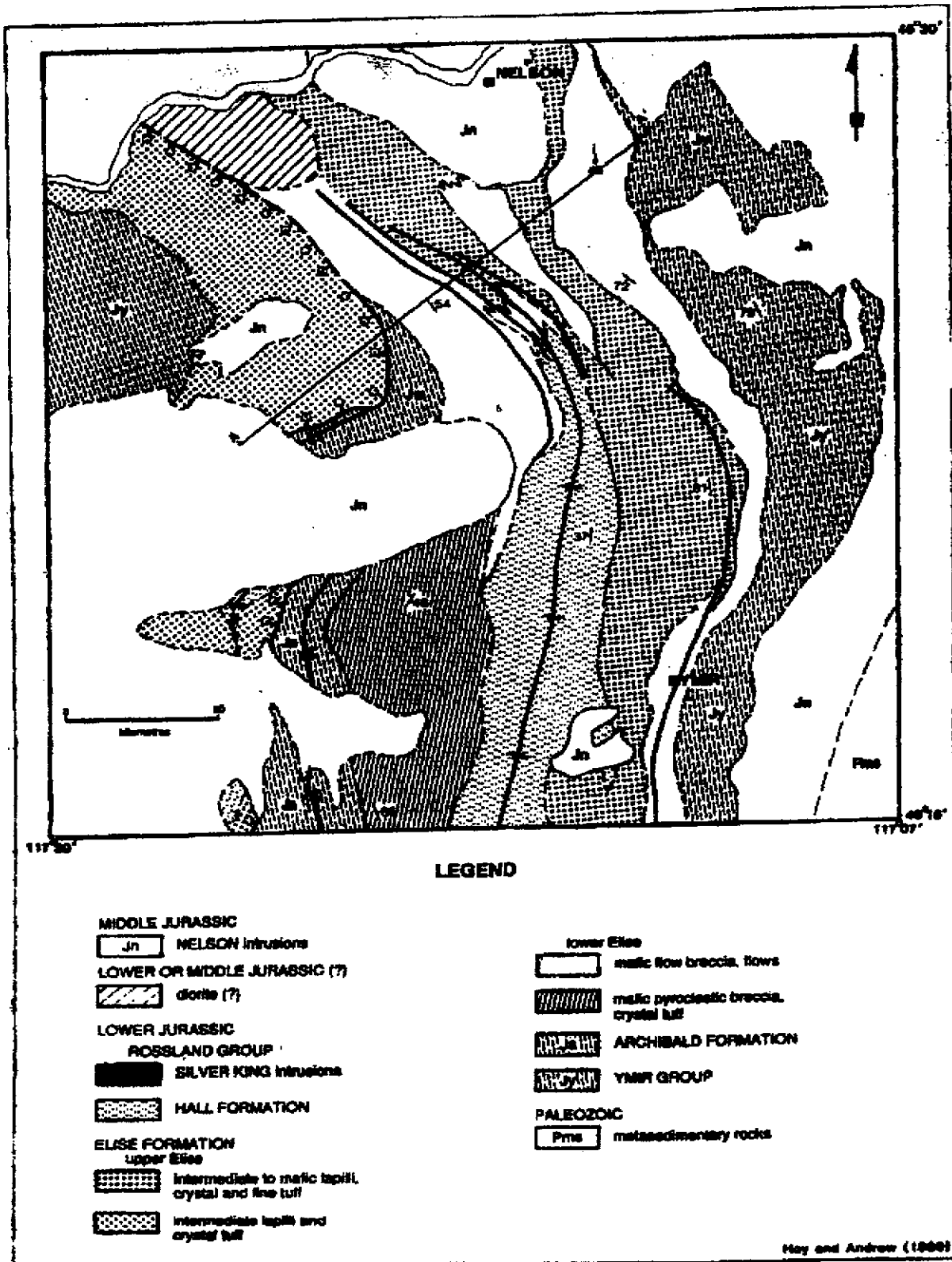


Figure 1-4-2a. Geology of the Nelson map area.

YMIR GROUP

The Ymir Group is exposed as a broad arcuate belt of deformed, dominantly fine-grained clastic rocks in the east half of the Nelson map area. These rocks have been mapped ... but complex structural relationships and repetitions have hindered detailed subdivision. Although the base of the Ymir Group is not exposed, the sequence has been estimated to be at least a kilometre thick.

The Ymir Group comprises greater than 120 metres of argillaceous quartzite overlain by more than 300 metres of grit, siltstone and argillite with discontinuous bands of massive to thin-bedded, impure limestone (McAllister, 1951). This lower succession is overlain by a fining-upward sequence of grit, siltstone, argillite and argillaceous quartzite over 500 metres thick that terminates with finely laminated argillite, feldspathic wacke and minor limy siltstone (Höy and Andrew, 1988). Augite porphyry sills or thin flows, up to 2 metres thick, also occur near the top of the Ymir Group. The Elise Formation conformably overlies the Ymir Group; the best exposure of the contact is in Ymir Creek.

ROSSLAND GROUP

ARCHIBALD FORMATION

The Archibald Formation ... is the lowermost unit of the Rossland Group. It is exposed in the limbs of an anticline in the Erie Creek area along the west side of the Nelson map area. ... The exposed thickness of the formation is estimated to be at least 1000 metres; its base is not exposed.

The Archibald Formation generally comprises a fining-upward succession of interbedded siltstones, sandstones and argillites. The lower part of the section is characterized by over 200 metres of interbedded tan siltstone and impure grey sandstone in beds 3 to 4 centimetres thick. These are overlain by a finer grained sequence of rusty weathering, tan siltstones intercalated with grey to black silty argillite and minor black graphitic argillite. A few thin (2 to 10 metres) basaltic andesite flows or sills occur with increasing abundance near the top of the section in both the Erie Creek and Red Mountain areas. This succession of interbedded volcanic and sedimentary rocks correlates with a similar succession at the top of the Ymir Group.

The contact between the Archibald and Elise formations is gradational. It is mapped where fine-grained interbedded siltstones and argillites with occasional thin flows give way to massive augite porphyry flows with fine argillaceous partings. The top of the Archibald Formation was previously located at a coquina bed, a few centimetres thick, within an agglomerate overlain by massive augite porphyry ...

ELISE FORMATION

The Elise Formation is characterized by a series of inter-fingering lenses of massive to brecciated flows, tuffs, sub-volcanic porphyries and minor epiclastic deposits. These lenses pinch out laterally and vertically causing facies changes on both outcrop and regional scales. Despite such lithologic variations, the eastern facies of the Elise Formation can be broadly subdivided into a lower and an upper member. The low Elise comprises dominantly massive mafic flow-breccias, flows and coarse blocky pyroclastic rocks whereas the upper Elise is predominantly intermediate pyroclastic rocks, minor epiclastic rocks and some mafic flows.

The Elise Formation is exposed in the east and west limbs of the Hall Creek syncline. In the eastern limb, the formation is characterized by a lower section of mafic flow breccias and flows up to a kilometre thick, overlain by an upper section of dominantly intermediate volcanic and volcanoclastic rocks nearly 2.5 kilometres thick. The flows and flow breccias in the basal member are characterized by augite phenocrysts commonly up to 1 centimetre in diameter, and subordinate finer grained plagioclase. Although the autoclastic fragments in the flow breccias typically include broken calcite and quartz-amygdaloidal pillows, pillow basalt flows are rare. The upper Elise on the east side of the Hall Creek syncline contains a number of cyclical sequences of pyroclastic rocks tuffs contain subrounded to subangular volcanic clasts of dominantly intermediate composition. The upper Elise is intruded by a number of plagioclase porphyries including the Silver King porphyry. These are intensely deformed and are locally incorporated as fragments in Elise epiclastic rocks, compelling evidence for a comagmatic origin.

The distinction between the upper and lower Elise Formation in the Cabin Peak and Mammoth Peak areas on the west limb of the Hall Creek syncline is less evident. The total thickness of the formation in this area is approximately 1.5 to 2 kilometres. It comprises primarily mafic coarse pyroclastic breccia interlayered with minor augite porphyry flows and prominent sections of waterlain crystal and lapilli tuff. Pyroclastic breccias and flow breccias of intermediate composition, similar to those that characterize much of the upper Elise east of the Hall Creek syncline, are uncommon.

The mafic pyroclastic breccias, informally referred to as the "Porto Rico tuffs", mainly comprise clasts of mafic augite porphyry and minor augite-plagioclase porphyry in a fine to coarse crystal matrix. They are best exposed in the Cabin Peak area where clasts commonly exceed 20 to 30 centimetres in diameter. The size of pyroclasts decreases to the north and south suggesting the Cabin Peak area is close to an explosive volcanic centre. A prominent mafic intrusion at Cabin Peak may also indicate proximity to a volcanic vent.

The pyroclastic breccias are interbedded with sections dominated by well-bedded, mafic to intermediate lapilli, crystal and fine tuff. These units are occasionally massive but more commonly contain numerous structures, including graded or laminated beds, scours, channels and cross laminations suggestive of subaqueous deposition. Although we interpreted them to

be primarily pyroclastic deposits that are reworked into turbidites, it is possible that they also include base-surge deposits; their distribution is areally restricted, unusual for turbidites, and they are closely associated with a proximal vent facies.

Further north, in the Copper Mountain-Fortynine Creek area, the upper Elise typically comprises massive pale grey-green feldspathic tuff, coarse crystal tuff and tuff-breccia. The crystal tuff has prominent white euhedral plagioclase crystals set in a dark tuffaceous matrix such that the rock resembles a subvolcanic intrusive porphyry; however, small lithic fragments and broken crystals indicate a pyroclastic origin. Occasional lenses of tuffaceous conglomerate with clasts of feldspar porphyry, mudstone, chert and mafic volcanic rock occur near the top of the section.

Summary

The Elise Formation in the Nelson area comprises a pile of mafic augite flows, pyroclastic rocks and minor epiclastic rocks. In the eastern belt, east of the Hall Creek syncline, the formation can be subdivided into a basal member consisting mainly of flows, overlain by an upper member dominated by pyroclastic rocks of a more intermediate composition. In the western belt, the formation is characterized by a thick succession of mafic pyroclastic breccias interbedded with waterlain lapilli and crystal tuffs. Further north, in the Copper Mountain area, pyroclastic rocks are less coarse, dominated by lapilli and feldspathic crystal tuffs. These volcanic facies indicate explosive volcanism initiated Elise volcanism in the Cabin Peak area while effusive eruptions of basaltic magma occurred further to the east.

Southwest of the Nelson map area, the Elise Formation is dominated by sedimentary rocks. These rocks were undoubtedly derived from active volcanic arcs, such as those in the Nelson area and perhaps in the Rossland area to the west.

HALL FORMATION

The Hall Formation is a succession of clastic sedimentary rocks exposed in the core of the Hall Creek syncline in the Nelson map area. It is the youngest formation of the Rossland Group and has yielded reliable early Pliensbachian and early Toarcian macrofossils in the Salmo, Trail and Rossland areas.

The thickness of the Hall Formation is at least 1400 metres; its top is not exposed. It generally rests conformably on volcanic rocks of the Elise Formation although locally an erosional unconformity, marked by a few metres of conglomerate with pebbles derived from the underlying volcanic rocks, is at the base. In the eastern part of the map area, a number of diorite sills parallel the Hall-Elise contact.

The Hall Formation comprises a lower coarsening-upward sequence of argillites, siltstones, grits and conglomerates overlain by a succession of interbedded siltstone and argillite. The lower part of the sequence is characterized by over 300 metres of black argillite with minor siltstone and rare limy argillaceous layers, overlain by over 200 metres of tan siltstone. These grade upward into over 300 metres of coarse sandstone interlayered with conglomerate, grit and pebble conglomerate, locally with a carbonate cement. The upper part of the section is an interlayered sequence of argillaceous laminated siltstone, silty argillite and argillite. Locally, impure limestones and mud-chip breccias occur near the top of the formation.

STRUCTURE

The structure of the Nelson map area is dominated by northerly trending tight folds and associated shears. The intensity of deformation increases toward the east. The Ymir Group near the eastern edge of the map area is folded into numerous tight to isoclinal west-dipping overturned folds whereas folds in the Archibald and Elise formations in the Copper Mountain and Cabin Peak areas are more open. These structures involve the Silver King intrusive rocks but are truncated by rocks correlative with the Nelson batholith. Small-scale open folds, locally associated with a crenulation cleavage, are superimposed on the early, northerly trending structures.

The Hall Creek syncline is the most prominent fold in the map area. It is a tight, south-plunging, west-dipping overturned fold, cored by the Hall Formation, that extends from west of Nelson to southwest of Ymir. A pronounced cleavage in clastic rocks of the Hall Formation and a penetrative foliation in the Elise Formation parallel the axial plane of the syncline. Northwest of the closure of the Hall Formation, between the headwaters of Noman and Giveout creeks, the core of the syncline forms a zone of intense shearing more than a kilometre in width. The shear zone, informally referred to as the Silver King shear, continues northwestward into intrusive rocks and more highly metamorphosed rocks of the Elise Formation near Eagle and Sandy creeks, and appears to die out to the south in rocks at a higher structural level along the limbs of the Hall Creek syncline.

Other zones of intense shearing are recognized in the Elise Formation and Ymir Group east of the Hall Creek syncline. The most prominent follows the western slope of Mount Elise and crosses Highway 6 south and west of Ymir. It dips to the west, essentially parallel to the prominent foliation, cuts down section to the south, and has an apparent net reverse displacement.

An overturned anticline occurs in the Archibald Formation near the western edge of the map area. It is truncated by apophyses of the Nelson batholith near Erie Creek and appears to be cut by the Red Mountain fault in the Mount Verde-Red Mountain area. The Archibald Formation on the east slope of Red Mountain is an east-facing upright succession on the east

limb of the anticline; on the eastern and northern slopes of Mount Verde, a number of small folds verge northward towards the hinge of the anticline. Numerous Cretaceous or Tertiary porphyry, aplite and granitic dykes intrude the Archibald Formation in the Erie Creek area.

The Red Mountain fault extends from Fortynine Creek south to Erie Creek. It dips to the north with a normal displacement in the Mount Verde-Copper Mountain area, but is overturned in Fortynine and Erie creeks where its apparent displacement is reverse. It may be a large listric normal fault that juxtaposes upper Elise volcanic rocks in its western hangingwall against more intensely folded Archibald rocks to the east. It is younger than the intense folding and associated shearing, but older than the Nelson granitic rocks.

MINERAL OCCURRENCES

The distribution of metallic mineral occurrences and deposits in the Nelson map area is shown in Figure 1-4-7 (Note: reproduced on the following page). These deposits have produced more than 16 750 kilograms of gold and 190 000 kilograms of silver, primarily from vein deposits in the Ymir camp. This compares with more than 84 000 kilograms of gold and 105 000 kilograms of silver recovered from the Rossland Camp, the second largest gold-producing camp in British Columbia.

Mineral occurrences in the Nelson and Ymir areas can be subdivided into four main types:

- (1) porphyry or stockwork molybdenum-copper
- (2) skarn molybdenum, tungsten, copper, gold
- (3) vein gold, silver, copper; gold, silver, lead, zinc
- (4) "conformable gold".

Porphyry, skarn and vein occurrences are closely associated with late granitic intrusions, whereas deposits referred to as "conformable gold" are more closely associated with Rossland Group lithologies and early structures. The most significant porphyry occurrences in the Nelson area are the Stewart and Bobbi prospects just west of Ymir (MINFILE 082FSW229 and 250). These occurrences contain zones of intense alteration and brecciation in a quartz monzonite stock and adjacent rocks of the Elise and Hall formations contain disseminated, vein and stockwork molybdenite, pyrite and minor powellite mineralization.

