1977

FALL DRILL PROGRAM

on the

LARCHE-ROUSSEAU PROPERTY

by

Dave Comba MSc.

N.T.S. 41 P/14

FALCONBRIDGE COPPER LIMITED
Noranda, Quebec

March, 1978

ACCOMPANYING DRILL LOGS

LR 77-1	Plan and Section	1" = 100'
LR 77-2	Plan and Section	1" = 100'
LR 77-3	Plan and Section	1" = 100'
LR 77-4	Plan and Section	1" = 100'
LR 77-5	Plan and Section	1" = 100'
LR 77-6	Plan and Section	1" = 100'
LR 77-7	Plan and Section	1" = 100'

CONTENTS

SUMMARY

A contract for 4000 feet of BQ wireline drilling was let to Hosking Diamond Drilling Company Limited, Rouyn, Quebec, to test geophysical anomalies and promising surface showings. Seven holes were completed between October 4th 1977 and November 9th 1977, for 3952 feet.

No base or precious metals of economic significance were intersected.

INTRODUCTION

The property is underlain by Archean volcaniclastic rocks of andesitic to dacitic composition. Gradational intercalations between bands rich in ash, lapilli or block*sized fragments are recognized. Little compositional variation exists within each band. Regional metamorphism lies within the lower Greenschist facies. All volcanic rocks contain abundant sericite and carbonate alteration and minor chlorite alteration. Schistosity striking 035° to 045° and dipping within a few degrees of vertical prevades all volcaniclastics with varying intensity. Some left hand movement appears to have taken place parallel to the schistosity on minor faults.

Previous explorationists recognized three "marker" zones of mineralized rhyolite/chert bearing breccias on that portion of the property immediately south of Patricia Lake to the baseline extending from L 30E to L 10W (Teck Coord System 1975-1976). The three zones are characterized by lapilli to block sized fragments of andesite-dacite lava mixed with fragments of rhyolite and/or chert in a silicified matrix containing up to 30% sulphides as massive pods, partial rims around chert clasts, veinlets and disseminations. The "New Showing Area" is conformable to a zinc-rich central "marker". Exposed mineralization varies from 0.5' to 30.0' wide, strikes 110° and dips nearly vertically. In decreasing order of abundance, the economic sulphide minerals are sphalerite (light honey coloured), galena and chalcopyrite. Pyrite is present in amounts varying from trace to 3% in pits and trenches. High tenors of precious metals are indicated from selected grab samples. Sulphides are assumed in part to be related to metal-exhalative processes or remobilizations from accumulations originally deposited by such processes.

Seven holes totalling 3952 feet were drilled to test the best surface exposures of mineralization in the "New Showing Area" and adjacent I.P. anomalies. All holes are collared in Halliday Township between lines 4W and 18W (Teck Coord Grid 1975-1976).

*Ash - fragments less than 4 mm
Lapilli - fragments from 4 mm to 32 mm
Block - fragments larger than 32 mm

LOCATION AND ACCESS

The claim group straddles the Halliday-Midlothian township boundary adjacent to the Stairs Mine, a small former gold producer, 40 miles south-southeast of Timmins and approximately 24 miles west of Matachewan. The townships form part of the Larder Lake Mining Division.

Summer access is by logging road (36 miles from Matachewan) and canoe. The logging roads are not plowed during the winter, effectively isolating the area. (FIGURE 1)

TOPOGRAPHY AND VEGETATION

The property is characterized by gently undulating hills and broad flat swampy areas. Topographic relief on the claim group does not exceed 100'. The hilly areas typically have about 20% outcrop, but the majority of exposures require stripping of moss and forest debris. Outcrops occur as abrupt ridges and small glacially sculptured "roches moutonees". Large swampy areas without outcrop contain overburden consisting of glacial sand, gravel and boulder outwash.

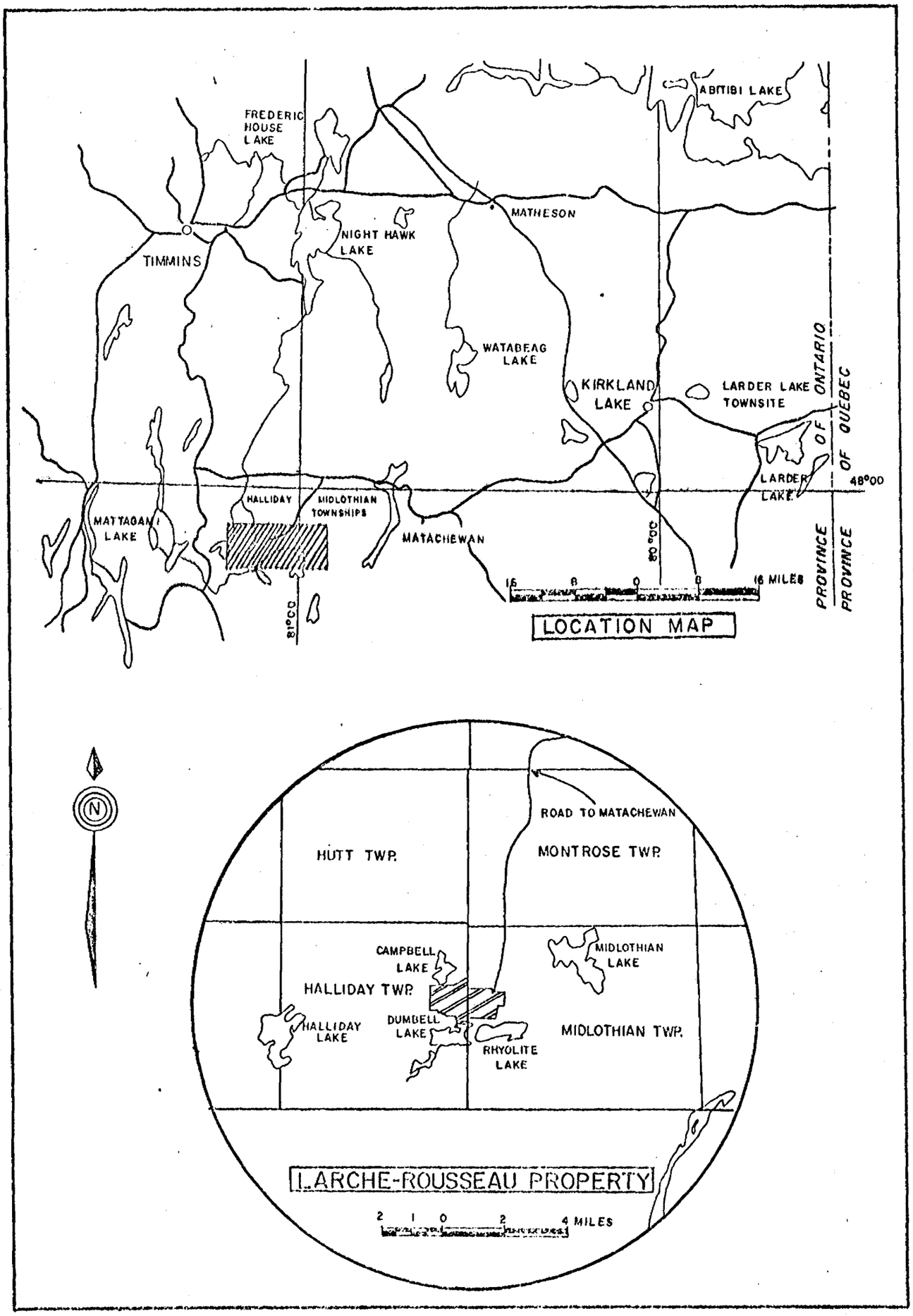
The property is heavily forested with spruce, hemlock and cedar in the lower areas and with birch, poplar and pine occurring on the better drained slopes. Magnificent specimens of white pine and cedar are present.

PROPERTY

A contiguous block of 37 claims was optioned in Halliday and Midlothian Townships from prospectors John P. Larche and A. (Fred) Rousseau, July 1st 1977. (FIGURE 2) The claims are currently under extension for lease.

The subject drill program resulted in the following footage drilled on individual claims in Halliday Township.

CLAIM	HOLE NUMBER	FOOTAGE
L-255466	LL 77-1	115
	Subtotal	115


FREDERIC HOUSE LAKE
ABITIBI LAKE
MATHESON
NIGHT HAWK LAKE
TIMMINS
WATABEAG LAKE
KIRKLAND LAKE
LARDER LAKE TOWNSITE
PROVINCE OF ONTARIO
PROVINCE OF QUEBEC
LARDER LAKE
48°00
HALLIDAY
MIDLOTHIAN TOWNSHIPS
MATTAGAMI LAKE
MATACHEWAN
80°00
16 8 0 8 16 MILES
LOCATION MAP
N
ROAD TO MATACHEWAN
HUTT TWP.
MONTROSE TWP.
CAMPBELL LAKE
MIDLOTHIAN LAKE
HALLIDAY TWP.
HALLIDAY LAKE
DUMBELL LAKE
MIDLOTHIAN TWP.
RHYOLITE LAKE
LARCHE-ROUSSEAU PROPERTY
2 1 0 2 4 MILES

CLAIM	HOLE NUMBER	FOOTAGE		
L-255465	LL 77-1	815		
	LL 77-2	507		
	LL 77-3	397		
	LL 77-4	496		
	LL 77-5	507		
			Subtotal	2,722
L-255464	LL 77-6	607		
	LL 77-7	508		
			Subtotal	1,115
3	7	3,952	TOTAL	3,952

PREVIOUS DRILLING

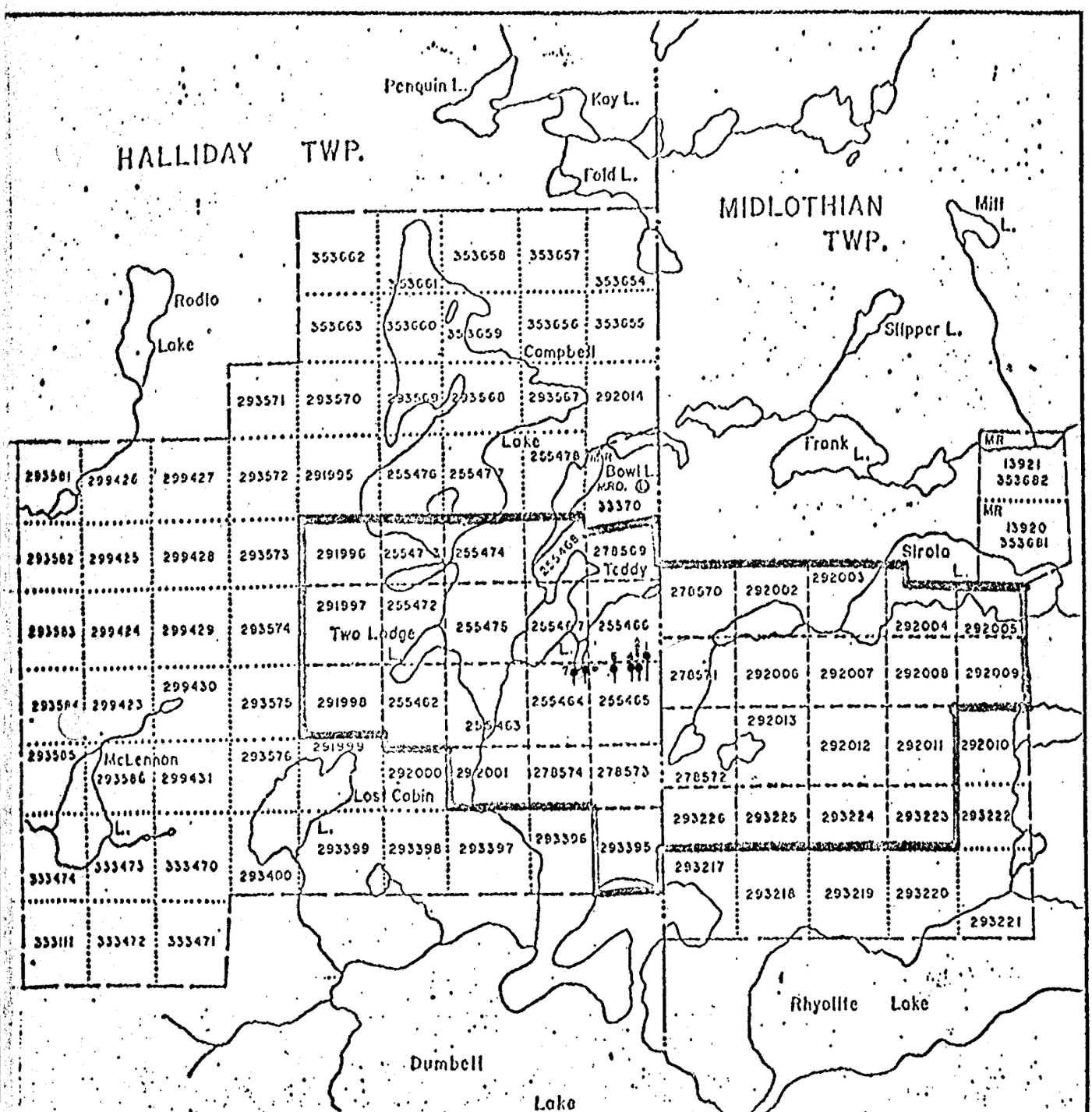
At least 24 drill holes are known or are reported to have been drilled on the property by the following companies:

COMPANY NAME	NUMBER OF HOLES	DATE(S)
STAIRS MINING AND EXPLORATION	1	1965
HALLIDAY MINES	1	1964
CANADIAN ARROW MINES LTD.	13	1971-1972
GLEN COPPER	8	1971-1972
NEWMONT	1	1973

Logs exist in government assessment files for the majority of holes. Core from most of the 1970's drilling is stored on the property and is in fair condition.

THE FALCONBRIDGE COPPER 1977 DRILL PROGRAM

Field men from three potential contractors were taken to the proposed sites on two occasions. A contract was signed with Hosking Diamond Drilling Company Limited, Rouyn, Quebec. Drilling was confined to geophysical and geological targets in Halliday Township. All holes were drilled north to south. All holes deviated to the left (east) i.e. perpendicular to the schistosity. Core is stored in steel core sheds at the Company's Norbec Mine site, Noranda, Quebec. Total footage 3952, is summarized as follows:



37 claims currently under extension for lease. Due 1981.

4 — hole number

Diamond drill hole FCL LR 77

Dave Comba 14/6/77

FALCONBRIDGE COPPER LIMITED
LAKE DUFAULT DIVISION

CLAIM LOCATION MAP
LARCHE - ROUSSEAU OPTION
HALLIDAY - MIDLOTHIAN TWPS.

SCALE 1" = ½ Mile	DRAWN D. Comba	FIGURE 2
DATE May 31/77	APPROVED	

HOLE	FOOTAGE	CLAIM(S)
LR 77-1	930'	L-255465, L-255466
LR 77-2	507'	L-255465
LR 77-3	397'	L-255465
LR 77-4	496'	L-255465
LR 77-5	507'	L-255465
LR 77-6	607'	L-255464
LR 77-7	508'	L-255464
	3,952'	

RESULTS

Hole LR 77-1

Location:	Latitude	9+00N
	Departure	6+00W
	Azimuth	180°
	Dip	55°
	Depth	930'

This hole was drilled for two reasons: (1) test an I.P. anomaly centered about 7N, 6W; and (2) intersect the projected extension of the mineralized chert breccia approximately 200' east of the last known surface exposure and below geophysical coverage. The hole intersected weakly mineralized lapilli tuff similar to surface exposures from 678' to 730.5' but lacks the distinctive chert clasts. The I.P. anomaly appears to be caused by disseminations, smears and anastomosing veinlets (matrix ?) of pyrite within sheared altered volcaniclastics.

Hole LR 77-2

Location:	Latitude	5+00N
	Departure	7+50W
	Azimuth	180°
	Dip	65°
	Depth	507'

Drilled to test the widest known exposure of mineralized chert breccia, below geophysical coverage. Intersected mineralized chert breccia and silicified lapilli to ash tuff, from 290.8 to 435.0'? Mineralized sections appear to be dilated by dykes (?) 318.5 to 330.0 and 334.2 to 339.9. The most significant intersections are:

Cu ppm	% Zn	Pb ppm	Au oz/Ton	Ag oz/Ton	Footage	Length
1260	3.19	154.5	0.047	0.23	311.0 - 318.5	7.5'
183	0.32	65.8	0.030	0.05	330.0 - 360.0	30.0'

Hole LR 77-3

Location:	Latitude	5+00N
	Departure	7+50W
	Azimuth	180°
	Dip	45°
	Depth	397'

Drilled to connect the widest known surface exposure of mineralized chert breccia with encouraging intersection in hole LR 77-2. Values were below expectations in chert breccia 186.8 to 270.5. The more significant intersections are:

Cu ppm	% Zn	Pb ppm	Au oz/Ton	Ag oz/Ton	Footage	Length
330	1.84	1460	0.001	0.10	228.8 - 230.8	2.0'
306	0.33	180	0.010	0.056	256.8 - 269.7	12.9'

Hole LR 77-4

Location:	Latitude	5+00N
	Departure	8+00W
	Azimuth	180°
	Dip	65°
	Depth	496'

Drilled to test zone between two surface sample sites and extend encouraging intersection in hole LR 77-2. The best values in a dilated intersection 298.5 - 318.0 and 328.8 - 356.5 are:

% Cu	% Zn	Pb ppm	Au oz/Ton	Ag oz/Ton	Footage	Length
0.35	0.93	-	0.075	0.27	353.7 - 356.5	2.8'
2.45	0.10	-	0.003	0.04	376.0 - 377.0	1.0'

Hole LR 77-5

Location:	Latitude	5+00N
	Departure	12+00W
	Azimuth	180°
	Dip	55°
	Depth	507'

Spotted to test a major gap between known surface exposures. Four possible en echelon zones were projected into the vicinity. A fault bounded weakly mineralized chert breccia was intersected between 306.5 and 311.8.

Hole LR 77-6

Location:	Latitude	6+00N
	Departure	14+00W
	Azimuth	190°
	Dip	55°
	Depth	607'

Drilled to test below geophysical coverage an area that appeared, based on surface exposures, to contain three mineralized en echelon zones. A sheared pyritic lapilli tuff? was intersected between 442.5 - 457.5. No characteristic chert clasts were observed, but low grade zinc values are interpreted as representing the zone.

Hole LR 77-7

Location:	Latitude	5+00N
	Departure	17+00W
	Azimuth	180°
	Dip	55°
	Depth	508'

This hole was drilled to test the west end of the "New Showing Area". Two, possibly three, en echelon zones were projected into the vicinity. A possible NE trending fault dipping steeply to the NW is inferred from the drilling results. A relatively barren lapilli chert breccia was intersected in the fault's F.W.(?) from 244.5 to 259.0.

CONCLUSIONS

No base or precious metal intersections of a commercially exploitable nature have been cored. Indicated true widths occasionally exceed those of surface showings, but values are erratically distributed, and below expectations. Near vertical dips restrict the amount of follow up drilling that can be reasonably justified.

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Falconbridge Copper Limited
Exploration Division

FALCONBRIDGE COPPER LIMITED — LAKE DUFAULT DIVISION

DRILL HOLE RECORD

HOLE NUMBER	LAT.	DEP.	ELEV.	BRNG.	DIP	HOLE SIZE	DEPTH
LR 77-1	9+00N	6+00W	Teck Corporation coord.	360° AZ	-55°	BQ Wire-line	930 ft.

LOCATION	PURPOSE	DATE DRILLED	CORE INTACT	COLLAR CEMENTED OR PLUGGED
Halliday Township, Ontario	Test NEW SHOWING Area Larche-Rousseau Option	Oct 10-16/77	X	X
			CORE DISCARDED ☐	COLLAR MARKED ☐

ACID TESTS 100 ft -52°, 200 ft -48°, 300 ft -40°, 400 ft -32°, 600 ft -22°, 700 ft -18°, 800 ft -14°, 900 ft -10° COMPASS TESTS 500 ft Az 159°,24°; 930 ft Az 149°,9°

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
0 - 4	Overburden								
4 6	Oxidized Rubbly Dacitic Ash Tuff?	Rusty, lt. grey with dark green speckle	Fine clastic	Broken, rubbly, core recovery 60%	Gradational but sharp	Weak sericitization of matrix, fine clastics chloritized.	10°-30° to C.A. 0.5 to 1.0 cm spacing	Trace Py	Bedrock ledge or ridge.
6 9	Fractured Dacitic Ash Tuff?	Lt grey with dk green speckle. Rusty fractures at 0.5 foot intervals	Fine clastic	Uniformly speckled with dk chloritic flecks (.5 to 1 mm) 10-20% of rock. Vague foliation; felty.	As above	Tiny particles strongly chloritized in weakly sericitic matrix	10° - 30° to C.A. 1 cm spacing of chloritic hairline fractures. 2-3 mm wide qtz veinlets at 30° to C.A. approx 0.3 - 0.4 feet. Odd oxidized fracture 30° to 50° to C.A. 0.5 feet	Rare speck of pyrite	Bedrock ledge or ridge.

