

**2000 DRILLING ON THE LLOYD CLAIM**

**CARIBOO MINING DIVISION  
BRITISH COLUMBIA**

**NTS: 93 A/12**

**LATITUDE: 52° 35' NORTH  
LONGITUDE: 121° 40' WEST**

**OPERATOR: BIG VALLEY RESOURCES INC.  
Suite 200, 580 Hornby Street  
Vancouver, B.C. V6C 3B6**

**REPORT BY: S. Tennant**

**DATED: February 27, 2001**

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**

**26,495**

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## SUMMARY

Big Valley Resources Inc. owns the Lloyd 2 mineral claim. The claim consisting of 20 claim units is located 57 kilometres northeast of Williams Lake in the Cariboo Mining Division.

Exploration has been ongoing for a number of years consisting of various geophysical and geochemical surveys as well as some diamond drilling. In 1997, diamond drilling was carried out on the Lloyd 2 claim to further evaluate the mineralized zone outlined by earlier exploration programs. The 1997 drilling extended the known mineralization some 500 metres west of the previously drilled Main Zone. Although copper grades are on the low side, drill holes intersected significant lengths of copper mineralization indicating.

The 2000 drilling intersected a thick sequence of volcanic tuffs overlying the intrusive. The contact was a broad zone, highly altered with very fine grained disseminated pyrite up to 10%.

## INTRODUCTION

### i. **Location, Access and Physiography**

The Lloyd mineral claims are located 57 kilometres northeast of the city of Williams Lake in central British Columbia (Figure I). The centre of the claims is at latitude 52° north and longitude 121° west in the Cariboo Mining Division.

The property is readily accessible from Williams Lake via 85 kilometres of paved highway to Moorhead Lake, then 16 kilometres on the Moorhead Forestry all-weather gravel road. A network of old logging roads provide good access to various parts of the claims.

The property lies in the Quesnel Highland physiographic region of the central British Columbia interior. This region is characterized by broad valleys and gently rolling hills with elevations on the property ranging from 1,006 metres (3,300 feet) to 1,220 metres (4,000 feet) above sea level.

The claims are located in a moist vegetable zone dominated by combinations of coniferous (cedar-pine-spruce-fir) and deciduous (birch-poplar) forests with undergrowths of alder and devil's club.

### ii. **Claim Status**

The Lloyd 2 claim consists of 20 claim units located in the Cariboo Mining Division. The Lloyd 2 claim is shown on Figure 2 and is part of a large block of claims in the area registered to Big Valley Resources Inc.



