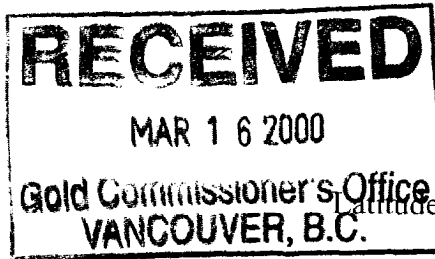


DIAMOND DRILLING ASSESSMENT REPORT ON THE CRUZ CLAIMS

CRUZ 82 and Cruz 31,32,39



NTS 82G/4+5

Latitude 49° 12' N Longitude 115° 50' W

Work Performed from September 15 to November 10, 1999

Owners – Chapleau Resources Ltd.

104-135 10th. Avenue South

Cranbrook, B.C.

V1C 2N1

Consultant – Anderson Minsearch Consultants Ltd.

3205 6th. St. South

Cranbrook, B.C.

V1C 6K1

Author – Douglas Anderson

Submitted – March, 2000

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26.202

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Drill log for Hole SN-99-1	Attached
Drill log for Hole CR99-1	Attached
Appendix B:	
Analytical data for – CR-99-1 Two grab samples listed.	Attached

DIAMOND DRILLING ASSESSMENT REPORT

CRUZ Property

Douglas Anderson

March/2000

1.00 Introduction

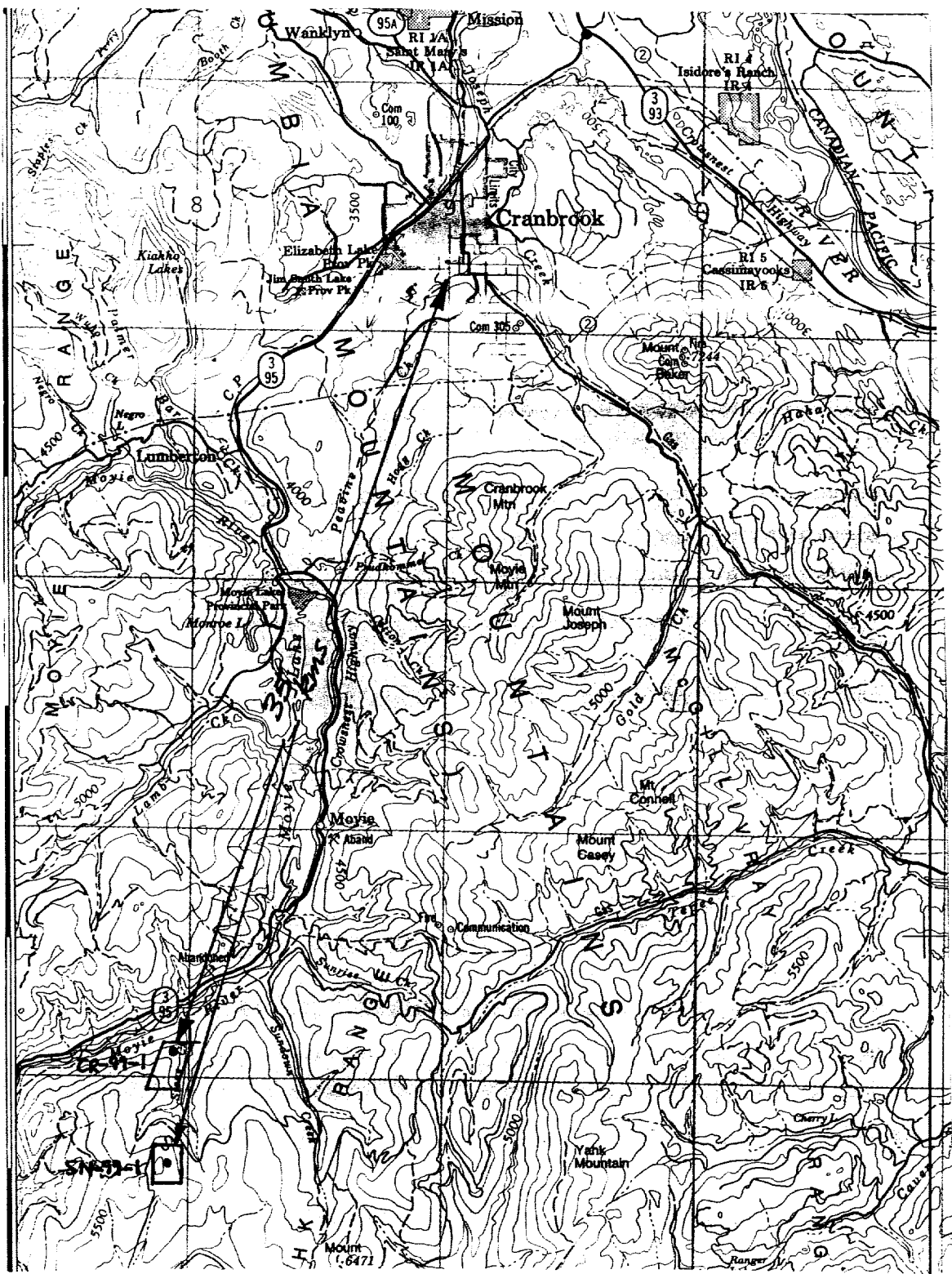
The Cruz claims which are the subject of this report cover the central portion of the northeast end of the Yahk anticline. They are centered about 35 kilometers south of Cranbrook, B.C. in the East Kootenay region of British Columbia. South of Highway 3, the claims where one drill hole was completed cover part of the height of land between the Moyie and Hawkins creek drainages in the very headwaters of Stone creek. The second hole was drilled at a much lower elevation about 5 kilometres to the NNE, on a southwest-trending ridge immediately west of Stone Creek. The claims extend from 1000m ASL to almost 1900 meters. The area is one of modest relief with complete and often thick forest cover with a very low percentage of outcrop. Access is from Highway 3 just south of the Moyie Lakes up old logging roads starting as Sunrise then switching to the Sundown creek road. Some east-west 4x4 access is available from this main road into the Stone creek drainage. Low-elevation access is achieved along the Stone creek road. Limited access can be used from the south, up logging roads from Hawkins, Cold, and Ryan creeks. (See enclosed Index Map.)

1.10 Property Definition, History, Background Information

The Cruz property includes the Cruz #1 to #137; Stone 1 to 46; Cruz 98-1, 2, 3; Farr 1 to 20; Aus 1 to 13; and Cruz Deplata 1 to 8.

The current owners and operators are Chapleau Resources Ltd. of Cranbrook, B.C.

The earlier history of the area is brief and not well known. Small lead/zinc showings along northern Sundown creek attracted initial attention. Modern exploration has included a variety of approaches on the current Cruz/Stone claim block. About 4 kilometers north of the north boundary of the above claims, a 3476 meter oil/gas exploration well was drilled in 1987, it yielded chips collected over 3 meter intervals for a significant portion of the Aldridge Formation. The present owners acquired the claims in 1994 spurred on by finding of fragmentals and altered rocks between Sunrise and Farrell creeks. In 1995, an east-west section was drilled across this Cruz Deplata occurrence, defining several fragmentals stacked over several hundred meters of stratigraphy as cored by the holes. In 1996, a single hole (R96-5) was drilled to 229 meters on the Cruz 1 claim in Sundown creek. It cored a Moyie gabbro sill intrusion then Middle Aldridge rocks to the end of the hole. A soil geochem grid was completed over a two year period, to the southeast on the claims defining a significant copper anomaly. To the north, a soil geochem grid straddling Stone creek defined lead/zinc anomalies downslope of and along strike of a gossan. A UTEM geophysical survey (Cominco) was completed in the upper reaches of Stone creek.. Minnova did minor mapping and drilled one hole (ST 91-03, 285.6m) on the west side (Cruz 94) in the 1990/92 period. To the south, two holes were drilled (ST89 - 1+2, totalling 519m) following up on anomalies from two lines of AMT run across the area. None of the holes hit significant sulfide mineralization.



10 Km

Cruz Property	
Location Map	
NTS: 82G04W	FIGURE: 1
SCALE: 1:250,000	

The Cruz claims have economic potential for lead/zinc/silver deposits of the Sullivan-style Sedex type and for smaller cross-cutting vein deposits occupying structural breaks. Underlain by Middle Aldridge rocks and Moyie intrusives, there are occurrences of disseminated galena and sphalerite within the Yahk anticline and other Sullivan indicators including fragmentals, tourmalinites, and albitized sediments. Significant mineralization occurs peripheral to the Cruz area. There are lead-zinc-silver veins with associated gold at the St. Eugene mine (some 12 km to the northeast) where production totalled about 1.47 million tons from two northwest-trending vein systems and an intervening system of cymoid structures. At the much smaller Midway mine (5 km to the north) production was approximately 1280 tons of 0.23 oz/ton Au and 2.15 oz/ton Ag from a north-striking quartz vein.

