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COMINCO LTD

EXPLORATION NTS: 94C/2,3

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WESTERN CANADA October 9, 1992

ASSESSMENT REPORT

DIAMOND DRILLING ON

PAR 1 MINERAL CLAIM

OMINECA MINING DIVISION, BRITISH COLUMBIA

LATITUDE: 56°07'30"

LONGITUDE; 125°00'20"

WORK PERFORMED

JULY 3-5, 1992

OWNER OPERATOR - COMINCO LTD.

M.G. WESTCOTT

GEOLOGICAL BRANCH ASSESSMENT REPORT

22.612

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### COMINCO LTD

#### **EXPLORATION**

WESTERN CANADA 9 October 1992

#### ASSESSMENT REPORT - PAR

#### INTRODUCTION

Cominco Ltd staked the Par 1-7 mineral claims in 1990, following discovery of soils anomalous in Pb, Zn, Ag and Fe over an area of 3.5 km x 4.5 km. The soil anomaly is underlain by a north-northwest trending package of Lower Cambrian to Middle Devonian carbonates and clastics. Additional claims were staked in 1991 in order to cover extensions of the prospective stratigraphy; the property now comprises 46 claims totalling 826 units.

Exploration programs in 1990 and 1991 involved: grid soil sampling, geological mapping, airborne and ground geophysics and backhoe trenching. Results from the geochemical and geophysical surveys collectively defined a northerly trending zone deemed prospective for hosting Pb/Zn mineralization. Trenching within this zone exposed mineralized bedrock, including a 17.2 m interval containing 3.5% Pb, 8.4% Zn and 14.2 g/t Ag.

A diamond drilling program was initiated in 1992 in order to further explore the prospective zone. This report pertains to diamond drill hole 92-2 and declares related expenditures for assessment credits applicable to the Par 1 claim.

#### LOCATION, ACCESS AND PHYSIOGRAPHY

The Par property is located 220 km northwest of Mackenzie, B.C. and 10 to 40 km northnorthwest of Germansen Landing (Figure 1 and 2). The property is in the Omineca Mining District on NTS Map Sheets 94C/2,3 and 93N/15,16 and is centered about Latitude 56°03'N and Longitude 124°50'W.

A well maintained network of logging roads stemming from the Fort St. James and Mackenzie areas provide access to the northern half of the property, while much of the area further south requires helicopter support. Tenahiki airstrip, located at Osilinka logging camp, 9 km northwest of the property, is presently in good condition and can accommodate mid-sized aircraft.

Topography in the area is moderate to steep, ranging from 825 to 1900 metres elevation. Tree line is at 1700 m, below which vegetation consists primarily of mature stands of spruce, pine and hemlock. Underbrush is typically sparse and doesn't usually inhibit navigation. Portions of the property have recently been logged.





# **TENURE**

The Par property consists of the following claims; all are 100% owned by Cominco Ltd, 700-409 Granville Street, Vancouver, B.C. V6C 1T2.

<u>Claim Name</u>	Record No.	<u>Size</u>	Date/Rec	<u>Date Due</u>
Osilinka 1	303712	20	91/08/29	94/08/29
Osilinka 2	303713	20	91/08/29	95/08/29
Osilinka 3	303714	18	91/08/29	95/08/29
Osilinka 4	303715	18	91/08/28	95/08/28
Osilinka 5	303716	18	91/08/28	95/08/28
Osilinka 6	303717	18	91/08/29	95/08/29
Osilinka 7	303718	18	91/08/25	95/08/25
Osilinka 8	203719	20	91/08/27	95/08/27
Osilinka 9	303720	5	91/08/30	95/08/30
Par 1	12072	18	90/06/22	99/06/22
Par 2	12073	20	90/06/22	99/06/22
Par 3	12521	20	90/09/10	99/06/10
Par 4	12522	20	90/09/08	99/09/08
Par 5	12523	20	90/09/08	99/09/08
Par 6	12524	20	90/09/09	99/09/09
Par 7	12525	20	90/09/09	99/09/09
Par 8	303721	20	91/08/26	94/08/26
Par 9	303722	20	91/08/27	94/08/27
Par 10	303723	9	91/08/31	94/08/31
Par 11	303724	4	91/09/01	94/09/01
Par 12	303725	20	91/09/02	94/09/01
Par 13	303726	20	91/09/03	94/09/03
Wasi 1	30372	20	91/08/31	94/08/31
Wasi 2	303728	20	91/08/31	94/08/31
Wasi 3	303729	20	91/08/30	94/08/30
Wasi 4	303730	20	91/08/31	94/08/31
Wasi 5	303731	20	91/08/30	94/08/30
Wasi 6	303732	10	91/08/30	94/08/30
Whistler 1	12071	20	90/06/17	94/06/17
Whistler 2	303733	18	91/08/25	94/08/25
Whistler 3	303734	20	91/08/25	94/08/25
Whistler 4	303735	20	91/08/25	94/08/25
Whistler 5	303736	20	91/08/27	94/08/27
Whistler 6	303737	20	91/08/27	94/08/27
Whistler 7	303738	20	91/08/27	94/08/27
Whistler 8	303739	20	91/08/27	94/08/28
Whistler 9	303740	12	91/09/01	94/09/01
Echo 1	303741	15	91/09/03	94/09/03
Echo 2	303742	18	91/09/02	94/09/02
Echo 3	303743	20	91/09/04	95/09/04

