LITHOLOGIC INTERPRETATION OF THE DE BRAGA #2 AND RICHARD WEISHAUPT #1

GEOTHERMAL WELLS, STILLWATER PROJECT, CHURCHILL COUNTY, NEVADA

by

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### INTRODUCTION

The De Braga #2 and Richard Weishaupt #1 geothermal test wells were drilled by Union Oil Company, Geothermal Division, between 1979 and 1981 as part of the U. S. Department of Energy, Division of Geothermal Energy Industry Coupled Program.

They are in the Stillwater area, located on the southeast side of the Carson Desert in Churchill County, Nevada (Figure 1). Hot water was first discovered in the area in 1919 (Garside and Schilling, 1979). There are no known surface manifestations of geothermal activity in the immediate vicinity, however, basaltic cinder cones at Soda Lake, a few miles to the west, are the result of phreatic explosions during the Quaternary (Sibbett, 1979).

### **GEOLOGY**

### Regional Setting

The Carson Desert is a large sediment-filled graben in the western Basin and Range physiographic province. During the Quaternary, the basin was filled with lacustrine, alluvial and fluvial deposits. The present surface consists of Lake Lahontan and recent sediments (Morrison, 1964). The Stillwater Range, on the east side of the basin, is composed of Quaternary and Tertiary volcanic rocks and Mesozoic sedimentary and igneous rocks (Page, 1965). A north-northeast-trending normal fault or faults form the boundary between the range and the basin. The block faulting, which has been active since late Tertiary time, is still active as evidenced by earthquakes in 1954 (Morrison, 1964). Ground breakage and minor offset occurred in the Stillwater area along a N 12° E trend during the 1954 earthquakes.

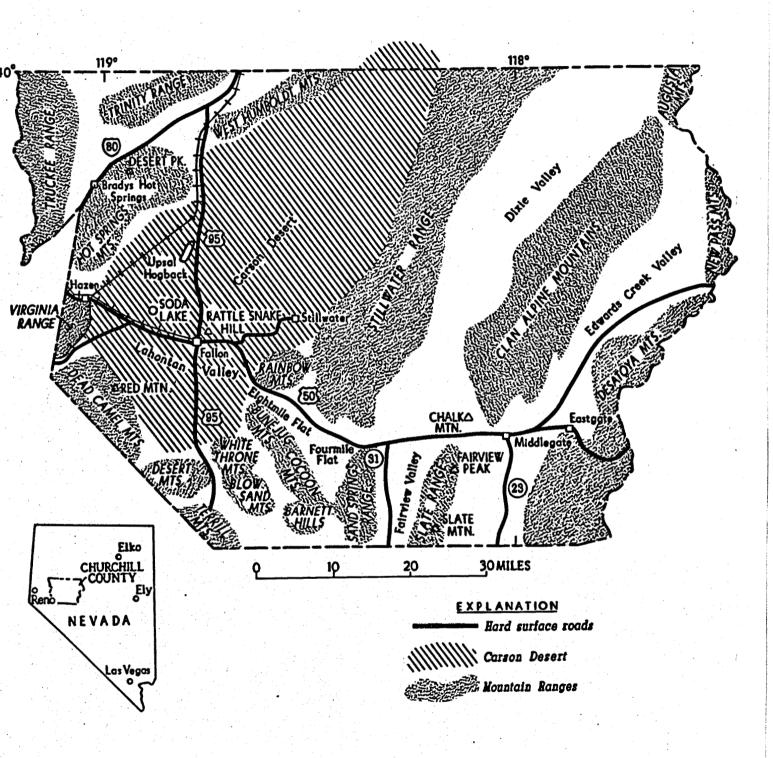


FIGURE 1
INDEX MAP OF CHURCHILL COUNTY, NEVADA

### Geothermal System

Geothermal occurrences have been known throughout the southern Carson Desert since the early 1900s. In recent years, several geothermal wells have been drilled in the Stillwater area (Figure 2). In 1964, O'Neill Geothermal, Inc. drilled the Reynolds No. 1 well to a depth of 1,291 m (4,237 feet) with a maximum recorded temperature of 136°C (277°F) (Garside and Schilling, 1979, p. 17). Union Oil Company drilled three wells to about 1220 m (4,000 feet) during 1976 and 1977.

### SUBSURFACE STUDIES

The detailed lithologic logs of the De Braga #2 and Richard Weishaupt #1 wells are included in the Appendix to this report. Generalized descriptions of rock types penetrated in the subsurface and tentative stratigraphic correlations for the De Braga #2 and Richard Weishaupt #1 wells are shown on Plate 1, and their locations are shown on Figure 2.

Depths and thicknesses of stratigraphic units reported here refer to probe depths and do not represent actual bed depths and thicknesses due to hole drift and deviation. The Richard Weishaupt #1 well was intentionally deviated below 905 m (2970 ft) to intersect a target located approximately 730 m (2400 ft) due west and 2900 m (9500 ft) vertically downward from the drillsite.

Overall, both wells appear to penetrate nearly identical stratigraphic units. The wells are collared in alluvium and penetrate over 1128 m (3700 ft) in De Braga #2 and over 1158 m (3800 ft) in Richard Weishaupt #1 of unconsolidated and semi-consolidated recent lacustrine sediments and Pleistocene tuffaceous sediments of Lake Lahonton and pre-Lake Lahonton age

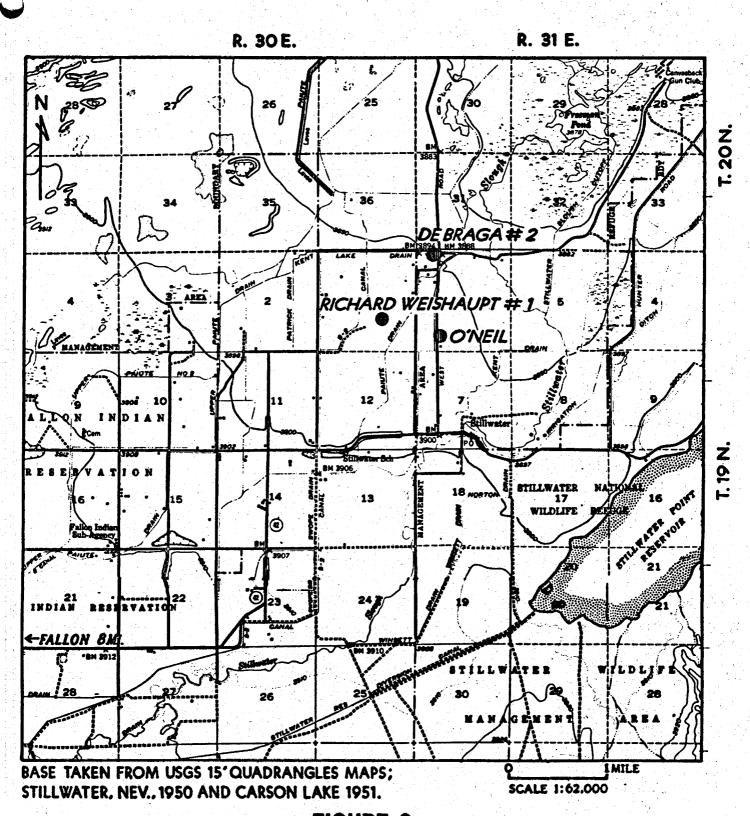


FIGURE 2
LOCATION OF GEOTHERMAL WELLS IN THE STILLWATER AREA

(Union Oil Company, 1979 and 1981a). Fossil shell fragments are localized in certain stratigraphic horizons while ostracods appear throughout the sedimentary section. Fragments of coal and lignite may represent either bedded units in the sediments or additions of "lost circulation" material. The sediments are either unconsolidated or poorly cemented with calcite and contain locally strong pyrite.

Underlying the upper unconsolidated sediments and contained within the lacustrine section is a basic to intermediate hypabyssal intrusion. The intrusion is considered to be a sill based upon the depth of intersection (at 732 m and 823 m in De Braga and Weishaupt respectively), thickness (122 to 229 m), apparent lateral extent, and the occurrence of pyrite and argillic alteration slightly above and below the unit that would indicate baking and hydrothermal activity.

The interval between the base of the intrusion and the top of the Bunejug Formation, 853 to 1128 m (2800 to 3700 ft) in De Braga #2 and 1052 to 1158 m (3450 to 3800 ft) in Weishaupt #1, appears to be interlayered tuffaceous claystone and basic igneous rock. Geophysical logs suggest several interlayered units of contrasting character. An intrusive or extrusive nature of the igneous rock was not determinable from cutting samples for this interval.