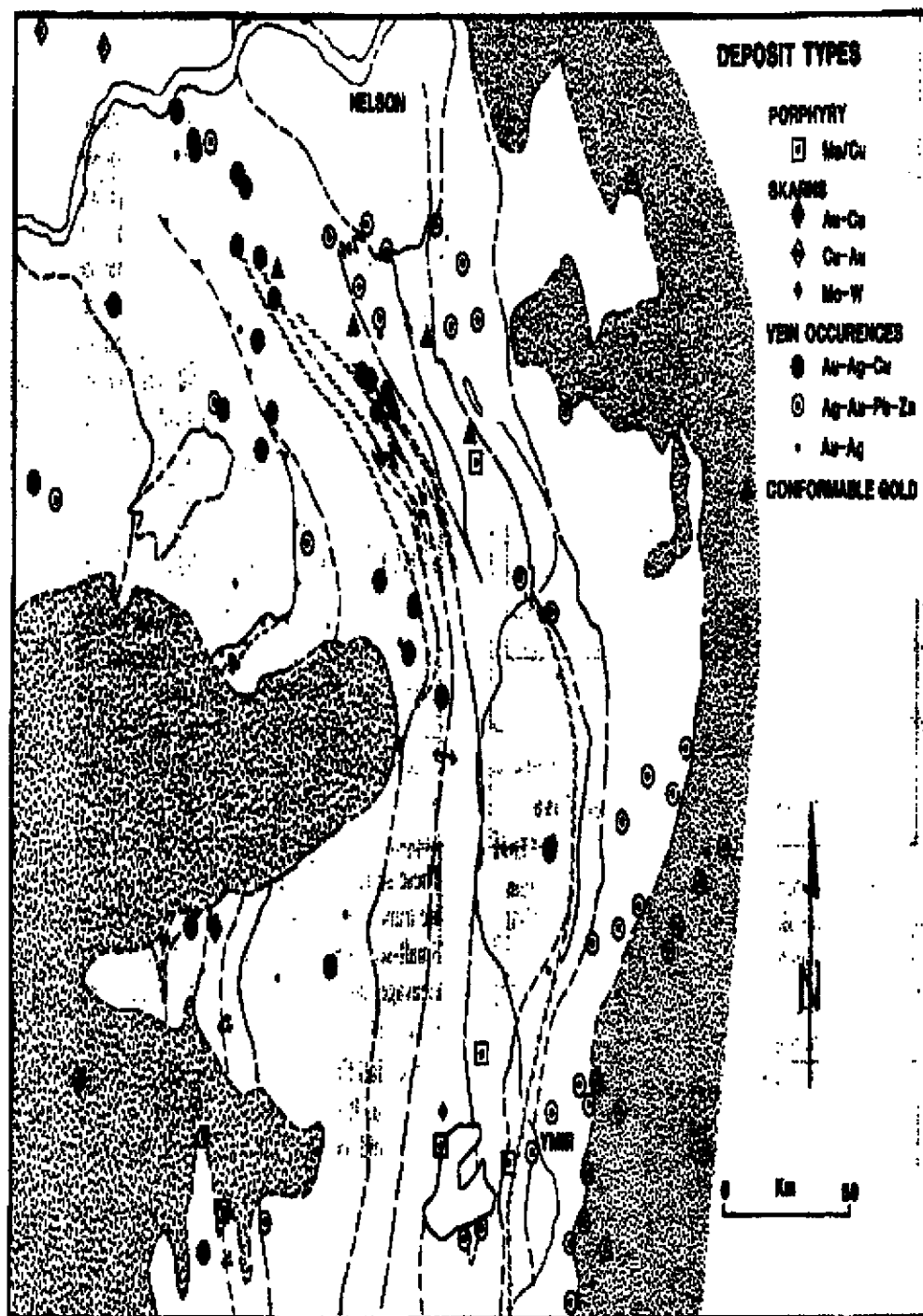


Figure 1-4-7. Metallic mineral deposit types of the Nelson map area.

Three main types of skarn deposits are recognized in the area. These are molybdenum or tungsten skarns, copper skarns and a gold-enriched skarn. The Mammoth showing (MINFILE 082FSW311) is a small molybdenum-copper skarn with minor lead-zinc-silver and trace gold in mafic augite flows of the Elise Formation and hornfelsed argillites of the Hall Formation, adjacent to the Bonnington pluton. Skarn gangue minerals include pyrite, pyrrhotite, quartz, epidote, potassium feldspar, garnet and actinolite. The Arrow Tungsten prospect (MINFILE 082FSW311) is a tungsten-molybdenum-garnet-diopside skarn in Hall Formation metasedimentary rocks on the north side of the intrusive complex that hosts the Stewart deposit. A number of copper skarns, comprising coarse-grained diopside-garnet-quartz-epidote with pyrrhotite, chalcopyrite, magnetite and bornite, occur in the Hall Formation along the margin of the Nelson batholith west of Nelson.

The only deposit that may be classed as a gold-enriched skarn is the Second Relief (MINFILE 082FSW 1 87). It comprises a number of "fissure veins" that carry pyrite, pyrrhotite, chalcopyrite and minor molybdenite in "greenstone" adjacent to a diorite porphyry sill. Skarn minerals in the country rock include coarse-grained garnet, epidote, biotite, quartz and magnetite. The Second Relief produced 3118 kilograms of gold and 866 kilograms of silver from 1902 to 1959, ranking it as one of the larger gold skarns in British Columbia and one of the few, other than those in the Hedley camp, that produced gold as its primary commodity.

100,246 oz's Au.

Vein deposits are widely distributed throughout the Elise and Archibald Formations, the Ymir Group and Nelson granitic rocks. Many of these veins have a preferred orientation parallel to either bedding or foliation, AC jointing, or extension joints. Vein mineralogy appears to have a lithologic control; veins that carry lead and zinc in addition to gold and silver are preferentially distributed in metasedimentary rocks of the Ymir Group or correlative Archibald Formation and within or adjacent to Nelson granitic rocks, whereas copper-gold-bearing veins are more common in Elise volcanic rocks. Most copper-gold-bearing veins are within or close to large faults or shear zones such as the Silver King shear. The gangue of these veins is predominantly quartz, with minor carbonate, chlorite, trace tourmaline and rare scheelite. Sulphides include pyrite, pyrrhotite, chalcopyrite and, in some veins, arsenopyrite and galena.

"Conformable gold" is an informal name applied to a variety of deposits that are conformable with either foliation or bedding in the host Elise Formation. They include the Great Western, Shaft and Cat showings, Kena, some showings in the Star area, and perhaps the Silver King deposits. In contrast with other deposits, conformable gold deposits are sheared and foliated together with their host rocks. Many appear to be associated with synvolcanic intrusions that range in composition from rhyodacite(?) to diorite, and all have extensive alteration halos.

The Great Western showings, located just southwest of Nelson, were extensively trenched and drilled by Lectus Developments Ltd. in 1987. One of the best mineralized intercepts included approximately 7 metres containing 9.7 grams per tonne gold (DDH 87-10); the highest reported assay was 58 grams per tonne gold over 0.9 metre (DDH 87-3). The showings consist

of a number of elongate zones of intense carbonate-silica-sericite-pyrite alteration up to several metres to several tens of metres thick. A number of the zones include thin lenses of quartz-eye rhyodacite or granular dacite. The zones are hosted by highly sheared mafic tuffs, lapilli tuffs and possible augite flows of the upper Elise Formation.

The Shaft-Cat property, currently being drilled by South Pacific Gold Corporation, is centred on an elongate, fine to medium-grained intrusive diorite complex. The diorite is locally brecciated and extensively altered to a chlorite-epidote-carbonate assemblage that contains magnetite, chalcopyrite and pyrite. Surface grab samples assayed an average of 6.2 grams per tonne gold and 1 per cent copper

SUMMARY AND DISCUSSION

The Elise Formation exhibits marked facies changes throughout the district. In the eastern part of the Nelson map area, Elise volcanic rocks record an early phase of effusive volcanism followed by eruptions of pyroclastic rocks. Further west, in the Copper Mountain area, explosive volcanism characterizes the entire formation. In contrast, the formation is dominated by sedimentary rocks southwest of Salmo, that were probably derived from volcanic centres in the Nelson area, and possibly, the Rossland area.

The Rossland Group was subjected to intense compressional deformation, particularly in the east close to its contact with Paleozoic miogeoclinal rocks. This deformation is bracketed by a late Early Jurassic age for the Rossland Group and a post-tectonic, late Middle Jurassic age for the Nelson batholith.

The shoshonitic nature of the Elise Formation supports the suggestion that the Rossland Group was deposited in a volcanic arc environment. Shoshonitic volcanism appears to be associated with disturbance or steepening of a subduction zone, possibly due to plate collision. The Rossland Group shoshonitic rocks may therefore record arc volcanism as a subduction zone was dying just prior to plate collision, possibly involving accretion of Quesnellia in Terrane I to the North American craton in Jurassic time. Continued compressional tectonics may have resulted in the intense regional deformation in Rossland Group rocks.

Mineral occurrences and deposits in the Nelson area include gold-silver-copper-lead-zinc veins, a number of porphyry molybdenum-copper deposits, "conformable gold" occurrences and skarn deposits. The recognition of a major gold-enriched skarn deposit within the Nelson area, the Second Relief, considerably increases the exploration potential for gold-bearing skarn deposits in the Rossland Group. The Second Relief produced more than 3100 kilograms of gold, which ranks it as the third largest skarn producer in the province, after the Nickel Plate and Phoenix mines.

LOCAL GEOLOGY

The following has been taken from Gilmour (1990) with reference to the Stewart claims (immediately to the southeast of the KODI claims):

The area covered by the claims "... is underlain by Elise Formation volcanic rocks that have been intruded by plutonic rocks of the Nelson Intrusions. To the east clastic rocks of the Hall Formation are present. The Elise and Hall Formations are part of the Rossland Group of Lower and Middle Jurassic age.

Throughout the region the Elise volcanics are known to be host to copper-gold vein deposits. Vein and porphyry or stockwork molybdenum - copper deposits are present within or immediately adjacent to the Nelson Intrusions.

...

In the study area, the western half is underlain by intermediate to mafic flows and fine pyroclastic units of the Elise Formation (Unit 1). Also present is an augite porphyry. Locally these flows are amygdaloidal and at one locality some poorly preserved pillow lavas were noted. Within the volcanic assemblage are coarse pyroclastics - agglomerate or volcanic breccias (Unit 1a).

These rocks are typically green to grey green, fine-grained and massive. Locally there is some banding, particularly in the pyroclastic horizons. They are fresh, exhibiting no alteration. Locally, minor amounts of pyrite were observed.

Intruding the volcanic assemblage and underlying the eastern half of the area are various intrusive rocks. The most prominent type is a feldspar porphyry (Unit 3). This unit is best exposed along the ridge north of the Stewart Creek logging road. Also present is a quartz-feldspar porphyry (Unit 4) and a hornblende diorite (Unit 2). As with the volcanic rocks these units exhibit no alteration. Locally, trace to minor amounts of pyrite were observed in the feldspar porphyry and quartz-feldspar porphyry.

Near the northwest corner of the map area a granodiorite to quartz monzonite dyke is present (unit 2a). It is exposed at one locality along the ridge across a width of 25 to 50 metres.

Intruding the Elise volcanics and feldspar-porphyry are narrow rhyolite dykes of Tertiary age (Unit 5). These dykes are siliceous and contain pyrite throughout, in amounts ranging from trace to 20%. These rocks also exhibit no alteration. The thickness of these dykes varies from a few centimetres to 72 metres. ...

In the northwest corner of the Stewart property intermediate volcanic rocks of the Elise Formation have been intruded by intrusive rocks of the Nelson Batholith and younger rhyolite dykes. These rocks are unaltered and except for varying amounts of pyrite contain no other sulphide minerals except for very minor chalcopyrite observed in talus at a single locality.

Soil geochemistry, both contour and detailed grid, indicated the presence of gold anomalies north of Stewart Creek logging road. These anomalies tend to be linear and oriented north-south. They show possible correlation with exposures of pyrite bearing rhyolite.

A possible source of the gold anomalies is interpreted to be the pyrite in the rhyolite dykes. Weathering of the pyrite may have caused an enrichment in gold in limonitic soils immediately above and downslope from the rhyolite. Rock sampling indicates that the rhyolites do contain more gold than other rock types in the area" (sic.).

Kaufman (2000) states "... The area is underlain by Elise volcanics, mostly intermediate to basic composition. Fragmental units are common within this volcanic section. A widespread rock type recognized by past workers is andesitic tuff. Bodies of augite porphyry and fine grained "diorite" found in the area might be coeval with the Elise. Possibly, other intrusions might also be related in time to the Elise.

Large intrusions of acidic to intermediate composition located mostly in the western part of the claims and further west are thought to be Nelson Intrusions. Small, elongate felsic bodies and "plugs" recognized by Orvana could possibly be anything from Elise age to Coryell. Minnova cores show that there are probably some felsic tuff interbeds within the Elise section.

... no discernible bedding features (have been noted) in the small outcrops ... (seen), nor ... any clear formational contacts, except for a few in the Minnova drill cores. Accordingly, ... structural interpretation is at best conjectural. Aerial photos show a WNW linear trend which likely represents a fracture system. This same pattern is seen at the Arlington Relief mine located a few kilometres NW of this area. The general NNE trend of the geochemical anomalies might indicate some kind of structural or stratigraphic control. Patterns evident on all geophysical maps (VLF, Mag and I.P.) indicate general N - S trends which likely reflect overall formational strikes. A narrow NNE trending relative low saddle seen on the B.C. government areal magnetic map (#8480G) roughly coincidental with our anomalous zones might be caused by structure or stratigraphy.

Orvana has noted several types of mineralization; widespread disseminated pyrite/pyrrhotite with minor chalcopyrite in all rock types except late dykes, magnetite stockwork associated mainly with felsic rocks, and vein-type (Quartz-pyrite, and massive pyrite-pyrrhotite-chalcopyrite)"(sic.)

With respect to mineralization on the Stewart Property, Fredericks (1998) wrote:

"Mineralization on the property is widespread and varied. Included are porphyry (Mo and Cu?) With high grade breccia (Stewart Moly), contact /skarn related Mo and W (Arrow Tungsten), porphyry/stockwork Au/Cu (Craigtown Creek), stratabound sediment hosted Au-rich sulphide (replacement manto or exhalative, i.e. Arlington Mine; Golg Hill?), quartz-pyrite-arsenopyrite stockwork in sediments (Trixi V), sediment hosted Ag-Pb-Zn (Free Silver), and quartz-pyrite veins with gold (Craigtown Creek). Additionally, disseminated pyrite is common in several rock types, including andesite, argillite, rhyolite, and diorite/monzonite intrusives.

In the Craigtown Creek area ... six types of mineralization are known. These include: 1) disseminated and fracture filling pyrite and/or pyrrhotite, +/- chalcopyrite, 2) quartz-magnetite veinlets, 3) quartz veinlet stockwork, 4) pyrite veinlets, 5) quartz-carbonate veins, and 6) quartz-sulphide veins. The first four types are associated with potentially economic, bulk tonnage, porphyry style gold and copper mineralization. The last type could be associated with the same system that produced the former mineralization types, but is a distinctly different target type that also has economic potential.

Pyrite and pyrrhotite as disseminated grains and fracture fillings is common in the Craigtown Creek area. This type of mineralization is observed in all of the rock types mapped in the area, with the exception of the granite intrusive and basalt dykes. Traces of chalcopyrite are present in places with this mineralization, where it occurs in intrusive or volcanic rocks, usually in association with shearing, brecciation, or quartz veinlets. Propylitically altered quartz monzonite and diorite generally has only 0.5-2% sulphide. Andesite typically has more sulphide; 2-3% in propylitic rocks and 5-10% in silicified rocks, in relative proportion to the amount of alteration. Potassically altered intrusive and volcanic rocks have less sulphide, generally in the 0.5-4% range. This type of sulphide is also very common in feldspar porphyry. In the area of grid 8850N 6300E, disseminated and fracture-filling pyrite and pyrrhotite in andesite tuff consistently yield 1-2 g/t Au in rock samples.

Quartz-magnetite veinlets are common in the NNW-trending contact zone between the felsic monzonite intrusives and the Elise volcanics. This zone has strongly anomalous Au and Cu in soils. The host rocks are usually the

intrusives and less commonly the volcanics. They are very rarely exposed in outcrop, mostly being seen in float or talus. The veinlets range <1mm - 5mm in thickness, constitute 2 - 20% of the rock, and in places constitute and stockwork. Two or three stages of veining are visible in some hand samples; at least one stage is quartz only. Malachite stains are present in places, though the rocks rarely contain sulphide. Where sampled on the surface, rocks containing this type of mineralization contain anomalous Au (100 - 300ppb range) and Cu (200 - 500 ppm range).

Quartz and quartz-pyrite veinlet stockwork was observed in feldspar porphyry float in several places, and in the small latite plug mapped in the southern portion of the nW-striking zone of alteration and anomalous geochemistry that bisects the central portion of the grid. The rocks hosting this stockwork generally are moderately silicified, and contain several percent disseminated pyrite. The rocks hosting this stockwork generally are moderately silicified, and contain several percent disseminated pyrite. Pyrite may also have been a component of the veinlets in some samples, but has been oxidized to limonite. This mineralization potentially represents the potential for discovery of a large tonnage Au deposit, as several samples have returned Au values > 1 g/t. This mineralization may represent more than one stage, as some rock samples contain high Au and low Cu; others have high Cu with high Au.

Pyrite veinlets in mafic andesite-basalt contain highly anomalous Au values in the central portion of Minnova's southern grid, east of Craigtown Creek. Dark green to black augite porphyritic mafic andesite or basalt is exposed in a few small outcrops, subcrop, and float. Petrographic study indicates that this rock is propylitically altered and fragmental. It typically contains a few percent disseminated pyrite. In a couple small outcrops, vague pyrite veinlets and clots are present. These vague veinlets have NE orientations. Samples of this material have run in the 8-10 g/t range.

Quartz-carbonate veinlets are present in both the Bonnington Pluton monzonite-diorite intrusive rocks and the Elise volcanics. They seem to occur in sheared, weakly altered (propylitic) outcrops. Shear directions are either NE or N-S, with near vertical dips. Minor amounts of pyrite and or magnetite are present in the host rocks. Samples of these rocks have weakly anomalous Au and Cu.

Quartz-calcite-sulphide veins occurring in Elise volcanic rocks were intersected in hole DEN-93-4, drilled by Cameco in 1994. They range 10 - 30 cm wide, and contain mostly white quartz and calcite, with 10 - 30% sulphide (pyrite, pyrrhotite, and minor chalcopyrite). One of these veins contains 24,854 ppb Au. They appear to have high enough grade potential to

be considered as targets, even in an underground mining situation. They are not known to outcrop anywhere. It is possible that the NE striking Au in soil anomalies located on Orvana's grid, north of Craigtown Creek, are related to this type of mineralization. These anomalies are fairly narrow and linear, appearing to be derived of relatively narrow veins or structures. Veins like this have been demonstrated to occur around porphyry type mineral systems in other important mining camps in British Columbia. ..