Echo 4	303744	20	91/09/04	95/09/04
Echo 5	303745	20	91/09/04	95/09/04
Echo 6	306622	20	91/12/02	92/12/02
Echo 7	306623	20	91/11/30	92/11/30
Echo 8	306624	18	91/11/30	92/11/30
Echo 9	306625	9	91/12/01	92/12/01

### <u>HISTORY</u>

The area currently comprising Cominco Ltd's Par property covers a number of mineral showings that were previously staked and have been restaked and worked intermittently. All showings are described as carbonate-hosted stratabound lead, zinc, silver <u>+</u> barite <u>+</u> hydrozincite styles of mineralization. An inventory of these and other showings has recently been compiled by Ferri, F. et al (1992) as part of BCDM Open File Paper 1992-1.

In 1990 Cominco Ltd carried out a reconnaissance program in the area, in part involving silt and soil sampling stratigraphic extensions of Lower Cambrian to Middle Devonian carbonates hosting known mineral occurrences. In the course of this program the area in the vicinity of the Weber showing, located at Latitude 56°07'23" and Longitude 125°01'31", was staked (Par 1 and 2) and evaluated. The Weber showing, originally staked in 1929, consists of patchy and disseminated galena, sphalerite and barite in Lower Cambrian dolomite. Contour and grid soil sampling defined an area (3.5 km x 4.5 km) anomalous in Pb, Zn, Ag and Fe and an additional five claims (Par 3-7, 100 units) were staked.

In 1991 a program involving: geological mapping, grid soil sampling, backhoe trenching, airborne EM and ground geophysics (HLEM, Mag, IP, VLF) was carried out and defined an area (4.5 km x 1.0 km) with anomalous soil geochemistry (Pb, Zn, Ag, Fe) and several conductors. Additional claims (668 units) were staked to cover the extension of prospective stratigraphy.

The 1992 program involved detailed mapping, line cutting, grid soil sampling, ground geophysics and diamond drilling.

### GEOLOGY

### <u>Regional</u>

The Par Property is situated at the boundary between the Omineca and Intermontane tectonostratigraphic belts. Rocks from four terranes including, from east to west, Cassiar, Slide Mountain, Harper Ranch and Quesnel outcrop in the area. Cassiar Terrane represents a displaced segment of North American miogeoclinal strata of Upper Proterozoic and Palaeozoic age. Slide Mountain Terrane represents an Upper Palaeozoic sedimentary and volcanic oceanic assemblage and occurs structurally above Cassiar Terrane. Further west, Quesnel terrane, which can be subdivided to include the Harper Ranch Terrane, is composed of two volcanic and sedimentary assemblages, the Upper Triassic to Lower Jurassic Takla Group and the Upper Palaeozoic Lay Range assemblage. The western margin of Quesnel Terrane is intruded by Triassic to Cretaceous monzonitic and syenitic rocks of the Hogem Intrusive Complex.

3.

#### <u>Local</u>

Rocks underlying the Par Property include Lower Cambrian to Mississippian clastics and carbonates. Stratigraphy was previously classified using nomenclature applied to miogeoclinal strata of the Cassiar Platform, however, recent 1:50,000 scale mapping by BCDM has resulted in new stratigraphic nomenclature, summarized as follows (After Ferri, et al. 1992, Open File 1992-11).

### Upper Devonian to Lower Mississippian

Big Creek Group:	shale, argillite and siltstone, dark grey, blue-grey and
	black, thin to very thinly-bedded and platy to wavy
	bedded.

#### Middle Devonian

Otter Lakes Group:	Dolomite and limestone, dark grey to grey, fetid, poorly
	bedded, locally fossiliferous, grey, massive.

#### Middle Ordovician to Lower Devonian

Echo Lake Group:Upper-Dolomite and limestone, pale to medium grey, thin<br/>to massively bedded, medium crystalline and sugary, may<br/>be bioclastic, oolitic and contain carbonate breccia<br/>horizons, locally silicified and may exhibit algal structures.