Below a depth of approximately 1128 m (3700 ft) in both the De Braga #2 and Richard Weishaupt #1 wells is a thick sequence of basalt and basaltic andesite flows and minor intercalated mudstone that is interpreted as the Bunejug Formation. The upper part of this unit is characterized by amygdular basaltic to andesitic lava flows having plagioclase and pyroxene phenocrysts in an aphanitic matrix and vesicles filled with calcite, secondary clay

minerals, zeolite, and celadonite. Hematite is pervasive in the basalt flows.

Felsic tuffs and tuffaceous sedimentary rocks were encountered below 2443 m (8015 ft) and are assigned to the Truckee Formation (Morrison, 1964). These rocks interfinger with the basalt flows of the Bunejug Formation for a vertical distance of approximately 244 m (800 feet).

Various geophysical and mechanical logs were run in both wells (Union Oil Company, 1979 and 1981a). Logs of the De Braga #2 well were digitized for use with the computer software system WELLOG (Atwood et al., 1980). Plate 2 shows a log composite obtained using the WELLOG program having temperature, caliper, resistivity, neutron porosity, density porosity, spontaneous potential and gamma ray logs. Rock types are broadly divisible into four categories, each exhibiting different geophysical responses. Pleistocene unconsolidated and semi-consolidated sediments present to depths of approximately 1158 m (3800 ft) in each hole have high natural gamma radioactivity, low density, low resistivity, and high porosity. Basaltic intrusive rocks occurring at shallow depths (1038 m) in both wells are characterized by low natural gamma radioactivity, high density, high resistivity, and low porosity. Basalt and basaltic andesite flows of the Bunejug Formation have low natural gamma radioactivity and moderate to low resistivity while displaying a somewhat erratic nature on the porosity and density logs. Felsic volcanic rocks encountered below 2443 m (8015 ft) in the Weishaupt well have distinctly higher natural gamma, lower resistivity, and higher porosity than overlying formations.

Temperature profiles of both wells show relatively high near-surface gradients of about 300°C/km in unconsolidated valley sediments to an approximate depth of 396 m (1300 ft). Temperature reversals occur between 427

and 457 m (1400 and 1500 ft) and negative gradients to nearly isothermal conditions exist to approximately 1219 m (4000 ft). The lower portions of both wells below 1219 m have positive gradients of 7.2° - 29°C/km. The maximum recorded temperatures in the De Braga and Weishaupt wells were 169°C and 178°C respectively (Union Oil Company, 1981b, p. 17).

### CONCLUSIONS

Lithologies penetrated throughout the upper 732 to 838 m (2400 to 2750 ft) within the Stillwater prospect area are terrigenous sediments of Pleistocene to Recent age. A sill of dacite to andesite composition with a thickness variable between 122 to 208 m (400 to 680 ft) is present below the terrigenous sediments. Between the base of the sill and the top of the Bunejug Formation are intercalated volcanic and sedimentary rocks. All formations overlying the Bunejug Formation are probably of Pleistocene age.

The basalt and basaltic-andesite flows and ash below a depth of approximately 1128 m (3700 ft) are herein assigned to the Bunejug Formation (Morrison, 1964) of Pliocene and possibly early Pleistocene age. The Bunejug Formation is a thick sequence of basalt to andesite flows and hyaloclastite exposed in the mountains surrounding the south half of the Carson Desert and mapped by Axelrod (1956), Morrison (1964), and Page (1965). There is extensive exposure of Plio-Pleistocene basalt and basaltic andesite in the Stillwater Range to the east and south of the Stillwater prospect area (Page, 1965). Page (1965) reports a 488 m (1600 ft) thickness of these rocks overlying folded Pliocene sedimentary strata.

The De Braga #2 well bottomed in Bunejug volcanics at a depth of 2109 m (6920 ft). The Richard Weishaupt #1 well penetrated the entire Bunejug

sequence and entered felsic volcanics and tuffaceous sediments, which possibly represent part of the Truckee Formation, at a depth of approximately 2412 m (7915 ft).

The sedimentary and volcanic stratigraphy penetrated by the De Braga and Richard Weishaupt wells is similar to that penetrated by wells drilled in the Soda Lake area (Horton, 1978 and Sibbett, 1979) located roughly (20 miles) westward. The top of the Bunejug Formation lies at a depth of 1400 m (4595 ft) below the Soda Lake area, at approximately the same structural elevation as in the Stillwater area.

Basalt and andesite encountered in the Carson Sink #1 well near Soda Lake and interpreted as the Bunejug Formation is at least 914 m (3000 ft) thick and is underlain by dacite porphyry, which could be Truckee Formation (Horton, 1978). Nearly 1220 m (4000 ft) of basalt and basaltic andesite were encountered in the Richard Weishaupt #1 well and this unit has been interpreted as Bunejug Formation.

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APPENDIX

LITHOLOGIC LOG

De Braga - 2

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	1000	Ш	Ш	Ш		Ш	$\blacksquare$	Ш					lignite
				╫			╂┼┼┼	╂┼┼┤	śi			/63 <i>0-/710</i>	Sand, C. to med. lithic, Mad. round.  and als sample mudetone, abon lignite
			Ш	Ш	Ш		Ш	Ш			民	100	1650- Xl. deer cale., 1670-90 Cal. cem.
	1700	Ш	Ш		Ш		Ш	Щ	ž				1670-90 poss. foult gouge.
		╫	$\parallel \parallel \parallel$				HH	${\tt HH}$				1710 1800	Sand, C. to m. rounded, lithic
	•	HH	<b> </b>	( )			<b> </b>	<b> </b>				1.00	eub, eta 8 py., Calc cement.
		Щ	Щ		Ш	Ш	Ш	Ш				100	py. cem. lignite grains in mudstane
	1800-	$\parallel \parallel$	₩		HH		₩	###				1800-1870	Mudstone . li oray with ligaite souch
	20	₩	╫	₩	₩		<del>    </del>	<del>    </del>			買	, <del></del> 1870	Mudstone, li, gray, with ligaite Speech
	60-	Щ	Щ	Ш	Ш	Ш	Ш	Ш			置		1840- abuadant lignite
	80-	Щ	Ш	₩	Щ		$\parallel \parallel \parallel$	HH				1870-1890	Soud, C. to med angil.
- 19	1900-	₩	╫	╫	₩		╫╢	╫				1890-1950	Mudstone, liegay, W C. Sand mixed
		Ш	Ш	Ш	Ш	Ш	Ш	Ш			数	1930-2100	Mudetone, braish gray, W/wh. goeche,
		Ш	Ш	141	Ш		###	##					45% 11. gray mud. \$ 15% ned sand.
		₩	₩	₩	₩		╫╫	╂╫╢					Fossiliferous - Ostracodes , yell- wary sin
	2000-	Ш	Ш		Ш		Ш	Ш			<b>F</b>		Zones of ligray musstone included
	-	Щ	Щ	扣	Щ	Ш	$\prod$	lacksquare			图		White and black specks in braish gray
		₩	╫	╫	₩		$\parallel \parallel \parallel$	HH					mudet probably alt foldspar and liante or biotite specks.
	2/40	╫	₩	丗	Ш			Ш			湿	3	abundant liquite, presperwax drill add
7	2,00	Ш	Ш	Ш	Щ	Ш	Ш	Ш			V. Salar		
		₩	₩	₩	₩		HH	$\parallel \parallel \parallel$					
•	سط	ш	Ш	Щ	Щ	للللا	Ш	ш	- WILLIAM   1		Lagrana .		Contraction and the contraction of the contraction