Gold values in 1997 soil samples range from below detection limit to 509 ppb. Values equal to or greater than 40 ppb are considered anomalous... The Au anomalies are related to the NNW-trending contact zone between the Elise Formation and the intrusive rocks, especially the felsic monzonite plugs. There is also an anomaly associated with a felsic monzonite plug located in the west-central portion of the grid. NE-trending structures also appear to control Au mineralization, as demonstrated by the NE trend of portions of the Au anomalies. Some of these anomalies coincide with NE-trending shears mapped on the ground

Copper values ... range 18-509 ppm. Values of 135 ppm or greater are considered anomalous ... The Cu anomalies reflect controls similar to those described for Au. The NNW-trending Elise Formation/intrusive contact is the strongest control of Cu mineralization. This is probably related to the felsic monzonite plugs that have intruded along the contact zone. The 1997 sampling also defines a Cu anomaly of moderate strength related to a felsic monzonite plug outcropping in the west-central portion of the grid....

Lead values ... reach a maximum of 111 ppm; values equal to or greater than 30 ppm are considered anomalous ... Lead seems to reflect a weak halo around the NNW-trending volcanic/intrusive contact zone. The anomalies are small, and have weak N-S, NW, or NE trends, which probably reflect structural control. Zinc exhibits a similar spatial distribution. Values reach a high of 445 ppm, and those equal to or greater than 225 ppm (are considered anomalous) ... Weak NE-trends are detectable in the Zn data. Both Pb and Zn values are elevated along the far eastern end of the southern grid line. The source of this anomaly is not known ...

Arsenic values in soil are generally low. Maximum value ... is 96 ppm; 20 ppm and greater is considered anomalous. A broad, low-level anomaly flanks the NNW-trending volcanic/intrusive contact zone on the east. Other small, scattered, weak anomalies have NW and NE trends, probably reflecting structure" (sic.).

With respect to the KODI claims, Santos (1986) wrote:

"The Robb claim is underlain by andesite flows, tuffaceous argillites, and carbonaceous slates of the Hall Formation which are intruded by diorite of the Nelson Intrusions. The beds generally strike to the north and dip to the east.

An adit was collared at the contact of the equigranular diorite and a flow-layered, green, amygdaloidal andesite porphyry. The adit (drift) was driven following a quartz vein which strikes Az 020° and dips 77° SE and varies in thickness from 12" to 36". The quartz vein contains varying amounts of pyrite as veinlets and disseminations. The pyrite also occur in the andesite wall rocks. Ten channel samples were taken across the vein underground, three channel samples were taken from the vein and walls on surface and one sample was taken from the mine dump. ... The samples showed fairly low gold and silver values. ... Although this drift was driven for 150 metres following the quartz vein, it was not long enough to reach the sulfide vein exposed at a trench beside the logging road on Line 0 at the baseline. At the trench, the vein is several feet thick and consists of pyrite and galena. ...".

2001 PROSPECTORS ASSISTANCE PROGRAM

A total of 58 Prospecting days were spent on the Erie Creek project, comprised of 48 days on the KODI claims and 10 days in the Granite Creek drainage, immediately west of the former Second Relief Mine. Work completed included prospecting, physical work (i.e. staking, road and adit clearing) and geochemical sampling (both rock and soil). A total of 24 two-post claims were staked to cover the Robb Adit, previously described by Santos (1986) as well as prospective ground located between the former Second Relief Mine and Orvana's Stewart Property.

A \$22,942 program was submitted for consideration under the Prospectors Assistance progra. It was proposed to stake claims covering open ground along the southern contact of an east projecting lobe of the Bonnington pluton into volcanic strata of the Archibald and Elise Formations. A preliminary prospecting program was proposed for these claims including work to:

- 1) Examine any old workings associated with the Minfile occurrences, which resulted in the discovery of the Robb Adit,
- 2) Prospect the area covered by the claims to locate and evaluate mineralized outcrops, which was undertaken along Granite Creek (disappointing results) and immediately east of Erie Creek,
- 3) Identify and evaluate any mineralized occurrences documented in Assessment Reports, the Robb Adit and immediately surrounding area
- 4) Stake open ground on either side of a group of Crown-granted claims covering one of the largest gold-enriched skarn producers in BC (082FSW 187 - Second Relief), completed immediately south of the Second Relief Mine
- 5) Undertake geological mapping of the claims and immediately adjacent areas, which was not completed
- 6) Establish a grid on the claims to cover:
 - 1) The trace of the Red Mountain Fault,
 - 2) The mapped contact of the Bonnington pluton, and
 - 3) mineralized outcrops as documented by prospecting and/or Assessment reports, which was not completed and
- 7) Undertake geochemical sampling of all or portions of the grid established in 4, a portion of which was completed.

As the grant approved was less than the amount applied for, the program was reduced in scale and focused on the KODI claims, specifically the Robb Adit, following a discussion with Dave Terry (Regional Geologist - Cranbrook Office) in early July.

Staking

A number of claims were proposed to cover ground along the southern margin of an eastward projecting lobe of the Bonnington pluton and south of Crown-granted claims

covering the former Second Relief mine. A total of 24 two post claims were staked ground immediately south of the Second Relief mine and northwest of Orvana's Stewart Property, covering mapped exposures of Archibald and Elise formation strata.

Prospecting

Approximately 46.5 days were spent prospecting along the mapped contact of the eastward projecting lobe or possible roof pendant of the Bonnington pluton along the Granite Creek drainage and immediately east of Erie Creek.

Therefore, a number of potential Mineral Deposit Models have been described and/or reported in the area, which include those described under "Local Geology" and the more formalized descriptions developed by the B.C. Geological Survey Branch, as follows:

- I01 - Au - quartz veins
- I02 - Intrusion-related Au pyrrhotite veins
- I05 - Polymetallic veins Ag-Pb-Zn \pm Au
- K01 - Cu Skarn
- K04 - Au Skarn
- K05 - W Skarn

A total of 25 rock samples were taken and submitted for 42 element ICP analysis at Acme Analytical Laboratories Ltd in North Vancouver. In addition, several samples were re-analyzed for Ag and Au, based upon anomalous levels of As, Bi and/or Cu in the ICP results. In addition, due to levels exceeding detection limits, two samples were assayed for quantitative Zn and Ag results.

The majority of the samples were taken from within the Robb Adit. Access to the Robb Adit necessitated limited brushing of an old mining road to enable ATV access and the adit had to be cleaned out to permit safe entry and work within the mine (limited physical work).

Geochemical Sampling

Subsequent to locating the Robb Adit, prospecting and limited geochemical sampling was undertaken in the immediate vicinity. Several contour soil lines were sampled to evaluate potential for mineralization along the mapped contact of the Bonnington pluton and host strata of the Archibald and Elise formations.

A total of 66 B-horizon soil samples were recovered on 3 contour soil lines. Samples 8 to 19 were taken along the 1100 metre contour (40 metres below the Robb Adit), samples 22 to 33 were taken along the 1140 metre contour (at the same elevation and south of the Robb Adit), samples 34 to 39 were taken along the 1240 metre contour (100 metre above and east-southeast of the adit) and samples 40 to 52 were taken along the 1140 metre contour north of the adit. The remaining samples were taken along the old mining road to and north of the Robb Adit.

RESULTS

The program returned a number of very interesting results. In the rock samples taken from surface (KR series), anomalous copper (≤ 239 ppm), lead ($\leq 3.54\%$), zinc (≤ 1599 ppm), arsenic ($\leq 3.04\%$) and silver (≤ 58.2 ppm) are apparent. The samples are associated with the mapped contact between the Archibald Formation of the Rossland Group and the northern exposure of an eastwardly projecting lobe of the Bonnington Pluton (Nelson Intrusive Suite), immediately east of the mapped trace of the Red Mountain Fault (Fig. 3 and 4). In particular, the very strongly anomalous arsenic is not characteristic (based preliminary research to date) of the geochemical signature of the host rocks described in the area.

Soil samples (Figure 5) were similarly anomalous in copper (≤ 1275 ppm), lead ($\leq 3.39\%$), zinc (≤ 6193 ppm), arsenic (≤ 6315 ppm), bismuth (≤ 5834 ppm) and silver (≤ 881.4 ppm). In addition, a limited sub-set of samples were analyzed for gold based on the anomalous results above and returned weakly anomalous (7.1 ppb) to strongly anomalous (10126.2 ppb) results. The association of anomalous base and precious metals with bismuth suggests a magmatic (i.e. secondary) component to the mineralization. This is supported by the strongly anomalous arsenic data (as compared to the Orvana database in which 20 ppm is considered anomalous with 96 ppm being the maximum).

A total of 14 samples were taken along the length of the Robb Adit (Figure 6). Anomalous Mo (≤ 42.9 ppm), Cu (≤ 4305 ppm), Pb (≤ 9745 ppm), Zn ($\leq 2.84\%$), Ag (≤ 112.2 ppm), Mn ($\leq 1.91\%$), As (≤ 1187 ppm) and Bi (≤ 136 ppm) were documented. Previous sampling of the Robb Adit by Santos (1986) returned a maximum of 0.011 ozs/ton Au and 0.55 ozs/ton Ag. The results returned from this program returned numerous higher grade values:

Sample #	Au (ppb)	Au (oz/ton)	Ag (ppm)	Ag (oz/ton)
M5	974.5	0.03	83.0	2.57
M6			31.9	0.99
M7			18.1	0.56
M9	132		31.8	0.98
M10	206	0.006	112.2	3.47
M11	316	0.010		
M14	200.7	0.006	26.9	0.83

Figure 6 plots the location of samples taken in this program with reference to those taken by Santos (1986).

The mineralized system in the KODI claim area (as documented on the Orvana claims) has gold \pm copper \pm lead \pm zinc. Examination by the author of the areas in which anomalous rock and soil samples were taken was hindered by snow, however, from the limited amount of bedrock and proximal float that could be observed, it is proposed (on a preliminary basis) that the intrusive contact with host strata (mapped as sediments of the Archibald Formation (Höy and Andrew 1988)) has localized mineralization, some of which has been contributed (and/or remobilized) by the Bonnington Pluton.

In addition, a plot of the magnetic data (Figure-4) with the intrusive contacts reveals the strong magnetic results centered on the DOG Claims (two post claims to southeast of KODI claims), from which quartz-magnetite veinlets have been described with anomalous gold and copper (see "Local Geology"), which are "... common in the NNW-trending contact zone between the felsic monzonite intrusives and the Elise volcanics" (Fredericks, 1998). The KODI claims appear to be located on the northwest fringe of the same local magnetic high, which may explain some of the elevated iron values (to 11.60 % in surface rock samples, 34.51% in soils and 16.54% in sub-surface (Robb Adit samples). No magnetite-bearing quartz veinlets were noted in this initial program.

A more thorough analysis of the geochemical results will be addressed in a subsequent Assessment Report.

CONCLUSIONS

The results of the program completed with the assistance of a Prospectors Assistance Program grant is very encouraging.

A total of 24, two post claims were staked immediately east of Erie Creek, located between the former Second Relief Mine and Orvana Minerals Corp.'s Stewart property. Fifty eight days of prospecting activity (including limited physical work), staking and geochemical sampling were completed in accordance with the proposed program as modified subsequent to a discussion between Dave Terry (Regional Geologist - Cranbrook) and the applicant (Wayne Anderson). In the course of prospecting, an old adit was located (Robb Adit) and cleaned out to facilitate sampling. A total of 66 B-horizon soils samples and 10 rock samples were taken in the immediate vicinity of the Robb Adit. A further 14 grab samples were taken from within the Robb Adit. Samples taken as part of this program returned more encouraging results than those reported previously by Santos (1986). Anomalous gold, silver and copper were documented in both rock and soil samples, together with arsenic \pm lead \pm zinc \pm bismuth.

Gold and silver ratios, together with moderately to strongly anomalous arsenic suggest the possibility of an epithermal vein system associated with the structural contact between the Bonnington Pluton and host strata of the Archibald Formation or the trace of the Red Mountain Fault. In addition, a magmatic contribution by fluids associated with the intrusion and freezing of the Bonnington Pluton may have contributed secondary mineralization and/or remobilized primary mineralization as indicated by the presence of anomalous levels of bismuth. Possible support for this conclusion may lie in the presence of Arrow Tungsten, expected to be dominated by scheelite (as opposed to wolframite) with an oxidized (magnetite-rich) intrusion.

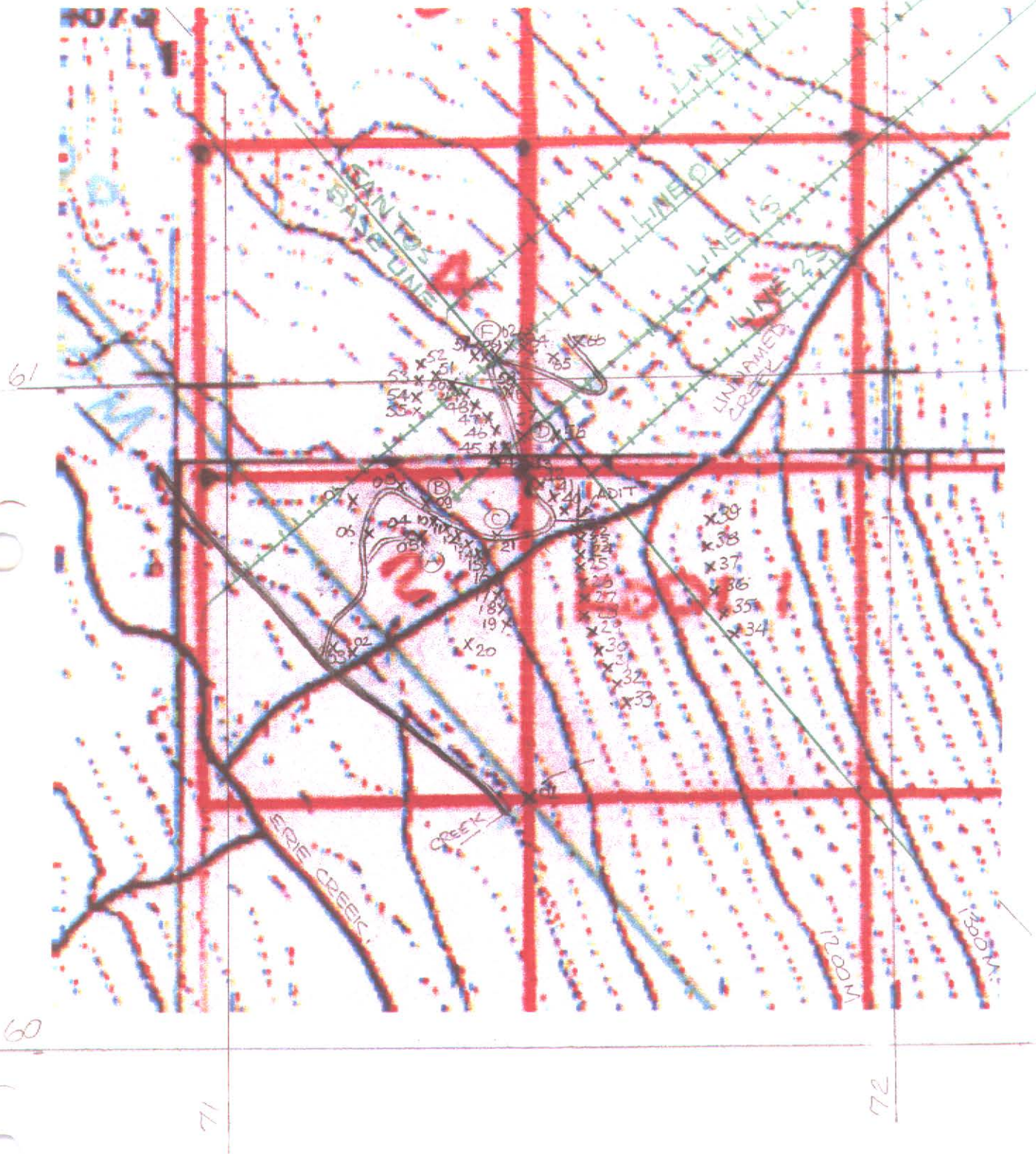
Further work is recommended on the existing property. Additional soil samples should be taken surrounding the anomalous values documented at the north end of the 1140 m contour soil line

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- (A) - TRENCH APPROX 30' LONG EXPOSING VEIN
- (B) - HOLE EXPOSING VEIN
- (C) - HOLE
- (D) - HOLE
- (E) - HOLE
- (F) - HOLE 20' Ø

xxxii



P.J. SANTOS SAMPLE
ROBB CLAIMS 1986

1-66 SOIL SAMPLES
KODI CLAIMS

LEGEND

75° Attitude of Quartz vein

45° Attitude of Jointing

65° Attitude of flow bedding

70° Attitude of faulting

#20737
.003/L.01
36"

Sample Number
Oz/tan Au, Oz/tan Ag
Thickness (Inches)

10001 of rail XXXVI

A. Holm
Oct. 14, 1934

GEOLOGICAL BRANCH ASSESSMENT REPORT

14,966

#20738
.002/L.01
36"

#20737
.003/L.01
36"

#20734
.002/.01
24"

#20733
.003/.01
24"

#20732
.003/.52
18"

#20731
.001/.29
36"

Diorite

#20729

.002/.26
12"

Pyrite vein
with Quartz

#20730
.006/.01
Dump

#20727
.001/L.01 (F.W.)
36"

#20728
.001/L.01 (H.W. w/
pyrite veins)
24"

#20726
.001/L.01
12"

(Quartz vein with pyrite)