<u>Lower</u>- Argillite, dark grey, graptolitic and argillaceous limestone, grey to dark grey, planar bedded.

### **Cambrian and Ordovician**

Razor Back Group: <u>Upper</u> - calcareous argillite, argillaceous and dolomitic limestone, dark grey, thinly bedded.

<u>Lower</u> - argillite, shale, dark grey to grey or silvery, thinly bedded, may contain sections of sericitic phyllite or schist, white to greenish.

#### Lower Cambrian

Atan Group

Mount Kison Formation:	limestone,	grey	to	white	and	mottled,
	recrystallize	ed, th	in,	wavy	indisti	nct and
	discontinuou	us beda	ling,	slightly	argillac	eous and
	may be dolo	mitized	•			

4.

Mount Brown Formation: sandstone, impure quartzite, grey-brown to maroon, moderately to thickly bedded, interlayered with siltstone and phyllite, dark grey to greygreen, thin to thickly bedded, minor limestone nodules.

Above mentioned stratigraphy forms a broad, northwest trending syncline, truncated to the north by an east-west fault contact with Proterozoic rocks. The northern third of the property covers stratigraphy on western and eastern limbs of the syncline, while the southern two-thirds covers the eastern limb only. Stratigraphy on the eastern limb maintains a relatively consistent northwest strike and westerly dip (20-50°). Faulting and additional folding of the western limb results in more variable structural orientations, though the northwest trend is generally maintained.

### **DIAMOND DRILLING**

During July and August 1992 a diamond drilling program was carried out on the Par property. Falcon Drilling Ltd. of Prince George, B.C. was the drill contractor. This report pertains to diamond drill hole 92-2, commenced July 3 and completed July 5, 1992. Drill hole 92-2 is located at the southern end of the Par 1 claim (Figure 2 and Plate 1), at UTM coordinate 6220725 N; 374800 E.

The objective of DDH 92-2 was to intersect mineralization revealed in trench 91-3, where a 17.2 m sample yielded 3.5% Pb, 8.4% Zn and 14.2 g/t Ag. The mineralized interval comprises a variety of rock types including light to dark grey dolomite, green-grey phyllite and black carbonaceous mudstone. Mineralization consists of pyrite, sphalerite, galena and trace barite, occurring as disseminations, massive bands and irregular patches.

The core was logged and select intervals were sampled and analyzed for Pb, Zn and Ag (refer to Appendix III for log and Appendix IV for analytical results).

Expenditures directly associated with diamond drill hole 92-2 totalled \$21,291.40 (see Appendix IV for details).

### RESULTS

Diamond drill hole 92-2 intersected three rock types: black, carbonaceous  $\pm$  calcareous mudstone; medium to dark grey, carbonaceous limestone; and a medium green-grey,  $\pm$  phyllitic rock composed of varying proportions of sericite, quartz and carbonate (See Appendix III). Limited outcrop, a lack of fossil evidence and similarities between lithologies at different stratigraphic levels, makes it difficult to definitively assign stratigraphic associations to the units observed in drill core, however an Ordovician or older age is presumed.

Two narrow mineralized intervals were intersected. Between 52.7 and 53.4 m, fine pyrite, sphalerite and galena is interlaminated with very calcareous sericite + quartz rock. Combined sulphides comprise approximately 15-20% of the interval. The estimated mode of sulphides is 80-90% pyrite, sphalerite + galena 10-20% (sphalerite > galena). This interval and adjacent intervals were split and analysed for Pb, Zn and Ag at the Cominco Exploration Research Lab, Vancouver, B.C. The mineralized interval yielded values of 7360 ppm Pb, 13700 ppm Zn and 4.5 ppm Ag over 1 m. A second mineralized interval, between 53.9 m and 54.4 m, is similar in style to the above-mentioned interval. A 0.5 m sample yielded values of 0.97% Pb, 5.45 Zn and 13.5 g/t Ag.

Analytical results for all sampled intervals are given in Appendix IV.

#### **CONCLUSIONS**

Diamond drill hole 92-2 tested a portion of the stratigraphy beneath trench 91-3, where surface sampling returned assay results of 3.5% Pb, 8.4% Zn and 14.2 g/t Ag over a 17.2 m interval. Two narrow (70 cm and 50 cm) mineralized intervals were intersected in drill core. The relationship between mineralization observed in core and that encountered in trench 91-3 is unclear, as rock types present in the trench are not all represented in the drill core and styles of mineralization differ somewhat.