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		GRAPHIC LOGS			P. 3
	*	ALTERATION I MEN	数	TH TRACE A WEAR B. ANDR.	DESCRIPTIONS
	DEPTH		88	S. STROM	20' sample interval
	4	(25 (27 (27 (27 (27 (27 (27 (27 (27 (27 (27	80	VEINLETS	
	2100				White micreeous win., foliated TX.
	40-			2100-2340	Mudstone, and ~ 3 f. sand Minor liquite, few C. rd. sand.
	60-	1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			2160-2200 abund, lianite (4 of sample)
	80-				plus waxy-orange meterial.
4.4.4.4					2200-2340 pure li gray mudstane
	_				Tr. lignite, ostracedes
******	7	TT 1 75-1			few ste grains
	#2M-		20位		ostracedes
. J. 1000	2500-				
C. C. C. C. C. C. C. C. C. C. C. C. C. C	-			2240-2360	Muditane, med dk. gray minor ligret
- 100°	-				Mudstone med li gray celegreses
	21188				few chips lighter & dker
	20-			2380-2420	and the second s
	40-		1	2420-2460	-3 Poss. 111051. 11. 4704.
	60-		-"EE	2460-2700	
	80-				amphon ilié, as above. Slicken & gaug
	Z500 -		星		igneous xx. is elive black, telsia
	_				To porphy-stite or asinghantic 2560 - question abundant oscudo-quest 2700
		<u> </u>	八島		2560 - gypsam, abundant pseudo-gouge \$ 700
	2600-	7F. 17F	:: ]		speaks smeared out to prod. foliations
	2600-		/ 等		Continued 2/2 olive black telsite
			() [	· · · · · ·	# -12 mudstone, li gray
					few slicken side surt on chips.
	-	126			produced in part?
	2700-		lost		Hem. stain from bit frag Brass frag.s
	40.			2720-2940	
	60.				Trace lignite tew chips w bedding.
	20.				a f. lithis So. chip., few vol. clost. of clive blk as above (2420-)
	2800 -				lignite speaks in Li. gray mudst chip
					high calc. content. , few gauge chips
					a seem silicitied?
		<u> </u>	對		Cont. 11 med gray mudst. & lingen
	2 <b>900 -</b>	11111111111111111111111111111111111111			muddle few olive blk. soneous chip.
	7.5			Fossil	2920-40 igneous chips increase to a sample
	V	zē.		2940 -2960	
			<b>於</b> [	2960-3080 Th ch/.	" Gabbro: \$ 12 mudstone, ligray, grn. mudstone chips are mattled with white
	300 -			'n Ch/	spots & black specks, pass. elf. tuff
	20	# \$			igneous rx has grn cast to teldep.
	40	11111111	:E	6. u_1	seme otz present in igneous rx.
	90		3.	*ACA 7**	
)	3100.		T.	2080-270	Mudstone, li. to m. li. gray, poss. fassil.  few olive blk. igneous rx. chips.
					high calc in mudst tines.
					ostracodes of 3108'
		A control of the state of the s	1 1 1	/ Ca	

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				1		G!	BA	P	H	16	r ,	Z	26	5	•					P4
	7	A	172	TR.	_	_	_	-				Γ	فلم		ŀ	70	ধ	松	TH TRACE A WEAR 2. AND. 3. STRONG	DESCRIPTIONS
			Γ	Γ	7	×	T	٦		T		4	ξυ <sup>χ</sup>		50	A.C.	x1 %	22	3. S77(CH4	10-20' sample intervals.
	8			9	Ý	ys.		_	,	J	92	(	٥		٥	X),	*	33	VEINLETS	Ts This section from interval Indicated
3	100		Ш		1		I		$\parallel$	П	I	Ш	Ш	Ш				46	3080-3760	Mudstone (cont.) Li. to m. li. grav. & white
	40-	Ш	Ш	Ш	#	Ш	H	H	H	$\mathbb{H}$	╫	#	₩					1		contains minor calcite
	80-	Ш	Ш	П	1	Ш	Ħ	Ш	Ш	Ш	Ш		Ш	Ш	Ш	Щ		、管		3 gabbro? - grn. ignerus clast. poss. stilbite filled amy gdule
3.	200-	$\prod$	Ш	$\prod$	$\parallel$	$\prod$		Щ	4	H	H			₩				1		
1		HH	₩	₩,	#	H	H	H	H	₩	H	H	₩	₩					Tr. 9/2	intermixed gebore andesite chip are probably from sed class in
. [		Ш	Ш	Ш	$\parallel$	Щ	$\prod$	Ш	Щ	$\blacksquare$	$\coprod$		Ш	Ш	Ш			選	•	the mudstone.
		Ш	$\parallel \parallel \parallel$	F	Ш	Ш	H	Ш	$\mathbf{H}$	Н	H	Щ	$\blacksquare$	Ш		$\parallel \parallel$			Tr. pte	
3	300-	Ш		Ш	#	Ш	Ħ	Ħ	Ш	Ш	$\parallel$		惴	Ш		Ш		4		Probable alluvial fan deposit with mudet metrix or cong mudet
	-	Щ	Ш	Z	$\coprod$	Щ	Ц	Щ	Щ	Щ	$\coprod$	Ш	Ш	Ш	Ш	Щ		臺	Tr. gts	with madet metrix or cong much x
7	. <b>s</b>	₩	₩	1	#	₩	#	H	$\mathbb{H}$	╫	H	₩	₩	₩	₩	#	₩	湿	Tr. ota	calcite amygdate, pyrite cubes.
1,	400	Ш	Ш	1	$\parallel$	Ш	#	Ш	Щ	#	$\parallel$	Ш	Ш	∭	Ш	Щ	Ш	/屋	Tr. calc.	
	20-	Щ	Ш	Щ	$\coprod$	Ш	$\coprod$	Ш	Щ	#	$\coprod$	Щ	$\blacksquare$	$\parallel \parallel$	Ш	Щ		I S		Mudstone componet may be from caving and washouts above 2400'
	40-	HH	╫	ť	H	H	H	₩	H	╫	H					$\parallel\parallel$				EAVIRE RIM WASHOWS ABOVE 2400
	80-	Ш	Ш	Ш	$\parallel$	Щ		Ш	Щ	Ш			Ш	Ш	Ш		Ш			
3	500	Ш	${ m HH}$	Ш	#	₩	H	Ш	Ш	#	$\mathbf{H}$				Ш					
17	rs.	HH	╫	H	H	Ш	Н	H	╫	Ħ	H	╫						打量		
1	1	Щ	Ш	Ш	${\rm I\hspace{1em}I}$	Ш		Щ	Щ		$\prod$	Щ	Ш				Ш			
	٩	$\mathbb{H}$	$\mathbb{H}$	H	H	Ш	$\mathbb{H}$	₩	Ш	#	H	Ш							2-3 stap	silicified zone, Mudet minor ign.
3	600-		<b> </b>	4.660.0	Ш	Ш		Ш	Ħ	I	Ш				2				7.5/	
	1	Щ	Ш		Ш	Щ		Щ	Щ	$\parallel$	Щ							Cutting		
		$\parallel \parallel \parallel$	HH	H	H	₩	Н	Ш	Н	╫	H	₩						15		
١,	700	Ш	Ш	$\coprod$		Ш		Ш	Ш	Ï	Ш	Ш					Ш			
	20-	Ш	Ш	Щ	Щ	$\coprod$	Щ	Щ	Щ	#	Щ	Щ			Ш			ē	3700-5730	Basalt or Basaltio-Andesita & mudst. Brownish-black & dusky brn. arn. tinte
7.	3.40.	HH	Ш	Ħ			Н	Ш	Н	╫	H				à				1.940.9/2	
	80-	Щ	Ш	#	Щ		Щ	$\parallel$	Щ	$\parallel$	Щ	Ш	Ш			Щ			1000	variable amounts of mudstane chips.
3	P08-	$\parallel \parallel$	$\parallel \parallel$	#	Щ	#	$\mathbb{H}$	₩	Щ	#	$\mathbb{H}$	₩	$\parallel\parallel$	$\parallel \parallel$		$\parallel \parallel$	$\parallel \parallel \parallel$			Basalt flows (or rubble) interbedded with mudstone or mudstone contamination
7	<u>ج</u>	₩	₩	Ħ	╫	$\dagger \dagger$	Ш	卌	H	#	H	╢	Ш			Ш	Ш			Basaltic- andesita, plage plates, pyraxene
		Щ	Ш	$\prod$	Щ	$\prod$	Щ	Щ	Щ	$\prod$	Щ	$\prod$				$\prod$	$\prod$			Multi-colored chips ~ & V. dk. red,
		$\parallel \parallel$	$\parallel \parallel$	#	Щ	#	$\mathbb{H}$	H	$\mathbb{H}$	╫	$\mathbb{H}$	₩								# - 4 dk graish gray & li. dire gray Muddi
3	100-	₩	₩	#	Ħ	H	Ш	H	H	$\parallel$	Ш						Ш			
	T.S.	Щ	Щ		Ш	$\prod$	Щ	Щ	Щ	$\prod$	Щ		Ш			$\prod$	$\prod$		1 a Cal	hem impregnated basalt chips soprate.
		₩	₩		$\mathbb{H}$	#	H	H	Ш	╫	Ш		₩			$\parallel \parallel$	₩		1 gle py	palagnite, amygdules of stillsta
	1000-	Ш	Ш	#	H	$\parallel$	Ш	$\parallel$	Ш	#	Ш						Ш	3	1 0/2	3980-4020 felsie rock pies tate & street.
17	- 100	Ш	Ш	$\prod$	Щ	$\prod$	Щ	$\prod$	Щ	$\prod$	Щ	Щ	Щ	Щ		$\prod$	$\prod$	3		Walland Lieb I was
		₩	₩	$\parallel \parallel$	H	#	H	#	$\mathbb{H}$	╫	$\mathbb{H}$	₩	₩	₩		$\parallel \parallel$	₩			4046- Mixed lithologies, besult &
		∭		╫	Ħ	I		$\parallel$	Ш	#	Ш	I	∭					3	- 1 J - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Poss rubble with mudst. matra ?
) 4	100-	Щ	Щ	$\prod$	Щ	$\prod$	$\prod$	Щ	Щ	$\coprod$	Щ	$\mathbf{I}$	$\prod$	$\mathbf{H}$		$\parallel \parallel$	$\mathbf{H}$			or mudstone washing from abore
		₩	₩	₩	H	₩	₩	H	$\mathbb{H}$	#	$\mathbb{H}$	₩	₩	₩	₩	₩				2400 or 3700' and contaminating
	•	₩		$\ $	H	$\  \cdot \ $	$\ $	$\parallel \parallel$	Ħ	#	Ш	╫	₩	∭		$\parallel$				34.00

