LOG NO: 1007	RD.
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FILE NO:	

GREENLAKE RESOURCES 1988 DRILL PROGRAM ON THE GOLDEN PLUG MINERAL CLAIM

OSOYOOS MINING DIVISION B.C.

FILMED

ΒY

M.J. VANDE GUCHTE, 8.SC.

VANCOUVER, B.C.

JANUARY 30, 1988

GEOLOGICAL BRANCH ASSESSMENT REPORT

17,843

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APPENDIX 1

GEOCHEMICAL ANALYTICAL RESULTS

APPENDIX II

DDH 88-2 DRILL LOG AND SECTION

INTRODUCTION

DURING JANUARY, 1988, A DIAMOND DRILL PROGRAM WAS CARRIED OUT ON THE GOLDEN PLUG MINERAL CLAIM. THE PRIMARY OBJECTIVE OF THE PROGRAM WAS TO TEST THE SPRINGBROOK FORMATION FOR EPITHERMAL PRECIOUS AND BASE METAL MINERALIZATION.

LOCATION AND ACCESS

THE PROPERTY IS LOCATED ABOUT 16 KM TO THE NORTHWEST OF KEREMEOS, B.C. IN THE INTERIOR PLATEAU OF SOUTH CENTRAL BRITISH COLUMBIA. THE SMALL SETTLEMENT OF OLALLA LIES ABOUT 7 KM TO THE SOUTHWEST. SPECIFIC COORDINATES WOULD BE 49 DEGREES 18' NORTH LATITUDE; 119 DEGREES 46' WEST LONGITUDE.

ACCESS TO THE PROPERTY IS BY GOOD GRAVEL ROAD WHICH BRANCHES TO THE SOUTH FROM PROVINCIAL HIGHWAY 3A ABOUT 5 KM NORTH OF OLALLA, B. C. AT A POINT OPPOSITE THE ACCESS ROAD TO THE APEX MOUNTAIN SKI RESORT. THIS GRAVEL ROAD (THE OLD GREEN MOUNTAIN ROAD) CROSSES THE CLAIM ABOUT 3 KM FROM THE HIGHWAY.

PROPERTY

THE PROPERTY CONSISTS OF ONE TWENTY UNIT M.G.S. CLAIM RECORDED IN THE NAME OF G.H. RAYNER AND ASSOCIATES LTD.

HISTORY AND PREVIOUS WORK

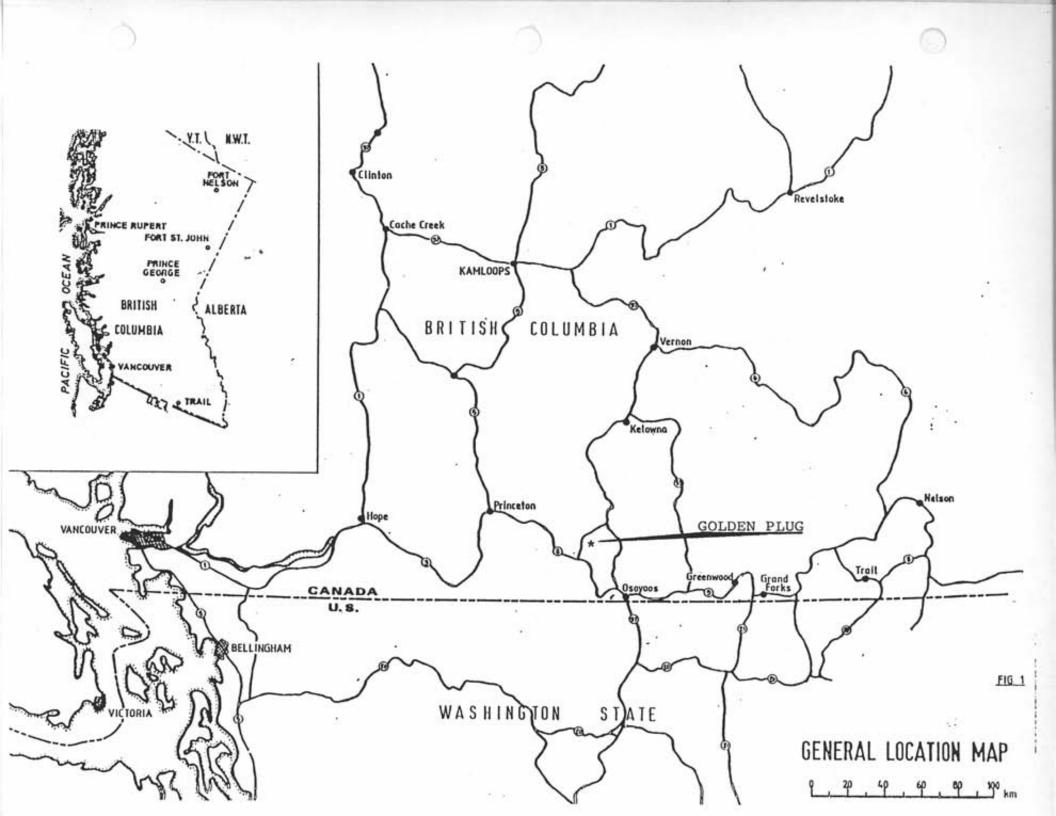
THE WRITER KNOWS OF NO RECORDED EXPLORATION WORK IN THE AREA PRIOR TO 1977, ALTHOUGH REPORTED EVIDENCE IN POST 1977 REPORTS INDICATE INTEREST IN THE AREA MANY YEARS AGO.

DURING 1977-78, UNION OIL COMPANY OF CANADA LTD., CARRIED OUT INDUCED POLARIZATION SURVEYS, SCINTILLOMETER SURVEYS AND LIMITED GEOLOGICAL WORK. THE AREA WAS THEN KNOWN AS THE TWIN CLAIMS WHICH OVERLAY THE PRESENT GOLDEN PLUG CLAIM AT LEAST IN PART.

LATER, IN JANUARY OF 1985, A SOIL GEOCHEMISTRY SURVEY WAS CARRIED OUT BY G.H. RAYNER OVER A LIMITED PORTION OF THE PROPERTY NOW KNOWN AS THE GOLDEN PLUG. THE RESULTS INDICATED GOOD POSITIVE RESPONSE FOR ZINC, THALLIUM AND IN PART FOR ARSENIC AND MERCURY.