1.20 Summary of Work Done

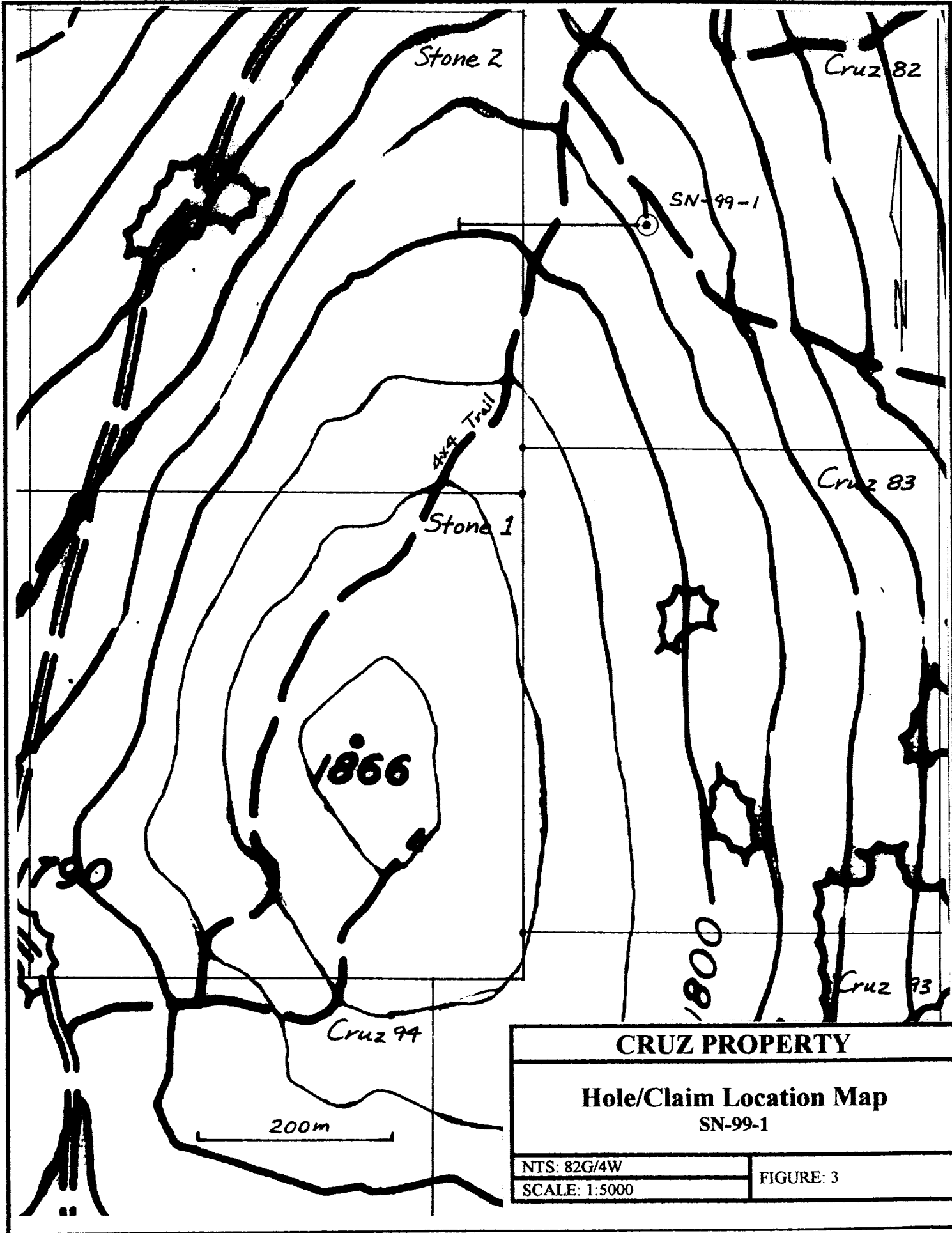
The 1999 exploration program involved the drilling of two diamond drill holes of NQ size, totalling 740 metres. Access involving clearing/re-establishing an old 4x4 road was necessary to the site for Hole SN-99-1. A trail was constructed to the site for Hole CR-99-01 and beyond to two other sites. This provided access for the drillers but the drill machine was helicopter-lifted into the site.

2.00 Diamond Drilling

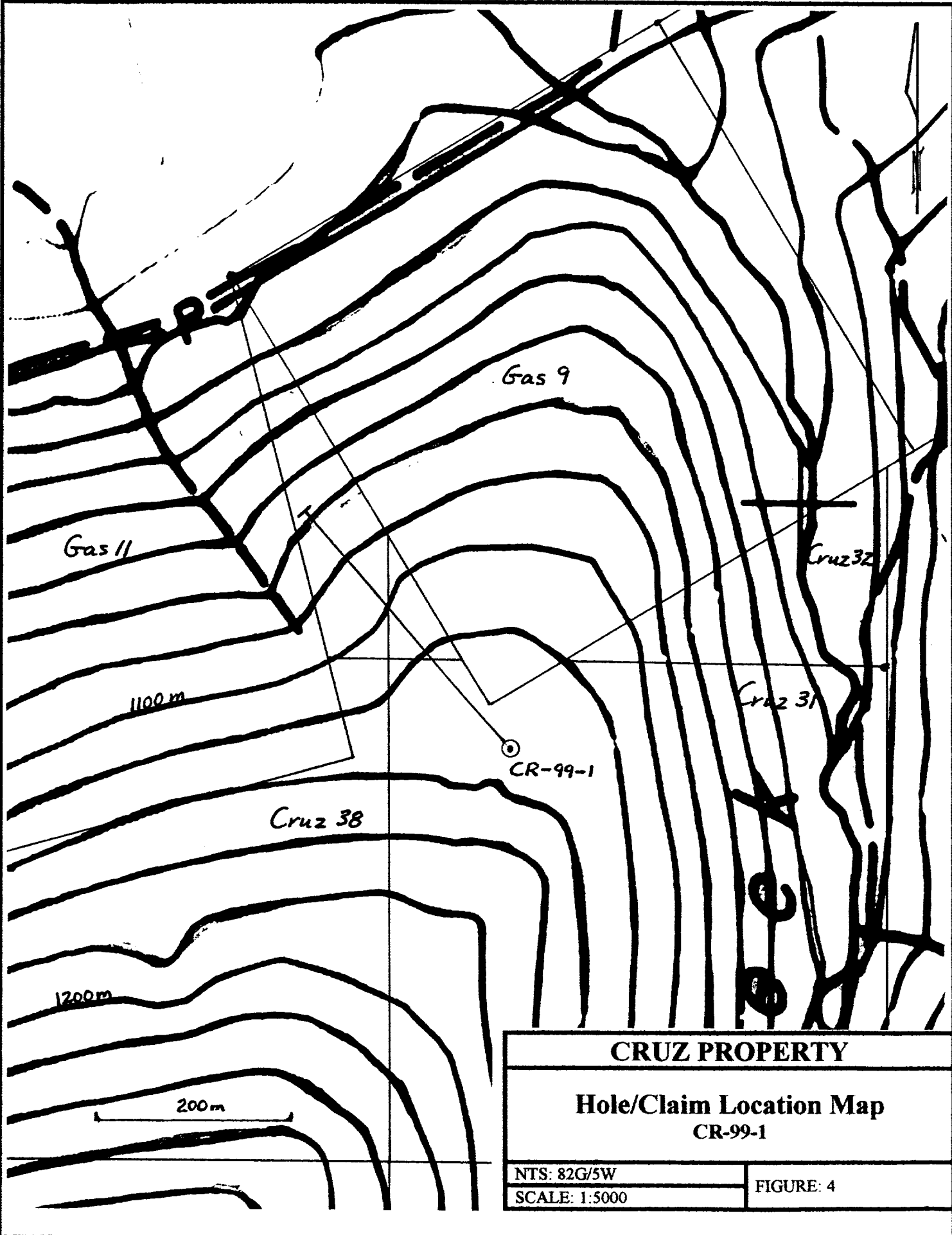
2.10 General Geology of the Property

The Cruz property is underlain by the oldest formation of the Proterozoic Belt-Purcell Supergroup. The Supergroup is a thick sequence of terrigenous clastic, carbonate, and minor volcanic rocks of Middle Proterozoic age. The basal Aldridge Formation, as exposed in Canada, is siliciclastic turbidites about 4000 meters thick. It is informally divided into the Lower, Middle, and Upper members. To the north and east in the basin, the Lower Aldridge, the base of which is not exposed, is about 1500 meters of rusty weathering (due to pyrrhotite), thin to medium bedded argillite, wacke and quartzitic wacke generally interpreted as distal turbidites with a dominant transport direction of south to north. The Sullivan orebody occurs at the top of this division. To the south and west in the basin in Canada, the upper part of the Lower Aldridge is dominated grey weathering, medium to thick bedded quartz wackes considered to be proximal turbidites derived from a source area to the west/southwest. The Lower Aldridge is commonly host to a proliferation of Moyie intrusions, principally as sills. The Middle Aldridge is about 2500 meters of grey to rusty weathering, dominantly medium bedded quartzitic wacke turbidites with periodic inter-turbidite intervals of thin bedded, rusty weathering argillites some of which form finely laminated marker beds (time stratigraphic units correlated over great distances within the Aldridge/Prichard basin). The Upper Aldridge is about 300 meters of thin bedded to laminated, rusty weathering, dark argillite and grey siltite often in couplet-style beds.