# LOCATION MAP

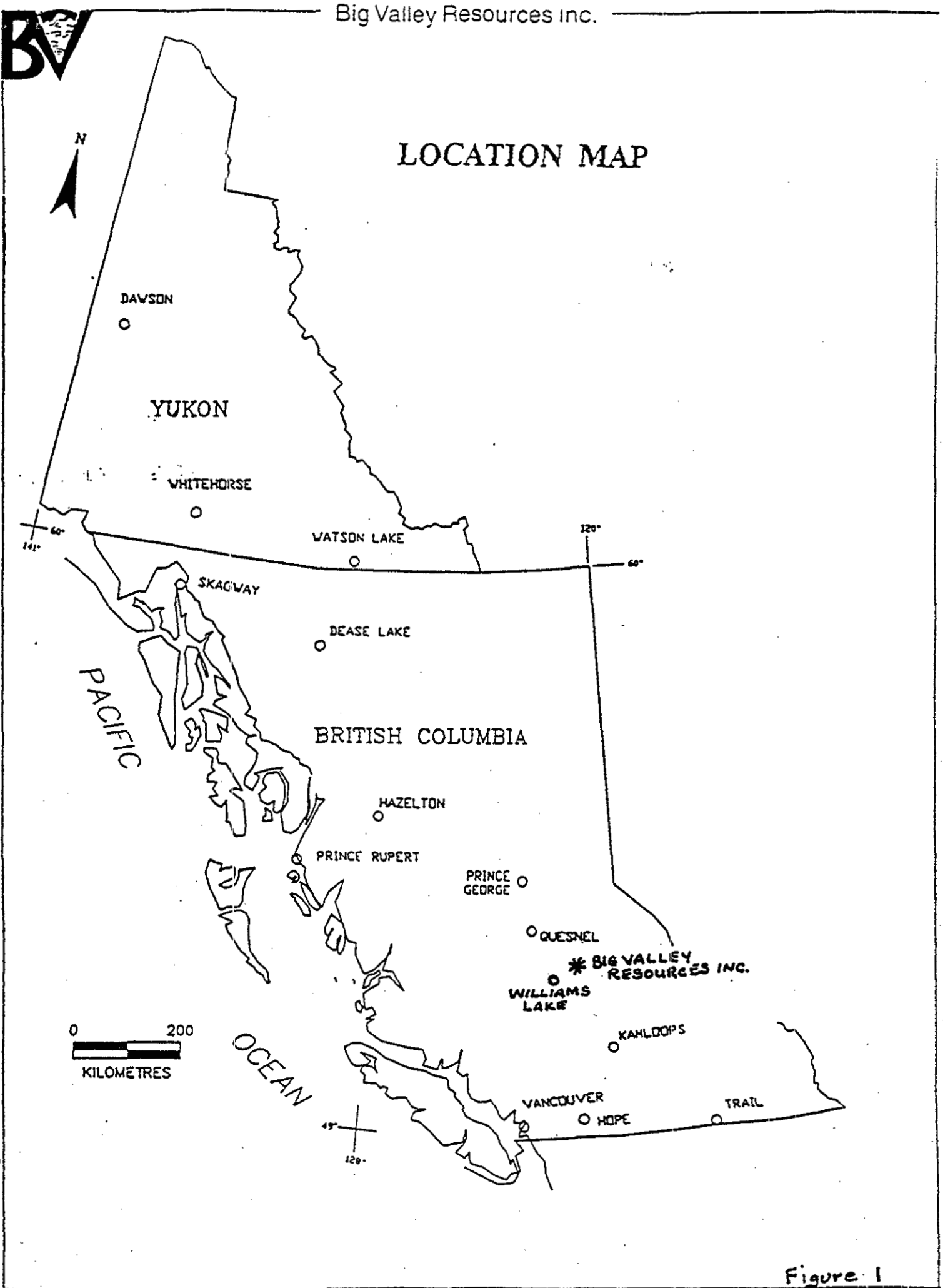


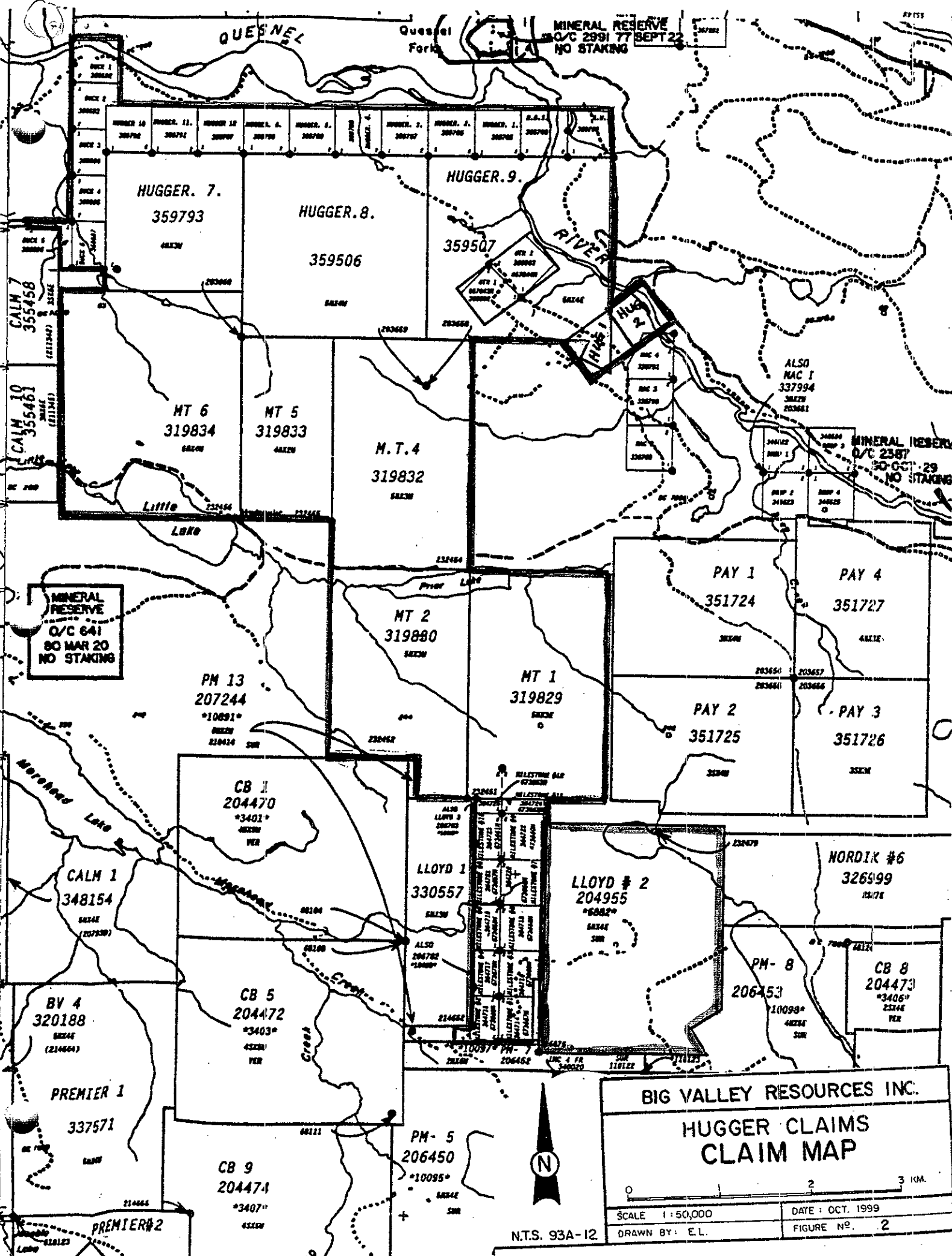
Figure 1

QUESNEL

Quesnel  
Fort

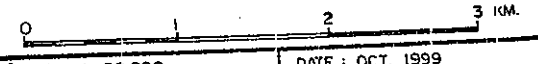
MINERAL RESERVE  
O/C 2991 77 SEPT 22  
NO STAKING

87175



BIG VALLEY RESOURCES INC.

# HUGGER CLAIMS CLAIM MAP



SCALE 1:50,000

DATE: OCT. 1999

DRAWN BY: E.L.

FIGURE NO. 2

N.T.S. 93A-12

**iii. Property History**

Mining activity in the region has a long history starting with placer operations in 1890, which has continued with varying intensity to the present. From 1960 to 1975, the area was explored for porphyry copper deposits.

In 1964, the Cariboo Bell porphyry gold-copper deposit was discovered during exploration of a prominent aeromagnetic anomaly. Today, the Mount Polley deposit is jointly owned 55% by Imperial Metals Corporation and 45% Sumitomo Corporation, and went into production in 1997. It adjoins Big Valley Resources Inc. to the south and east. In 1975, during the investigation of a similar aeromagnetic anomaly, Dome Mines Ltd. discovered the QR gold deposit. The QR deposit was in production from May 1995 to April 1998 and adjoins Big Valley to the northwest. During the past ten years, Big Valley's mineral claims represent the mineral tenures that have been acquired for their potential of hosting porphyry copper and/or gold deposits similar to the Mount Polley and QR deposits.

## GEOLOGY AND MINERALIZATION

Big Valley Resources property is located in a structural feature known as the Quesnel Trough, a 30 kilometre wide north west trending volcanic-sedimentary belt of regional extent of Early Mesozoic age. It is fault bounded on the west by Paleozoic rocks of the Cache Creek Group and on the east by older Paleozoic and Pre-Cambrian strata.

Locally within the Trough, intrusive rocks, in part coeval to the volcanics occur on cross cutting structures. The Mount Polley intrusions, representing one such centre, are of interest for their potential of hosting porphyry copper/gold mineralization. The QR gold deposit is associated with a pyrite-epidote zone in basaltic breccia near an alkalic stock.

