ASSESSMENT REPORT

on

DIAMOND DRILLING

CAR PROPERTY
Car and Zing Claims

Carroll Creek Area

FORT STEELE & NELSON MINING DIVISIONS

NTS 82 F/1 W
TRIM 82F.009 & 019

Latitude 49° 91' N
Longitude 116° 21' W
UTM 5,438,000N 550,000E

By

PETER KLEWCHUK, P. Geo.

February, 2000

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1.00 INTRODUCTION

This report describes a program of diamond drilling completed on the Zinger property in the Carrol Creek drainage during 1999.

1.10 Location and Access

The Car property, which includes the Car and Zing claims, is located approximately 60 kilometers southwest of Cranbrook, B.C., in the Fort Steele and Nelson Mining Divisions (Fig. 1). The claims are centered near 49° 91' N Latitude and 116° 21' W Longitude / UTM 5,438,000N, 550,000E.

Access to the property is off Highway 3 east of Creston, B.C., along the Carroll Creek logging road and access on the property is further provided by a number of old logging spur roads..

1.20 Property

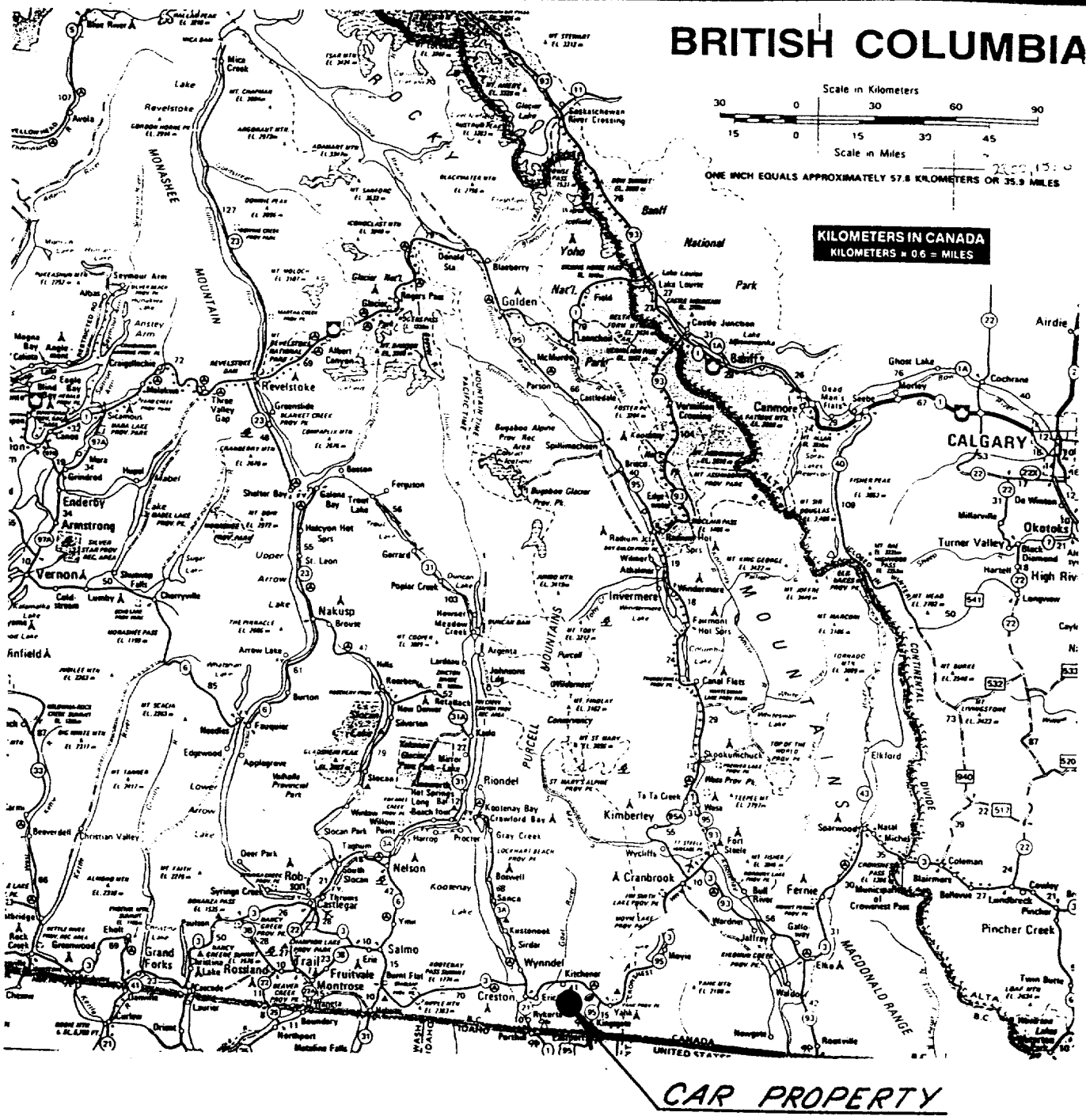
The Car property is a contiguous group of 119 claim units in 54 two-post claims and 4 modified grid claims (Fig. 2), owned by Chapleau Resources Ltd. and Black Bull Resources Inc..

1.30 Physiography

The Car and Zing claims are in an area of mainly glacially rounded mountainous terrain within the Moyie Range of the Purcell Mountains. Elevations on the claim block range from about 1000 m to 1900 m. Glacial till covers most of the lower mountain slopes and the valleys are floored by thick glacio-fluvial deposits. Forest cover consists of mature and immature stands of a mixture of Pine, Fir and Larch. Some parts of the property have been recently clear-cut logged.

1.40 History of Previous Exploration

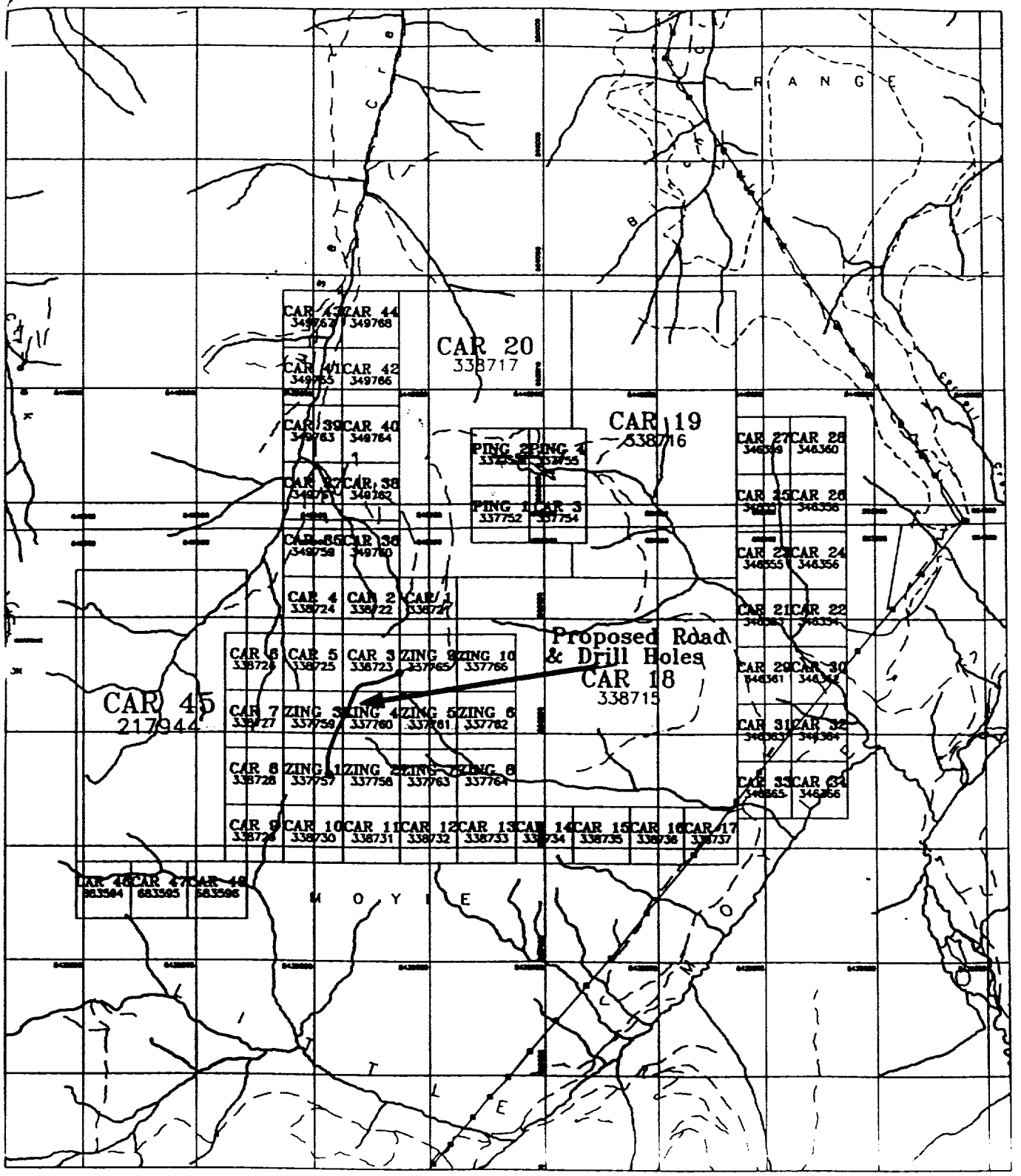
The Car property was staked in 1995 by Consolidated Ramrod Gold Corporation. Ramrod cut a grid on the property and completed a soil geochemistry survey. The claim group was optioned to Black Bull Resources Inc. in 1998; they expanded the soil geochemistry with a small survey (Pighin, 1998, A.R.25,661) and conducted a prospecting program (Kennedy, 1998, A.R. 25,701). Late in 1998 Chapleau Resources Ltd. joint ventured the property with Black Bull. Work in 1999 included geological mapping (Pighin, 1999, A.R. 26,027) and the diamond drilling which is the subject of this report.



CAR PROPERTY

LOCATION MAP

Scale: as Shown | Date: Sept. 98 | Figure 1.



CHAPLEAU RESOURCES LTD.

0 400 800 1200 1600 2000 3000 4000
metres

CAR PROPERTY

CLAIM MAP

Map Reference:
TRIM 82F009 & 82F019

Date: June 15 1999 by RP
Scale: 1:50000 Fig 2

Last Update (Y/M/D):

CAD Filename:

1.50 Scope and Purpose of Work

In 1999 a 6 hole diamond drilling program, totaling 2400.1 meters, tested a series of targets on the Car property. The holes tested for the extension of surface base metal sulfide mineralization and also tested the extensive hydrothermal vent system that is exposed at surface.

2.00 GEOLOGY

2.10 Regional Geology

Bedrock on the property is part of the Mesoproterozoic Purcell Supergroup, a thick succession of fine grained clastic and carbonate sedimentary rocks exposed in the core of the Purcell Anticlinorium in southeast British Columbia. These rocks are believed by most workers (eg. Harrison, 1972) to have been deposited in an epicratonic re-entrant of a sea that extended along the western margin of the Precambrian North American Craton.

The oldest known member of the Purcell Supergroup is the Aldridge Formation, a thick sequence of fine-grained siliciclastic rocks deposited largely by turbidity currents. Reesor (1958) has divided the Aldridge Formation in the Purcell Mountains into three informal units: rusty weathering siltstone, quartzitic wacke and argillite of the lower Aldridge Formation; grey weathering quartz wacke and siltstone of the middle Aldridge Formation; and laminated argillite of the upper Aldridge Formation.

The base of the lower Aldridge Formation is not exposed; within southeastern British Columbia this unit is about 1500 meters thick; the middle Aldridge is about 2500 meters thick and includes periodic inter-turbidite intervals of thin bedded, rusty-weathering argillites some of which form finely laminated marker beds that are time stratigraphic units and which can be correlated over great distances within the Aldridge basin and equivalent stratigraphy in the United States. The upper Aldridge Formation is about 300 meters thick. The lower and middle units of the Aldridge Formation are host to a proliferation of gabbroic to dioritic composition Moyie Intrusions, predominantly as sills. These intrusions are interpreted to be penecontemporaneous with deposition of their host sediments (Hoy, 1989).

The Aldridge Formation is gradationally overlain by shallower-water deltaic clastics of the Creston Formation. The Creston Formation is in turn overlain by predominantly dolomitic siltstones of the Kitchener Formation.

The Purcell Anticlinorium is transected by a number of steep transverse and longitudinal faults. The transverse faults appear to have been syndepositional (Lis and Price, 1976) and Hoy (1982) suggests a possible genetic link between sedex style base metal mineralization and syndepositional faulting.

Longitudinal faults which more closely parallel the direction of basin growth faults may have played a similar role. The Sullivan orebody, which occurs at the upper contact of the lower Aldridge Formation, is part of a NNE oriented structural corridor that hosts extensive evidence of disturbed sedimentation, hydrothermal vent products and the base metal sulfides themselves. This corridor is parallel to longitudinal basin growth faults and is probably related to such a structure.

2.20 Property Geology

The Car property is underlain by the middle informal member of the Aldridge Formation. Bedrock exposure is limited to about 5% of the surface area and consists of middle Aldridge Formation argillites, siltstones and quartz wackes, along with a series of gabbroic intrusions which appear to be mainly sills.Sedimentary beds generally strike north and dip moderately to the east.

A large fragmental complex is partially exposed in the southwest part of the claim block; fragmental and related rocks are found over a distance of one kilometer and over a stratigraphic thickness of at least 100 meters. The fragmental complex is composed of interfingering lenses of clast-supported siltstone fragmental, matrix-supported quartzite fragmental, quartzite, black very fine-grained silty argillite and rare lenses of dolomite. Disseminated sulfides include pyrrhotite, sphalerite, galena, pyrite and arsenopyrite. The sulfides appear to be closely related to intense silica, biotite, muscovite and talc alteration, and are most abundant in the quartzite unit (Pighin, 1999). A second fragmental with a smaller surface exposure, occurs near the central part of the claims. This fragmental is albite-altered and carries minor iron sulfides.