Stratigraphically, the entire Cruz property is underlain by middle to upper Middle Aldridge rocks and several Moyie sills. It is an east-facing panel, younging to the east where it is overlain by the shallower-water siliclastics of the Creston Formation, east of the property boundary. Upper Aldridge is exposed only in the extreme southeast corner. The Middle Aldridge is dominated by moderately rusty weathering, medium bedded, wackes to quartzitic wackes. There are some thicker-bedded, quartz wacke to arenite



CRUZ PROPERTY	
Hole/Claim Location Map	
SN-99-1	
NTS: 82G/4W	FIGURE: 3
SCALE: 1:5000	



CRUZ PROPERTY

**Hole/Claim Location Map
CR-99-1**

NTS: 82G/5W
SCALE: 1:5000

FIGURE: 4

intervals on the claims. The individual beds are turbidites of a Bouma style but generally of the AE form with a poorly graded sand base and a muddy top. Current features are common with sole marks, small cross-beds, and flame structures. These sediments are intruded by gabbro sills which can be shallow cross-cutting. There are two principal sills on the Cruz property; they are sills recognized throughout the basin. A third sill is likely but it is only identified in a limited area. The gabbros range from fine-grained near the contacts to medium and coarse-grained within. Hornblende and plagioclase dominate, dictating the textures which can be equicrystalline ranging to a coarse, plumose hornblendite. They appear to change in thickness along the length of the property but this is largely apparent.

2.20 Drill Hole SN-99-1

This NQ hole was drilled as an angle hole (-45° to azimuth 270°) close to the height of land between the Moyie and Hawkins creek drainages. Collared at about 1765 metres elevation the hole ended at 279.6 metres. The rocks in the immediate area are Middle Aldridge turbidites with a thin and much thicker gabbro sill within the package. Of particular note are small sedimentary fragmental zones and similar float rock occurring along a short linear distance of about 150 metres. Nearby are quartzite outcrops which have spotty tourmalinite alteration. The tourmaline is a pale brown color. The mapping indicates some north and northwest-trending faults are likely present although the trace of the fault(s) could not be firmly established. For these reasons, a drill hole was planned to test the likely cross-cutting structures and search for mineralization and alteration.

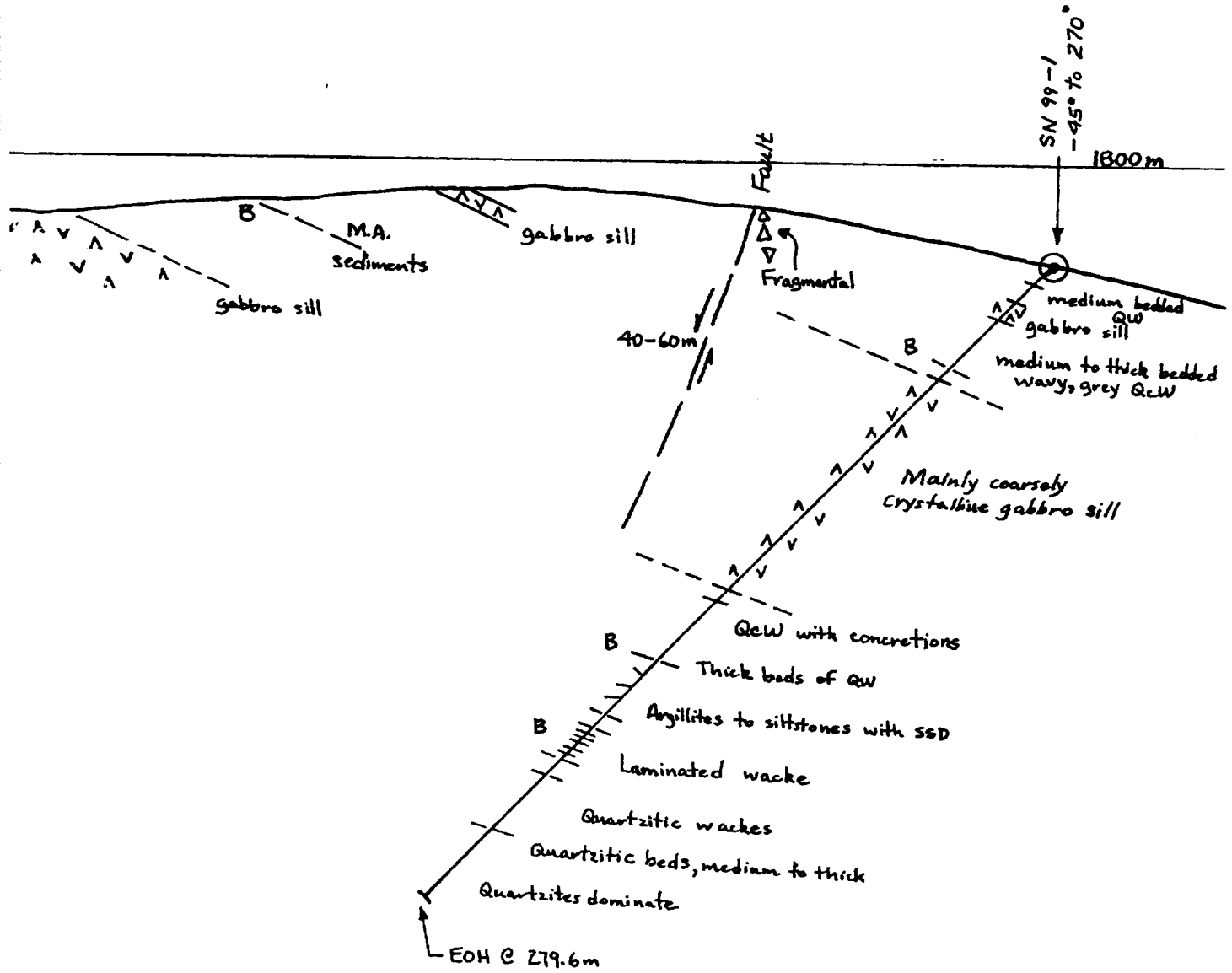
The hole encountered medium to thick bedded quartzitic sediments with wavy bedding but no disruptions to sedimentation. A thin gabbro sill (8.5 metres thick) of fine-grained hornblende/feldspar was cored next, then more medium to thick bedded quartzitic wackes with fine biotite. From 50 to 143.4 metres, the hole cored a mainly coarsely crystalline gabbro. The sediments below are quite quartzitic with thick beds dominating. The quartzitic wackes to quartz wackes do have some soft sediment deformation features with scattered rip-up clasts. This is more pronounced in the argillite below (to 180m) with disrupted beds or no bedding. To the end of the hole is dominated by quartzites, often thick bedded.

No sampling for analytical work was done on this hole.

2.30 Drill Hole CR-99-1

This NQ hole was drilled at -45° at an azimuth of 320° . Collared at about 1125 metres on the ridge west of Stoney Creek this hole was designed to test beneath some scattered outcrops of fragmental and altered Middle Aldridge. The sediments are variably altered by biotite, tourmaline, and silica. Tourmalinite float was noted in the area. North-trending faults were located but their significance and relationship to the fragmentals etc. not established. It was decided to drill test beneath these features within the Middle Aldridge to learn more about them and to see if they extended to depth.

A well bedded interval of quartzitic wacke with argillite intervals was intersected from the collar. The argillites are biotite-altered with some small pink garnets. Below about 60 metres, bedding is locally disrupted but dominantly regular to about 165 metres.