DURING, JANUARY 1986, A DIAMOND DRILL PROGRAM WAS CARRIED OUT ON THE GOLDEN PLUG. THE OBJECTIVE WAS TO BETTER DEFINE THE CAUSE OF THE 1.P. ANOMALY AS REPORTED EARLIER IN 1977-78.

NO FURTHER WORK HAS BEEN CARRIED OUT UNTIL THE CURRENT PROGRAM.



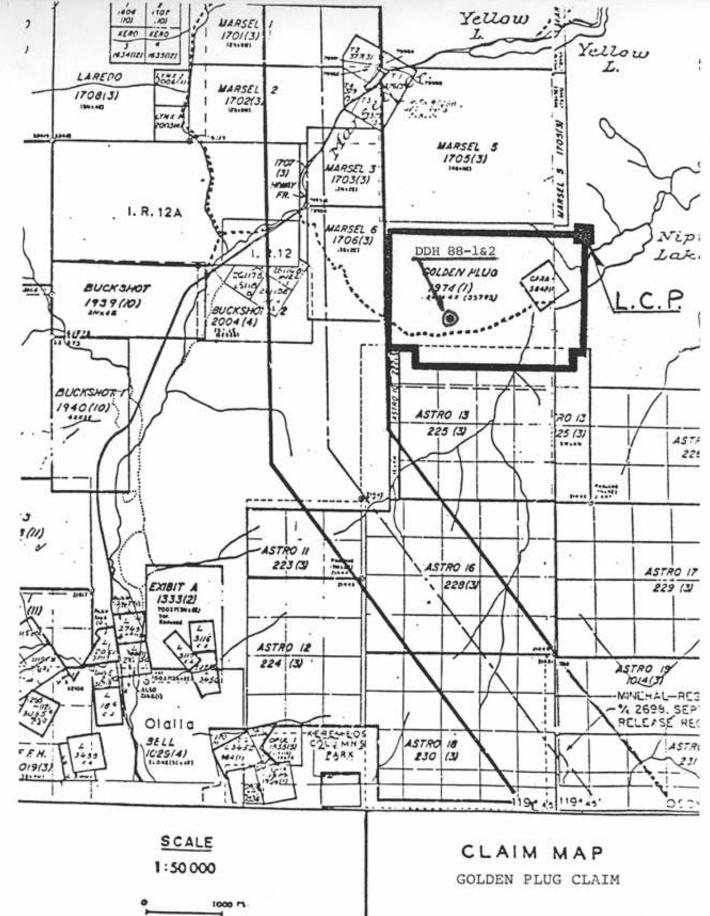


Fig. 2

REGIONAL GEOLOGY

THE GOLDEN PLUG LIES WITHIN THE WESTERN MARGIN OF THE WHITE LAKE BASIN VOLCANIC-SEDIMENTARY COMPLEX. THE REGION IS PRIMARILY MADE UP OF A SERIES OF TERTIARY EXTRUSIVE ROCKS KNOWN AS THE MARRON FORMATION. THESE ROCKS ARE COMPOSED OF VARIOUS INTERMEDIATE AND BASALTIC FLOWS, AND PYROCLASTICS.

THE SPRINGBROOK FORMATION, THE MAIN TARGET OF THE PRESENT WORK, FORMS A BASAL CONGLOMERATE DIRECTLY BELOW THE MARRON FM.

THE YOUNGEST MAJOR EXTRUSIVE UNIT IN THE AREA IS THE GLALLA RHYOLITE, COMPOSED MOSTLY OF RHYOLITE BRECCIA (CHURCH, 1979). THE RYHOLITE FOUND ON THE GOLDEN PLUG CLAIM IS BELIEVED TO BE THE NECK OR FEEDER ZONE FOR THE GLALLA RYHOLITE.

THE WHITE LAKE COMPLEX IS DEVELOPED ON A VARIETY OF PRETERTIARY ROCKS KNOWN AS THE SHOEMAKER AND OLD TOM FORMATION. BOTH ARE THOUGHT TO UNDERLIE THE GOLDEN PLUG AT LEAST IN PART AND TO BE TRIASSIC OR OLDER IN AGE. THE SHOEMAKER IS COMPOSED MAINLY OF THIN BEDDED CHERT WITH MINOR CLASTICS. THE OLD TOM IS LARGELY GREENSTONES, AND APPEARS TO HAVE BEEN THE MAJOR CONTRIBUTOR TO THE SPRINGBROOK FORMATION.

PROPERTY GEOLOGY

SPRINGBROOK FM.

THE SPRINGBROOK FM. IS THE OLDEST EXPOSED UNIT ON THE GOLDEN PLUG MINERAL CLAIM. IT IS PRESUMED BY CHURCH (1979) TO BE MIDDLE ECCENE IN AGE. REGIONALLY IT VARIES IN THICKNESS AND LITHOLOGY AND IS COMPOSED MAINLY OF A CONGLOMERATE WITH LESSER SHALE, SANDSTONE, TUFF AND SOME TALUS DEPOSITS. THERE TENDS TO BE AN INCREASE IN SORTING AND DECREASE IN FRAGMENT SIZE FORM THE BOTTOM TO THE TOP OF THE SECTION (RAYNER, 1978).

EXPOSURE ON THE PROPERTY IS LIMITED AND TOTAL THICKNESS IS UNKNOWN AS THE BASE IS NEVER SEEN. THE EXPOSURES ARE A MASSIVE, UNSORTED CONGLOMERATE WITH A WELL INDURATED, SILTY MATRIX OF PALE GREEN COLORATION. THE CLASTIC MATERIAL FORMING THE CONGLOMERATE ARE DOMINATELY VOLCANICS AND CHERT (45% AND 35%, RESPECTIVELY) WITH METAMORPHICS (10%), SEDIMENTS (5%) AND INTRUSIVES (5%) MAKING UP THE REMAINDER, (RAYNER, 1978). THESE PERCENTAGES REFER TO THE VOLUME OF MATERIALS PRESENT BUT NOT TO THE NUMBER OF CLASTS.

MARRON FM.

THE MARRON FORMATION FORMS THE BULK OF THE WHITE LAKE COMPLEX OVERLYING THE SPRINGBROOK FORMATION. CHURCH (1979) HAS SUBDIVIDED THE FORMATION INTO 6 MEMBERS OF WHICH 3 ARE PRESENT ON THE GOLDEN PLUG.