3.00 DIAMOND DRILLING

3.10 Introduction

In August and September of 1999, 6 diamond drill holes totaling 2400.1 meters, were drilled on the Car property. The holes were drilled in the area of two fragmental complexes which have favourable alteration and / or base metal sulfides associated with them on surface. All drill holes are NQ in size (7.3 cm in diameter); other drill hole data is provided in Table 1.

Drilling was done by Britton Bros. Diamond Drilling Ltd., P.O. Box 968, Smithers, B.C., V0J 2N0. Core was logged by D.L. Pighin, P.Geo., and core is stored at Vine Properties near the north end of Moyie Lake.

Figure 3 is a drill hole location map, drill hole cross-sections are provided in Figures 4 to 8, complete drill logs are in Appendix 1 and analytical results of core samples are provided in Appendix 2.

Drill Hole	Collar Azimuth	Dip	Elevation	Start	End	Length	Claim
CA-99-1	023°	-45°	1934 m	Aug 19	Aug. 24	343.6 m	Zing 1
CA-99-2	290°	-45°	1930 m	Aug 24	Aug 30	371.0 m	Zing 3
CA-99-3	-	-90°	1930 m	Aug 30	Aug 31	188.1 m	Zing 3
CA-99-4	257°	-45°	1915 m	Sept. 1	Sept. 8	547.9 m	Car 3
CA-99-5	225°	-50°	1855 m	Sept. 8	Sept. 11	346.6 m	Car 3
CA-99-6	225°	-55°	1680 m	Sept 12	Sept.19	602.9 m	Car 20

Table 1. Diamond Drill Hole Data

3.20 Results

Drill hole CA-99-1 was collared on the Zing 1 claim at the south edge of the large fragmental complex and was intended to test this edge of the fragmental for associated base metal sulfides. The hole collared in sericitic and talc-altered middle Aldridge Formation rocks and drilled fairly normal middle Aldridge lithologies below that. One narrow fragmental zone was encountered from 294 to 296 meters (Figure 4). Minor concentrations of disseminated sphalerite, galena and arsenopyrite were encountered, along with more abundant, mainly disseminated, pyrite and pyrrhotite.

Drill hole CA-99-2 was collared on the Zing 3 claim about 350 meters north of hole CA-99-1 (Figure 3), above the central part of the exposed fragmental complex and drilled to the west. The main fragmental was intersected between 97 and 209 meters, where it has a massive texture with no obvious internal structure; correlation with surface geology suggests a steep-dipping, cross-cutting fragmental body (Figure 5). Minor galena, sphalerite and widespread iron sulfides are present.

Drill hole CA-99-3 is a vertical hole collared at the same site as CA-99-2 (Figure 5). A twenty meter thick band of fragmental was encountered high in the hole, with no obvious correlation to the main fragmental complex seen on surface and in drill hole CA-99-2. No further fragmental was encountered in the remainder of the hole, supporting the probable steep-trending nature of the main fragmental unit. Disseminated iron sulfides are common in the hole, with minor local disseminated base metal sulfides.

CAR CLAIM BOUNDARY

CA-99-6 -55°

CA-99-5 -50°

CA-99-4 -45°

CA-99-2 -45°
CA-99-3 -90°

CA-99-1 -45°

BC 82035

Creek

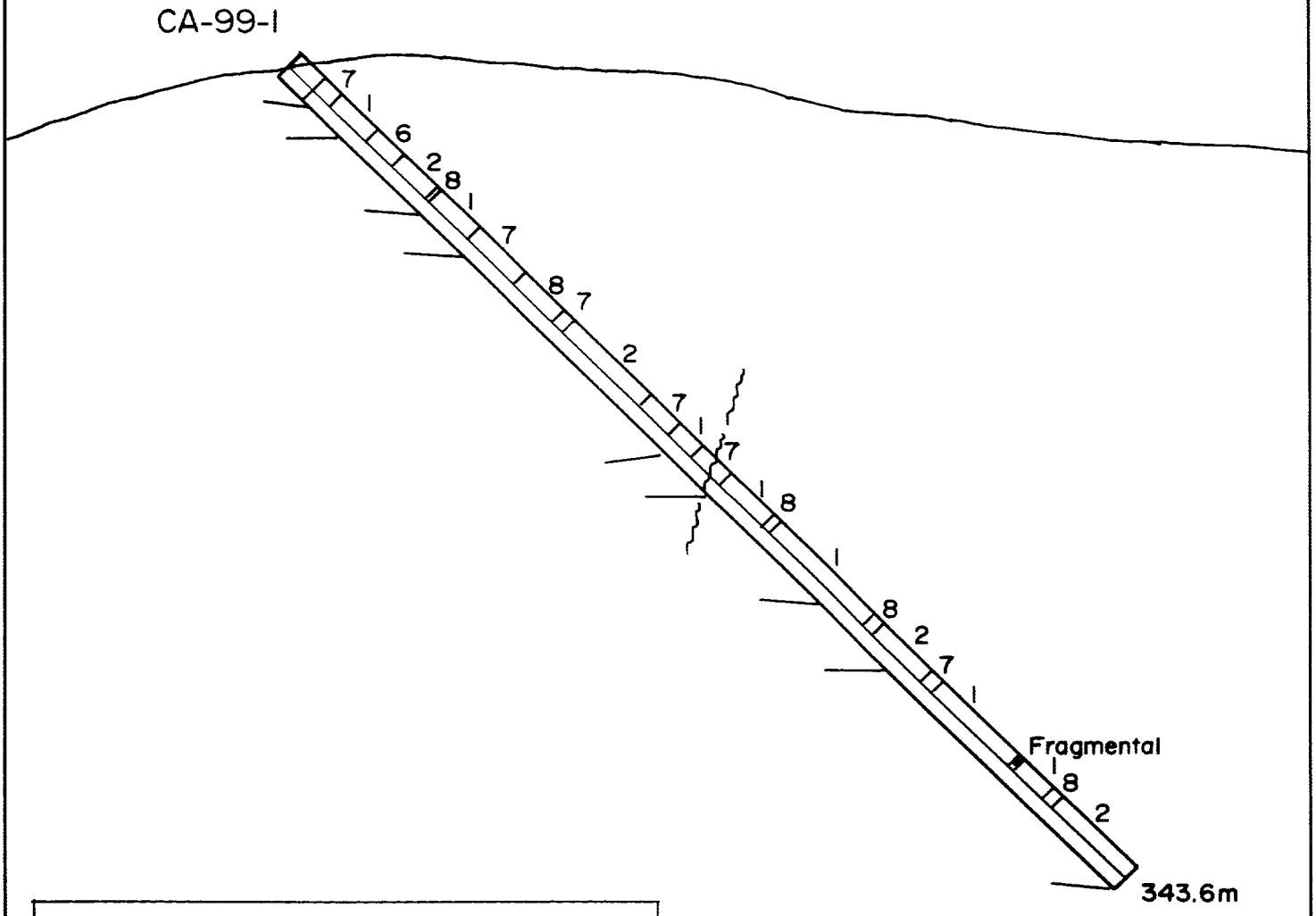
Russell

1000 m

N

CAR CLAIM BOUNDARY

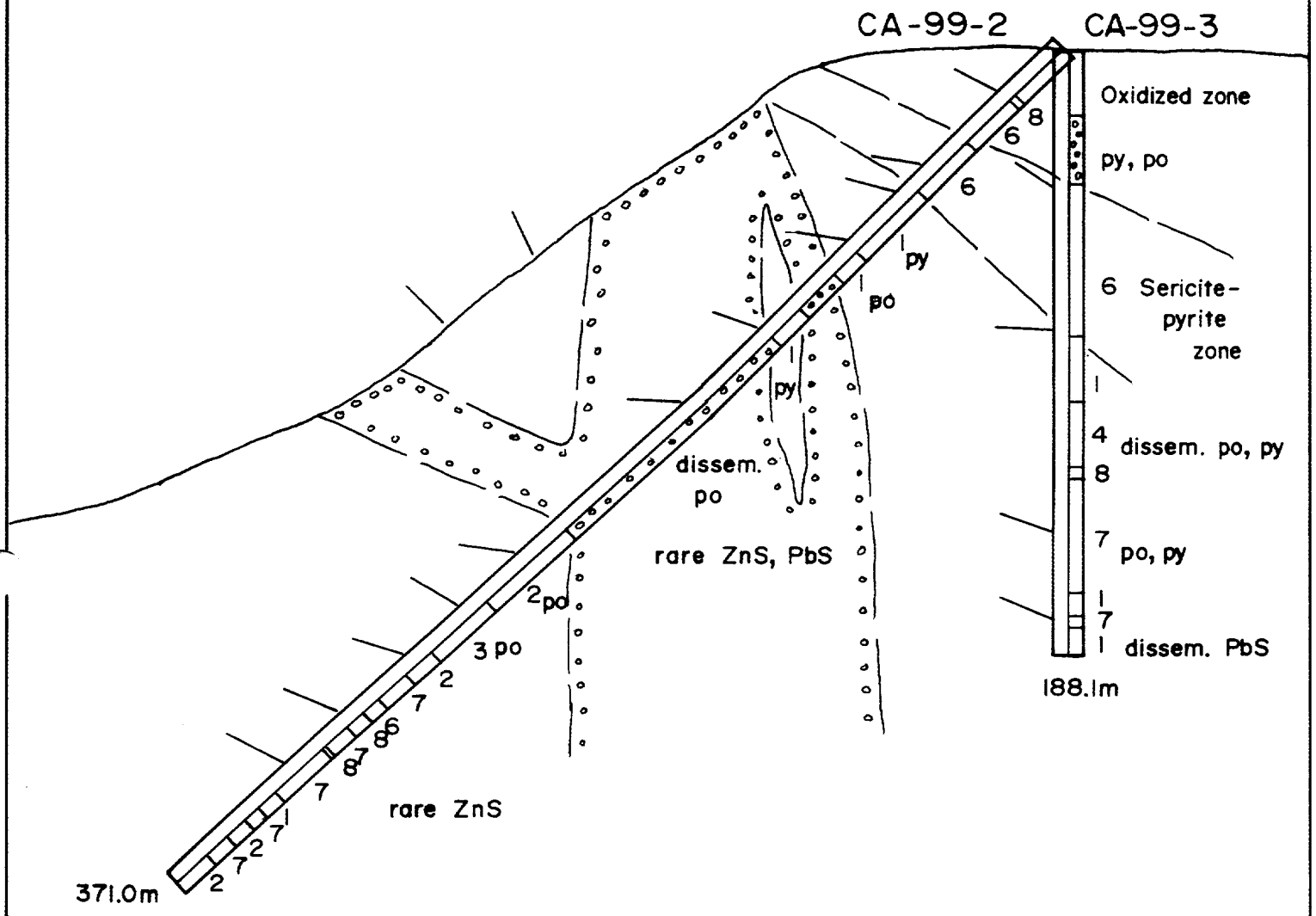
Figure 3. Drill Hole Location Map
82F.009 & 019
Scale 1:20,000



LEGEND

ooo	FRAGMENTAL
1	QUARTZITE mainly thick or very thick bedded
2	QUARTZITE mainly medium to thick bedded
3	QUARTZITE thin to very thin bedded
4	ARGILLITE medium to thin bedded
5	ARGILLITE thin to very thin bedded
	Mixed Sequence; Siltstone, Quartzite & Argillite
6	Medium to thick bedded
7	Medium to thin bedded
8	Thin to very thin bedded
9	Gabbro

Figure 4. Cross section
DDH CA-99-1
Scale 1:2000
For location see Figure 3



LEGEND

∞	FRAGMENTAL
1	QUARTZITE mainly thick or very thick bedded
2	QUARTZITE mainly medium to thick bedded
3	QUARTZITE thin to very thin bedded
4	ARGILLITE medium to thin bedded
5	ARGILLITE thin to very thin bedded
	Mixed Sequence; Siltstone, Quartzite & Argillite
6	Medium to thick bedded
7	Medium to thin bedded
8	Thin to very thin bedded
9	Gabbro

Figure 5. Cross section
DDH CA-99-2 & 3
Scale 1:2000
For location see Figure 3

Drill hole Ca-99-4 was collared on the Car 3 claim, just over 300 meters north of CA-99-2 & 3 and drilled to the west to test the northern extension of the fragmental (Figure 3). A series of fragmental lenses were intersected, suggesting the complex fingers out into the host stratigraphy in this area (Figure 6). Widespread disseminated minor sphalerite and galena are present, along with more common pyrite and pyrrhotite.

Drill hole CA-99-5 was collared on the Car 3 claim east of the main fragmental and drilled to the west. A gabbro sill was encountered high in the hole, with one lower narrow fragmental unit as well as a massive argillaceous zone which may be a slump feature (Figure 7). No base metal sulfides were noted in the hole.

Drill hole Ca-99-6 was collared on the Car 20 claim and drilled to test for sratiform sulfides in association with an albitized fragmental exposed on surface. Middle Aldridge Formation stratigraphy was encountered in the hole, including two gabbro sills (Figure 8). Two narrow lamprophyre dikes were encountered near 67 and 75 meters depth. Narrow fragmental units were intersected at 245 and 300 meters; both are massive, matrix-supported fragmentals. The upper fragmental is muscovite-altered, the lower, thicker fragmental sits directly on the thicker gabbro sill.

3.30 Core Sampling

Three grab samples of core were taken in drill hole CA-99-2 between 43 and 58 meters depth, of a strongly pyrite-sericite altered quartzite-argillite unit with very minor chalcopyrite and sphalerite noted. The samples were analyzed for a multi-element ICP package by Acme Analytical Laboratories Ltd., 852 E. Hastings St., Vancouver, B.C. Analytical results are provided in Appendix 2; all 3 grab samples have relatively low values for zinc, lead and copper, although one sample has 50 ppm Pb, which is a low anomalous value for the Aldridge Formation generally.