Dave Combe — 8/03/78

HOLE NO. LR 77-1

LOGGED BY D. Combe

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
9 - 9.5	Fractured Dacitic Tuff?	Lt grey with dk green speckles	Fine clastic	Fractured massive xtal tuff? 65% core recovery	Sharp	As above	As above	As above	Bedrock ridge
9.5 - 11.0	OVERBURDEN								Drilled out of bedrock ridge. Reamed to 14.0'
11.0 to 13.0	Fractured Dacitic Tuff?	Lt.grey rubble	Fine clastic	Core recovery 45%, pebble sized chunks	Sharp	As above	As above	Tr. Py	Weathered bedrock
13.0 to 27.5	Fractured Oxidized Dacitic Tuff	Lt. toned grey with dk speckles	Fine clastic	Core recovery 80%. Rusty rubbly oxidized fractures at approximately 3 ft. intervals at 30° to C.A.	Gradational and arbitrary	Light colored sericitic? patches adjacent to fractures. Less altered patches med grey.	Irreg qtz stockwork (5-10%) filled fractures.	Tr euhedral pyrite < 1 mm	Weathering on fracture zones.
27.5 to 37.3	Dacitic? Ash Tuff	Med.grey vague lt grey mottling and banding. Dk green speckles	Fine clastic; less than 4 mm	Core recovery 95%. Massive, vague to distinct foliation, felty. Possible 0.5 cm bedding at 50° to C.A. from 32.1 to 32.6'. Odd oxidized fracture at 30°-35° to C.A. where core is broken up.	Lower contact sharp at 50°-55°	Lt grey alteration associated with qtz filled fracture (0.3 cm from 33.0 to 33.3	Weak with hairline qtz filled fracture at 1-3 foot intervals	1 cm patch semi-massive pyrite (v fg) at 31.9. Trace dissem py.	Relatively unaltered. Felty, foliated sections may reflect primary layering. Possibly much more mafic.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
37.3 to 66.5	Andesite-dacite Lapilli Tuff	Med grey with lt grey mottle	Medium clastic 4 mm to 32 mm.	Heterogeneous, poorly sorted tuff. Clasts usually lighter than fine clastic matrix	Upper contact at 50° to C.A.	Bleaching frequently associated with 1/3 of fracturing. Lighter color due to sericitization e.g. 52.2 or possibly silicification, but primarily caused by carbonitization. Light colored clasts usually respond to acid. 10% red carbonate specks (1-2 mm) around 38.3. At 65 ft. an oxidized fracture zone is bleached from 63.5 to 66.5 (ser-carb-silica?)	Qtz-carb filled fractures at all angles at approx. 1 ft. intervals	Tr. vfg Py. Negligible	Pyroclastic debris probably consists of juvenille lava, broken ash tuff welded and pumice. Matrix appears to be fine ash or dust.
66.5 to 68.5	Andesitic? Block Tuff	Lt grey clasts in med grey matrix	Coarse clastic	Several irregular clasts exceed 32 mm, remainder are lapilli sized. Light colored clasts are well supported in ashy matrix. Clasts rounded to angular. Reentrant angles common.	Sharp in fracture zones	Surprisingly strong response to dilute HCl. Pervassive carbonate alteration.	Strong irreg qtz-carb filled fracturing at 30°-45° to C.A.	Negligible	May represent coarse clastic base of lapilli tuff 37.3 to 66.5.
68.5 to 87.0	Dacite-andesite? Ash Tuff	Lt to med grey, patchy vague mottling, dk green speckles 10-15%.	Fine Occasionally medium clastic	Massive, felty or foliated over short sections. Thin intercalated screens of lapilli tuff. Clasts or felty sections at 60°-65° to C.A. Clasts usually lighter colored than matrix. May appear porphyritic e.g. 78 ft.	Lower contact gradational	Moderate pervassive carbonate alteration.	Hairline qtz-carbonate filled fracture average 6" spacings. Average 25°-30° to C.A.	1-2 mm pyrite filled fracture at 45° to C.A. 82.6'.	Si-Ti #14001 70.0 to 80.0.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
87.0 to 158.5	Dacite-andesite Lapilli Tuff	Mottled lt, med and dk grey with buff-olive green sections	Medium clastic 4 mm to 32 mm	Poorly sorted heterogeneous pyroclstic. Clasts light or dark with respect to matrix. Large block or bomb at 137.5 with 1 mm chill or reaction rim.	Lower contact gradational	Pervassive carbonate and veinlets of sericite in bleached sections: 100.5 to 104.0; 124.5 to 136.5; and 151.0 to 158.5 5% of clasts have reaction rims of unidentified dark grey alteration (chl?).	White qtz carbonate veinlets in fractures, average spacing 3-4'. Large vein 128.5 feet to 130.5 ft.	1% dissem Py in hairline fractures 151 to 158.	Heterogeneous debris appear to consist of juvenille leva, broken ash tuff and pumice.
158.5 to 172	Thinly Banded Dacitic? Tuff	Banded off white, buff, med grey with olive green cast.	Aph to fine. Clastic	Thin 0.5 - 2 mm bands, frequently broken, often contorted but average 60°- 65° to C.A.	Gradational (arbitrary)	Pervassive carbonate and sericitic alteration. Sericite in bedding? planes and fractures.	Low to moderate density of qtz carb filled fractures. 158.5 to 168 High density 168 to 172. White qtz (carb) vein 163.7 to 164.7. Open folding of veinlets 168.0 to 168.5.	3% very finely dissem Py 167, rare semi-massive lenses (1 mm to 1 cm) 167.5, 167.8 1-2% very finely dissem Py.	Banding probably reflects primary bedding.
172 to 173.5	Fractured vein	Lt grey with dk olive green stock-work	Aph.	Intensely fractured quartz carbonate vein	Sharp at 45° to C.A.	Quartz carbonate vein with Chl-ser filled fractures.	Intensely fractured	Tr pyrite in fractures.	May mark location of fault. Strong adjacent alteration but distinct change in lithology.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
173.5 to 199.0	Altered Fractured Pyritic Ash Tuff	Lt green grey with irregular streaks of dark brown bronze white bands and streaks	Fine clastic	Brecciated, massive, featureless with pyritic fracture fillings.	Lower contact gradational	Strong bleaching (sericitic) with carbonate in matrix to pyrite and in white veinlets	Moderate to strongly fractured, spacings average 3"-4". All angles, but average 60° to C.A.	Sections 1/16" to 3" wide of semi-massive to massive pyrite 5-7% overall.	Semi-massive fine grained pyritic sections may represent exhalative precipitate in matrix to blocks of ash tuff, or epigenetic frature filling in shattered ash tuff. Latter genetic model appears appropriate. Sulphide samples: #14002 173.5 - 178.5 03 178.5 - 183.5 04 183.5 - 188.5 05 188.5 - 193.5 06 193.5 - 198.5
199.0 to 204.0	Andesite-Dacite Ash Tuff	Medium grey green	Fine clastic less than 4 mm.	Massive featureless	Gradational top contact. Sharp lower contact at fracture 45° to C.A.	Relatively unbleached (altered). In gradational top contact section flecks of chlorite occur in weak sericitized section.	Low density of hairline fractures	Tr. Py.	
204.0 to 212.0	Altered Fractured Pyritic Ash Tuff	Lt green grey with few irreg streaks of dk brown. bronzy pyrite white bands.	Fine clastic	Massive and featureless with following exceptions (1) thin banding 209 to 210 at 50-55° to C.A. (2) 211 - 212 contains clast like unsericitized sections adjacent to gradational contact with relatively unaltered ash tuff. Qtz carbonate vein 207.3 207.9.	Lower contact gradational	Moderate to strongly bleached by sericitic-like alteration with <1 mm specks chlorite 2-5%.	Low density of hairline fractures minor qtz carbonate.	Sections 1/16" to 2" wide of semi-massive to massive pyrite 5-7% overall.	Sulphide sample: #14007 204.0 - 209.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
212.0 to 279.0	Andesite-Dacitic Ash Tuff (Weakly altered)	Medium grey-green with bleached sections adjacent to fractures.	Fine clastic	Massive, uniform, featureless Tectonic fractures associated with semi-massive pyrite, white qtz-carbonate and sericitic bleaching. Examples of altered fractures 231.3 to 231.6; 232.1 to 232.3; 234.0 to 237.0; 242.5; 247.8; 251.0 to 251.4; 252.3 and 263.0.	Gradational, chosen arbitrarily	Pyrite, carbonate qtz in hairline fractures. Apparent sericitic alteration haloes about fractures from 1-2" to 1'	Low density 1' - 3'	Veinlets 1/16" - 1/4" wide at 1'-2' intervals (av.) Veinlets usually at 60° -65° to C.A. Average 1-2%.	Fracture control of sulphides and alteration very apparent. 1' of core missing 238 to 240.
279.0 to 339.0	Altered Ash Tuff (Moderately altered)	Lt green grey bands, irregular streaks of dark bronze & white. Med grey-green sections.	Fine clastic less than 4 mm.	Massive, fairly uniform resembles massive porph-lava in relatively unaltered sections. 3" wide white-qtz-carb vein 45° to C.A. at 290. 1" fault gouge, 70° to C.A. at 309.	Arbitrary gradational	Sericite (Carbonate) quartz and pyrite associated with fractures	Moderate density 1.0' - 1.5'	Veinlets of semi-massive pyrite at approx 1' intervals av. 2-3%. Veinlets in two attitude groups: (1) 60-70° to C.A. (2) 10-30° to C.A. Group 1 predominates.	Si-Ti #14009 324.0 - 334.0 Similar to section 212.0 to 279 but cut by double the number of fractures containing pyrite and associated with alteration.
339.0 to 364.0	Fractured Altered Pyritized Ash Tuff (Strongly altered)	Lt green grey with specks and stockwork of dk brown bronze White bands 1/4" to 2"	Fine clastic	Marbling of massive bleached ash tuff by pyritized stringers. Quartz, minor carbonate, veinlet 357.5 to 358.0. Disseminated pyrite developed in unfractured areas.	Arbitrary gradational	Strong sericitization and pyritization associated with numerous fractures.	High density 0.5' to 1.0' at all angles.	Dessem and stringer pyrite average 5-10%.	Pyritized stringer stockwork associated with strongly altered ash tuff. Sulphide Samples: 14010 339.0 - 344.0 11 344.0 - 349.0 12 349.0 - 354.0 13 354.0 - 359.0 14 359.0 - 364.0.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
364.0 to 463.0	Pyritized Ash Tuff (Moderate to strongly altered)	Medium grey-green with strong bleached sections. Dk brown streaks in med grey and lt green rock	Fine clastic less than 4 mm.	Massive, uniform. Contrasting colour variation due to tectonic fracturing and bleaching adjacent 75% of fractures. Result is distinctive stringer breccia. Strongly bleached sections are listed below: 365.5 - 366.0 369.3 - 369.5 380.0 - 380.5 381.0 - 382.5 388.5 - 389.5 396.0 - 405.0 405.7 - 406.2 406.9 - 407.1 407.5 - 409.0 411.0 - 414.0 423.0 - 430.0 433.5 - 438.5 442.5 - 444.0 447.0 - 449.0 incl 4" qtz vein 352.0 - 364.0 (variable)	Gradational - Arbitrary	Sericite, weak carbonate quartz and pyrite associated with 75% of fractures. Remaining 25% may contain pyrite without bleaching	Moderate to high density. Majority at 50° - 80° to C.A.	70% of pyrite in fracture fillings, rest dissem. Pyritic fractures in relatively unaltered rock ash tuff. Short sections 20-25% pyrite. Average 2-7%.	Similar to section 279.0 to 339.0 but contains pyrite filled fractures in relatively unaltered rock. John Larche says that this is some of the strongest pyrite that he has seen when compared to Glen Copper drilling. Sulphide Samples: #14015 to #14033 incl. from 368.0 to 463.0. Note 1' error 364 - 368.
463.0 to 498.5	Pyritized Altered Ash Tuff	Lt green with dk brown stockwork streaks irreg white bands and short med grey green sections	Fine clastic to aph	Massive, uniform ash tuff intensely brecciated by hairline fractures.	Gradational upper contact. Lower contact sharp in 4" wide mottle	Strong to intense pervassive sericite. Strong carbonate quartz veining at all angles.	High density stockwork fracturing at all angles	80% of pyrite in fractures. 20% dissem. Average 10% - 12%, short sections 20 - 25%.	Sulphide Samples: #14034 to 14040 incl. 463.0 to 498.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
498.5 to 523.0	Dacitic-andesite Ash Tuff	Medium green grey with vague lt. greenish stockwork of white hairline veinlets. 511.0 to 511.8; 515.0 to 517.5	Fine clastic to aph	Massive, uniform, featureless	Upper contact mottled over 4"; sharp. Lower contact gradational arbitrary	Weak sericite, especially in lower sections. White quartz carb in hairline fracture stockwork 511.0 to 511.8 and 515.0 to 517.5	Low density with exceptions of high density hairline fracturing between 511.0 to 511.8 and 515.0 to 517.5	1-2% pyrite as fine dissem and occasional hairline fracture.	Relatively unaltered and very weakly pyritized. Si-Ti Sample #14041 499.0 - 509.0
523.0 to 551.0	Pyritized Altered Ash Tuff	Lt.green with med green grey sections. Stockwork of dk brown bronze streaks	Fine clastic to aph.	Massive, featureless, uniform Breccia sections result of strong to intense tectonic fracturing and associated alteration. Section 536 to 537 resembles block tuff or interflow breccia, but is probably tectonic in origin.	Arbitrary gradational contacts	Strong sericite alteration, moderate carbonate and quartz veining.	Moderate to high density stock-work fracturing	90% of pyrite associated with fractures. 10% dissem. Average overall content 8-10%.	Sulphide Samples: #14042 526 - 531 43 531 - 536 44 536 - 541 45 541 - 546 46 546 - 551
551.0 to 585.0	Altered Pyritized Ash Tuff	Lt grey with stockwork of dk brown bronze streaks. Odd white band.	Aph to fine clastic	Massive. Qtz filled amygdaloidal-like structures 562.5 to 563.5. Vaguely bedded and or intercalated lapilli 578 to 585.0.	Gradational	Intense bleaching, sericitic, with flecks of bluish chlorite or fuchsite 1% at 552.5 and 562.5 to 568.0.	Low to moderate density 551.0 to 578.0. Weak schistose 578.0 to 585.0	Pyrite in fractures 70% and disseminated. Overall pyrite 5-6%.	Sulphide samples: #14047 551 - 556 48 556 - 561 49 561 - 566 50 566 - 571 51 571 - 576 52 576 - 581 53 581 - 586

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
585.0 to 639.5	Pyritized Ash Tuff	Variagated lt to dk grey with lt green sections and white bands.	Fine clastic less than 4 mm.	Vaguely bedded 617.0 to 623.0 and over shorter sections. Bedding? at approximately 70°-80° to C.A. Lapilli? intercalation 608 to 611 Section 598 to 603 resembles feldspar porphyry.	Gradational arbitrary	Weak sericite and carbonate overall with short sections 1"-2" to 3' of moderate to strong sericite.	Low to moderate density with short schistose sections.	Pyrite in fractures and tuff bands? Overall pyrite 6% - 8%.	Sulphide Samples: #14054 to #14064 586 - 641
639.5 to 651.0	Pyritized Lapilli Tuff	Marbled lt green med grey and dk grey-dk brown (bronze)	4 mm to 32 mm	Poorly sorted, looks tectonized in many sections.	Lower contact sharp in 5" wide qtz vein at 45° to C.A.	Weakly altered with exception of strongly sericitized section 644 to 646; 646.5 to 648.0.	Moderate to high density Refer remarks.	Pyrite in fractures and matrix to lapilli. Overall pyrite 6-8%.	May be tectonized ash that resembles lapilli tuff. Sulphide samples: #14065 641.0 - 646.0 14066 646.0 - 651.0
651.0 to 671.0	Pyritized Ash Tuff	Mottled blue grey, med to lt grey and lt green. Irregular stockwork of dk brown bronze and white veinlets	Fine clastic, less than 4 mm.	Poorly sorted densely packed	Lower contact gradational	Weak to moderately altered. Blueish cast may be due to silicification.	Low to moderate density 6"- 1'	Pyrite in fractures and disseminated in matrix areas. Occasionally may appear as sulphide clast. Estimated pyrite 6-8%.	Relatively coarse ashy compared to majority of sections logged as ash in this hole. Sulphide samples: #14067 to #14070 651.0 to 671.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
671.0 to 730.5	Mineralized Lapilli Tuff	Mottled blue-grey lt green and light to medium grey. White qtz bands. Streaks & blebs of dk brown pyrite & tr brownish sphalerite 714 - 716.	Medium clastic 4 mm to 32 mm	Heterogeneous poorly sorted pyroclastic. Altered in massive ash 674 to 676	Gradational	Weak to strong sections of sericitization and silicification.	Tensional fractures in majority of quartz veinlets. On surface these tensional fractures often host sphalerite.	1-2% blebby pale sphalerite 714-716. Tr chalcopyrite by one fractured quartz vein. Pyrite semi-massive in veinlets, dissem and apparent clasts. Pyrite content 6-8%.	Similar to surface exposures from 678 to 730.5 but lacks good chert breccia. Tensionally fractured qtz veinlets account for 1-2% of rock, but this is lower than in surface exposures. Sulphide samples: #14071 to #14082 671.0 to 731.0
730.5 to 749.2	Altered Ash Tuff	Lt grey green with dk green flecks (2-3%) white specks 1%.	Fine clastic less than 4 mm.	Massive, vague fabric at 70°-80° to C.A. due to chloritic flecks. Short section of lapilli, 733.7 to 734.5.	Sharp at 70° to C.A.	Moderate sericitization	Low density Average 8"- 12'.	1-2% dissem Py and in rare fracture.	Si-Ti #14083 738.0 - 748.0
749.2 to 769.0	Lapilli Tuff	Mottled lt green and med green-grey	Med clastic 4 mm to 32 mm.	Heterogeneous poorly sorted pyroclastic. Sericitized ash tuff 61.7 to 64.0	Lower Contact gradational	30% of clasts have been sericitized.	Low density 1'- 2'	1% dissem Py or in rare fracture.	

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
769.0 to 785.4	Altered Ash Tuff	Lt green with dk toned grey alter associated with stockwork of fractures	Fine clastic	Massive with fabric at 70°- 80° to C.A.	Gradational and arbitrary	Moderate sericitization	High fracture density 1/4" spacing.	1-2% dissem Py and in fractures.	Sulphide Sample: #14084 778 - 783
785.4 to 788.2	Lapilli Tuff?	Med grey with wk lt green mottle	Medium clastic 4 mm to 32 mm	Clast outlines hazy, may be altered tectonized zone rather than pyroclastic	Lower contact sharp at 75° to C.A.	Weak sericitization. Darker colouration may be due to increased chlorite.	High fracture density 1/4" - 1" spacing	2-3% pyrite in fracture fillings, blebs and dissem.	Sulphide Sample: #14085 783 - 788
788.2 to 802	Fractured Altered Ash Tuff	Streaked lt green and medium to dark grey	Fine clastic less than 4 mm.	Massive, uniform.	Sharp at 70-80° to C.A.	Light green attributed to sericitization. Dk med grey green alteration associated with fractures appears to be chloritic with some silicification(?).	High fracture density 1/2"-1" spacing.	1% pyrite in fractures and disseminations.	
802.0 to 805.0	Lapilli Tuff?	Lt to med grey marbled	4 mm to 32 mm	Breccia with tectonized quartz veins	Lower contact gradational	Weak sericitization, moderate silicification	Strong to intensely fractured. Fractures of three possible ages: (1)fracture of host volcanic (2)qtz-filled fractures	Very finely dissem pyrite in matrix, massive pyrite in rare late fracture and bleb or clast(?) 1-2%.	May be tectonized and altered Ash Tuff similar to dyke-like Chert Breccia

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
							(3)fracturing of qtz veinlets.		
805.0 to 833.4	Fractured Altered Ash Tuff	Lt green with dk grey stockwork fractures	Fine clastic less than 4 mm.	Vague banding of massive uniform tuff due to intense fracturing and associated alteration.	Gradational and arbitrary	Strong pervassive sericitization with chloritization(?) 70% associated with intense fracturing.	High density of fracturing at high angles to C.A. 98% of fracturing associated with dk grey alteration and 35% with hairline pyrite-rich veinlets in fracture cores. 2% of fractures filled by white-quartz	2-3% pyrite in tiny veinlets associated with approx 1/3 of fractures. Trace dissem pyrite.	Habit of pyrite contrasts strongly to zones between 0 and 700. In upper pyritic sections the sulphide was associated with bleached fractures (sericite?). In this section and those that follow the host has been bleached? then cut by fractures associated with chlorite-rich? solutions. Sulphide Samples: 808.0 - 833.0 #14086 to 14090 incl.
833.4 to 841.5	Altered Ash Tuff	Lt green with grey streaks 834.2 to 834.6	Fine clastic	Massive, uniform with narrow zone of high density fracturing 834.2 to 834.6.	Gradational and arbitrary	Pervassive sericite with 5-8% chlorite-rich associated fractures. Compared to adjacent sections this chlorite(?) content is low.	Relatively low density of fractures compared to adjacent sections.	Less than 1% pyrite in odd fracture.	Si-Ti Sample #14091 834.0 to 842.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
841.5 to 857.3	Fractured Altered Ash Tuff	Med to dk grey with lt green marbling	Fine clastic	Massive, uniform, strong to intensely tectonized	Gradational	Pervassive sericite(?) with 60%-70% chlorite-rich? associated fractures.	High density pervassive hairline fracturing. Rare late fracture with white quartz fillings.	1-2% pyrite primarily occurring as tiny veinlets in cores of altered fractures.	Sulphide Samples: 842.0 to 857.0 #14092 - 14094 incl.
857.3 to 881.4	Altered Lapilli Tuff	Medium to dk grey mottled with lt greenish spots and bands	Med clastic 4 mm to 32 mm.	Heterogeneous pyroclastic with odd block sized clast of ash tuff.	Gradational	Moderate to strong chlorite, and weak to strong sericite and silica?	Moderate to high density hairline fractures, especially section 857.3 to 864.5. 5-10% of fractures asscociated with white quartz veinlets.	2-3% pyrite as fine dissem in matrix, and semi-massive clasts? Massive pyrite in veinlets.	Lapilli Tuff may only occur from 864.5 to 881.4. Sulphide Samples: #14095 - 14099 incl. 857.0 to 882.0'
881.4 to 930.0	Brecciated Altered Ash Tuff	Lt green, white, lt to med grey marbled.	Less than 4 mm.	Brecciated and mylonized massive, uniform ash.	Gradational	Moderate to weak sericitization with moderate to strong chloritization and silicification. Latter two types of alterations are fracturecontrolled. 10-15% of fractures contain white quartz veinlets from hairline width to 3"- 4".	High density fracturing has pervassive brecciated host ash tuff. Majority of fracture planes are at 70°- 90° to C.A.	1-2% pyrite with short sections 4-5% pyrite. Sulphide usually occurs as veinlets in cores of altered fractures.	Sulphide Samples: #14100 and #14101 to #14105 incl. from 882.0 to 912.0; #14106 to 14107 incl. 920.0 to 930.0'
930.0	END OF	HOLE							

JEB 1158

HOLE NO L.R. 77-1

JOB 3624

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE Cu	ESTIMATE Zn	LENGTH FT.	ppm % Cu	ppm % Zn	ASSAYS Oz. Ag	Oz. Au	ppm Pb	Fe	PROGRESSIVE TOTALS Ft. % Cu	Ft. % Zn	Ft. Oz. Ag	Ft. Oz. Au	REMARKS AND AVEPAGE ASSAYS FROM	TO	LENGTH	% Cu	% Zn	Oz. Ag	Oz. Au
	14002	173.5	178.5			5	145	190	0.04	.001	23	3.63											
	14003	178.5	183.5			5	115	174	0.03	.001	27	3.00											
	14004	183.5	188.5			5	61	38	0.04	.001	60	3.10											
	14005	188.5	193.5			5	58	27	0.02	.001	17	1.80											
	14006	193.5	198.5			5	63	26	0.04	.001	13	3.50											
	14007	204.0	209.0			5	48	40	0.02	.001	20	3.13											
	14010	339.0	344.0			5	62	42	0.02	.002	14	3.30											
	14011	344.0	349.0			5	55	22	0.02	.001	16	3.47											
	14012	349.0	354.0			5	58	37	0.02	.003	18	3.60											
	14013	354.0	359.0			5	50	50	0.02	.001	13	2.75											
	14014	359.0	364.0			5	56	27	0.02	.001	12	3.53											
	14015	368.0	373.0			5	47	75	0.02	.001	15	3.25											
	14016	373.0	378.0			5	51	70	0.02	.001	13	2.93											
	14017	378.0	383.0			5	44	43	0.01	.001	10	2.90											
	14018	383.0	388.0			5	46	68	0.02	.001	14	3.15											
	14019	388.0	393.0			5	43	58	0.01	.001	13	3.35											
	14020	393.0	398.0			5	43	52	0.01	.001	15	3.05											
	14021	398.0	403.0			5	48	33	0.01	.001	13	3.10											
	14022	403.0	408.0			5	49	35	0.02	.001	17	3.03											
	14023	408.0	413.0			5	48	33	0.01	.001	13	3.10											

HOLE NO. LR 77-1

JER 7624

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ppm ASSAYS % CU	% ZN	OZ. AG	OZ. AU	ppm Pb	Fe PROGRESSIVE TOTALS FT. % CU	FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14024	413.0	418.0			5	45	63	0.01	.001	15	3.15										
	14025	418.0	423.0			5	44	65	0.02	.001	13	2.88										
	14026	423.0	428.0			5	46	25	0.02	.001	17	3.33										
	14027	428.0	433.0			5	48	47	0.02	.001	15	3.45										
	14028	433.0	438.0			5	49	33	0.02	.001	14	3.27										
	14029	438.0	443.0			5	44	43	0.02	.001	16	3.08										
	14030	443.0	448.0			5	42	45	0.02	.001	12	3.17										
	14031	448.0	453.0			5	56	56	0.02	.001	15	2.83										
	14032	453.0	458.0			5	47	58	0.02	.001	16	3.37										
	14033	458.0	463.0			5	41	53	0.02	.001	12	2.88										
	14034	463.0	468.0			5	45	44	0.02	.001	16	2.85										
	14035	468.0	473.0			5	43	40	0.02	.001	14	3.05										
	14036	473.0	478.0			5	60	57	0.02	.001	16	2.63										
	14037	478.0	483.0			5	57	55	0.02	.001	18	3.00										
	14038	483.0	488.0			5	62	48	0.02	.001	17	3.26										
	14039	488.0	493.0			5	40	35	0.02	.001	20	2.87										
	14040	493.0	498.0			5	48	28	0.02	.001	17	3.25										
	14042	526.0	531.0			5	50	48	0.02	.001	18	3.23										
	14043	531.0	536.0			5	49	78	0.01	.001	22	2.68										
	14044	536.0	541.0			5	48	47	0.03	.001	20	3.57										

HOLE NO. LR 77-1

JER 3726

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ppm % CU	ppm % ZN	ASSAYS OZ. AG	OZ. AU	ppm Pb	Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14045	541.0	546.0			5	46	43	0.02	.001	18	3.50										
	14046	546.0	551.0			5	50	47	0.03	.001	13	3.57										
	14047	551.0	556.0			5	48	42	0.02	.001	17	3.10										
	14048	556.0	561.0			5	50	70	0.02	.001	23	3.05										
	14049	561.0	566.0			5	62	210	0.01	.001	17	3.00										
	14050	566.0	571.0			5	59	337	0.01	.001	30	2.68										
	14051	571.0	576.0			5	43	37	0.03	.001	27	3.37										
	14052	576.0	581.0			5	38	29	0.02	.001	20	3.73										
	14053	581.0	586.0			5	52	144	0.02	.001	37	4.03										
	14054	586.0	591.0			5	112	219	0.03	.001	33	4.23										
	14055	591.0	596.0			5	50	84	0.02	.001	23	4.17										
	14056	596.0	601.0			5	58	105	0.02	.001	20	4.27										
	14057	601.0	606.0			5	45	60	0.02	.001	27	3.93										
	14058	606.0	611.0			5	46	154	0.02	.001	37	4.17										
	14059	611.0	616.0			5	40	73	0.01	.001	20	3.38										
	14060	616.0	621.0			5	39	92	0.02	.001	53	3.80										
	14061	621.0	626.0			5	40	96	0.01	.001	54	3.85										
	14062	626.0	631.0			5	44	118	0.01	.001	46	3.73										
	14063	631.0	636.0			5	49	560	0.02	.001	92	3.70										
	14064	636.0	641.0			5	45	424	0.02	.001	75	4.13										

HOLE NO. LR 77-1

JER 1624

DIAMOND DRILL CORE ASSAY RECORD

CD	Sample Number	From Ft.	To Ft.	Estimate Cu	Estimate Zn	Length Ft.	ppm % Cu	ppm % Zn	Assays Oz. Ag	Oz. Au	ppm Pb	Fe Ft. % Cu	Progressive Totals Ft. % Zn	Ft. Oz. Ag	Ft. Oz. Au	Remarks and Average Assays From	To	Length	% Cu	% Zn	Oz. Ag	Oz. Au
	14065	641.0	646.0			5.0	42	916	0.02	.001	255	3.85										
	14066	646.0	651.0			5.0	48	452	0.02	.001	218	4.56										
	14067	651.0	656.0			5.0	43	211	0.01	.001	320	3.30										
	14068	656.0	661.0			5.0	32	475	0.01	.001	153	3.56										
	14069	661.0	666.0			5.0	38	74	0.01	.001	44	4.03										
	14070	666.0	671.0			5.0	40	240	0.01	.002	60	4.27										
	14071	671.0	676.0			5.0	39	104	0.01	.002	52	3.78										
	14072	676.0	681.0			5.0	34	181	0.02	.001	55	4.15										
	14073	681.0	686.0			5.0	31	292	0.02	.001	53	4.00										
	14074	686.0	691.0			5.0	44	451	0.01	.001	70	3.37										
	14075	691.0	696.0			5.0	52	44	0.01	.001	63	3.38										
	14076	696.0	701.0			5.0	41	68	0.01	.001	75	3.27	Mineralized Lapilli Tuff [illegible]									
	14077	701.0	706.0			5.0	84	2150	0.01	.002	118	2.93										
	14078	706.0	711.0			5.0	68	283	0.01	.001	52	2.78										
	14079	711.0	716.0			5.0	96	1940	0.01	.002	68	3.43										
	14080	716.0	721.0			5.0	104	770	0.01	.001	165	3.80										
	14081	721.0	726.0			5.0	45	1130	0.01	.001	183	4.33										
	14082	726.0	731.0			5.0	50	1420	0.01	.001	54	3.77										
	14084	778.0	783.0			5.0	43	87	0.01	.001	23	3.17										
	14085	783.0	788.0			5.0	35	51	0.01	.001	22	2.93										

HOLE NO. LR 77-1

JEB 7624

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE Cu	ESTIMATE Zn	LENGTH FT.	ppm % Cu	ppm % Zn	ASSAYS Oz. Ag	ASSAYS Oz. Au	ppm Pb	% Fe FT. % Cu	PROGRESSIVE TOTALS FT. % Zn	FT. Oz. Ag	FT. Oz. Au	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% Cu	% Zn	Oz. Ag	Oz. Au
	14086	808.0	813.0			5.0	49	239	0.01	.001	38	3.13										
	14087	813.0	818.0			5.0	40	105	0.02	.001	25	2.97										
	14088	818.0	823.0			5.0	44	105	0.02	.001	22	3.13										
	14089	823.0	828.0			5.0	54	1000	0.01	.001	28	3.27										
	14090	828.0	833.0			5.0	42	78	0.01	.001	25	3.12										
	14092	842.0	847.0			5.0	40	101	0.01	.001	46	3.20										
	14093	847.0	852.0			5.0	42	135	0.02	.001	50	3.17										
	14094	852.0	857.0			5.0	41	424	0.03	.001	87	3.05										
	14095	857.0	862.0			5.0	40	675	0.01	.001	36	3.75										
	14096	862.0	867.0			5.0	125	1280	0.01	.001	57	3.70										
	14097	867.0	872.0			5.0	63	1110	0.01	.001	100	3.53										
	14098	872.0	877.0			5.0	44	640	0.01	.001	53	3.80										
	14099	877.0	882.0			5.0	48	1280	0.01	.001	73	3.63										
	14100	882.0	887.0			5.0	43	97	0.01	.001	30	3.00										
	14101	887.0	892.0			5.0	60	72	0.02	.001	34	2.88										
	14102	892.0	897.0			5	72	420	0.01	.001	47	2.52										
	14103	897.0	902.0			5	90	938	0.05	.001	30	2.97										
	14104	902.0	907.0			5	54	85	0.02	.001	23	3.47										
	14105	907.0	912.0			5	75	67	0.06	.001	37	3.55										
	14106	920.0	925.0			5	58	690	0.03	.001	76	3.93										