Reported by:

Endorsed by:

Approved for Release by:

M. G. Westcott Geologist

A.M. Pauwels Senior Geologist

N. J. M

W. J. Wolfe Manager, Exploration-Western Canada

WJW/pm Distribution: Mining Recorder File

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#### APPENDIX I

#### REFERENCES

CRAIG, D.L. (1990): Par Property Year End Report, Cominco Ltd Files.

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- FERRI, F., DUDKA, S., and REES, C.: (1992a): Geology of the Uslika Lake Area, Northern Quesnel Trough, B.C. (94C/3,4,6); B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork 1991, paper 1992-1.

(1992b): Geology of the Uslika Lake Area, Northern Quesnel Trough, B.C. (94C/3,4,6); B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1992-11.

# APPENDIX II

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# STATEMENT OF EXPENDITURES

# PAR 1 Mineral Claim (Work Performed July 3-5, 1992)

Salaries	
M.G. Westcott - 2 days @ \$285/day	\$ 570.0
Domicile - 2 man days @ \$50/day	100.00
Geochemical analyses (Pb, Zn, Ag)	
7 samples @ \$11/sample	77.00
Diamond Drilling 248.7 m @ \$79.31/m Drilling expenses include mob/demob, supplies, drill cost and site preparation. Cost per metre represents total drilling expenses as per Falcon Drilling Ltd. invoice, divided by total metres drilled.	19,724.40
Report preparation (M.G. Westcott) - 2 days @ \$285/day	570.00
Drafting/Reproduction	250.00

Total Expenditures: \$21,291.40

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APPENDIX III

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DRILL LOG, DDH 92-2

# DRILL HOLE RECORD

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# COMINCO LTD.

Property: PAR Commenced: July 3, 1992 Completed: July 5, 1992 District: Western District Location: Par Main Grid Core size: NQ Hole No.: 92-2 Tests at: 30.5 93.3 130 248 Cor. Dip: 59 60° 60° 60.5 True Brg.: 258°, 258.5, 261, 258 % Recovery.: 95.6%

Objective: Intersect mineralization under trench 91-3 Date: July 4, 1992 Logged by: M.G. Westcott

Metres From	То	Description
0	7.9	OVERBURDEN - CASING
7.9	12.2	CASING in and out of Rock + mud to 12.2 so cased to 12.2
7.9	8.4	BLACK, VERY CARBONACEOUS, CALCAREOUS MUDSTONE very broken up
8.4	10.8	BLACK, MUDDY GOUGE ZONE and broken up black, carbonaceous limestone
10.8	14.0	BLACK, VERY CARBONACEOUS LIMESTONE. Broken up section with a few narrow muddy gouge zones. White calcite stringers fairly abundant.
14.0	14.4	BLACK, MUDDY GOUGE (as above)
14.4	27.7	BLACK, VERY CARBONACEOUS SLIGHTLY CALCAREOUS MUDSTONE. Difficult to see bedding features, but very fine laminations or foliation surfaces are distinguished by lighter colour. Some small scale tight folding defined by these laminae/foliation surfaces. Fine white calcite stringers present but not plentiful. Pyrite patches, lenses and stringers are common (Total $Py = 1\%$ ). Pyrite stringers are folded with foliation. Rusty patches on some fracture surfaces.
		Core axis to foliation (probably bedding parallel) angle @ 15.6m is 45°, appears quite consistent
27.7	27.9	BROKEN ZONE @ CONTACT BETWEEN MUDSTONE (above) AND LIMESTONE (below). Not necessarily a fault.
27.9	41.2	<ul> <li>MEDDARK GREY, CARBONACEOUS LIMESTONE. Distinct banding (bedding) defined by shades of grey, which appear to correlate with finer (dark) and coarser (med grey) silt and mud size material. White calcite veins, lenses and irregular patches are common (10 + /m) Bedding orientation is quite consistent.</li> <li>@ 33.5m 55° to core axis.</li> <li>@ 39.6m 50°</li> <li>@ 40.6m 55°</li> <li>Minor pyrite (&lt;0.5%) cubes.</li> <li>Few stylotiles highlighted with black carbonaceous material.</li> </ul>