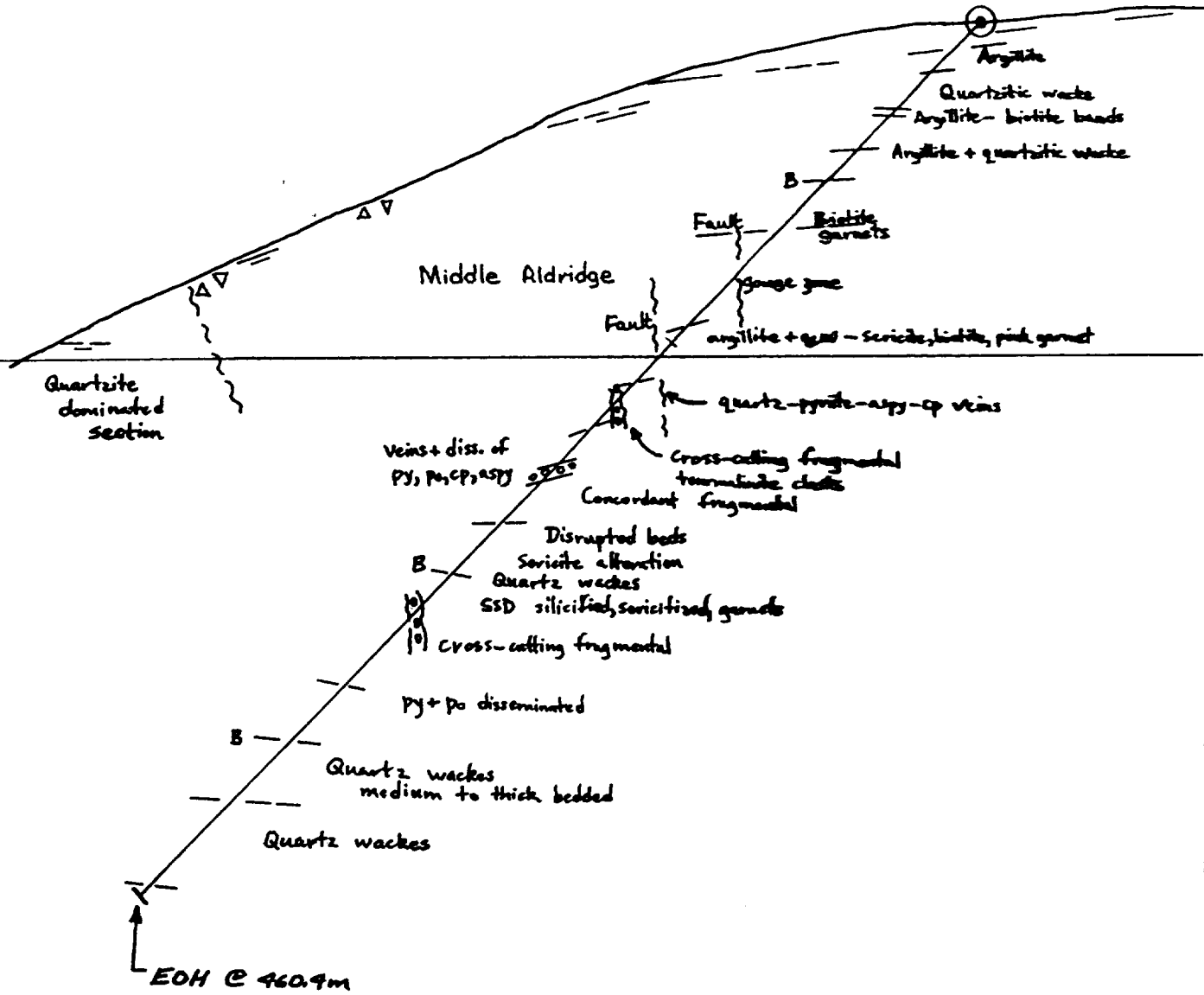


Looking N

100 m

CRUZ PROPERTY	
Drill Hole Section SN-99-1	
NTS: 82G/4W	FIGURE: 5
SCALE: 1:2000	

CRUZ CR 99-1
-45° @ 520'



Looking NE

CRUZ PROPERTY	
Drill Hole Section CR-99-1	
NTS: 82G/5W	FIGURE: 6
SCALE: 1:2500	

100m

EOH @ 460.9m

Interbedded quartzitic wackes and argillites typify the section. Below 165 metres more disruption is noted, with a discordant fragmental and then a concordant fragmental both containing a mixture of clasts including tourmalinite fragments. Some quartz veinlets are present with minor amounts of pyrite, arsenopyrite, and pyrrhotite. Below 250 metres the bedding in the mixed sediments is dominantly regular with some local disruption noted. The sediments to the end of the hole are dominated by thick bedded quartz wackes with short argillite sections, often with disrupted bedding. A possible fault zone was intersected around 130 metres with a second fault around 177 metres with associated quartz veining containing pyrite, arsenopyrite, and chalcopyrite.

Two samples were taken for analysis. Grab samples were taken at 199 metres and at 237.2 metres. The results (Appendix B) show anomalous amounts of copper, cobalt, arsenic, and gold.

3.00 Interpretations and Conclusions

Hole SN-99-1 was unsuccessful in locating any significant amounts of Sullivan indicator features. The Middle Aldridge is largely undisturbed and unaltered. No significant fault was intersected. A normal fault must be present but is interpreted to be west-dipping. Mineral exploration for a Pb-Zn-Ag Sedex deposit remains viable but not at the stratigraphic level tested in this hole.

Hole CR-99-1 was somewhat successful in defining fragmental (albeit small units) and some altered rocks with minor mineralization. At least two faults were intersected and both seem to bear some relationship to the presence of the fragmentals and alteration. Disrupted bedding and soft sediment features are present but intermittently so. Overall there is a zone of cross-cutting fluid-flow indicated but the complex retains some concordant character as well (as it does at surface). The geological setting based on outcrops and drill core warrant additional mineral exploration for a Sedex deposit at depth.

4.00 Itemized Cost Statement

DIAMOND DRILL CONTRACTOR

Britton Bros. Diamond Drilling, Smithers, B.C.

2 holes = 740.0 m	\$ 45,201.07
-------------------	--------------

CONTRACTOR COSTS

Geological Consultants

D. Anderson, PEng	layout access, site installation, hole design, core review, sampling	
	9.2 days @ \$330/day	3,036.00
D.L. Pighin, PGeo.	Log core, drill moves	
	14.5 days @ \$330/day	4,785.00
P. Klewchuk	Notice of Work	
	1 day @ \$330/day	330.00

Labourer

EK Expediting, Cranbrook, B.C.

Haul core, layout core, store core

11 days @ \$175/day 1,925.00

Truck charge 11.5 days @ \$100/day 1,150.00

MOBILIZATION/DEMOBILIZATION

Big Horn Helicopter, Cranbrook, B.C.

Move Drill 5.2 hours @ \$925.00 = \$4,810.00

Fuel = 574.08

5,384.08

SITE PREPARATION & ACCESS

Lost Creek Enterprises, Fort Steele, B.C.

D7 Caterpillar 38 hours @ \$110/hour 4,180.00

Ram Exploration, Cranbrook, B.C.

331 Excavator & Chain Saw

81.0 hours @ \$22/hour = \$1,782.00

109.5 hours @ \$60/hour = \$6,570.00

8,352.00

Mallard Logging, Fort Steele, B.C.

Lowbed to move D7 9 hours @ \$90/hour 810.00

EQUIPMENT RENTAL

Pighin's Welding, Cranbrook, B.C.

Water tank rental & haul 56 hours @ \$60/hr 3,360.00**TOTAL EXPENDITURES = \$ 78,513.15**

AUTHOR'S QUALIFICATIONS

I, Douglas Anderson, Consulting Geological Engineer, have my office at 3205 6th. St. South in Cranbrook, B.C., V1C 6K1.

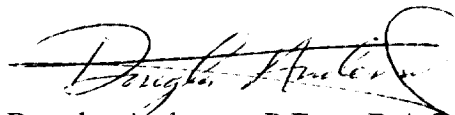
I graduated from the University of British Columbia in 1969 with a Bachelor of Applied Science in Geological Engineering.

I have practiced my profession since 1969, dominantly with one large mining company, in a number of capacities all over Western Canada. I have been a practicing geological consultant for the last two years.

I am a Registered Professional Engineer and member of the Association of Professional Engineers and Geoscientists of B.C., and I am authorized to use their seal which has been affixed to this report.

I am also a Fellow of the Geological Association of Canada.

Dated this 7th day of March, 2000

A handwritten signature in black ink, appearing to read "Douglas Anderson", written over a horizontal line.

Douglas Anderson, P.Eng., B.A.Sc., FGAC
Consulting Geological Engineer

APPENDIX "A"
Drill Logs
Holes SN99-1 & CR99-1

PROPERTY: CRUZ		HORI COMP: 197.7 m	HOLE #: SN99-1
LOCATION: Head waters of Stone Creek		VERT. COMP: 197.7 m	LENGTH: 279.6 m
COMMENCED: Sep 22, 1999	COMPLETED: Sep 24, 1999	CORR. DIP:	DRILL CONTRACTOR: Britton Bros.
COORDS: (long)	(lat)	TRUE BEARING:	CORE SIZE: NQ
COORDS: (UTM) (E) 560990 E	(N) 5447100 N (EL)	% RECOVERY:	CASING: 0 – 3.1 m
COORDS: (grid) (E)	(N) (EL)	LOGGED DATE: Sep 1999	CORE STORAGE: Vine Property
ELEVATION: 1760 m	COLLAR: (dip) -45° (Azi) 270°	LOGGED BY: D.L. Pighin	Additional Surveys:
OBJECTIVE:			Depth Dip Azi
SURVEYS: (depth) 152.4 m	Dip: -44° Azi: 274°	Type: Sperry Sun	
From	To	LITHOLOGY: Siltstone, interbedded argillite and quartzite	
3.1-14.3		COLOR: light gray	
		PRIMARY STRUCTURE: medium to thick bedded, bedding distinct, generally wavy, medium to coarse grained siltstone and quartzite Bedding to core at 7.0m = 63°	
		TECTONIC STRUCTURE: nil	
		GENERAL ALTERATION: generally silicified, weakly sericitic	
		MINERALIZATION & ASSOCIATED ALTERATIONS, HOST STRUCTURE: none	
		ADDITIONAL OBSERVATIONS:	