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	ľ						(	7	2	41	2	12	6	-	Z	C	Ģ	5	7								Ī	p. 5
7	į	Ā	2	4	Æ	4	7.	70	21	Y		Á .	646 72	44 9.					T	V	j,	Y	Ī	1/4		TH TRACE A WEAR S. ANDP. S. STROMS		DESCRIPTIONS
aep)					8	, i		110											4		o <sup>d</sup>	r 		<b>E</b>		VEINLET	1	T.S. In dapth Column Warks thinsection
\$100	I		Í		Ï		Ū	П	Į	Щ	I	П		$\prod$		Щ		$\prod$			Щ	Щ			ľ	3700 <b>-57</b> 5	4	Continued - besalt and muditione.
1 -		$\coprod$	$\!$	Щ	4	$\parallel$	H	H	H	Ш	H	H	H	4		₩		#			Ж	Н	Н		Ú		┨	Basalt & palagonte & celadonte (green)
-	∦	H	$\mathbb{H}$	Н	+	H	H	H	H	Н	H	Н		H	Н	₩		₩	ı		Н	╫	H.				1	feur mudet chies.
4200	Ħ	$\dagger \dagger$	H	H	t	H	Ħ	Ħ	t	Ш	Ħ	Н	İ		Ш		iii	Ш	18000.3	III	Ï	Ш					1	amyadules of stilbite.
T.S.	Ħ	T	I	ij			Π			П												$\blacksquare$					1	plag, phero, palagonite, anyques
40-	П	Ш	$\prod$			Ц	Ц	$\prod$		Ш		Ш	Ц	Щ	Щ	Щ	Ш	Ш	Щ	Ш	Ш	Щ	Ш				4	few mudstone blast.
10-	Ц	Щ	Щ	Ц	Ţ	Ц	H	Ц		Щ	1	Щ	1	Ш	Щ	Щ		Щ	$\blacksquare$	Ш	Щ	Щ	Н				-	#370 412 of the Lambert Land
TS.80-	H	Ш	$\!$	Щ	ľ	H	H	H		Н	H	Н	H	Н	Н	H		Ш	╫	₩	Н	₩	Н		W.		1	4280-4300 - strong hem. coloring of basels Calc. amyordules, pass baseltic ach.
TS 80- 4300- TS	H	H	╫	Н	H	H	H	H		Н	H	Н	$\dagger$	Н	H	Н	Ш	Ш	╫	Ш	iii	╫	H			<del> </del>	1	Basalt with tachylyte, palagonite, amygd
<b>1</b> ′ ′	t	$\parallel \parallel$	H	H	lt	H	H	Ħ	T	$\dagger \dagger \dagger$	t	H	I	ΙŤ	Ħ	$\ $	Ш	Ш		Ш	$\parallel \parallel$	III		1	W		]	few mudstone chips.
	Ħ		IT	Ħ	lt	Ħ	Ħ	Ħ	T	$\parallel$		Ħ								Ш	Ш	$\ $						Stillite chips. spors other realites
					$\prod$		I			$\prod$		$\coprod$	$\prod$	$\prod$	Ш	Ш	Щ	Ш		Щ	Ш	Щ	Ш				_	
4460-	$\parallel$	Щ	$\prod$	$\coprod$	$\prod_{i=1}^{n}$	Ц	Ц	$\downarrow$	1	Щ	4	Щ	4	$\mu$	Щ	Щ	Щ	Щ		Щ	Щ	Щ			H		4	
	H	Щ	$\parallel$	$\mu$	$\parallel$	$\parallel$	H	4	#	Щ	4	Щ	#	$\parallel$	H	Ш	₩	$\parallel \parallel$		₩	$\parallel$	#	₩	1			4	
	H	Ш	H	H	$\parallel$	H	H	+	#	₩	+	Н	#	#	₩	#	₩	₩	H	₩	H	₩	₩	쾚			1	
TS	H	Н	H	H	H	Н	H	+	H	H	lt	Н	H	H	H	Ш	₩	Ш		₩	Ħ	Ħ	H				٦	basalt, palagonite, stilbite amygdalo
-	H	Н	H	H	H	H	H	t	H	H	H	Н	lt	lt	Ħ	III	₩	₩	ii	Ш	Ш	Ш	Ħ					
4500-	T	Ш	Ħ	Ħ	H	Ħ	į		Ī		I	П	I				$\blacksquare$			$\blacksquare$	${ m I\hspace{1em}I}$				u ic			
, Z.	1	Ш	I	$\prod$				I		$\prod$	$\Pi$	$\prod$	${ m I\hspace{1em}I}$	$\prod$	$\coprod$		Ш	Ш		Ш	Щ	Ш	Ш	3		Tr. of	_	enhedral quarte exystal
60.	$\mathbf{I}$	Ш	П	П	Ц	Ц				Щ	Ц	Щ	1	Щ	Щ	Щ	Щ	Щ		Щ	Щ	Щ	Ш		H		4	
so.	4	Ш	Ц	Щ	Ц	Ц	1	4		Щ	4	#			Щ	Щ	Ш	Щ	8	Щ	Щ	Ш					4	celadorita
4600-	H	Ш	H	H	H	H	H	H	H	₩	H	H	╫	H	H	₩	Ш	₩			₩	Н	H				-	
	ł	Н	H	H	H	H	H	H	H	₩	H	H	╫	H	H	₩	Ш	₩	H	Ш	₩	Ш	ï			54.	7	
	t	Н	H	H	H	H	ļ	H	H	Ħ	H	H	Ħ	H	Ħ	₩		₩	H	Ш	₩	Ш	iii					
•	1	Ш	Ħ	Ħ	H	Ħ		I	IT	Ħ	I	Ħ	II	I	Ħ	$\parallel$			П		$\ $				Щ			
W200-	1	Ш	П	$\prod$				$\prod$	${ m I\hspace{1em}I}$	$\prod$	$\prod$	$\prod$	$ lap{II}$	$\prod$	$\prod$	Ш		Ш	Ш	Ш	Ш	Ш	Ш					
		Ш	Ш		Ц		See See	Ц	Ц	Щ	Ц	Ц	Ц	Ц	Щ	Ш	Ш	Щ	Щ	Ш	Ш	Ш	Ш				_	celadonita
	1	Щ	Щ	Ц		Ļ		Щ	1	Щ	11	Щ	#	Щ	Щ	Щ	Щ	Щ	Щ	Ш	Ш	Щ	Щ		Ш		-	4730-4780 10% orange wax min, poss.
	4	Ш	H	H	H	H	Ļ	H	₩	₩	H	H	H	₩	₩	₩		#	Щ	аШ		Н	#		₩		-	4740-60 - few large masconte sheets, additi
	+	Н	H	H	Н	ł	ł	H	H	Ħ	H	H	Ħ	H	Ħ	Ш	Ш	H	ıř		Ш	╫	ii		Ш		_	
4800_	†	H	Ħ	H	H	t	t	H	Ħ	#	Ħ	Ħ	Ħ	Ħ	Ħ	Ш	Ħ	Ш		Ш	Ш	Ħ	Ħ					
26	Ţ	$\parallel$	I	I		Ţ				I		$\prod$	I	$\prod$	I	Ш					Ш	$\prod$	Ш		Щ			
4	I	Ш	$\prod$	$\prod$	$\mathbf{I}$	I	$\prod$	$\prod$	Ц	$\prod$	Ц	$\prod$	$\prod$	Щ	Щ	Щ	Щ	Щ	$\parallel$	Щ	Щ	Щ	Ш		₩			
80	1	Щ	IJ	Щ	Ц	ļ	4	$\parallel$	1	#	Ш	#	#	Щ	#	Щ	Щ	Ш	Щ	$\parallel \parallel$	Щ	Щ	Щ			<b> </b>		Seledenite (bright grn) stilbite.
4100	4	Щ	H	H	H	+	#	H	H	#	H	₩	╢	H	₩	Ш	₩	₩	₩	₩	₩	#	₩		H			Minor calcite, polagmite hem emoreonated chies, few mudstene
T.S.	+	Ш	H	H	H	$\dagger$	H	H	╫	#	H	H	H	₩	#	₩	₩	H	Ш	₩	₩	$\parallel$	₩	Ш	$\prod$	<b> </b>	-	1930-1980 abundant stillite amygdales
	ł	₩	H	H	H	$\dagger$	H	H	╫	#	H	Ħ	H	₩	#	₩	₩	₩	H	Ш	₩	$\parallel$	₩		Щ		_	and abundant celadenita-
	1	#	H	Ħ	H	†	H	H	#	#	Ħ	Ħ	Ħ	Ħ	#	III	₩	Ħ								1 1 Hay V		
5000 -	j	$\prod$	T	I			I	$\prod$			$ lab{l}$	$\prod$	$\prod$	$\prod$	$ lab{I}$		$\mathbf{III}$				${ m I\hspace{1em}I}$	Ш	$\ $		Щ		٠.	
2000	I	$\prod$		$\prod$		$\int$	J	Ц	Ц	Щ	$\parallel$	Щ	Щ	Щ	4	Щ	Щ	Щ	Щ	Щ	Щ	Щ	Щ		Ш	<b></b>	_	<del>                                     </del>
	1	Щ	Щ	Ц	ļ	1	H	H	$\parallel$	Щ	4	#	$\parallel$	Щ	4	Щ	Щ	₩	Щ	$\parallel \parallel$	₩	$\parallel \parallel$	₩			1	_	Dock of the military
TS-	إ	$\parallel$		#	P	${\mathbb H}$	H	H	$\parallel$	Ш	H	H	#	H	#	₩	₩	₩	$\parallel$	₩	₩	₩	₩	翻	H			BASAIT WITH PAIRSONIE, MKASURE,
75	4.	#	H	H	ł	H	H	H	#	H	H	H	H	H	H	₩	₩	₩	#	₩	₩	₩	╢	蝎		Tr. ch	7.	Basalt with palagenite, Mudstine, Basalt with miner palagenite
5100	+	H	H	$\dagger$	t	H	H	Ħ	Ħ	H	Ħ	H	H	H	H	₩	₩	₩	H	₩	₩	H	Ħ	1			_	
	1	$\parallel$	Ħ	H	t	H	Ħ	Ħ	1	Ħ	Ħ	Ш	П	Ħ	ij	#	Ш	Ħ	Ħ		III							
	1	Ħ	T	T	t	IT	Ħ	T	T	П	T	П	П	П	П	Ш	Ш	Ш	III	M	III	Ш	I					