HOLE NO. LR 77-1

JER 7624

DIAMOND DRILL CORE ASSAY RECORD

C.D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE Cu	ESTIMATE Zn	LENGTH FT.	DDH % Cu	DDH % Zn	ASSAYS Oz. Ag	ASSAYS Oz. Au	DDH Pb	% Fe Ft. % Cu	PROGRESSIVE TOTALS Ft. % Zn	Ft. Oz. Ag	Ft. Oz. Au	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% Cu	% Zn	Oz. Ag	Oz. Au
	14107	925.0	930.0			5	68	443	0.02	.001	43	3.38										

HOLE NO. LR 77-1

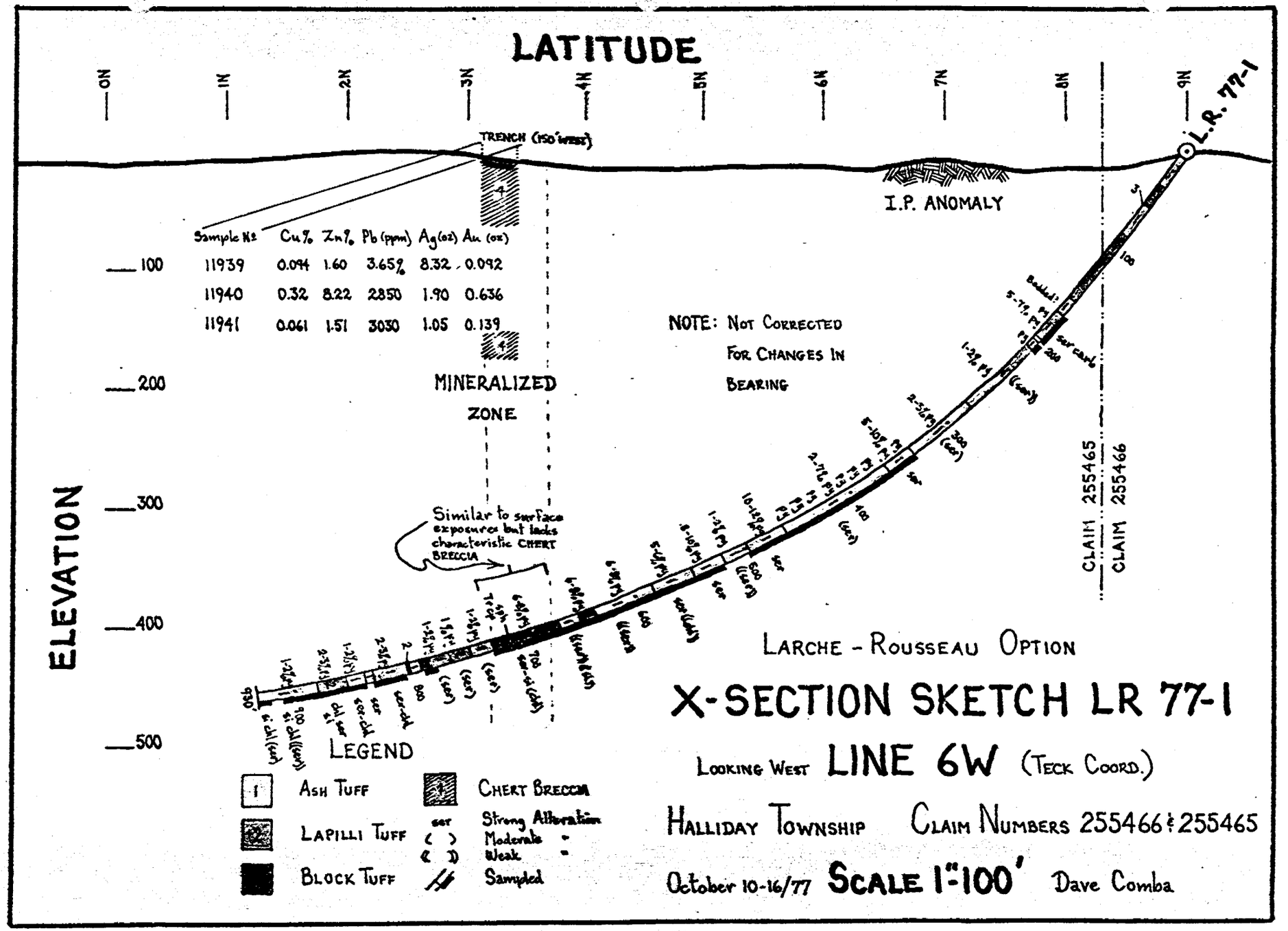
JKR 1624

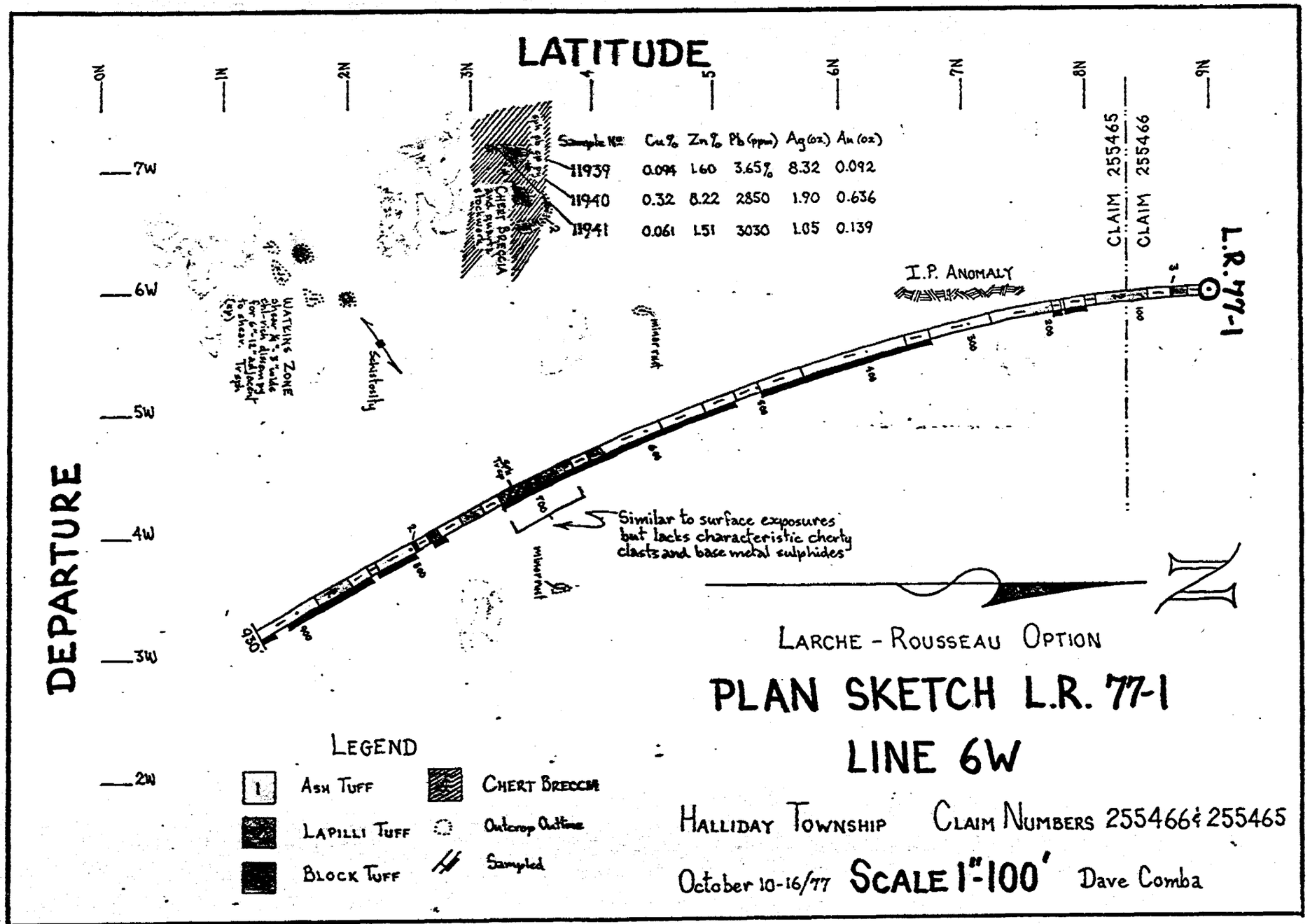
SiO_2 TiO_2

DIAMOND DRILL CORE ASSAY RECORD

C.D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS % CU	ASSAYS % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	PROGRESSIVE TOTALS FT. % CU	PROGRESSIVE TOTALS FT. % ZN	PROGRESSIVE TOTALS FT. OZ. AG	PROGRESSIVE TOTALS FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
							SiO_2	TiO_2	Na_2O												
	14001	70.0	80.0			10.0	65.9	0.63	3.80												
	14008	212.0	222.0			10.0	65.6	0.56	1.72												
	14009	324.0	334.0			10.0	63.9	0.57	2.72												
	14063	738.0	748.0			10.0	64.9	0.67	0.09												
	14091	834.0	842.0			8.0	71.9	0.63	1.97												

HOLE NO. LR 77-


LATITUDE
0N
1N
2N
3N
4N
5N
6N
7N
8N
9N
L.R. 77-1
TRENCH (150' WEST)
I.P. ANOMALY
Sample No Cu% Zn% Pb (ppm) Ag (oz) Au (oz)
11939 0.094 1.60 3.65% 8.32 0.092
11940 0.32 8.22 2850 1.90 0.636
11941 0.061 1.51 3030 1.05 0.139
MINERALIZED ZONE
NOTE: NOT CORRECTED FOR CHANGES IN BEARING
Similar to surface exposures but lacks characteristic CHERT BRECCIA
CLAIM 255465
CLAIM 255466
ELEVATION
100
200
300
400
500
LEGEND
ASH TUFF
LAPILLI TUFF
BLOCK TUFF
CHERT BRECCIA
Strong Alteration
Moderate
Weak
Sampled
LARCHE - ROUSSEAU OPTION
X-SECTION SKETCH LR 77-1
LOOKING WEST LINE 6W (TECK COORD.)
HALLIDAY TOWNSHIP CLAIM NUMBERS 255466 & 255465
October 10-16/77 SCALE 1"=100' Dave Comba



LARCHE - ROUSSEAU OPTION

PLAN SKETCH L.R. 77-1

LINE 6W

HALLIDAY TOWNSHIP CLAIM NUMBERS 255466 & 255465

October 10-16/77 SCALE 1"-100' Dave Comba

FALCONBRIDGE COPPER LIMITED — LAKE DUFAULT DIVISION

DRILL HOLE RECORD

HOLE NUMBER	LAT.	DEP.	ELEV.	BRNG.	DIP	HOLE SIZE	DEPTH
L.R. 77-2	5+00N	7+50W	Teck Corp. Coord.	180° Az	65°	BQ Wireline	507'

LOCATION	PURPOSE	DATE DRILLED	CORE INTACT / CORE DISCARDED	COLLAR CEMENTED OR PLUGGED / COLLAR MARKED
Halliday Township, Ontario	Test NEW SHOWING AREA Larche-Rousseau Option	Oct 18-20/77	☒ / ☐	Making Water

ACID TESTS 100 ft 62°; 200 ft 51°; 300 ft 42°~~43°~~ (probably taken at 300 ft. due to water pressure)

COMPASS TESTS 504 ft 155° Az(true) Dip 20°

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
0 to 13	Overburden								
13 to 17	Coarse Ash Tuff	Med grey green	Less than 4 mm	Looks feldspar porphyritic, uniform	Sharp in oxidized fractured material	Oxidation on fractures. Weak sericitization 10%	Low to moderate density 4" - 9" spacing	1-2% py as dissem and fracture fillings	May not be bedrock. Siliceous clasts 1-3 mm resemble feldspar phenocrysts or metacrysts
17 to 18	Fractured Oxidized Ash Tuff	Med grey streaks of rust	Fine clastic	Core recovery 60%, uniform, appears feldspar porph.	Sharp	Oxidation on fractures. Weak sericitization ~ 10%.	Core broken up on numerous fracture planes	1-2% pyrite as dissem and pyrite smears on fracture planes	May not be bedrock.
18 to 19	Overburden								No core.
19 to 20	Fractured Pyritized Ash Tuff	Lt grey green with dk brown stockwork	Less than 4 mm	Uniform, in situ brecciation	Sharp	Sericitization 10-20%	Closely spaced stockwork fractures	4-5% pyrite in fractures	May not be bedrock

Dave Combe — 8/3/78

HOLE NO. L.R. 77-2

LOGGED BY Dave Combe

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
20 to 22	Overburden								No core.
22 to 23	Fractured Ash Tuff	Lt toned grey	Less than 4 mm	Uniform, in situ brecciated	Sharp	Weak sericitization ~ 10%	Moderate density stockwork	1-2% pyrite in fractures, minor dissem.	May not be bedrock
23 to 28	Overburden								No core.
28 to 52	Pyritized Coarse Ash Tuff	Med grey with tiny vague white spots and lt green sections	Less than 4 mm	Uniform, resembles feldspar porphyry	Lower contact gradational	Sericitic bleaching 37.2 to 37.5; 38.2 to 38.7 is associated with densely packed and pyritized fractures.	Moderate density of stockwork hairline fractures 1/2" - 8"	2-3% Py in fractures with short sections 6-10%	Refer remarks 13.0 to 17.0 regarding pseudoporphyritic texture. Sulphide samples: #14108 to #14113 28.0 to 58.0
52 to 114	Pseudo-Porphyritic Coarse Ash Tuff	Med to lt grey and green with white specks & irreg dk brown (bronze) streaks.	Less than 4 mm.	Uniform, strongly resembles feldspar porphyry. Weak to moderate in situ type brecciation.	Gradational Arbitrary	Weak to moderate sericitization. Short strongly sericitic sections in more intensely fractured rock approx 35%.	Moderate density of in situ stockwork fractures.	2-3% pyrite in fractures	Sulphide samples: #14114 to 14118 58.0 to 83.0 SiO_2 Sample: #14119 84.0 to 93.0 Sulphide samples: #14120 to #14123 93.0 to 113.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
114 to 118	Altered Pyritized Ash Tuff	Lt green grey with irreg dk brown (bronze) bands. Vague white specks	Less than 4 mm	Uniform, vague pseudo porphyry. Tectonic fabric at 45° to C.A. 117 to 118	Gradational	Moderate to strong bleaching (Sericitization)	Moderate to high density of fractures 2" - 8"	4-5% pyrite in fractures and dissem.	Similar to section 52 to 114 but stronger bleaching. Sulphide sample #14124 113.0 to 118.0
118 to 126	Schisted Ash Tuff	Lt green with dk grey bronze streaks	Less than 4 mm	Uniform, streaked tectonic fabric at 40° - 50° to C.A.	Gradational	Strongly sericitized	Schist deforms 65% of earlier <u>in situ</u> fractures. Later fractures cut C.A. at all angles.	6-8% pyrite in sheared veinlets and dissem.	Similar to section 114 to 118 but pervassively tectonized. Sulphide samples: #14125 to #14126 118.0 to 128.0
126 to 163	Altered Fractured Ash Tuff	Variagated lt. green & lt grey	Fine clastic	Sections of vague pseudo porphyry. <u>In situ</u> brecciation, especially in bleached sections. Sericite schist 154.5 to 157.0 at approx 45° to C.A.	Gradational	Moderate to strong bleaching (sericitization). Bleached sections 65-70% of intersection.	High density of <u>in situ</u> tectonic fractures	4-5% pyrite with short sections 6% - 10% Occurs mainly as fracture fillings	Sulphide samples: #14127 to #14133 128.0 to 163.0
163 to 178.5	<u>In situ</u> brecciated Sericitized Ash Tuff	Lt green with dk grey hairline meshwork of fractures	Less than 4 mm	Uniform, massive featureless. Strong to intensely brecciated <u>in situ</u>	Gradational	Strong bleaching (sericitic)	High density of <u>in situ</u> stockwork fractures at all angles to C.A.	1-2% pyrite overall with most concentrated at start of intersection.	Similar to section 126 to 163 but more highly altered and brecciated <u>in situ</u> Less pyrite. Sulphide sample: #14134 163.0 to 168.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
178.5 to 193	Altered Fractured Ash Tuff	Variagated lt green & lt grey	Less than 4 mm	Sections of vague pseudo-porphyry. In situ brecciation	Lower contact sharp at 45° to C.A.	Moderate to strong bleaching (sericitization) Bleached sections 60-65% of intersection.	Moderate to high density of in situ tectonic fracturing	Less than 1% py.	Similar to section 126 to 163 but contains appreciably less pyrite. Sulphide sample: #14136 187.0 - 192.0
193 to 197	Sheared Altered Lapilli Tuff	Med to dk grey with white streaks	4 mm to 32 mm	Fragments are elongate and oriented at approximately 45° to C.A.	Lower contact in fracture at 75° to C.A.	Strong chlorite and silicification as qtz-carbonate veining.	High density of fractures, 70% filled with qtz minor carbonate 30% with pyrite	Pyrite 2-3% in fractures	Clasts may represent mylonized ash tuff in a shear zone Sulphide sample #14137 192.0 to 197.0
197 to 202.9	Sheared Ash Tuff	Med green grey with dk grey fractures	Less than 4 mm	In situ brecciation of uniform fine clastic tuff	Bounded by fractures at high angles to C.A.	Weak to moderate sericite and chlorite?	High density of stock-work fractures.	2-3% pyrite, primarily in fractures.	Sulphide sample: #14138 197.0 to 202.0
202.9 to 205.0	Schisted Fault? Zone	Lt grey with med grey and white irregular streaks	Very fine grained	Schistose, soapy, ground core 204.0 to 204.5	Lower contact gradational	Sericite chlorite schist.	Schistosity at 45° to C.A.	1% pyrite with qtz veinlets 202.9 to 203.1	Possible fault.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
205.0 to 222.8	Sheared Lapilli Tuff	Med green grey banded & mottled.	4 mm to 32 mm	Elongated sheared clasts at 45° to C.A. Some clasts appear silicified but breccia is primarily homogeneous 4" sericite schist 222.0	Gradational contacts	Weak to moderate sericite and chlorite.	High fracture density, shearing at 45° to C.A.	3-4% pyrite in fractures and matrix areas	Sulphide samples: #14139 to 14142 205.0 to 225.0
222.8 to 228.5	Sheared Ash Tuff	Medium grey-green variagated bands	Less than 4 mm	Uniform, featureless with massive band of sericite 45° to C.A. 2" wide 223.5	Lower contact sharp at 45°	Weak to moderate chlorite sericite overall	Shearing 45° to 50° to C.A.	2-3% pyrite in fractures and as fine disseminations	Sulphide sample: #14143 225.0 to 228.5
228.5 to 255.0	Sericitized Ash Tuff	Lt green buff with lt grey-green sections white & dk green specks	Less than 4 mm	Uniform, appears feldspar porphyritic. Less sericitic sections are greyish in colour: 233.0 to 234.0 244.0 to 245.7 1-2% irregular tigmatic and bondinaged quartz veinlets	Lower contact sharp irregular at about 30° to C.A.	Intense sericite and moderate carbonate. Chlorite flecks 5-10% over short sections	Low fracture density fractures filled with white quartz, chlorite or rarely pyrite	1/2" wide pyrite filled fracture at 45° to C.A. at 237.4 Less than 0.5% overall.	
255.0 to 277.7	Altered Lepilli Tuff Intercalated Ash Tuff	Mottled and banded lt green-buff and medium grey	4 mm to 32 mm	Heterogeneous 255.0 to 261.7. Intense sericitic sections 261.7 - 263.3 269.0 - 270.0	Lower contact 45° C.A.	Moderate sericite and chlorite. Weak silification overall	Low to medium fracture density	Less than 1% pyrite overall. 3-4% py 275.0 to 277.7	Alteration and shearing may be responsible for lepilli look.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
277.7 to 290.2	Sericitized Ash Tuff	Lt green buff with white flecks & irregular patches	Less than 4 mm	Appears fledspar porphyritic 1% irregular quartz veinlets	Lower contact at 50° to C.A.	Intensely sericitized with moderate carbonate alteration.	Low fracture density	Less than 0.5% pyrite in blebs and rare veinlet	Similar to sections: 228.5 to 255.0 261.7 to 263.3 269.0 to 270.0 SiO_2 - TiO_2 Sample #14144 280.0 - 290.0
290.2 to 290.8	Schist Zone	Lt green buff and olive green streaks	Finely schistose	Paper schist, some augen structures.	50° to C.A.	Intense sericite, minor chlorite and silica	Schist	Tr py	
290.8 to 318.5	Silicified breccia dyke or lapilli Chert Breccia	Marbled lt green grey-white dk brown bronze with lt brown splotches 315 to 318 Blue-grey cast	4 mm to 32 mm	Breccia; homogeneous in situ brecciated sections intercalated with heterogeneous sections containing exotic clasts of lt grey chert. 5-10% quartz veinlets that are frequently contorted, and boudined.	Sharp at 50° and 70°	Moderate to strong silicification, moderate sericitization and chloritization. Moderate to weak carbonitization.	High density of tensional fractures in quartz veins. Moderate to high density of stockwork fractures. Minor shearing.	6-8% sphalerite 315.0 - 318.0 Tr cp 314.6 and 315.3 associated with qtz veinlets 2-3% pyrite in matrix areas. Tr sph 305, and 308.	Greatly resembles lapilli or block tuff. Similar to surface exposures of CHERT BRECCIA in "new zone" stripping. Sulphide samples: #14145 to #14150 291.0 to 318.5
318.5 to 330.0	Sericitized Ash Tuff? Possibly dyke ?	Lt green-buff with dk green-blue specks white spots and irregular bands.	Less than 4 mm.	Appears feldspar porph. in some sections 2-3% irregular quartz veins	Sharp at 70° and 45° to C.A.	Intensely sericitized with moderate carbonate alteration.	Low density of late fractures in schistose rock.	Less than 0.5% pyrite in odd blebs and rare veinlet.	Similar sections: 228.5 to 255.0 261.7 to 263.3 269.0 to 270.0 277.7 to 290.2 Probable dyke

JEB 1133

HOLE NO. L.R. 77-2

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
330.0 to 334.2	Silicified breccia dyke or lapilli Chert Breccia	Marbled lt green grey-white dk brown bronze. Blue grey cast	4 mm to 32 mm	Breccia, apparently heterogeneous with 5-10% cherty clasts. 8-10% irregular quartz veinlets.	Sharp at 45° and 55° to C.A.	Strong to moderate silicification. Moderate chlorite and sericite. Weak to moderate carbonitization.	Moderate to high density of stockwork fracturing	Tr cp in tiny splotches associated with qtz-rich sections. Possible traces of tetrahedrite or galena. 2-3% dissem pyrite.	Similar to 290.8 to 318.5 but lacks sph. Looks like lapilli tuff. Sulphide sample #14151 330.0 to 334.2
334.2 to 339.9	Sericitized Ash Tuff? Possible dyke?	Lt green-buff with white specks & dk grey narrow bands.	Less than 4 mm	Appears to be anyg or feldspar porph in some sections.	Sharp at 55° and 45° to C.A.	Intense sericitization, moderate carbonate alteration and minor chlorite and silica associated with odd fracture.	Low density of late fractures	Tr py in rare fracture	Similar to sections 228.5 to 255.0, 261.7 to 263.3, 269.0 to 270.0, 277.7 to 290.2, 318.5 to 330.0 } Probable dykes. Refer SiO_2 - TiO_2 Sample #14144
339.9 to 435.0	Silicified Lapilli to Ash Tuff?	Med to dk grey with bluish cast. Variegated lt green-grey sections. Irregular bands and streaks of white	Less than 20% exceed 4 mm	Resembles breccia dyke and/or coarse ash to lapilli tuff in some sections. 15-20% quartz veinlets, often contorted by later shearing	Lower contact gradational	Moderate to strong silicification, moderate chlorite, weak to moderate sericite and carbonate alteration.	Weak to moderate sheering. Possible earlier high density in situ brecciation	Less than 0.5% sph in tiny veins, blebs and rare short disseminated sections e.g. 360'. Pyrite 1-2% as fine disseminations	May be a breccia dyke, but probably is sheared, altered ash tuff. Sulphide Samples: #14152 to 14170 340 to 435.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
435.0 to 445.0	Sheared Altered Lapilli Tuff	Lt green to med to dk grey mottled with short irregular white patches	4 mm to 32 mm	Sheared heterogeneous lapilli Fault 441.0 to 441.5	Gradational	Strong sericitization. Moderate to weak silica and chlorite. Trace sericite and fuchsite? 443.5		Less than 1% pyrite. Speck of tetrahedrite? in quartz vein 442.8 to 442.9	Sulphide sample: #14171 441.0 to 446.0
445.0 to 482.0	Sheared Altered Ash Tuff	Lt green-grey with dk grey streaks and variagations	Less than 4 mm	Sheared in situ brecciation and foliation of ash tuff	Gradational	Strong sericite with minor chlorite and silicification	High density fracturing	Pyrite 1-2% with short sections 2-3% pyrite. Traces of sphalerite 456, 465.6, 468 and 469 to 470.	Sulphide samples: #14171 441 - 446 #14172 to #14175 454 - 470 #14176 477 - 482
482.0 to 507.0	Altered Ash Tuff	Lt green with dk grey hairline fractures	Less than 4 mm	Bleached, in situ brecciated with dark alteration products associated with hairline fractures	Gradational	Strongly sericitized weekly chloritized and silicified.	High fracture density in stockwork	Pyrite <1% overall 1-2% for first 10' with tr sph at 490.4 in pyritic 1/4" veinlet.	Sulphide samples: #14176 to 14178 482 to 492 SiO_2 - TiO_2 #14179 497 - 507
507.0	END OF	HOLE		HOLE MAKING WATER					