4.00 CONCLUSIONS

All of the rocks drilled on the Car property in 1999 are part of the middle Aldridge Formation with lithologies ranging from thin bedded argillites through mixed siltstone assemblages to thick quartzites.

Both fragmentals exposed on surface have been shown to be rather complex features by the diamond drilling. The largest complex is obviously steeply dipping and cross-cuts its host stratigraphy.

Base metal sulfides, including sphalerite, galena and chalcopyrite, occur widely through the areas of the fragmental complexes but have been encountered only in minor concentrations.

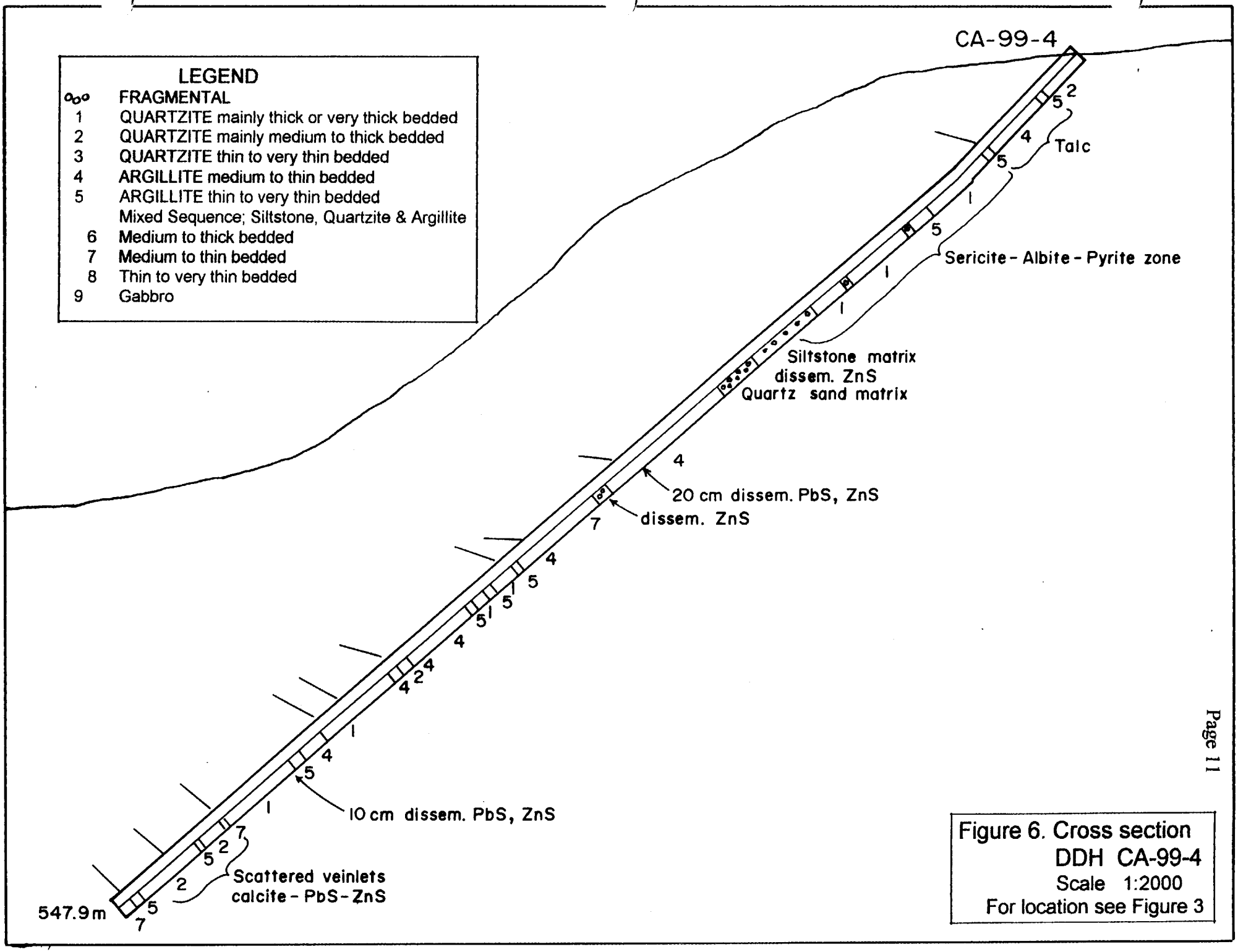
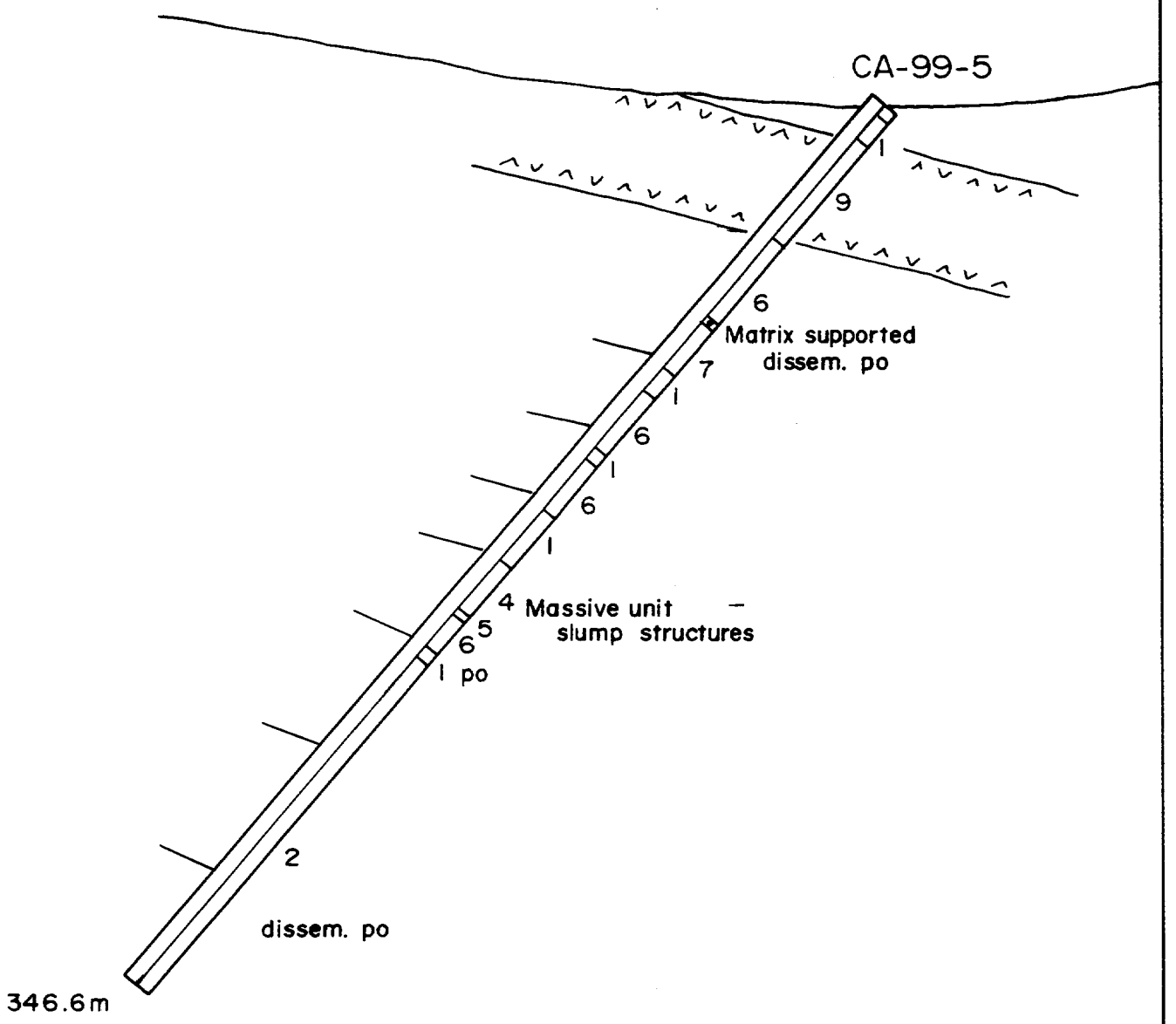


Figure 6. Cross section
DDH CA-99-4
Scale 1:2000
For location see Figure 3



LEGEND

°o°	FRAGMENTAL
1	QUARTZITE mainly thick or very thick bedded
2	QUARTZITE mainly medium to thick bedded
3	QUARTZITE thin to very thin bedded
4	ARGILLITE medium to thin bedded
5	ARGILLITE thin to very thin bedded
	Mixed Sequence; Siltstone, Quartzite & Argillite
6	Medium to thick bedded
7	Medium to thin bedded
8	Thin to very thin bedded
9	Gabbro

Figure 7. Cross section
DDH CA-99-5
Scale 1:2000
For location see Figure 3

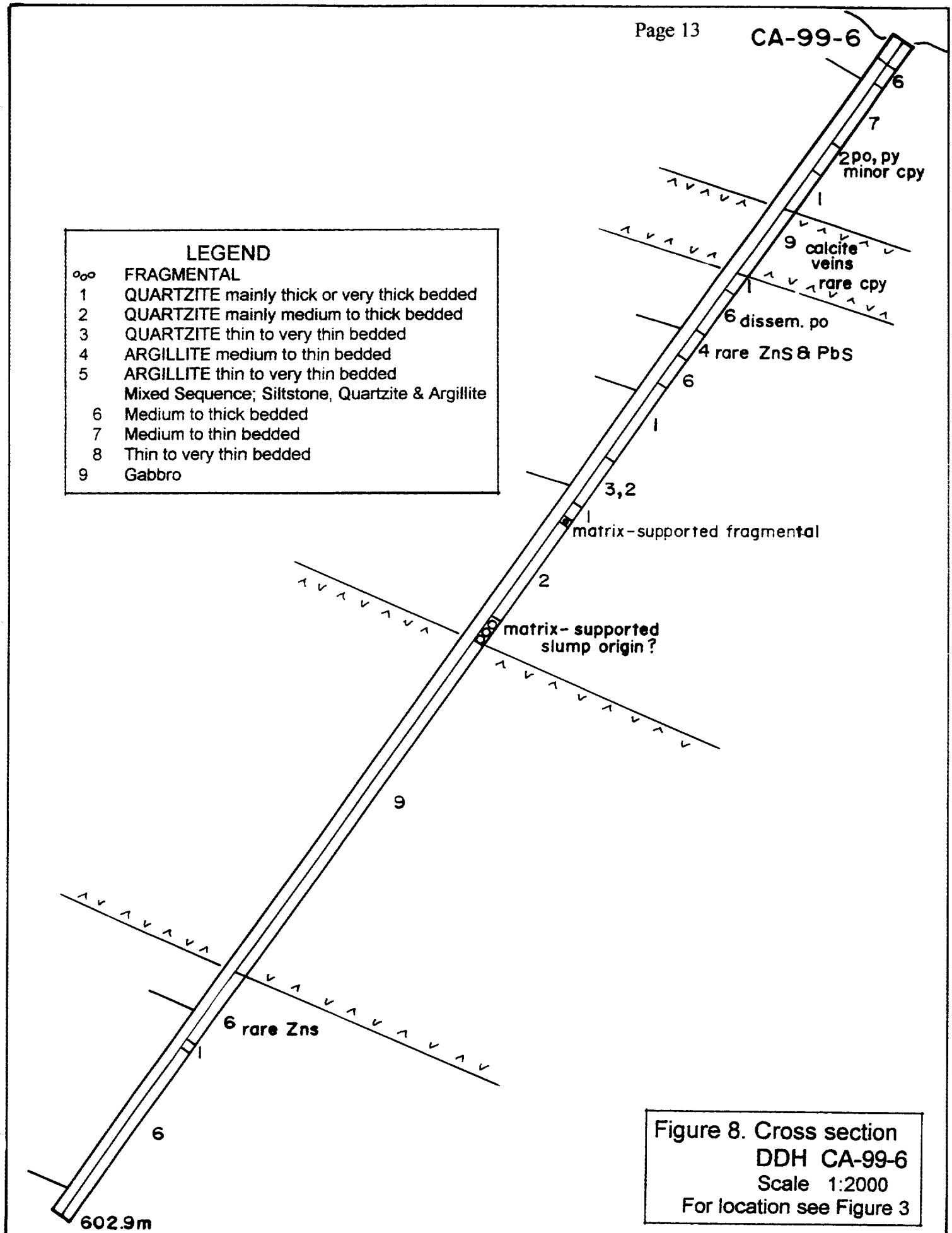


Figure 8. Cross section
DDH CA-99-6
Scale 1:2000
For location see Figure 3

5.00 REFERENCES

Harrison, J.E., 1972 Precambrian Belt Basin of northwestern United States: Its geometry, sedimentation and copper occurrences: Geol. Soc. of America Bull., V.83, p.1215-1240.

Hoy, T., 1982 The Purcell Supergroup in southeastern British Columbia: sedimentation, tectonics and stratiform lead-zinc deposits. In : Precambrian sulphide deposits; H.S. Robinson Memorial Volume (R.W Hutchison, C.D. Spence, and J.M. Franklin, Eds.) Geol. Assoc. Can. Special Paper 25.

Hoy, T., 1989 The age, chemistry and tectonic setting of the Middle Proterozoic Moyie Sills, Purcell Supergroup, Southeast British Columbia; Canadian Journal of Earth Sciences, V.26, p. 2305-2317.

Kennedy, C.K., 1998 Assessment report, Prospecting program. Car property, Fort Steele Mining Division, B.C. Ministry of Mines Assessment Report 25,701.

Lis, M.G. and Price, R.A.,1976 Large scale block faulting during deposition of the Windermere Supergroup (Hadrynian) in southeastern British Columbia: Geol. Surv. Can. Paper 76-1A, p135-136.