DRILL HOLE DeBrage 2 , Union Oil Ca.

		Γ		-				4	4	A	P	7	70	~	4	50	24	75	7						1000000		p. 6
1 472	×	Ī.	Ą	12	Ę	R	A	77	C.	W		KE	#1 #4 \$77	100					T		, K	T	ŔŹ	<b>,</b>	77: 729.4 A MEM B. MICH	er er	DESCRIPTIONS
A1.8.20	XEP1	ľ			-		1	•	1		I				1				1.	S.	X.		36		9. STR	-214	T.S in depth coloren indicates thinsection for the interval-
	4	L	21	L	.7	2	?	100		18		4		4			:		15	9,			50	}	VEINL	ETS	
3	5109	H	H	H	Н	+	H	Н	H	H	╫	H	#	H	╢	$\parallel \parallel$	₩	₩				H					Basalt and Mudstone Cont. from 3700' Calcite shells in mudstone chips:
100	60-	I	$\parallel$		ij		1	-		_	78		78	тт	-	ш	3111	11111	1111	11111	Ш	:::::					Celadonite stilbite, celaite hem empregneted chips
4.50	80-	H	$\coprod$	$\parallel$		Н	+	Н	$^{+}$	$\mathbb{H}$	H	H	#	H	#		₩		H	$\blacksquare$		H		Ш			hem empregnated chips. pieces of large zeolite amyodales
10 v 16 ··	5200-	İ	Ш	İ	Ï				İ	Щ		I	#	Ħ	1		∭	Ш	I		Ш						
(Coloredo)		$\parallel$	$\coprod$	$\ $	Н	4	Н		$\coprod$	Ш	H	H	$\parallel$	H	$\parallel$	$\parallel \parallel$					₩		##		1		few muditive chips included
S 300 6		1	H	H	H	H	H			H	H	H	$\dagger \dagger$	H	Ħ		₩	Ш			Ш	į,	Щ	$\prod$			5260-80 & 11. gray igneous chips- poss dacite flow.
	5300_	I	$\prod$	$\prod$			$\blacksquare$			Щ	$\prod$	Ц	$\coprod$	$\prod$	$\ $		Ш				$\parallel \parallel \mid$						
		H	H	H	H		H		H	Н	H	H	╫	H	H		₩	₩	Ш		₩	ľ					Mostly Olive gray, & dk. grn. gray and graish bk.
14.4			$\parallel$	I	Щ			П		Щ	ĮĮ	$\prod$	$\parallel$	$\parallel$	$\prod$	$\prod$	$\parallel \parallel$	∭			$\ $						
	5400-	$\parallel$	H	╫	$\mathbb{H}$	#	$\parallel$	$\mathbb{H}$	H	₩	$\parallel$	$\parallel$	H	H	#	₩	₩	₩	₩	₩	₩	H	Щ	Ш			Trece carbon with a zeolite!
ı	5400- Ts 20-					I		Щ		Щ	$\parallel$	#	#	$\parallel$	#	Щ	∭	∭			∭	W	<b>    </b>	腮			Boself with pelagonite & celedonite
	40-	H	H	$\parallel$	Н	-	$\parallel$	H	$\mathbb{H}$	Н	H	Н	H	H	H	$\parallel \parallel$	₩				₩	Щ	Ш	Щ			
	60 - 80 -	Ħ	Ħ	I	Ħ	T			Í	Ш	1	İ	#	Ħ		Ш	Ш	Ш			Ш						
	<i>550</i> 0 –		Щ	$\ \cdot\ $	Щ				$\parallel$	Щ	$\parallel$	$\parallel$	#	H	$\parallel$	Ш	₩	Ш	$\blacksquare$		₩						
		l	H	H	H					Ш	H	H	#	Ħ	1		Ш	Ш			Ш						5560-5750 increasing ash intermixed with flow chips.
			$\prod$	$\prod$	Щ		$\perp$			Щ	$\coprod$	$\prod$	$\coprod$	$\prod$	$\prod$		Ш	Ш		Ш					ļ		with flow chips.
	TS -	H	H	H	Н	Н	+	8.5		H	H	H	+	H	H	₩	₩		i		₩						Small amygdules, poss. basaltic ash.
	5600 -		П					$\prod$		Щ	$\prod$	$\prod$	$\prod$	$\prod$	$\prod$	Щ	$\prod$										
		H	H	H	H	$\mathbb{H}$	H	Н		Н	H	H	H	H	H	₩		₩	₩		₩		Щ	Ш	}		Most of the diversity in chip color is due varying degree of alteration
		1	Щ		П			Щ	I	Ш	1	$\blacksquare$		$\parallel$	1	Щ	$\prod$				$\blacksquare$		#				and type of alteration, ie. chlorite
	5700 <u> </u>	H	$\mathbf{H}$	#	Н	+	H	Н		Н	H	H	H	H	H		$\blacksquare$				₩						and palagonite formation or hem.
	10-	I	Ш	I	İ	I		İ	ij	Ш	Ц	İ	1	Ц	1	Ш	Ш	Ш		Ш	▥			<b>**</b>	5730	-6840	Basalha ash with minor flows-
	60_	$\parallel$	$\coprod$	#	Ш	ŧ	$\parallel$	H	$\parallel$	Ш	H	#	#	H	#	₩	₩	$\blacksquare$	$\ $		₩	H					Caving has added to the lithology and color mix in individual samples.
	EFAR	t	Ш	lt	Ш			Ш		Ш	IJ			Ш	1	Ш	∭	Ш		Ш	Щ			Ų.		* .	5770-80 poss flow with ash & cinders.
	7000		Щ	F	Щ	4	4	$\prod$	Щ	Щ	$\prod$	$\parallel$	$\prod$	$\prod$	4	$\prod$	$\parallel \parallel$	$\parallel \parallel$	$\parallel \parallel$	Щ	₩	H					5810-5830 poss. flow within the ash
		Ħ	H	$\ $	H	$\parallel$	H	H	H	世	Ħ	Ħ	$\parallel$	Ħ	Ħ			Ш			▦	此		Š			
			$\prod$	$\prod$	$\prod$	$\prod$	$\prod$	$\prod$	$\prod$	Щ	$\prod$	$\prod$	$\prod$	П	$\prod$			$\blacksquare$		$\prod$	∭	#	Sec.				Basalt with palagonile, stilbite amyad.  some calcite. May be ash or breccia
	5900-	H	#	H	H	$\dagger$	$\parallel$	H	H	$\parallel \parallel$	H	$\parallel$	H	H	$\parallel$	₩	#	₩		₩	₩		<b>)</b> %	**			some calcite. May be ash or breccia
			Щ	$\ $	Щ			Щ	П	Щ	П		$\prod$	$\prod$	$\prod$	$\parallel \parallel$		Ш		$\blacksquare$	$\blacksquare$		慧.				hetrogeneous basalt, prob. cinders,
		$\parallel$	$\mathbb{H}$	₩	$\mathbb{H}$	$\parallel$	$\parallel$	H	H	$\mathbb{H}$	H	H	H	H	H	₩	$\parallel \parallel$	$\parallel \parallel$	H	₩	₩	₩		۲۱) (۲)			ash and minor flows.  Zeolite amugdule
	6000-	$\sharp$	Щ	I	Щ		Ц	I	Щ	Щ	1		Ш	$\parallel$	#	$\parallel \parallel$	Щ	Щ		Щ	∭		<u> </u>	Š			Bosaltic ash or andesiki ash.
	20-	$\parallel$	Щ	$\parallel$	Ш	$\parallel$	Щ	Н	Щ	Щ	#	$\parallel$	$\mathbb{H}$	$\parallel$	#	₩	$\parallel \parallel$			₩	₩	#					
	TS.10	t	Ш	lt	Ш	H		H	Ш	Ш	#	Ħ	H	Ш	1	▦		Ш	Ш	Ш	▥						hem. empregnated, basatio ash,
	80-	$\prod$	Щ	$\prod$	Щ	4		$\prod$	Щ	Щ	$\parallel$	Щ	Щ	Щ	4			$\blacksquare$		Щ	$\blacksquare$						hem. empregnated, basatio ash, zeolik and celadente amygdules.
)	6100 -	H	H	H	H	$\parallel$	H	H	Н	H	Ħ	H	H	H	H	$\parallel$	$\parallel$	#		₩		H	CLE				
		I	Щ	$\ $	Щ	$\ $	$\prod$	$\prod$	Щ	Щ	$\prod$	$\prod$	$\prod$	П		$\prod$		$\blacksquare$		$\prod$	$\prod$						
		L	Ш	Ц	Ш	Ų	Ц	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Щ			L		