JER 7524

DIAMOND DRILL CORE ASSAY RECORD

C.D.	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS ppm % CU	ppm % ZN	OZ. AG	OZ. AU	ppm PB	% Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14108	28.0	33.0			5	67	53	0.04	.001	28	4.53										
	14109	33.0	38.0			5	63	76	0.03	.001	22	3.00										
	14110	38.0	43.0			5	50	65	0.03	.001	20	3.27										
	14111	43.0	48.0			5	46	83	0.04	.001	25	3.37										
	14112	48.0	53.0			5	46	62	0.03	.001	27	2.38										
	14113	53.0	58.0			5	43	58	0.03	.001	32	3.05										
	14114	58.0	63.0			5	38	46	0.03	.001	34	2.76										
	14115	63.0	68.0			5	56	73	0.04	.001	70	3.50										
	14116	68.0	73.0			5	47	45	0.03	.001	40	2.74										
	14117	73.0	78.0			5	45	54	0.04	.001	33	3.00										
	14118	78.0	83.0			5	67	33	0.04	.001	42	3.40										
	14120	93.0	98.0			5	43	88	0.04	.001	36	3.60										
	14121	98.0	103.0			5	34	85	0.04	.001	30	2.77										
	14122	103.0	108.0			4	40	58	0.04	.001	15	3.15										
	14123	108.0	113.0			5	34	66	0.03	.001	18	3.63										
	14124	113.0	118.0			5	45	54	0.04	.001	19	3.13										
	14125	118.0	123.0			5	53	33	0.04	.001	20	3.10										
	14126	123.0	128.0			5	48	40	0.04	.001	18	2.93										
	14127	128.0	133.0			5	35	97	0.04	.001	15	2.38										
	14128	133.0	138.0			5	38	54	0.04	.001	22	3.00										

HOLE NO. L.R. 77-2

JEB 1624

DIAMOND DRILL CORE ASSAY RECORD

C.D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS ppm % Cu	ppm % Zn	Oz. Ag	Oz. Au	ppm Pb	% Fe Ft. % Cu	PROGRESSIVE TOTALS Ft. % Zn	Ft. Oz. Ag	Ft. Oz. Au	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% Cu	% Zn	Oz. Ag	Oz. Au
	14129	138.0	143.0			5	30	63	0.05	.001	19	2.90										
	14130	143.0	148.0			5	42	58	0.05	.001	20	3.28										
	14131	148.0	153.0			5	38	40	0.03	.001	17	3.08										
	14132	153.0	158.0			5	43	85	0.05	.001	20	3.00										
	14133	158.0	163.0			5	44	78	0.04	.001	22	2.50										
	14134	163.0	168.0			5	40	42	0.04	.001	18	2.95										
	14136	187.0	192.0			5	94	88	0.01	.001	26	3.55										
	14137	192.0	197.0			5	58	78	0.01	.001	46	4.50										
	14138	197.0	202.0			5	50	106	0.01	.001	26	3.15										
	14139	205.0	210.0			5	47	0.40%	0.03	.001	640	6.00										
	14140	210.0	215.0			5	43	480	0.03	.001	275	3.65										
	14141	215.0	220.0			5	43	395	0.03	.001	170	3.70										
	14142	220.0	225.0			5	40	875	0.03	.001	268	3.90										
	14143	225.0	228.5			3.5	37	880	0.02	.001	226	3.85										
	14145	291.0	296.0			5	32	40	0.01	.001	35	2.95										
	14146	296.0	301.0			5	107	510	0.04	.001	64	2.80										
	14147	301.0	306.0			5	68	93	0.04	.001	42	2.63										
	14148	306.0	311.0			5	76	695	0.07	.007	87	3.03	CHERT SCHIST									
	14149	311.0	315.0			4	1200	2.00%	0.12	.003	147	3.44										
	14150	315.0	318.5			3.5	2400	4.83%	0.33	.130	163	4.00										

HOLE NO. L.R. 77-2

JEB 1624

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ppm % CU	ppm % ZN	ASSAYS OZ. AG	OZ. AU	ppm Pb	% Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14151	330.0	334.2			4.2	945	0.70%	0.19	.227	94	3.73	CHERT [illegible] diluted dyke from 318.1									
	14152	340.0	345.0			5	169	0.40%	0.04	.002	83	2.85										
	14153	345.0	350.0			5	69	0.40%	0.02	.001	52	3.23										
	14154	350.0	355.0			5	60	0.29%	0.04	.001	68	3.68										
	14155	355.0	360.0			5	106	0.27%	0.03	.001	113	3.76										
	14156	360.0	365.0			5	96	0.31%	0.01	.001	202	4.00										
	14157	365.0	370.0			5	42	0.16%	0.02	.001	93	3.80										
	14158	370.0	375.0			5	30	675	0.01	.001	88	3.35										
	14159	375.0	380.0			5	70	0.34%	0.01	.001	405	3.45										
	14160	380.0	385.0			5	52	0.36%	0.01	.001	230	3.05	Porphyritic CHERT BRECCIA DYKE [illegible] diminishing in mineralization [illegible]									
	14161	385.0	390.0			5	47	0.30%	0.02	.001	300	3.90										
	14162	390.0	395.0			5	67	0.34%	0.01	.001	490	4.00										
	14163	395.0	400.0			5	76	0.19%	0.02	.001	925	4.00										
	14164	400.0	405.0			5	53	0.42%	0.01	.001	305	4.00										
	14165	405.0	410.0			5	68	0.37%	0.03	.001	382	3.70										
	14166	410.0	415.0			5	51	0.17%	0.02	.001	142	3.40										
	14167	415.0	420.0			5	82	0.58%	0.03	.001	250	3.80										
	14168	420.0	425.0			5	84	0.81%	0.03	.001	402	4.35										
	14169	425.0	430.0			5	50	0.27%	0.02	.001	175	3.50										
	14170	430.0	435.0			5	60	0.16%	0.04	.001	192	3.70										

HOLE NO. L.R. 77-2

JER 1624

DIAMOND DRILL CORE ASSAY RECORD

C.D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	DDH % CU	DDH % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	DDH PB	% FE FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14171	441.0	446.0			5	51	386	0.02	.001	131	3.35	% MS									
	14172	454.0	459.0			5	46	540	0.02	.001	93	3.25										
	14173	459.0	464.0			5	61	316	0.01	.001	73	3.30										
	14174	464.0	469.0			5	39	583	0.02	.002	39	3.55										
	14175	469.0	470.0			1	177	0.17%	0.02	.001	46	3.70										
	14176	477.0	482.0			5	44	358	0.02	.001	76	3.40										
	14177	482.0	487.0			5	51	256	0.02	.001	30	3.15										
	14178	487.0	492.0			5	60	322	0.03	.001	35	3.05										
	10349	318.2	325.0			6.8	46	~~57~~	0.06	0.001			1.16	] DYKE								
	10350	325.0	330.0			5.0	38	51	0.06	0.001			1.60	]								

HOLE NO. L.R. 77-2

JER 1624

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS % CU	ASSAYS % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	PROGRESSIVE TOTALS FT. % CU	PROGRESSIVE TOTALS FT. % ZN	PROGRESSIVE TOTALS FT. OZ. AG	PROGRESSIVE TOTALS FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
							$\%SiO_2$	$\%TiO_2$	$\%Na_2O$												
	14119	84.0	93.0			9	65.6	0.65	2.55												
	14135	168.0	178.0			10	67.8	0.56	1.92												
	14144	280.0	290.0			10	62.2	0.71	1.25												
	14179	497.0	507.0			10	72.7	0.62	2.53												

HOLE NO. L.R. 77-2

FALCONBRIDGE COPPER LIMITED — LAKE DUFAULT DIVISION

DRILL HOLE RECORD

HOLE NUMBER	LAT.	DEP.	ELEV.	BRNG.	DIP	HOLE SIZE	DEPTH
L.R. 77-3	5+00N	7+50W	Teck Corp. Coord.	180° Az	-45°	BQ Wireline	397'

LOCATION	PURPOSE	DATE DRILLED	CORE INTACT	COLLAR CEMENTED OR PEGGED
Halliday Township, Ontario	Test NEW SHOWING AREA Larche-Rousseau Option	Oct. 20-22/77	X	
			CORE DISCARDED ☐	COLLAR MARKED

ACID TESTS 100 ft -39°; 200 ft 34°; 300 ft 31° (probably taken around 240 ft. due to water pressure)

COMPASS TESTS 395 ft. 159° Az Dip 17°

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
0 to 10.0	OVERBURDEN								
10.0 to 26.0	Coarse Ash Tuff?	Medium grey with vague white flecks. Sections lt grey with white streaks 11.0 to 12.0 22.0 to 23.0. Rusty 27.0 - 28.0	Less than 4 mm	Appears to be feldspar porphyritic	Sharp at oxidized overburden contacts	Moderate to strong carbonitization 11.0 to 12.0 22.0 to 23.0 Weak sericite and chlorite associated with fractures.	Low density late fracturing except in carbonated zones 11.0 to 12.0 22.0 to 23.0	1-2% pyrite as fracture fillings and disseminations	May not be bedrock. Resembles section 13 to 17 Hole LL 77-2
26.0 to 37.0	Overburden								This and the two previous holes appear to be clipping bedrock ridges in the first 50 feet.

Dave Comba 8/03/78

HOLE NO. LR 77-3

LOGGED BY Dave Comba

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
37.0 to 78.5	Pyritized Porphyritic? Coarse Ash Tuff	Med to lt grey with greenish sections & white specks. Irreg dk brown (bronze) streaks and spots.	Less than 4 mm.	Uniform, strongly resembles feldspar porphyry.	Lower contact sharp at 45° to C.A.	Weak sericitization associated with fractures.	Weak to moderate in situ stockwork brecciation	2-3% pyrite in fractures, tiny blebs, and dissem.	SiO_2 - TiO_2 #14180 40.0 - 47.0 Sulphide Samples: #14181 to #14186 47.0 to 77.0
78.5 to 80.5	Lapilli Tuff	Mottled lt green and med grey	4 mm to 32 mm	Heterogeneous but 80% of clasts are lt green (sericitic) or buff and set in a grey fine clastic matrix. Long axis of clasts are at 45° to C.A.	Sharp at approx 45° to C.A. (sheared) at top contact, and 55° at lower contact	Majority of clasts have been moderately to strongly sericitized. Sericite associated with shearing at top contact.	Sheared for 2"-4" adjacent to top contact	1% pyrite or less as elong blebs	Appears to be pyroclastic rather than tectonically brecciated ash tuff.
80.5 to 101.0	Pyritized Altered Ash Tuff	Lt green grey with irregular dk brown bronze) streaks and flecks. Vague white specks.	Less than 4 mm	Uniform, vague feldspar porphyritic appearance. Tectonic fabric at 45° to C.A. especially noticeable in disseminated pyrite sections after 85.0. At 94.0 a pyrite-rich fracture is truncated by a hairline fracture? at 90° to fabric.	Lower contact gradational	Moderate to strong bleaching (sericitization)	Moderate fracture density 2" - 8"	4-5% pyrite in dissem after 82.0 and fracture fillings	Similar to section 114 to 118 in hole LR 77-2. Sulphide Samples: #14187 to #14191 82.0' - 102.0'

JKB 1133

HOLE NO. L.R. 77-3

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES.	SULPHIDES	REMARKS
101.0 to 143.5	In situ brecciated sericitized Ash Tuff	Lt green with dk grey-dk brown (bronze) hairline meshwork of fractures	Less than 4 mm	Porphyritic dioritic dyke 116.7 to 120.3 Strong to intensely brecciated in situ Short sections of shearing give distinct fabric accentuated by aligned pyrite blebs.	Gradational	Strong bleaching (sericite)	High density of stockwork fractures at all angles to C.A.	3-4% pyrite in fractures and dissem blebs 1 mm	Sulphide Samples: #14192 to #19143 102.0' to 116.7' #14194 to 14198 120.3' to 145.0'
143.5 to 153.5	Sheared Sericitized Brecciated Ash Tuff	Lt green with dk grey hairline meshwork of fractures	Less than 4 mm	Pervassively sheared in situ breccia.	Gradational	Strong sericitic bleaching. Chloritization adjacent to fractures.	Moderate to high density stockwork fractures at all angles. Sheared at 35° to 45° to C.A.	2-3% pyrite in fractures and some dissem.	Similar to section 101.0 to 143.5 but strongly sheared 35° to 45° to C.A. Sulphide Samples: #14199 to 14200 145.0 to 155.0
153.5 to 156.0	Pyritized Chloritic Schist	Med to dk grey with dk brown (bronze) whitish streaks	Fine grained	Schistose, soapy	Gradational	Strong chlorite minor sericite schist.	Pervassive schistosity at 65°-70° to C.A. 153.5 to 155.0; 45° to 50° 155.0 to 156.0	5-7% pyrite as semi-massive bands parallel to schistocity.	
156.0 to 165.5	Sheared Fractured Ash Tuff	Med green grey with dk brown (bronze) streeks	Less than 4 mm	Pervassively sheared, in situ brecciated with vague feldspar porphyry appearance	Lower contact sharp at 45° to C.A.	Weak to moderate sericite and chlorite	Weak to mod. pervassive shearing after in situ brecciation	1% pyrite in fractures	Similar to 143.5 to 153.5 but not as intensely sericitized. SiO_2 - TiO_2 #14201 156.0 - 165.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
							Shearing at 45° to C.A.		
165.5 to 170.5	Sheared Sericitic Ash Tuff	Lt olive green with dk grey and white streaks.	Less than 4 mm	Resembles lapilli tuff 168.5 to 170.5; but probably reflects late shearing of high density in situ brecciation and alteration.	Sheared at 45° to C.A.	Strong seritization, weak silicification, moderate to strong chloritization associated with fractures.	Pervassive shearing after in situ brecciation	Pyrite 1-2% in semi-massive fracture fillings and blebs	Sulphide Sample #14202 165.0 - 170.0
170.5 to 186.8	Sericitized Fractured Ash Tuff	Lt olive green-white streaks and patches with med grey haloes that form distinct bands at all angles.	Less than 4 mm	Vague feldspar porphyritic appearance. Lapilli tuff? 185.5 to 186.8	Sharp at 45° to C.A. at upper contact Lower contact at 70°	Strong sericitic bleaching. Fractures frequently haloed by grey chlorite(?)-rich alteration, and filled with white quartz veinlets Strong veining (qtz) 183.0 to 186.0	Moderate to high fracture density 1/4" - 4" Fractures often contain 1/4" to 1/2" white quartz veins	Less than 1% pyrite	
186.8 to 270.5	Silicified breccia dyke or lapilli CHERT BRECCIA	Marbled lt green grey, white dk brown (bronze) Grey-blue cast	4 mm to 32 mm	Breccia, homogeneous in situ brecciated sections intercalated with heterogeneous sections. 5%-10% quartz veinlets that are frequently contorted and/or tensionally fractured. Quartz veins: 202.5 - 203.5 Tr sph 205.7 - 206.3 Tr tetrahedrite???	Sharp at 70° to C.A. Lower contact dyked out	Moderate to strong silicification moderate sericitization and chloritization. Chill margins of dyke 251.5 to 256.8 are bleached (sericitized)	High density of tensional fractures in quartz veins. Moderate to high density stockwork fractures. Weak to moderate pervassive shearing.	Tr sph, cp gn 228.8 to 230.8 Tr sph, cp 268.3 to 269.7.	Resembles lapilli or block tuff. Similar to surface exposures of CHERT BRECCIA in "new zone" and intersections in hole LR 77-2: 290.8 - 318.5 330.0 - 334.0 339.0 - 435.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
				Sericitized Ash Tuff?: 238.3 to 239 239.4 to 242.4 Sericitized diorite dykes: 251.5 to 256.8 278.7 to 279.5 Grey chert blocks or bombs: 251.0 - 251.3 - Tr sph 265.2 - 265.5 - Tr sph Irregular patch of light green chlorite or fuchsite? and sericite: 267.3 - 267.4				1-2% pyrite in matrix areas. Odd speck of sph and gn at long intervals. Tetrahedrite in qtz veins: 205 - 206	Equivalent to sericitic ash tuff? in hole LR 77-2: 228.5 to 255.0 261.7 to 263.3 269.0 to 270.0 277.7 to 290.2 318.5 to 330.0 334.2 to 339.9 Sulphide Samples: #14202 - 14222
270.5 to 323.0	Silicified Ash Tuff Minor Lapilli Tuff	Med to dk grey green variagated lt green-grey sections. Irregular white bands and streaks	Less than 10% exceed 4 mm	Resembles coarse ash to lapilli tuff in some sections and breccia dyke in others: 15-20% quartz veinlets, often tectonically deformed. Bleached (sericite-rich) section 310.5 to 313.4 Lapilli 313.5 to 314.5	Lower contact gradational	Moderate silicification and chlorite, weak to moderate sericite and carbonate	Weak to moderate shearing. Possible earlier high density in situ brecciation	Pyrite 1-2% Tr tetrahedrite associated with 5% of quartz veinlets. Pyrite 1-2% Tr sph gn 295 - 297	SiO_2 - TiO_2 #14224 Sulphides: #14223; #14225 to 14231 Similar to section 339.2 to 435.0 in hole L.R. 77-2
323.0 to 339.0	Altered Ash Tuff	Lt olive green with dk grey hair-line stockwork fractures	Less than 4 mm	Bleached (sericite) uniform then fractured and altered	Gradational	Strong sericite overall weakly chloritized and silicified in fracture fillings.	Weak to moderate pervassive shearing.	Pyrite 1-2% primarily in fractures.	Sulphide Samples: #14232 to 14234 Similar section L.R. 77-2 482.0 to 507.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
339.0 to 397.0	Altered Ash Tuff	Med to dk grey with lt green-grey variagations. Irregular white streaks and bands	∠4mm	Unifirm, 5-10% quartz veinlets	Gradational	Moderately chloritized, weak to moderate silicification and sericitization.	Pervassive weak to moderate shearing at 50°-55° to C.A.	Pyrite 1% or less Tr sph 392.5	Similar to section 270.5 to 323.0 but less pyritic and silicified.
END OF HOLE				HOLE MAKING WATER					

JKB 7624

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE Cu	ESTIMATE Zn	LENGTH FT.	ppm % Cu	ppm % Zn	ASSAYS Oz. Ag	Oz. Au	ppm Pb	% Fe Ft. % Cu	PROGRESSIVE TOTALS Ft. % Zn	Ft. Oz. Ag	Ft. Oz. Au	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% Cu	% Zn	Oz. Ag	Oz. Au
	14181	47.0	52.0			5.0	74	74	0.02	.001	10	3.10										
	2	52.0	57.0			5.0	49	78	0.02	.001	12	2.70										
	3	57.0	62.0			5.0	77	51	0.04	.001	20	3.90										
	4	62.0	67.0			5.0	74	81	0.04	.001	34	4.30										
	5	67.0	72.0			5.0	56	44	0.05	.001	35	4.30										
	6	72.0	77.0			5.0	68	120	0.04	.001	35	4.70										
	14187	82.0	87.0			5.0	65	76	0.02	.001	18	3.80										
	8	87.0	92.0			5.0	73	52	0.02	.001	20	3.35										
	9	92.0	97.0			5.0	65	48	0.03	.001	24	3.75										
	90	97.0	102.0			5.0	59	62	0.02	.001	22	3.70										
	1	102.0	107.0			5.0	61	181	0.03	.001	26	4.00										
	2	107.0	112.0			5.0	53	66	0.03	.001	15	3.65										
	3	112.0	116.7			4.7	52	47	0.02	.001	15	3.45										
	14194	120.3	125.0			4.7	49	47	0.02	.001	16	3.25										
	5	125.0	130.0			5.0	59	44	0.02	.001	16	3.85										
	6	130.0	135.0			5.0	61	54	0.02	.001	15	3.55										
	7	135.0	140.0			5.0	56	64	0.02	.001	21	3.75										
	8	140.0	145.0			5.0	57	184	0.03	.001	27	3.10										
	9	145.0	150.0			5.0	82	263	0.03	.001	34	3.15										
	14200	150.0	155.0			5.0	66	123	0.04	.001	30	3.35										

HOLE NO. L.R. 77-3

JTER 1624

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS ppm % Cu	ASSAYS ppm % Zn	ASSAYS Oz. Ag	ASSAYS Oz. Au	ppm Pb	% Fe	PROGRESSIVE TOTALS Ft. % Cu	PROGRESSIVE TOTALS Ft. % Zn	PROGRESSIVE TOTALS Ft. Oz. Ag	PROGRESSIVE TOTALS Ft. Oz. Au	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% Cu	% Zn	Oz. Ag	Oz. Au
	14202	165.0	170.0			5.0	72	238	0.06	.001	105	3.70											
	14203	186.8	191.0			4.2	65	702	0.04	.001	147	3.30											
	4	191.0	196.0			5.0	58	310	0.04	.002	104	3.50											
	5	196.0	201.0			5.0	57	818	0.03	.001	177	3.20											
	6	201.0	205.0			4.0	49	72	0.03	.001	98	3.15											
	7	205.0	206.0			1.0	30	0.12%	0.03	.001	203	3.70											
	8	206.0	211.0			5.0	40	0.21%	0.03	.001	432	2.80											
	9	211.0	216.0			5.0	62	0.12%	0.03	.001	213	3.40											
	10	216.0	221.5			5.0	41	252	0.03	.001	48	2.25											
	11	221.0	226.0			5.0	46	60	0.02	.001	42	2.60											
	12	226.0	228.8			2.8	124	0.19%	0.04	.001	360	3.45											
	13	228.8	230.8			2.0	330	1.84%	0.10	.001	1460	3.30											
	14	230.8	236.0			5.2	43	312	0.04	.001	140	4.05											
	15	236.0	238.3			2.3	45	423	0.02	.001	70	3.55											
	14216	242.4	247.0			4.6	54	815	0.02	.001	36	3.70											
	17	247.0	250.0			3.0	43	272	0.03	.009	40	4.20											
	18	250.0	251.5			1.5	200	0.30%	0.07	.065	212	3.75											
	19	256.8	262.0			5.2	340	0.13%	0.06	.020	130	3.40					256.8	269.7	12.9				
	20	262.0	267.0			5.0	287	0.45%	0.05	.005	260	3.00											
	21	267.0	268.3			1.3	108	0.30%	0.05	.001	109	2.95											

CHECK ASSAYS

HOLE NO. L.R. 77-3

JER 3524

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ppm % Cu	ppm % Zn	ASSAYS Oz. Ag	ASSAYS Oz. Au	ppm Pb	% Fe Ft. % Cu	PROGRESSIVE TOTALS Ft. % Zn	Ft. Oz. Ag	Ft. Oz. Au	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% Cu	% Zn	Oz. Ag	Oz. Au
	14222	268.3	269.7			1.4	502	0.67%	0.07	0.001	153	4.55										
	23	270.5	276.0			5.5	52	0.26%	0.04	0.001	90	3.05										
	14225	286.0	291.0			5.0	47	0.18%	0.03	0.001	124	3.80										
	26	291.0	295.0			4.0	41	0.14%	0.04	0.001	72	3.65										
	27	295.0	297.0			2.0	84	0.30%	0.04	0.001		3.40										
	28	297.0	302.0			5.0	45	0.15%	0.03	0.001		3.40										
	29	302.0	307.0			5.0	43	0.13%	0.03	0.001		3.50										
	30	307.0	312.0			5.0	38	0.15%	0.03	0.001		3.95										
	31	312.0	317.0			5.0	34	730	0.06	0.001		3.60										
	32	317.0	322.0			5.0	38	0.10%	0.03	0.002		3.50										
	33	322.0	327.0			5.0	43	0.07%	0.03	0.001		3.40										
	34	327.0	332.0			5.0	98	0.20%	0.03	0.001		3.95										
	35	332.0	337.0			5.0	61	0.13%	0.03	0.002		3.60										
	36	337.0	342.0			5.0	80	0.22%	0.02	0.001		3.50										
	37	342.0	347.0			5.0	81	0.29%	0.07	0.002		4.00										
	38	347.0	352.0			5.0	64	0.26%	0.14	0.004		3.50										
	39	352.0	357.0			5.0	61	1280	0.15	0.001	103	3.90										
	40	357.0	362.0			5.0	52	1360	0.04	0.001	125	3.90										
	14241	375.0	380.0			5.0	43	760	0.03	0.001	140	3.20										
	42	380.0	385.0			5.0	70	765	0.02	0.001	117	3.25										

HOLE NO L.R. 77-3

JER 7524

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C O	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS ppm % CU	ASSAYS ppm % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	ppm Pb	% Fe	PROGRESSIVE TOTALS FT. % CU	PROGRESSIVE TOTALS FT. % ZN	PROGRESSIVE TOTALS FT. OZ. AG	PROGRESSIVE TOTALS FT. OZ. AU
	14243	385.0	390.0			5.0	61	642	0.03	.001	75	3.35				
	44	390.0	395.0			5.0	46	1250	0.03	.001	50	3.95				
	45	395.0	397.0			2.0	82	216	0.03	.001	50	2.70				

REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU

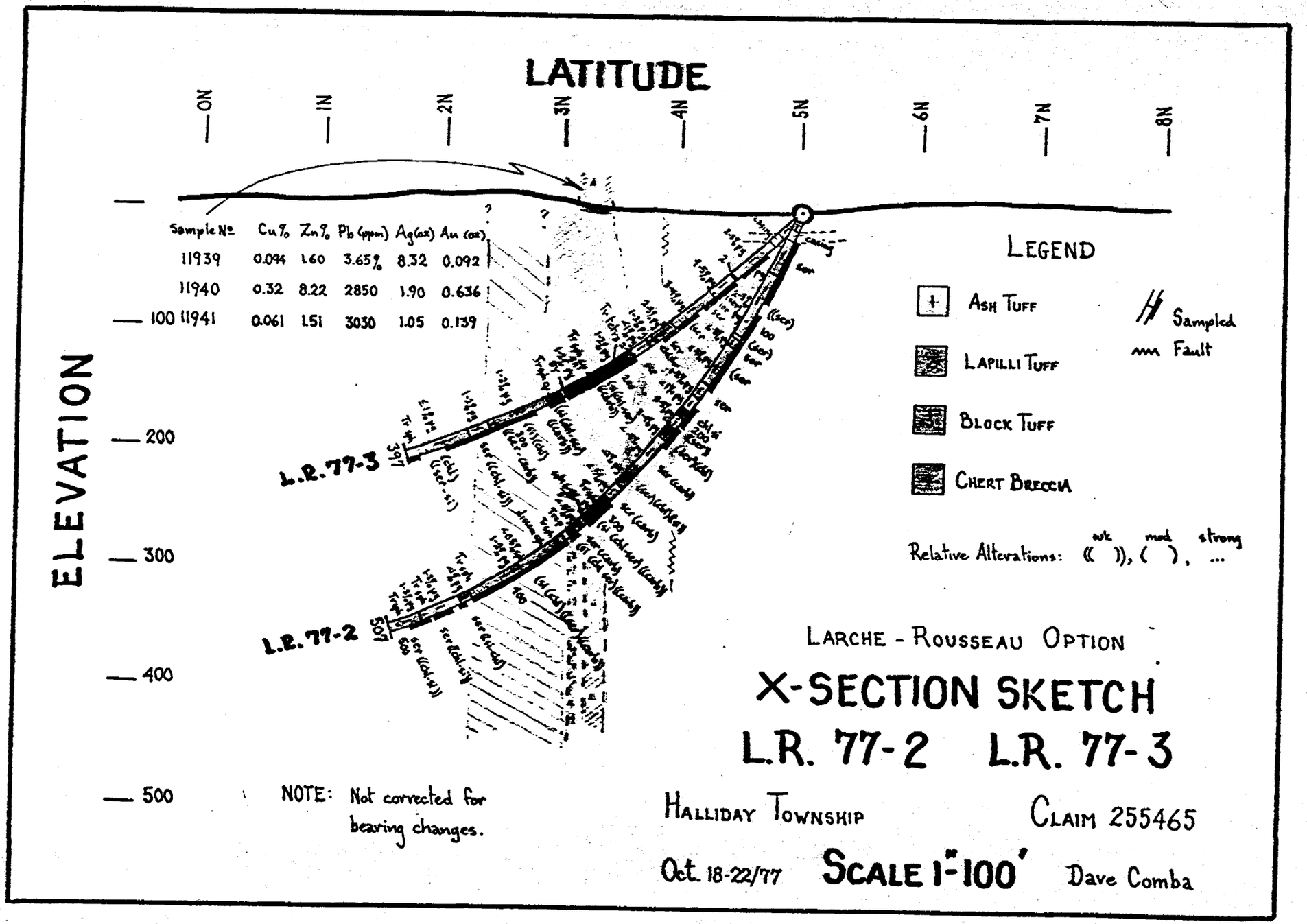
HOLE NO. L.R. 77-3

JER 1624

DIAMOND DRILL CORE ASSAY RECORD

C.D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS % CU	ASSAYS % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	PROGRESSIVE TOTALS FT. % CU	PROGRESSIVE TOTALS FT. % ZN	PROGRESSIVE TOTALS FT. OZ. AG	PROGRESSIVE TOTALS FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
							$\%SiO_2$	$\%TiO_2$	$\%Ne_2O$												
	14180	40.0	47.0			7.0	64.5	0.62	2.96												
	14201	156.0	165.0			9.0	65.7	0.54	0.18												
	14224	276.0	286.0			10.0	69.1	0.59	0.05												

HOLE NO. L.R. 77-3


LATITUDE
0N
1N
2N
3N
4N
5N
6N
7N
8N
ELEVATION
100
200
300
400
500
Sample No. Cu% Zn% Pb (ppm) Ag(oz) Au (oz)
11939 0.094 1.60 3.65% 8.32 0.092
11940 0.32 8.22 2850 1.90 0.636
11941 0.061 1.51 3030 1.05 0.139
L.R.77-3
L.R.77-2
LEGEND
Ash Tuff
Lapilli Tuff
Block Tuff
Chert Breccia
Sampled
Fault
Relative Alterations: (( )), ( ), ... wk mod strong
NOTE: Not corrected for bearing changes.
LARCHE - ROUSSEAU OPTION
X-SECTION SKETCH
L.R. 77-2 L.R. 77-3
HALLIDAY TOWNSHIP
CLAIM 255465
Oct. 18-22/77
SCALE 1"=100'
Dave Comba

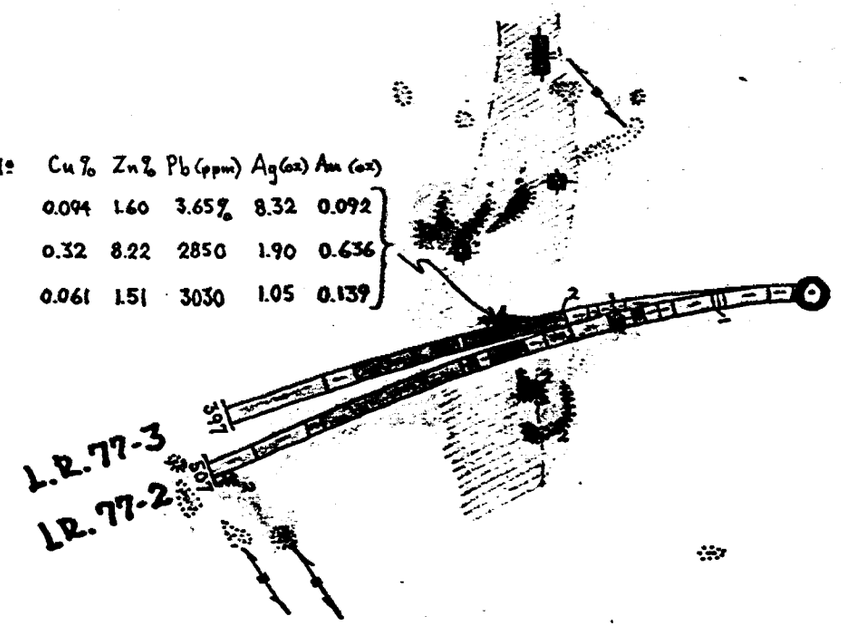
LATITUDE

0N 1N 2N 3N 4N 5N 6N 7N 8N

DEPARTURE

9W 8W 7W 6W 5W 4W

Sample №	Cu %	Zn %	Pb (ppm)	Ag (oz)	Au (oz)
11939	0.094	1.60	3.65%	8.32	0.092
11940	0.32	8.22	2850	1.90	0.636
11941	0.061	1.51	3030	1.05	0.139



LEGEND

1 Ash Tuff

Lapilli Tuff

Block Tuff

Chert Breccia

Larche - Rousseau Option

PLAN VIEW

L.R. 77-2 L.R. 77-3

Halliday Township Claim 255465

Oct. 18-22/77 **Scale 1"=100'** Dave Comba

FALCONBRIDGE COPPER LIMITED — LAKE DUFAULT DIVISION

DRILL HOLE RECORD

HOLE NUMBER	LAT.	DEP.	ELEV.	BRNG.	DIP	HOLE SIZE	DEPTH
L.R. 77-4	5+00N	8+00W	Teck Corp. Coord.	180° Az	-65°	BQ Wireline	496'

LOCATION	PURPOSE	DATE DRILLED	CORE INTACT	CORE DISCARDED	COLLAR CEMENTED OR PLUGGED	COLLAR MARKED
Halliday Township, Ontario	Test ~~KEW~~ SHOWING AREA Larche-Rousseau Option	Oct 24-27/77	☒	☐	☐	☐

ACID TESTS 100 ft. -61°; 200 ft -57°; 300 ft -51°; 400 ft -34°

COMPASS TESTS Az 152°(Tr) Dip 18°

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
0 to 25.0	Overburden								
25.0 to 25.5	Sericitic Boulder?	Buff	Fg	Massive, uniform	~~Sharp~~	Intense sericite, minor carbonate and chlorite	High density 1/16"-1/4" at 45°	Negligible	Probably erratic. Casing to 26.0'
25.5 to 82.7	Pyritized Ash Tuff	Med grey with lt grey-green sections. Dk brown (bronze) streaks and specks. Vague to distinct white flecks after 64.0	Less than 4 mm	Appears feldspar porphyritic after 64.0'. Coarse ash to lapilli section 31.0 to 32.0. Contacts and long axis heterogeneous clasts at approximately 30° to C.A.	~~Sharp lower contact~~ at 80°	Relatively weak to moderate bleaching (sericitic?) adjacent to fractures over short sections.	Fault at 75° to C.A. 74.0 to 74.2. Weak density of quartz filled fractures 6" - 2"~35° to C.A. Moderate density pyritized fractures at all angles.	Pyrite 3-5% over 40% in hairline fractures to 1/4" wide breaks. 60% pyrite disseminated in sections frequently adjacent to pyritic fracture and often associated weak bleaching.	Sulphide Samples; #14245 to # 14256 25.5 to 80.0

Dave Comba 8/03/78

HOLE NO. L.R. 77-4

LOGGED BY Dave Comba

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
82.7 to 84.2	Lapilli to Block? Tuff	Spotted white, lt green buff med to dk grey-green.	4 mm to 32 mm	Heterogeneous, densely packed with block sized clast? of ash tuff. Banding at 30° to C.A. 84.0 to 84.2	Upper contact 80°, lower at 30° to C.A.	Weak sericite-chlorite	Low to moderate density	4-5% dissem pyrite	Pyroclastic
84.2 to 89.0	Dacitic? Ash Tuff	Med grey vague white specks	Less than 4 mm	Uniform featureless	Contacts at 30° to C.A.	Regional greenschist	Negligible	Negligible	Appears to be as "fresh" as any ash tuff logged to date. SiO_2-TiO_2 # 14257
89.0 to 90.3	Block Tuff	Spotted	Greater than 32 mm	Heterogeneous breccia, densely packed with block sized rounded clasts of ash tuff.	Contacts at 30° to C.A.	Regional greenshcist	Odd fracture at 30° to C.A.	2% pyrite	Pyroclastic, similar to section 82.7 to 84.2
90.3 to 137.0	Weakly bleached Ash Tuff	Med grey green. 90.3 to 112.0	Less than 4 mm	Resembles feldspar porphyry, especially 122 to ___. where fine felsic clasts ~35% of rock. Vague fabric due to alignment of felsic clasts and tiny blebs of pyrite at about 30-35° to C.A.	Upper contact sharp Lower contact gradational	Frequency of bleached sections increase in length and intensity down hole. Bleaching (sericite) associated with fractures.	Quartz filled fractures rare (5' to 8'). Low density pyrite filled fractures 90.3 to 112.0 increases to relatively moderate density.	Pyrite 1-2% 90.3 to 112.0 2-4% 112.0 to 137.0. 60% pyrite occurs as fracture fillings. 40% as dissem	Sulphide samples: # 14258 to # 14267 107.0 to 137.0 Fracture density and attend- and bleaching (sericite) and pyritic fracture filling incrementally increases down section.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
137.0 to 192.0	Moderately Altered Fractured Ash Tuff	Lt grey-green with white specks and dk brown bronze streaks & flecks	Less than 4 mm	Uniform, resembles feldspar porphyry.	Gradational	Moderate bleaching (sericitic alteration)	Moderate to high fracture density at all angles	2-3% pyrite 137.0 to 152.0 decreasing to 1-2% 192.0. 70% of pyrite occurring in hairline to 1/4" fractures 30% as dissem.	Similar to adjacent sections as part of a progressive increase (down hole) in intensity of pervassive bleaching (sericitic) and tectonic deformation. Sulphide Samples: # 14264 to # 14271 137.0 to 177.0 # 14275 187.0 to 192.0 SiO_2-TiO_2 Sample # 14272 177.0 to 187.0
192.0 to 222.2	Sheared Bleached Ash Tuff	Lt grey-green, streaked & banded with med to dk grey	Less than 4 mm	Vaguely pseudoporphyritic with early *in situ* breccia texture overprinted by pervassive tectonic fabric at 45° to C.A.	Upper contact gradational. Lower contact sharp at 45°	Moderate bleaching at 192.0 increases incrementally to strong sericitization 215.0	Intensity of shearing increases to schist at 222.0 Earlier *in situ* breccia fabric aligned 45° to C.A.	1-2% overall, primarily as fillings in hairline fractures.	Similar to previous section but more intensive pervassive sericitization and shearing. Sulphide Samples: # 14274 to # 14276 192.0 to 207.0
222.2 to 232.0	Altered Dioritic? Dyke	Lt green chill zones 3" -6" wide. Lt grey-green with 5% small irreg. white clots	Fg	Inclusion of sheared bleached ash tuff 222.4 to 222.5 Appears to be fledspar porphyritic	Sharp at 45°	Intensely sericitized chills with weak to moderately bleached interior.	Weak to moderate density of barren hairline fractures.	Negligible	Similar dykes in L.R. 77-2 were more intensely altered and logged as sericitic ash tuff.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPH'IDES	REMARKS
232.0 to 256.0	Sheared in situ brecciated Ash Tuff	Lt.green-grey marbled with cream, white & dk grey	Less than 4 mm	In situ brecciation pervasively deformed by shearing at 50° to 60° to C.A.	Lower contact gradational	Moderate to strong sericitization	Fault 240.0 to 241.0 Strong shearing overprints earlier strong in situ brecciation	1-2% pyrite in hairline fractures	No core 240.0 to 241.0 Hole making water. Sulphide Samples: # 14277 to # 14278 232.0 to 240.0 # 14279 to # 14281 241.0 to 256.0
256.0 to 277.0	Schistose Ash Tuff	Banded lt and dk green grey with white streaks	Less than 4 mm	Schistose at 45°-55° to C.A. from 256 to 271. Paper schist 271 to 276 at 30° to 40° to C.A.	Gradational contacts	Strong sericite, moderate chlorite schist. 2-4% qtz veining and weak carbonate alteration	Paper schist 271 to 276	1% pyrite	3' of ground core 257 to 260 or footage error.
277.0 to 298.5	Sheared Altered Ash Tuff	Mottled lt green grey off white	Less than 4 mm	Relatively coarse clastic, some sections close to lapilli tuff. Other sections appear to be feldspar porph.	Lower contact 45°-50° to C.A. and sharp.	Moderate sericitization, chloritization and weak silicification and carbonitization.	Intensity of shearing decreases down hole from strong to weak.	Less than 1% pyrite	Alteration products similar to "main zone" in holes LR 77-2 and 3 but in different proportions. Note drop in pyrite content just north (up hole) of CHERT BRECCIA. SiO_2- TiO_2 # 14282 288.0 to 298.0
298.5 to 356.5	Altered Lapilli CHERT Tuff	Marbled lt green lt grey med grey white with minor lt green sections	4 mm to 32 mm	First lapilli sized lt grey chert clast at 298.9. Lt grey chert clasts 20% 337 to 340. Lt grey chert block? and dyke 349.3 to 351. Lt grey chert clasts 353 to 356.3.	Sharp at 45°	Less than 5% qtz veinlets. Moderate sericitization, moderate to weak chloritization silicification and carbonitization.	Low density fracturing Weak shearing	Chalcopyrite and telluride or tetrahedrite semi-massive 1/4" wide 353.5 Tr cp and telluride?	Sulphide Samples: # 10463 298.5 to 302.0 # 10464 to # 10465 307.4 to 317.0 # 10487 to # 10492 328.8 to 356.5

356.0.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
				Sericitized dykes with white quartz (minor carbonate): 302.0 to 307.4 310.4 to 311.3 318.0 to 328.8 Dyke contacts at 40° to 50° to C.A.					
356.5 to 360.2	Altered dyke	Lt green with white bands	Fg		Sharp at 45°	Strong to intense bleaching (sericite) with minor silicification (qtz veinlets) and carbonate.	Low to moderate fracture density and shearing	Rare pyrite filled fractures Less than 1%	Similar dykes: 302.0 to 307.4 310.4 to 311.3 318.0 to 328.8
360.2 to 404.0	Altered Ash to Lapilli Tuff	Lt green med grey streaked with white irreg bands	Less than 10 mm	Lapilli sections may be in situ brecciated Ash Tuff overprinted by later pervassive shearing. Less than 5% qtz veinlets overall with relatively qtz vein-rich sections: 376 - 379 395 - 400	Lower Contact gradational	Moderate bleaching (sericite) and chloritization (assoc with fractures). Weak silicification (qtz veins) and carbonitization.	Moderate to high fracture density (in situ stockwork) overprinted by later weak to moderate pervassive shearing at 50°-55° to C.A.	Tr cp sph 376.0 Tr sph 396.5 1% Cu 397.9 - 398.2 Less than 1% pyrite overall but odd semi-massive pyrite filled fracture.	Base metal sulphides associated with sections containing 10-25% qtz veinlets. Sulphide Samples: # [illegible] to # 14304 361.0 to 406.0
404.0 to 496.0	Dacitic? Ash Tuff (Minor Lapilli intercalations)	Med grey with odd section of lt green mottle & white streaks. Dk brown	Less than 10 mm	Lapilli sections may be in situ brecciated Ash Tuff overprinted by later pervassive shearing. Less than 2-3% quartz veinlets overall with relative qtz vein-rich sections: 445.0 to 447.0 458.0 to 459.2		Weak sericitization and moderate to weak chloritization short sections of strong silicification (qtz veinint): 445.0 to 447.0 458.0 to 459.2 479.8 to 486.5	Moderate fracture density with weak shearing at 55°-65° to C.A.	Tr cp sph at 446. Tr cp 485.9 1% pyrite overall with 5-15% in qtz veined sections:	SiO_2-TiO_2 # 14305 408.0 to 418.0 Sulphide Samples: # [illegible] to # [illegible] 440.0 to 464.0 # 14313 to # 14314 479.8 to 486.5

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
		(bronze) streaks and mottle associated with white streaked sections.		479.8 to 486.5				445.0 to 447.0 458.0 to 459.2 479.8 to 486.5	Sulphides, principally pyrite, are associated with quartz veinlets and alteration similar to the "main zone" in holes LR 77-2, LR 77-3. They may represent the marginal phases of enechelon base metal-rich fractures.
496.0	END OF HOLE								Hole making water.

JEB 1624

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS ppm CU	ASSAYS ppm ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	ASSAYS ppm Pb	PROGRESSIVE TOTALS % Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	PROGRESSIVE TOTALS FT. OZ. AG	PROGRESSIVE TOTALS FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14246	25.5	30.0			4.5	61	80	0.03	.001	10	2.80										
	7	30.0	35.0			5.0	72	76	0.03	.001	18	4.75										
	8	35.0	40.0			5.0	90	70	0.04	.001	12	4.30										
	9	40.0	45.0			5.0	74	92	0.04	.001	13	3.90										
	14250	45.0	50.0			5.0	63	122	0.02	.001	10	3.20										
	51	50.0	55.0			5.0	82	108	0.02	.001	9	3.50										
	52	55.0	60.0			5.0	71	82	0.02	.001	12	3.95										
	53	60.0	65.0			5.0	59	90	0.02	.001	8	3.05										
	54	65.0	70.0			5.0	115	92	0.02	.001	20	4.40										
	55	70.0	75.0			5.0	50	82	0.02	.001	14	3.90										
	56	75.0	80.0			5.0	50	79	0.02	.001	16	3.90										
	58	107.0	112.0			5.0	50	98	0.03	.001	17	3.40										
	59	112.0	117.0			5.0	53	46	0.03	.001	15	3.80										
	60	117.0	122.0			5.0	58	55	0.03	.001	16	4.00										
	61	122.0	127.0			5.0	39	110	0.02	.001	14	3.60										
	62	127.0	132.0			5.0	58	58	0.02	.001	14	3.65										
	63	132.0	137.0			5.0	30	88	0.02	.001	10	3.35										
	64	137.0	142.0			5.0	81	280	0.04	.001	35	4.75										
	65	142.0	147.0			5.0	66	100	0.03	.001	46	3.75										
	66	147.0	152.0			5.0	65	80	0.03	.001	27	4.10										

HOLE NO. L.R. 77-4

JER 1624

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C.D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS ppm % CU	ASSAYS ppm % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	ppm Pb	% Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14267	152.0	157.0			5.0	49	66	0.02	.001	23	3.70										
	68	157.0	162.0			5.0	72	80	0.02	.001	17	3.75										
	69	162.0	167.0			5.0	41	100	0.03	.001	16	3.35										
	70	167.0	172.0			5.0	66	68	0.03	.001	24	3.40										
	71	172.0	177.0			5.0	57	87	0.03	.001	20	3.85										
	14273	187.0	192.0			5.0	46	72	0.03	.001	26	4.20										
	74	192.0	197.0			5.0	46	930	0.05	.001	48	3.60										
	75	197.0	202.0			5.0	42	88	0.03	.001	27	3.10										
	76	202.0	207.0			5.0				.001												
	77	232.0	237.0			5.0	107	595	0.03	.001	60	3.50										
	78	237.0	240.0			3.0	87	0.18%	0.05	.001	263	3.78										
	79	241.0	246.0			5.0	54	107	0.03	.001	44	2.77										
	80	246.0	251.0			5.0	52	186	0.02	.001	62	3.00										
	81	251.0	256.0			5.0	48	134	0.02	.001	80	3.20										
	10483	298.5	302.0			3.5	63	.210	0.02	.003	37	3.47										
	84	307.4	312.0			4.6	110	900	0.02	.015	64	4.00										
	85	312.0	317.0			5.0	137	1120	0.03	.002	37	3.73										
	86	328.8	333.8			5.0	295	965	0.03	.001	78	3.80										
	87	333.8	338.8			5.0	228	0.13%	0.03	.012	53	4.07										
	88	338.8	343.7			4.9	608	408	0.04	.001	27	3.78										

HOLE NO. L.R. 77-4

JRB 1624

DIAMOND DRILL CORE ASSAY RECORD

C.D.	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS % Cu	ASSAYS % Zn	ASSAYS Oz. Ag	ASSAYS Oz. Au	ASSAYS % Fe	PROGRESSIVE TOTALS Ft.	PROGRESSIVE TOTALS % Cu	PROGRESSIVE TOTALS Ft.	PROGRESSIVE TOTALS % Zn	PROGRESSIVE TOTALS Ft.	PROGRESSIVE TOTALS Oz. Ag	PROGRESSIVE TOTALS Ft.	PROGRESSIVE TOTALS Oz. Au	REMARKS AND AVERAGE ASSAYS
	14289	343.7	348.7			5.0	147	0.16%	0.02	.002	30	3.93								
	90	348.7	353.7			5.0	263	0.35%	0.05	.005	145	3.08								
	91	353.7	354.7	.1	Au?	1.0	0.80%	1.01%	0.46	.015		3.65								
	92	354.7	356.5	Tr	Au?	1.8	0.10%	0.89%	0.16	.108		2.95								
	93	361.0	366.0			5.0	56	0.13%	0.02	.001	100	3.50								
	94	366.0	371.0			5.0	48	1050	0.02	.002	93	3.03								
	95	371.0	376.0			5.0	53	0.18%	0.02	.002	84	3.08								
	96	376.0	377.0	Tr	Tr	1.0	2.45%	0.10%	0.04	.003		2.75								
	97	377.0	382.0			5.0	92	1000	0.02	.002	68	3.22								
	98	382.0	387.0			5.0	46	775	0.02	.002	47	3.36								
	99	387.0	392.0			5.0	47	937	0.03	.003	44	3.44								
	14300	392.0	396.3			4.3	42	765	0.02	.004	50	3.28								
	1	396.3	397.9		Tr	1.6	0.14%	0.12%	0.10	.002		3.70								
	2	397.9	398.2	.1		0.3														
	3	398.2	403.0			4.8	73	900	0.02	.003	85	3.35								
	4	403.0	408.0			5.0	50	683	0.02	.003	38	3.00								
	6	440.0	445.0			5.0	116	590	0.04	.001	50	3.67								
	7	445.0	447.0			2.0	0.15%	0.17%	0.12	.003	355	5.17								
	8	447.0	452.0			5.0	197	0.14%	0.10	.002	132	3.65								
	9	452.0	457.0			5.0	57	995	0.03	.001	120	3.76								

HOLE NO. L.R. 77-4

JEP 1624

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS ppm % CU	ppm % ZN	OZ. AG	OZ. AU	ppm PB	% Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14310	457.0	458.1			1.1	60	210	0.04	.001	87	3.30										
	11	458.1	459.2			1.1	58	353	0.10	.003	430	8.87										
	12	459.2	464.0			4.8	66	600	0.02	.001	78	3.73										
	13	479.8	485.0			5.2	52	670	0.04	.001	205	6.00										
	14	485.0	486.5	Tr		1.5	125	0.17%	0.05	.001	95	4.20										

