

ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 90.03.13

ASSESSMENT REPORT 18836

MINING DIVISION: Revelstoke

PROPERTY: Mohawk

LOCATION: LAT 50 46 30 LONG 117 35 55  
UTM 11 5624756 457791  
NTS 082K13E

CLAIM(S): Hazel 2

OPERATOR(S): Royal Crystal Res.

AUTHOR(S): Von Einsiedel, C.A.

REPORT YEAR: 1989, 9 Pages

COMMODITIES

SEARCHED FOR: Gold, Silver, Lead, Zinc

KEYWORDS: Lardeau Group, Silurian, Metavolcanics, Quartz Veins, Galena  
Sphalerite

WORK

DONE: Drilling  
DIAD 921.7 m 3 hole(s);AQ

MINFILE: 082KNW043

RAM EXPLORATIONS LTD.

LOG NO: 0645	RD.
ACTION:	
FILE NO:	

### DIAMOND DRILLING REPORT

SUB-RECORDER RECEIVED	JUN 12 1989	M.R. #	\$	VANCOUVER, B.C.
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#### MINERAL CLAIMS

Hazel No.1, Record No.10145K  
Hazel No.2, Record No.10146K

#### PROPERTY LOCATION

Revelstoke Mining Division  
Longitude: ~~117~~ 40' West  
Latitude: 50° 48' North  
NTS Map Sheet: 82K13E

117° 35' 55"  
50° 46' 30" **FILMED**

DATE SUBMITTED: June 12, 1989

REPORT PREPARED BY: C. von Einsiedel, BSc.

NEOLOGICAL BRANCH  
ASSESSMENT REPORT

18,836

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1. Introductory Note

*The subject property consists of two fractional mineral claims located near the junction of Pool and Mohawk Creeks roughly five kilometers east of the abandoned Camborne townsite. The claims are accessible by a four wheel drive road which extends from Cambourne along the south side of Pool Creek a distance of roughly 7 kilometers.*

*These claims are within a belt of lode-type, silver-lead-zinc occurrences referred to as the Trout Lake Mining District (reference, Read, 1976; GSC Open File Map no.s 432, 464).*

*The claim area covers a series of short adits and shafts (circa. 1900) driven to test a north trending zone showing quartz, siderite and scattered galena, sphalerite and pyrite mineralization. This prospect is referred to in literature as the Mohawk - Excise Vein.*

*In 1987, Royal Crystal Resources proposed a program of road construction, trenching and drilling to evaluate this vein system as well as other prospects which form part of the Hawk Claim Group. Previous operators technical data is summarized in Royal Crystal Resources Ltd. Prospectus, Vancouver Stock Exchange, dated April 23, 1987.*

*This report was prepared for assessment requirements only and describes results of part of this program. Additional exploration data forms part of Royal Crystal Resources corporate files.*

2. Description of Exploration Program

*Between May 1 and May 25, 1988 three, AQ size holes were drilled from a position southeast of the Excise workings. A total footage / meterage of 957 ft. / 272.8 m. was completed in three holes numbered DDH 87-07, 08 and 09.*

*This work represents part of an exploration program carried out under Exploration Permit No. MX5-101.*

*Drill hole locations are shown in figure no.2. Drill logs are included as included as section 4.*