From	To	LITHOLOGY: Gabbro Sill
14.3	22.8	COLOR: green
		PRIMARY TEXTURE: generally finely crystalline
		TECTONIC STRUCTURE:
		GENERAL ALTERATION:
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
From	To	LITHOLOGY: Siltstone, minor interbedded argillite
22.8	50.0	COLOR: gray with some thin dark gray interbeds
		PRIMARY STRUCTURE: mainly medium to thick bedded with some very thin-bedded intervals. Bedding is distinct and wavy, generally medium to fine grained, grading not apparent. Bedding to core at 44.0m = 70°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: generally silicified throughout, abundant fine black biotite and lesser sericite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Gabbro sill
50.0	143.4	COLOR: green
		PRIMARY TEXTURE: mainly coarsely crystalline
		TECTONIC STRUCTURE:
		GENERAL ALTERATION:
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE:
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Siltstone, rare interbeds of argillite
143.4	160.0	COLOR: light gray with thin black lineations
		PRIMARY STRUCTURE: medium to thick bedded, bedding indistinct, generally wavy, generally fine to medium grained, no grading evident. Bedding to core at 145.5m = 65°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: generally silicified throughout, weakly biotitic and sericitic throughout. Local concretions with abundant pink garnet and actinolite, green muscovite forms scattered irregular wispy lineation
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
From	To	LITHOLOGY: Quartzite, interbedded siltstone
160.0	180.0	COLOR: light gray to gray
		PRIMARY STRUCTURE: thick to very thick bedded, bedding distinct, generally wavy, medium to fine grained, no grading evident, soft sed. deformation evident in some beds, rip-up clasts are common. Bedding to core at 177.6m = 62°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: siltstone and quartzites generally silicified with scattered garnetiferous concretions, argillite beds generally weakly biotitic with widely scattered books of green muscovite(?)
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite, interbedded siltstone
180.0	197.3	COLOR: light gray, gray rarely dark gray
		PRIMARY STRUCTURE: medium to thick bedded, rare thin beds, bedding indistinct, commonly disrupted, soft sed. deformation throughout section, widely scattered rip-up clasts, grading not evident
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: patchy silicification with scattered subhedral pink garnets, argillite weakly biotitic with scattered books of green muscovite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: disseminated py and po in hairline fractures and in seds.
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Argillite, interbedded siltstone
197.3	223.7	COLOR: light gray, banded gray and dark gray
		PRIMARY STRUCTURE: medium to thin bedded, bedding commonly flat-sharp, siltstone beds graded fining upwards Bedding to core at 203.0m = 66°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: some argillite and siltstone beds are intensely silicified with scattered garnets and coarsely crystalline sericite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: py and po forms widely scattered beds rarely more than 2 to 4mm thick, some widely scattered weak disseminations.
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Silty argillite, interbedded argillite and siltstone
223.7	226.7	COLOR: banded light gray, gray and dark gray
		PRIMARY STRUCTURE: thin to very thin bedded, generally sharp-flat, rarely wispy, thin silty beds are finely cross bedded, ripples(?) Some soft sed. deformation
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: finely biotitic, scattered greenish muscovite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
From	To	LITHOLOGY: Siltstone, interbedded argillite
226.7	240.0	COLOR: light gray with rare gray interbeds
		PRIMARY STRUCTURE: medium to thick bedded, rare thin beds. Bedding generally wavy-sharp, locally sharp-flat, some soft sed. deformation, some graded beds fining upwards, scattered rip-up clasts. Bedding to core at 235.6m = 65°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: patchy silicification, scattered garnet-actinolite-biotite concretions. Argillite generally weakly biotitic
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Widely scattered disseminated po. Locally abundant disseminated po

From	To	LITHOLOGY: Mainly quartzite with lesser interbedded siltstone
240.0	254.6	COLOR: light gray
		PRIMARY STRUCTURE: thick to very thick bedded, rare thin argillite interbeds, bedding is rare but generally sharp, medium to coarse grained, grading not evident. Bedding to core at 253.0m = 61°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: quartzites, generally silicified, with abundant biotite and scattered sericite generally with abundant scattered small subhedral light pink garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Quartzite, interbedded siltstone and argillite
254.6	279.6	COLOR: light gray with gray interbeds
		PRIMARY STRUCTURE: medium to thick bedded, with some thin bedded sequences, quartzite and siltstone medium to fine grained, commonly graded fining upwards, bedding distinct. Bedding to core at 279.0m = 79°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: quartzite and some siltstone intensely silicified with scattered biotite and sericite, scattered concretions with abundant subhedral pink garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
		ADDITIONAL OBSERVATIONS:
From	To	End of Hole
279.6		

PROPERTY: CRUZ		HORI COMP: 325.55 m		HOLE #: CR99-1	
LOCATION: West Side of Stone Creek		VERT. COMP: 325.55 m		LENGTH: 460.4 m	
COMMENCED: Oct 27, 1999		COMPLETED: Nov 3, 1999		CORR. DIP:	
COORDS: (long)		(lat)		TRUE BEARING:	
COORDS: (UTM) (E) 57,0680E		(N) 54,51800N (EL)		% RECOVERY:	
COORDS: (grid) (E)		(N) (EL)		LOGGED DATE: Nov 1999	
ELEVATION: 1125 m		COLLAR: (dip) -45° (Azi) 320°		LOGGED BY: D.L. Pighin	
OBJECTIVE:					
SURVEYS: (depth)		Dip:		Azi:	
				Type:	
Additional Surveys:					
		Depth		Dip	
				Azi	
From	To	LITHOLOGY: Siltstone			
1.5-6.7		COLOR: light gray			
		PRIMARY STRUCTURE: thick bedded, bedding indistinct, fine grained			
		TECTONIC STRUCTURE: nil			
		GENERAL ALTERATION: finely sericitic, some widely scattered garnets			
		MINERALIZATION & ASSOCIATED ALTERATIONS, HOST STRUCTURE:			
		ADDITIONAL OBSERVATIONS:			