Pighin, D.L., 1998 Assessment report, Grid soil geochemical survey, Car property, Fort Steele Mining division, B.C. Ministry of Mines Assessment Report 25,661.

Pighin, D.L., 1999 Assessment Report, Geological mapping program, Car property, Fort Steele Mining Division, B.C. Ministry of Mines Assessment Report 25,701.

Reesor, J.E., 1958 Dewar Creek map-area with special emphasis on the White Creek Batholith, British Columbia: Geol. Surv. Canada, Memoir 292, 78 p.

6.00 STATEMENT OF EXPENDITURES

Diamond Drilling; 6 holes, 2400.1 meters	
Britton Bros. Diamond Drilling, Smithers, B.C.	$146,338.90
Program preparation, supervision, surveying drill sites, logging core	
D.L. Pighin, P.Geo. 21 days @ $330/day	6,930.00
Preparation of drill sites, mobilization of drill, transporting core	
B. Collison 20 days @ $175/day	3,500.00
Report preparation	
P. Klewchuk, P.Geo. 3 days @ $330/day	990.00
Transportation 4x4 truck, 24 days @ 100/day	2,400.00
Total Expense	**$160,158.90**

7.00 AUTHOR'S QUALIFICATIONS

As author of this report I, Peter Klewchuk, certify that:

1. I am an independent consulting geologist with offices at 246 Moyie Street, Kimberley, B.C.
2. I am a graduate geologist with a B.Sc. degree (1969) from the University of British Columbia and an M.Sc. degree (1972) from the University of Calgary.
3. I am a Fellow of the Geological Association of Canada and a member of the Association of Professional Engineers and Geoscientists of British Columbia.
4. I have been actively involved in mining and exploration geology, primarily in the province of British Columbia, for the past 25 years.
5. I have been employed by major mining companies and provincial government geological departments.

Dated at Kimberley, British Columbia, this 10th day of February, 2000.

Peter Klewchuk
P. Geo.

AUTHOR'S QUALIFICATIONS

As author of this report I, David L. Pighin, certify that:

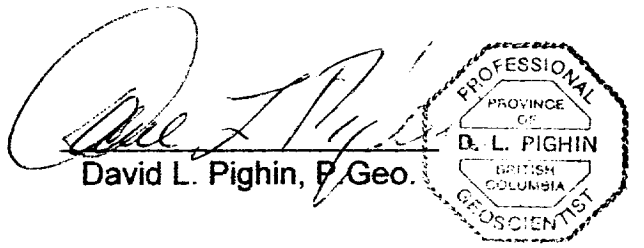
1. I am a self employed consulting geologist whose office is at Hidden Valley Road, Cranbrook, B.C., mailing address is 301 - 8th St. S., Cranbrook, B.C. V1C 1P2.

2. I am a Member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

3. I have been actively involved in mining and exploration geology, primarily in the Province of British Columbia, for the past 33 years.

4. I was employed by Cominco Ltd. as a prospector, exploration technician and geologist for 24 years and later by numerous junior exploration companies.

Dated at Cranbrook, British Columbia, this 9th day of February, 2000.



David L. Pighin, P.Geo.

APPENDIX 1

DIAMOND DRILL HOLE LOGS

PROPERTY: CAR

LOCATION: Zing 1 Claim
Headwaters of Russell Creek

COMMENCED: Aug 19, 1999

COORDS: (long)

COORDS: (UTM) (E)

COORDS: (grid) (E)

ELEVATION: 1934.16 m

OBJECTIVE:

SURVEYS: (depth)

COMPLETED: Aug 24, 1999

(lat)

(N) **(EL)**

(N) **(EL)**

COLLAR: (dip) -45° **(Azi)** 025°

Dip: **Azi:**

HORI COMP: 265.0

VERT. COMP: 265.0

CORR. DIP: avg. dip 40°

TRUE BEARING: magnetic rocks in hole

% RECOVERY:

LOGGED DATE: Aug 1999

LOGGED BY: D.L. Pighin

Type: Sperry Sun

HOLE #: CA99-1

LENGTH: 343.6 m

DRILL CONTRACTOR: Britton Bros.

CORE SIZE: NQ

CASING: 0 – 10.7 m

CORE STORAGE: Vine Property

Additional Surveys:

Depth	Dip	Azi
172.8	40°	magnetic rocks
343.6	38°	magnetic rocks

From To	
	LITHOLOGY: Argillite
10.7 – 17.3	**COLOR:** Light gray, banded dark gray
	PRIMARY STRUCTURE: Thin to very thin bedded, bedding sharp-flat, locally bedding is strongly slump structured (soft sed. deformation) Bedding to core: 37° at 11.0 meters
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally sericitized
	MINERALIZATION & ASSOCIATED ALTERATIONS, HOST STRUCTURE: Abundant disseminated euhedral pyrite
	ADDITIONAL OBSERVATIONS:

From	To	
		LITHOLOGY: Quartzite, interbedded talc
17.3-18.7		**COLOR:** light gray to white, band dark gray to black
		PRIMARY STRUCTURE: very thin to thin bedded, bedding sharp-flat, some thin highly disrupted beds, quartzite beds fine to medium grained
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: talc beds alternate (interbedded) with thin intensely albitized silty beds. Quartzite generally sericitic.
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant limonite along fractures and disseminated in seds
		ADDITIONAL OBSERVATIONS:
From	**To**	**LITHOLOGY:** Quartzite
18.7-22.7		**COLOR:** light brownish gray
		PRIMARY STRUCTURE: very thick bedded, no bedding, medium to coarse grained, unsorted and non graded
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: weakly sericitic
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant disseminated limonite and limonite staining
		ADDITIONAL OBSERVATIONS:
From	**To**	**LITHOLOGY:** Siltstone, interbedded argillite
22.7-25.0		**COLOR:** light brownish gray, interbanded dark gray
		PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-wavy to flat, commonly disrupted, finely parallel laminated to finely cross-bedded. Bedding to core at 26.3 m = 45°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: rare thin talc beds, weak sericitic alteration
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: limonitic throughout
		ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite
25.0-34.6	**COLOR:** brownish light gray
	PRIMARY STRUCTURE: very thick bedded, bedding is rare and generally disrupted, medium to coarse grained, unsorted and ungraded, quartz grains are generally sharply angular
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: matrix is strongly sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant disseminated limonite in quartzite
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, minor thin talc beds (or soft argillite)(?)
34.6-43.0	**COLOR:** light brown with some dark green banding
	PRIMARY STRUCTURE: medium to thick bedded, bedding is sharp, commonly distorted, medium to coarse grained
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: limonitic (supergene alteration), dark green talc interbeds or very soft argillite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: limonite speck and bands throughout
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite interbedded argillite (talc(?))
43.0-56.0	**COLOR:** light brown with scattered thin dark green bands
	PRIMARY STRUCTURE: 43.0-46.0m – very thin bedded, 46.0-49.4m – medium to thick bedded, 49.4-50.3m – very thin bedded, 50.3-56.0m – medium to thick bedded, bedding planes generally sharp-flat and commonly distorted (soft sed. slumping)
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: Supergene generally limonitic throughout, with dark green talcose argillite beds
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: limonite disseminated throughout
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Argillite (talcose)
56.0-57.3	**COLOR:** light brown, banded dark green
	PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp and flat
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: as previously described
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: widely scattered bands of intense limonitization
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, minor argillite interbeds
57.3-73.5	**COLOR:** light brownish gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding rare but distinct, homogeneous medium grained sediments, no sorting or grading. At 59.0m bedding to core = 40°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: matrix strongly sericitic and weakly limonitic throughout
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some disseminated limonite and locally pyrite, less than 1%
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone interbedded silty argillite and argillite
73.5-80.0	**COLOR:** light brown with light greenish gray
	PRIMARY STRUCTURE: medium to thin bedded, bedding sharp, generally distorted. Bedding to core at 77.0m = 40°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: as previously described
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: 78.8-79.3m – very limonitic quartzite
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite
80.0-84.0	**COLOR:** light greenish gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding very rare, medium to coarse grained, unsorted and graded
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: matrix strongly sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some disseminated pyrite and limonite
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone interbedded quartzite and argillite
84.0-92.6	**COLOR:** light gray to light brownish gray. Some light greenish gray banding.
	PRIMARY STRUCTURE: medium to thick bedded with minor thin beds, bedding sharp and generally distorted. Siltstones and quartzites generally medium grained, this section is strongly deformed by soft sediment deformation. Ball and Pillow structures very common.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: Siltstones and quartzite sericitic matrixes.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Limonite occurs as widely scattered round spheres (2mm) in circumference. Py occurs in the same manor as above limonite (limonite after py)
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite interbedded siltstone and quartzite
92.6-107.7	**COLOR:** light gray, banded by dark gray and greenish gray
	PRIMARY STRUCTURE: thin to very thin bedded, rare medium beds, bedding sharp and commonly distorted. In general seds are moderately to strongly slump structured, ball and pillow structures common
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: as previously described
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: widely scattered py spheres (2mm circum), rare thin bedding parallel massive py lenses
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Argillite
107.7-112.8	COLOR: gray with light gray banding
	PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat, finely parallel laminated
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: nil
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: relatively abundant disseminated euhedral py, rare disseminated ZnS and aspy
	ADDITIONAL OBSERVATIONS:
From To	LITHOLOGY: Quartzite interbedded siltstone, rare argillite
112.8-144.7	COLOR: light gray and light brownish gray
	PRIMARY STRUCTURE: medium to thick bedded, rare thin beds, bedding sharp, generally disrupted by soft sediment deformation, generally fine grained, rarely medium or coarse grained.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: Siltstone and quartzite, strongly sericitic, locally silicified
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: small spheres (2-4mm circum.) are widely scattered throughout seds, thin argillite beds host rare bedding parallel small massive py lenses (20 x 5mm). Argillite contain abundant dendritic po.
	ADDITIONAL OBSERVATIONS:
From To	LITHOLOGY: Argillite
144.7-147.3	COLOR: banded gray and light gray
	PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: Regional
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po is relatively abundant as thin disseminated layers parallel to bedding, also disseminated in argillite
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Siltstone, interbedded argillite and silty argillite
147.3-156.5	**COLOR:** light gray with lesser dark gray banding
	PRIMARY STRUCTURE: medium to thick bedded, lesser thin to very thin beds, bedding sharp and distorted (soft sed. deformation). Ball and pillow structures common
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: limonite stained in part, limonite lined fractures. Po dendrites common
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite
156.0-160.5	**COLOR:** light gray with white mottling
	PRIMARY STRUCTURE: very thick bedded, bedding is rare but distinct, commonly distorted, medium grained to coarse grained, mainly mature sand, not graded or sorted
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: silicified, locally intensely silicified, finely sericitic, over printed by whitish circular calcareous concretions, from one to two cm in size
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite interbedded argillite.
160.5-177.2	**COLOR:** light gray, gray and dark gray banding
	PRIMARY STRUCTURE: medium to thin bedded, some very thin bedded, bedding is sharp and generally distorted. Bedding to core at 160.5m = 52° and at 177.0m = 40°
	TECTONIC STRUCTURE: broken rubble ground from 165.6-171.0m 173.2-173.5m – fault zone consisting of brecciated seds and gouge cuts core axis at 65°
	GENERAL ALTERATION: quartzites are silicified and sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant fine po as dendrites
	ADDITIONAL OBSERVATIONS:

From To	
177.2-194.6	**LITHOLOGY:** Quartzite, rare argillite interbeds
	COLOR: mainly light gray with some white mottling
	PRIMARY STRUCTURE: very thick bedded, rare thick beds, very rare thin beds. Bedding is rare but sharp typically distorted (flame structure, ball and pillow). Quartzites are medium to fine grained, no grading evident.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite generally silicified, locally intensely silicified, generally sericitic throughout. Calcium carb. over prints silicification as round concretion and irregular wisps and lenses.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po throughout
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite
194.6-196.4	**COLOR:** banded light and dark gray
	PRIMARY STRUCTURE: thin bedded
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: nil
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare py
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, very rare thin argillite interbeds
196.4-234.9	**COLOR:** light gray to whitish gray, some white mottling near top of interval
	PRIMARY STRUCTURE: generally very thick bedded, very rare thin beds. Bedding is rare but distinct, generally very distorted, (soft sed. deformation). Quartzites composed of mainly coarse-grained mature quartz sand, not sorted or graded. Bedding to core at 222.0m = 40°.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: matrix composed of mainly white sericite, locally can be strongly silicified. Late calcite is speckled throughout, locally forming rounded concretions up to 20mm in circum. (calcite flooding). Some widely scattered crystals of green muscovite.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po is relatively abundant throughout. Quartzites as fine disseminated specks and as dendrites, pyrolusite occurs throughout the quartzite unit as widely scattered tiny black specks. Rare ZnS was noted throughout unit.