Regional geological mapping of the Quesnel Trough in the claim area is taken from work recently completed by Dr. D. Bailey for the British Columbia Department of Mines (Figure 3).

In the project area, a belt of mafic and felsic volcanic rocks, comagmatic alkaline stocks and dyke complexes make up the Quesnel Trough. The belt is symmetrical around a central axis of felsic volcanics and sediments. Drilling on the Lloyd 2 Main Zone indicates a northeast trending mineralized structure controlled by a steep dipping shear zone. Drilling has cored felsic volcanic flows and clastics that have been intruded by high level dykes and sills. The highest grade mineralization encountered in the drilling occurs as magnetite, chalcopyrite and pyrite breccia.





## DIAMOND DRILLING

During November 2000, Big Valley completed 4 diamond drill holes on the Lloyd 2 mineral claim (figure 4). Drilling has been ongoing on the Lloyd 2 claim since 1994 and to date an area approximately 250 metres by 200 metres has been drilled. The zone has been drilled eastward to the property boundary with Imperial Metals, but is still open to the north, west and south.

The drilling was carried out utilizing a Longyear super 38 drill and recovered NQ size core. The contractor was Beaupre Drilling of Princeton BC. Water for drilling was pumped from a nearby stream close to the drill sites. Core was transported to the field camp on Beaver Valley Road for logging and permanent storage.

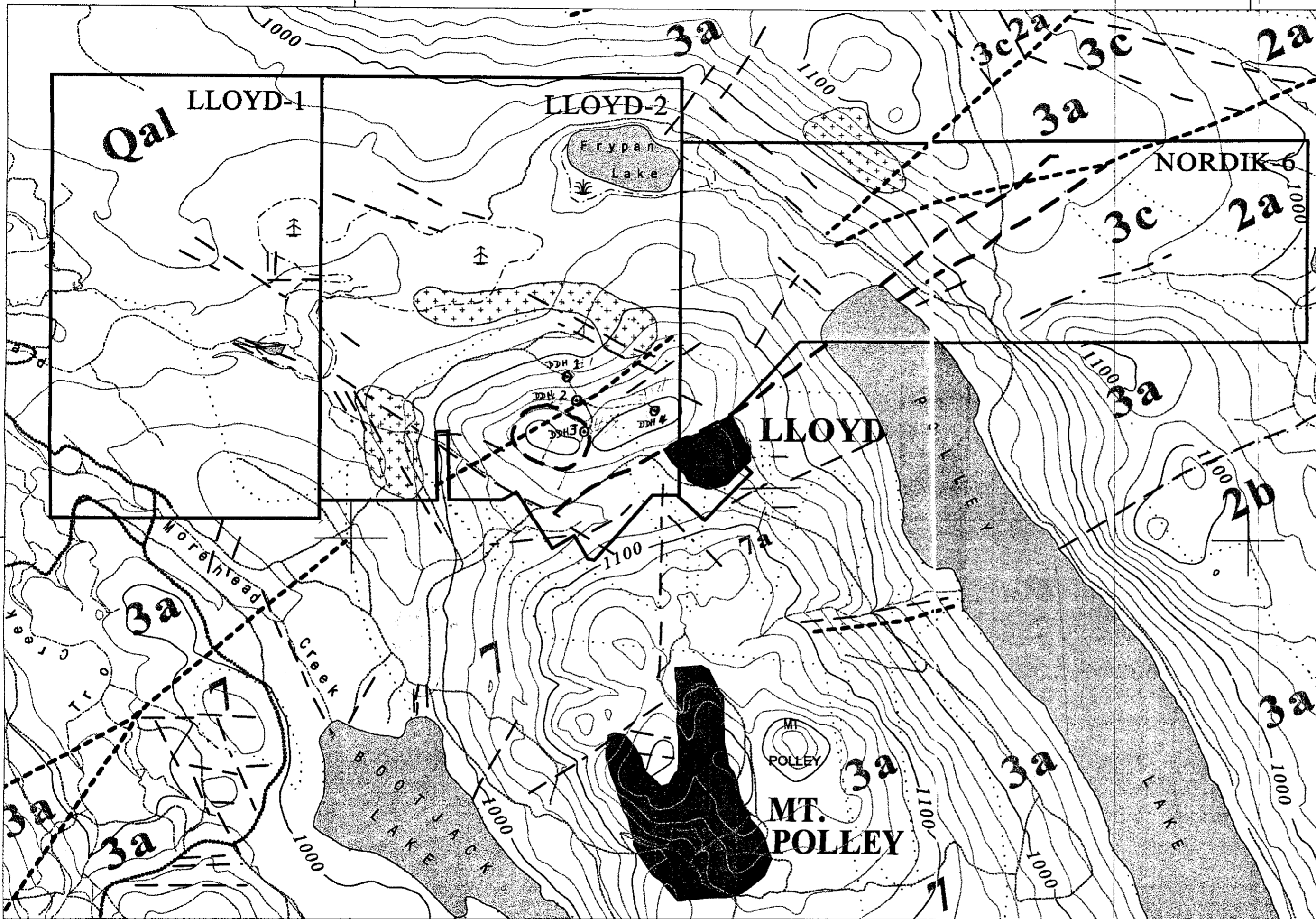
Drill information is as follows:

<u>Zone</u>	<u>Hole No.</u>	<u>Dip</u>	<u>Northing</u>	<u>Easting</u>	<u>Length</u>
Lloyd 2	2000-1	-90°	5825920	591180	170m
Lloyd 2	2001-2	-45°	5825730	591240	333m
Lloyd 2	2000-3	-60°	5825590	591300	273.5m
Lloyd 2	2000-4	-90°	5825700	591660	276m

The core was not split as it was decided that only selected areas would be assayed. This will be carried out in the spring of 2001.

59 0000m. E

59 5000m. E



### LEGEND

- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- LAKE
- STREAM / RIVER
- SWAMP / MARSH
- PAVED ROAD
- GRAVEL ROAD
- ROUGH ROAD
- CUT LINE
- MINERAL CLAIMS
- BUILDINGS
- GEOLOGICAL CONTACT
- THRUST FAULT
- FAULT
- FAULT, LATERAL MOVEMENT
- MINERALIZED INTRUSIVE RUBBLE
- MINERAL DEPOSITS
- AIRPHOTO LINEAMENTS
- AIRPHOTO LINEAMENTS - NOTABLE

### GEOLOGY

- | SEDIMENTARY AND VOLCANIC ROCKS |  | INTRUSIVE ROCKS |
|--------------------------------|--|-----------------|
| <b>PLEISTOCENE - RECENT</b>    |  |                 |
| Qal                            | Unconsolidated glacial, fluvio-glacial sediments (gravel, sand, silt and clay)                                 |                 |
| <b>TERTIARY</b>                |  |                 |
| T1                             | Maroon and grey vesicular alkali olivine basalt flows, breccia   |                 |
| <b>CRETACEOUS</b>              |  |                 |
| 9                              | Grey cobble conglomerate; dark grey mudstone, sandstone; distinctive orange weathering carbonate matrix        | 8               |
| <b>JURASSIC</b>                |  |                 |
| 6                              | Grey and maroon polyolithic cobble and pebble conglomerate; shale, siltstone, sandstone; minor redbeds         | 8               |
| 5                              | Grey siltstone and sandstone, massive to well bedded commonly pyritic calcareous                               |                 |
| 4                              | Maroon amygdaloidal and vesicular olivine pyroxene basalt breccias and flows                                   |                 |
| 3c                             | Feldspathic tuffaceous siltstone sandstone, minor volcanic breccia   | 7b              |
| 3b                             | Latic crystal tuff, tuff breccia and tuffaceous sandstone, minor latite flow breccia                           | 7               |
| 3a                             | Maroon and grey polyolithic volcanic breccia, characterized by the presence of felsic clasts                   | 7a              |
| <b>TRIASSIC</b>                |  |                 |
| 2f                             | Dark brown to grey and grey-green mafic sandstone, siltstone, calcareous siltstone and sandstone, limestone    |                 |
| 2e                             | Dark green and maroon analcime-bearing pyroxene basalt flows and breccia; locally crystal and lithic tuffs     |                 |
| 2d                             | Greenish-grey to maroon hornblende bearing pyroxene basalt   |                 |
| 2c                             | polyolithic maroon and grey basaltic breccia with rare to absent felsic clasts                                 |                 |
| 2b                             | Maroon and grey microclitic alkali basalt flows, breccia, minor maroon and dark green basaltic lithic tuff     |                 |
| 2a                             | Green and grey pyroxene-phyric alkali olivine and alphanitic alkali basalt flows, breccia, minor pillow basalt |                 |
| 1                              | Dark grey and brown sandstone siltstone, shale, micaceous, phyllitic rocks                                     |                 |