Green amygdoloidal
Andesite porphyry flow

M13

M14

#20436
.013/.55
24"

M1

#20735
.003/L.01
12"

M2

M5

M12

70°

65°

60°

55°

50°

45°

40°

35°

30°

25°

20°

15°

10°

5°

0°

30°

25°

20°

15°

10°

5°

0°

30°

25°

20°

15°

0 50 100 Feet

0 10 20 30 Meters

SUN RESOURCES CORPORATION

SAMPLING PLAN

01-26

ROBB ADIT

①

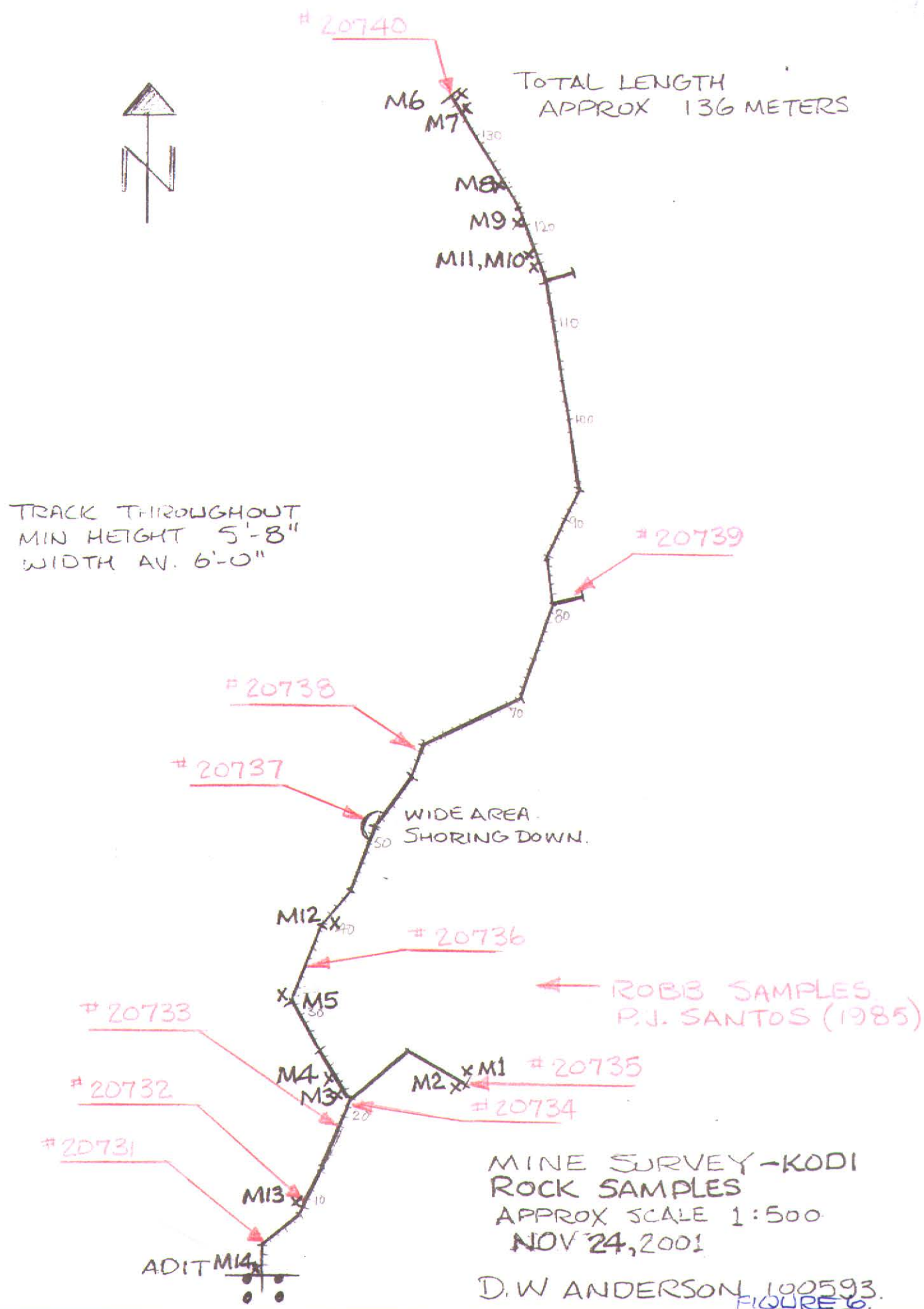
KODI MINE SAMPLES

ANGINEL RESOURCES LTD.

Drawn by:
P.J.Santos

Date:
Nov. 1985

PLATE 5



ROBB
2266 (5)

XXXIV

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,966

01-26 (2)

LEGEND and SYMBOLS

— 5 — Silver Contour (ppm)



0 100 200 Meters

P. J. (PEC) SANTOS P. ENG.
Consulting Geologist

Project Title
SILVER GEOCHEM MAP
Robb Property
Sun Resources Corporation

DATE
May, 1986

SCALE
As Shown

DRAWN BY
P. J. SANTOS

PLATE NO. 7

Appendix A

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, Richard T. Walker, of 656 Brookview Crescent, Cranbrook, BC, hereby certify that:

- 8) I am a graduate of the University of Calgary of Calgary, Alberta, having obtained a Bachelors of Science in 1986.
- 2) I obtained a Masters of Geology at the University of Calgary of Calgary, Alberta in 1989.
- 3) I am a member of good standing with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
- 4) I am a consulting geologist and Principal of the firm of Dynamic Exploration Ltd. with offices at 656 Brookview Crescent, Cranbrook, British Columbia.
- 5) I am the author of this report which is based on information provided by Wayne Anderson, a two day property visit during the 2001 field season (early November), and research subsequent to the end of the field season.

Dated at Cranbrook, British Columbia this 20th day of January, 2002.



Richard T. Walker, P.Geo.

Appendix B

Excerpts from the literature

The following has been taken from Little (1960):

Year	Erie Creek		Fortynine Creek	
	ounces	\$	ounces	\$
1886-1890			48	900
1891-1895			241	4,500
1911-1915			7	130
1931-1935	1	30	78	2,126
1936-1940			94	3,064
1941-1945			24	833
Totals	1	30	492	11,553

...

Erie Creek

Placer gold was discovered on Erie Creek in 1902 by the Peterson brothers while digging a well for water. They staked the ground and operated the lease for some time before their discovery became known. Thirty-five claims were staked during that summer and the Petersons' ground was acquired by Wild Duck Placer and North Fork Placer, but no record of production has been kept. In 1904 two claims just below Hooch Creek were worked. A small amount of coarse gold was said to have been obtained from gravel in an old stream channel on the north side of the creek. Farther down the creek the Erie Placer Company did preliminary work and found some coarse gold. No further activity is reported.

In 1915 some work was done near the mouth of Hooch Creek and good returns were said to have been obtained. In 1921 an attempt was made to work the ground about 2 miles above Erie, but progress was hampered by the presence of large boulders and a layer of clay that carried much gold through the sluice boxes. A little coarse gold was obtained. In 1935 one ounce of gold was recovered from Erie Creek, but the locality is not given

...

Fortynine Creek

Fortynine Creek is apparently the most productive in the map-area. A hydraulic operation was reported as early as 1890 and activity was reported each year to 1895, the principal operator in 1894 and 1895 being Nelson Hydraulic Company, Limited. In 1914, tests were started by a syndicate of men from Nelson. By 1916 a tunnel that was to explore an old channel had been advanced 230 feet, in spite of quicksand that caused grave difficulties. No work other than one small operation in 1921 is reported until 1928. In that year Fortynine Creek Placers, Limited, acquired the leases upon which tunnelling had been carried out. The company cleared out the tunnel, which had been filled with mud, and advanced the face to encounter gravel of an old channel believed to be about 1,700 feet long. No further reports of the success of this venture are given nor does Holland record any placer gold production in this period.

In 1933 the Black Watch Syndicate, under the direction of H. A. McKen, removed by drag line and sluiced 8,000 cubic yards of gravel from a bench on the east side of the creek about half a mile upstream from the road to the powerplant on Kootenay River. The syndicate continued work in 1934 with a small crew of men. A little activity occurred the following year when 5¾ ounces of placer gold were recovered.

In 1938 H.A. McKen sunk a shaft to a depth of 28 feet on one of sixteen claims, but it is not known if placer gold was obtained from this operation. In the same year Nelson Placers, Limited reworked marginal gravel on ground that had been hydraulicked between 1890 and 1900. Eleven ounces of gold were recovered. This company continued operations in 1939 and the following year the property was operated under lease.

In 1942, a shaft was sunk on the creek-bed in the Acorn group to a depth of 110 feet to prove the existence of an old channel of supposed Tertiary age. Gravel from the shaft which was said to penetrate to within a few feet of bedrock, was hoisted to the surface and dumped onto a grizzly over sluice boxes. Encouraging amounts of gold and some scheelite were recovered.

...

Gold-silver Deposits, With or Without Some Lead and Zinc

Gold-silver deposits are as numerous within the map-area as those containing lead-silver ores. However, there are a great many that have produced only minor amounts of ore. The overall gross value of production from the gold-silver deposits is therefore probably less than that from the lead-silver deposits.

In the gold-silver deposits the value of gold is in most cases greater than that of silver. ... (From) the Star and Alam N., Second Relief, Harriet, Porto Rico, Tamarac, Jumbo, and Columbia-Kootenay, silver is only of minor importance. ... The Granite-Poorman, Athabasca, Canadian Belle, Second Relief, Porto Rico, Tamarac, Arizona, and Golden Drip have produced also a little copper ...

The major belt of gold-silver deposits is oval in shape and extends from the Good Hope, and Nevada and Royal Canadian properties west of Nelson south-eastward to the Sheep Creek camp. This belt may be divided into three smaller ones, a northwest division of irregular shape, and central and southeast divisions of elongate shapes, arranged *en échelon*. Within each of these divisions are mines of considerable economic importance but the most important is the southeast division which embraces the Sheep Creek camp.

Within the entire major belt the gold-silver deposits are all fissure-filled veins with ... more or less disseminated sulphides adjacent to the vein The Good Hope, May and Jenie, Star and Alam N., Perrier, Daylight and Berlin, Starlight, Golden Age, Euphrates, Harriet, Porto Rico, Spotted Horse, Myrtle, and Clubine-Comstock veins are in greenstone, augite porphyry, or chlorite or sericite schists of the Rossland formation, and the Whitewater, Venus and Juno, Athabasca, Bear, and Fern veins lie partly within these rocks and partly in granodiorite or porphyritic granite. ...

The remaining deposits in this belt occur in sedimentary rocks. These ... are in quartzite, argillaceous quartzite, or in brittle, metamorphosed argillaceous rocks. Some of the gold-silver deposits in the western part of the belt are in argillaceous quartzite and related sedimentary rocks. The Canadian

Belle, Second Relief, Second Chance. Keystone, Gold Hill, and Arlington are of this type, and it appears significant that the most productive mines in this part of the belt are those in which the country rock is hard, brittle quartzite. ...

The gangue in the deposits of this belt is quartz, with, in the Fern, Second Relief, Myrtle, and Yankee Girl veins, some crushed country rock. IN the Daylight and Berlin, Spotted Horse, and Protection, some ankerite or calcite is present and scheelite has ben reported i nthe Royal Canadian and Nevada, Golden Age, and Porto Rico veins. ...

Pyrite is the predominant metallic mineral in many of the veins of the major gold-silver belt. Galena and sphalerite have been seen in most veins and are abundant in some ... On the other hand, neither is reported in the veins of the May and Jennie, Starlight, Bear, Fern, Second Relief, Harriet, Porto Rico, Spotted Horse, Tamarac, and Gold Hill properties. Chalcopyrite, mainly in minor quantity, occurs in the Nevada and Royal Canadian, Venango, Granite-Poorman, Star and Alam N., Daylight and Berlin, Fern, Canadian Belle, Golden Age, Euphrates, Clubine-Comstock, and Gold Hill ores, ... Arsenopyrite is reported also in the veins of the Canadian Belle and Euphrates, and pyrrhotite in those of the Hummingbird, Daylight and Berlin, Canadian Belle, Second Relief, Centre Star, and Clubine-Comstock mines. Free gold occurs in the Granite-Poorman, Athabasca, Catherine, Perrier, Bear, Fern, Harriet and Porto Rico. Only the Second Relief deposit contains molybdenite, and there, only in small quantities.

The following has been taken from Cockfield (1936):

(2) Vein Deposits in the Rossland Volcanic Group. The veins present more variation in type than do the fissure veins in the Pend d'Oreille group and associated intrusives. Direction of strike is not nearly so uniform, although the veins generally strike northeast or north. Pyrite and chalcopyrite appear in some and these two minerals, together with pyrrhotite, or, more rarely, arsenopyrite, in others. Very commonly the veins are associated with minor intrusives of granite porphyry or diorite porphyry. At the Second Relief mine the vein follows the upper contact of a dyke of diorite porphyry for nearly 2,000 feet. The vein occurs in the greenstones of the Rossland Volcanic group, but in no place is more than a few feet from the dyke and, in places, cuts across minor projections from it. Sheared granite porphyry occurs at the Fern mine; the Gold cup fissure cuts across tongues of granite porphyry; and an augite kersantite dyke follows the vein on the Porto Rico property. Some veins, however, occur at considerable distances from these minor intrusions. Quartz is the chief gangue mineral. Magnetite, epidote, and garnet were noted in the gangue at the Second Relief mine, and molybdenite is reported to occur with the ores. Specularite was noted in the Gold Cup and several other veins, and free gold is reported from many. The suite of minerals at the Second Relief deposit are those of a typical contact metamorphic deposit. In this case, however, the deposit is a fissure vein, occurs in the contact zone of a granitic dyke, and might be expected to carry, in its gangue, minerals associated with the contact metamorphism of the dyke. Such deposits are believed to be of a high temperature type; probably higher than those of group 1.

The veins of group 2 are cut by northwesterly faults. Such a fault, on the Second Relief property, has a horizontal displacement of 96 feet and is of the normal type; another, affecting the Fern vein, has not been solved.

The veins of this group are, in general, narrower than the better known veins of group 1. The ore, where shoots occur, is mostly high grade and values are chiefly in gold. In general, though, the deposits have not received the attention devoted to those of the previous group.

(3) Fissure Veins Carrying Galena, Pyrite, and Zinc Blende in a Quartz Gangue, with Values Chiefly in Silver. Veins of this type have been described with the deposits of group 1. Examples occurring with intrusions of monzonite have been discussed by Drysdale and were not examined by the present writer.¹

(4) Vein Deposits and Mineralized Shear Zones. These carry quartz and pyrite and, in some instances, small amounts of chalcopyrite, galena, and zinc blende. Many of these are nearly identical with deposits of group 2. Quartz is the chief gangue mineral and pyrite the chief metallic mineral. Free gold is a conspicuous constituent and, locally, chalcopyrite or galena and zinc blende occur. The veins form an important group around Nelson and cut both the Rossland volcanics and the Nelson granodiorite. In some instances they pass from the one formation into the other as in the cases of the Venus and Athabasca veins. Many veins split to include horses of country rock. Some occur in shear zones. These shear zones may conform with the foliation of the enclosing rocks or may dip across the foliation. In other cases their trend is uncertain. The shear zones have generally poorly defined walls and, to date, have received comparatively little exploration. Minerals are not confined to the quartz, but occur also in the sheared country rock. Locally, free gold is abundant at the surface, as a result, it is thought, of surface enrichment. Average assays are probably low in the mineralized shear zones, but as some of the deposits are wide they may merit more attention than they have received.

The veins of this group are generally narrow, but in some are remarkably persistent, horizontally. Many of the veins have been lost at moderate depths, but in some of these cases the exploration done has not been sufficient to prove conclusively whether the vein has died out, or has been lost through a change in attitude or through faulting.

DESCRIPTION OF PROPERTIES¹

(1) Second Relief Mine

This property is owned by the Relief-Arlington Mines, Limited, which, in turn, is controlled by Premier Gold Mining Company, Limited. It is on Erie creek about 13 miles from the village of Erie on the Great Northern railway. The mine camp, at an elevation of 3,650 feet, is connected by road with Erie.

This is an old property and has been operated intermittently for years, generally, by lessees. In 1929 the Second Relief Mining Company, Limited, was amalgamated with the Arlington Mining Company to form the Relief-Arlington Mines, Limited, and in 1934 the Premier Gold Mining Company, Limited, secured control. The Arlington mine lies south of the Second Relief mine and outside the area covered by the present report.

...

The accompanying figure (No. 2) shows the claims, general geology, and the location of the principal mine entrances. The area containing the veins is underlain by the rocks of the Rossland-Beaver Mountain group, which here consist of greenstone, slate, tuff, and argillite. This group was subdivided into two units; one comprising rusty-weathering greenstone, slate, tuff, and argillite, and the other consisting entirely of greenstone. The rusty band formed by the former is quite apparent from a distance, as the area surrounding the mine has recently been burned over. There is no definite contact between the

two units and, so far, it has been impossible to distinguish the greenstones of the two units underground and thus to draw a contact between them. Slate and argillite, as will be pointed out later, have had an important influence on ore deposition, and it was considered important to outline the areas in which they occur. Owing to scarcity of outcrops no section of this composite unit could be obtained. Scattered outcrops have suggested that bands of slate, argillite, and tuff are intercalated with numerous bands of greenstone. At the surface the sediments dip eastward at moderate angles, but underground they have been found dipping steeply to the west.