YELLOW LAKE MEMBER

THE YELLOW LAKE MEMBER IS THE OLDEST MEMBER OF THE MARRON VOLCANICS. TYPICALLY IT IS COMPOSED OF AN ANORTHOCLASE - AUGITE PORPHYRY. THE BASE OF THE MEMBER IS COMPOSED OF A VOLCANIC BRECCIA/LAHAR UNIT WITH INTERBEDDED SEDIMENTS AND TUFFS.

KITLEY LAKE MEMBER

THE KITLEY LAKE MEMBER IS COMPOSED DOMINATELY OF TRACHYTE FLOWS. THESE ARE MASSIVE RESISTANT ROCKS OFTEN FORMING BLUFFS AND CLIFFS (RAYNER 1978). THE LOWER PART OF THIS UNIT IS A DISTINCTIVE BIOTITE-FELDSPAR PORPHYRY.

KEARNS CREEK MEMBER

COMPOSED DOMINATELY OF BASALTIC ANDESITE, THE KEARNS CREEK MEMBER OVERLIES THE KITLEY LAKE MEMBER. THIS MEMBER FORMS A DISTINCTIVE REDDISH-BROWN REGOLITH WITH MANY FINE BASALTIC FRAGMENTS. THIS UNIT TENDS TO BE STRONGLY VESICULAR TO SCORLACEOUS. THE VESICLES ARE USUALLY FILLED WITH VARIOUS SECONDARY MINERALS.

OLALLA RYHOLITE

THE OLALLA RHYOLITE IS COMPOSED OF RHYOLITE AND RHYODACITE FLOWS AND PYROCLASTIC MATERIALS. WHAT IS BELIEVED TO REPRESENT THE NECK OR FEEDER ZONE FOR THESE VOLCANICS ARE A PALE BUFF TO WHITE RHYOLITE WHICH IS OFTEN QUITE XENOLITHIC. FLOW BANDING IS EVIDENT AT VARIABLE, USUALLY STEEP ATTITUDES. SMALL, VUGGY SILICEOUS AREAS HAVE BEEN NOTED AND ARE OFTEN ASSOCIATED WITH FINE RUSTY VOIDS.

SUMMARY

THE PRIMARY OBJECTIVE OF THE JANUARY, 1988 DIAMOND DRILL PROGRAM WAS TO TEST THE SPRINGBROOK FORMATION FOR EPITHERMAL PRECIOUS AND BASE METAL MINERALIZATION. FORMATION THICKNESS (PROBABLY NOT TRUE THICKNESS) AND THE EXTREME DOWNFAULTED NATURE IN THE AREA OF INTEREST PREVENTED THE SPRINGBROOK FM. FROM BEING REACHED. THE INITIAL, VERTICAL DRILL HOLE DDH 88-1, WAS ABANDONED AT 293' DUE TO TECHNICAL DIFFICULTIES. THE SECOND DRILL HOLE, DDH 88-2, WAS COLLARED ON THE SAME SITE WITH AN INCLINATION OF -80 DEGREES AND AZIMUTH OF 345 DEGREES. DRILLING ON DDH 88-2 WAS DISCONTINUED AT 1203' DUE TO THE DEPTH CAPABILITY OF THE DRILL RIG (1200'). ALTERNATIVES (DRILL PIPE REDUCTION) WERE DEEMED UNVIABLE WITH THE PRESENT EQUIPMENT. SURFACE CASING WAS LEFT IN PLACE TO ALLOW FOR FURTHER DRILLING.

AT 366.7 M (1203') IN DDH 88-2, THE DRILL CORE INDICATED THAT DRILLING WAS WELL INTO THE BASAL UNIT OF THE YELLOW LAKE MEMBER. THE LOWER 87 M.(287.4 - 366.7 M) IS COMPOSED OF VOLCANIC BRECCIA/LAHAR UNITS WITH INTERBEDDED SEDIMENTS AND TUFFS. THIS BASAL UNIT OF THE YELLOW LAKE MEMBER IS CITED ON SURFACE TO BE ABOUT 100 M THICK (RAYNER, 1978), THEREBY INDICATING THE POSSIBLE PROXIMITY OF THE SPRINGBROOK FM. HAD DRILLING CONTINUED.

PRIOR TO THIS BASAL UNIT IS A DISTINCTIVE FELDSPAR-CRYSTAL TUFF WHICH IS BELIEVED TO REPRESENT THE UPPER PORTION OF THE YELLOW LAKE MEMBER. MINOR AMOUNTS OF FRACTURE CONTROLLED BASE METAL MINERALIZATION (CHALCOPYRITE, GALENA, AND SPHALERITE) IS INTERSECTED IN THIS UNIT BETWEEN THE DEPTHS OF 185 M - 204 M AND 217 M -222 M. THE ENTIRE SECTIONS WERE SAMPLED AT 1.0 M INTERVALS AND GEOCHEMICAL RESULTS INDICATE ANOMALOUS VALUES FOR CU, PB, AND ZN.

THE KITLEY LAKE MEMBER, A BIGTITE - FELDSPAR TRACHYTE PORPHYRY, WAS ENCOUNTERED AT A DEPTH OF 93.1 M AND THE OVERLYING KEARNS CREEK MEMBER, A VESICULAR ANDESITE, WAS PENETRATED AT A DEPTH OF 77.7 M.

OLALLA RHYOLITE, PRESUMED TO BE FROM THE NECK OR FEEDER ZONE, BEGIN FROM THE TOP OF THE HOLE (21.3 M) TO A DEPTH OF 75.8 M. THIS UNIT WAS SAMPLED EVERY 6.0 M FOR A 1.0 M SAMPLE.

DVERALL, ARGILLIC ALTERATION IS WEAK TO MODERATE THROUGHOUT, BECOMING LOCALLY STRONG WITHIN THE OLALLA RHYOLITE. CHLORITIC ALTERATION IS WEAK AND RESTRICTED TO THE MARRON VOLCANICS. FRACTURE CONTROLLED CARBONATE IS PRESENT IN WEAK TO MODERATE AMOUNTS BELOW THE OLALLA RHYOLITE.

RECOMMENDATIONS

WITH ONE DIAMOND DRILL HOLE ON THE GOLDEN PLUG PROPERTY, COMPLETE PROPERTY EVALUATION IS DIFFICULT. THE PRESENCE OF ECONOMIC MINERALS AND EXTENSIVE ALTERATION IS ENCOURAGING. FURTHER WORK IN THE FORM OF GEOLOGICAL MAPPING IS RECOMMENDED AND WOULD PROVIDE A BETTER UNDERSTANDING FOR FUTURE DEVELOPMENT OF THIS PROPERTY.