3. Regional Geology and Exploration Model

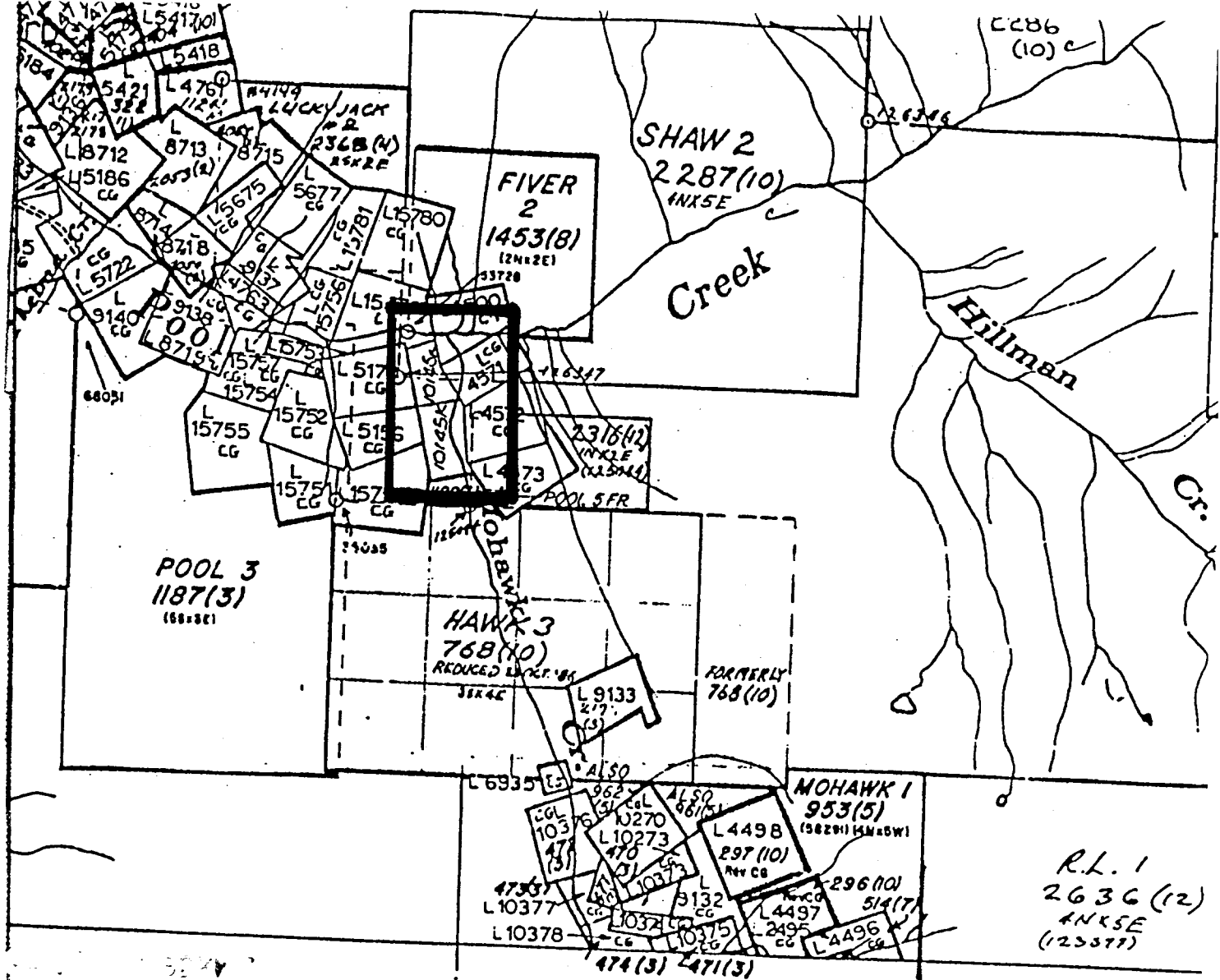
*Published geological maps show that the Trout Lake District forms the northern terminus of an arcuate belt of Paleozoic aged metasediments and metavolcanic rocks termed the Kootenay Arc. This belt extends from the Metalline Falls district of northern Idaho to north of Revelstoke in southeastern, B.C. and hosts many of the well known lead-zinc-silver (gold) camps of the western cordillera.*

*Stratigraphy comprises a Cambrian to Devonian aged sequence including the Hamill Group, Badshot Formation and Lardeau Group. The Lardeau Group is of principal interest in the current study and consists of the Broadview, Jowett, Ajax-Sharon Creek and Index Formations. During the Jurassic and Cretaceous these rocks underwent a several episodes of deformation and now form a series of tightly folded anticlines and synclines alligned along a northwest axis. One of these fold structures (termed the Silver Cup Anticline) extends for over 50 kilometers and hosts over 100 vein-type occurrences (collectively termed the Central Mineral Belt).*

*During deformation major faults were developed parallel to the principal fold structures (NW orientation) and subsidiary fracture zones were developed at orientations varying from NNE to NNW. All Trout Lake area mineral deposits occur within these fault zones and it is concluded that they represent important exploration targets.*