DRILL HOLE RECORD Property:		COMINCO LTD.	Page 2 of 8 Hole No.: 92-2
41.2	41.9	BLACK, SLIGHTLY CALCAREOUS MUDSTONE + 0 zone comprises 50% black gouge mud and 509 mudstone. There are a few small (< 1 cm) white	% broken-up black
41.9	44.4	LIGHT-MED GREY AND BLACK, FINELY LA MUDSTONE. Light grey laminae appear to be c size). Laminae are fine (0.5 - 2mm) and wavy band consistent bedding. Core axis/bedding @ 42.1m 70° Minor pyrite (< 0.5%) Minor calcite <u>+</u> qtz veinlets and irregular patches. Core/bedding @ 43.0 70°. Rock is only slightly calcareous and quite soft.	oarser grained (silt ed, but overall have
44.4	46.9	BLACK SLIGHTLY CALCAREOUS, MIXED MUDST MUD GOUGE. Approx. 50% gouge mud and 50% bi 41.2-41.9 zone). Mudstone is soft. No lamination	lack mudstone (like
46.9	50.1	<ul> <li>BLACK + MINOR GREY LAMINATED SILTY M calcareous (could be classified as muddy - silty ligrey silty laminations present but not as plentifus section. Foliation (well developed parting) paralle</li> <li>@ 48.0 m 20 cm quartz (80%) carbonate (20%) w</li> <li>@ 48.2 - 49.2 m this section is broken-up with qu and flooding, locally entraining mudstone fragm laminations and irregular patches total 2-5% pyrite To be sampled for geochem.</li> <li>Quartz-calcite veining comprises approx. 10% of it</li> </ul>	mestone). Lighter al as in 41.9-44.4 els bedding. vein. artz-calcite veining ents. Fine pyrite e for this section.
		Core to bedding angles: @ 47.6m 55° @ 48.2m 50° @ 50.0m 75°	
50.1	50.5	TRANSITION FROM BLACK, CALCAREOUS S (muddy limestone) TO GREENISH GREY, SERICI QUARTZ/CARBONATE ROCK. The two lithologi approx. 50% of interval and are interbedded. O represent gradual depositional change. The rock is i along foliation and breaks up when handled. Core axis to bedding @ 50.3 m is 65°	TE ( <u>+</u> CHLORITE) ies each comprise Contact appears to
50.5	53.4	<ul> <li>MEDIUM GREENISH-GREY, SERICITE/QUARTZ/C/ (PHYLLITE). Sericite (<u>+</u> Chlorite) laminations (0 defined and wavy. Very well developed parting, ro (1-2 mm) bedding parallel chips. Rock is calcareous.</li> <li>Fine Pyrite laminations and patches (&lt; 1 cm) are consistent interval.</li> <li>Fine pyrite, sphalerite, galena interlaminated with</li> </ul>	0.5-2mm) are well ock breaks into thin weakly-moderately ommon throughout

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DRILL HOLE RECORD Property:		COMINCO LTD. Page 3 of Hole No.: 92	
		sericite + quartz rock over 70 cm (52.7-53.4) sulphides comprise approx. 15-20% of inter- estimate is Pyrite 80-90, Sphal + galena 10- Several 0.5-1.0 cm calcite veins in mineralize mineralization). Core/sulphide lamination angle @ 52.8 m 30-35 20 cm section @ 52.8-53.0 is 50% sulphides ( Core/lamination angle @ 51.9 m 10-15° Lower 30 cm of mineralized interval (53.1-53.4) highly sericitic ( <u>+</u> chlorite).	val. Sulphide mode 20% (sphal > gal.) ed section (they cut 5° as above).
53.4	57.1	LIGHT GREENISH-GREY SERICITE/QUARTZ/C Phyllitic foliation. Sericite ( <u>+</u> chlorite) is light ye occurring as laminations, thin bands and perv throughout rock. Quartz is grey and commonly 1mm) laminations and discontinuous lenses paral is typically difficult to see with naked eye. Very well developed parting/foliation indicates se folding. Sericitic laminae define swirled texture is obviously present, the overall orientation consistent @ 50-60° to core axis. Minor (<< 0.5%) fine disseminated pyrite is interval. Occasional patches and lenses of pyrite	Ilow-green-tan colour vasive disseminations observed as thin (< lel to foliation. Quartz ome tight mesoscopic locally. While folding of banding is quite present over most of
		<ul> <li>© 53.9-54.4 Sulphide (py, sph, gal) is interlam quartz/carbonate rock (phyllite). Style of miner 52.8-53.0 m mineralized section. The main dift two mineralized intervals is that this one appear and less carbonate than the upper section. section (54.1-54.3) comprises approx. 30-40% 70-80%, sph + gal 20-30%). Sphalerite is brownore abundant than galena.</li> </ul>	ralization is similar to iference between the rs to have more silica The best mineralized sulphide (mode pyrite
		Sample intervals: 53.9-54.4 54.5-55.9 55.9-58.2 Core/banding angle of sulphide mineralization @ Resistivity of sulphide interval at 1" electrode 5000 ohms along sulphide bands and 500,000	spacing is as low as
57.1	58.1	LIGHT GREENISH-GREY MUDDY GOUGE ZONE mud, 10% sericite/quartz/carbonate (phyllite) 1 Muddy gouge is quite calcareous.	
58.1	62.0	MEDIUM GREENISH GREY "SERICITE"/O (PHYLLITE). Slightly calcareous, very soft. Dark -appears to be due to higher "chlorite" content. broken-up. Core/bedding measurements difficu 61.8 m 20°.	er than section above This section is quite