AS CASING HAS BEEN LEFT IN PLACE ON DBH 88-2, FURTHER DRILLING WOULD ALLOW THE POSSIBILITY OF TESTING THE SPRINGBROOK FM., HOWEVER, UNFORESEEN COSTS MAY BE HIGH AND LITTLE INFORMATION MAY BE RETRIEVED.

RESPECTFULLY SUBMITTED,

G. A. CLOUTHIER BSc. F.G.A.C.

FOR M.J. VANDE GUCHTE, B.SC.

Sa Chuth

REFERENCES

- RAYNER, G.H.; 1985, A GEOCHEMICAL REPORT ON THE GOLDEN PLUG MINERAL CLAIM, OSOYOOS MINING DIVISION, B.C..
- CHURCH, B.N.; 1979, GEOLOGY OF THE PENTICTON TERTIARY OUTLIER, B.C. DEPT. OF MINES AND PET. RES. REVISED PRELIM. MAP 35.
- RAYNER, G.H.; 1978, A GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL REPORT ON THE TWIN 3,5,8,7, AND 8 MINERAL CLAIMS, OSOYOOS M.D. ASSESSMENT REPORT #6945.
- MULLAN, A.W.; 1977, REPORT ON THE INDUCED POLARIZATION AND RESISTIVITY SURVEY, TWIN CLAIMS, OSOYOOS M.D. ASSESSMENT REPORT #6506.

STATEMENT OF COSTS

JAN. 26/88

DRILLING:	*1 - 293' •	\$20.50 / FT	\$ 6,006.50
	#2 -1203' e	\$20.50 / FT	\$24,661.50
TRANSPORT COSTS	- 1,500.00		\$1,500.00
4 MEN 8 \$50/DAY	(= \$200/DAY S = 90'(9 ROI	X 18 DAYS DS)	\$3,600.00
PAYMENT TO C. S	SIEMENS (WATI	ER WELL)	\$ 750 00
CAT WORK		• \$7.50/SAMPLE	\$2,481.50
NOOM! EXIENSE	- 33 SAMPLES	9 \$1.50/SAMPLE	247.50
			\$40,247.00

PERSONNEL:

	M. VANDE GUCHTE	
HOTEL	*	\$ 255.96
FIELD SUPPLIES		\$ 101.29
SALARY - 24 DAY	\$	
MEALS & MISC		\$ 382.59
•		
		\$4,663.10
B.DAY		
G. RAYNER		

Mac

COMPANY: GREEN LAKE RESOURCES MIN-EN LARS ICP REPORT

(ACT:F31) PAGE 1 DF 3

20JECT NO: #28			705 WEST	15TH ST.	NORTH	VANCOUVER,	B.C. V7M	172			FILE	NO: 9-98
ENTION:				(604) 980-	5814 DR	(604) 988-	4524	# TYP	E ROCK BED	CHEM #	DATE: FEE	1, 1988
(VALUES IN PPM)	AG	AL	AS	В	BA	BE	BI	CA	CD	CB	CH	FE
7951	2.0	14120	5	30	193	1.2	1	25580	4.5	7	125	28840
7952	1.4	16470	6	26	220	1.3	1	17780	7.0	9	263	31460
7953	1.1	17180	7	26	232	1.2	1	20060	.5	7	22	30170
7954	1.3	17080	3	25	236	1.3	1	22750	2.4	7	59	31550
7955	2.9	15240	11	21	203	1.3	1	21140	3.0	6	50	29110
7956	1.2	15180	9	20	198	1.2	1	21070	1.5	6	64	29380
7957	1.3	13300	12	19	198	1.3	1	24540	5.7	5	111	28630
7958	1.3	14370	8	21	159	1.1	1	22460	2.4	6	57	28350
7959	2.3	15690	8	24	182	1.4	1	24900	9.1	8	113	34280
7960	1.7	15640	5	21	184	1.2	1	21980	2.4	6	51	30720
7961	2.0	14700	10	21	176	1.2	1	26160	1.9	6	71	28440
7962	1.8	13710	5	20	166	1.2	1	28430	3.1	6	66	28910
7963	2.4	14750	7	21	207	1.2	1	20940	4.2	Ь	90	30010
7964	2.1	14920	9	26	186	1.3	1	23890	14.7	6	86	30080
7965	.9	14270	9	25	237	1.2	1	21090	.6	6	60	29360
7966	1.0	11800	12	24	222	1.1	1	24820	1.2	Ь	56	28060
7967	1.0	13310	6	21	238	1.1	1	17820	1.4	6	44	27740
7968	1.8	13670	4	21	258	1.2	3	23580	1.4	6	51	28650
7969	1.1	15350	10	24	258	1.2	4	21120	.3	6	55	28420
7970	1.3	13920	8	21	203	1.2	5	32370	5.1	6	59	26200
7971	1.4	13540	6	19	141	1.1	5	37440	5.5	5	60	26980
7972	1.2	13550	12	19	204	1.1	6	26000	.7	7	49	26480
7973	1.2	12580	5	18	183	1.0	4	28960	1.6	Ь	46	25050
7974	1.4	13170	11	18	215	1.2	ò	17590	5.5	6	62	29390
7975	1.6	6270	6	10	919	.6	6	134430	.3	4	14	13540