From To	LITHOLOGY: Argillite, minor quartzite
234.9-238.4	**COLOR:** light gray, thin gray lineation
	PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat to distorted (slump structured). Quartzite beds mainly coarse grained
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: strongly sericitic, rare crystals of green muscovite, unit is magnetic.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant disseminated po, abundant disseminated pyrolusite
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite
238.4-247.6	**COLOR:** Light gray
	PRIMARY STRUCTURE: medium to thick bedded, bedding sharp, generally distorted, medium grained, no obvious grading.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite generally silicified, matrix strongly sericitic, very widely scattered muscovite (green) crystals.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po throughout. Some disseminated aspy, locally weakly disseminated ZnS and PbS
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite, very rare quartzite interbeds
247.6-249.5	**COLOR:** gray banded dark gray
	PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp flat, but locally extremely distorted (soft sed. slumping). Bedding to core at 249.5m = 45°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: widely scattered circular blebs of green muscovite, thin quartzite interbeds, generally very limy, mainly in soft sed. deformed blebs.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: ZnS is weakly disseminated mainly in deformed calcareous quartzite. Beds generally associated with green muscovite. Po occurs in thin disseminated layers throughout unit.
	ADDITIONAL OBSERVATIONS:

From To.	LITHOLOGY: Quartzite, minor thin argillite interbeds
249.5-259.1	COLOR: light gray with some dark gray thin beds
	PRIMARY STRUCTURE: medium to thick bedded, rare thin argillite beds, bedding sharp and distorted, generally slump structured
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzites generally silicified, weakly calcareous throughout, generally silicified and sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po throughout, locally weakly disseminated ZnS
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded argillite, rare quartzite
259.1-263.0	COLOR: light gray with dark gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, bedding sharp and distorted, soft sediment slumping, medium grained. Graded turbidite beds.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: finely biotitic, some siltstones are weakly calcareous
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: minor disseminated po
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, very rare thin argillite beds
263.0-280.2	COLOR: light gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding rare but is sharp and strongly contorted (soft sed. deformation). Generally medium to fine grained quartzite. Some graded beds.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: in general strongly silicified with intense sericitization of matrix, generally weakly limy with local patches of intense calcium carb. Alteration.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po is weakly disseminated and as dendrites, locally ZnS and PbS occur as weak disseminations. Best between 271.4-274.1m. Unit is weakly magnetic throughout due to weakly disseminated magnetite.
	ADDITIONAL OBSERVATIONS:

From To	
280.2-287.1	**LITHOLOGY:** Quartzite
	COLOR: light gray
	PRIMARY STRUCTURE: very thick bedded, no bedding, coarse grained
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: intensely silicified with sericite and CaCo2 rich matrix
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: disseminated py and po throughout. Abundant dendritic po along fractures and in seds. Weakly disseminated black specks throughout probably pyrolusite(?) Rare disseminated ZnS.
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, rare thin argillite interbed 294.0-296.0m – matrix supported fragmental, clasts are rare and generally contorted.
287.1-308.0	**COLOR:** light gray
	PRIMARY STRUCTURE: thick to very thick bedded, rare thin or very thin argillite beds. Bedding is sharp, commonly flat or distorted, medium to coarse grained.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: intensely silicified and sericitized with patchy fine biotitization. Matrix is weakly limy throughout, with local concretion of intense carbonitization.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po weakly disseminated throughout unit. Locally ZnS rims some of the disseminated blebs of po.
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite
308.0-312.0	**COLOR:** dark gray with darker gray banding
	PRIMARY STRUCTURE: thin to very thin bedded
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: finely biotitic throughout
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: relatively abundant disseminated po with rare specks of ZnS.

From To	
312.0-343.6	**LITHOLOGY:** Quartzite, minor interbeds of argillite
	COLOR: gray with minor dark gray to black beds
	PRIMARY STRUCTURE: generally medium to thick bedded, with widely scattered thin to very thin argillite beds. Contacts are sharp, generally distorted, rarely flat. Argillite beds are generally black and finely laminated and commonly slump structured. Quartzite medium and coarse grained. Bedding to core at 341.9m = 38°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite strongly silicified and sericitized and generally weakly limy. Fine disseminated biotite throughout. Black argillite hosts scattered subhedral white garnets.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Locally aspy forms finely disseminated patches. Po and py is generally disseminated throughout quartzite and argillite. Small patches of fine disseminated PbS and ZnS occur in quartzite beds. ZnS and calcite form thin layers parallel to bedding in black argillite units. The thickest layer at 298.0m is 1cm thick
	ADDITIONAL OBSERVATIONS:
From To	End of hole
343.6	

PROPERTY: CAR

LOCATION: Zing 3 Claim
Head Waters of Russell Creek

COMMENCED: Aug 24, 1999

COORDS: (long)

COORDS: (UTM) (E)

COORDS: (grid) (E)

ELEVATION: 1930.16

OBJECTIVE:

SURVEYS: (depth) 152.4m

COMPLETED: Aug 30, 1999

(lat)

(N) **(EL)**

(N) **(EL)**

COLLAR: (dip) -45° **(Azi)** 293°

Dip: -40° **Azi:** 300°

HORI COMP: 266.1m

VERT. COMP: 266.1m

CORR. DIP: avg. dip 44°

TRUE BEARING:

% RECOVERY:

LOGGED DATE: Aug 1999

LOGGED BY: D.L. Pighin

Type: Sperry Sun

HOLE #: CA99-2

LENGTH: 370.0 m

DRILL CONTRACTOR: Britton Bros.

CORE SIZE: NQ

CASING: 0 – 3.1 m

CORE STORAGE: Vine Property

Additional Surveys:

Depth	Dip	Azi
353.6	43°	301°

From To	
3.1-20.4	**LITHOLOGY:** Limonite (weathered seds) siltstones(?)
	COLOR: brown
	PRIMARY STRUCTURE: (?)
	TECTONIC STRUCTURE: badly broken ground
	GENERAL ALTERATION: oxidized – super gene
	MINERALIZATION & ASSOCIATED ALTERATIONS, HOST STRUCTURE:
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Argillite
20.4-21.3	**COLOR:** banded light gray and gray
	PRIMARY STRUCTURE: thin bedded Bedding to core 72°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional(?)
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
From To	**LITHOLOGY:** Siltstone
21.3-40.2	**COLOR:** brown and gray
	PRIMARY STRUCTURE: very thick bedded, no bedding. Some wispy-disrupted beds.
	TECTONIC STRUCTURE: badly broken ground
	GENERAL ALTERATION: generally limonitic super gene alterations
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE:
From To	**LITHOLOGY:** Sericitic quartzite and argillite. Some scattered thin bands or beds of fragmental
40.2-62.7	**COLOR:** white with green lineation and green blebs, metallic blebs and lineation
	PRIMARY STRUCTURE: highly altered sediments, bedding obscured by alteration. Bedding to core at 55.8m = 60°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: sediments are nearly completely altered to fine white sericite, some remnant silicified patches, green muscovite occurs throughout as small round spheres, irregular lineation, wisps and lenses.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Py is very abundant, as thin beds, up to 5 – 10mm thick and as abundant rounded spheres. Overall py content for the sericitic unit 5% by volume. Locally up to 10% by volume. Rare cpy noted, some rare specks of ZnS.

Sample #	From	To	Length	Pb	Zn			
4259 Grab	43.0m							
4260 Grab	55.0m							
4261 Grab	58.0m							

From To	LITHOLOGY: Quartzite
62.7-87.8	**COLOR:** light gray to white, abundant dark gray dendrites
	PRIMARY STRUCTURE: massive to very thick bedded, bedding is not evident, coarse to medium grained, no sorting, no grading
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite matrix completely altered to sericite, matrix is weakly limy with local small lenses and patches which are strongly calcareous. Thin bands of buff disseminated dolomite are scattered throughout interval.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: py is relatively abundant throughout unit as circular blebs up to 10mm in diameter. Po is abundant as scattered dendritic structures.
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite
87.8-97.0	**COLOR:** light buffish gray
	PRIMARY STRUCTURE: very thick bedded, bedding is indistinct, some fine parallel lineation, no sorting, no grading. Quartzite composed of mixed coarse, medium to fine quartz sand. Bedding to core at 88.0m = 54°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: intensely silicified with strongly sericitized matrix, generally limy to dolomitic throughout, locally very limy.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant po as scattered dendrites
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Fragmental mainly quartzite with soft talcose argillite clasts
97.0-112.0	**COLOR:** light gray with waxy white clasts
	PRIMARY STRUCTURE: massive, matrix coarse mature quartz sand, mainly matrix supported with scattered zones of clasts supported by frag, clasts generally angular and are rarely more than 2 to 4mm in size
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: strongly sericitic with scattered patches of intense silicification
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: widely scattered py blebs, generally circular and from 2 to 5mm in size. Rare speck of PbS noted.
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite
112.0-125.0	**COLOR:** light buffish gray
	PRIMARY STRUCTURE: very thick bedded, no bedding, but some fine parallel lineation, generally medium grained quartz sand, no grading. Rare bedding at base of unit 65° to core
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: intensely silicified and sericitic, weakly limy and dolomitic throughout.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated py throughout and rare disseminated ZnS.
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Fragmental, quartzite matrix, waxy argillite clasts
125.0-209.0	**COLOR:** gray
	PRIMARY STRUCTURE: massive, no bedding, coarse grained, unsorted quartz sand matrix, clasts are widely scattered, sharply angular, rarely more than 5mm in size, thin 1.0 to 1.5m intervals of clasts supported fragment
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified and strongly sericitic, becoming more biotitic towards base of unit.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: fine disseminated po throughout. Rare specks of ZnS throughout. ZnS is common in thin hairline calcite filled fractures, these fractures are commonly subparallel to core axis.
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, interbedded argillite
209.0-220.2	**COLOR:** mainly light gray with gray to dark gray banding
	PRIMARY STRUCTURE: medium to thin bedded and some very thin bedded, bedding sharp and very distorted. Abundant ball and pillow structures (soft sed. deformation). Bedding to core at 209.0 = 48°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzites are silicified and sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po is weakly disseminated throughout sed., both quartzite and argillite. Very abundant ZnS and aspy
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite, rare thin argillite interbeds
220.2-242.3	**COLOR:** light gray
	PRIMARY STRUCTURE: medium to thick bedded, rare thin beds, bedding is distinct and highly distorted. Bedding to core at 226.5 = 50°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite beds are generally silicified and highly sericitized
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weak disseminated po throughout, rare specks and blebs of ZnS and PbS
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite interbedded argillite
242.3-255.2	**COLOR:** light gray with gray and dark gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, bedding distorted and sharp, very rarely flat-sharp (soft sed. deformation). Quartzites mainly medium to fine grained. Bedding to core at 250.0m = 74°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite silicified and sericitic with late carbonate rich concretions, widely scattered blebs of light green muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po throughout. Weakly disseminated small patches of ZnS are widely scattered throughout unit, generally occurs in association with carbonate concretions.
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, rare argillite interbeds
255.2-268.8	**COLOR:** light gray
	PRIMARY STRUCTURE: medium to thick bedded, bedding is distinct but rare, generally sharp and strongly distorted, generally medium grained.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: as previously described
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po throughout. Weakly disseminated patches of ZnS occur with carbonate rich concretions.
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Argillite, interbedded siltstone
268.8-286.3	**COLOR:** light gray with dark gray to black interbeds
	PRIMARY STRUCTURE: mainly thin to medium beds, some very thin beds, and very rare thick beds. Bedding generally sharp-distorted, (ball and pillow structure). Siltstones generally medium grained. Bedding to core at 272.0m = 60°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: 273.2-275.6m – affinitic black tourmalinite. Siltstone generally sericitic. Argillite hosts abundant small (2mm) white carbonate spheres.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po and rare ZnS weakly disseminated throughout. Po with rare ZnS often replace small carbonate spheres
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone
286.3-292.9	**COLOR:** light gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding indistinct and rare, generally medium grained.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: strongly sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite, interbedded siltstone
292.9-299.0	**COLOR:** gray to dark gray
	PRIMARY STRUCTURE: thin to very thin bedded, bedding mainly sharp-flat, rarely distorted. Siltstones generally medium grained. Bedding to core at 298.0m = 66°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: siltstone beds strongly sericitic, small carbonate rich spheres common in argillite units.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some weakly disseminated po, very rare specks of ZnS.
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite
299.0-308.0	**COLOR:** light gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding is rare but distinct, generally distorted by soft sed. deformation, generally medium grained to fine grained, commonly graded, (turbidites)
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified and sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: widely scattered po disseminations
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite
308.0-309.0	**COLOR:** light gray banded dark gray
	PRIMARY STRUCTURE: very thin bedded, bedding sharp and strongly distorted by soft sed. deformation, abundant ball and pillow structures
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: small (2mm) calcite spheres scattered throughout argillite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po with lesser ZnS in part replaces calcium carbonate spheres.
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded argillite
309.0-328.6	**COLOR:** light gray with dark gray and gray interbeds
	PRIMARY STRUCTURE: mainly medium to thin bedded, rare thick bed, bedding distinct and strongly distorted (soft sed. deformation), widely scattered clasts in siltstone beds from 325.0-328.0m Bedding to core at 321.0m = 71°
	TECTONIC STRUCTURE: badly broken ground up core. 318.3-318.7m – fault(?) Contacts destroyed.
	GENERAL ALTERATION: argillite beds contain abundant calcite spheres, siltstone beds strongly sericitized
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po with rare ZnS throughout. Po and rare ZnS replacing in part calcium spheres in argillite beds
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite, rare argillite interbeds
328.6-335.6	**COLOR:** light gray with rare dark gray band
	PRIMARY STRUCTURE: thick to very thick bedded, rare thin beds, bedding indistinct, medium grained quartzite
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: strongly silicified and sericitized
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: widely scattered small (2 to 5mm) of po with ZnS throughout the quartzite units. Thin irregular veinlets (2 to 5mm) of calcite cut core at angles of 30° and 55°, host weak ZnS mineralization
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, Interbedded argillite
335.6-341.9	**COLOR:** light gray to gray
	PRIMARY STRUCTURE: medium to thin bedded, bedding planes are distinct and strongly distorted (soft sed. deformation). Generally medium to fine grained seds.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: siltstone beds strongly sericitic and rarely weakly limy
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po and lesser ZnS throughout, rare bedding parallel (5mm thick) layer of calcite with minor ZnS. Rare calcite veinlets with ZnS at 337.5m (2mm) thin irregular calcite veins host cpy, po, PbS and ZnS. Very rare ZnS is disseminated in argillite beds and in calcite spheres.
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, minor interbedded argillite
341.9-348.9	**COLOR:** light gray with dark gray interbeds
	PRIMARY STRUCTURE: medium to very thick bedded, bedding is rare and generally distorted. Quartzites are medium to fine grained.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite strongly silicified and sericitized
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: 242.4-343.4m – thin quartz-calcite-muscovite (2mm to 10mm) host ZnS, PbS and po veins cut core at 10°, ZnS is disseminated in quartzite adjacent to thin veinlets. Weakly disseminated ZnS occurs in some argillite beds.
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Siltstone, interbedded argillite
348.9-357.5	**COLOR:** light gray with dark gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, bedding is distinct, mainly flat to slightly wavy, fine to medium grained siltstone, some graded beds.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: siltstone beds generally sericitic and weakly biotitic. Argillite bedded continue to host calcium carb spheres
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po and ZnS in siltstone beds
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite
357.5-371.0	**COLOR:** light gray
	PRIMARY STRUCTURE: medium to thick bedded, bedding sharp, generally distorted, medium grained quartzite
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: strongly sericitized matrix
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po throughout
	ADDITIONAL OBSERVATIONS:
From To	End of hole
371.0	