## DRILL HOLE RECORD

Property:

62.0	63.2	Same rock as above except crushed up + sections of light greenish grey mud. Fragments are subrounded (2 mm - 20 mm) and commonly quite siliceous. This rock is only slightly carbonaceous.
63.2	72.0	LIGHT - MED GREENISH GREY, "SERICITE"/QUARTZ/CARBONATE (PHYLLITE). Rock has been folded, sheared and broken-up. Sericitic bands (laminae) are fairly distinct and inpart define the contorted nature of the rock. Minor pyrite is present as discrete cubes sparsely disseminated, or as drawn out specs (1-3 mm) of pyrite + quartz parallel to foliation. Quartz occurs as med-dk grey lenses and irregular patches and occasionally in veins. (eg. @ 64.8m, where 10 cm bull white quartz veins with 5% pyrite occurs). Carbonate is present, but hard to estimate amount because where "sericite" content becomes significant it is generally difficult to get acid to fizz - acid gets soaked up etc.
		Core axis/banding angles. @ 70.7 m 40-45° @ 69.3 m 50° @ 64.2 m 50°
72.0	74.1	FAULT ZONE. Same as above except rock is sheared up here. Rock is brecciated (0.5 - 1.0 cm frags) and has light green-grey muddy gouge developed over ~ 50% of interval. Gouge fizzes quite well.
74.1	76.0	MED. GREEN GREY, WELL LAMINATED "SERICITE"/QUARTZ CARBONATE ROCK. This section is quite siliceous and has particularly well defined laminations of "sericite" and pyrite + quartz. Pyrite + quartz laminations are (0.2-1.0 mm) and very abundant (2-5/cm). Laminations define wavy and locally contorted bedding. Average core/bedding angle is 35-45°. Total pyrite in section ~ 5%
76.0	108.5	LIGHT-MED GREENISH GREY, SERICITE (30-50%) / QUARTZ (40%) / CARBONATE (10-20%), PHYLLITIC ROCK. This rock differs only slightly over this thick interval. Bands/laminations of greenish tan "sericite" (± chlorite) rich material are well defined. Bands are generally wavy, but locally contorted. Locally "sericite" bands are fairly dark green and are presumably chlorite rich. Where quartz is visible it occurs as fine (< 1.0 mm) light grey laminae, or more commonly as discontinuous elongate lenses < 1 mm x 10 mm) Minor pyrite disseminations and quartz + pyrite specs are sparsely distributed throughout section ( << 0.5% py). Carbonate content of this rock is difficult to estimate but is present; most spots react slightly to acid. Zinc Zap tried on all boxes - no positive (red) reaction. Core axis/Lamination angles quite variable at metre scale. Significant mesoscopic folding obvious. Averages for intervals.

DRILL HOLE RECORD Property:		COMINCO LTD.	Page 5 of 8 Hole No.: 92-2	
		78.0-84.0       25-45°         84.0-86.0       20-40°         86.0-89.8       10-20°         89.8-96.3       20-40°         96.4-99.4       30-45°         99.4-102.4       40°         102.4-108.4       45-65°		
108.5	112.9	MED GREENISH GREY SERICITE/QUARTZ/ Same as interval above. Chlorite content is slightly darker green. Sericite banding angle to core axis. Minor drawn out quartz + pyrite Quite calcareous.	s above average, locally is quite consistent @ 45 °	
112.9	116.6	SERICITE/QUARTZ/CARBONATE PHYLLITE R THIN BLACK MUDSTONE BANDS/LAMINATIC grey, well banded. Wavy-contorted ban sections. Few thin (1-3 mm) dark grey interfoliated (interbedded?). Core/banding ar 20-35°.	DNS. Light-medium green- ds and local broken-up -black mudstone seams	
116.6	118.2	"SERICITE"/QUARTZ/CARBONATE PHYLLITIC 20 CM) OF BLACK GRAPHITIC MUDSTON (green-tan) and quartz (grey) is well defined mm), quartz bands are (2-5mm). @ 117.4-117.6 black, graphitic mudstone do (10-20%) "sericite"/quartz/carbonate rock int at 118.1-118.2 m. Core/banding quite cons	E. Banding of "sericite" Sericite bands are (1-4 minated band with minor serfoliated. A similar band	
121.0	134.5	<ul> <li>SERICITE/QUARTZ/CARBONATE PHYLLITIC</li> <li>This section has less well defined sericite</li> <li>higher quartz content. Rock cores well and f</li> <li>to foliation as well as along foliation. Gen</li> <li>rock. Some sections have been pervasively</li> <li>bleached to pale greenish grey.</li> <li>Quartz veinlets (&lt; 1mm) and occasional legistering</li> <li>Dark grey pyrite + quartz specs (0.3 mm X 2</li> <li>pyrite for interval &lt; 0.5%.</li> <li>Core/banding angle not always obvious b</li> <li>consistent @ 45°.</li> </ul>	bands and significantly fractures at varied angles erally a better indurated ly silica flooded and are enses (1 cm) throughout -10 mm) common. Total	
134.5	139.2	MED GREENISH-GREY "SERICITE"/QUARTZ/C defined sericite bands present. Less silica th 10 cm light green-grey gouge mud @ 137.8 Core/banding angle gradually increases thro 55°, @ 139m 80°). Interval also gradual downhole.	nan above interval. ugh interval (@ 137.5m	
139.2	155.4	MEDIUM GREENISH-GREY "SERICITE"/QUAR Quite siliceous, locally very siliceous (perva		