COMPANY: BREEN LAKE RESOURCES HIN-EN LABS 1CP REPORT

(ACT:F31) PASE 2 DF 3

TOJECT NO: #28			705 WEST	15TH ST.	NORTH 1	ANCOUVER,	B.C. V7M	172			FILE NO): 8-98
ENTION:						1604) 988-4			ROCK BED	CHEM *	DATE: FEB 1	. 1988
(VALUES IN PPM)	K.	LI	MB	MN	MO	NA	NI	P	PB	SB	SR	18
7951	3270	27	14020	1920	1	B20	8	5150	425	3	486	1
7952	3500	25	12610	1601	1	1050	5	5190	272	2	348	1
7953	4030	24	13180	1724	2	1140	8	5510	243	2	355	1
7954	3610	25	15050	1883	1	1030	8	5660	150	3	687	1
7955	3480	19	12800	1824	2	1040	3	4950	210	1	795	1
7956	3140	19	13480	1888	1	1010	12	5270	151	2	416	1
7957	2760	16	13500	2138	1	940	9	4910	380	2	468	1
7958	2620	19	13390	1873	1	860	10	4950	258	1	467	1
7959	2900	19	13880	2176	2	930	5	5090	698	2	559	1
7960	2200	19	13530	2090	1	880	2	5040	88	2	278	1
7961	2310	19	12740	2017	1	970	6	4660	134	2	278	1
7962	2430	19	12240	1944	1	870	8	4930	67	3	301	1
7963	2640	20	12830	1808	2	1030	6	5120	57	2	250	1
7964	2770	20	12540	1784	2	1000	8	4840	87	3	323	1
7965	3240	20	14480	1549	2	970	6	4880	60	2	570	1
7966	2220	17	14480	1612	2	790	11	4750	44	2	362	1
7967	2630	17	12020	1342	2	850	4	4800	78	2	400	1
7968	2660	19	13560	1696	2	800	5	4660	106	1	316	1
7969	3350	20	13190	1729	2	1010	6	5040	74	2	306	1
7970	2710	18	18180	899	2	720	8	4410	54	1	580	1
7971	2020	16	16460	1231	2	650	1	4260	83	2	522	1
7972	2650	15	13500	999	2	680	6	4750	29	1	437	1
7973	2270	14	13870	1182	2	690	5	4410	32	1	479	1
7974	2160	17	12730	1168	2	630	2	4630	62	2	315	1
7975	1100	9	12460	2527	2	400	19	2900	28	. 1	2176	. 1

COMPANY: GREEN LAKE RESOURCES

MIN-EN LASS ICP REPORT

(ACT:F31) PAGE 3 OF 3 765 WEST 15TH ST.. NORTH VANCOUVER, B.C. V7M 1T2 FILE NO: 8-98

PRODUCED SOUTH FRANCE	THE REAL PROPERTY.	to the				the tract with a			17756-7	PINAL INDE D MI
COJECT NO: #28			765 WEST	15TH ST						FILE NO: 8-9
. ENTION:				(604) 980-	5814 DR	(604)988-	4524	* TYPE RO	CK SEDEHEM *	DATE: FEB 1, 198
(VALUES IN PPM)	U	y	ZN	SA	SN	H	CR	AU-PPB		
7951	1	54.8	856	1	1	2	40	4		
7952	1	54.0	1032	1	2	2	39	8		
7953	1	57.0	341	1	2	2	40	6		
7954	2	61.2	248	1	1	1	34	3		
7955	2	53.5	443	1	1	. 1	37	195		
7956	1	55.3	279	1	2	1	35	7		
7957	1	51.1	923	1	2	1	31	12		
7958	1	54.1	418	1	1	1	30	6		
7959	2	54.8	1573	1	1	1	32	13		
7960	- 1	59.5	210	1.	1	2	29	9		
7961	1	54.6	299	1	2	1	27	12		
7962	1	59.9	204	1	1	1	30	3		
7963	1	60.4	546	1	1	1	30	10		
7964	1	54.3	2637	1	2	1	30	14		
7965	2	59.2	178	1	1	2	28	8		
7966	1	58.0	185	1	1	1	34	4		
7967	1	57.5	253	1	1	1	36	7		
7968	1	57.3	229	1	1	1	30	14		
7969	1	55.5	255	1	2	1	32	2		
7970	2	56.8	797	1	1	1	24	9		
7971	2	54.7	810	1	1	1	28	4		
7972	2	60.6	88	1	1	1	28	7		
7973	2	55.9	68	1	1	1	25	B		
7974	1	59.4	908	1	1.	1	28	3		
7975	2	30.9	55	1	1	1	53	5		

Diamond Drill Log

Name of Client GREENLAKE RESOURCES LTD.

Name of Contractor ROGERS DRILLING

	<u> </u>	,		
Area GOLDEN PLUG	Latitude	Bearing 345 degrees	Date Started Jan.16/88	Hole No. DDH 88-2
	Departure	Inclination -80 degrees	Date Completed Jan. 26/88	Logged by M.V.G.
Grid	Elevation	Section to	Total Length 366.7 m	Date Jan.17 - 26/88

rid —————				Elevation	Section	to		Total	Length 36	56.7 m	Date	Jan.17 -	26/88	
From	ĩo	Length		Geological Description	'n	Sample No.	From		To	Length	Ag (ppm)	Cu (ppm)	Zu (ppm)	Au (ppl
0 m	21.3 m		CASIN	· ·										
				<u> </u>										
21.3 m	44.3 m		RHYOL	ITE-leucocratic (light grey) de	efinitive orange-buff	7976 A	21.3	3	22.0	.8 m				
			∞lou	ration increasing gradually tow	wards the base,	7977 A	28.	0	29.0	1.0 m				
			weakl	y xenolithic, minor gtz & felds	spar phenocrysts;	7978 A	35.	0	36.0	1.0 m				
			stron	ng siliceous areas throughout se	ection - slightly	7979 A	42.	0	43.0	1.0 m				
			vuggy	(minor) and in some areas infi	illed with strongly									
			weath	nered pyrite (brownish black col	louration) - most									
			promi	inent at 31.8 m - 32.0 m, 43.8 r	m - 43.9 m									
			dark	grey mineralization showing der	ndritic-like habit -									
			weath	mered pyrite evident throughout	section - stopping									
			abrub	otly at base.										
			Overa	all weak - moderate argillic al	teration (locally									
			stron	ng) evidence of flow banding										
			Fault	t at 43.4 m										:
1 ! i														
44.3 m	51.0 m		RHYOL	LITE-leucocratic (white-lt.grey) weakly xenolithic									:
			(ande	esitic, sedimentary/tuff and rh	yolitic fragments)-	7980 A	49.	.0	50.0	1.0 m				ŀ
			minor	r quartz-feldspar phenocrysts,	overall weak-moderate	· · · · · · · · · · · · · · · · · · ·			 -					