The greenstone bodies from which specimens were selected for petrographic study are fine-grained, greyish green rocks showing no crystals with a hand lens. Under the microscope they are seen to consist of crystals of feldspar, or of hornblende and feldspar, in a very fine-grained and altered groundmass. Where determined the feldspar is andesine. The hornblende has been mostly altered to chlorite. Other secondary minerals include considerable quartz and some calcite. Such rocks may be called hornblende andesites.

About half a mile north of the mine the rocks of the Rossland-Beaver Mountain group are invaded by a large body of granitic rocks of the Nelson batholith. The intrusives are light grey and medium to coarse grained. One specimen examined under the microscope was a typical granodiorite consisting, essentially, of orthoclase, plagioclase, hornblende, and minor amounts of quartz.

The other rocks seen on the property are dykes. One group consists of diorite, and diorite porphyry and is pre-mineral. A prominent dyke of diorite porphyry, striking northeast, is followed by the main vein. It is a speckled rock consisting of phenocrysts of white oligoclase in a fine-grained, dark groundmass partly altered to chlorite. A specimen from near the vein differed by containing more quartz and by containing epidote.

Another small dyke of the same type but striking northwest occurs on the Argenteuil claim. It is a dark greyish green, holocrystalline, fine-grained rock containing horn-blende, altered plagioclase, and a little pyroxene.

So far as is known most of the other dykes are younger than the vein deposits and strike north to northwest. The common types are granite porphyry and quartz porphyry. There are also several mica and hornblende lamprophyre dykes. Some of the quartz and granite porphyries have a light-coloured, and others a dark-coloured, groundmass and although these are believed to be but variations of the same rock, conflicting evidence as to relative age was obtained. On the fifth level of the mine a light-coloured, somewhat silicified quartz porphyry is out by a quartz porphyry with a dark groundmass. Elsewhere, however, the light-coloured dykes hold rounded nodules of rock which is indistinguishable from the darker coloured types. It is believed that the colour of these rocks is dependent upon their rate of cooling and that all belong to the one period of intrusion, though in places cutting one another. The dark-coloured porphyries cut and offset the vein. The light-coloured types are chiefly grey, but include some slightly brown or slightly pink rocks and contain visible crystals of quartz, white or pink feldspar, and hornblende in a fine-grained, in some cases granitic, groundmass. Under the microscope are seen large crystals of oligoclase containing numerous inclusions; smaller crystals of quartz, of orthoclase, and of hornblende largely converted to chlorite. A specimen of light brownish rock with visible crystals of quartz showed under the microscope, phenocrysts of quartz, orthoclase, and oligoclase in a very fine-grained groundmass through which are areas of secondary quartz and minute crystals of feldspar. Another specimen, examined microscopically, showed phenocrysts of orthoclase and quartz with shreds of biotite in a groundmass of fine laths of feldspar, occasional spherulites, and considerable calcite. Part of the groundmass consists of intergrown quartz and feldspar.

The porphyry dykes with a dark groundmass contain visible crystals of quartz and feldspar in a very fine-grained, greenish grey groundmass. A dyke with a grey to greenish, fine-grained groundmass contained phenocrysts of quartz, feldspar, and hornblende. Another dyke with a fine-grained greenish groundmass contained phenocrysts of orthoclase, plagioclase, and quartz, shreds of biotite, and crystals of pyrite in a groundmass of feldspar and quartz, calcite and chlorite.

Only a few lamprophyre dykes were seen. They are deemed to be the youngest of the dyke rocks, but little evidence as to their age was obtained other than that one of them cuts the Second Relief vein.

Two dykes of mica lamprophyre were found in the northwestern part of the area mapped. These were not examined under the microscope, but, on macroscopic examination, are similar to the mica-lamprophyre dykes common elsewhere in the camp. They are dark green to black, fine-grained rocks with visible crystals of mica easily weathered to a partly coherent reek which is easily gouged with a pick. One of them was found cutting the rocks of the Nelson batholith. The other lamprophyre dyke was observed near station 15 on the 5th level of the mine. This is a fine-grained, black dyke with none of the constituent minerals distinguishable in a hand specimen. Under the microscope the rock shows fine, needle-like laths of hornblende and individuals of plagioclase feldspar. The rock is holocrystalline with a slight suggestion of ophitic texture.

The ore deposits are fissure veins occurring, chiefly, in the greenstone of the Rossland volcanics. The veins strike northeast and dip, generally, to the northwest at steep angles. The ore minerals consist of pyrite, pyrrhotite, and chalcopyrite. Molybdenite has also been reported. The gangue is country rock and quartz carrying some magnetite and, in places, garnet and epidote. Principal values are in gold and average about 0.4 ounce a ton.

One vein, known as the Second Relief vein, has been developed extensively and has supplied almost all of the production of the mine. The vein follows the hanging-wall of a diorite-porphyry dyke. This dyke varies from 30 to 40 feet wide. Its upper contact is slightly irregular and small tongues or projections run out into the greenstone. The vein cuts across these projections showing that it was formed subsequent to the intrusion of the dyke. In some places it leaves the dyke and is wholly in greenstone, but is very close to the dyke contact. The vein varies in width from a few inches up to 13 feet and consists, at its widest, of hanging- and foot-wall strands with a horse of country rock between. Where seen by the writer the average width was probably slightly less than 2 feet. The vein and diorite porphyry are out by dark-coloured quartz or granite porphyry dykes. In the upper levels of the mine these dykes cross the vein directly and, in places, follow faults that offset the vein a few feet; but on the lowest level, No. 6, the dykes, in some instances, enter the vein fissure and follow along it for some feet before passing out on the other wall.

The main vein is opened on six levels. No. 1 level, at an elevation of 4,065 feet, is entered from the surface by a crosscut driven southeast 140 feet to the point of intersection of the vein. A drift is run from the point of intersection northeasterly along the vein for 385 feet almost to the southern boundary of the Ida D. claim. At the time this work was done that claim was only partly owned by the company so that the vein was not followed into this claim. The section of the vein developed by this working has been stoped to the surface.

No. 2 level, at 3,985 feet elevation, is not an adit, but is accessible by a raise from No. 3 adit. The vein has been followed by drifts northeast for 445 feet and southwest for 420 feet from the raise. The northerly drift terminates at the line of the Ida D. claim. A crosscut about 80 feet southerly from the raise has been driven 320 feet to the southeast. This crosscut has short drifts northerly and southerly on a

parallel vein about 220 feet from the main vein. The ore developed by these workings has been stoped to the surface.

No. 3 level, at an elevation of 3,900 feet, crosscuts southeast for 190 feet to the point of intersection with the vein. From the point of intersection a drift has been run northeasterly 1,320 feet into the Ida D. claim with several short crosscuts near its face. A drift has also been run southwesterly 110 feet and a short crosscut has, been driven to the southeast near its face.

No. 4 level, at an elevation of 3,795 feet, is a drift for 130 feet to where a fault is encountered. The fault strikes north 25 degrees west and dips 50 degrees southwest. It is a normal fault offsetting the northeasterly part of the vein 96 feet to the right or southeast. A crosscut beyond the fault picks up the vein which is then drifted on to the northeast for 1,200 feet, approximately to the line of the -Ida D. claim.

No. 5 level, at an elevation of 3,706 feet, is driven southeasterly for 690 feet and intersects the vein at 250 feet. At 320 feet from the portal a short drift has been run northeast to a winze station. From the point of intersection with the vein a drift has been run northeasterly along the vein for about 1,480 feet. Near the end of this drift both the vein and the diorite dyke enter slates and in doing so the vein swings to the north, nearly in line with the strike of the sediments. The slates at this point dip steeply to the west. Where the vein enters the slates the values disappear.

No. 6 level is reached by a shaft from No. 5 level in the foot-wall of the vein and is approximately 150 feet below No. 5 level. The crosscut from the foot of the shaft to the vein runs northerly and encounters the vein at 120 feet from the shaft station. The vein has been drifted on northeasterly to where it enters the slates. This point lies northeast of the contact of the slate and greenstone on No. 5 level and indicates that the contact is plunging in this direction. The slates, however, dip west. As on No. 5 level, the vein, where it enters the slates, turns to follow them and values disappear. Several faults and dykes on No. 6 level, when related to similar occurrences on No. 5 level, appear considerably to the southwest of their projected position as calculated from dips on No. 5 level, in spite of the fact that the dykes and faults on No. 6 level have the same dip as on No. 5. More information on this problem will, undoubtedly, be obtained in raising and stoping from No. 6 level. A raise to No. 5 had been started at the time of the writer's last visit in September and it was intended, as soon as possible, to deepen the winze in order to open up new levels.

The ore length on No. 6 level, deducting the width of dykes (75 feet), had been proved for a distance of 1,500 feet. Assay averages up to 3 feet where the vein width is below that figure indicate mill grade ore over that width. The vein has not been drifted on southwest of the crosscut which enters it from the winze station.

The diorite dyke that accompanies the vein has been traced southwest some 800 to 900 feet from the most southwesterly point on the vein explored by the mine workings. It is visible in a short adit driven near the boarding house and is accompanied by a fissure which is, however, not mineralized. Southwest from this point the dyke is lost under the drift deposits of the creek and has not been located on the opposite side of the valley.

Parallel with the Second Relief vein are four veins known as Nos. 2, 3, 4, and 5, lying at 50, 140, 290, and 320 feet, respectively, southeast of the Second Relief vein. These are reported to have given, in general, good assays at the surface, but the small amount of work done on them underground is reported to have given disappointing results.

No. 2 is a narrow vein on the foot-wall of the diorite dyke. It is exposed in several crosscuts through the diorite dyke from the main workings. In the long crosscut from No. 2 level the vein strikes north 60 degrees east and dips 76 degrees northwest. At this point it carries very little sulphide and is only a few inches wide. The vein is also exposed in a short crosscut from the 6th level where it appears as a small stringer of quartz with seams of pyrite in the enclosing wall-rock. The vein has been exposed, too, at other points in the mine not seen by the writer. O'Grady (1933) reports that good assays have been obtained at several of these intersections.

No. 3 vein is only a stringer with no sulphides. Two open-cuts have been made on it about 30 feet apart.

No. 4 vein has been prospected over a length of 50 feet by two open-cuts, and consists of quartz with pyrrhotite and chalcopyrite. It is about 2 feet wide.

No. 5 vein is about 4 feet wide and contains widths ranging from 1 foot to 4 feet, of massive sulphides, mainly pyrrhotite and chalcopyrite. Very little quartz is present. The vein is exposed for about 40 feet. According to O'Grady (1933, page 236) three samples assayed 0.24, 0.39, 0.36 ounce of gold a ton across 12, 39, and 42 inches respectively. O'Grady notes that these assays are lower than might be expected from the heavy sulphide content and explains "that the absence of quartz has similar characteristics to sections of the main vein, where in some cases, massive sulphides without quartz show lower gold values than anticipated."

Several veins that cannot be related with certainty to those already discussed have been found in the long crosscut to the southeast from No. 2 level. One at the face of the crosscut consists of a 2-inch veinlet of calcite dipping 75 degrees northwest.

Again, at 210 and 230 feet from the main drift in this crosscut, two drifts have been run on two branches of a vein. These drifts unite about 30 feet southwest from the crosscut and continue along the vein for 30 feet in this direction. Northeast of the crosscut the drifts have been run for about 40 feet and are converging at their ends. The drift at 210 feet follows a vein; the drift at 230 feet is along a stringer that splits from the vein. The vein is 2½ feet wide, strikes north 60 degrees east, and dips 80 degrees southwest (or in the opposite direction to the Second Relief vein). It consists of sheared country rock with stringers of quartz and the walls are heavily pyritized. Northeast from the crosscut the vein narrows to about a foot.

The Ida D. vein outcrops about 450 feet northwest of the intersection of the main vein with the Ida D. boundary line. It was not examined by the writer but is stated to have shown good assays at the surface.

On the opposite side of Erie creek, westerly from the Second Relief workings, a vein has been traced continuously for about 800 feet by a series of open-cuts. It strikes north 70 degrees east, dips 75 degrees northwest, and ranges from 1 to 3 feet wide. One strand of quartz, 8 inches wide, occurs on the foot-wall of the vein in the lower part of the lowest open-cut. A horse of country rock, 16 inches wide, separates this from another strand of quartz 14 inches wide. In the upper part of the open-cut the vein is 2 feet wide. The quartz is well mineralized with pyrite.

In the next cut the vein is not fully exposed and in the uppermost cuts, which cover a length of about 30 feet, the vein varies from 1 to 3 feet in width and carries considerable pyrite.

A new 75-ton cyanide mill under construction at the property was expected to be in operation before the close of 1935. The former mill was a flotation plant with a daily capacity of about 40 tons.

The ore and gangue minerals suggest a high-temperature deposit, and the presence of garnet, magnetite, and epidote in the gangue suggests deposition under conditions similar to those of typical contact metamorphic deposits. No study of the paragenesis of the ore and gangue minerals has been made for the purposes of this report. Garnet and epidote were found in the country rock at some distance from the vein deposits and epidote is a common alteration of greenstone throughout the area. It would thus appear possible that the vein, owing to its location along the dyke, intersects the contact zone of the dyke and as a result these gangue minerals are found in the ore. The time of the formation of the vein is fixed as between that of the injection of the diorite porphyry dyke and the injection of the quartz or granite porphyry dykes, for the vein cuts across projections from the former, and is cut and offset by the latter. The diorite porphyry may represent stages connected with intrusion and differentiation of the Nelson granodiorite to which the ore deposits are undoubtedly related, and the dykes cutting the vein may be related to Tertiary intrusives correlated by Drysdale with the Coryell batholith and the Rossland alkali-granite and syenite of the West Kootenay sheet.

...

(20) Porto Rico

This property comprises a group of five claims, owned by E. Wragge of Nelson. It lies at the head of Barrett creek about 7 miles by road from Porto Rico siding on the Great Northern railway.

The property has been described fully by Drysdale and as almost no work has been done on it since, and as some of the workings have caved, less information is now available than at that time. Only a brief description will, in consequence, be given here and the reader is referred to Drysdale's report for more complete details.

The property was worked in 1898-99 by the Canadian Pacific Exploration Company and yielded \$56,511 or about \$17.21 a ton of ore milled. It was worked under lease by G. H. Barnhardt in 1903 and yielded about \$16,000, representing a value of \$17 to \$18 a ton. The last work recorded was in 1915 when about \$1,000 worth of ore was recovered by Smith Curtis. Recently, the property has been worked by lessees, but the writer has no record of shipments.

The vein on this property is a quartz-filled fissure striking north 50 degrees east and dipping 42 to 45 degrees to the northwest. Associated rocks comprise augite porphyry and a sill of augite-feldspar porphyry and the productive part of the vein is in the latter. The vein averages 2 feet in width and is mineralized, chiefly, by pyrite with values mainly in gold. Free gold has been reported but was not seen by the writer.

The vein is developed by four adits and a number of open-cuts, extending in all about half a mile from the apex of the vein on the summit down the hill towards Barrett creek. A lower adit, known as No. 6, has also been driven but is reported to be off the vein. It had caved at the entrance and could not be examined. Of the other adits, No. 3 is the only one now readily accessible. No. 4 is caved at the portal and the vein has been stoped from No. 3 to the surface. The stope has been left open and prevented an examination of the remainder of the higher levels. No. 3 adit developed an ore shoot 450 feet long that has been stoped above the level. The hanging-wall of the vein in this section is a fine-grained, cherty, augite kersantite dyke about a foot wide. The vein varied along the level from 1 foot to 31 feet wide.

About 50 feet from the face it is lost in a sheared section of the country rock containing many seams of calcite, but appears to have deviated toward the hanging-wall side. About 330 feet from the portal a winze had been sunk by recent lessees but was full of water. It is reported to be 20 feet deep and to have discovered ore.

No. 4 level is reported to be off the vein but to have been driven parallel with it for 358 feet and to have followed small bunches and stringers of quartz and calcite for 90 feet. The level, it is reported, has not been driven far enough to get beneath the ore shoot stoped from No. 3 level.

The apex of the vein is exposed by open-cuts at the summit of the hill. The most southwesterly cut failed to locate the vein, but farther northeast and along its strike two other cuts expose the vein and there it is 2 and 3 feet wide, respectively. The vein exposed in these cuts was traced-down the hill by outcrops and float to a point opposite the entrance to No. 1 level. Here it was found to be offset about 50 feet to the south of the vein exposed above the portal of No. 1 adit. A cross vein in No. 1 adit, just southwest of the stope opening referred to above, is reported to strike towards these outcrops but could not be seen on the surface. As the Porto Rico vein is reported to be lost towards the end of the upper workings, it is possible that the vein shown in the open-cuts is not this vein, but one *en échelon* with it and extending farther northwest. Only low gold values have been obtained from the open-cuts, but further surface prospecting should be done to prove the relations of the vein exposures there to the main vein as developed underground. The matter has a considerable bearing on the future of the property.

(21) Spotted Horse Claim

This claim is northeast of the Porto Rico group and is owned by E. Wragge of Nelson. The workings consist of one small open-cut and a short adit.