From	To	LITHOLOGY: Argillite, interbedded siltstone
6.7	29.4	COLOR: light with gray banding
		PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat, argillite generally finely parallel laminated. Bedding to core at 18.0m = 40°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: abundant fine black biotite and sericite, rare thin argillite beds completely altered to fine black biotite, rare small tourmaline needles
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare specks of po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone, rare argillite interbeds
29.4	47.3	COLOR: light gray speckled black
		PRIMARY STRUCTURE: medium to thick bedded, bedding is indistinct and wavy, and locally deformed by soft sed. slumping, fine grained sed.
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: sericitic matrix abundantly speckled by biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare specks of po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite, rare interbedded siltstone
47.3	49.1	COLOR: light gray to lead gray with fine black banding
		PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp and distorted. Section (unit) strongly deformed by soft sed. deformation. Bedding to core = 49°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: thin black layer consist of finely crystalline black biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant fine disseminated po in some siltstone beds, usually in dendritic forms.
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Siltstone
49.1-51.5		COLOR: light gray
		PRIMARY STRUCTURE: thick to very thick bedded, bedding is rare and distorted, fine grained seds.
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: strongly sericitic with biotite speckling
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone, interbedded argillite
51.5-58.4		COLOR: light gray with dark gray and black interbeds
		PRIMARY STRUCTURE: thin to very thin bedded, bedding generally sharp-flat with locally distorted beds. Siltstone appear fine grained. Bedding to core at 58.0m = 44°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: siltstone generally sericitic with late biotite speckling, argillite are mainly fine sericite with thin layers of black biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone
58.4-61.3		COLOR: light gray with black speckling
		PRIMARY STRUCTURE: medium to thick bedded, bedding is rare and indistinct, fine grained seds.
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: sericitic with crystalline black biotite speckling
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare po
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Argillite, rare siltstone
61.3	62.7	COLOR: light banding on dark gray and black
		PRIMARY STRUCTURE: thin to very thin bedded, bedding is sharp and flat, rarely disrupted and pulled apart (soft sed. deformation)
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: generally sericitic and biotitic, with fine black biotite banding
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone
62.7	69.0	COLOR: light gray speckled black
		PRIMARY STRUCTURE: thick to very thick bedded, bedding indistinct and rare, generally fine grained siltstone
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: sericitic throughout with black biotite speckling
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some finely disseminated po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite, interbedded siltstone
69.0	73.0	COLOR: dark gray to black
		PRIMARY STRUCTURE: thin to very thin bedded, bedding generally sharp-flat, some beds are finely parallel laminated. Bedding to core at 70.0m = 39°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: generally sericitic with fine black biotitizations and thin beds of crystalline black biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: scattered thin veinlets of fine po
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Siltstone, interbedded argillite
73.0	77.2	COLOR: gray banded black to dark gray
		PRIMARY STRUCTURE: medium to thin bedded, bedding sharp-flat-wispy to distorted, generally fine grained seds.
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: siltstone are sericitic with biotite speckling with rare subhedral pink garnet
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone
77.2	100.5	COLOR: light gray with black speckling
		PRIMARY STRUCTURE: thick to very thick bedded, bedding is very rare, medium to fine grained, grading not evident
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: patchy silicification, generally sericitic throughout, with black biotitic speckling
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare specks of po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite
100.5	101.5	COLOR: black
		PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat and very thinly parallel laminated
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: strongly biotitic, rare subhedral pink garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Siltstone
101.5	107.5	COLOR: light gray
		PRIMARY STRUCTURE: very thick bedded, no bedding, medium to fine grained, no grading evident
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: patchy silicification, generally sericitic with biotite speckling
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare disseminated po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite
107.5	112.4	COLOR: dark gray with gray banding
		PRIMARY STRUCTURE: medium to thin bedded, bedding sharp-flat, finely parallel laminated. Bedding to core at 107.5m = 41°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: abundant fine black biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone, interbedded argillite
112.4	115.0	COLOR: light gray
		PRIMARY STRUCTURE: medium to thick bedded, rare very thin beds of argillite, medium to fine grained
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: siltstones sericitic and silicified
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Argillite, rare thin siltstone interbeds
115.0	116.6	COLOR: lead gray with black lineations
		PRIMARY STRUCTURE: very thin bedded, bedding sharp-flat. Bedding to core at 116.0m = 37°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: strongly biotitic
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone, interbedded argillite
116.6	133.8	COLOR: light gray with gray banding
		PRIMARY STRUCTURE: medium to thick bedded, bedding sharp-flat, but locally disrupted by soft sed. deformation
		TECTONIC STRUCTURE: fault 128.8-133.8m, marked by abundant soft fault gouge cuts core at 45°
		GENERAL ALTERATION: siltstones are sericitic and silicified in part. Argillites are strongly biotitic with coarse black biotite lineation
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: siltstone units contain patches of abundant fine dendritic po with some py
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone
133.8	138.0	COLOR: light gray-black to dark green speckling
		PRIMARY STRUCTURE: medium to thick bedded, bedding distinct, generally wavy (flame structures) medium grained, grading is not evident
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: strongly sericitic over printed by black biotite spotting, patchy silicification with abundant subhedral pink garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare specks of po
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Silty argillite, interbedded argillite
138.0	142.5	COLOR: smoky gray with black interbeds
		PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat, some thin zones of disrupted sed. Bedding to core at 138.0m = 43°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: strongly biotitic and sericitic, with some thin beds altered totally to crystalline biotite. Subhedral pink garnets scattered throughout unit
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone
142.5	147.6	COLOR: light gray speckled dark green
		PRIMARY STRUCTURE: thick to very thick bedded, bedding distinct, wavy (flame structured), medium grained, sed. look like good turbidites
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: sericitic, speckled by biotite and scattered garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: py and cpy relatively strongly disseminated in certain siltstone beds
From	To	LITHOLOGY: Siltstone, interbedded argillite and silty argillite
147.6	165.8	COLOR: light gray with smoky gray and dark gray banding
		PRIMARY STRUCTURE: mainly medium to thick bedded, with scattered thin to very thin beds of argillite. Argillite interbeds are generally finely parallel laminated, beds are sharp and commonly flat, some argillite interbeds are strongly slump structured. Bedding to core at 158.5m = 40°, 162.5m = 25°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: siltstone beds are generally silicified in part, usually with abundant subhedral small pink garnets, all are strongly sericitic with biotite speckling, some units contain widely scattered tannish blebs and tabular (after selinite) of Fe carbonate (siderite?). Argillite beds are typically strongly biotitic
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: locally siltstone beds host abundant disseminated po and py with rare cpy

From	To	LITHOLOGY: siltstone, interbedded argillite and silty argillite
165.8-177.2		COLOR: lead gray interbedded dark gray rarely black
		PRIMARY STRUCTURE: medium to thin bedded, bedding sharp, mainly flat, some highly disrupted interbeds (pull aparts) and slump structured. Argillite generally finely parallel laminated, siltstones are medium to fine grained with rare rip-up clasts. Bedding to core at 172.6m = 22°
		TECTONIC STRUCTURE: 176.8-177.2m – fault zone consists of soft black fault gouge, cuts core at 47°
		GENERAL ALTERATION: as previously described 170.0-173.0m – abundant scattered siderite after selinite crystals
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated po throughout
From	To	LITHOLOGY: Argillite, interbedded siltstone and silty argillite
177.2-197.7		COLOR: light gray, banded smoky gray and dark gray and or black
		PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp to flat, commonly finely parallel laminated
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: seds strongly sericitic and biotitic throughout 195.3-197.7m – abundant bands of black tourmalinite, locally abundant open selenite ? crests
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: quartz-py-aspery-cpy veins 1cm thick or less cut core at 48° are widely scattered throughout section. Thin bedding layers of py and aspy scattered throughout section, rarely more than 1cm thick. Py and lesser aspy weakly disseminated throughout section
From	To	LITHOLOGY: Fragmental unit (discordant) Tourmaline clasts in siltstone matrix
197.7-199.5		COLOR: gray to light gray with brown and black clasts
		PRIMARY STRUCTURE: matrix to clast supported fragmental, clasts range between 2 to 50mm, well rounded to subangular, rarely angular, contact cuts core at 72°. Siltstone matrix is medium grained
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: clasts are intensely tourmalinized (brown and black tourmalinite) matrix is strongly sericitic
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: Sulphides are abundant as disseminations. Small wispy lenses and irregular blebs. Aspy is most abundant with lesser cpy, py and po.

From	To	LITHOLOGY: Mainly siltstone, lesser interbedded quartzite and argillite
219.5-236.0		COLOR: generally gray to light gray with black and dark gray argillite interbeds
		PRIMARY STRUCTURE: medium to thick bedded, with scattered thin to very thin bedded argillite units. Bedding generally sharp and strongly disrupted. Siltstones medium grained with some widely scattered rip-up clasts. Bedding to core at 225.8m = 20°, at 233.7m = 18°, at 234.0m = 5°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: as described above, disrupted beds of tourmalinite present throughout
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: sulphides py, po, aspy and cpy occur throughout section as previously described. At 222.0m = massive po vein cuts core at 20° is 1cm thick. At 225.0m = 20cm thick quartz-po vein cuts core at 18°, rare cpy
From	To	LITHOLOGY: Fragmental concordant Consists of a siltstone matrix, with clasts of black tourmalinite, black argillite and siltstone
236.0-240.0		COLOR: light gray matrix with black clasts
		PRIMARY STRUCTURE: mainly clast supported fragmental, clasts are mainly angular, rarely subrounded, range in size from 2 to 50mm.
		TECTONIC STRUCTURE: crackle brecciated throughout
		GENERAL ALTERATION: matrix is sericitic and generally silicified, clasts are mainly tourmalinized
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: sulphides are abundant as disseminations, blebs, small wispy lenses and as thin irregular veinlets. Dominant sulphides are py and aspy with lesser cpy and po
From	To	LITHOLOGY: Siltstone, interbedded argillite
240.0-255.0		COLOR: mainly light gray, locally black
		PRIMARY STRUCTURE: medium to thin bedded, bedding sharp, usually flat, very rubbly, broken core ground by core
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: 242.0-253.0m – tourmalinized
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: locally abundant disseminated py