From	īo	Length	Geological Description	Sample No.	From	То	Length				
			argillic alteration locally strong siliceous areas								i
			(45.9m - 46.0m, 46.2m - 46.25m, 46.4m - 46.9 m), flow				-				
			banding evident.	· · · · · · · · · · · · · · · · · · ·							
			BRECCIA TUFF at 48.2 m - 48.55 m, leucocratic (ltm.gy)								
			dominately rhyolitic and sed/tuff fragments, weakly						 		
			defined contacts						 		
51.0 m	55.2 m		RHYOLITE - leucocratic (white-light grey) strongly	<u> </u>							
			xenolithic (rhyolite, andesite, sed/tuff fragments)	·							
			throughout - weak to mod. xempolithic between 51.85 m -								
			52.25 m & 52.9 m - 53.5 m, weak-mod argillic alteration,						-		
			flow banding evident.								
				•						<u> </u>	
55.2 m	60.2 m		RHYOLITE/VOLCANIC BRECCIA	7981 A	56.0	57.0	1.0 m				
:			55.2 - 56.7-BRECCIA-leucocratic (lt.grey),composed	- " · · · · · · · · · · · · · · · · · ·							
			dominately of rhyolitic, andesitic & sed/tuff fragments,								
			weak to moderate argillic alteration, fine matrix.								
		-	56.7 m - 57.6 m - Strongly xeuolithic "intermixed"								
	-		rhyolite and volcanic breccia, upper 20 cm composed of								
			weakly xemolithic rhyolite (flow banding, minor qtz/feld								
			phenocrysts), basal 30 cm composed of breccia (rhyolite,								
			andesite and sed./tuff fragments), weak-moderate argilli	C					-		
			alteration. 57.6 - 60.2 m - Pulermixed rhyolite and								
			volcanic breccia with fine grained matrix, upper 25 cm					·			
	1		weakly xemolithic rhyolite, flow banding evident, basal								

trom	10	Length	Geological Description	Sample No.	From	To	Length	 		
			50 cm composed of breccia (dominately rhyholitic, sed/							:
:			tuff and andesitic frags) mod. argillic alteration							
									1	
60.2 m	71.0 m		RHYOLITE with interlayed volcanic breccia's & tuff	7982 A	63.0	64.0	1.0 m			
			rhyolite - leucocratic (white-light grey) weakly	7983 A	70.0	71.0	1.0 m			
			xenolithic texture with intermixed breccia showing							
			moderate flow banding - (61.3 - 61.8 m, 62.4-63.1 m,							
			64.1 - 64.5 m, 68.0 - 68.4 m, 70.45 - 70.95 m							
			- overall weak argillic alteration				1		<u> </u>	<u> </u>
			- slightly vuggy, siliceous areas at 60.5 - 60.95 m,							<u></u>
			65.55 - 66.65 m					 		
			- minor gtz veinlets (lmm) cross cutting flow	•						
·			(61.9 - 62.3 m)							
:			- minor gtz - geldspar phenocrysts							
<u></u>			64.7 - 65.0 m - Tuff, mesocratic (m.brown), moderate -							!
			strong argillic alteration, minor amounts of vessicle							1
			infilling tale (soft green). Paterlayered BRECCIA'S -							
			med. grey - brown 66.65 - 67.8 m - sharp upper contact							
			and weak basal contact, clast content decreases towards							
			upper contact (75% - 20%), presence of vesicle infilling							
			tale in upper 30 cm, fragments are dominately rhyolitic,					-		
			and sedimentary/tuff fragments are porphyritic andesition							
			fragments. Other breccias at 68.87-69.1 m, 69.25-69.35m							1
			69.5 - 69.6 m, 70.25 - 70.45 m, 70.95 - 71.0 m Fault gouge at 63.45 - 63.5 m							•

From	10	Length	Geological Description	Sample No.	From	To	Length		
71.0 m	75.8 m		RHYOLITE - leucocratic (white-lt.grey), moderately						
			xenolithic (andesitic , rhyolite & sed/tuff fragments),						
			minor quartz - feldspar phenocrysts. Weak argillic						
			alteration, strongly siliceous at 71.8 m - 72.07 m, flow						1
			banding evident. Buff-orange discoloration (Fe-stain)						
			at 73.25 m - 73.45 m with minor amount of grey-black						
			(weathered pyrite) mineral showing dendritic habit. (No						
			definitive mineralization observed).						
		,	Fault gouge at 73.8 - 73.9 m & 75.3 - 75.35 m						
75.8 m	77.7 m		INTERMIXED VESICULAR ADNESITE/RHYOLITE						
			Andesite - brown - red; vesicular (tale (soft, green)	-					
			infilling material) weakly xemolithic, weak chloritic						
:			alteration, prominent chlorite/tale at 76.5 - 76.65 m &						
			76.8 - 76.95 m.						
			Rhyolite - white - lt.grey, weak argillic alteration						
			(moderate-strongly siliceous), moderately xemolithic						
			(sed/tuff, rhyolitic & paph andesite fragments)						
			* Mud seam from 78.65 - 78.8 m						
77.7 m	85.1 m		ANDESITE WITH INTERLAYED VOLCANIC BRECCIA'S						
			- meso-melamocratic (reddish brown-black) strongly						
			vesicular (infilled with tale & quartz) weak fracture			}			
			controlled qtz, overall						

From	10	Length	Geological Description	Sample No.	From	To	Length				
			weak chloritic alteration (locally moderate at 78.35 m								ĺ
			and strong at 83.37 m - 83.43 m) Colouration varies from	1							
			reddish brown - dk. brown indicating slight basaltic								
			composition - "BASALTIC ANDESITE"								
			INTERLAYED BRECCIA'S								
			- mesocratic, well defined contacts, composed of								
			andesitic, sed/tuff and some rhyolitic fragments, weak								
			chloritic alteration, brecciated zones located at								
			77.75 - 78.2 m, 78.54 - 79.8 m, 79.97 - 80.5 m								
									-		
85.1 m	87.0 m		VOLCANIC BRECCIA - mesocratic, rhyolitic (siliceous),								
			andesitic & sed/Tuff fragments, strong siliceous areas	•							
			changing from white - lt.grey near base to a greenish-								
			grey (chlorite) near top, flow banding (irregular) in								
			strong siliceous areas								
			-speck of pyrite at 86.1 m								1
87.0 m	93.1 m		Rhyolite - leucocratic (white - lt.grey), weak to						1		
			moderately xemolithic (strongly xemolithic at 88.1-88.25m								
			weak - moderate argillic alteration (mod strong at								_
			92.35 - 92.45 m, 92.6 - 92.67 m - slight green								
			discoloration)								
-	٠		minor qtz - feldspar phenocrysts, flow banding evident					,			
			greyish-black mineralization at 91.2 m - weathered pyrit	e e					- Augustus de la companya de la comp		