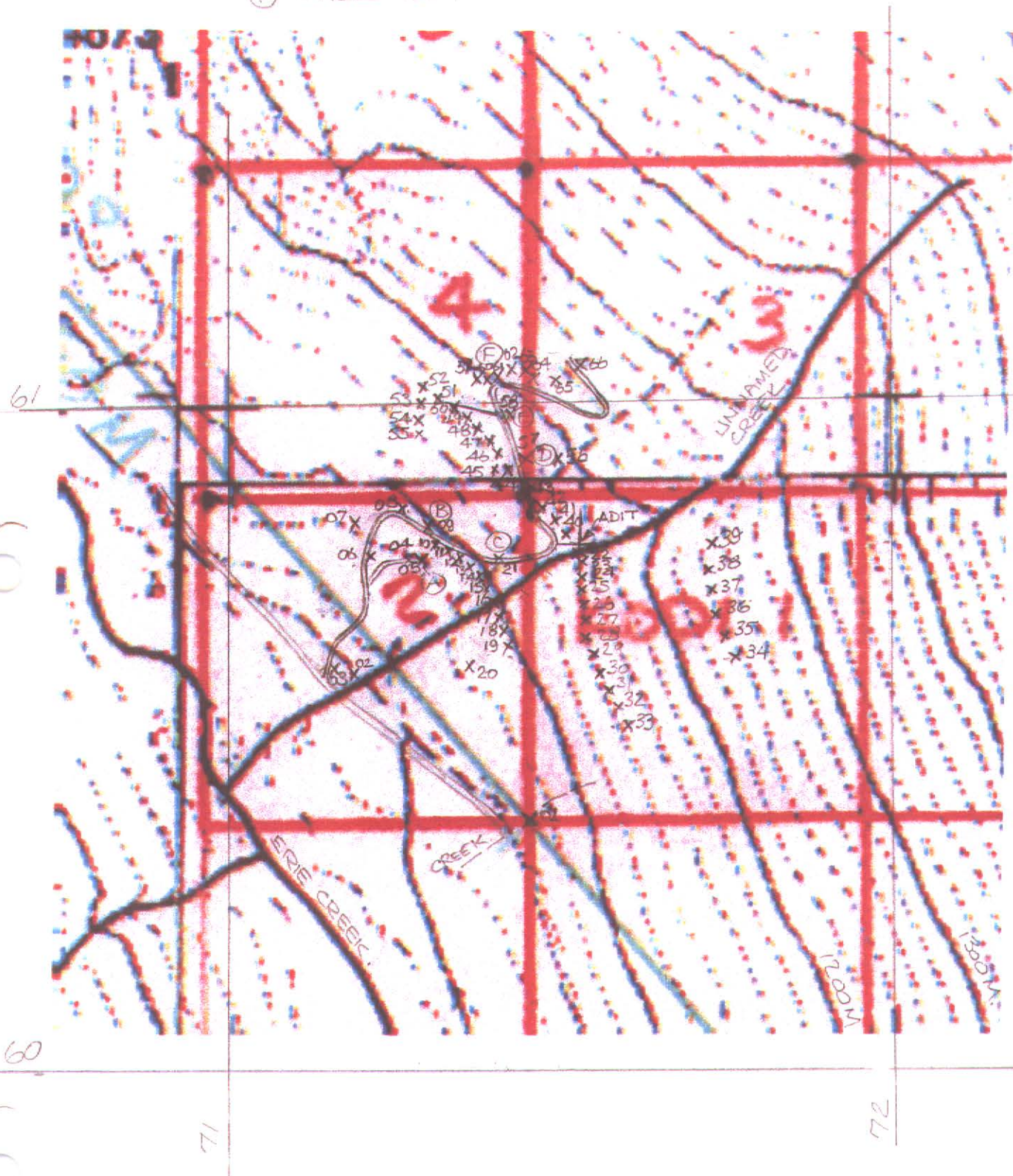
The country rock is augite porphyrite of the Rossland Volcanic group. The open-cut is a few hundred feet from the road to the Porto Rico camp at the side and near the head of one of the branches of Barrett creek. It exposes a quartz vein composed of two stringers of quartz separated by country rock. The stringers strike north 75 degrees east and dip at 65 and 55 degrees, respectively. At the top of the cut the northwest stringer is about 2 inches wide, but pinches towards the bottom of the cut which has a face about 5 feet high. The southeast stringer is 2 to 3 inches wide and at the bottom of the cut is a foot from the other stringer, whereas at the top of the out the stringers are 21 feet apart. The country rock between the two stringers is slightly sheared. No sign of sulphide mineralization was seen.

The adit is in the bed of the same stream, immediately below the road, and is about 150 feet long. The deposit consists of a number of veinlets traversing the rock in a shear zone that has no definite walls. The general direction of the zone is south 70 degrees east and the dip is 55 to 60 degrees to the northeast. A quartz vein occurs at the portal and has this attitude. It is 6 inches wide and pinches out within a short distance in the adit; but, farther in, are a number of stringers running in different directions. Some are of quartz and others, particularly those running across the direction of the shear, are of calcite. The zone appears to be 3 to 4 feet wide, but the only definite wall appears at the face where a well-marked plane, with the attitude given above, forms the foot-wall of the shear zone. No sulphides were seen, but according to Mr. Wragge thin plates of native gold are found in the small stringers. It is reported that 17 tons were shipped from this working and averaged \$21 in gold.

Appendix D
Geochemical Analyses

- (A) - TRENCH APPROX 30' LONG EXPOSING VEIN
- (B) - HOLE EXPOSING VEIN
- (C) - HOLE
- (D) - HOLE
- (E) - HOLE
- (F) - HOLE 20' d

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SOIL SAMPLES
KODI CLAIMS

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GEOCHEMICAL ANALYSIS CERTIFICATE

Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A103578
1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. ANDERSON

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AA
LL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	L1	S	Rb	Hf	Ga		
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
G-1	1.1	2	24	52	<2	6	4	753	2.12	<2	3	<4	8	681	<2	<1	<1	52	2.66	100	31	17	.61	1037	253	7.34	2.484	3.26	3	9.0	56	1.7	17.8	23.0	1.4	2	5	34	<.02	139	1	24		
KS01	2.1	45	111	255	1.0	28	22	3118	3.95	18	45	<4	9	421	1.2	1	1	117	2.27	138	48	114	1.16	1114	312	7.48	1.467	2.01	2	47.7	69	4.8	36.4	18.2	.9	2	13	47	.03	94	1	22		
KS02	2.4	129	322	427	2.5	46	24	2467	5.76	99	13	<4	6	503	2.1	2	3	183	3.51	183	38	107	1.99	890	399	7.79	1.678	1.68	1	35.8	57	1.6	27.6	11.6	.6	1	21	41	.10	79	1	21		
KS03	1.1	96	89	438	.7	32	26	2320	5.66	61	5	<4	7	479	2.0	1	<1	165	2.92	234	37	85	1.64	894	472	8.75	1.779	1.56	1	66.6	67	1.8	22.8	12.9	.7	2	17	46	.02	84	2	25		
KS04	4.2	62	681	1050	.9	3	10	14004	6.29	4631	21	<4	25	43	5.3	5	1	97	42	263	66	6	.40	1063	218	8.35	.056	5.53	8	17.2	96	3.0	32.0	9.1	.5	2	5	12	<.02	323	1	28		
KS05	2.3	114	1296	1222	2.9	11	13	6676	10.94	8491	19	<4	38	175	3.2	10	1	121	.78	241	71	33	.61	1040	236	7.80	.546	3.67	5	64.9	89	2.0	38.0	10.4	.5	3	10	17	.08	227	2	25		
KS06	1.1	38	48	205	.7	22	12	1101	3.81	37	11	<4	9	368	.5	1	<1	100	1.94	197	48	54	.89	897	431	8.95	1.718	1.87	2	107.4	88	2.0	26.2	20.6	1.0	2	11	30	.02	74	3	27		
KS07	1.3	52	76	640	.4	38	21	1309	5.41	39	3	<4	7	388	1.3	1	2	150	2.62	273	29	76	1.50	839	506	8.98	1.650	1.46	1	67.7	72	2.0	15.6	14.8	.8	1	16	47	.02	72	2	25		
KS08	1.3	61	80	404	1.3	36	18	1223	4.69	137	15	<4	10	450	.8	1	1	136	2.39	122	49	91	1.42	1043	469	8.79	1.715	2.00	3	95.5	99	1.8	31.1	19.6	1.0	2	15	44	.02	94	3	24		
KS09	3.7	338	33910	1516	65.1	3	14	5083	11.60	23626	17	10	22	42	27.2	53	5	96	.43	186	55	11	.29	1187	.090	5.81	.043	3.26	4	20.5	78	3.2	26.7	13.4	.5	2	4	9	.15	208	1	17		
KS10	1.4	52	153	419	1.0	27	15	1893	4.45	269	4	<4	9	353	.7	1	1	123	1.73	228	39	61	1.11	969	438	8.83	1.626	1.82	1	105.8	78	2.0	21.3	16.7	.9	2	13	32	.02	85	3	27		
KS11	1.2	42	81	568	.5	25	16	1883	4.41	65	3	<4	7	382	.8	1	1	121	2.08	259	29	61	1.04	970	461	8.35	1.823	1.70	1	84.4	65	2.1	16.1	16.3	.9	2	11	35	<.02	58	2	28		
KS12	1.1	74	115	845	.7	32	23	1677	5.46	131	6	<4	6	443	1.4	1	<1	153	2.52	224	32	80	1.54	844	486	8.71	1.786	1.49	1	73.8	71	1.6	20.5	14.5	.8	2	15	49	.02	61	2	25		
KS13	.9	148	78	698	.9	38	31	2268	6.30	130	7	<4	6	524	2.6	1	<1	188	3.14	147	40	98	1.96	854	486	8.58	1.871	1.56	1	45.4	63	1.4	26.7	11.7	.6	1	20	56	.03	91	1	24		
KS14	1.8	83	102	257	.6	35	25	1849	6.03	37	4	<4	5	495	1.1	1	1	190	3.15	189	30	105	2.06	955	414	8.38	1.921	1.70	1	34.5	52	1.4	19.7	11.3	.6	1	20	41	.04	84	1	22		
KS15	2.9	139	728	693	5.2	48	21	3101	5.54	163	5	<4	5	378	4.2	2	8	155	2.82	127	28	139	1.85	369	309	6.48	1.390	1.57	1	30.2	47	1.1	17.9	10.4	.5	1	17	26	.39	79	1	18		
KS16	1.0	51	51	421	.6	28	18	1239	4.27	34	3	<4	6	306	1.6	1	<1	122	1.71	295	23	54	1.06	718	427	8.34	1.588	1.32	1	92.6	58	1.8	15.2	10.5	.6	1	12	38	.02	56	3	25		
KS17	1.3	45	166	379	1.0	25	14	1871	3.84	58	4	<4	9	296	1.2	1	1	107	1.41	288	28	52	.92	793	387	8.57	1.490	1.52	1	103.5	73	1.7	16.0	14.6	.8	2	11	32	.02	71	3	24		
KS18	1.4	46	171	321	.8	28	13	1847	3.94	59	3	<4	8	373	.8	1	1	114	1.63	158	38	60	1.03	1016	367	7.85	1.721	2.00	2	66.7	68	1.6	18.5	17.6	.9	2	12	28	.02	101	2	23		
RE KS18	1.7	44	168	316	.8	27	13	1844	3.92	59	3	<4	9	374	.9	1	1	111	1.63	155	39	59	1.04	1026	358	7.92	1.747	1.99	2	66.1	69	1.7	17.9	17.3	.9	1	12	27	.02	88	2	24		
KS19	1.1	37	135	816	.5	27	14	2873	4.31	35	2	<4	6	343	1.4	1	1	116	1.76	210	23	57	1.05	897	417	7.38	1.603	1.65	1	54.6	47	2.0	10.8	16.0	.9	2	10	49	.02	65	2	24		
KS20	1.4	61	56	238	.4	32	20	980	4.95	22	3	<4	5	333	.4	1	<1	143	1.84	182	21	68	1.27	825	460	8.61	1.582	1.32	1	102.9	45	1.8	14.1	11.4	.6	2	13	41	.03	37	3	28		
KS21	13.0	374	5471	2956	8.5	30	41	20818	9.90	2031	13	<4	21	104	28.0	9	13	91	.56	242	101	39	.73	1212	198	8.07	2.49	3.86	10	61.8	176	3.3	35.0	52.0	1.9	2	10	18	.13	227	1	24		
KS22	2.4	106	511	678	2.1	33	21	2942	5.05	50	9	<4	5	441	4.9	2	3	159	3.30	150	29	88	1.74	787	326	6.96	1.588	1.33	1	31.9	46	74.9	20.8	9.0	<.5	1	18	29	.11	70	1	18		
KS23	56.0	575	3632	1636	9.0	36	99	16022	9.69	188	5	<4	6	175	8.8	4	63	150	.86	232	29	55	.98	604	233	6.94	.793	1.67	5	27.4	89	1.4	24.4	6.8	<.5	1	19	24	.14	94	1	20		
KS24	2.2	108	206	563	2.2	55	23	2001	5.14	36	3	<4	7	360	1.6	1	2	152	2.04	154	37	116	1.67	900	437	9.00	1.635	1.63	2	85.4	76	1.9	23.4	13.4	.6	1	17	34	.03	92	2	27		
KS25	1.7	96	128	441	1.2	50	22	1870	5.19	40	2	<4	7	341	1.1	1	2	152	2.03	174	34	117	1.89	868	429	9.00	1.582	1.61	2	84.7	70	1.6	21.6	12.7	.6	1	18	31	.03	96	2	25		
KS26	2.5	83	483	1182	4.7	38	14	4007	5.13	306	4	<4	12	258	2.3	1	4	128	1.06	156	41	68	1.14	1233	361	11.00	1.232	3.38	3	77.4	73	2.4	30.0	13.7	.7	3	12	35	.04	218	2	34		
KS27	2.4	83	192	461	2.3	48	21	7740	5.11	42	5	<4	14	317	2.3	1	4	116	1.28	442	78	100	1.46	1142	406	8.45	1.250	1.66	4	95.6	166	2.4	22.8	41.0	1.8	2	16	48	.05	82	3	27		
KS28	1.5	35	95	284	.7	25	12	2865	3.86	49	2	<4	7	314	.9	1	1	109	1.21	321	31	55	.98	1124	367	8.12	1.603	2.26	2	77.3	68	2.1	14.2	19.9	1.0	2	9	32	.02	92	2	28		