From	To	LITHOLOGY: Siltstone, interbedded quartzite
255.0	265.5	COLOR: light gray to gray
		PRIMARY STRUCTURE: medium to thick bedded, bedding indistinct and usually distorted. Medium to coarse grained quartzite, consists of unsorted, mature quartz sand, siltstones are similar to quartzites, rare rip-up clasts
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: generally silicified with intensely sericitized matrix, minor biotite cream to white specks throughout (Fe carbonate?)
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: locally abundant disseminated py and po, locally very irregular veinlets of black pyrolusite? are abundant
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite with rare siltstone interbeds
265.5	270.2	COLOR: gray banded, light gray
		PRIMARY STRUCTURE: thin to very thin bedded, bedding flat-sharp. Siltstone interbeds are generally fine grained. Bedding to core at 270.0m = 45°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: argillite is mainly finely sericitic, siltstone beds are sericitic and biotitic. Abundant scattered dolomite after selenite crystals
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: relatively abundant disseminated py and po and in thin wispy veinlets
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Siltstone
270.0	274.4	COLOR: light gray
		PRIMARY STRUCTURE: medium to thick bedded, bedding is indistinct and rare, medium to fine grained
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: strongly sericitic with minor biotite, widely scattered crystals of dolomite after selenite? (light buff crystals)
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: none
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Argillite, interbedded siltstone
274.4	278.3	COLOR: gray band, light gray
		PRIMARY STRUCTURE: thin to very thin bedded, bedding generally sharp, flat to locally disrupted. Bedding to core at 276.0m = 53°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: sericitic and biotitic with scattered dolomite after selenite, some thin black biotite lineation, some subhedral and euhedral light pink garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some weak disseminated py and po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Quartzite
278.3	286.6	COLOR: light gray
		PRIMARY STRUCTURE: thick to very thick bedded, very rare bedding planes, no grading, medium to coarse grained, immature, unsorted quartz sand
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: generally silicified with sericite matrix, some biotitic zones usually accompanied by abundant subhedral pink garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: scattered very thin irregular veinlets of pyrite-pyrolusite
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite, interbedded siltstone
286.6	291.5	COLOR: gray banded dark gray and brownish gray
		PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat, locally distorted, fine grained seds. Bedding to core at 290.5m = 56°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: strongly biotitic and sericitic
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: weakly disseminated py and po throughout
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Quartzite, interbedded argillite
291.5	302.0	COLOR: light gray some gray banding
		PRIMARY STRUCTURE: medium to thin bedded, some scattered very thin bedded argillite, medium to coarse grained quartzites composed of unsorted immature quartz sand, some soft sed. deformation, scattered black graphitic rip-up clasts
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: silicified and sericitic with widely scattered subhedral pink garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: finely disseminated py throughout section
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite, interbedded siltstone
302.0	310.3	COLOR: gray banded, dark gray
		PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat, some argillite units are finely parallel laminated
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: generally sericitic with biotitization, with thin biotite layering, anhedral small light pink garnets scattered throughout 306.0-307.0m – argillite strongly biotitic
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: finely disseminated py and po throughout
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Fragmental unit, discordant? Contact 47° to core. Clasts consist of siltstone, laminated argillite and argillite, marix siltstone
310.3	313.6	COLOR: spotted light gray, dark gray and gray
		PRIMARY STRUCTURE: massive, clasts supported, generally sharply angular, range in size from 2 to 50mm. Matrix is siltstone
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: biotitic and sericitic
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare sulphide specks of po
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Quartzite
313.6	324.6	COLOR: light gray
		PRIMARY STRUCTURE: thick to very thick bedded, bedding is rare, usually sharp and strongly distorted, composed of coarse grained, unsorted, immature quartz sand in a sericitic matrix, no grading evident
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: strongly sericitic with rare biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: py is abundant throughout unit as small blebs and rarely as veinlets
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite, interbedded siltstone
324.6	332.3	COLOR: light gray with gray banding, some dark gray units with black lineation
		PRIMARY STRUCTURE: mainly thin to very thin bedded, bedding sharp flat 324.6-328.0m – very finely parallel laminated Bedding to core at 320.0m = 52°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: strongly biotitic from 324.6-328.0m 328.0-332.3m – strongly sericitic
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: finely disseminated po with some scattered wispy veinlets of po
From	To	LITHOLOGY: Quartzite, interbedded argillite
332.3	381.8	COLOR: light gray banded pale gray and gray
		PRIMARY STRUCTURE: medium to thin and very thin bedded, rare thick beds, bedding is sharp and generally flat, with local distorted beds. Argillite unit generally thin to very thin bedded, commonly finely parallel laminated. Quartzite generally medium bedded consisting of immature quartz sand. Bedding to core at 347.0m = 52°, at 381.0m = 52°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: matrix of quartzite generally sericite, argillite beds are mainly fine sericite with abundant fine brown biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: po and py weakly to strongly disseminated in most of quartzite At 348.3m – crystals of ZnS occur in small vugs
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Quartzite, interbedded argillite and siltstone
381.8	399.3	COLOR: light gray with brownish gray interbeds
		PRIMARY STRUCTURE: mainly medium to thick bedded, with scattered 10 to 50cm thick sequences of thin to very thin bedded argillites. Bedding argillite units sharp-flat to locally strongly distorted (soft sed. deformation). Quartzite composed of medium grained rarely coarse grained quartz sand, some graded beds
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: quartzites generally silicified and sericitized with local patches of small subhedral garnets. Argillites are mostly fine sericite and fine brown and black biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: quartzites host abundant disseminated po
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite, interbedded siltstone
399.3	403.4	COLOR: light gray to light brownish gray with some black lineation
		PRIMARY STRUCTURE: mainly very thin bedded with lesser medium beds, bedding sharp-flat with some local distorted beds (soft sed. deformation) Bedding to core at 399.5m = 55°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: mainly fine sericite and fine brownish biotite with some very thin black biotite beds
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE:
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite, interbedded siltstone
403.4	413.9	COLOR: light gray banded light brown
		PRIMARY STRUCTURE: mainly thin to very thin bedded, rare medium beds, bedding sharp and generally flat, with minor disrupted beds, thin beds are thinly parallel laminated, to locally fine cross bedded
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: mainly sericitic and finely biotitic, scattered thin zones of small subhedral garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE:

From	To	LITHOLOGY: Quartzite
413.9	416.3	COLOR: light gray
		PRIMARY STRUCTURE: medium to thick bedded, bedding indistinct, composed of immature, unsorted, ungraded quartz sand
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: silicified and strongly sericitic, minor biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: abundant disseminated po blebs usually with minor cpy
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Argillite, interbedded siltstone
416.3	417.7	COLOR: light gray to light tannish gray
		PRIMARY STRUCTURE: very thin bedded, bedding sharp, generally flat, some soft sed. deformation in certain beds
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: as previously described
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: nil
		ADDITIONAL OBSERVATIONS:
From	To	LITHOLOGY: Quartzite, minor interbedded argillite
417.7	431.0	COLOR: light gray
		PRIMARY STRUCTURE: thick to very thick bedded, bedding generally sharp-flat to wavy, some soft sed. deformations, generally medium to coarse grained. 10cm to 50cm sequences of very thin bedded argillite Bedding to core at 51.0m
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: generally silicified and strongly sericitic, light pink subhedral garnet scattered throughout silicified quartzites. Weak biotitization throughout, argillite units mainly sericite with fine brownish biotite
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some quartzite beds host abundant disseminated po blebs usually with minor cpy
		ADDITIONAL OBSERVATIONS:

From	To	LITHOLOGY: Argillite, interbedded quartzite
431.0	440.5	COLOR: light gray banded brown and brownish gray
		PRIMARY STRUCTURE: thin to very thin bedded, bedding sharp-flat to wavy, generally due to soft sed. deformations. Some beds very thinly parallel laminated
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: quartzite beds are typically silicified and sericitized with scattered small subhedral pink garnets
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: some disseminated po in some quartzite beds
From	To	LITHOLOGY: Quartzite, interbedded argillite
440.5	460.4	COLOR: light gray some thin brownish gray argillite
		PRIMARY STRUCTURE: medium to thick bedded, with some scattered thin bedded argillite units. Bedding generally flat-sharp with some wavy bedding (flame structured) quartzite are medium grained, commonly graded (turbidites) Bedding to core at 457.0m = 51°
		TECTONIC STRUCTURE: nil
		GENERAL ALTERATION: as previously described
		MINERALIZATION & ASSOCIATED, HOST STRUCTURE: rare specks of disseminated po
460.4		End of Hole

David L. Plevin

APPENDIX "B"
Analytical Data
Two Grab Samples
Hole CR99-1

GEOCHEMICAL ANALYSIS CERTIFICATE

Chapman Resources Ltd. File # 9904362
100 - 157 - 10th Ave S., Cranbrook BC V1C 2A1 Submitted by: D. P. Smith