HOLE NO. L.R. 77-4

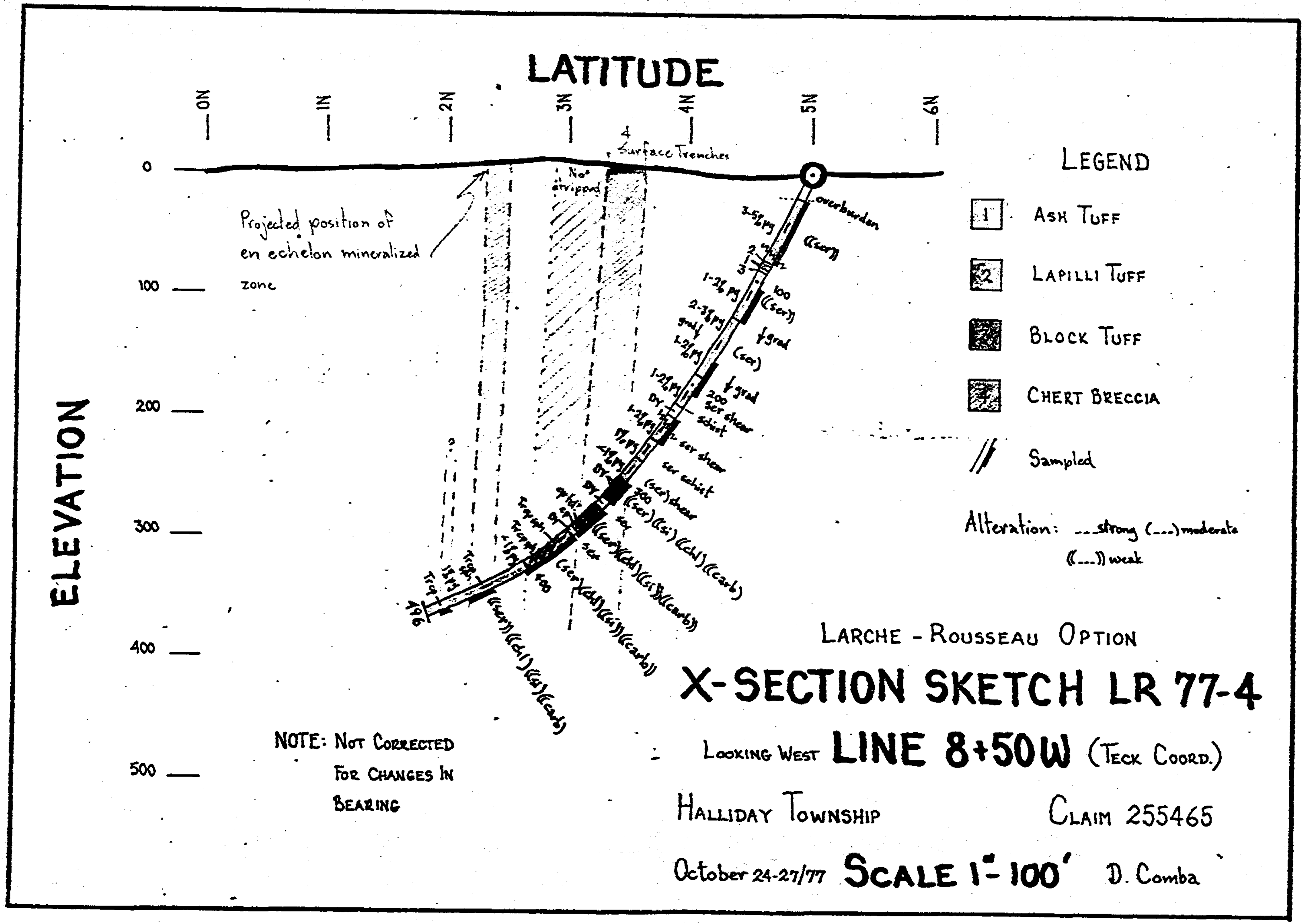
JER 1624

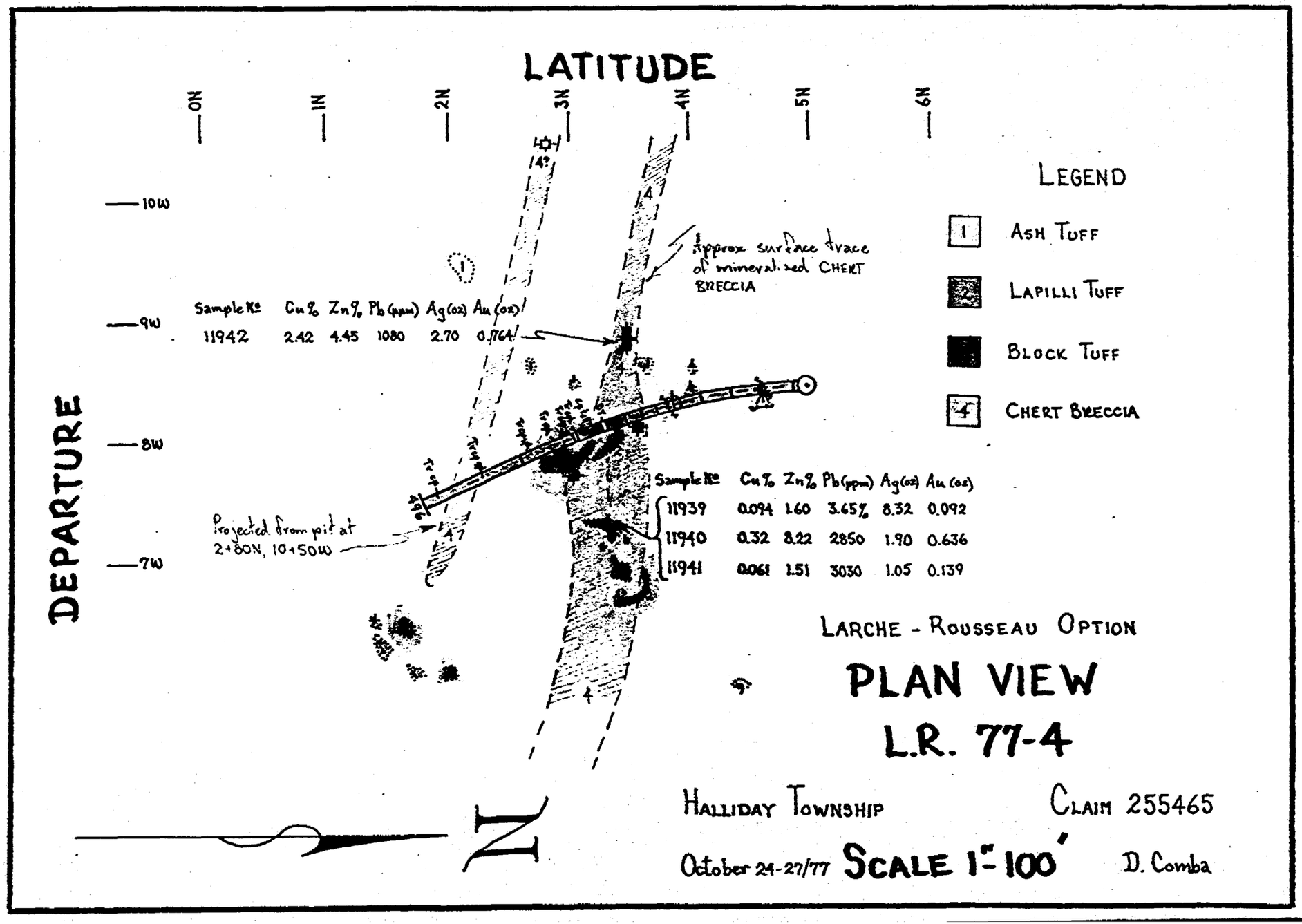
SiO_2-TiO_2

DIAMOND DRILL CORE ASSAY RECORD

C.D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS % CU	ASSAYS % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	PROGRESSIVE TOTALS FT. % CU	PROGRESSIVE TOTALS FT. % ZN	PROGRESSIVE TOTALS FT. OZ. AG	PROGRESSIVE TOTALS FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
							$\%SiO_2$	$\%TiO_2$	$\%Na_2O$												
	14257	84.5	89.0			5.5	63.7	0.64	2.86												
	14272	177.0	187.0			10.0	67.4	0.59	1.10												
	14282	288.0	298.0			10.0															
	14305	408.0	418.0			10.0	66.2	0.61	0.74												

HOLE NO. L.R. 77-4


LATITUDE
0N
1N
2N
3N
4N
5N
6N
ELEVATION
0
100
200
300
400
500
4 Surface Trenches
Not stripped
Projected position of en echelon mineralized zone
overburden
LEGEND
1 Ash Tuff
2 Lapilli Tuff
Block Tuff
Chert Breccia
Sampled
Alteration: ---strong (---)moderate ((---)) weak
NOTE: Not Corrected For Changes In Bearing
Larche - Rousseau Option
X-SECTION SKETCH LR 77-4
Looking West LINE 8+50W (Teck Coord.)
Halliday Township
Claim 255465
October 24-27/77
Scale 1" = 100'
D. Comba


LATITUDE
0N
1N
2N
3N
4N
5N
6N
DEPARTURE
10W
9W
8W
7W
Approx surface trace of mineralized CHERT BRECCIA
Sample № Cu% Zn% Pb(ppm) Ag(oz) Au(oz)
11942 2.42 4.45 1080 2.70 0.764
Projected from pit at 2+80N, 10+50W
Sample № Cu% Zn% Pb(ppm) Ag(oz) Au(oz)
11939 0.094 1.60 3.65% 8.32 0.092
11940 0.32 8.22 2850 1.90 0.636
11941 0.061 1.51 3030 1.05 0.139
LEGEND
1 ASH TUFF
2 LAPILLI TUFF
BLOCK TUFF
4 CHERT BRECCIA
N
LARCHE - ROUSSEAU OPTION
PLAN VIEW
L.R. 77-4
HALLIDAY TOWNSHIP
CLAIM 255465
October 24-27/77
SCALE 1" = 100'
D. Comba

FALCONBRIDGE COPPER LIMITED — LAKE DUFAULT DIVISION

DRILL HOLE RECORD

HOLE NUMBER	LAT.	DEP.	ELEV.	BRNG.	DIP	HOLE SIZE	DEPTH
L.R. 77-5	5+00N	12+00W	Teck Corp. Coord.	180° Az	-55°	BQ Wireline	507'

LOCATION	PURPOSE	DATE DRILLED	CORE INTACT ☒	COLLAR CEMENTED OR PLUGGED ☐
Halliday Township, Ontario	Test NEW SHOWING AREA Larche-Rousseau Option	Oct 28-30/77	CORE DISCARDED ☐	COLLAR MARKED ☐

ACID TESTS 100 ft -55°, 200 ft -50°, 300 ft -44°, 400 ft -35°

COMPASS TESTS 500 ft. Az 164.5 (Tr) Dip 21°

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
0 to 12	Overburden								5" of pink granitic boulder
12 to 104	In situ brecciated Ash Tuff	Med grey green with dk grey cracks, lt green grey and white bands.	Less than 4 mm	Massive, uniform, with occasional short sections resembling feldspar porphyry. In situ brecciation "crackle breccia" or shattering produces sections which superficially resemble lapilli or block tuff. Breccias are homogeneous and "clests" can often be mentally fitted back together. Bleached section 82.0 to 87.0 with white qtz veinlet (10% chlorite) 83.0 to 84.0.	Gradational	Bleaching (sericite-carbonate) associated with fractures. White quartz frequently occurs as fracture filling veinlets in the central section of the bleached zone. Pyritic-chloritic? filled in situ fractures prominent in bleached sections but are ubiquitous. 2-5% chlorite specks range up to 20% in some bleached sections.	High density of in situ stockwork fracturing at all angles to core axis.	3-4% pyrite 12.0 to 27.0 then gradual decrease down section to less than 1%.	SiO_2- TiO_2 #14318 47.0 to 57.0 Sulphide samples #14315 to #14317 12.0 to 27.0 #14319 83.0 to 84.0
104.0 to 169.0	Ash Tuff with intercalated lapilli tuff. In situ brecciated.	Med to lt grey green with dk grey mottle and lines at all angles to C.A.	Less than 32 mm	Ash Tuff sections tend to be massive or occasionally appear to be weakly feldspar porphyritic. Lapilli sections are darker grey (matrix areas chlorite?-rich) and for the most part are homogeneous or bimodal. An exception, a thin screen of heterogeneous clasts at 45° to C.A. 161.0	Top contact arbitrary. Lower contact gradational	Weak to moderately bleached (sericite carbonate) with chlorite-rich (dk grey) fracture fillings and fine disseminations.	High density of in situ stockwork type of fractures at all angles.	Less than 1% pyrite, principally as fracture fillings.	Sections that appear lapilli-rich or even as block tuffs may be sheared intensely in situ brecciated ash tuff.

Dave Combe 8/03/78

HOLE NO. L.R. 77-5

LOGGED BY Dave Combe

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
169.0 to 222.0	Ash Tuff in situ brecciated progressively altered and sheared	Med to dk grey with lt grey green sections to 192	Less than 4 mm.	Massive, uniform with section 169.0 - 175.0 appearing feldspar porphyritic. Intensity of in situ brecciation low to moderate 169.0 to 175.0, moderate to high 175.0 to 185.0 and strong thereafter. Resembles block tuff or lapilli tuff but clasts are homogeneous and can "mentally" be fitted back together.	Gradational	Relatively unaltered 169.0 to 175.9. Progressive bleaching (silicite minor carbonate) down section. Weak 175.0 to 202.0; weak to moderate 202.0 to 210.0; moderate to strong 210.0 to 222.0 Intensely sericitized dyke 220.5 to 221.0 at 45° to C.A.	Density of in situ fractures low to moderate 169.0 to 175.0 moderate to high 175.0 to 185.0 and high 185.0 to 222.0 Shearing at 45° to C.A. 210.0 to 222.0	Less than .5% pyrite.	SiO_2-TiO_2 #14320 from relatively unaltered section 170.0 - 180.0 SiO_2- TiO_2 #14321 from relatively strongly bleached section 207.0 - 217.0
222.0 to 240.5	Sheared Lapilli to block Tuff	Mottled lt green, lt med and dk grey with odd yellow green splotch	4 mm to 32 mm with odd clast? exceeding 32 mm	Heterogeneous clasts frequently flattened by pervassive shearing at approximately 45° to C.A.	Lower contact may be with in situ brecciated ash tuff at 239.5	50-60% of clasts are strong to intensely bleached (sericite minor carbonate?)	Pervassive weak to moderate shearing at 45° to C.A. Fine clastic sections are most strongly deformed.	Less than 1% pyrite overall. Semi-massive veinlets or matrix sections are commonest habit.	
240.5 to 264.8	Altered Dyke	Lt toned grey and green variagated with odd white to cream spot.	Fg with feldspar phenos? to 5 mm	Chills 4"-6" wide are strong to intensely sericitized. 1-2% irreg shaped white to cream feldspar phenocrysts 1 mm to 5 mm. Inclusion of lapilli tuff 251.0 to 251.5	Sharp at 45° to C.A.	Moderate to strongly bleached (sericite) especially chill margins 1 mm to 3 mm wide white quartz filled fractures 2-4%. Majority of fractures are chloritic?	Low to moderate fracture density at 35°-40° to C.A.	Trace pyrite	Similar to dykes in "zone" of holes LR 77-2 and LR 77-3.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
264.8 to 293	Sheared Lapilli to Block Tuff	Mottled lt green, lt med and dk grey mottled.	4 mm to 32 mm with 3 to 4% clasts greater than 32 mm.	Block sized clasts of ash tuff are moderate to strongly bleached. 80% of clasts appear to be ash tuff. Cherty clasts are rare 2-4%	Lower contact sharp but gradational.	Degree of bleaching ranges from weak to strong in ash tuff clasts, but 50-60% are strongly sericitized and carbonated?	Pervassive shearing weak. 264.8 to 272 gradually increases down section. Schistose by 293 at 45° to C.A.	Less than 1% pyrite	Similar to section 222.0 to 240.5 but contains more block sized clasts.
293 to 302.5	Schistose Ash Tuff to Lapilli Tuff.	Banded lt green grey and med to dark grey.	Rare clast greater than 4 mm.	Lapilli sized clast at 297. Ubiquitous fabric at 45° to C.A.	Gradational upper contact, lower contact very sharp.	Moderate bleaching (sericite-carbonate) with 10-20% chlorite-rich bands and spots.	Schistosity at 45° to C.A. all pervassive.	Less than .5% pyrite.	
302.5 to 306.0	White quartz vein	White	Fg	Massive, uniform, blocky	Sharp	Silica, trace chlorite	Moderate to high density of shatter type fractures.	Negligible	85-90% core recovery. Sulphide Sample #14322 302.5 to 306.0
306.0 to 306.5	Rubbly Fault Zone	Blue grey mud, lt grey green to white clasts	4 mm to 32 mm	Soft, muddy, rubbly fault gouge or breccia	Sharp	Clay minerals.	Muddy, cley seam 1/4" wide at 70° to C.A. Tectonic brecciation	Negligible	65-70% core recovery? One of two faults bounding weakly base metal mineralized CHERT BRECCIA.

JAB 1133

HOLE NO. L.R. 77-5

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
306.5 to 311.8	Lapilli CHERT BRECCIA	Lt grey, white, dk green grey mottled	4 mm to 32 mm	Heterogeneous breccia, foliated at 45° to C.A. 310 - 312. Irregular veinlets	Sharp	Moderate to strong silicification, moderate chlorite, weak carbonate and sericite	Sheared at 45° to C.A.	Semi-massive pyrite 20% - 30% 309.0 to 309.5. Overall pyrite 1-2% Tr sph 307.5	Mineralized zone is fault bounded. Sulphide samples: #14323 to #14324 306.5 to 312.0
311.8 to 312.2	Sheared Fault Zone	Lt grey, white, green grey banded	4 mm to 32 mm	Sheared, mylonized fault zone at 45° to C.A.	Sharp at 45° to C.A.	Clay minerals, weak to moderate sericite.	Shearing at 45° to C.A.	Negligible	Core recovery 80%?
312.2 to 313.5	Sheared Lapilli Tuff	Lt grey clasts in darker grey matrix	4 mm to 32 mm	Heterogeneous breccia, clasts elongate 45-55° to C.A.	Sharp at 45° to 55° to C.A.	Moderate chlorite and silicification. Weak sericitization and carbonitization.	Pervassive shearing at 45° to 55° to C.A.	Less than 1% pyrite.	
313.5 to 320.0	Sheared Ash Tuff	Lt grey-green & med grey banded	Less than 4 mm	Uniform, ubiquitous shearing at 50°-60° to C.A.	Lower contact gradational	Moderate to weak bleaching (ser.carb.) and chloritization	Pervassive shearing at 50° to 60° to C.A.	Less than 0.5% pyrite.	
320.0 to 330.0	Ash Tuff	Med grey with dk grey mottle	Less than 4 mm	Resembles lapilli tuff but breccia appears to be homogeneous and the result of in situ tectonic fracturing and alteration.	Gradational	Moderate chlorite primarily fracture controlled. Weak sericite and carbonate bleaching.	Minor shearing at 55°-60° to C.A. Superimposed on earlier in situ fracturing.	Less than 0.5% pyrite	Breccia is probably tectonic in origin. SiO_2-TiO_2 #14325 322.0 - 332.0

JKB 1133

HOLE NO L.R. 77-5

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
330.0 to 407.0	Dyke Zone	Lt grey mottled host; dk green on lt green and lt green on dk green speckled dykes.	Fg-mg	55-65° dyke rock intruded along irregular in situ fractures. Numerous inclusions of host ash tuff within dykes. Chill zones of dykes frequently appear to be variolitic or spherulitic	Dyke chills irregular and sharp.	Weak bleaching (ser-carb) moderate chloritization.	Ash tuff sections are in situ brecciated. Dykes have intruded along irreg stockwork fractures.	Less than 0.5% pyrite.	Dykes appear to be dioritic?
407.0 to 448.0	Ash Tuff	Med grey with vague dk grey mottle	Less than 4 mm	Uniform, featureless. Minor in situ brecciation.	Gradational	Weak to moderate chlorite. Weak bleaching (ser.carb) 1-2% thin quartz veinlets at all angles, evidence of weak to moderate sericitization.	Moderate to weak in situ fracturing. Low to moderate density of late quartz filled fractures at all angles.	Less than 1% pyrite.	Similar to section 320.0 to 330.0, but not sheared and less intense in situ brecciation and alteration. Drillers report "hard ground" started around 400'. SiO_2-TiO_2 #14326 437.0 to 447.0.
448.0 to 466.0	Bleached Ash Tuff	Lt grey with white bands and dk grey streaks	Less than 4 mm	Uniform, featureless minor in situ brecciation. 3 quartz veins account for 80% of rock 460.0 to 462.0	Gradational	Weak chloritization. Moderate sericitization and carbonitization. Moderate silicification with 2-4% quartz veinlets.	Weak in situ fracturing.	Less than 0.5% pyrite overall but section 457 - 462 1-2% pyrite as dissem 50% and fracture fillings 50%.	Similar to section 407.0 to 448.0 but more bleached and a slightly higher content of white quartz veinlets. Sulphide Samples: #14327 to #14328 457.0 to 462.

JHB 1133

HOLE NO. L.R. 77-5

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
466.0 to 507.0	Bleached <u>in situ</u> brecciated Ash Tuff	Lt grey green with dk grey meshwork cracks.	Less than 4 mm.	Uniform brecciated with 1% white quartz veinlets. Autobrecciation structure.	Gradational	Moderate to strong bleaching (ser. minor carbonate). Chloritized fractures 15%-20% of rock.	High density of <u>in situ</u> auto brecciated fractures	Less than 1% overall Section 469.0 to 474.0 1-2% pyrite as dissem and fracture fillings	Similar to section 448.0 to 466.0 but more intensely bleached and auto brecciated. Sulphide Sample: #14329 469.0 to 474.0
507.0	END OF	HOLE							Hole making water.

JRB 1135

HOLE NO L.R. 77-5

JEB 7624

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS ppm % CU	ASSAYS ppm % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	ppm Pb	% Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ AG	OZ. AU
	14315	12.0	17.0			5.0	60	65	0.01	.001	15	4.72										
	16	17.0	22.0			5.0	67	46	0.01	.001	17	4.90										
	17	22.0	27.0			5.0	52	48	0.01	.001	13	4.39										
	14319	83.0	84.0			1.0	142	68	0.01	.001	30	2.44										
	14322	302.5	306.0			3.5	45	227	0.01	.001	32	2.18										
	23	306.5	308.5		Tr	2.0	46	0.26%	0.04	.001	65	3.16										
	24	308.5	312.0			3.5	43	0.15%	0.05	.001	100	4.22										
	14327	457.0	460.0			3.0	64	0.43%	0.05	.001	103	4.58										
	28	460.0	462.0			2.0	40	123	0.01	.001	54	2.93										
	29	469.0	474.0			5.0	48	580	0.04	.001	313	3.77										

HOLE NO. L.R. 77-5

JEB 3626

SiO_2-TiO_2 SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS % CU	ASSAYS % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	PROGRESSIVE TOTALS FT. % CU	PROGRESSIVE TOTALS FT. % ZN	PROGRESSIVE TOTALS FT. OZ. AG	PROGRESSIVE TOTALS FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
							% SiO_2	% TiO_2	% Na_2O												
	14318	47.0	57.0			10.0	64.2	0.55	2.75												
	14320	170.0	180.0			10.0	67.2	0.55	3.28												
	21	207.0	217.0			10.0	66.0	0.56	3.33												
	25	322.0	332.0			10.0	64.7	0.66	1.54												
	26	437.0	447.0			10.0	64.5	0.63	3.11												

HOLE NO. L.R. 77-5

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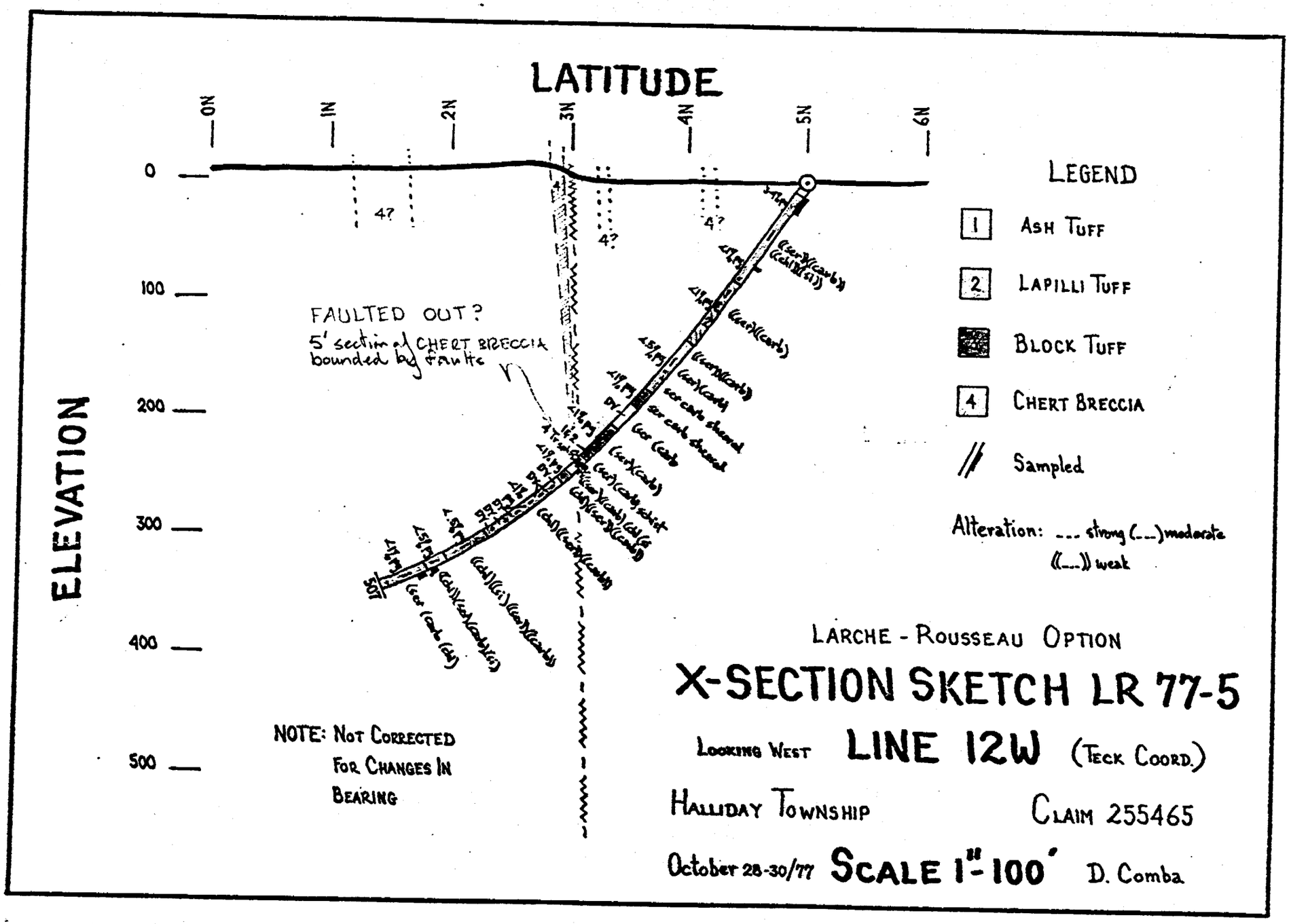
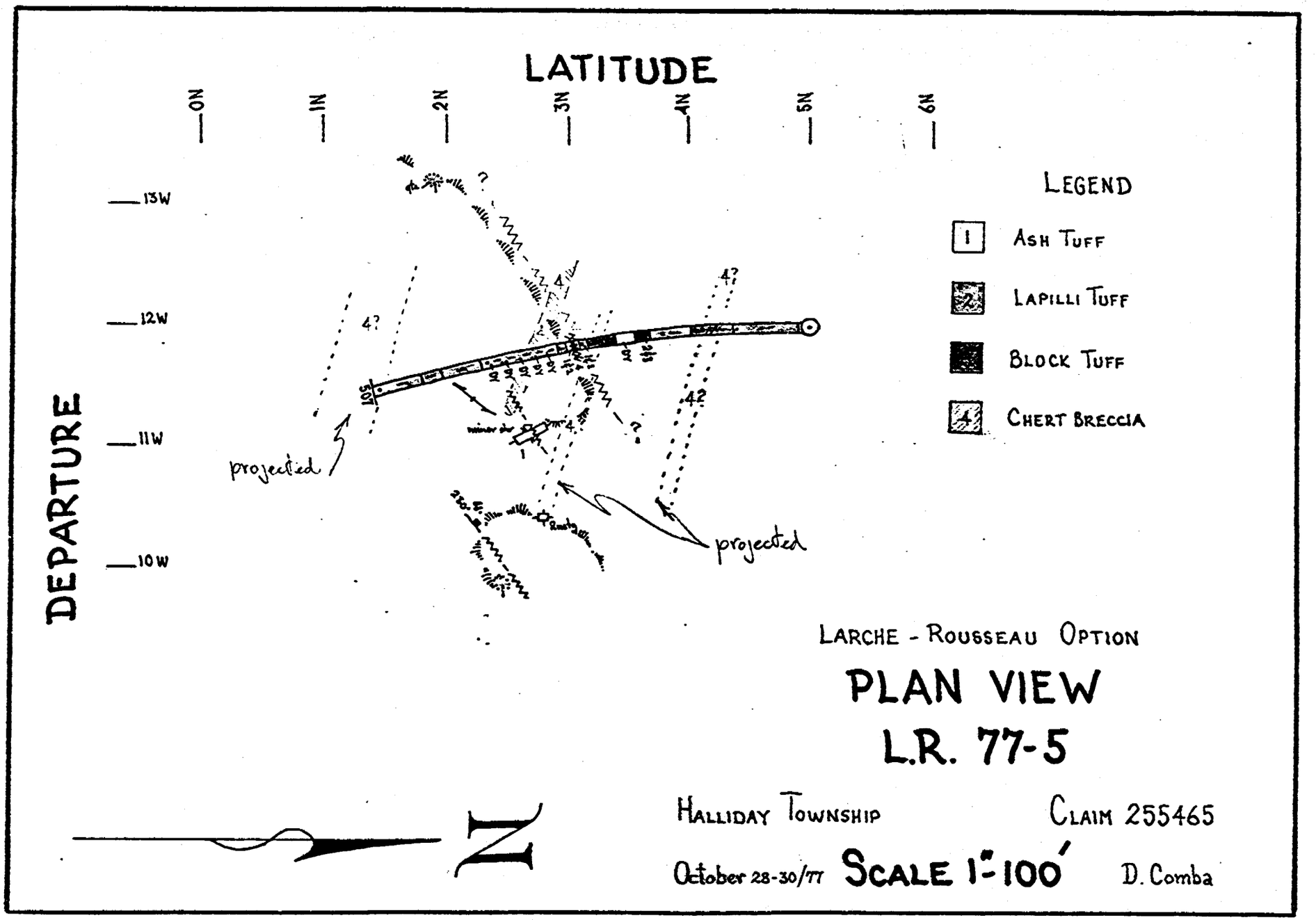