From	10	Length	Geological Description	Sample No.	From	То	Length				
93.1 m	141.6 m		BIOTITE-FELDSPAR TRACHYTE PORPHYRY (***********************************								
:			mesocratic (medium grey), fine-biotite and feldspar								
·			phenocrysts, weakly brecciated areas throughout section,								
			weak - moderate siliceous areas (fracture controlled)					-			
<u> </u>			throughout - presence of quartz cavities at 96.8m, 98.1m					[
			113.3 m, 113.75 m, 115.45 m, 115.6 m, quartz blebs	-							
· ·			throughout. Vesicular, "blebby" tale (soft, green)								
			130.5 - 134.0 m - very weakly defined boundaries. Minor								
			fracture controlled carbonate located near base (135.3m)								
			fine, disseminated pyrite throughout, weak chloritic								
			alteration								<u> </u>
		-	VOLCANIC BRECCIA - 108.95 - 109.5 m	•							<u></u>
			- dominately rhyolitic fragment (50%) and sed/tuff								
			fragments, distinct contacts indicating gentle dip			-					
			(80 degrees to core axis)								
									·		
141.6 m	162.6 m		INTERBEDDED SEDIMENTS & TUFFS								
			Sediment units predominately med dk.grey								
 			and lower contacts show moderate - strong carbonization								
			(soft; black; dull and vitreous lustre) from 141.6-142.6 π								
			(upper) and 160.95-162.6 m (lower). Well indurated						-		
			(weakly indurated 144.15 - 145.2 m), "chaty'like"								
			texture in some sections, weak argillic alteration.	_							
				·							

from	10	Length	Geological Description	Sample No.	From	To	Length				
			minor fracture filling quartz and calcite. Blebby pyrite								
			(+ .05 cm) at 106.95 m								-
		_	TUFFACEOUS UNITS - leucocratic (light grey), well								
		 	indurated minor biotite phenocrysts, large "tuff only"				<u>.</u>				
			area at 150.5 - 151.1 m and 151.75 - 153.55 m, otherwise	-				-			
			finely interbedded to interlaminated with sediments,								
			minor amounts of fracture controlled qtz and calcite.								
			Weak - moderately fractured and soft sediment deformation	1							1
			throughout interbedded sections with the beds dipping at				·		<u> </u>	<u> </u>	
		-	sharp angles to core, weakly disseminated pyrite						-		
			throughout.								
				-							
162.6 m	279.4 m		FELDSPAR - CRYSTAL TUFF							1	
,			-leucocratic (med-dk.grey) fracture controlled quartz	7951 A	185	186	1.0 m	2.0	125	856	4
			and calcite (weak overall), weakly brecciated areas,	7952 A	186	187	1.0	1.4	263	1032	8
			volcanic breccia zones at 169.2 - 169.55 m, 169.85 -	7953 A	187	188	1.0	1.1	22	341	6
			169.95 m & 254 - 255.8 m (composed of rhyolitic sed/tuff	7954 A	188	189	1.0	1.3	59	248	3
			and andesitic fragments). Chlorite/argillic alteration	7955 A	189	190	1.0	2.9	50	443	1 9 5
			generally weak - moderate throughout and locally strong	7956 A	190	191	1.0	1.2	64	279	7
			(10 cm widths)	795 7 A	191	192	1.0	1.3	111	923	12
			-Feldspar crystals prominent throughout core varying in	7958 A	192	192	1.0	1.3	57 ·	418	6
			intensity $(-2\%30\%)$. Zones weak in feldspar crystals	7959 A	193	194	1.0	2.3	113	1573	13
			tend to host fracture controlled sphalerite, galema,	7960 A	194	195	1.0	1.7	51	210	1 9
			chalcopyrite (all in minor amounts) and increased pyrit (otherwise finely disseminated throughout). Only	² 7961 A	195	196	1.0	2.0	71	299	12

From	10	Length	Geological Description	Sample No.	From	То	Length				
		<u> </u>	major zone noted was 185-204 m (dominately low in	7962 A	196	197	1.0	1.8	66	204	3
			feldspar Xstals) Weakly brecciated zones throughout	7963 A	197	198	1.0	2.4	90	546	ρo
			section. Becomes weak-moderatley magnetic below 222.3 m.	796 4 A	198	199	1.0	2.1	86	2637	14
			minor amounts of magnetite observed as well as a darker	7965 A	199	200	1.0	.9	60	178	8
		_	colouration, magnetic property dissappears at 278.6 m.	7966 A	200	201	1.0	1.0	56	185	4
			Volcanic breccia contacts indicate steep - dip (high	7967 A	201	202	1.0	1.0	44	253	7
			angles in core). Minor shear zones noted at 218.8 m and	7968 A	202	203	1.0	1.8	51	229	14
			210.8 m	7969 A	203	204	1.0	1.1	55	255	2
				7970 A	217	218	1.0	1.3	59	797	9
	•			7971 A	218	219	1.0	1.4	60 ·	810	4
				7972 A	219	220	1.0	1.2	49	88	7
				7973 A	220	221	1.0	1.2	46	68	8
				797 4 A	221	222	1.0	1.4	62	908	33
:											
279.4 m	281.0 m		INTERBEDDED SEDIMENTS AND TUFFS]
			Sediment units composed of dk.grey - blk.(carbonaceous)								
			clay mudstone with interbedded /interlaminated ltmed.								
			grey tuff. Minor evidence of soft sediment deformation,								
			weak argillic alteration (strong in minor localities),								
			weakly calcareous, sharp contacts at base and top.								
<u> </u>		<u> </u>	Fracture controlled calcite (minor) in moderately								
			fractured rock								
281.0 m	283.5 m		LAHAR								
			-med.grey green, weakly paphyritic (pyroxene & amphibol phenocrysts	ļ							

From	10	Length	Geological Description	Sample No.	From	To	Length				
		<u></u>	upper 30 cm becoming tuffaceous, minor fracture						<u></u>		<u>· </u>
			controlled calcite. Finely disseminated pyrite, weakly								<u> </u>
			magnetic, minor fragments (similar to matrix in colour)								
			weak chloritic alteration								<u></u>
283.5 m	284.9 m		INTERBEDDED SEDIMENTS AND TUFFS								
	·		- same as previous unit 279.4 - 281.0								
204 2 ==	206 E m		LAHAR		<u> </u>						<u> </u>
284.9 m	200.5 R	<u> </u>	- med. grey - green, weakly porphyritic (pyroxenes &		<u>[</u>	<u> </u>				<u> </u>	<u> </u>
1			amphiboles), weakly calcareous (fracture controlled		1			<u> </u>		<u> </u>	<u> </u>
			calcite) finely disseminated pyrite, minor fragments							<u> </u> 	<u> </u>
	<u> </u>		(similar to matrix in colour), weakly magnetic	•						<u> </u>	
286.5 m	289.2 m		INTERBEDDED SEDIMENTS AND TUFFS		-						
			same as previous unit 279.4 - 281 m.								Ì
			weak argillic alteration (locally strong)								
					<u> </u>						
289.2 m	296.65	п	LAHAR								
İ			same as previous 284.9 - 286.5								
	<u>-</u>		- increasingly porphyritic (pyroxenes/amphibole) minor								
			fracture controlled calcite, weak chloritic alteration						·		
	·	-					<u> </u>		<u> </u>		
296.65m	302.9 m	l l	INTERBEDDED SEDIMENTS AND TUFFS								