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		bands are very difficult to discern. Chlorite ma section. Very green chloritic patches with non- silicic sections. Silica is very fine grained, g pervasive. Faint white specs (0.5-1.0 mm) co Core angle/foliation is difficult to measure @ Quartz veinlets (1-3 mm) locally. Fine disseminated pyrite throughout (< 0.5% Core/foliation @ 155.0m 40-45° @ 148.7m 40° (Quite consistent over interva	discrete edges in highly reenish-grey and quite ommon in some bands. 144.6 m 45°. )
155.4	159.6	MEDIUM - DARKISH GREEN-GRE (CHLORITIC)/QUARTZ/CARBONATE ROCK. above section. Lighter and darker green-grey & bands are gritty looking (fine sand and silt observed. The rock is quite siliceous, fine sil- significant silica component. Contacts of san and lobate (possible loading feature or biot disseminated throughout, quite abundant (0.5 in many spots. On average core/bedding is 20	Gradual change from bands (1-2 cm). Lighter b), no obvious grading t/sand appears to have ndy bands are irregular urbation). Fine pyrite %). Banding is swirled
159.6	165.8	LIGHT-MEDIUM GREEN-GREY "SERICITE"/ ROCK. Bands/laminations of "sericite" are loc quite siliceous. Narrow (< 1 cm) quartz veinlet 6/m). No reaction with acid. Core/banding @ 162.0 m 45° Core/banding @ 165.6 m 75-80° Banding not well developed in most spots. Some contorted sections.	ally abundant. Rock is
165.8	175.7	MEDIUM GREEN-GREY "SERICITE"/QUARTZ Bedding is faint and defined by light coloure laminated (< 1mm), somewhat gritty looking Med-dk green chlorite rich patches locally. Ro content + few narrow quartz veins. Core/bedding angles @ 168.5m 10° @ 170.0m 30° @ 175.4m 20°	d greenish-grey, finely bands.
175.7	189.8	LIGHT-DARK GREEN + GREY "SERICITE"/QUAR Banding well defined by 1. greenish-tan "sericite" rich beds/laminae. 2. light, green-grey siliceous gritty looking bed 3. med-dk green chlorite rich bands. Edges of individual bands (laminae) are "washe sharp). Typical band thickness (2 mm - 1 cm Laminations are wavy, but have consistent or w.r.t. core axis.	ds. ed out" (not particularly )