Medium to coarse grained, hornblende granodiorite and quartz monzonite

Medium to coarse grained, hornblende and/or pyroxene bearing, nepheline syenite, orbicular in part

Pink and grey, medium to fine grained diorite, monzonite, syenite

Grey, medium grained equigranular to porphyritic quartz diorite granodiorite (lakomkane batholith in part)

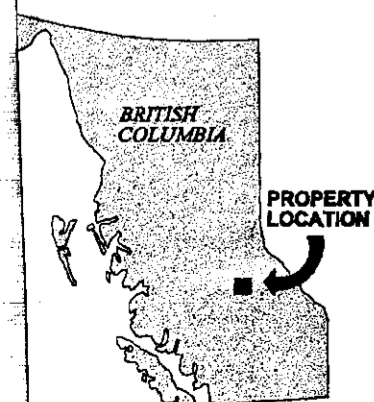
IPANDEM

50/2 11

2111

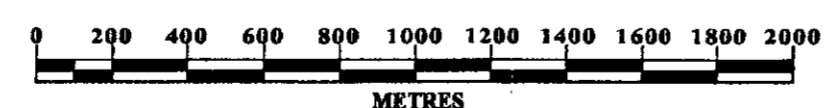
59 0000m. E

59 5000m. E



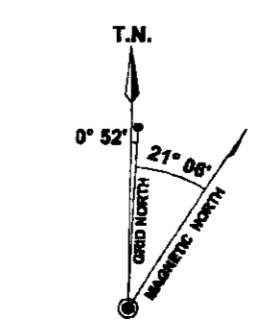
122°00'	122°30'	123°00'
93A.071	93A.072	93A.073
93A.061	93A.062	93A.063
93A.051	93A.052	93A.053
52°30'	52°00'	51°30'

Index to adjoining maps of the British Columbia Geographic System



Contours generated from Digital Elevation Model  
 Contour interval 20 metres  
 Elevations in metres above Mean Sea Level

Universal Transverse Mercator Projection  
 North America datum - NAD 83  
 UTM Zone 10



This map was produced in 1998, for Big Valley Resources. Original map was produced in 1993, for the B.C. Ministry of Crown Lands, under the Forest Resource Information Management (FRIM) initiative. Digitized from 1:50,000 scale aerial photography flown in August 1996.

Use diagram only to obtain numerical values  
 Approximate Mean Declination 1993  
 for center of map  
 Decreasing 11.2' Annually

**Big Valley Resources Inc.**

DRILL HOLE LOCATION

**LLOYD GROUP**

Drawn: J.D.	Checked: E.L.	Province: BRITISH COLUMBIA	Drawing: BV/LLOYD_GRP.DWG
Date: JULY, 1998	Scale: 1:20 000	Mining Division: CARBOOD	N.T.S. 93A/11.12W

26495  
 PG 11  
 Fig 4

## CONCLUSIONS AND RECOMMENDATIONS

Drilling on the Lloyd 2 mineralized zone has been ongoing since 1994. Early drilling has shown a north easterly trending mineralized structure coincident with an Induced Polarization chargeability high as well as a magnetic high. During 1996-97, drilling has extended the copper mineralization some 500 metres west of the Main Zone. Although results of drilling in 1998 indicated low copper grades, significant length of copper mineralization was intersected, indicating that the potential for a large low grade deposit exists.

The 2000 drilling intersected a thick sequence of volcanic tuffs overlying the intrusive. The contact was a broad zone, highly altered with very fine grained disseminated pyrite up to 10%. It is believed that this contact zone subcrops between the 2000 drilling and the 1998 drilling. A geological structural and alteration study should be carried out on all the drill holes in the general area.