DRILL HOLE De Braga 2. Union Oil Co.

LOCATION Stillwater New

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8		Ą	Ľ	72	Ź,	2	12	70	2	Ŋ		ź.	AVE AVE	141° 15. 1311					Γ		کولا	1		87	K 1 8.	TRACE WEAR ADD. STROMS	DESCRIPTIONS'
QEP)	ı		ı		ı	¥ŧ	/	'n,	'		ı		1		ı				۹			λ.					Basaltic or andesitic ash & cinders with minor flows and mudst chips zeolites and calcite amyodules.  Caladonite, palegonite.  6140-6370 cutting ground V. fine.  coald be due to fine ash or drilling aperation.  Basalt flow, Greenish block with oline block & dork gray chips.  few ploy phene, zeolite amyodules and few hem. emprenated chips.  Stilbite, few chips med gray & bra. blk  Basaltic to andesitic ash and cinders.  Med. to dark gray, grn. trists.  Chip with mudst—ash contact.  Basaltic ash, palegonite, Stilbite amyodule few flow chips & mudstone chips.  Chip with mudst—ash contact.  Basaltic ash, palegonite, Stilbite amyodule few flow chips & mudstone chips.  Basalt flows, clive-block,  V. fine grain, ne phene, fresh,  mudstone and ash chips.
6100	I	Ш			I	П		П		П	I	П		П		Ш	Ш			Ш	Ш	Ш	ľ		3_		Basaltic or andesitic ash & cinders
40-	ļ	Ш	Ш	Ц	Ц	Ц	Ц	Щ	Į.	Щ	4	$\parallel$	Щ	Щ	Щ	Щ	Ш	Щ		Ш	Ш		ľ	دروز	<b>3</b> _		with minor flows and mudst chips zeolites and calcite amyodules.
60-	l	Ш	H	Н	H	Н	$\mathbb{H}$	$\mathbb{H}$	1	Ш	H	$\!$	Щ	Щ	1	Ш	Щ	Ш	Щ	Ш	Ш		k		4_		zeolites and calcife amyodules.
80-	H	Ш	H	H	H	H	$\mathbf{H}$	Н	+	Н	H	₩	H	Н	+	Ш	₩	₩	+	Ш	₩	Ш	Ŋ		<b>I</b> I-		Caladonile, polaganite.
6200-	ł	Н	H	Н	H	Н	Н	Н	+	H	H	H	Н	Н		Н	₩	Ш	#	Ш	₩		Ė		;}-	<del></del>	1140-1870 cutting amount 11 5000
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	t	Н	H	H	H	H	Н	H		₩	H	H	Ħ	Н	i	Ш	₩	₩	H	Ш	Ш	iii	S		1		6140-6870 cutting ground V. fine.
	t	Ш	Ħ	Ħ	Ħ	Ħ	Ħ	Н		Ш	I	lt	H	Н	ii	Ш	Ш	Ш	Ħ	Ш	Ш	iii	Ę.	773	<u>1</u>		drillier appration.
1	t	Ш	Ħ	Ħ	Ħ	Ħ	Ħ	Ï	İ	Ш	I	IT	Ħ	П	ii	Ш	Ш	Ш	II	Ш	Ш	Ш	ŀ		3		
1200	Ī	Ш	П	Ħ	I	I	Ī	7	Ī	$\prod$		$\prod$		П	İ		Ш	Ш					ķ		3	. 4	
	I	Ш	$\prod$	$\prod$	$\prod$	$\Pi$				Ш	$\blacksquare$	$\prod$	${ m I\!I}$	П			Ш	Ш	Ш	Ш	Ш	Ш	B		1_	7 - 1	
	Ц	Ш	Ц	Ц	Ц	Ц		Щ		Ш	Ц	Ц.	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Щ	Ш	Ш	Š		1_		
	1	Щ	Ц	Ц	Ц	Ц	H	Щ		Щ	4	1	1	Щ	Ш	Щ	Щ	Щ	Щ	Щ	Щ	Щ			6	340-6480	Basalt flow, Greenish black with olive
	H	Щ	$\parallel$	$\parallel$	H	$\parallel$	4	Щ	1	Щ	4	$\parallel$	#	Ш	Щ	Щ	Щ	₩	Щ	Щ	Щ	Щ			<b>—</b>		block & dark gray chips.
6400 -	H	Щ	H	H	H	H	H	H	4	Ш	1	#	#	$\mathbb{H}$	Щ	₩	₩	₩	Щ	Щ	₩	$\parallel \parallel$	H		-		few play phone, seelite amygdules
Te20-	H	Ш	H	H	H	H	H	Ш	+	Н	+	╫	#	Н	$\parallel$	₩	₩	₩	₩	₩	₩	$\parallel \parallel$	Ĭ		1—		and few hem. Emprenated chips.
~3`40 <i>-</i>	H	Н	H	H	H	H	H	H	+	Н	H	H	Н	Н	+	Ш	₩	₩		₩	Ш						Stillette, tew chips med gray & brn. blk
60-	H	Ш	H	H	H	H	H		ł	Н	H	H	H	Н	Н	Ш	₩	₩		Ш	Ш		侧侧		-		