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		Core/bedding angles: @ 175.6m 30° @ 178.6m 35° @ 183.2m 40° @ 186.2m 45° @ 188.6m 40-45° @ 184.7m there are three 1.0 cm quartz veins with minor patchy pyrrhotite and red-brown sphalerite selvages. @ 187.8-188.2m broken-up/sheared zone. Minor gouge development. Acid fizzes slightly in most spots.
189.8	248.7	LIGHT-MEDIUM GREEN-GREY "SERICITE"/QUARTZ/CARBONATE ROCK. The remainder of the hole is very similar, varying locally in silica content, nature of banding/bedding and intensity of shear and induration. Occasional narrow quartz veins (< 1 cm). Pyrite + quartz specs/lenses (0.2 mm x 2-5 mm) common throughout (total py < 0.5% ). Small pyrrhotite patches (2-5 mm), commonly in quartz vein, occur very locally. <u>General description of "Sericite"/Quartz/Carbonate Rock</u> From 189.8 to E.O.H. <u>Colour</u> : Predominantly light green-grey, locally medium green grey. Fine gritty silica rich sandy-silty bands are light grey and slightly green. "Sericite" rich bands are greenish tan colour. Irregular patches, and occasional bands of chlorite-rich rock are med- dark green. <u>Texture/Fabric</u> The rock has a well developed phyllitic parting parallel to compositional bands (bedding). Bedding is typically planar to wavy and occasionally contorted. Locally, sections (< 1m) are sheared and brecciated (0.5 - 2 cm frags.) In general, the rock cores well (usually 100% Recov.) <u>Composition</u> "Sericite" includes sericite, chlorite ± talc and occurs as 1. discrete bands and laminae. 2. pervasively distributed through rock. Where bands/laminae are developed rock is generally more sheared (evidenced by drawn out pyrite/quartz specs). Bands may be caused by shear? <b>Quartz</b> occurs as veinlets and stringers (quite sparse) - silica flooded patches (very local) - silica rich gritty silt-sand bands - laminations and discontinuous lenses of fine grained quartz.

# DRILL HOLE RECORD Property:

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Irregular silic	a patches (< 1m) are coincident with bleached patches.		
Where rock is sheared, quartzose gritty bands are brecciated and are commonly imbricated and/or drawn out. Silica rich gritty silt-sand bands (1-3 cm thick) are present locally eg. @ 155-156 m and 226.5. These bands have lobate - wavy boundaries - loading feature? Laminations and discontinuous lenses of grey silica rich rock are interfoliated with "sericite".			
Carbonate	The carbonate content of this rock is difficult to quantify. Most places will give fizz with acid if pulverized; locally it will fizz slightly on cut surfaces. Calcite veinlets and stringers common but not volumetrically significant - some veins and veinlets are quartz + carbonate.		
Core Axis to	Banding/Foliation/Bedding Angles		
238.5-243m	quite sheared up, wavy banding 10-40° wavy banding, locally sheared 0-30° avg 20° wavy banding, changes gradual. Locally broken up. avg. 20-30° fairly consistent, planar - slightly wavy, avg. 25° (defined by 2-3 mm laminations and parting) poorly defined banding, quite broken section. Wavy - contorted bands locally, avg. 10-25° well defined banding (1 mm - 2-3 cm), quite planar. Exhibits significant shear; pyrite + quartz and quartz rich frags are drawn out along banding. Consistent orientation 30-40° poorly defined, wavy "banding" (foliation rather than compositional banding), fairly consistent @ 30-40°. Sheared broken-up zone @ 10-20° to core axis Poorly defined sericitic bands + few chloritic bands. Wavy and gradually changing 10-30°. Poorly developed sericitic bands, and partings well developed. Gritty quartz-silty-sandy bands locally present (sometimes broken up). Core axis to		
	banding/Foliation angle 20-30° (quite consistent) al 225.0-248.7 (E.O.H) small (1-5 mm) pyrrhotite are quite abundant. Estimate total pyrrhotite (~0.5-		
Е.О.Н.			
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## APPENDIX IV

### Analytical Results for Par DDH 92-2

Sampled Interval	Length(m)	Pb(ppm)	Zn(ppm)	<u>Ag(ppm)</u>
48.20 - 49.20	1.0	176	2660	0.5
50.90 - 52.40	1.5	20	37	<.4
52.40 - 53.40	1.0	7360	13700	4.5
53.40 - 53.90	0.5	394	3050	0.6
53.90 - 54.40	0.5	8950 (0.97%)	52100 (5.45%)	13.5
54.40 - 55.90	1.5	33	1320	<.4
55.90 - 58.20	2.3	60	43	<.4

All analyses were performed at the Cominco Exploration Research Laboratory, E. Pender Street, Vancouver, B.C.

Analytical Methods

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Pb - Aqua Regia Decomposition/AAS Zn - " Ag - "

## APPENDIX V

### CERTIFICATE

I Michael G. Westcott of #14-1101 West 8th Avenue, Vancouver, British Columbia, Canada, declare:

- 1. I am a Geologist, residing at the above address.
- 2. I graduated from the University of British Columbia in 1988 with a Bachelor of Science (Geology) degree and from Queen's University, Kingston, Ontario in 1991 with a Masters of Science degree (Mineral Exploration).
- 3. I am an associate of the Geological Assocation of Canada.
- 4. This report is based on my personal field\_examination of the property and a review of all pertinent information.

Dated at Vancouver, British Columbia, this  $14^{\text{H}}$  day of

October, 1992.

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Mile Wester

M. G. Westcott, M.Sc. Geologist