LATITUDE
0N
1N
2N
3N
4N
5N
6N
ELEVATION
0
100
200
300
400
500
4?
4?
4?
FAULTED OUT?
5' section of CHERT BRECCIA bounded by faults
LEGEND
1 ASH TUFF
2 LAPILLI TUFF
BLOCK TUFF
4 CHERT BRECCIA
Sampled
Alteration: ___ strong (___) moderate ((___)) weak
NOTE: NOT CORRECTED FOR CHANGES IN BEARING
LARCHE - ROUSSEAU OPTION
X-SECTION SKETCH LR 77-5
LOOKING WEST LINE 12W (TECK COORD.)
HALLIDAY TOWNSHIP
CLAIM 255465
October 28-30/77 SCALE 1"=100' D. Comba


LATITUDE
0N
1N
2N
3N
4N
5N
6N
DEPARTURE
13W
12W
11W
10W
LEGEND
1 ASH TUFF
2 LAPILLI TUFF
BLOCK TUFF
4 CHERT BRECCIA
projected
projected
LARCHE - ROUSSEAU OPTION
PLAN VIEW
L.R. 77-5
HALLIDAY TOWNSHIP
CLAIM 255465
October 28-30/77
SCALE 1"=100'
D. Comba

FALCONBRIDGE COPPER LIMITED — LAKE DUFAULT DIVISION

DRILL HOLE RECORD

HOLE NUMBER	LAT.	DEP.	ELEV.	BRNS.	DIP	HOLE SIZE	DEPTH
L.R. 77-6	6+00N	14+00W	Teck Corp. Coord.	190° Az	-55°	BQ Wireline	607'

LOCATION	PURPOSE	DATE DRILLED	CORE INTACT	COLLAR CEMENTED OR PLUGGED
Halliday Township, Ontario	Test NEW SHOWING AREA Larche-Rousseau Option	Oct 31-Nov 2 1977	X	X
			CORE DISCARDED ☐	COLLAR MARKED

ACID TESTS 100 ft -52°, 200 ft -50°, 300 ft -47°, 400 ft -36°, 500 ft -25°, 600 ft -21°

COMPASS TESTS 500 ft Az 171(Tr) Dip 24°

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
0 to 7.0	Overburden								
7.0 to 32.0	Pyritized Bleached Schistose Ash Tuff	Strongly contrasting buff and dk grey-brown marbling	Less than 4 mm	Massive uniform bleached ash pervassively sheared and streaked with contorted pyrite-rich fractures.	Lower contact gradational arbitrary	Strong to intense bleaching (sericite minor carbonate).	Pervassive schistosity at 45° to C.A. overprints earlier in situ auto-brecciation of moderate to high density fracturing.	8-10% pyrite in sheared cut stockwork fractures and minor dissemination	Bleached, in situ brecciated (auto brecciation, pyritized and pervassively sheared. Sulphide Samples: #14330 to #14333 7.0 to 27.0 #14334 29.0 to 32.0
32.0 to 80.0	Pyritized Altered Sheared Ash Tuff	Lt grey and green grey "clasts" in a dk grey and dk brown (bronze) matrix white speckles.	Less than 4 mm	Appears to be feldspar porphyritic after 42.0. Breccia texture results from in situ auto brecciation and pyritization of the resultant stockwork of channels or fractures.	Contacts gradational	Moderate to strong bleaching (sericite minor carbonate)	Pervassive shearing at intervals at 45° to C.A. overprints earlier in situ auto brecciation	6-8% pyrite in sheared in situ fractures and minor disseminations	Similar to section 7.0 to 32.0 but less intensely altered and tectonized. A segment of a sequential decrease in dynamo hydrothermal metamorphism down hole. #14335 to #14344 incl.

5/03/78

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
80.0 to 156.0	Pyritized Altered Ash Tuff	Variegated sections of lt to med grey and lt green-grey white speckles. Dk brown (bronze) streaks, occasional white band.	Less than 4 mm	Resembles feldspar porphyry. Spherulitic? dykes: 100.5 to 101.7 120.5 to 122.3 Short sections may superficially resemble lepilli to block tuffs but are homogeneous and probably reflect zones of more intense in situ auto brecciation	Arbitrary and gradational	Weak to moderate bleaching (sericite carbonate) 5-10% of late fractures are filled by quartz veinlets ranging in width from 1/16" to 1/4" wide. From 137.0 to 142.0 qtz veinlets at 25° to C.A. Majority of qtz veinlets in section at 55°-65° to C.A.	Moderate to high density of brittle fractures at all angles to C.A.	2-5% pyrite primarily as fracture fillings. 90-95% of fractures pyrite-rich.	Oxidized zone 93.0 to 97.0 Carbonates "dissolved" giving the core a "poxy" appearance. Sulphide samples: #14345 to #14348 82.0 to 100.5 #14349 to #14352 101.7 to 120.5 #14353 to 14359 122.3 to 156.0
156.0 to 260.0	Ash Tuff	Med grey with short variagated sections of lt grey. White specks & odd white band.	Less than 4 mm	Looks feldspar porphyritic. Appears to be relatively unaltered with the exception of the fine dissem sericite? over short sections.	Arbitrarily chosen	Regional greenschist with very fine disseminated sericite? in some sections e.g. 200 - 210. 65% of late fractures filled with quartz minor chlorite.	Low density of late fractures 65% filled with quartz and chlorite	Less than 1% pyrite in fracture fillings and minor disseminations	SiO_2-TiO_2 #14360 162.0 - 172.0 Fine disseminated sericite not observed in previous logging. Seems to be related or best developed adjacent to dykes in section 262.5
260 to 262.5	Quartz Diorite? dyke	Dk green grey with buff speckles	Aph to fg	Uniform, dioritic?	Irregular chills average 40-45° to C.A.	Moderate chlorite. Moderate sericite as fine conspicuous flecks 20-25%	Late quartz filled fractures 8"-12" at all angles to C.A.	2-3% dissem pyrite.	

J&B 1135

HOLE NO. L.R. 77-6

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
262.5 to 293.5	Altered Ash Tuff	Lt to med grey with dk grey and buff specks & odd dk grey spot	Less than 4 mm.	Fairly uniform, odd large dk grey spot may be lapilli sized clast. Lamp dyke at 30% to C.A. 288.5 to 289.2	Sharp at 40° to 45° to C.A.	Sericitic bleaching associated with hairline fractures 288.0 to 293.5. 80% of the rock from 293.0 to 293.5 is strongly bleached. Conspicuous dissem sericite occurs throughout section but is particularly well developed within 10' of dyke contacts. Chloritic? alteration with traces of pyrite occupy hairline fractures 262.5 to 288.0 Less than 10% of the fractures contain quartz veinlets.	Relatively low density of fracturing	Less than 0.5%	SiO_2-TiO_2 #14361 268.0 to 278.0
293.5 to 299.0	Carbonated Dacitic Dyke	Lt to med grey with irreg white clots	Fg	May appear to be slightly feldspar porphyritic. White specks < 1 mm and irregular clots < 10 mm are conspicuous. Sheared chill margins	Sharp at 45° to C.A.	Weak to moderate sericitic bleaching. Moderate to strong carbonitization.	Hairline fracture density relatively low 4"-5"	Tr dissem py	Similar dykes in earlier holes in 1977 series. Irregular white carbonate clots are characteristic, although the dykes are usually more intensely bleached.
299.0 to 300.4	Sericitized Ash Tuff	Buff with grey specks	Less than 4 mm	Uniform, massive.	Sharp at 40° to 45°, lower contact irregular	Strong sericitization (minor carbonate)	Low density of late fractures	Tr pyrite	Similar to section 293.0 to 293.5 on other side of dyke.

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
300.4 to 303.4	Lapilli Tuff	Mottled lt green lt and medium grey.	4 mm to 32 mm	Heterogeneous pyroclastic densely packed, poorly sorted no apparent grading. Clasts rounded	Lower contact gradational	Weak to moderate bleaching (sericitic) and moderate to strong carbonitization	One or two hairline fractures with quartz	Tr pyrite	If adjacent block tuff is taken as part of the same sequence graded bedding would indicate tops to the north (up hole).
303.4 to 305.2	Block? Tuff	Mottled lt green and med grey	Greater than 32 mm	"Clasts" of altered ash tuff predominate.	Lower contact Gradational	Moderate bleaching (carbonate-sericite)	Low density of late fractures	Trace pyrite	May represent base of lapilli tuff 300.4 to 303.4 or irregular broken top of underlining ash tuff. 305.2 to 312.0
305.2 to 312.0	Sericitized Ash Tuff	Lt green buff with grey specks	Less than 4 mm	Uniform, increasingly auto brecciation after 310.0	Lower contact chosen arbitrarily	Strong sericitic bleaching with moderate to weak carbonitization associated with fractures	Moderate to high density in situ fracturing 310.0 to 312.0	Less than 1% pyrite occupying hairline fractures.	
312.0 to 336.5	Sericitic Ash Tuff with pyrite and smokey grey quartz	Lt green with irreg bands of smokey grey and dk brown (bronze)	Less than 4 mm	Breccia texture produced by in situ fracturing or auto brecciation of ash tuff. Odd rounded medium grey lapilli sized clast(?)	Lower contact sharp at 45° to C.A.	Ash Tuff is bleached (sericite - minor carbonate). Fractures filled with smokey grey quartz, very fine grained pyritic carbonate and chlorite(?)	Weak to moderate shearing at 45° to C.A. 335.0 to 336.5 Strong to intense in situ auto brecciation	3-5% pyrite overall with short sections to 20%	Smokey grey quartz and very fine grained pyrite occupying in situ fractures 312.0 to 325.0 is not as pronounced in holes LR 77-1, LR 77-5 Sulphide Samples: #14362 to #14366 312.0 to 336.5

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
336.5 to 345.0	Sheared Block Tuff	Mottled lt green, lt and med grey; buff	Greater than 32 mm after 342.0	Heterogeneous pyroclastic, densely packed, angular to rounded clasts appear to be "stretched" by shearing. Block sized clasts 342.0 to 345.0 grade upwards through coarse lapilli to fine lapilli. North tops are indicated.	Lower contact sharp at 65° to C.A.	35% - 40% of clasts are bleached a light tan or buff (sericite)	Pervassive shearing at 45° to C.A. Low density of late pyritic fractures	1-2% pyrite as fine dissem and rare fracture filling. Some semi-massive streaks look like clasts.	Clasts more "angular" and deformed compared to section 300.4 to 303.4 Sulphide Sample #14367 341.0 - 343.0
345.0 to 355.3	Bleached Dacitic(?) Dyke	Lt green to buff with dk grey streaks and white bands.	Aph to fg	Uniform, featureless. Chills are sheared and silicified with inclusions of lapilli within lower chill.	Sharp at 65° and 40° respectively	Pervassive bleaching (sericite - minor carbonate) with grey chloritic? alteration adjacent to hairline fractures.	Moderate density of hairline fractures	Negligible	
355.3 to 355.5	Lapilli Tuff								
355.5 to 382.8	Sheared Coarse Ash Tuff	Mottled and streaked lt grey, dk grey	Less than 6 mm	Intercalated ash tuff, coarse ash tuff and minor lapilli. Apparent tectonic(?) fabric at 50°- ° to C.A.	Sharp at 50° and 65° respectively	Disseminated flecks (<1 mm) of sericite 355.5 to 360.0 Note proximity to dykes 345.0 to 355.3 and 358.9 to 359.1. Moderate bleaching 375.0 to 378.0	Moderate to density of hairline cracks.	Negligible	Similar to section 340.5 to 343.0 Similar to dyke 345.0 to 355.3
385.0 to 386.0	Lamprophyre Dyke	Lt grey with black specks	Fg-mg	Porphyritic	Sharp at 25°	Carbonate, weak to moderate	None	Negligible	

JKB 1155

HOLE NO. L.P. 77-6

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
386.0 to 414.0	Sheared Ash Tuff	Medium grey with vague lt green or buff sections	Less than 4 mm	Uniform, featureless Section 408.3 to 410.3 55% quartz, 5%-8% sericite, 10% carbonate.	Sharp at 25° and 45° to C.A. respectively	Weak sericitization and carbonitization	Low density of late white quartz filled fractures ~ 12" intervals	Tr pyrite or shear planes	Sulphide Sample: #14368 408.3 to 410.3
414.0 to 431.0	Sheared Lapilli Tuff	Med grey with lt grey to buff clasts	4 mm to 32 mm	Relatively homogeneous; exotic clasts less than 10%	Lower contact gradational	Weak to moderate sericitization, weak carbonitization and chloritization	Rare quartz filled late fracture	Less than 0.5% pyrite	SiO_2-TiO_2 Sample #14369 421.0 to 431.0
431.0 to 442.5	Schistose Lapilli Tuff	Med to lt grey green variagated	4 mm to 32 mm	Relatively homogeneous	Gradational	Moderate to strong sericitization, weak to moderate carbonitization ~~weak~~ to moderate chlorite.	Rare quartz string. Pervassive schistosity at 50° - 60° to C.A.	Less than 0.5% pyrite	May be intensely auto brecciated ash tuff over printed by schistosity.
442.5 to 457.5	Pyritic Sheared Lapilli Tuff?	Lt green, apple green, white, dk brown, med grey marbled	4 mm to 32 mm	25% to 30% quartz veining. Large "barren" veins: 452.1 to 453.0 453.7 to 454.6 455.7 to 457.6	Lower contact sharp at 45°	Moderate to strong sericitization, weak to moderate carbonitization and chloritization. Silicification moderate to strong, primarily as introduced quartz veins.	Schist 453.0 to 453.2 at 70° to C.A.	2-3% pyrite overall with sections 1/4" to 2" up to 30%. Trace sphalerite 449.0 to 452.0	Closest thing to base metal mineralized CHERT BRECCIA in this hole. Sulphide Samples #14370 to #14376 444.0 to 457.5

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
457.5 to 501.0	Auto brecciated altered Ash Tuff	Lt green lt grey with dk grey fracture stockwork	Less than 4 mm	Sections of lapilli-like breccias are probably intensely in situ auto brecciated massive ash. Quartz veins: 463.3 to 464.1 465.0 to 465.5	Sharp intrusive contacts at 45° and 80° to C.A. respectively	Moderate to strong sericite, weak carbonate and moderate chlorite(?) The latter is associated with in situ fracturing.	Intensely auto brecciated	Less than 0.5% pyrite	Sulphide Samples: #14377 463.3 to 464.1 #14378 465.0 to 465.5
501.0 to 513.0	Altered Dyke	Lt green with grass green flecks	Fg-mg	Granular	Top contact at 80° to C.A. Lower contact very irregular 512.0 to 513.0	Looks sericitized, moderate to strong carbonate. Grass green flecks look like fuchsite but may be exotic chlorite	Moderate density of late quartz filled fractures 6"-10" apart at 45° to C.A.	Negligible	Lacks large fuchsite metacrysts(?) in dykes observed in trenches near township boundary.
513.0 to 534.0	Dyked and Veined Ash Tuff	Lt grey with white & greenish sections	Less than 4 mm	Massive, uniform grey ash tuff cut by dyke 518.0 to 519.0 and white quartz 522.7 to 527.7	Lower contact gradational	Moderate, pervassive sericitic bleaching, weak carbonitization and weak chlorite associated with infrequent hairline fracturing.	Low density of in situ fractures	Trace pyrite	Dyke 518.0 to 519.0 is similar to beastie 501.0 513.0 Sulphide Sample #14379 522.7 to 527.7
534.0 to 607.0	Pyritic Ash Tuff	Lt grey, green-grey mottled and streaked	Less than 4 mm	Massive, uniform with vague dense finely feldspar porphyritic appearance after 587.0. 3-4% quarta in late fractures. Quartz vein 543.5 to 544.3	Gradational	Weak to moderate bleaching (sericite and carbonate)	Low density of auto breccia in situ fractures. Low to moderate	Pyrite starts 540.0 and is strongest 1-2% 545.0 to 558.0 1% or less to 587.0	Sulphide Samples: #14380 to #14383 543.5 to 559.0

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
		with white and dark grey					density of late quartz filled fractures	60% of pyrite is associated with fractures, the remainder is disseminated	SiO_2-TiO_2 #143SH 566.0 to 576.0
607.0	END OF	HOLE							

JER 7626

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ppm % CU	ppm % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	ppm Pb	% Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14330	7.0	12.0			5.0	47	30	0.01	.001	23	3.63										
	31	12.0	17.0			5.0	50	32	0.01	.001	17	3.50										
	32	17.0	22.0			5.0	46	16	0.01	.001	18	3.72										
	33	22.0	27.0			5.0	57	14	0.01	.001	22	4.15										
	34	29.0	32.0			3.0	54	15	0.01	.001	18	3.95										
	35	32.0	37.0			5.0	46	20	0.01	.001	17	3.54										
	36	37.0	42.0			5.0	50	13	0.01	.001	22	4.03										
	37	42.0	47.0			5.0	42	12	0.01	.001	18	3.38										
	38	47.0	52.0			5.0	48	20	0.01	.001	20	3.57										
	39	52.0	57.0			5.0	50	25	0.01	.001	23	3.78										
	14340	57.0	62.0			5.0	49	22	0.01	.001	18	3.50										
	41	62.0	67.0			5.0	47	13	0.01	.001	17	3.46										
	42	67.0	72.0			5.0	60	40	0.01	.001	18	4.20										
	43	72.0	77.0			5.0	47	50	0.01	.001	24	3.60										
	44	77.0	82.0			5.0	55	34	0.01	.001	20	3.38										
	45	82.0	87.0			5.0	163	163	0.02	.001	26	3.46										
	46	87.0	92.0			5.0	88	67	0.01	.001	27	3.70										
	47	92.0	97.0			5.0	65	50	0.01	.001	25	3.22										
	48	97.0	100.5			3.5	64	48	0.01	.001	26	3.90										
	49	101.7	107.0			5.3	70	38	0.01	.001	27	3.80										

HOLE NO. L.R. 77-6

JER 1624

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ppm % CU	ppm % ZN	ASSAYS OZ. AG	OZ. AU	ppm Pb	% Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14350	107.0	112.0			5.0	66	27	0.01	.001	30	4.13										
	51	112.0	117.0			5.0	52	22	0.01	.001	17	3.35										
	52	117.0	120.5			3.5	57	37	0.01	.001	13	3.33										
	53	122.3	127.0			4.7	60	33	0.01	.001	18	3.62										
	54	127.0	132.0			5.0	62	24	0.01	.001	17	3.68										
	55	132.0	137.0			5.0	47	15	0.01	.001	13	3.50										
	56	137.0	142.0			5.0	45	28	0.01	.001	15	3.24										
	57	142.0	147.0			5.0	80	58	0.01	.001	14	3.35										
	58	147.0	152.0			5.0	53	44	0.01	.001	11	3.25										
	59	152.0	156.0			4.0	58	40	0.01	.001	14	3.35										
	14362	312.0	317.0			5.0	46	28	0.01	.001	13	3.30										
	63	317.0	322.0			5.0	56	37	0.01	.001	15	3.45										
	64	322.0	327.0			5.0	60	43	0.01	.001	15	3.85										
	65	327.0	332.0			5.0	67	45	0.01	.001	16	3.95										
	66	332.0	336.5			4.5	42	28	0.01	.001	17	4.15										
	67	341.0	343.0			2.0	43	40	0.01	.001	20	4.30										
	68	408.3	410.3			2.0			0.01	.001												
	70	444.0	449.0			5.0	47	0.16%	0.01	.002	190	4.05										
	71	449.0	452.1			3.1	66	0.92%	0.01	.001	343	3.35										
	72	452.1	453.0			0.9			0.01	.001												

HOLE NO L.R. 77-6

PAGE 10

J.K.B. 1626

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C.D	Sample Number	From Ft.	To Ft.	Estimate Cu	Estimate Zn	Length Ft.	ppm % Cu	ppm % Zn	Assays Oz. Ag	Assays Oz. Au	ppm Pb	% Fe (Progressive Totals Ft. % Cu)	Progressive Totals Ft. % Zn	Progressive Totals Ft. Oz. Ag	Progressive Totals Ft. Oz. Au		Remarks and Average Assays From	To	Length	% Cu	% Zn	Oz. Ag	Oz. Au
	14373	453.0	453.7			0.7	76	0.935	0.01	.002	129	4.25		CHERT BRECCIA ???									
	74	453.7	454.6			0.9			0.01	.001				qtz vein									
	75	454.6	455.7			1.1			0.01	.002				qtz vein									
	76	455.7	457.5			1.8			0.01	.002				qtz vein									
	77	463.3	464.1			0.8			0.01	.002													
	78	465.0	465.5			0.5			0.01	.002													
	79	522.7	527.7			5.0			0.01	.001													
	80	543.5	544.3			0.8			0.01	.001													
	81	544.3	549.0			4.7	40	142	0.01	.001	13	2.95											
	82	549.0	554.0			5.0	42	88	0.01	.001	25	3.25											
	83	554.0	559.0			5.0	52	300	0.01	.001	70	3.70											