## STATEMENT OF COSTS

Drilling - November 18 to December 1 3455 ft. @ \$22/ft. (all inclusive - includes mob./demob, moves, core boxes etc.)	76,010.00
Supervision - Logging E. Livgard P. Eng 11 days @ \$360/day	3,960.00
Helper - Moving and stacking core. L. Tattersall. 8 days @ \$200/day	1,600.00
Truck Rental - 12 days @ \$55/day	660.00
Room and Board - 11 days @ \$60/day	660.00
Report Prep. S. Tennant 3 days @ \$250/day	750.00
	<hr/>
	\$ 83,640.00

## AUTHOR'S QUALIFICATIONS

I, **STUART J. TENNANT**, do hereby certify that:

1. I am a geologist residing at 600 Garrow drive, Port Moody, British Columbia, V3H 1H5.
2. I am a 1959 graduate of the University of British Columbia with a Bachelor of Science degree in geology.
3. I have practiced my profession in exploration since 1959, primarily in British Columbia.
4. Since May 1996, I have been employed as an exploration geologist with Big Valley Resources Inc.

  
STUART J TENNANT

Dated at Vancouver, British Columbia, this 27<sup>th</sup> day of February, 2001.

## REFERENCES

1. Bailey, David G. (1976): Geology of the Moorhead Lake Area, Central British Columbia, BCMEMPR. Notes to accompany Preliminary Map No. 20.
2. Bailey, David G. (1987): Geology of the Central Quesnel Belt, Hydraulic, South Central British Columbia (93A/12), BCMEMPR, Geological Fieldwork, 1987, Paper 1988-1.
3. Fox, Peter E., Cameron, R.S.: Geology of the QR Gold Deposit, Quesnel River area, British Columbia, CIM Special Volume 46.
4. Panteleyev, Andre, Hancock, Kirk D. (1988), Quesnel Mineral Belt: Summary of the Geology of the Beaver-Creek-Horsefly River Map Area, BCMEMPR, Geological Fieldwork, 1988, Paper 1989-1.
5. Panteleyev, A., Bailey D., Bloodgood, M., Hancock, K., (1996): Geology and Mineral Deposits of the Quesnel River – Horsefly Map Area, Central Quesnel Trough, British Columbia, NTS 93 A/5, 6, 7, 11, 12, 13; 93 B/9, 16; 93 G/1; 93 H/4; Bulletin 97.

APPENDIX – DRILL LOGS













MAIN DIV.		MINOR DIV.		DESCRIPTION	SAMPLE NUMBER	INTERVAL		ASSAYS			
from (m)	to (m)	from (m)	to (m)			from (m)	to (m)				
15.9	22.3			<p>VOLCANIC BRECCIA            GROUNDMASS APHANITIC RED            CONTAINS VERY FINE 1.0mm            GREY TO CLEAR ANGULAR            TO TRAPEZOIDAL PARTICLES            ALSO FRAGMENT LIMUSTONE            USUALLY GREY-GREEN OCCASIONAL            RED WITH SMALLER FRAGMENTS            WITHIN IT.</p>							
		AT	22.3	MINOR GOUSSÉ							
22.3	25.3			<p>TUFF RED APHANITIC GROUNDMASS            WITH VERY FINE CLEAR            ANGULAR PARTICLES AND SOME            WHITE FELDSPAR (ANGULAR            FRAGMENTS) 1/2-3mm            NON-MAGNETIC</p>							
		23.8	25.3	<p>VERY IRREGULAR FRACTURES            GENERALLY 60° TO CORE            SOME PARTLY BRECCIATED            FILLED WITH CALCITE GROWTH            FROM WALLS CONSTITUTES 60%</p>							
25.3	25.6			FAULT 50% RED GOUSSÉ							
25.6	31.1			<p>TUFF - DARK GREY AND BLACK GREEN            VARIABLE TO RED PARTICLES            AND 25-30% FRAGMENTS            GREEN (OLIVE <del>TO</del> PISTACHIO)            FRAGMENTS. INTERSTITIAL            IRREGULAR WHITE - SOME QUARTZ?</p>							