CA99-3 DRILL HOLE RECORD **CHAPLEAU RESOURCES LTD.**

PROPERTY: CAR		**HORI COMP:**	**HOLE #: CA99-3**
LOCATION: Zing 3 Claim Headwaters of Russell Creek		**VERT. COMP:** 188.1 m	**LENGTH: 188.1 m**
COMMENCED: Aug 30, 1999	**COMPLETED:** Aug 31, 1999	**CORR. DIP:**	
COORDS: (long)	**(lat)**	**TRUE BEARING:**	**DRILL CONTRACTOR:** Britton Bros.
COORDS: (UTM) (E)	**(N)** **(EL)**	**% RECOVERY:**	**CORE SIZE:** NQ
COORDS: (grid) (E)	**(N)** **(EL)**	**LOGGED DATE:** Sept 1999	**CASING:** 3.1 m
ELEVATION: 188	**COLLAR: (dip)** -90° **(Azi)**	**LOGGED BY:** D.L. Pighin	**CORE STORAGE:** Vine Property
OBJECTIVE:			
SURVEYS: (depth) 188.1m	**Dip:** -90° **Azi:**	**Type:** Sperry Sun	**Additional Surveys:** **Depth** **Dip** **Azi**

From To	
3.1-21.6	**LITHOLOGY:** Siltstone
	COLOR: yellowish brown
	PRIMARY STRUCTURE: (?)
	TECTONIC STRUCTURE: very broken and rubbly oxidized ground
	GENERAL ALTERATION: nil
	MINERALIZATION & ASSOCIATED ALTERATIONS, HOST STRUCTURE: nil
	ADDITIONAL OBSERVATIONS:

From	To	
		LITHOLOGY: Fragmental, Argillite clasts with silty argillite matrix
21.6-41.0		**COLOR:** gray with dark gray and light gray clasts
		PRIMARY STRUCTURE: massive, matrix supported fragmental, clasts 2mm to 10mm, angular to subangular, no preferred clast orientation
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: sericitic throughout
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant py as fine disseminations and massive small spheres, 4 to 5% py by volume. Rare po spheres and disseminations
From	**To**	**LITHOLOGY:** Argillite, quartzite
41.0-98.6		**COLOR:** white with light green, buff and metallic specklings
		PRIMARY STRUCTURE: (?) destroyed by alteration. Bedding to core at 41.0m = 51°, at 87.5m = 87°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: very strongly sericitized sediments with scattered small spheres of green muscovite. Abundant disseminated and small calcareous concretions 49.7-51.2m – abundant calcium carbonate pellets set in a light green muscovitic matrix
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Py as disseminations (euhedral) and in thin py layers. Parallel to bedding is abundant throughout sericitic unit. 49.7-51.2m – orange ZnS and fine PbS occurs with calcium rich zones. Dendritic po abundant throughout unit locally up to 50% by volume. 59.5-60.5m - weak disseminated PbS – ZnS 79.0-81.5m – vuggy limonitic quartz vein cuts core at 5°
From	**To**	**LITHOLOGY:** Quartzite
98.6-104.3		**COLOR:** Light gray
		PRIMARY STRUCTURE: very thick bedded, no bedding planes evident, medium to coarse grained, no grading or sorting
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: generally silicified with a sericitic matrix, over printed by small lens shaped calcium carb. patches.
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po and py

From To	
104.3-128.5	**LITHOLOGY:** Argillite, interbedded quartzite
	COLOR: light gray with dark gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, some very thin beds, bedding is sharp-distorted (soft sed. deformation) locally very distorted
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzites typically silicified and sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: py and po abundantly disseminated throughout unit
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite
128.5-132.4	**COLOR:**
	PRIMARY STRUCTURE:
	TECTONIC STRUCTURE:
	GENERAL ALTERATION:
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE:
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded argillite, and quartzite
132.4-167.8	**COLOR:** light gray with gray and dark gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, bedding sharp, generally distorted, disrupted by soft sed. deformation. Bedding to core at 149.7m = 70°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzites generally silicified and sericitized
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant disseminated py and po with some thin 2mm layers of po and py. Commonly parallel to bedding.
	ADDITIONAL OBSERVATIONS:

From To	
167.8-174.5	**LITHOLOGY:** Quartzite
	COLOR: light gray
	PRIMARY STRUCTURE: thick to very thick bedded, rare bedding planes, quartzites are medium to coarse grained, none graded or sorted
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: strongly silicified and sericitized
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po throughout
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite, interbedded siltstone
174.5-177.4	**COLOR:** light gray with dark gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, mainly flat-sharp bedding. Bedding to core at 176.0 m = 61°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: disseminated po throughout
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, rare argillite interbed
177.4-188.1	**COLOR:** light gray, rare dark gray interbeds
	PRIMARY STRUCTURE: very thick bedded, bedding is rare but is flat-sharp. Quartzite is medium to coarse grained, graded beds not evident.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: strongly silicified and sericitized
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: disseminated po throughout. 185.0-186.0m - Weakly disseminated PbS
188.1	End of hole

PROPERTY: CAR			**HORI COMP:** 419.7 m	**HOLE #: CA99-4**
LOCATION: Car 3 Claim			**VERT. COMP:** 352.2 m	**LENGTH: 547.9 m**
COMMENCED: Sep 1, 1999	**COMPLETED:** Sep 8, 1999		**CORR. DIP:**	
COORDS: (long)	**(lat)**		**TRUE BEARING:**	**DRILL CONTRACTOR:** Britton Bros.
COORDS: (UTM) (E)	**(N)**	**(EL)**	**% RECOVERY:**	**CORE SIZE:** NQ
COORDS: (grid) (E)	**(N)**	**(EL)**	**LOGGED DATE:** Sep 1999	**CASING:** 0 – 3.1 m
ELEVATION: 1915 m	**COLLAR: (dip)** -45°	**(Azi)** 260°	**LOGGED BY:** D.L. Pighin	**CORE STORAGE:** Vine Property
OBJECTIVE:				
SURVEYS: (depth) 152.4m	**Dip:** -40°	**Azi:** 269°	**Type:** Sperry Sun	**Additional Surveys:**

Depth	Dip	Azi
408.0	-39°	289°

From To	
	LITHOLOGY: Quartzite
3.1-22.5	**COLOR:** light gray with brown staining
	PRIMARY STRUCTURE: medium to thick bedded, bedding is rare, generally indistinct, generally medium to coarse grained, unsorted or graded quartz sand. Bedding to core at 8.9m = 58°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified and sericitic throughout, limonitic in patches and along all fractures, weakly limy throughout, very limy small concretions
	MINERALIZATION & ASSOCIATED ALTERATIONS, HOST STRUCTURE: abundant dendritic po throughout unit
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: talcose argillite, interbedded siltstone
22.5-26.4	**COLOR:** brown with greenish brown interbeds
	PRIMARY STRUCTURE: thin to very thin bedded, bedding is sharp-flat to sharp, highly distorted by ball and pillow structures. Bedding to core at 26.0m = 70°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: siltstone beds are sericitic and limonitic, argillite beds(?) nearly completely altered to green talc
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant limonite along fractures and bedding planes
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded argillite and quartzite
26.4-55.3	**COLOR:** brown with thin dark green interbeds
	PRIMARY STRUCTURE: medium to thin bedded, rare thick bed. Bedding distinct, flat-sharp to sharp and highly distorted by soft sed. deformation
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: siltstone are sericitic and generally limonitic, argillite generally altered to talc
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: speckled by limonite throughout, limonite generally fills all fractures
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite, minor thin quartzite interbeds
55.3-59.0	**COLOR:** gray to dark gray
	PRIMARY STRUCTURE: thin to very thin bedded, bedding is distinct and strongly distorted by strong soft sed. deformation. Bedding to core at 59.0m = 62°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally sericitic with abundant small 2mm green muscovite spheres
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: py is abundant as disseminations and commonly forms the nucleus of muscovite spheres
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite, lesser argillite
59.0-82.0	**COLOR:** light gray, brown and orange brown
	PRIMARY STRUCTURE: thick to very thick bedded, no visible bedding, distorted by alteration
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: 62.5-63.2m & 74.4-82.4m – strongly albitized, with local patches of massive green muscovite 63.2-65.0m – crackle brecciated healed by fine crystalline muscovite veins. Argillite beds contain abundant small spheres of crystalline green muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: limonite after py is very abundant in albitized zones from 15 to 30% by volume. Some fresh py disseminations and small massive lenses. Py generally coarsely crystalline and euhedral. 80.1-80.5m – bedded quartz limonite vein host massive hematite and magnetite
From To	**LITHOLOGY:** Argillite
82.0-97.6	**COLOR:** dark gray
	PRIMARY STRUCTURE: very thick bedded (massive) slump structured throughout
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: finely sericitic with abundant late small spheres (2mm) of green muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: finely disseminated po throughout
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, interbedded argillite
97.6-103.0	**COLOR:** white with brown staining
	PRIMARY STRUCTURE: no bedding or primary structure due to extensive alteration
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: argillite beds completely altered to fine sericite. Quartzite matrix completely altered to sericite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant disseminated po and py dendrites
	ADDITIONAL OBSERVATIONS:

From To	
103.0-106.5	**LITHOLOGY:** Fragmental, quartzite matrix, argillite clasts. Argillite consist of at least 3 different lithologies.
	COLOR: generally limonite brown
	PRIMARY STRUCTURE: massive, matrix supported, matrix consists of coarse grained quartz sand and limonite, clasts are abundant, generally sharp angular, 4 to 50mm in size, no clast orientation.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: sericitic and limonitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: limonite
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, intermixed with argillite
106.5-124.0	**COLOR:** white with brown staining
	PRIMARY STRUCTURE: massive (no bedding evident) appears to be a massive homogenized quartzite-argillite unit. Quartzites generally medium grained
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: argillite and quartzite matrix completely altered to fine white sericite with abundant late green muscovite spheres rarely more than 3mm in size
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: dendritic po is abundant throughout unit, "sulphide flooding"
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite Fragmental 138.4-140.6m – large angular clasts consisting of 4 or more argillite clasts
124.0-157.6	**COLOR:** light brown
	PRIMARY STRUCTURE: massive, "no bedding", unsorted medium to coarse grained quartz sand 138.4-140.6m – fragmental clast-supported in part, clasts are generally angular, rarely rounded, no clast orientation
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: matrix is completely sericitized, clasts in fragmental generally talcose, abundant late spheres of green muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: generally limonitic throughout, limonite might be after siderite(?)
	ADDITIONAL OBSERVATIONS:

From To	
157.6-190.4	**LITHOLOGY:** fragmental, siltstone matrix, argillite clasts consisting of 4 different argillite lithologies
	COLOR: gray to light gray with brown staining
	PRIMARY STRUCTURE: massive, matrix supported, clasts are generally sharp angular, range between 2 and 5mm in size, show no preferred orientation, matrix consist of medium grained quartz sand
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: matrix strongly sericitic with scattered bleb, lenses and small spheres of green muscovite, matrix weakly limy with scattered patches, very strong calcium carb. alteration
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: po generally disseminated throughout unit. Rare disseminated ZnS noted throughout unit, rare small massive po clasts. ZnS is more abundant 185.0-190.4m
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Fragmental, quartz sand matrix, clasts consist of various argillite lithologies and siltstone types
190.4-219.8	**COLOR:** light gray with dark gray to white clasts
	PRIMARY STRUCTURE: massive, clasts are generally larger and more abundant than the unit above, clasts generally 10 to 30mm in size, commonly sharply angular to well rounded. Matrix consists mainly of medium to very coarse quartz, unsorted mature sand
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: matrix strongly sericitic with scattered limy patches
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po is weakly to moderately disseminated throughout, some rare massive po clasts. Disseminated ZnS occurs weakly throughout unit
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded argillite and quartzite
219.8-256.4	**COLOR:** dark gray, brown and light gray mixed
	PRIMARY STRUCTURE: medium to thin bedded, section is strongly deformed by soft sediment slumping, beds pulled apart and intermixed by slumping
	TECTONIC STRUCTURE: 230.8-239.6m – fault zone cuts core at 2° to 3°
	GENERAL ALTERATION: only regional
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant limonite on all fractures and as stains in seds
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite, interbedded argillite
256.4-273.4	**COLOR:** light gray with gray and dark gray argillite interbeds
	PRIMARY STRUCTURE: medium to thin bedded, some very thin bedded units. Bedding sharp-flat to sharp-wavy, some soft sed. deformation but as severe as above, quartzite generally medium to fine grained. Bedding to core at 265.5m = 47°, at 271.0m = 60°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzites are silicified and sericitized, argillite contains abundant tiny spheres, consist of po cores rimmed by sericite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po weakly disseminated throughout section. 258.0-260.0m – weakly disseminated ZnS and as weak disseminated thin quartz-calcite veinlets which cut at angles of 40° and 15°. At 259.2m – 20cm zone of calcite-green muscovite hosts po, ZnS and PbS
From To	**LITHOLOGY:** Fragmental – quartzite matrix, argillite clasts at 3 different lithologies
273.4-279.6	**COLOR:** light gray with light gray and gray clasts
	PRIMARY STRUCTURE: massive, matrix consists of unsorted mature medium to coarse grained quartz sand. Clasts are matrix supported, sharply angular, range in size from 2 to 60mm.
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified and sericitic, weakly limy throughout
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Po weakly disseminated throughout. ZnS occurs as weak disseminations locally
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Mixed argillite and Siltstone 304.8-305.3m – fragmental
279.6-305.3	**COLOR:** mainly greenish gray
	PRIMARY STRUCTURE: medium to thin bedded(?) Seds strongly slump structured – beds pulled apart, fragmented and folded
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally talcose throughout
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant limonite specks, some po specks. 292.0-295.0m – high oxidized crackle breccia zone
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite
305.3-308.8	**COLOR:** light gray
	PRIMARY STRUCTURE: very thick bedded, no bedding
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified and sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, interbedded siltstone and argillite
308.8-313.5	**COLOR:** light gray with very light gray and dark gray argillite interbeds
	PRIMARY STRUCTURE: medium to thin bedded, bedding sharp-flat to extremely disrupted by soft sed. deformation, thin argillite beds commonly parallel laminated
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite beds are silicified and sericitic, dark argillite bed typically contain abundant sericite spheres
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weak po disseminations
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, rare thin argillite beds
313.5-322.6	**COLOR:** light gray
	PRIMARY STRUCTURE: thick to very thick bedded, rare bedding is distinct and highly disrupted (soft sed. deformation) At 317.0m – bedding to core is 43°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: intensely silicified and sericitic 320.0-320.5m – intensely albitized mottled by green muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: 314.0m – 10cm thick quartz limonite vein cuts core at 30°, weakly disseminated po as dendrites. Disseminated limonite in quartzite and along hairline fractures
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Argillite
322.6-325.4	COLOR: dark gray
	PRIMARY STRUCTURE: medium bedded and very finely parallel laminated
	TECTONIC STRUCTURE:
	GENERAL ALTERATION:
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE:
	ADDITIONAL OBSERVATIONS:
From To	LITHOLOGY: Quartzite, rare thin beds of argillite
325.4-338.0	COLOR: light gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding is rare, generally sharp and high distorted. Thin argillite beds generally strongly slump structured. Bedding at 327.0m = 60°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: intensely silicified and sericitized
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: scattered 2 to 4mm calcite veinlets host rare ZnS cut core at 26° and 40°
	ADDITIONAL OBSERVATIONS:
From To	LITHOLOGY: Argillite, rare quartzite
338.0-341.5	COLOR: banded light gray and dark gray
	PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat. Bedding to core at 340.0m = 62°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: sericitic with abundant sericite spheres
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: very rare disseminated po
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite
341.5-348.7	**COLOR:** light gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding is rare and indistinct, medium to coarse grained, some beds graded
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified and sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: at 348.0m – thin 2 to 3mm thick veinlet subparallel to core hosts abundant PbS and ZnS. Scattered thin 2 to 3mm thick calcite veinlets host weak disseminated ZnS
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite, interbedded silty argillite
348.7-351.2	**COLOR:** light gray with wavy gray and dark gray banding
	PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp and distorted, ball and pillow structures
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: sericitic with weak green muscovitization
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare weakly disseminated po and very rare specks of ZnS
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, lesser interbedded siltstone and argillite
351.2-379.4	**COLOR:** light gray – light greenish gray
	PRIMARY STRUCTURE: medium to thin bedded, rarely thin bedded, bedding sharp, very distorted, abundant ball and pillow structures, scattered rip-up clasts, quartzite generally fine grained, some beds are graded fining upwards
	TECTONIC STRUCTURE: 373.5-374.1m – fault zone cuts core at 90°, consists of soft fault gouge and brecciated seds.
	GENERAL ALTERATION: quartzite are generally strongly silicified, with a matrix consisting of fine sericite and greenish muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: at 357.4m – 4cm thick quartz-calcite vein cuts core at 25°, hosts abundant po, lesser ZnS and PbS. At 352.0m – thin calcite-muscovite veinlet hosts ZnS
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite, interbedded siltstone and argillite
379.4-384.3	**COLOR:** light gray with gray and dark gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, some very thin beds, bedding sharp and distorted
	TECTONIC STRUCTURE: 383.3-383.7m – fault zone cuts core at 26°
	GENERAL ALTERATION: quartzite silicified and sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite
384.3-390.5	**COLOR:** light gray
	PRIMARY STRUCTURE: medium to very thick bedded, bedding rare and indistinct, medium to coarse grained
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: strongly silicified and sericitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po, widely scattered quartz-calcite-muscovite veins (1cm to 4cm thick) cut core at 5° and 30°
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, interbedded argillite
390.5-394.8	**COLOR:**
	PRIMARY STRUCTURE: medium to thin bedded, bedding sharp and highly distorted (soft sed. slumping(?)) scattered rip-up clasts. Bedding to core at 394.0m = 55°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: as previously described
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite, rare interbeds of argillite 401.6-403.4m – very thin bedded black argillite
394.8-434.6	COLOR: light gray with rare black argillite units
	PRIMARY STRUCTURE: thick to very thick bedded, rare thin argillite interbeds, quartzite medium to coarse grained. Bedding to core at 419.0m = 68°, at 431.0m = 68°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite intensely silicified and sericitic, with some fine green muscovite, black argillite contain abundant small 2mm spheres of fine sericite with calcite nucleus
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:
From To	LITHOLOGY: Quartzite, minor interbedded argillite from 436.8-437.2m
434.6-445.6	COLOR: light gray, gray interbeds
	PRIMARY STRUCTURE: medium to thick bedded, bedding is rare, usually distinct and distorted, medium to coarse grained
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally sericitic and weakly muscovitic (green) some weakly limy beds, quartzite generally silicified
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:
From To	LITHOLOGY: argillite, minor interbedded quartzite
445.6-450.5	COLOR: gray to dark gray with light gray interbedded
	PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat to wavy, some disrupted argillite beds. Bedding to core at 450.5m = 71°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: weakly greenish due to fine muscovitization
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant and widely scattered thin irregular calcite-quartz veinlets host minor po
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite, very thin argillite beds
450.5-488.0	**COLOR:** light gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding is very rare and indistinct, quartzite is mainly coarse grained, unsorted, not graded, mature quartz sand
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: intensely silicified with a sericite matrix, thin argillite beds commonly light greenish gray due to fine muscovite, quartzite also contains scattered small blebs and spheres of green muscovite throughout section
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: 450.5-465.2m – weakly crackle brecciated, healed by calcite and green muscovite At 452.0m – 10cm thick zone of calcite and muscovite alteration host abundant ZnS and po. Small calcite-muscovitic vein are generally widely scattered throughout the section, some of these veinlets host minor ZnS
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded quartzite and argillite
488.0-490.1	**COLOR:** light gray to light greenish gray with gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, bedding sharp-flat. Bedding to core at 488.0m = 79°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: scattered thin beds of green muscovite, beds are generally sericitic – lesser fine greenish muscovite, some silicification
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: scattered 2 to 5mm thick, bedding parallel quartz-calcite veins, contain minor ZnS and po
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, rare thin argillite interbeds
490.1-501.7	**COLOR:** light greenish gray
	PRIMARY STRUCTURE: medium to thick bedded, bedding rare and indistinct, generally wavy, generally medium to fine grained
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: intensely silicified, with fine sericite and greenish muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: scattered thin irregular veinlets of quartz-calcite hosts rare ZnS and rarer cpy
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Argillite, minor interbedded quartzite
501.7-504.5	**COLOR:** dark gray
	PRIMARY STRUCTURE: thin to very thin bedded
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite with minor argillite interbeds
504.5-537.3	**COLOR:**
	PRIMARY STRUCTURE: medium to thick bedded, lesser thin beds, bedding generally disrupted to flat-sharp. Quartzites generally medium to fine grained. Bedding at 515.5m = 80°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite generally silicified with fine sericite and greenish muscovite. Mainly argillite beds are altered to green muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: widely scattered thin irregular quartz-calcite veinlets host rare ZnS and po and very rare cpy. Scattered bedding parallel quartz-calcite veins generally in argillite unit, contain rare ZnS
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite, rare quartzite interbeds
537.3-540.0	**COLOR:** light greenish gray
	PRIMARY STRUCTURE: thin to very thin beds, bedding generally flat-sharp
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: finely muscovitic throughout, with some thin beds completely altered to fine greenish muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:

From	To	
540.0	547.9	**LITHOLOGY:** Quartzite, interbedded argillite
		COLOR: light gray to light greenish gray
		PRIMARY STRUCTURE: medium to thin bedded, rare thick beds, bedding is sharp-flat to wavy. Bedding to core at 546.0m = 85°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: quartzite generally silicified and sericitic, argillite muscovitic (greenish)
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
		ADDITIONAL OBSERVATIONS:
From	**To**	End of Hole
547.9		

PROPERTY: CAR		**HORI COMP:**	**HOLE #:** CA99-5
LOCATION: Car 3 Claim Head waters of Russell Crk		**VERT. COMP:**	**LENGTH:** 346.6 m
COMMENCED: Sep 8, 1999	**COMPLETED:** Sep 11, 1999	**CORR. DIP:**	
COORDS: (long)	**(lat)**	**TRUE BEARING:**	**DRILL CONTRACTOR:** Britton Bros.
COORDS: (UTM) (E)	**(N)** **(EL)**	**% RECOVERY:**	**CORE SIZE:** NQ
COORDS: (grid) (E)	**(N)** **(EL)**	**LOGGED DATE:** Sep 1999	**CASING:** 0 – 3.1 m
ELEVATION:	**COLLAR: (dip)** -50° **(Azi)** 270°	**LOGGED BY:** D.L. Pighin	**CORE STORAGE:** Vine Property
OBJECTIVE:			
SURVEYS: (depth) 166.76m	**Dip:** 38° **Azi:** 284°	**Type:** Sperry Sun	**Additional Surveys:** **Depth** **Dip** **Azi**

From To	
3.1-12.3	**LITHOLOGY:** Quartzite
	COLOR: tannish white
	PRIMARY STRUCTURE: very thick bedded, fine grained, no bedding, no grading
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: strongly silicified and sericitized
	MINERALIZATION & ASSOCIATED ALTERATIONS, HOST STRUCTURE: none
	ADDITIONAL OBSERVATIONS:

OLOGY: Gabbro Sill(?) Contacts very gradational
OR:
IARY TEXTURE: medium crystalline, very vuggy 51.5m – becomes very dense and fine grained
TONIC STRUCTURE: nil
ERAL ALTERATION: (?) feldspar appears to be argillitized and mafic minerals altered to sericite(?) Or fine muscovite(?)
:RALIZATION & ASSOCIATED, HOST STRUCTURE: none, limonite stained throughout
ITIONAL OBSERVATIONS:
OLOGY: Siltstone, lesser interbedded argillite
OR: light brownish gray
IARY STRUCTURE: medium to thick bedded, bedding distinct, generally flat to wavy (load clasts, flame structures). Generally graded turbidite beds ing to core at 54.0m = 65°
TONIC STRUCTURE: nil
ERAL ALTERATION: generally sericitic
:RALIZATION & ASSOCIATED, HOST STRUCTURE: weakly limonitic
ITIONAL OBSERVATIONS:
OLOGY: Fragmental, siltstone matrix, scattered small argillite clasts
OR: brownish gray
IARY STRUCTURE: massive, matrix support fragmental, no preferred clast orientation
TONIC STRUCTURE: nil
ERAL ALTERATION: limy and sericitic
:RALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po
ITIONAL OBSERVATIONS:

From To	LITHOLOGY: Siltstone, interbedded quartzite and argillite
85.0-102.7	**COLOR:** light brownish gray with gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, bedding mainly flat-sharp. Bedding to core at 100.0m = 64°
	TECTONIC STRUCTURE: 96.9-98.0m – fault zone cuts core at 30°
	GENERAL ALTERATION: quartzite generally silicified, argillite weakly muscovitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant limonite after Fe carbonate (?)
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite
102.7-112.0	**COLOR:** light gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding very rare but distinct, medium grained
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified with weak sericite and biotite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: locally abundant disseminated limonite after Fe carbonate
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded quartzite
112.0-135.0	**COLOR:** light gray with dark gray interbeds
	PRIMARY STRUCTURE: medium to thick bedded, bedding sharp-distorted, (soft sed. deformation) widely scattered rip-up clasts Bedding at 130.5m = 62°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite-siltstone generally silicified, some weak greenish muscovitization
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: scattered patches of intense limonitization
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite
135.0-138.4	**COLOR:** light gray
	PRIMARY STRUCTURE: very thick bedded, bedding very rare, medium grained, some rip-up clasts
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified and limonitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded argillite
138.4-141.6	**COLOR:**
	PRIMARY STRUCTURE: medium to thin bedded, bedding sharp and distorted, scattered rip-up clasts Bedding to core at 157.0m - 65°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some disseminated limonite
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Mainly quartzite with interbedded argillite and siltstone
141.6-159.5	**COLOR:** light gray band, gray and dark gray
	PRIMARY STRUCTURE: medium to thick bedded, bedding sharp-distorted
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Quartzite
159.5-178.5	**COLOR:** light gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding is sharp and distorted, some argillite interbeds strongly slump structured, medium grained quartzite
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified and weakly sericitic and biotitic
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: widely scattered po blebs
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite "limy"
178.5-197.9	**COLOR:** gray with white wisps and lenses
	PRIMARY STRUCTURE: massive, no bedding, slump structured throughout, with abundant wispy layers and small lenses of very limy argillite
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: very finely biotitic throughout
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: po is abundantly disseminated within limy argillite lens etc.
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Argillite
197.9-200.0	**COLOR:** dark gray band light gray
	PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat to strongly distorted. Bedding to core at 180.0m = 65°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: scattered small massive po lenses and thin beds
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Siltstone, interbedded quartzite and argillite
200.0-213.0	**COLOR:** light gray with dark gray argillite interbeds
	PRIMARY STRUCTURE: medium to thick bedded, some very thin bedded units, bedding sharp-distorted to wavy, most beds are strongly slump structured, generally medium to fine grained siltstone and quartzites Bedding to core at 212.0m = 74°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: siltstone and quartzite are silicified with weak light green muscovitization
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: po is relatively abundant, as thin bedding planes parallel thin layer (2-5mm thick) and as disseminations and massive blebs
From To	**LITHOLOGY:** Quartzite
213.0-217.5	**COLOR:** light gray
	PRIMARY STRUCTURE: thick to very thick bedded, bedding planes sharp-wavy, medium grained, some graded beds fining upwards
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified with weak sericitization and weak greenish muscovitization
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: blebs and disseminated po throughout
From To	**LITHOLOGY:** Quartzite, interbedded argillite
217.5-346.6	**COLOR:** light gray to light greenish gray with gray and dark gray interbeds
	PRIMARY STRUCTURE: mainly medium to thick bedded, with scattered thin beds of argillite, contacts are sharp and commonly wavy (flame structured). Quartzite generally medium grained, some soft sed. deformation rip-up clasts are common. Bedding to core at 256.0m = 70°, at 282.5m = 75°, at 311.5m = 75°, at 346.0m = 74°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite beds generally silicified and sericitized with weak greenish muscovitization
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: disseminated po common throughout section
	ADDITIONAL OBSERVATIONS:

From	To	End of Hole
	346.6	

PROPERTY: CAR			**HORI COMP:**	**HOLE #:** CA99-6	
LOCATION: Car 20 Claim, Little Moyie			**VERT. COMP:**	**LENGTH:** 602.9 m	
COMMENCED: Sep 12, 1999	**COMPLETED:**		**CORR. DIP:**		
COORDS: (long)	**(lat)**		**TRUE BEARING:**	**DRILL CONTRACTOR:** Britton Bros.	
COORDS: (UTM) (E)	**(N)**	**(EL)**	**% RECOVERY:**	**CORE SIZE:** NQ	
COORDS: (grid) (E)	**(N)**	**(EL)**	**LOGGED DATE:** Sep 1999	**CASING:** 0 – 12.0 m	
ELEVATION: 1680 m	**COLLAR: (dip)** -55°	**(Azi)** 224°	**LOGGED BY:** D.L. Pighin	**CORE STORAGE:** Vine Property	
OBJECTIVE:					
SURVEYS: (depth) 426.8m	**Dip:** -34°	**Azi:** 224°	**Type:** Sperry Sun	**Additional Surveys:**	
				Depth **Dip** **Azi**	

From To	
	LITHOLOGY: Siltstone oxidized
12.0-21.0	**COLOR:** wide and brown
	PRIMARY STRUCTURE: (?)
	TECTONIC STRUCTURE: rubbly broken core
	GENERAL ALTERATION: oxidized
	MINERALIZATION & ASSOCIATED ALTERATIONS, HOST STRUCTURE: abundant limonite
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Siltstone, interbedded quartzite and argillite
21.0-51.7	**COLOR:**
	PRIMARY STRUCTURE: medium to thin bedded, bedding distinct, generally disrupted, generally fine grained sediments Bedding to core at 23.0m = 85°
	TECTONIC STRUCTURE: weakly crackle brecciated throughout, with rare thin zones of intense brecciation cutting core at 10°
	GENERAL ALTERATION: quartzites and siltstones generally silicified, sericitized with weak light green muscovitization, some scattered patches of albitization
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: calcite with minor py and po heal the crackle breccia structures, rare specks of zinc
From To	**LITHOLOGY:** Quartzite, minor argillite interbeds
51.7-66.5	**COLOR:** light greenish gray to dark greenish gray
	PRIMARY STRUCTURE: medium to thick bedded, bedding distinct-flat, locally wavy. Quartzite beds are mainly medium grained, locally coarse grained. No evidence of grading. Bedding to core at 62.0m = 72°
	TECTONIC STRUCTURE: lightly fractured throughout
	GENERAL ALTERATION: quartzites are intensely silicified with minor sericitic and greenish muscovite. 66.0-66.5m – intense albitization with disseminated green muscovite, seems to be related to the adjacent lamprophyre. Argillite beds are strongly muscovitic (green)
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant thin quartz and calcite fractures (2 to 5mm thick) host po and py very rare cpy cut core at 8°. Po occurs throughout as weak disseminations and widely scattered blebs.
From To	**LITHOLOGY:** Quartzite 66.5-69.0m – lamprophyre dyke, dark green, very finely crystalline, weakly calcareous 74.7-77.8m – lamprophyre dyke, light green, very finely crystalline, strongly calcareous
66.5-86.6	**COLOR:**
	PRIMARY STRUCTURE: thick to very thick bedded, bedding very rare, quartzite generally fine to medium grained
	TECTONIC STRUCTURE: 77.8-86.6m – crackle brecciated throughout, intense white silicification in seds, adjacent to fractures
	GENERAL ALTERATION: intensely silicified throughout
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: thin irregular quartz-calcite veinlets host py, po and rare cpy. Veinlets in lamprophyres contain some magnetite. Locally finely disseminated py is abundant

From To	LITHOLOGY: Gabbro
86.6-119.7	**COLOR:** green
	PRIMARY TEXTURE: medium crystalline with finely crystalline boundaries
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: nil
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: widely scattered calcite veins throughout, gabbro – 2mm to 10mm thick, host rare cpy
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite
119.7-126.9	**COLOR:** white, tannish white when wet
	PRIMARY STRUCTURE: massive, grain size not evident due to intense silicification
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: intensely silicified with weakly calcareous matrix, some buff dolomitization
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: very disseminated py
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded argillite
126.9-147.6	**COLOR:** gray with dark gray interbeds
	PRIMARY STRUCTURE: medium to thick bedded, bedding is distinct, commonly wavy, rarely flat
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional, most of the siltstone beds are dotted by calcareous spheres and wispy lenses
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: po is relatively abundant throughout, it occurs as small blebs (2 to 3mm) and as scattered thin nearly (2mm to 4mm thick) beds, and in thin bedding parallel quartz-calcite veins. Po blebs commonly rimmed by calcite
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Argillite, rare siltstone interbeds
147.6-161.4	**COLOR:** gray to dark gray, some light gray interbeds
	PRIMARY STRUCTURE: medium to thin bedded, bedding generally sharp-flat, argillites commonly finely parallel laminated. Bedding to core at 153.0m - 72°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional, some weakly limy argillite beds
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: po relatively abundant as scattered blebs and fine disseminations and in thin bedding plane parallel quartz-calcite vein – generally from 2 to 5mm thick. 156.7-157.1m – bedding parallel quartz-calcite vein, minor po. 158.2-158.7m – vein as above Rare ZnS and PbS noted in thin bedding parallel veins
From To	**LITHOLOGY:** Siltstone, rare argillite interbeds
161.4-174.6	**COLOR:** gray
	PRIMARY STRUCTURE: medium to thick bedded, bedding indistinct, generally fine grained seds
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: regional
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: po deposited as described previously
From To	**LITHOLOGY:** Quartzite with very minor argillite and siltstone interbeds
174.6-213.4	**COLOR:** mainly light gray to light greenish gray
	PRIMARY STRUCTURE: mainly thick to very thick bedded, with minor meter thick sequences of medium to thin bedded siltstone and argillite. Bedding is rare in quartzite units but is sharp-flat in thin bedded units. Bedding to core at 183.0m = 74°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: Quartzite, generally intensely silicified, weakly sericitic and muscovitic. Lens shaped calcite concretions are relatively abundant, rarely more thin and dime in size. Argillite beds are commonly strongly muscovitic. In some beds late biotite forms spheres (spotted hornfels(?)) In some beds light green muscovite also forms spotted hornfels(?)
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: very widely scattered thin 2mm to 10cm thick quartz-calcite veins host minor po veins cut core at 5° and are commonly parallel to bedding

From To	
213.4-235.9	**LITHOLOGY:** Quartzite, interbedded argillite
	COLOR: light gray with light green interbeds, white specks and patches scattered throughout
	PRIMARY STRUCTURE: medium to thin bedded, some thin to very thin bedded sequences. Bedding is distinct generally wavy (flame structured) generally medium grained, grading not evident due to alteration. Bedding to core at 231.0m = 72°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: quartzite-silicified and calcareous generally in lenses and patches. Thin argillite beds altered green muscovite. At 230.8m altered to thin talc beds, some bed altered to spotted hornfels – generally green muscovite spheres in a silicified to partly albitized matrix.
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite Fragmental 244.5-247.0m matrix supported, all clasts altered to green muscovite
235.9-247.0	**COLOR:** light greenish gray
	PRIMARY STRUCTURE: very thick bedded, bedding not evident, medium to coarse grained, with scattered wispy argillite clasts
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: silicified, sericitized and weakly muscovitized, some clasts totally altered to green muscovite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some weak disseminated po
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Quartzite, interbedded argillite and minor siltstone
247.0-294.8	**COLOR:** light greenish gray with green and gray interbeds
	PRIMARY STRUCTURE: generally medium to thick bedded, with some thin to very thin bedded sequences. Bedding is sharp-flat, to sharp-wavy, mainly medium grained quartzite, rarely coarse grained. Bedding to core at 291.0m = 75°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: as previously described (235.9-247.0m)
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some po in thin fractures and as weak disseminations
	ADDITIONAL OBSERVATIONS:

From To	
294.8-307.0	**LITHOLOGY:** Fragmental
	COLOR: light greenish gray
	PRIMARY STRUCTURE: massive, matrix supported, clasts generally large and distorted, unit appears slump structured in part. Matrix mainly medium grained sand
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: generally silicified, sericitic, biotitic in part and generally weakly muscovite throughout. Weakly calcareous locally. 302.9-307.0m – strongly muscovitic matrix producing a granofevic texture widely scattered clasts completely altered to green muscovite – weakly calcareous throughout – grades into a gabbro sill at 307.0m
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE:
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Gabbro Sill
307.0-477.8	**COLOR:** green
	PRIMARY STRUCTURE:
	TECTONIC STRUCTURE:
	GENERAL ALTERATION:
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE:
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded quartzite, minor interbedded argillite, rare thin zone of fragmental
477.8-512.0	**COLOR:** light gray to light greenish gray
	PRIMARY STRUCTURE: medium to thick bedded, bedding indistinct wavy, generally medium grained to fine grained. Bedding to core 79°
	TECTONIC STRUCTURE: weakly crackle brecciated, healed by calcite
	GENERAL ALTERATION: intensely silicified and muscovitized, minor biotite
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare specks of ZnS
	ADDITIONAL OBSERVATIONS:

From To	LITHOLOGY: Gabbro
512.0-512.8	**COLOR:**
	PRIMARY STRUCTURE:
	TECTONIC STRUCTURE:
	GENERAL ALTERATION:
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE:
	ADDITIONAL OBSERVATIONS:
From To	**LITHOLOGY:** Siltstone, interbedded quartzite and argillite
512.8-602.9	**COLOR:** gray
	PRIMARY STRUCTURE: medium to thick bedded, rare very thick beds, bedding generally distinct wavy. Quartzite and siltstone generally medium grained, grade beds common, typical turbidites At 603.0m – bedding to core 78°
	TECTONIC STRUCTURE: nil
	GENERAL ALTERATION: siltstone and quartzite beds are generally silicified, sericitic with some weak muscovitization
	MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare thin calcite-quartz veinlets with minor po and py
	ADDITIONAL OBSERVATIONS:
From To	End of Hole
602.9	

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GEOCHEMICAL ANALYSIS CERTIFICATE

Chapleau Resources Ltd. File # 9903522

104 - 135 - 10th Ave S., Cranbrook BC V1C 2N1 Submitted by: Dave L. Pighin

SAMPLE# Hole No	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 %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
4259	2	12	50	21	<.3	23	15	89	3.36	32	<8	<2	13	4	<.2	4	<3	6	.07	.034	8	8	.32	52	<.01	<3	.78	.01	.29	<2	1
4260	2	12	31	11	<.3	17	11	53	1.93	30	<8	<2	11	3	<.2	<3	<3	5	.05	.027	11	10	.19	52	<.01	<3	.58	.01	.27	2	1
4261	1	19	30	5	<.3	33	28	56	4.62	50	<8	<2	14	4	.2	4	<3	6	.06	.028	11	7	.18	49	<.01	<3	.65	.01	.32	<2	6
RE 4261	1	19	29	4	<.3	32	27	53	4.63	49	<8	<2	14	4	.3	4	<3	6	.06	.027	11	7	.18	50	<.01	<3	.64	.01	.31	<2	6
STANDARD C3/AU-R	27	64	37	176	5.9	36	10	800	3.30	59	25	<2	22	31	22.1	16	24	83	.55	.085	17	165	.58	152	.09	17	1.85	.04	.17	12	538

GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: CORE AU* GROUP 3A - 10.00 GM SAMPLE, AQUA-REGIA,MIBK EXTRACT, ANALYSIS BY GF/AA.
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 20 1999 **DATE REPORT MAILED:** Sept 25/99 **SIGNED BY.** C. Leong D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

CAR GRAB SAMPLES

core

4259 Hole No - C99-2 Grab at 43.0 m
4260 " " - C99-2 " " 55.0 m
4261 " " C99-2 " " 58.0 m

Appendix 2. Analytical Data, Drill Core Samples

Date 1 FA