80-	f	Ш	H	H	H	H	H	Н	t	Н	H	H	Н	Н	Ħ	₩	₩	Ш	Ш	₩	Ш	Ш		CEV	4	486-2680	Bosaltie to andertie ash and ciadore
6500-	Ħ	Ш	Ħ	Ħ	Ħ	Ħ	Ħ		1	Ш	Ħ	IT	П	П	ı	Ш	Ш	Ш	III		Ш	Ш	E.	3.3	1		med to dark aray arm tists.
Arras T	Ħ	Ш	Ħ	Ħ	H	11	Ħ		T	Ш	ij	IT	П	Ш		Ш	Ш	빼	Ш		Ш	Ш	6		1		
	I	Ш	I	Ħ	I	Ħ	I		T	П		П	П	$\prod$		Ш	III	Ш				$\Pi$	Ŗ		$\mathbf{L}$		
		$\prod$	I	П	I		1	7.		$\Pi$	II	П		$\prod$				$\prod$				Ш	Ľ		$\mathbf{L}$		Chip with mudel - ash contact.
6600	$\mathbf{I}$	Ш	I	$\coprod$	Ц	$\prod$				Ш		$\prod$	Ш			Ш	Ш	Ш		Ш	Ш	Ш		$\mathcal{X}_{\mathcal{C}_{\mathcal{C}_{\mathcal{C}_{\mathcal{C}}}}}$	1_		Chip with mudst - ask contact.  Basaltic ask, palagonite, stilbite any gdulo faw flow chips & mudstone chips.
	Ц	Ш	Ц	Ц	Ш	Ц	Ц	Щ		Щ	Ш	Ц	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Щ	Ш	Щ	ķ	SYX		2019	few flow chips & mudstone chips.
	Ц	Щ	Ц	Ш	Ш	Ц	Ц	Щ	Ц	Ш	Ш	Щ	Ш	Щ	Щ	Ш	Щ	Ш	Ш	Щ	Щ	Ш	ò	ÀĞ.	]_		
-	H	Щ	H	H	H	H	Н	Щ		Ш	Н	Щ	Ш	Ш	Ш	Ш	Ш	Щ	Ш	Щ	Ш	Щ	F		3-		
A 4 3-	H	Ш	H	H	H	H	H	H	H	Ш	H	Н	Н	Н	Ш	Ш	₩	₩	H	Ш	Ш	Ш	¥	3/03/C	1	las las	8 - 14 - 64 - 14 - 14 - 14
6700_	H	Ж	H	H	H	H	H	Н	+	Н	H	Н	Н	Н	Н	Ш	₩	₩	Н	Ж	Ш	₩	Ħ		100	804780	BASAIT Flows, Olive-black,
-20-	H	Н	₩	H	H	Н	H	Н	H	Н	H	Н	Н	Н	Н	₩	₩	₩	Н	Ж	Н	₩	L		-		Mudstone and ash chips.
46-	H	#	H	H	H	H	H	H	H	Н	+	H	Н	Н	╫	₩	₩	₩	₩	₩	₩	₩				<del></del>	PUNDS STILL AND ASH CHIPS.
60-	H	H	Ħ	Ħ	H	Ħ	Ħ	Ħ	t	Ш	H	H	H	Ш	₩	₩	₩	₩	₩	$\parallel$	₩	₩	級			<u> </u>	
180-	I	Ш	I	T	I	T	I	T	T	[[]]				П	III								Ī	Y (ii	9 67	780-6830	Basalta ash with mudstone
000	I	Ш	I	I	I	IJ	I	$\prod$	I	$\prod$	I											$\mathbf{III}$	Ē	636			med gray to dk. graish gray
	Ц	Щ	Щ	Щ	Ц	Ц	Щ	Щ	L	Щ	Ц	Щ	Ш	Щ	Щ	Щ	Щ	Щ	Щ	Щ	Щ	Щ	W				
	Ц	Щ	Ц	Щ	Ц	Ц	Ш	Щ	Ц	Щ	Ц	Щ	Щ	Щ	Щ	Щ	Щ	Щ	Ш	Щ	Щ	Щ	Ĕ	479			Besalt flow , Olive black .
	Ц	Щ	Ц	#	H	Н	#	꺾	Н	Ш	Щ	Щ	Щ	Щ	Щ	Щ	Щ	$\parallel \parallel$	Щ	Щ	Щ	₩	Ę		368	750-6920	Basaltic ash & lapilli
6900	H	Щ	H	H	H	H	$\parallel$	#	H	Ш	4	$\mathbb{H}$	$\mathbb{H}$	H	₩	₩	₩	₩	W	#	₩	₩	ę	-0.14	-		grays & grn. histo.
T.O.	H	₩	H	H	H	H	H	H	H	Ш	+	Н	$\mathbb{H}$	$\mathbb{H}$	╢	₩	₩	₩	H	₩	₩	₩	f	, 55.53	4-	· 9/2	
-	Н	H	H	H	H	H	H	H	H	Ш	+	Н	$\mathbb{H}$	H	╢	₩	₩	₩	₩	₩	₩	₩	1		-		
1	Н	#	H	H	H	H	H	H	H	H	+	H	H	H	₩	₩	₩	₩	₩	#	₩	₩	1		-		
	Ħ	H	H	H	H	H	Ħ	H	Ħ	Ш	Ħ	H	H	Ш	╫	Ш	惴	₩	H	₩	₩	₩	1				
	Ħ		Ħ	Ħ	Ħ	Ħ	Ħ	$\dagger$	T	Ш	T	IT	H	Ш	Ħ	憪	₩	₩	Ш	Ш	Ш	∭	T	1.1			
	T	I	I	ľ	ľ	I	I		Τ	[[]														4			
		Ш	$\prod$	Ц	$\prod$	П	П	П	П	Ш		$\prod$	Щ	Ш	Ш	Ш	Щ	Щ	Щ	Щ	Щ	Щ			L	14 7 7 7	
	Ц	Ш	Ц	Ц	Ц	Ц	Щ	Щ	Ц	Щ	1	Щ.	Щ	Щ	Щ	Щ	Щ	Щ	Щ	Щ	Щ	Щ					
	Ц	Щ	Ц	Щ	Ц	Ц	Ц	Щ	1	Щ	Ц	Щ	Щ	Щ	Щ	Ш	Щ	Щ	Щ	Щ	Щ	Щ	L		↓		
	μ	Щ	Ц	#	H	Н	Щ	Щ	4	Щ	4	Щ	Щ	Щ	Щ	Щ	Щ	₩	Щ	Щ	Щ	Щ	I		-		
	H	Щ	H	Н	H	H	H	$\parallel$	4	Ш	4	#	Ш	Ш	Щ	Щ	Щ	Щ	Ш	Щ	$\parallel \parallel$	₩	I		-		
		Ш	H	Ц	П	П	П	Ш	1	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	Ш	L		1		

DRILL HOLE DeBraga 2. Union Oil Co.