MAIN DIV.		MINOR DIV.		DESCRIPTION	SAMPLE NUMBER	INTERVAL		ASSAYS		
from (m)	to (m)	from (m)	to (m)			from (m)	to (m)			
25.6	31.1			CONT. HIGH TO MODERATELY MAGNETIC DARK PARTICLES CARRY MINOR VERY FINE ZIRCON						
31.1	48.2			VOLCANIC BRECCIA (AS 15.9 TO 22.3)						
		AT 31.1		FRAGMENTS AND GRAIN 10CM						
		39.6	40.2	SOFT FRAGMENTS <del>FRAGMENTING</del> 45° TO CORE 20% FILL WITH WHITE FELDSPAR AND GREENISH (ALTERED) SOME SLIGHTLY PINK.						
		46.4	48.2	DECREASING GREY FRAGMENTS INCREASE IN 1-3MM WHITE FRAGMENTS						
48.2	51.2			TUFF (AS 23.8 TO 25.3) OCCASIONAL GREY FRAGMENTS - HAIRLINE TO 2MM FRAGMENTS 55° TO CORE FILLED WITH CALCITE 40-50 EVERY METRE						
51.2	56.1			LAPILLI TUFF RED <sup>AND GREY</sup> Aphanitic groundmass WITH GREY GLASSY ANGULAR LATHS - BLACK AND GREEN FRAGMENTS 1mm TO 10cm ROUNDED TO SUBROUNDED BLACK FRAGMENTS HAVE CLEAR TO WHITE 1/2 <sup>TO 10mm</sup> mm TRAPEZOIDAL AND HEXAGONAL <del>PAIR</del> CRYSTALS - OCCASIONAL VERY IRREGULAR BRIGHT ORANGE INTERSTITIAL MATTER						







MAIN DIV.		MINOR DIV.		DESCRIPTION	SAMPLE NUMBER	INTERVAL		ASSAYS		
from (m)	to (m)	from (m)	to (m)			from (m)	to (m)			
1379	153.7			VOLCANIC BRECCIA SMALL 0.1-2.0 CM FRAGMENTS BLACK AND GREY.						
		1463	147.6	BROKEN 4cm - MILD						
		147.6	1500	HARLINE FRACTURING 55-60% CORE SPACED AT 1-2 CM OVERALL RED GROUND MASS WITH GLASSY GREY VERY FINE PARTICLES BLACK FRAGMENT HAVE WHITE SPECKLES - OCCASIONAL SPECKLES AND STREAKS OF BRIGHT ORANGE MATTER						
1537	160.1			TUFF - STRONG RED APHANITIC WITH GLASSY PARTICLES 1/2-1 MM						
		AT 156.1		5 CM SOURCE						
		156.1	160.1	GREY MINOR RED GROUND MASS SOME VERY FINE OLIVE PARTICLES						
1601	1829			LAPILLITUFF (AS 116.2 TO 139.9) (MODERATELY TO WEAKLY MAGNETIC)						
		172.6	172.9	DYKE GREY WITH BLACK SPECKLES						
1829	183.8			TUFF FINE GRAINED GREY						
183.8	196.3			LAPILLITUFF PREDOMINANTLY GREY ALSO RED GROUND MASS WITH MINOR OLIVE COLOURED PARTICLES 0.1 TO 1.0 CM FRAGMENT ANGULAR TO ROUNDED (MODERATE TO STRONGLY MAGNETIC)						
		192.7	189.3	HOMOGENEOUS APHANITIC BROWN REDDISH OXIDE APPARENTLY BOUNDED BY 20° TO CORE FRACTURE ALSO PATCHES						
		191.2	191.6	SOME - ALSO 192.7 TO 193.3 SAME, <del>AND</del> BOUNDED BY 45°						



















MAIN DIV.		MINOR DIV.		DESCRIPTION	SAMPLE NUMBER	INTERVAL		ASSAYS			
from (m)	to (m)	from (m)	to (m)			from (m)	to (m)				
237.5	238.4			BRECCIA LAPILLITUS AND INTRUSIVE. DARK GROUND MASS - ORANGE FRAGMENTS ALSO A FEW BLACK. HIGHLY ALTERED - SERICITE AND MODERATE SILICIFICATION LIGHT MAGNETIC - MINOR SULPHIDE PYRITE DISSEMINATED AND SOME PATCHES							
				END							