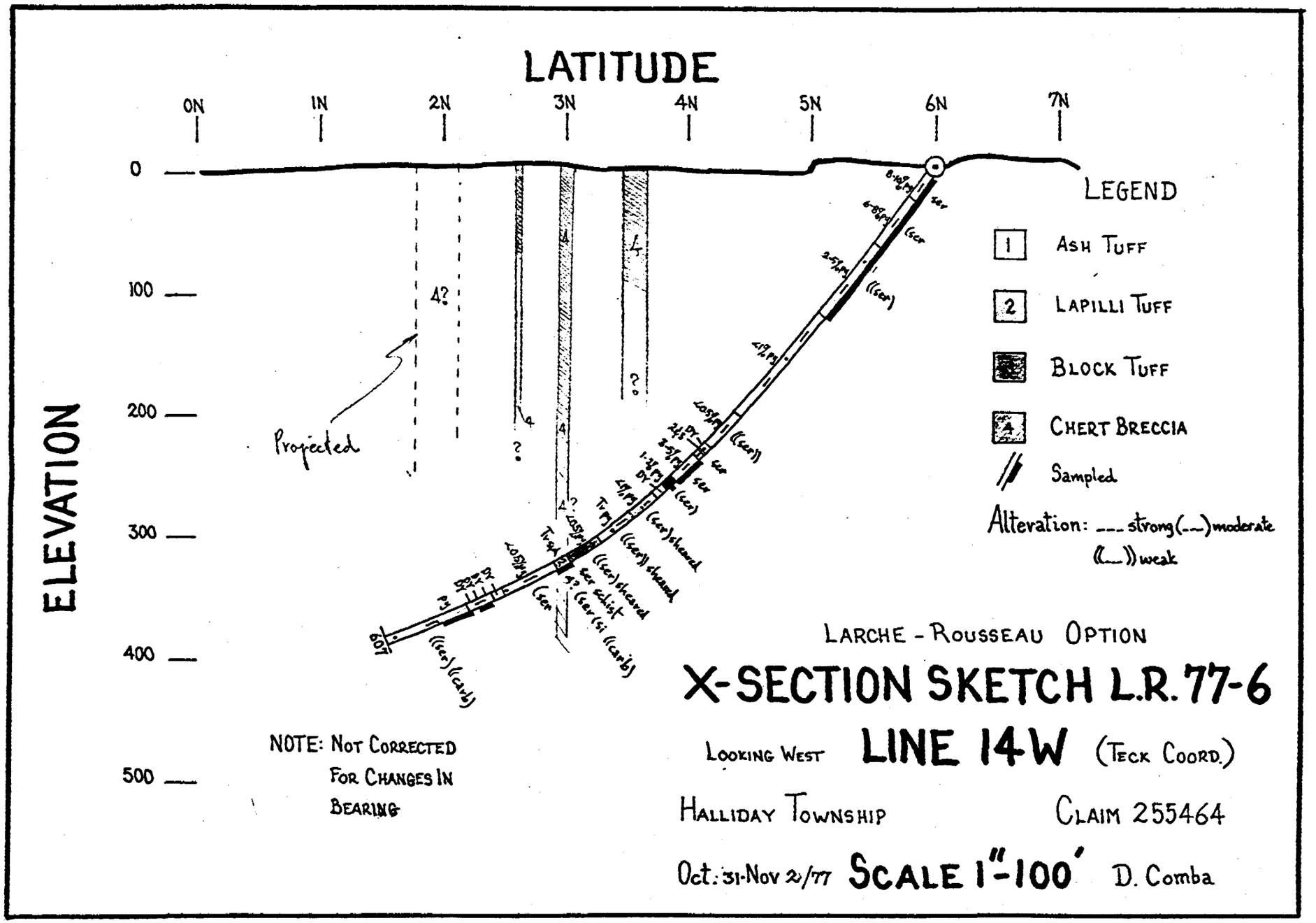
HOLE NO. L.B. 77-6

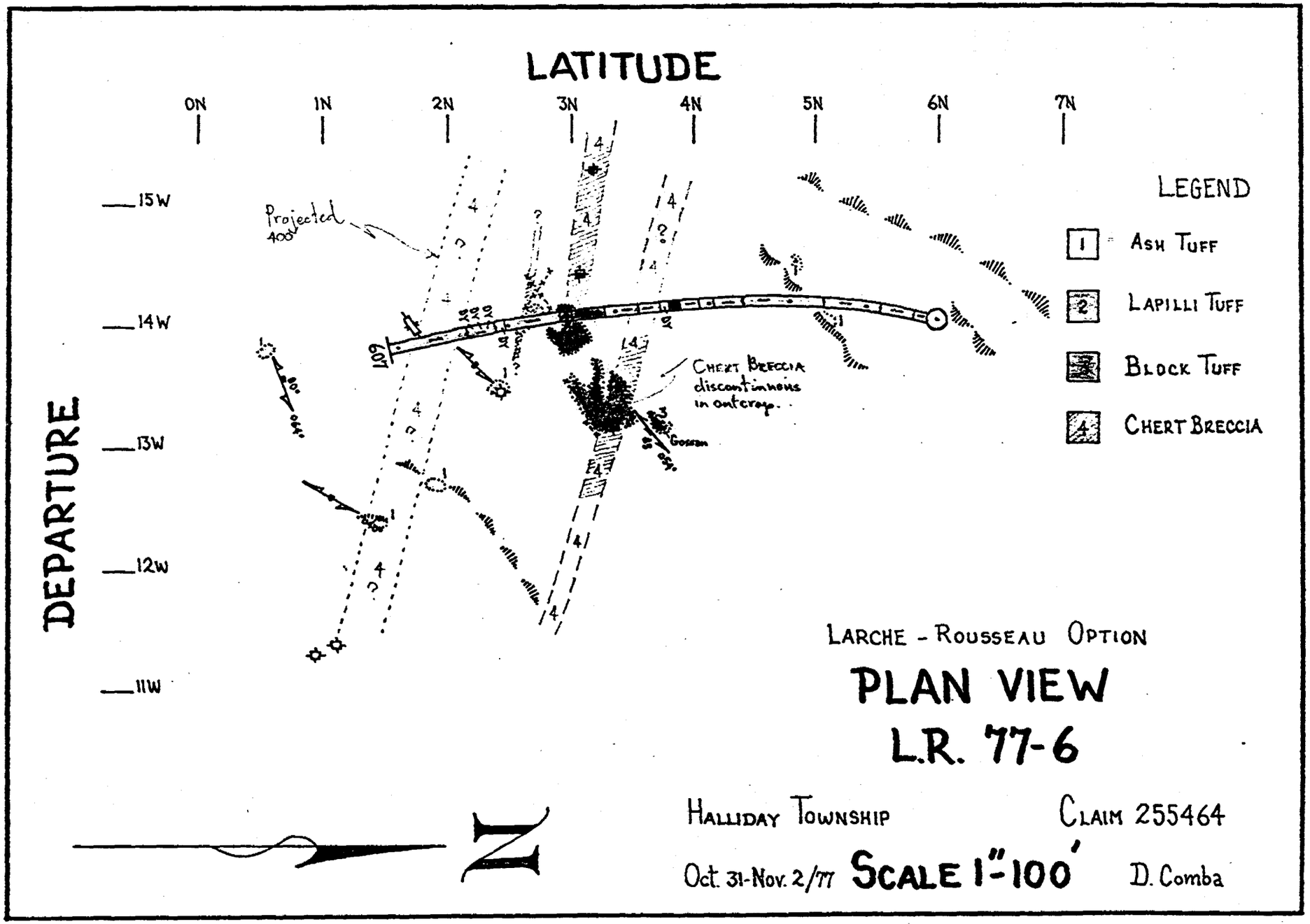
JF.H 1624

SiO_2-TiO_2 SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS % CU	% ZN	OZ. AG	OZ. AU	PROGRESSIVE TOTALS FT. % CU	FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
							$\%SiO_2$	$\%TiO_2$	$\%Na_2O$												
	14360	162.0	172.0			10.0	65.9	0.57	4.24												
	61	268.0	278.0			10.0	65.2	0.54	3.83												
	14369	421.0	431.0			10.0	67.4	0.58	0.58												
	14384	566.0	576.0			10.0	65.1	0.53	2.47												


LATITUDE
0N
1N
2N
3N
4N
5N
6N
7N
ELEVATION
0
100
200
300
400
500
Projected
4?
LEGEND
1 Ash Tuff
2 Lapilli Tuff
Block Tuff
4 Chert Breccia
Sampled
Alteration: ___ strong (___) moderate ((___)) weak
EOT
NOTE: Not Corrected For Changes In Bearing
Larche - Rousseau Option
X-SECTION SKETCH L.R. 77-6
Looking West LINE 14W (Teck Coord.)
Halliday Township
Claim 255464
Oct. 31-Nov 2/77 SCALE 1"-100' D. Comba


LATITUDE
0N
1N
2N
3N
4N
5N
6N
7N
DEPARTURE
15W
14W
13W
12W
11W
Projected 400'
Chert Breccia discontinuous in outcrop.
Gossan
LEGEND
1 Ash Tuff
2 Lapilli Tuff
3 Block Tuff
4 Chert Breccia
LARCHE - ROUSSEAU OPTION
PLAN VIEW
L.R. 77-6
HALLIDAY TOWNSHIP
CLAIM 255464
Oct. 31-Nov. 2/77
SCALE 1"=100'
D. Comba
N

FALCONBRIDGE COPPER LIMIT[illegible] — LAKE DUFAULT DIVISION

DRILL HOLE RECORD

HOLE NUMBER	LAT.	DEP.	ELEV.	BRNG.	DIP	HOLE SIZE	DEPTH
L.R. 77-7	5+00N	17+00W	Teck Corp. coord.	180° Az	-55°	BQ Wireline	508'

LOCATION	PURPOSE	DATE DRILLED	CORE INTACT	CORE DISCARDED	COLLAR CEMENTED OR PEGGED	COLLAR MARKED
Halliday Township, Ontario	Test NEW SHOWING AREA Larche-Rousseau Option	Nov 3-5/77	X	☐		Casing Pulled X

ACID TESTS 100 ft -55°, 200 ft -50°, 300 ft -45°, 400 ft -35°

COMPASS TESTS 500 ft 162° Az(Tr) -25°

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
0 to 36.0	Overburden								Casing to 37 feet.
36.0 to 148.0	Sheared Block Tuff	Med grey with dk grey and lt brownish clasts White spots occur in clasts? after 92.0	Greater than 32 mm	Well supported heterogeneous lapilli to block sized clasts. Re-entrant angles are frequently observable in clast outlines. 60%-70% of rock is fine clastic ash. From 92.0, and especially 120.0 to 148.0 lapilli to block clasts of coarse ash tuff or feldspar porphyry.	Lower contact arbitarily set in a gradational sequence	Relative to other holes in 1977 drilling program this section is altered. Individual clasts may be strongly sericitized and/or chlorite-rich.	Schistose or strongly sheared sections at 40° to 45° to C.A.	Traces only of dissem pyrite	Sharp to hazy contacts with lighter or darker colored sections that appear to be dyke rock when sections are equivalent to block sized clasts. Smaller "clasts(?)" of similar rock suggest block or lapilli tuff. SiO_2-TiO_2 #14385 67.0 to 77.0 Unlike any sections logged in previous holes.
148.0 to 173.3	Sheared Altered Lapilli Tuff	Light to med grey mottled lt brown dk grey	4 mm to 32 mm	Heterogeneous pyroclastic. Clasts not as well supported by fine clastic ash as section 36.0 to 148.0 Clasts elongated parallel to pervassive shearing.	Lower contact sharp at 40° to 45° to C.A.	Weak bleaching (sericite-carbonate). Lt brown filaments of sericite. Individual clasts may be strongly sericitized or chlorite-rich	Sheared 45° to C.A.	Less than 0.5% pyrite in semi-massive clots.	SiO_2-TiO_2 #14386 173.0 - 173.0 Similar to section 36.0 to 148.0 but unlike any sections from previous holes.

HOLE NO. L.R. 77-7

LOGGED BY Dave Combe

Dave Combe 8/3/78

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
173.3 to 235.5	Sheared Dyked Lapilli Tuff	Lt green dykes with grass green (lt green spots on dk green in chill zones).	Dykes aph to mg Host 4 mm to 32 mm.	Dykes with spherulitic or variolitic chills occur throughout section. Contacts are irregular or sharp at 35° to 50° to C.A. Dyke sections: 173.3 to 175.6 179.0 to 185.0 186.3 to 188.0 198.0 to 201.5 203.8 to 206.0 206.9 to 207.4 211.0 to 214.0 215.0 to 219.0 223.7 to 224.0 233.0 to 235.5 Lapilli host is heterogeneous poorly sorted and not well supported by ash.	Lower contact sheared at 45°	Weak bleaching (sericite -carbonate) . Lt brown streaks of filaments of sericite constitute moderate to strong alteration over short section.	Pervassive shearing of host lapilli tuff. Short sections schistose.	Less than 1% pyrite overall in host. Negligible pyrite as semi-massive blebs.	Sulphide Samples: #14387 to #14388 224.0 to 233.0 Dykes similar to those intersected in holes LR 77-5 and LR 77-6.
235.5 to 244.5	Schistose Coarse Ash Tuff	Streaked lt to med grey and lt green and off white	Less than 6 mm	Fine clastic pervassively sheared.	Lower contact gradational	Week to moderate sericitization and minor carbonitization	Pervassive schistosity at 45° to 55° to C.A.	Less than 0.5% pyrite	Possible fault zone?
244.5 to 259.0	Lapilli CHERT Tuff	Mottled lt grey and dk grey with streaks of white and lt brown.	4 mm to 32 mm	Densely packed, rounded to angular heterogeneous clasts. Light grey cherty clasts 3-5% after 250.5 to 257.5	Fairly sharp but gradational	Weak to moderate sericitization, carbonitization, and silicification.	Shearing at 45° to 55° to C.A.	Trace sphalerite at 255.0 in fracture filling. 4-6% pyrite 244.5 to 247.0 1-2% pyrite 247.0 to 249.0 1-2% pyrite 254.0 to 257.0	Not a really good section of CHERT BRECCIA and certainly lacks base metal sulphides. Sulphide Samples: #14389 to #14393 244.5 to 259.0

JKM 1133

HOLE NO. L.R. 77-7

DEPTH	ROCK TYPE	COLOUR	GRAIN SIZE	TEXTURE AND STRUCTURE	CONTACTS	ALTERATION	FRACTURES	SULPHIDES	REMARKS
259.0 to 508.0	Ash Tuff	Lt grey with fine white speckle	Less than 4 mm	Uniform, featureless, resembles a finely feldspar porphyritic dyke in some sections. Short sections of late quartz veining and adjacent bleaching 1-2% of section. Possible dykes 271.4 to 272.0 and 272.5 to 273.0 Shattered quartz vein 273.0 to 273.6. Possible chert band at 50°-55° to C.A. between 273.8 to 273.9	Top contact gradational	Relatively weak bleaching over short sections. Appears to be unaltered.	Weak shearing to approx 300.0' Low density of late quartz filled fractures 1'-3' on average, usually at high angle to C.A.	Trace of pyrite in odd hairline fracture and infrequent dissem. Less than 0.5%	SiO_2-TiO_2 Samples #14394 282.0 to 292.0 #14395 383.0 to 393.0 #14396 488.0 to 498.0
508.0	END OF HOLE								Casing pulled

JEB 1133

M.B. 77-7

J.E.H. 1624

SULPHIDE SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C.D	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ppm % CU	ppm % ZN	ASSAYS OZ. AG	OZ. AU	ppm Pb	% Fe FT. % CU	PROGRESSIVE TOTALS FT. % ZN	FT. OZ. AG	FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ. AG	OZ. AU
	14387	224.0	228.0			4.0	60	128	0.01	.001	58	6.05										
	88	228.0	233.0			5.0	40	73	0.01	.001	26	3.60										
	89	244.5	247.0			2.5	57	175	0.01	.001	65	6.50										
	90	247.0	252.0			5.0	64	360	0.01	.002	46	4.05										
	91	252.0	254.0			2.0	370	0.49%	0.02	.002	40	4.45										
	92	254.0	255.5			1.5	200	0.21%	0.02	.003	32	3.00										
	93	255.5	259.0			3.5	83	483	0.02	.002	58	4.05										

HOLE NO. L.R. 77-7

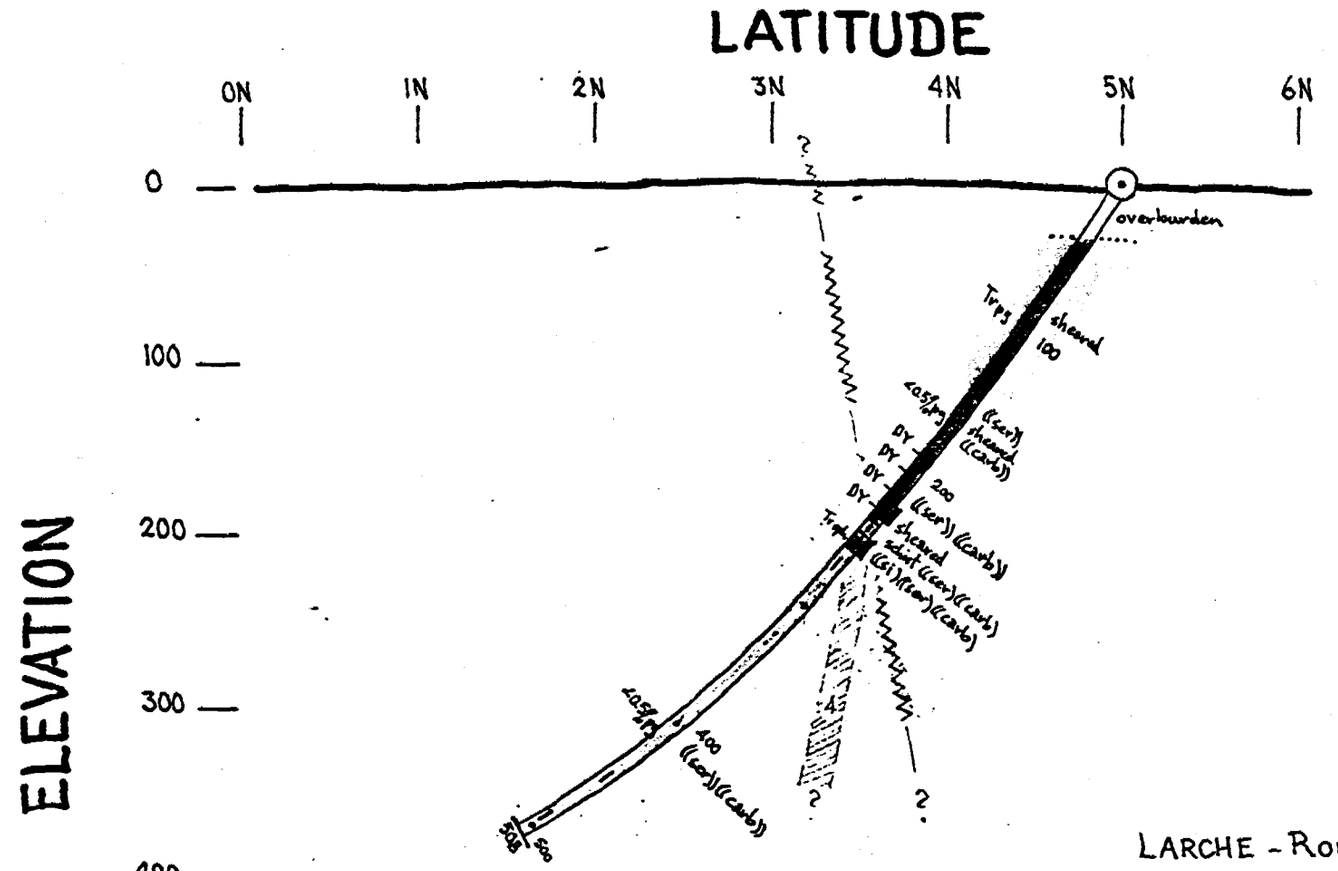
J.H.M. 1624

SiO_2-TiO_2 SAMPLES

DIAMOND DRILL CORE ASSAY RECORD

C.D.	SAMPLE NUMBER	FROM FT.	TO FT.	ESTIMATE CU	ESTIMATE ZN	LENGTH FT.	ASSAYS % CU	ASSAYS % ZN	ASSAYS OZ. AG	ASSAYS OZ. AU	PROGRESSIVE TOTALS FT. % CU	PROGRESSIVE TOTALS FT. % ZN	PROGRESSIVE TOTALS FT. OZ. AG	PROGRESSIVE TOTALS FT. OZ. AU	REMARKS AND AVERAGE ASSAYS FROM	TO	LENGTH	% CU	% ZN	OZ AG	OZ. AU
							$\%SiO_2$	$\%TiO_2$	$\%Na_2O$												
	14385	67.0	77.0			10.0	67.5	0.64	1.16												
	86	163.0	173.0			10.0	62.6	0.58	1.23												
	94	282.0	292.0			10.0	66.3	0.54	0.75												
	95	383.0	393.0			10.0	66.5	0.60	2.60												
	96	488.0	498.0			10.0	70.0	0.53	2.46												

HOLE NO. L.R. 77-1



LEGEND

1 Ash Tuff

2 Lapilli Tuff

3 Block Tuff

4 Chert Breccia

Sampled

Alteration: ___ strong (___) moderate ((___)) weak

NOTE: Not Corrected For Changes In Bearing-

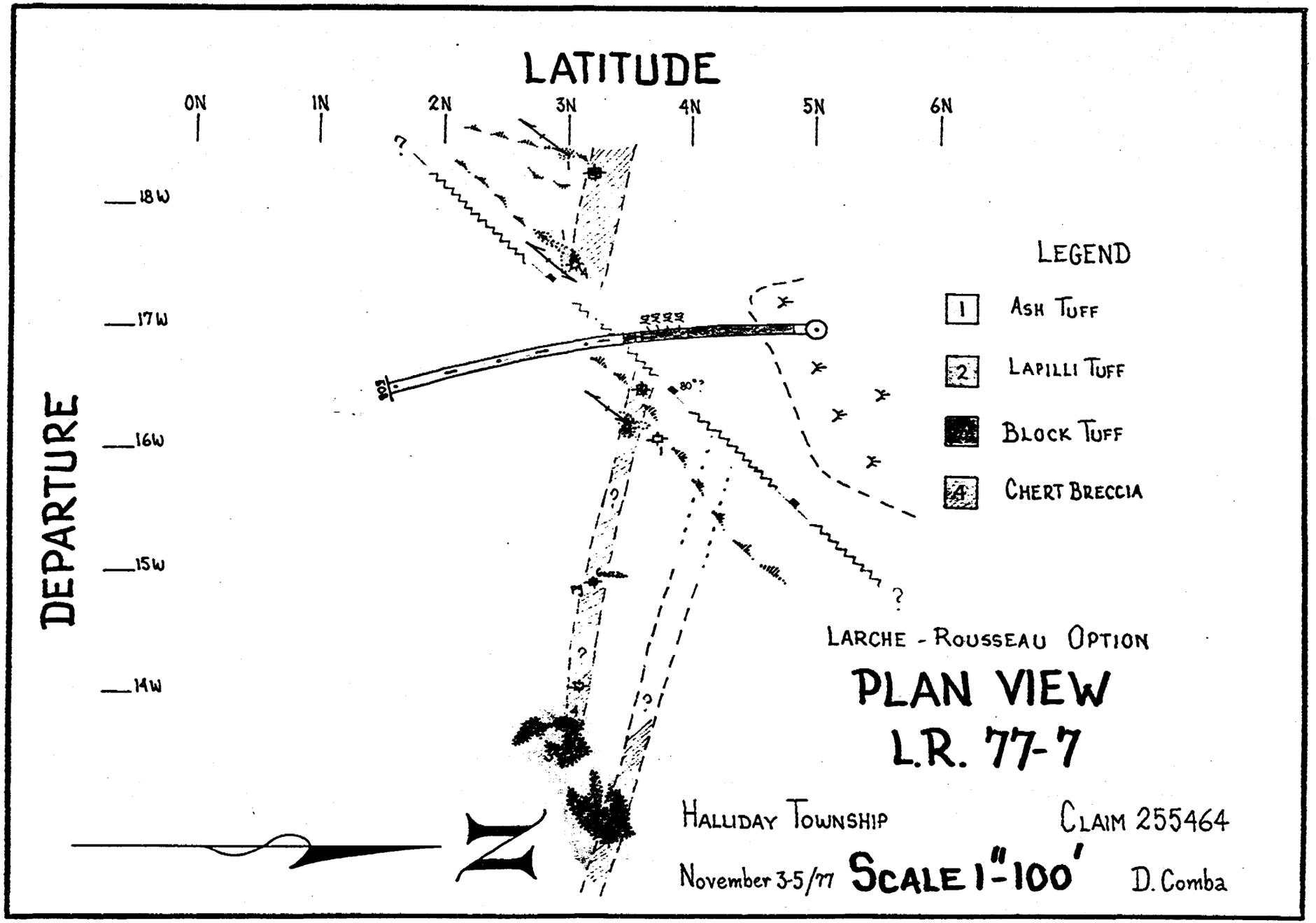
Larche - Rousseau Option

X-SECTION SKETCH LR. 77-7

Looking West **LINE 17W** (Teck Coord.)

Halliday Township Claim 255464

November 3-5/77 **Scale 1"=100'** D. Comba


LATITUDE
0N
1N
2N
3N
4N
5N
6N
DEPARTURE
18W
17W
16W
15W
14W
LEGEND
1 ASH TUFF
2 LAPILLI TUFF
BLOCK TUFF
4 CHERT BRECCIA
LARCHE - ROUSSEAU OPTION
PLAN VIEW
L.R. 77-7
HALLIDAY TOWNSHIP
CLAIM 255464
November 3-5/77
SCALE 1"=100'
D. Comba

Ministry of Natural Resources
Ontario

CG-124

#63

41P14NE0021 63.3524 MIDLOTHIAN

900

To the Recorder of Larder Lake Mining Division

I, Falconbridge Copper Limited T. 556
name of Recorded Holder Prospector's Licence

P. O. Box 40, Commerce Court West, Toronto, Ontario.
Post Office Address

do hereby report the performance of 3952 days of Diamond Drilling
type of work

not before reported to be applied on the following contiguous claims Halliday & Midlothian Jarse

Claim No.	Days	Claim No.	Days	Claim No.	Days
		SEE ATTACHED SCHEDULE			

Geological Branch ODM
ASSESSMENT FILES
RESEARCH OFFICE
APR 13 1978
RECEIVED

All the work was performed on Mining Claim (s) L.255464, L.255465, L.255466 1,115' 270' 130'
(In the case of geological and/or geophysical survey (s) where more than 18 claims are involved attach a schedule)

READ CAREFULLY: THE FOLLOWING INFORMATION IS REQUIRED BY THE MINING RECORDER.

For Manual Work, Stripping or Opening up of Mines, Sinking Shafts or Other Actual Mining Operations – Names and addresses of the men who performed the work and the dates and hours of their employment.
For Diamond and other Core Drilling - Footage, No. and angle of holes and diameter of core. Name and address of owner or operator of drill. Dates when drilling was done. Signed core log and sketch in duplicate.
For Compressed Air or Other Power Driven or Mechanical Equipment
Type of drill or equipment. Names and addresses of men engaged in operating equipment and the dates and hours of their employment.
For Power Stripping - Type of equipment. Name and address of owner or operator. Amount expended. Dates on which work was done. Proof of actual cost must be submitted within 30 days of recording.
With each of the above types of work sketches are required to show the location and extent of the work in relation to the nearest claim post. In the case of diamond or other core drilling the sketch must be submitted in duplicate.
For Geophysical, Geological, Geochemical Surveys and Expenditure Credits - the name of author of report. Covering dates of survey (linecutting & office). Type of instrument used. Total amount of expenditure. Technical reports, maps, expenditure breakdown, receipts must be filed in duplicate with the Minister within 60 days of recording.
For Land Survey - the name and address of Ontario Land surveyor.

The Required Information is as Follows: (Attach a list if this space is insufficient)

Contractor: Hosking Diamond Drilling, P. O. Box 815, Rouyn, Quebec, J9X 3P9.
Dates: October 4th, 1977 to November 9, 1977.
Hole Size: BQ Wireline

Hole Number	Footage	Angle	Hole Number	Footage	Angle
LL77-1	930'	55°	LL77-5	507'	55°
LL77-2	507'	65°	LL77-6	607'	55°
LL77-3	397'	45°	LL77-7	508'	55°
LL77-4	496'	65°			

Date March 15 1978

Signature of Recorded Holder or Agent

THE PENALTY FOR MAKING A FALSE STATEMENT IN THIS REPORT AND/OR CERTIFICATE IS $500. OR SIX MONTHS IMPRISONMENT OR BOTH

The Mining Act
Certificate Verifying Report of Work

I, Charles David Andrew Comba
Box 866 Haileybury, Ontario, P0J 1K0.
(Post Office Address)

hereby certify:

1. That I have a personal and intimate knowledge of the facts set forth in the report of work annexed hereto, having performed the work or witnessed same during and/or after its completion.

2. That the annexed report is true.

Dated March 15, 19 78

Dave Comba
Signature

LARDER LAKE MINING DIV. RECEIVED APR 10 78 AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

APR 10 1978

(Cycle L255462)

768 (8/77)

LA 041

SCHEDULE "A"

CLAIM NO.	DAYS
L. 255464	116
L. 255465	116
L. 255466	116
L. 255462	106
L. 255463	106
L. 255467	106
L. 255468	106
L. 255472	106
L. 255473	106
L. 255474	106
L. 255475	106
L. 278569	106
L. 278573	106
L. 278574	106
L. 291996	106
L. 291997	106
L. 291998	106
L. 292001	106
L. 293395	106
L. 278570	106
L. 278571	106
L. 278572	106
L. 292002	106
L. 292003	106
L. 292004	106
L. 292005	106
L. 292006	106
L. 292007	106
L. 292008	106
L. 292009	106
L. 292011	106
L. 292012	106
L. 292013	106
L. 293223	106
L. 293224	106
L. 293225	106
L. 293226	106