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Po	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Tl	B	Al	Na	K	W	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	µ	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	µ	µ	ppm	ppm	µ	ppm	µ	ppm	µ	µ	µ	ppm	ppb
4280 P99-8	2	14	17	91	<.3	58				2	<.8	<.2	8	6	<.2	41	7	9	.28	.016	4	20	55	29	.04	<.3	1.01	.02	.68	4	118
4281 CR99-1	4	179	13	72	.3	42	1252	41	3.86	9062	<.8	<.2	6	13	<.2	4	12	1	.02	.016	16	28	.01	29	.01	40	.10	.01	.03	4	71
4282 CR99-1	2	458	11	13	.4	38	258	26	3.70	1060	<.8	<.2	10	8	<.2	3	21	2	.02	.008	17	14	.01	40	<.01	25	.27	.01	.19	3	110
	3	83			.3	27	20	367		24	<.8	<.2	7	7	(39.0)	3	<.3	17	.63	.014	32	39	.58	41	.05	<.3	1.17	.04	.28	4	2
	2	55			.4	24	12	282		20	<.8	<.2	11	8	.2	<.3	<.3	9	.53	.033	36	15	.45	59	.04	<.3	1.04	.01	.54	<.2	2
	1	105			.3	40	19	280	1	10	<.8	<.2	10	6	<.2	<.3	3	9	.34	.032	40	16	.46	64	.04	3	.99	.01	.54	<.2	3
	1	103			.4	36	16	195		10	<.8	<.2	11	4	<.2	<.3	<.3	6	.22	.025	37	11	.28	55	.03	<.3	.71	.01	.44	<.2	2
	2	76			.3	26	12	191		4	<.8	<.2	11	3	<.2	<.3	<.3	7	.18	.034	42	14	.29	60	.02	3	.82	.01	.47	<.2	1
	3	38			.3	20	14	498		10	<.8	<.2	10	7	24.2	<.3	<.3	18	.35	.044	41	29	.69	80	.07	<.3	1.53	.02	.69	2	8
	2	19			.3	19	6	341		3	<.8	<.2	14	4	1.0	<.3	<.3	15	.22	.030	45	21	.48	115	.09	3	1.35	.01	.85	<.2	1
	1	33			.3	22	14	602		20	<.8	<.2	6	7	27.7	3	<.3	21	.54	.120	44	31	.87	83	.09	<.3	1.78	.03	.85	<.2	3
	1	32			.3	21	14	590		20	<.8	<.2	6	7	26.9	3	<.3	21	.54	.118	43	30	.86	81	.09	<.3	1.76	.03	.83	<.2	3
	1	32			.4	23	13	589		14	<.8	<.2	7	7	26.7	<.3	3	21	.53	.118	43	29	.85	80	.09	<.3	1.75	.03	.83	2	2
	1	20			.3	20	8	329		37	<.8	<.2	14	4	3.0	<.3	<.3	15	.22	.027	42	19	.47	107	.09	3	1.34	.01	.86	<.2	1
	1	30			.3	18	13	546		4	<.8	<.2	7	7	21.8	<.3	<.3	19	.30	.014	34	27	.79	88	.10	<.3	1.74	.03	1.05	3	1
	2	20			.3	21	6	323		3	<.8	<.2	14	8	1.0	<.3	<.3	13	.38	.029	40	18	.42	90	.06	3	1.22	.01	.69	<.2	1
	1	18			.3	13	6	217		4	<.8	<.2	8	9	3.0	<.3	3	4	.41	.016	31	14	.19	45	.01	3	.68	.01	.30	<.2	1
	2	28			.3	12	9	308		<.2	<.8	<.2	7	16	6.7	<.3	<.3	7	.70	.011	24	21	.29	34	.01	3	.78	.02	.25	<.2	3
	1	22			.3	22	7	433		27	<.8	<.2	14	24	1.1	<.3	<.3	14	.86	.031	36	18	.49	76	.07	4	1.32	.02	.67	<.2	3
	1	19			.3	27	11	386		39	<.8	<.2	11	10	1.1	<.3	<.3	16	.49	.027	36	23	.51	78	.08	3	1.40	.02	.68	<.2	3
	2	23			.3	17	11	519		8	<.8	<.2	7	10	17.3	<.3	<.3	15	.44	.013	26	28	.70	46	.04	<.3	1.50	.02	.46	2	3
	1	17			.1	19	4	363		4	<.8	<.2	13	6	.6	<.3	<.3	17	.33	.030	34	20	.55	100	.12	3	1.50	.02	.92	<.2	1
	1	27			.1	24	8	350		4	<.8	<.2	8	7	4.7	<.3	<.3	17	.31	.020	33	21	.55	78	.09	3	1.40	.02	.70	<.2	1
	1	26			.1	24	8	347		3	<.8	<.2	8	7	4.6	<.3	<.3	16	.31	.019	32	22	.54	76	.09	<.3	1.39	.02	.70	<.2	1
	1	27			.1	24	8	348		2	<.8	<.2	8	6	4.6	<.3	<.3	16	.31	.019	33	26	.54	76	.09	<.3	1.38	.02	.70	<.2	1
	1	19				16	6	257		16	<.8	<.2	14	5	1.2	<.3	<.3	13	.24	.030	36	17	.44	94	.09	3	1.29	.01	.79	<.2	1
	3	213				125	66	263		<.2	<.8	<.2	6	3	<.2	<.3	<.3	6	.18	.028	52	13	.29	43	.03	3	.76	.01	.35	<.2	4
	2	26				8	8	264		3	<.8	<.2	7	8	11.6	<.3	<.3	6	.50	.010	24	22	.26	29	.02	<.3	.74	.02	.21	<.2	5
	<.1	425				127	139	1012		2	<.8	6	<.2	62	2.4	12	3	55	13.28	<.001	<.1	10	.23	4	<.01	<.3	.36	.01	.02	3	3600
AU-R	27	67								57	25	2	31	31	25.6	16	24	84	.60	.096	19	179	.63	161	.09	21	1.96	.04	.18	18	484
STANDARD G-2	2	3	3	44	<.3	8	2	548	2.05	<.2	<.8	<.2	4	73	.3	<.3	<.3	41	.66	.097	8	76	.59	227	.13	3	.95	.07	.48	<.2	4

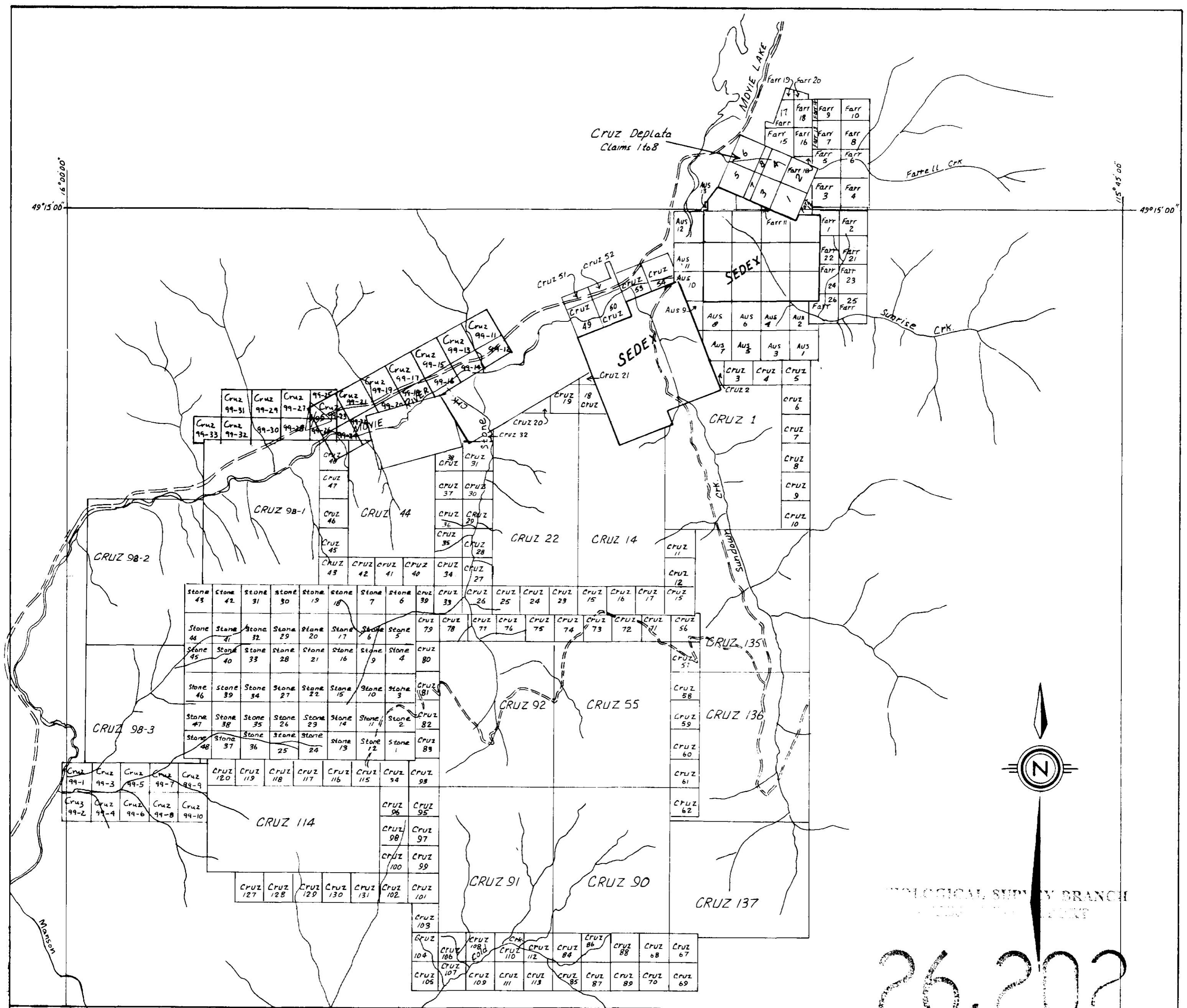
GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.
UPPER LIMITS - AG, AU, HG, W - 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, EM, NI, MN, AS, V, LA, CR = 10,000 PPM.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES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

DATE RECEIVED: NOV 9 1999 DATE REPORT MAILED: NOV 15/99 SIGNED BY: C. Long D. TOYE, C. LBONG, J. WANG; CERTIFIED B.C. ASSAYERS

49°15'00"

115°45'00"

49°15'00"

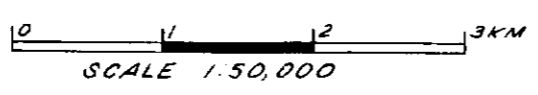


LOGICAL SURVEY BRANCH
 DEPARTMENT OF MINES

26,202

CRUZ PROPERTY

CLAIM MAP



DRAWN BY
D.L. PIGHIN

DATE
OCT 1998

MAP REF. 82G05W, 82G04N

Fig. 2