	Length i	Geological Description	Sample No.	From	To	Length				
		same as previous unit 279.4 - 281.0 m, fine interbedded								
		pyrite (minor amounts), interbedded Lahar units at				-				
		298.4 - 298.6 m and 298.85 - 298.85 m (non-magnetic),							<u> </u>	
	<u></u>	weakly prophyritic (pyroxenes)								
			·		, , , , , , , , , , , , , , , , , , ,					
339.0 m	_	LAHAR			_		<u> </u>			
		med. greenish grey, overall moderate - strongly								
		porphyritic (pyroxenes and amphiboles) becoming weak					<u> </u>			
		towards the upper and lower contacts, fracture controll	æd.							
		carbonate (minor), weak - moderate magnetism finely								
		disseminated pyrite (weak). Fragments are poorly								- <u> </u>
		distinguishable (same colour as matrix). Becoming	-							
		increasingly tuffaceous near base.								
						-				
366.7 m		INTERBEDDED SEDIMENTS AND TUFF	-				<u> </u>		-	
		similar to previous unit 279.4 - 281.0 m								
		-moderately brecciated zones, breccia fragments within								
		tuffaceous zones, interbedded pyrite, fracture controlle	ā							
		carbonate.								
	The co	he is stored martly at C.T. Renneré re	sidneo i	h Ma	No Mo	ta	and			
-	postl	at leterioni Seran Metale in Pentir	Jon	1.10	- Wasting	 \- /				
	V									İ
	339.0 m	339.0 m	same as previous unit 279.4 - 281.0 m, fine interbedded pyrite (minor amounts), interbedded Lahar units at 298.4 - 298.6 m and 298.85 - 298.85 m (non-magnetic), weakly prophyritic (pyroxenes) 339.0 m LAHAR med. greenish grey, overall moderate - strongly porphyritic (pyroxenes and amphiboles) becoming weak towards the upper and lower contacts, fracture controlled carbonate (minor), weak - moderate magnetism finely disseminated pyrite (weak). Fragments are poorly distinguishable (same colour as matrix). Becoming increasingly tuffaceous near base. 366.7 m INTERBEDDED SEDIMENTS AND TUFF similar to previous unit 279.4 - 281.0 m -moderately brecciated zones, breccia fragments within tuffaceous zones, interbedded pyrite, fracture controlled carbonate.	same as previous unit 279.4 - 281.0 m, fine interbedded pyrite (minor amounts), interbedded Lahar units at 298.4 - 298.6 m and 298.85 - 298.85 m (non-magnetic), weakly prophyritic (pyroxenes) 339.0 m LAHAR med. greenish grey, overall moderate - strongly porphyritic (pyroxenes and amphiboles) becoming weak towards the upper and lower contacts, fracture controlled carbonate (minor), weak - moderate magnetism finely disseminated pyrite (weak). Fragments are poorly distinguishable (same colour as matrix). 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Becoming increasingly tuffaceous near base. 366.7 m INTERREDUED SEDIMENTS AND TUFF similar to previous unit 279.4 - 281.0 m -moderately brocciated zones, breccia fragments within tuffaceous zones, interbedded pyrite, fracture controlled carbonate.	same as previous unit 279.4 - 281.0 m, fine interhedded pyrite (minor amounts), interhedded Lahar units at 298.4 - 298.6 m and 298.85 - 298.85 m (non-magnetic), weakly prophyritic (pyroxenes) 339.0 m LAHAR med. greenish grey, overall moderate - strongly porphyritic (pyroxenes and amphiboles) becoming weak towards the upper and lower contacts, fracture controlled carbonate (minor), weak - moderate magnetism finely disseminated pyrite (weak). Pragments are poorly distinguishable (same colour as matrix). Becoming increasingly tuffaceous near base. 366.7 m INTERBEDUED SEDIMENTS AND TUFF similar to previous unit 279.4 - 281.0 m -moderately brecciated zones, breccia fragments within tuffaceous zones, interhedded pyrite, fracture controlled	same as previous unit 279.4 - 281.0 m, fine interbedded pyrite (minor amounts), interbedded Lahar units at 296.4 - 298.6 m and 298.85 - 298.85 m (non-magnetic), weakly prophyritic (pyroxenes) 339.0 m LAMAR med. greenish grey, overall moderate - strongly porphyritic (pyroxenes and amphiboles) becoming weak towards the upper and lower contacts, fracture controlled carbonate (minor), weak - moderate magnetism finely dissominated pyrite (weak). Fragments are poorly distinguishable (same colour as matrix). Becoming Increasingly tuffaceous near base. 366.7 m INTERREDDED SEDIMENTS AND TUFF similar to previous unit 279.4 - 281.0 m -moderately brecciated zones, breccia fragments within tuffaceous zones, interbedded pyrite, fracture controlled carbonate.	same as previous unit 279.4 - 281.0 m, fine interhedded pyrite (minor anounts), interhedded jahar units at 298.4 - 298.6 m and 298.85 - 298.85 m (non-magnetic), weakly prophyritic (pyroxenes) 339.0 m LAHAR med. greenish grey, overall moderate - strongly porphyritic (pyroxenes and amphiboles) becoming weak towards the upper and lower contacts, fracture controlled carbonate (minor), weak - moderate magnetism finely disseminated pyrite (weak). Fragments are poorly distinguishable (same colour as matrix). Becoming increasingly tuffaccous near base. 366.7 m Intermedical SEDIMENTS AND TUFF similar to previous unit 279.4 - 281.0 m -moderately brecciated zones, breccia fragments within tuffaccous zones, interbedded pyrite, fracture controlled carbonate.