*Mineral deposits within the Central Belt consist of quartz and quartz-carbonate veins containing variable amounts of galena, sphalerite and pyrite ± chalcopyrite, tetrahedrite and in some instances, free gold. Published technical data suggests that local deposits have potential to host polymetallic deposits in the 100,000 to 500,000 ton range at grades of between 0.05 and 0.2 oz/ton, gold, 10 to 20 oz/ton silver and 5 to 15% combined base metals.*

*The subject property is located approximately 2 kilometers east of an important past producing mine (140,000 tons grading 0.084 oz/ton gold, 12.6 oz/ton silver, 9.2% lead and 8.6% zinc) and is considered a promising exploration target.*

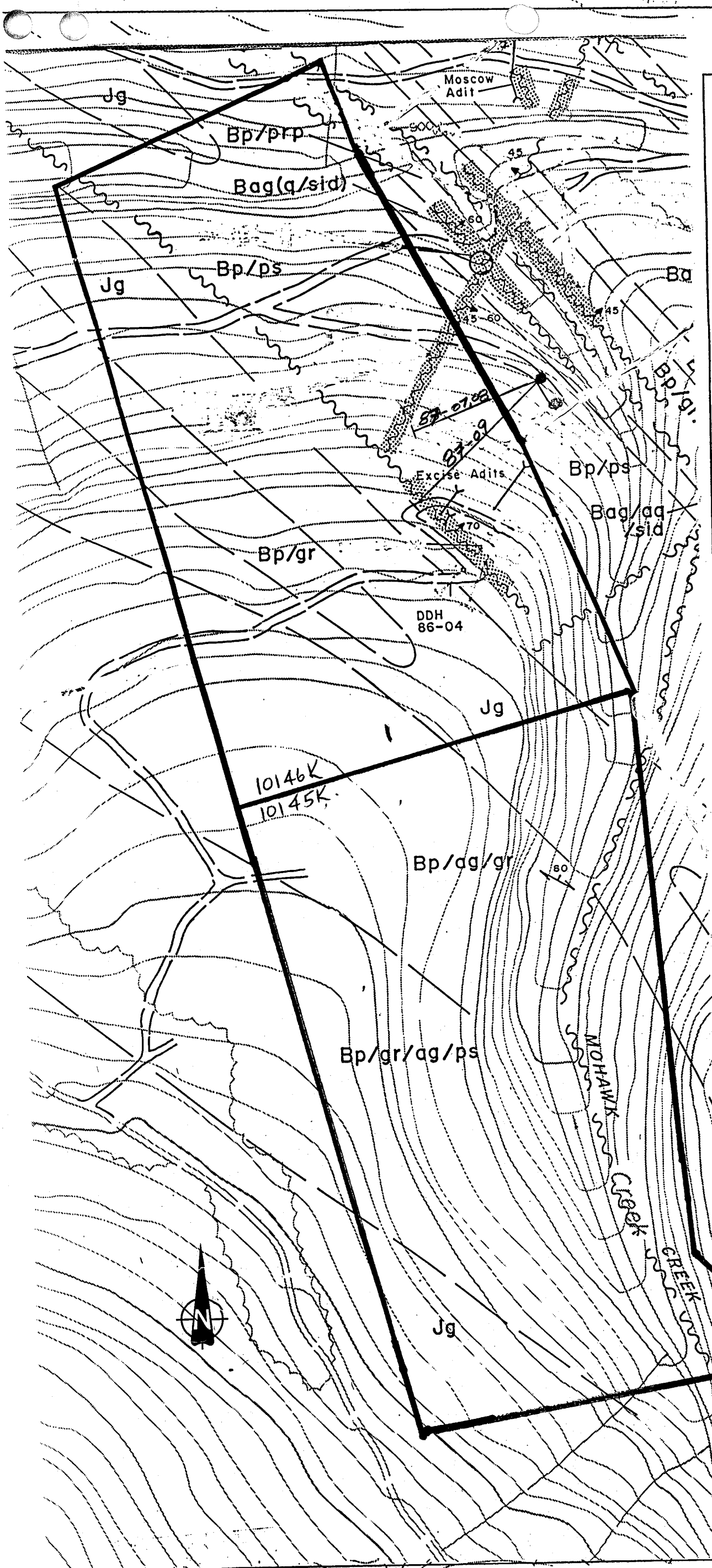


N.T.S. MAP SHEET: 82K13E

FIGURE NO. 1  
LOCATION AND CLAIM MAP

Block shows location of Hazel No.1 (10145K) and  
Hazel No.2 (10146K) Mineral Claims

Scale: 0 0.5 1.0 km.