Dynamic Exploration Ltd. PROJECT ERIE CREEK FILE # A103578

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SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	Ga	
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
G-1	.9	2	24	50	<2	6	5	732	2.27	<2	4	<4	8	734	<2	<1	<1	57	2.64	.094	34	20	.56	1112	242	7.85	2.369	3.27	3	9.2	57	1.5	21.5	23.3	1.3	3	6	37	.05	149	1	24	
KS34	.8	66	51	218	.2	27	24	1546	5.39	15	1	<4	4	528	1.0	1	<1	166	2.27	.141	21	71	1.40	1231	418	7.12	1.971	1.96	1	32.1	38	1.3	14.1	14.0	.6	2	15	30	.03	82	1	23	
KS35	1.0	61	46	276	.5	28	20	901	4.65	13	2	<4	6	433	1.0	1	<1	148	2.04	.124	27	59	1.21	939	387	7.93	1.877	1.65	1	70.6	53	1.5	18.9	13.0	.6	2	14	29	.02	69	2	24	
KS36	.9	66	42	279	.3	30	21	1055	4.78	14	2	<4	6	417	1.0	1	<1	149	2.11	.162	26	66	1.29	991	424	7.99	1.810	1.62	1	74.6	59	1.7	17.5	13.0	.6	2	15	38	<.02	66	2	24	
KS37	1.1	45	39	243	.3	25	20	2553	4.71	14	2	<4	5	436	1.5	1	<1	141	2.20	.196	27	57	1.13	1161	411	7.24	1.787	1.71	1	53.4	48	1.6	16.5	12.5	.6	1	14	30	<.02	82	1	25	
KS38	.9	74	43	215	.4	28	24	1367	5.81	15	2	<4	5	465	1.0	1	<1	169	2.49	.190	26	73	1.50	1150	452	7.83	1.863	1.82	1	48.8	52	1.6	16.7	13.7	.6	2	17	33	<.02	74	2	25	
KS39	.8	86	50	162	.2	30	24	1073	5.86	21	2	<4	5	469	.5	1	<1	185	2.23	.131	24	84	1.68	1186	431	8.03	1.841	1.92	1	32.6	41	1.4	15.1	12.7	.6	2	18	30	<.02	86	1	22	
KS40	2.5	77	234	536	1.9	31	20	2048	4.83	248	4	<4	8	297	1.7	1	3	124	1.40	.193	49	64	1.02	845	400	8.60	1.459	1.66	2	133.8	72	2.0	39.7	13.8	.7	2	17	32	<.02	83	4	24	
KS41	1.7	48	545	993	1.9	22	14	4179	4.79	1165	5	<4	17	299	2.7	2	2	107	1.37	.303	34	50	.81	991	370	8.00	1.454	1.71	2	107.7	61	1.7	25.6	13.9	.7	1	12	34	<.02	94	3	25	
KS42	1.1	48	54	236	.6	25	17	1007	4.46	24	2	<4	7	375	.9	1	1	131	1.81	.200	28	55	1.04	925	406	8.18	1.653	1.50	1	88.2	58	1.6	18.2	13.9	.7	2	14	30	.02	65	3	24	
KS43	1.7	64	64	238	1.1	22	16	870	4.19	20	3	<4	8	363	.5	1	3	124	1.45	.156	36	56	.93	969	373	7.78	1.738	1.64	2	102.6	62	1.7	22.7	15.7	.8	2	13	30	.02	67	3	24	
KS44	1.6	61	77	274	.8	58	22	2528	5.01	21	4	<4	13	421	1.1	1	1	146	2.32	.240	47	100	1.55	1104	411	6.59	1.603	1.77	2	57.1	80	1.9	21.4	26.1	1.3	3	13	33	.02	82	2	23	
KS45	1.6	61	122	287	.8	31	19	1599	6.02	85	4	<4	8	473	.9	1	1	184	2.31	.152	42	80	1.28	1084	370	7.37	1.767	1.79	2	46.1	68	1.3	24.5	18.2	.9	2	17	26	<.02	82	1	21	
KS46	1.5	50	196	315	.7	30	15	1296	4.59	71	2	<4	8	383	.8	1	2	141	1.79	.175	36	69	1.09	1138	367	7.77	1.706	1.83	2	54.5	68	1.8	19.0	17.5	.8	2	13	26	<.02	86	2	23	
KS47	1.8	53	246	626	1.2	29	17	1991	4.70	202	4	<4	9	389	1.6	1	2	128	1.63	.161	43	60	1.03	1124	386	8.24	1.738	2.05	2	93.8	71	1.7	27.3	17.8	.9	2	14	28	<.02	98	3	25	
KS48	1.7	57	176	2499	1.2	37	22	1960	5.52	329	3	<4	7	451	4.2	1	1	151	2.35	.140	32	79	1.40	920	450	8.33	1.749	1.62	1	63.4	69	1.9	20.4	17.5	.9	2	17	51	<.02	84	2	25	
KS49	1.1	35	99	1653	.5	25	20	1815	5.30	82	2	<4	6	424	2.2	1	1	139	2.22	.153	26	67	1.23	922	459	8.45	1.821	1.64	1	75.9	59	2.1	15.4	14.8	.7	2	14	42	.02	85	2	27	
KS50	3.7	80	254	1725	2.2	46	21	7862	7.57	242	13	<4	15	320	10.8	2	2	148	2.19	.195	59	66	1.09	1076	277	7.44	1.005	2.30	4	49.5	93	1.1	44.1	11.2	.5	2	19	39	.08	137	2	21	
KS51	1.1	65	100	851	.6	28	22	1831	5.60	58	6	<4	7	398	1.4	1	1	159	2.15	.195	34	73	1.35	865	461	8.45	1.652	1.48	1	70.4	74	1.7	24.1	14.6	.7	2	16	59	.04	72	2	23	
KS52	1.2	32	66	422	.5	23	17	1674	4.59	17	2	<4	6	350	.8	1	1	134	1.99	.160	24	63	1.16	920	464	7.78	1.790	1.45	1	69.8	56	2.1	14.8	15.4	.7	2	13	46	<.02	61	2	27	
RE KS52	1.2	32	63	408	.4	25	18	1702	4.77	17	2	<4	5	364	.8	1	1	138	1.95	.159	23	63	1.14	927	470	7.45	1.844	1.44	1	69.1	53	2.2	14.8	16.2	.7	1	12	42	<.02	57	2	26	
KS53	1.1	32	59	187	.4	35	16	1848	4.43	16	5	<4	7	367	.6	1	1	119	1.80	.245	35	65	1.15	983	412	7.84	1.569	1.61	1	83.7	69	1.8	20.2	19.0	.9	2	12	33	<.02	76	2	24	
KS54	1.3	35	60	174	.3	33	17	1246	4.61	27	3	<4	7	379	.6	1	1	130	1.81	.178	32	67	1.19	1001	418	7.83	1.821	1.53	1	75.4	63	2.1	18.2	18.2	.9	2	13	30	<.02	72	2	25	
KS55	1.2	39	128	326	.6	26	19	2463	4.66	30	3	<4	6	382	1.5	2	1	137	2.03	.245	26	64	1.10	924	451	7.65	1.947	1.63	2	79.7	51	2.4	15.3	15.6	.8	2	13	38	<.02	78	2	28	
KS56	1.5	39	170	394	.9	25	17	1827	4.66	43	3	<4	9	409	1.5	1	1	139	1.85	.244	37	67	1.08	1197	404	8.02	1.842	2.05	2	66.3	76	1.8	19.4	27.7	1.3	2	14	25	<.02	86	2	24	
KS57	60.0	1275	7014	6193	15.3	159	42	71789	24.33	6315	17	<4	13	101	79.5	13	4	110	1.25	.180	167	60	1.20	539	112	3.50	.180	.56	5	59.7	256	<.5	69.4	36.0	1.4	3	15	34	.12	38	1	13	
KS58	24.5	104	2611	2375	3.6	66	39	16289	9.80	416	10	<4	5	154	24.7	4	1	149	.70	.184	41	56	.76	996	212	6.57	.515	2.34	6	24.7	59	.9	49.7	7.0	<.5	2	15	21	.04	143	1	22	
KS59	42.7	273	2843	716	107.7	31	79	19070	27.38	425	16	<4	6	157	8.8	2	286	109	.91	.081	34	32	.65	466	.098	3.86	.408	1.12	15	19.8	54	.6	52.3	5.7	<.5	1	7	20	.42	69	1	18	
KS60	20.0	599	9280	223	881.4	9	21	5009	34.51	791	22	<4	8	46	4.6	6	5834	460	.37	.147	70	29	.36	223	.031	2.43	.032	.55	7	24.8	51	<.5	29.9	2.3	<.5	1	6	14	.18	38	1	23	
KS61	41.9	257	2784	523	66.2	26	78	19839	24.84	481	27	<4	6	138	9.7	3	167	172	.61	.095	45	33	.59	523	.101	3.83	.457	1.11	13	23.7	52	<.5	47.3	6.1	<.5	1	8	18	.47	67	1	17	
KS62	1.6	50	60	362	2.3	25	19	1393	4.71	18	2	<4	6	373	1.9	1	4	128	1.67	.146	27	52	.94	1038	382	8.01	1.688	1.52	1	63.0	54	1.8	17.5	13.8	.7	2	12	30	.08	65	2	26	
KS63	1.6	50	58	212	.6	26	16	807	4.57	18	2	<4	6	429	1.1	1	1	145	1.92	.140	28	54	1.08	1165	325	8.11	1.832	1.67	1	53.6	59	1.5	17.9	15.7	.7	2	14	25	.09	62	2	24	
KS64	1.3	33	53	226	.5	25	16	1004	4.42	26	2	<4	6	429	.9	1	1	130	2.00	.136	29	57	1.03	1077	379	7.76	1.834	1.64	1	67.9	58	1.8	18.1	17.9	.9	2	12	28	.05	66	2	25	
KS65	1.4	53	88	254	.7	29	20	1166	4.58	25	2	<4	6	430	.8	1	1	150	1.84	.204	32	78	1.24	1190	367	7.70	1.613	1.69	1	56.0	66	1.6	18.6	19.5	.9	1	14	27	.05	67	2	23	
KS66	1.8	65	128	278	.9	29	23	2467	5.02	28	4	<4	7	431	2.0	1	1	155	2.37	.163	37	80	1.40	1205	361	7.39	1.485	1.98	2	50.0	67	1.5	21.4	22.9	1.1	1	17	36	.06	92	2	22	
STANDARD DST3	9.8	129	44	188	.3																																						



GEOCHEMICAL ANALYSIS CERTIFICATE

Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A103579
1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. ANDERSON

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb	Hf	Ga
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
SI	1.2	29	13	17	<2	3	1	47	.16	6	<1	<4	<1	185	<2	1	<1	8	8.40	.016	3	5	.21	199	.038	1.11	10.003	.27	<1	88.8	5	2.9	4.2	.6	<5	<1	<1	3	.05	5	2	3
KR01A	3.0	129	1849	1599	6.6	4	9	1005	6.44	1458	3	<4	8	26	10.1	5	<1	64	.18	.139	31	46	.31	26	.146	6.19	.042	3.43	7	27.4	56	3.5	5.2	34.5	1.2	1	4	14	5.93	236	1	19
KR01B	1.6	32	227	639	.7	5	9	5978	3.31	135	3	<4	9	139	4.6	1	<1	64	1.74	.082	33	67	.68	111	.145	8.01	.068	5.09	8	9.2	50	2.0	13.3	9.3	<5	2	4	13	1.52	342	1	25
KR01C	2.4	36	35374	209	58.2	1	<1	153	4.13	30373	1	10	4	26	1.3	113	4	23	.03	.043	6	65	.14	250	.040	2.69	.018	1.47	3	2.3	10	2.5	.9	2.1	<5	<1	1	20	.42	113	<1	9
KR02	2.8	141	154	94	1.1	34	30	859	8.46	80	1	<4	3	350	.7	1	<1	182	4.43	.092	18	129	1.03	24	.338	7.11	.601	.92	2	16.4	28	1.9	16.0	4.4	<5	1	14	20	4.86	47	1	24
KR03A	2.4	21	270	200	.5	29	28	5582	6.87	181	2	<4	7	705	<2	1	<1	169	4.60	.313	40	82	3.13	843	.375	7.65	1.404	3.03	3	63.7	66	1.0	13.8	19.1	.7	2	16	26	.43	137	2	23
KR03B	5.0	37	144	254	3.3	13	26	7693	10.32	26	2	<4	5	117	1.0	<1	8	56	4.43	.047	8	69	.83	19	.070	4.23	.023	1.25	5	5.4	17	2.5	16.5	3.9	<5	1	3	26	5.17	87	<1	19
KR03C	2.7	39	523	324	11.6	3	6	876	9.83	98	2	<4	5	14	1.6	1	27	61	.12	.041	15	45	.36	14	.081	5.19	.036	2.67	6	10.5	32	1.3	3.5	4.6	<5	1	2	12	9.45	177	1	19
RE KR03C	2.7	34	508	320	11.1	3	6	836	9.19	110	2	<4	5	13	1.8	1	26	57	.12	.040	14	43	.35	14	.082	4.92	.028	2.72	7	10.4	31	1.3	3.3	4.6	<5	1	2	11	9.29	173	<1	18
KR04	6.7	239	23	40	1.2	24	23	616	7.71	9	2	<4	3	249	.2	1	<1	216	2.04	.080	12	97	.87	44	.333	7.03	.473	2.47	5	10.4	25	.9	18.8	4.6	<5	1	15	14	3.17	164	<1	27
KR05	2.1	44	1078	1061	2.7	2	3	2416	2.50	792	2	<4	5	33	4.8	4	<1	45	.67	.050	15	52	.32	86	.101	5.62	.036	3.29	6	5.3	25	3.2	5.4	4.7	<5	1	3	20	1.72	255	<1	19
KR06	3.2	77	110	167	2.7	32	13	2038	8.08	43	5	<4	20	23	.7	1	2	79	.36	.206	94	133	1.11	22	.186	4.71	.030	2.09	11	80.3	140	1.5	10.7	67.1	2.7	1	9	22	3.96	146	2	15
STANDARD DST3	10.3	131	46	185	.4	42	14	1051	4.14	28	7	<4	6	238	5.8	7	6	136	1.57	.119	30	326	1.02	1130	.382	7.01	1.745	2.02	8	49.6	50	7.8	14.8	10.9	.6	3	11	20	<.02	78	3	22

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HClO₄-HNO₃-HCL-HF TO 10 ML. UPPER LIMITS - AG, AU, W = 200 PPM; MO, CO, CD, SB, BI, TH & U = 4,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM. DIGESTION IS PARTIAL FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-ES.
- SAMPLE TYPE: ROCK R150 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: OCT 10 2001 DATE REPORT MAILED: Oct 23/01 SIGNED BY: C. Leong D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

reg. / H.A.

1 pps



TOTAL LENGTH
APPROX 136 METERS.

TRACK THROUGHOUT
MIN HEIGHT 5'-8"
WIDTH AV. 6'-0"

WIDE AREA.
SHORING DOWN.

ADIT

MINE SURVEY (KODI)
ROCK SAMPLES
APPROX SCALE 1:500
NOV 24, 2001

D.W. ANDERSON 100593.

GEOCHEMICAL ANALYSIS CERTIFICATE

Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A104168
1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. Anderson

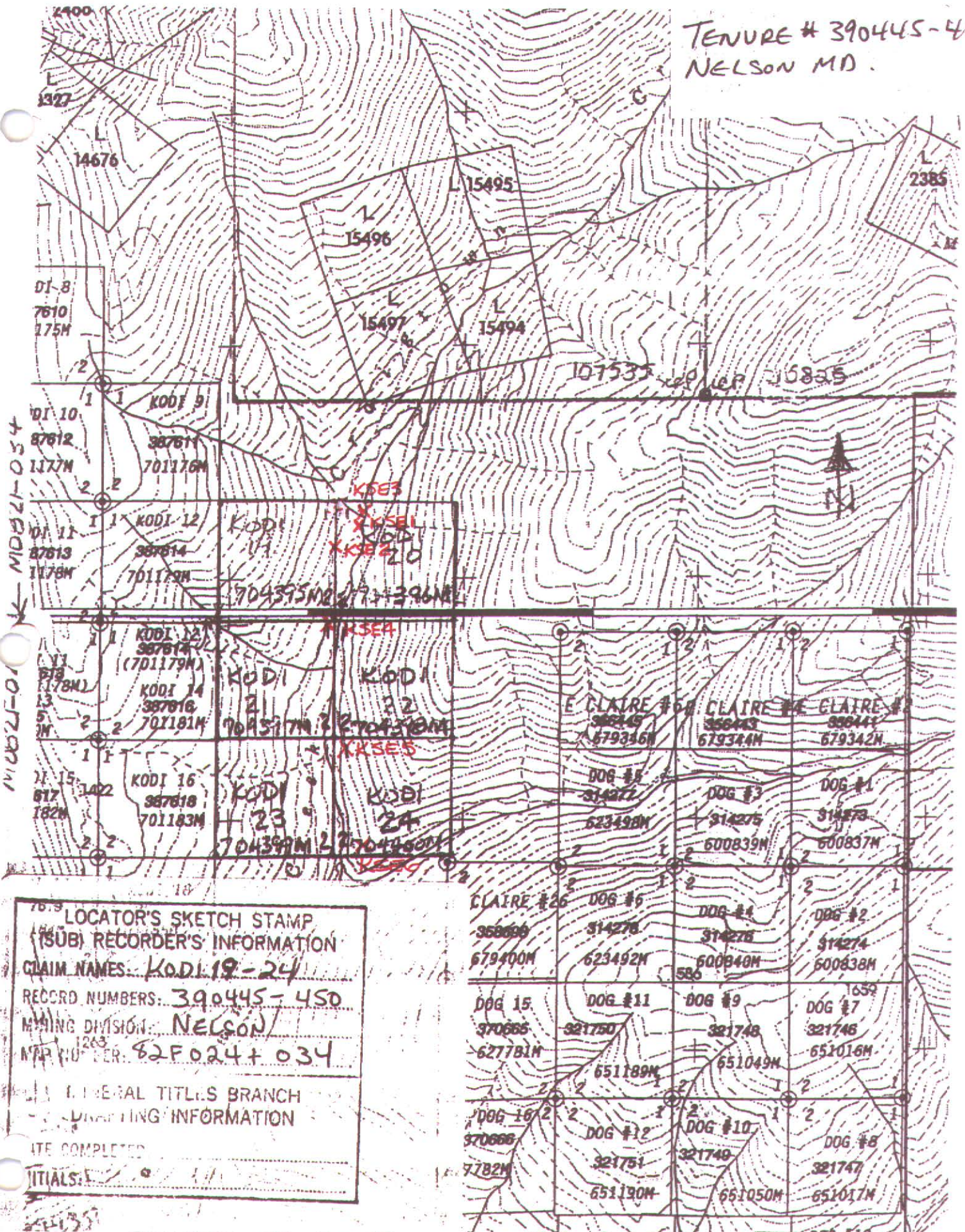
SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	L1	S	Rb	Hf	Ga	
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
S1	1.0	7	11	12	<.2	2	1	25	15	2	<1	<4	<1	164	<.2	1	<1	7	7.93	.012	2	11	.11	150	.032	1.03	9.216	.20	<1	97.4	4	2.4	3.3	.7	<.5	<1	<1	3	.06	3	2	2	
M1	4.8	148	39	170	.6	12	11	875	3.46	5	1	<4	2	476	.6	<1	<1	160	3.47	.065	10	34	1.00	165	.196	6.56	4.242	1.89	2	29.8	17	.8	9.0	.6	<.5	1	10	17	.92	60	1	14	
M2	3.4	87	16	50	.2	14	13	649	4.29	4	1	<4	2	490	<.2	<1	<1	167	1.90	.089	10	41	1.05	137	.248	7.72	2.255	2.59	1	12.4	19	<.5	12.5	.7	<.5	1	12	21	1.37	64	<1	17	
M3	4.6	67	293	661	2.7	3	4	4334	1.96	12	4	<4	7	226	3.5	1	4	52	3.81	.048	20	10	.49	736	.119	6.84	.640	3.00	4	7.2	32	.7	9.5	4.4	<.5	3	2	13	.11	151	<1	15	
M4	8.2	198	583	1657	3.9	11	16	5121	5.32	28	6	<4	11	390	10.0	1	4	162	4.57	.098	22	24	.93	284	.223	7.05	.972	2.93	4	9.0	35	.6	12.5	5.6	<.5	1	9	19	2.50	150	1	16	
M5	2.4	641	8012	28388	83.0	4	10	1725	4.90	381	4	<4	4	34	176.5	14	124	33	.50	.030	10	8	.27	51	.072	4.52	.029	2.13	5	5.0	18	1.0	2.9	3.2	<.5	1	2	21	4.18	125	<1	10	
RE M6	29.6	341	2669	716	31.9	12	8	8936	4.97	43	2	<4	3	509	4.5	1	54	114	8.28	.084	22	23	.99	354	.246	6.17	.216	2.24	4	16.6	36	.6	17.5	10.2	<.5	1	9	24	1.46	117	1	14	
M7	29.3	333	2626	680	30.1	11	7	9173	4.65	42	2	<4	4	497	4.0	1	54	121	8.38	.090	22	25	.99	570	.189	6.19	.204	2.24	4	17.1	35	<.5	17.0	9.8	<.5	<1	9	24	1.51	114	1	14	
M8	30.0	213	1676	1219	18.1	10	6	11426	5.60	41	2	<4	1	435	7.7	1	31	109	9.23	.051	7	22	.99	116	.129	5.13	.032	1.73	5	9.7	14	.6	13.0	1.4	<.5	<1	7	27	2.23	94	<1	12	
	4.1	34	251	565	.9	9	12	1064	4.15	3	1	<4	2	429	3.2	1	1	154	2.22	.099	12	31	1.05	142	.271	8.42	1.962	2.44	1	7.7	20	<.5	10.6	.8	<.5	1	11	24	1.30	85	<1	19	
M9	42.9	221	2921	1556	31.8	12	9	19082	5.88	38	2	<4	1	679	10.0	2	57	100	19.48	.031	13	16	.67	144	.082	3.27	.027	1.25	3	8.7	20	<.5	12.8	.9	<.5	1	6	16	4.45	74	<1	8	
M10	2.7	4305	8209	21526	112.2	14	46	6711	16.54	18	1	<4	1	329	131.4	4	136	100	5.67	.040	11	39	1.03	89	.102	4.20	.026	.99	4	5.8	19	<.5	13.0	1.1	<.5	<1	7	27	14.54	54	<1	10	
M11	5.1	28	157	374	1.6	18	13	10947	3.90	1187	2	<4	2	137	1.6	15	1	179	2.60	.070	8	69	.52	73	.244	6.14	.040	3.06	6	13.3	14	1.4	9.1	5.7	<.5	1	12	19	2.77	169	<1	14	
M12	6.2	97	491	1259	2.8	9	12	8887	3.95	153	1	<4	1	98	5.7	3	<1	205	2.35	.088	7	39	.53	85	.475	6.57	.035	3.45	17	12.8	13	2.2	8.9	3.6	<.5	2	11	16	2.91	178	1	17	
M13	3.4	27	1769	2169	4.8	3	4	13792	2.45	167	4	<4	9	175	13.3	3	4	31	4.69	.033	19	8	.52	162	.084	5.32	.029	2.66	4	5.9	28	1.5	6.7	3.9	<.5	3	2	11	1.56	146	<1	12	
M14	6.4	208	9745	6852	26.9	18	36	424	12.70	148	1	<4	3	15	44.3	7	19	43	.09	.053	6	41	.28	182	.116	3.95	.022	1.85	7	27.2	10	.9	2.5	5.1	<.5	1	3	13	13.05	110	1	9	
STANDARD DST3	10.1	128	38	181	.5	39	13	1063	3.86	24	6	<4	6	221	5.4	6	5	130	1.49	.108	26	295	1.00	945	.391	6.99	1.702	1.91	7	43.9	47	5.7	14.7	9.1	.5	4	10	20	<.02	62	2	16	