**LEGEND**

**MISSISSIPPIAN TO PERMIAN**  
Poplar Creek Greenstones

**PCg** Greenstone, chlorite-muscovite-illite-(epidote)-(actinolite)-(calcite) schist.

**PCd** Diorite, metadiorite, actinolite diorite, actinolite-chlorite-quartz-plagioclase schist, unfoliated to weakly foliated.

**CAMBRIAN TO DEVONIAN (LARDEAU GROUP)**  
Broadview Formation

**Bp** Phyllite, green to green grey, numerous microscopic folds, axial plane parallel to foliation, variably pyritic, common folded quartz and quartz-carbonate lenses.

**Bps** Phyllite, light green grey, gritty or siliceous, sparse to trace pyrite, usually bedded, propylitized in some intervals.

**Bgr** Metagrit or pyritic grit, grey, fine to coarse elongated quartz grains, thin phyllite laminae, propylitized in some intervals.

**Bga** Greywacke or metagreywacke, light grey or light green grey, very fine to microgranular.

**Bgv** Argillite, dark grey graphitic with black pyritic carbonaceous argillite interbeds.

**Bls** Limestone and phyllitic limestone, buff to brown weathering, grey to white, coarse crystalline granular, thin lenses quartz, grey phyllite, grey mica schist discontinuous lenses and thin beds interbedded with phyllite.

**Jowell Formation**

**Jv** Metavolcanics (undifferentiated).

**Jvd** Metavolcanic dyke/sill rock, very fine to microcrystalline felsite, feldite or altered diabase, usually pyritic, rusty weathering.

**Jp** Phyllite, light green, chloritic with trace mariposite, variably calcareous and pyritic, occasionally with dark grey phyllite laminations.

**Jg** Greenstone, very finely laminated, variably calcareous and magnetic.

**Sharon Creek Formation**

**SCp** Phyllite, dark grey to black, green grey to grey; siliceous phyllite, grey gritty, common quartz-(chlorite)-(carbonate) lenses and laminations.

**SCa** Argillite, grey to dark grey, variably siliceous, common quartz and quartz-carbonate laminae and lenses, fair to good slaty cleavage.

**SCac** Argillite, black, carbonaceous, variably pyritic.

**SCag** Argillite, black to dark grey, graphitic, friable, common graphite slicks.

**SCas** Argillite, grey, silicified, phantom laminae, offset quartz veinlets.

**SCs** Metasiltstone, grey to light grey, very finely laminated.

**SCa/s** Interbedded units SCa and SCs.

**SCs** Metasiltstone, grey to light grey, very finely laminated.

**SCa/s** Interbedded units SCa and SCs.

**Ajax Formation**

**Aq** Quartzite, grey to black, occasionally carbonaceous, weakly foliated, indistinct bedding, sparse to common locally abundant anastomosing quartz veinlets and veins, thin beds of grey laminated argillite.

**Triune Formation**

**Tac** Argillite, black carbonaceous.

**Tas** Argillite, grey, siliceous, poor to blocky slaty cleavage.

**Tp** Phyllite, dark grey to green grey.

**SYMBOLS**

— — — Geological Contact (Approximate).

~ ~ ~ Fault Defined, Inferred.

— + — Foliation, Bedding.

+ + — Anticline, Syncline, Fold Plunge

• • — Adit, Rock Sample Location.

● Stockwork zone, zone of propylitic alteration, silicification, abundant siderite, goethite, sphalerite, pyrite chalcopyrite mineralization.

○ Drill Hole location.

0 25 50 100 150  
Meters

Contour Interval: 10 meters

— MOWHAWK CREEK CLAIM GROUP —  
REVELSTOKE MINING DIVISION - BRITISH COLUMBIA

Hazel No.1 and Hazel No.2  
1988 DIAMOND DRILLHOLE  
LOCATION MAP

RAM EXPLORATIONS LTD. VANCOUVER, B.C.	DWN. BY: T.M. CHK. BY: DATE: JUNE, 1988	FIG. No. 2
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4. Program Objectives and Results

*The objective of the subject drill program was to test an inferred northwest extension of mineralization exposed in the Excise workings. Results of previous underground sampling and diamond drilling form part of Royal Crystal Resources corporate files.*

*DDH 87-07 was drilled at 45 degrees on an azimuth of 45 degrees. This hole encountered a narrow zone (approx. 5 cm wide) of lead-zinc mineralization at a depth of 56.5 meters. This intersection was too narrow to be considered economic and therefore no assays were made.*

*DDH 87-08 (45 degrees) and 87-09 (60 degrees) were drilled from the same position as 87-07 but were drilled at an azimuth of 250 degrees. No significant mineralization was encountered in either of these holes.*

*Drill core is stored at Consolidated Trout Lake Mines storage facility in the community of Trout Lake.*

## APPENDIX 1 - DIAMOND DRILL CORE LOGS

Drill Hole No.: DDH87-07

Location: see figure no.2

Azimuth: 225 degrees

Dip: 45 degrees

Length: 79.8 meters

<u>Interval</u>	<u>Description</u>
0 - 1.2	(casing)
1.2 - 52.4	Interbedded pale green phyllite, grey phyllite and light grey phyllitic metasiltstone and metagrit, common quartz lenses and segregations, 0.3-0.6 m metagrit units at 18.9 m, 20.4 m, very folded section at 24.3-52.4 m.
52.4 - 57.0	Folded and brecciated zone with common quartz-siderite veins, graphite slicks^core axis 30 deg. * fair galena-(sphalerite) mineralization at 56.5 m (5 cm), some phyllite fragments with small kink folds are finely pyritic
57.0 - 66.7	Interbedded light grey phyllitic metagrit and grey phyllite with common quartz lenses, frequent graphite slicks
66.7 - 79.8	Greenstone, calcareous to very calcareous, common quartz-carbonate and carbonate-(quartz) lenses and veinlets with chlorite blebs and veinlets, with dark phyllite laminae over interval 70.7-72.8 m, reticulating siderite-quartz veinlets at 68.2-68.5 m with veinlets^core axis 30-40 deg.; foliation^core axis 45 deg.

Drill Hole No.: DDH87-08

Location: see figure no.2

Azimuth: 250 degrees

Dip: 45 degrees

Length: 83.8 meters

<u>Interval</u>	<u>Description</u>
0 - 0.6	(casing)
0.6 - 44.8	Interbedded pale green phyllite, grey phyllite and light grey phyllitic metasiltstone and metagrit, common quartz lenses and segregations, 0.3-0.6 m metagrit beds at 16.7-18.5 m, 10 cm quartz vein at 16.7 m.
44.8 - 48.4	Fold zone with occasional breccia or flow breccia zones, common quartz-chlorite and quartz-carbonate-chlorite lenses
48.4 - 52.1	Interbedded and interbanded grey phyllite, graphitic phyllite, phyllitic metasiltstone, common quartz-carbonate intercalations
52.1 - 59.1	Greenstone, calcareous, slightly siliceous, phantom quartz veinlets
59.1 - 67.6	Interbedded and interbanded grey phyllite, graphitic phyllite, phyllitic metasiltstone, phyllitic metagrit at 59.4-59.7 m, quartz-siderite vein at 60.6-62.1, very graphitic in upper portions, phyllite fragments near bottom; * massive pyrite (2 cm) with minor sphalerite at 61.2 m.
67.6 - 83.8	Greenstone, calcareous, finely laminated, occasional siderite-quartz veinlets; reticulating siderite-quartz veinlets and chlorite veinlets at 72.7-73.7m.