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HClO₄-HNO₃-HCL-HF TO 10 ML. UPPER LIMITS - AG, AU, W = 200 PPM; MO, CO, CD, SB, BI, TH & U = 4,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM. DIGESTION IS PARTIAL FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-ES.
- SAMPLE TYPE: ROCK R150 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: NOV 27 2001 DATE REPORT MAILED: Jan 18/02 SIGNED BY: C. L. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

REVISED COPY add 616

TENURE # 390445-4
NELSON MD.



SOIL SAMPLES KSE1 TO KSE6.
KSE7 & KSE8 SEE NOTES.



GEOCHEMICAL ANALYSIS CERTIFICATE



Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A104254
1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. Anderson

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Ga ppm
G-1	1.7	3	20	52	<2	6	5	806	2.35	<2	3	<4	9	716	<2	<1	<1	55	2.75	.099	26	11	.64	1057	.268	8.07	2.432	3.47	2	8.7	54	1.3	16.0	19.3	1.4	2	6	36	.05	130	1	21
KSE1	1.2	53	16	201	.4	80	28	1091	5.42	11	2	<4	5	312	.6	1	<1	163	2.55	.329	18	154	2.12	790	.487	9.21	1.766	1.23	1	64.1	38	1.6	13.7	8.3	.5	1	18	44	<.02	51	2	22
KSE2	1.0	68	12	85	.6	52	21	798	4.63	14	2	<4	5	362	<2	1	<1	145	2.47	.135	18	101	1.65	794	.477	8.91	2.079	1.28	1	103.9	56	1.3	17.9	7.3	.5	<1	16	29	<.02	44	4	21
KSE3	1.2	51	21	120	.2	88	25	1339	5.67	16	1	<4	3	399	.6	1	<1	206	3.93	.129	19	199	2.85	817	.454	7.60	1.681	1.13	1	26.5	34	1.0	18.9	8.3	.5	1	25	23	<.02	44	1	17
KSE4	1.3	71	17	130	.3	61	28	1077	5.57	19	2	<4	6	386	.3	1	<1	193	2.73	.193	26	128	2.19	1061	.469	9.53	1.805	1.72	1	54.0	70	1.0	20.9	11.0	.6	1	22	32	<.02	64	2	22
KSE5	.9	50	9	105	.3	62	30	1031	5.42	15	1	<4	4	351	.4	1	<1	192	3.56	.261	15	162	2.47	669	.460	9.01	1.559	1.11	1	53.0	36	1.0	16.4	5.7	<.5	2	23	24	<.02	50	2	19
KSE6	.9	29	17	106	.2	46	20	1041	5.56	9	1	<4	5	365	.4	1	<1	180	3.07	.190	16	135	1.92	713	.483	7.97	1.636	1.20	1	43.9	36	1.5	13.4	8.8	.5	1	19	28	<.02	54	2	21
KSE7	5.7	174	23	105	<.2	72	30	815	6.23	5	6	<4	17	496	.2	1	3	142	2.04	.203	53	108	1.81	1160	.463	8.56	1.729	1.93	5	57.5	122	5.0	16.4	41.1	2.3	2	14	31	<.02	98	2	20
KSE8	6.9	152	9	26	<.2	20	10	492	26.28	16	2	<4	8	250	<.2	<1	1	73	1.55	.300	31	82	1.14	594	.212	2.90	.552	1.06	831	21.8	50	2.6	14.9	14.5	.8	2	8	10	<.02	111	1	8
STANDARD	10.0	129	38	186	.4	43	15	1061	3.92	24	6	<4	7	226	6.2	7	6	134	1.57	.117	25	314	.95	1107	.398	7.30	1.768	2.12	8	46.1	50	7.0	14.5	9.2	.6	4	11	22	<.02	72	3	18

Standard is STANDARD DST3.

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HClO₄-HNO₃-HCL-HF TO 10 ML. UPPER LIMITS - AG, AU, W = 200 PPM; MO, CO, CD, SB, BI, TH & U = 4,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM. DIGESTION IS PARTIAL FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-ES.
- SAMPLE TYPE: SOIL SS80 60C

DATE RECEIVED: DEC 4 2001 DATE REPORT MAILED: Jan 18/02 SIGNED BY: C. Leong D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

REVISED COPY
add Ga



GEOCHEMICAL ANALYSIS CERTIFICATE



Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A104255

1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. Anderson

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Ce ppm	Sn ppm	Y ppm	Nb ppm	Ta ppm	Be ppm	Sc ppm	Li ppm	S %	Rb ppm	Hf ppm	Ga ppm
SI	1.5	5	15	19	<.2	1	1	45	.11	<2	<1	<4	<1	167	<.2	1	<1	6	8.00	.012	2	9	.16	201	.033	1.08	10.269	.24	<1	65.0	5	2.5	4.1	.6	<.5	<1	<1	3	.10	3	2	2
KREB	4.6	136	13	66	<.2	14	17	872	4.25	2	2	<4	4	415	<.2	2	1	196	4.96	.105	15	98	1.09	120	.453	8.22	2.420	1.63	8	22.6	27	6.0	17.7	3.8	<.5	1	16	8	1.12	61	1	18
STANDARD DST3	10.2	129	42	188	.4	41	15	1086	4.03	26	6	<4	6	225	5.6	7	6	132	1.60	.113	28	320	.98	1107	.414	7.10	1.789	2.04	8	45.8	48	6.6	16.1	9.1	.7	2	11	22	<.02	70	3	19

GROUP 1EX - 0.25 GM SAMPLE DIGESTED WITH HClO₄-HNO₃-HCL-HF TO 10 ML. UPPER LIMITS - AG, AU, W = 200 PPM; MO, CO, CD, SB, BI, TH & U = 4,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM. DIGESTION IS PARTIAL FOR SOME MINERALS & MAY VOLATIZE SOME ELEMENTS, ANALYSIS BY ICP-ES.
- SAMPLE TYPE: ROCK R150

DATE RECEIVED: DEC 4 2001

DATE REPORT MAILED:

Jan 18/02

SIGNED BY: C. Leong

D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

REVISED COPY add Gra

Main Identity

From: W. Anderson <dwanderson@telus.net>
To: <cleong@acmelab.com>
Sent: Thursday, December 13, 2001 10:09 PM
Subject: Fw: Additional analyses and your e-mail of Nov.26,01

Clarence,

After discussion with Rick Walker, Dynamic Exploration of Cranbrook, I would like you to proceed as per the the following E-mail of Dec 13,01 from Rick to myself.

Please send billing to me as per previous analytical reports.

If you require additional information before proceeding please contact me at my

E-mail, dwanderson@telus.net

I will be away from Dec 21 until Dec 28 and then off again on Dec 29 for approx one week.

If you can expedite this request so I have results prior to Dec 21 it would be greatly appreciated.

Thank you. D. Wayne Anderson, phone 250-365-7561

----- Original Message -----

From: Rick Walker

To: W. Anderson

Sent: Thursday, December 13, 2001 7:25 PM

Subject: Additional analyses

Wayne

First of all, please note that Acme did not analyze for Ga on File # A104168, as requested. If that is the case, they may not have charged you the lower rate I negotiated as well. You might want to check that on your invoice.

Here is a list of the samples I would like to have additional analysis for gold:

File A104168

Sample #	Rationale
M1	High Cu (148 ppm)
M4	High Cu (198 ppm)
M5	High Cu (641 ppm), high As (381 ppm)
M6	High Cu (341 ppm)
M7	High Cu (213 ppm)
M9	High Cu (221 ppm)
M10	High Cu (4305 ppm)
M11	High As (1187 ppm)
M14	High Cu (148 ppm)

Analyze for high Ag:	High Zn
M5 83 ppm	M5 28388 ppm (2.83%)
M10 112.2 ppm	M10 21526 ppm (2.15%)

File A103578

Analyze for high Au:	
KS04	High As (4631 ppm)
KS05	High As (8491 ppm)
KS09	High Cu (338 ppm), High As (23626 ppm - 2.36%), High Au (10 ppm)
KS10	High As (269 ppm)
KS13	High Cu (148 ppm)
KS15	High Cu (139 ppm)
KS21	High Cu (374 ppm), High As (2031 ppm)
KS23	High Cu (575 ppm), Moderate As (188 ppm)
KS26	High As (306 ppm)
KS41	High As (1165 ppm)
KS47	High As (202 ppm)
KS48	High As (329 ppm)
KS50	High As (242 ppm)

KS57 High Cu (1275 ppm), High As (6315 ppm)
 KS58 High As (416 ppm)
 KS59 High Cu (273 ppm), High As (425 ppm)
 KS60 High Cu (599 ppm), High As (791 ppm)
 KS61 High Cu (257 ppm), High As (481 ppm)

Analyze for high Ag:

KS09 65.1 ppm
 KS59 107.7 ppm
 KS60 881.4 ppm
 KS61 66.2 ppm

File A103579

Analyze for high Au:

KR01A High Cu (129 ppm), high As (1458 ppm)
 KR01C High As (30373 ppm (3.04%), High Au (10 ppm)
 KR02 High Cu (141 ppm)
 KR04 High Cu (239 ppm)
 KR05 High As (792 ppm)

Analyze for high Ag:

KR01C 58.2 ppm

Summary,

32 samples for Au (Group 3A)

7 samples for Ag (>50 ppm), and

2 for Zn (>1%)

Rick

----- Original Message -----

From: "W. Anderson" <dwanderson@telus.net>

To: "Rick Walker" <ekcm1@home.com>

Sent: Monday, November 26, 2001 6:13 PM

Subject: Fw: gold analysis(file a103578/3579)

>

> ----- Original Message -----

> From: Clarence Leong <cleong@acmelab.com>

> To: <dwanderson@telus.net>

> Sent: Monday, November 26, 2001 3:23 PM

> Subject: gold analysis(file a103578/3579)

>

>

> > Dear Wayne,

> >

> > I will recommend the group 3A for gold on the soil samples. The gold is
 > > reported to 0.2 ppb utilizing 5 to 10 grams sub-sample. The cost is \$6.80
 > > per sample. Please contact me by e-mail, if you wish to proceed with the
 > > gold analysis. Thank you!

> >

> > Clarence

> > *****

> > Acme Labs now has its own website. Visit us at www.acmelab.com

> >

> >

>

GEOCHEMICAL ANALYSIS CERTIFICATE

Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A103578R

1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. Anderson

SAMPLE#

Au*
ppbKS04
KS05
KS09
KS10
KS13271.3
616.7
10126.2
17.0
7.1KS15
KS21
KS23
KS26
KS41260.5
231.6
41.3
44.0
154.9KS47
KS48
RE KS48
KS50
KS5719.7
7.2
30.5
366.0
563.8KS58
KS59
KS60
KS61
STANDARD DS3136.8
652.3
563.2
261.3
23.0

AU* BY ACID LEACHED, ANALYSIS BY ICP-MS. (10 gm)

- SAMPLE TYPE: SOIL PULP

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: DEC 14 2001

DATE REPORT MAILED:

Dec 24/01

SIGNED BY:

C. L.

D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

ACME ANALYTICAL LABORATORIES LTD.
(ISO 9002 Accredited Co.)

852 E. HASTINGS ST. COUVER BC V6A 1R6

PHONE (604) 253-3158 FAX (604) 53-1716

ASSAY CERTIFICATE

Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A103578R2
1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. Anderson

SAMPLE#

AG
gm/mt

KS09
KS59
KS60
KS61
STANDARD R-1

73.6
119.7
1645.9
72.4
100.7

GROUP 7AR - 1.000 GM SAMPLE, AQUA - REGIA (HCL-HNO3-H2O) DIGESTION TO 100 ML, ANALYSED BY ICP-ES.
- SAMPLE TYPE: SOIL PULP

DATE RECEIVED: DEC 14 2001

DATE REPORT MAILED:

Dec 24/01

SIGNED BY: *C. Leong*

TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



GEOCHEMICAL ANALYSIS CERTIFICATE



Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A103579R
1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. Anderson

SAMPLE#	Au* ppb
KR01A	121.3
KR01C	9359.0
KR02	30.0
KR04	6.0
KR05	120.0
STANDARD DS3	21.3

AU* IGNITION BY ACID LEACHED, ANALYSIS BY ICP-MS. (10 gm)

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: DEC 14 2001 DATE REPORT MAILED: Jan 4/02 SIGNED BY: C. Leong D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Assay gold recommend if > 1000 ppb

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COUVER BC V6A 1R6

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3-1716

ASSAY CERTIFICATE

Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A103579R2

1976 Brilliant Road, Castlegar BC V1N 4N2 Submitted by: D.W. Anderson

SAMPLE#

AG
gm/mt

KR01C

71.7

GROUP 7AR - 1.000 GM SAMPLE, AQUA - REGIA (HCL-HNO3-H2O) DIGESTION TO 100 ML, ANALYSED BY ICP-ES.
- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: DEC 14 2001 DATE REPORT MAILED: *Dec 21/01* SIGNED BY: *C.L.* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

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(ISO 9002 Accredited Co.)

852 E. HASTINGS ST.

COUVER BC V6A 1R6

PHONE (604) 253-3158 FAX (604) 59-1716

59-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A104168R
1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. Anderson

SAMPLE#

Au*
ppb

M1
M4
M5
M6
M7

1.5
5.2
974.5
45.0
91.6

M9
M10
M11
M14

132.0
206.0
316.0
200.7

STANDARD DS3

20.3

AU* IGNITION BY ACID LEACHED, ANALYSIS BY ICP-MS. (10 gm)

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: DEC 14 2001

DATE REPORT MAILED:

Dec 24/01

SIGNED BY:

C. L.

D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

ASSAY CERTIFICATE

Dynamic Exploration Ltd. PROJECT ERIE CREEK File # A104168R2
1976 Brilliant Road, Castlegar BC V1N 4M2 Submitted by: D.W. Anderson

SAMPLE#

ZN
% gm/mt

AG

M5
M10
STANDARD R-1

2.91 103.6
2.17 133.3
2.15 98.9

GROUP 7AR - 1.000 GM SAMPLE, AQUA - REGIA (HCL-HNO3-H2O) DIGESTION TO 100 ML, ANALYSED BY ICP-ES.
- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: DEC 14 2001 DATE REPORT MAILED: *Dec 21/01* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Appendix E
Program-Related Documents