Drill Hole No.: DDH87-09

Location: see figure no.2

Azimuth: 250 degrees

Dip: 60 degrees

Length: 128.2 meters

<u>Interval</u>	<u>Description</u>
20 - 1.2	(casing)
1.2 - 9.8	PHYLLITE, pale green, common quartz and quartz-carbonate segregations and bands to 2 cm., common siderite stringers, occasional pyrite metablasts; fol./core 50-60 deg.; 4.9 m - siderite veinlet, 30 deg. to core 6.4 m - siderite veinlet; 6.7 m - pyritic quartz-siderite vein
9.8 - 11.1	PHYLLITE, grey, siliceous, finely laminated, dark grey phyllite bands and xenoliths
11.1 - 11.6	PHYLLITE, grey, finely banded and laminated



<u>Interval</u>	<u>Description</u>
11.6 - 24.4	PHYLLITE, pale green, c.a., with thin grey phyllite bands, common quartz segregations
24.4 - 25.9	SCHIST, chloritic, porphyroblastic interbedded with PHYLLITE, siliceous light grey
25.9 - 30.5	Interbedded PHYLLITE, pale green, PHYLLITE, grey, common quartz lenses
30.5 - 36.6	PHYLLITE, siliceous, grey
36.6 - 47.6	PHYLLITE, grey, with thin bands of pale green PHYLLITE, common siderite stringers and veinlets cutting foliation in tension fractures, occasional pyrite metablasts
47.6 - 48.2	PHYLLITE, silicified, shadow quartz veinlets
48.2 - 54.9	PHYLLITE, grey, quartz-siderite lenses with phyllite xenoliths chlorite clots 50.2 m - pyrite-quartz-siderite veinlet 2 cm, 70 deg. to core
54.9 - 70.1	PHYLLITE, grey, interbedded with PHYLLITE, green-grey, common quartz-siderite lenses and veinlets, occasional bands of graphitic phyllite 56.1 - 56.4 PHYLLITE, graphitic, dark grey, pyritic
70.1 - 77.7	PHYLLITE, green metavolcanic, with thin calcareous grey PHYLLITE laminae in upper portions, occasional quartz lenses and veinlets, fol./core 60 deg.
77.7 - 79.3	PHYLLITE, grey, very finely laminated, metavolcanic
79.3 - 87.8	PHYLLITE, green, very chloritic, sausseritized, magnetite tetrahedra
87.8 - 93.3	PHYLLITE, grey, with green phyllite laminae and bands
93.3 - 93.9	PHYLLITE, green c.a.
93.9 - 98.8	PHYLLITE, grey with green laminae and chlorite clots, 30% quartz segregations and veinlets
98.8 - 100.3	PHYLLITE, grey with green phyllite laminations
100.3 - 103.6	PHYLLITE, green, locally with epidote porphyroblasts
103.6 - 128.2	PHYLLITE, green, finely laminated, occasional sections with thin laminae of quartz carbonate

STATEMENT OF COSTS

Diamond Drilling

DDH 87-07: 79.8 meters x 86.95 / meter (inclusive)	\$ 6,938.60
DDH 87-08: 83.8 meters x 86.95 / meter (inclusive)	7,286.40
DDH 87-09: 128.2 meters x 86.95 / meter (inclusive)	11,147.00

Geological Supervision

-C. von Einsiedel - 3 days @ \$ 250.00 750.00

Travel Expense

611.00

Total Expenditure: \$ 26,733.00

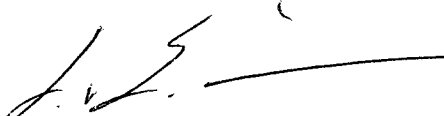
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CERTIFICATE

I, Carl A. von Einsiedel of the City of Vancouver, in the Province of British Columbia, certify that:

1. I am a consulting geologist with offices located at 210 - 470 Granville Street, Vancouver, B.C.
2. I am a graduate of Carleton University in Ontario in Geological Sciences with a degree of BSc.
3. This report is based on: results of several personal examinations of the subject property and results of diamond drilling carried out under my supervision.
4. I have no interest, either directly or indirectly, in the properties or securities of Royal Crystal Resources Ltd.
5. I consent to the use of this report in a Prospectus, Statement of Material Facts or Qualifying Report for submittal to the Superintendent of Brokers or the Vancouver Stock Exchange.

Dated this 12th day of June, 1989 at Vancouver, British Columbia.

  
Carl A. von Einsiedel, BSc.  
Consulting Geologist