LOCATION Stillwater

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7		274	TRA							18		DESCRIPTIONS
DEPTA		Т			<u> </u>		STANK.			28	DEPTH	DESCRIF 11011P
8	SAK	620	62	Ġ	3	CM				20	INT	
	$\prod$	Ш		Ш	Ш							
	+	╂┼┼┼		╫╫							40-1400_	Sand, Silt and Clay: Course gramed conglomeratie Sand to pre Silt
100	$\dagger \dagger \dagger \dagger$	Ш		Ш	4		Ш					& Clay, largely, unconsolidated to
100	4111	Ш		Ш						: · · · · ·		semi-consolidated, abundant beal
		╂╫╫										Obort fragments. Ored commantly
	1111	$\mathbf{I}$	Ш	Ш			Ш					Calcareous arkase locally
200		Ш	Ш	Ш			Ш			7-5-5		quartzose. Segimente are
	###	╂┼┼┼		₩			Ш					Michigan to light gray and tone
	<u> </u>	₩		Ш						バラ		ropresent lecestrine facies
	$\prod$	Ш		Щ	Ш	Ш	Ш			V		dithin a deginantly alluvial
300		╂┼┼┼	╂┼┼┼	₩	╂╫╫	╂┼┼┼	$\parallel \parallel \parallel$			$\wedge$		and Flyvial regime Carbante Comenting 13 005316W Ormany
	1111	╫								<u> </u>		and war not reflect hidrothermal
	$\prod$	Ш		Ш		Ш	Ш					activity.
	##	╫		HH	-		+++					
400	Ш	Ш		Ш			Ш					
	Ш	Ш	Ш	Ш			Ш					
	##	₩		╫	+		+++					
500	###			HH						1		
300	Щ	Ш	Ш	Щ			Щ			 		
	+++	₩		₩								
	<u>Ш</u>			Ш			$\dagger \dagger \dagger$			1		
600	Ш	Ш	Ш	Ш			Ш			÷ = =		*
	+			HH						-6.		abundant astrocodes with
	丗			Ш						@		shellend home fragments
		Ш		Ш						0		shellend some Fragments  pyrite ritres embedded in
700 -	┨╢		+++	HH								The motor
	1111	Ш	Ш	Щ		Ш	Ш					
	4	$\  \ $		$\coprod$						1.5		
		╂┼┼┼	$\parallel \parallel \parallel \parallel$	$\parallel \parallel$		HH						
800 -		Ш	Ш	Ш		Ш	Ш					
		Щ	Щ	Щ		Щ	Щ					
			HH	$\parallel \parallel \parallel$						-:-:		
900 -		Ш	Ш	Ш		Ш	Ш			- <u>-</u> -		
700	4	Щ	Щ	Щ		Щ	Щ			7.17.5		
		$\ \cdot\ $		$\parallel \parallel \parallel$		HHH						
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1000	$\prod$	Щ	Щ	Щ		Ш	Щ			-:-:		
	##	₩	₩₩	Ш	╂┼┼┼	$\parallel \parallel \parallel$	$\parallel \parallel \parallel \parallel$					
	1111						$\parallel \parallel \parallel$					
					_					. #	<u> </u>	

DRILL HOLE DICHARD WEIGHAUPT # 1
LOCATION SE, Sec. 1, T. 19 N., R. 30E CHURCHILL CONTEN

LOGGED BY RIACKETT

LITHOLOGIC LOG

Richard Weishaupt - 1

				LOGS	 		
-   }	ALTERA	TION	2. MOD. 3 STRONG		SEALONS SEALONS		DESCRIPTIONS
DEPTH	6 3	ا اا			88	DEPTH	
19	Sec. Sec.	6 3	3		80	INT	
						1404-1220	Obradant microfosils, maderate
						1080-1620	perite and other sulfides occurring
1100-					- Q -		in carponized plant tragments
					0		
					- 0		
1200 -					=		
7200		11118	<del>                   </del>		0-0-		
	<del>-{                                    </del>		<del>                 </del>				
	<u>                                      </u>						
1500-			$\coprod$		. <u>-:</u> -i.		
			<u>                                      </u>			and the second	
1400-						1400-1660	Sand light array well sorted sub-
						1400 - 1660	averler to Sabrand advice becom-
							ing quartyose near 1620.
							J / /
1500 -		###\$##					
	<del></del>	####	<del>                                      </del>				
					$\mathbb{X}$		
		4114	<del>      <b>   </b>                             </del>				
1600 -			<del>                                      </del>				
			<del>                                     </del>			1660-1760	10% = bright coal (vitain) chips
		<del>                                      </del>	╫		7	•	present possibly a drilling
1700 -			<u>                                      </u>		- 2-	le <sub>s</sub> as	present.
			ЩЩ				
		<del>                                     </del>	╂╫╂╫╫			1760-1900	Sediments peceming more betero-
			<del>         </del>		,	/ <i>160~ 1700</i> )	lithologic, lorger chips of state
1800 -					v.		and chrystone, and volcage rock
	444444444444444444444444444444444444444		<del>        </del>				fengments.
	<del>-                                      </del>	<del>                                      </del>	╂╂╂╂╂┼				
مسا					:		
100 -					6	190-1960	astraceds and enstropods.
	<b></b>		<del>         </del>		00		Silt and footly Softed Soud Subnaula,
			<del>       </del>		<b>-</b> -₹	1960-2700	Mixed lithologies continue
2000					<u>-=-</u>		
	<b></b>		HHHH				
	<del>                                     </del>		╫╫╫				
				TOTAL STREET			

DRILL HOLE, RICHARD WEISHAUPT #1
LOCATION SE, Sec. 1, T. 19N., R. 30E., CHURCHILL CO. NEV.

	Π			G	R	AF.	H	C	· .	200	SS.				<u> </u>	
1	AL	7 <i>E</i>	RA				į.		w					1/2	ee tije.	DESCRIPTIONS
DEPTH	Sove.	407	36	V		CM.	CHL.				. 2			200	DEPTH INT.	
								H	ff					00	• • • • • • • • • • • • • • • • • • •	Hoorly sorted sand and clay,
		$\prod$	$\coprod$	$\parallel \parallel$	1		$\parallel$	$\prod$	$\coprod$			Ш				tuffectous, light to might
		Щ		Ш			Ш	Ш	Ш			Ш				gray; careire comenca.
2100 -		Ш	+++	H	+		₩	$\  \ $	$\!$			Ш		72.7		
			Ш	Ш			Ш	Ш	Ш			Ш			<u>.</u>	
		$\coprod$	₩	H		-	Ш	H	$\coprod$			Ш				Minor ancents of carbon toush
2200-		Ш	Ш	Ш			Ш	Ш	Ш			Ш				2400. Alundant large estarate
-		Ш		H	+		₩	H	Ш							320-2280. Michtossils Sametimes forming tagments
	300	Ш	Ш	Ш			Ш	Ш	Ш							Sometimes torning tagments
		$\prod$	$\prod$	$\prod$			$\prod$	$\prod$	$\coprod$			₩		00		Sediments highly tuttaceous.
2300-		$\parallel$		Ш			$\parallel$		╢	Ш		Ш				Seasmen 15 Myn 14 Turiaceous.
		Ш	Ш	$\coprod$			$\prod$		Ш							
		H	╫	╫			H		Ш							
2400-		$\prod$	Ш	$\prod$			$\prod$	$\prod$	$\prod$					<u>-</u>		
		$\parallel \parallel$	╫	╫	+		H	H	╫							
	Ш	$\prod$	$\prod$	Щ			Щ		$\prod$							
2500-		₩	₩	₩	+	Н	╫	╫	╫							
2300 -		Щ	$\prod$	Щ		П	Щ		Ш							Madium amined arkasic Sand
		₩		H			H	╫	$\parallel \parallel$							Sahangular to Supround, loss
		Ш	Ш	$\prod$		$\prod$	$\prod$	$\prod$	Щ							Sand cross grained with 1835
2600-		Ш	₩	₩		H	H	╫	H							Chy matrix Than above. Minor
		Щ	Ш	Щ		П	Ш	Щ	Щ							
		H	₩	H		+	H	H	H							
2700-			$\prod$	$\prod$		Ш	Щ	Щ	Ш					25.5		Interne Argillie afterning
		H	₩	₩	+	Н	₩	╫	╫					- 4 6	2700 -2820	Intermixed ignorus rocks and tollarges
		Щ	$\prod$	Щ		$\parallel$	Щ	$\prod$	Щ							most commenty as veinlets.
		H	₩	$\parallel \parallel$	+	$\mathbb{H}$	#	₩	╢					112		
2800-		Щ	Щ	Щ		Щ	Щ	$\prod$	Щ					-10,		
		H	₩	₩	╢	H	$\mathbb{H}$	₩	H					$\backslash$		
		Щ	Ш	Щ	$\parallel$	Щ	Щ	Щ	Щ	빼				1 X		
2900-		H	₩	₩	╫	H	₩	H	H					$\forall \lambda$		
		Щ	Щ	Щ	$\parallel \parallel$	Щ	Щ	Щ	Щ	▥			Щ		2920-2940	Base to Justy mediate, ignerus, rocks,
		H	₩	₩	₩	$\mathbb{H}$	$\parallel \parallel$	₩	$\parallel \parallel$	₩		$\mathbb{H}$		X		atundant tackylite and quarts
3000		Ш	Щ	Щ	Щ	Щ	Щ	Щ	Щ	Ш			Ш		2980-3380	Basic to intermediate rooks as above
		₩	₩	₩	╫	$\mathbb{H}$	#	$\mathbb{H}$	₩	₩		$\parallel \parallel$				auxad with fultheres sedments
		$\parallel$	Ш	Ш	Ш	$\dagger \dagger$	$\parallel$	Ш	Ш							

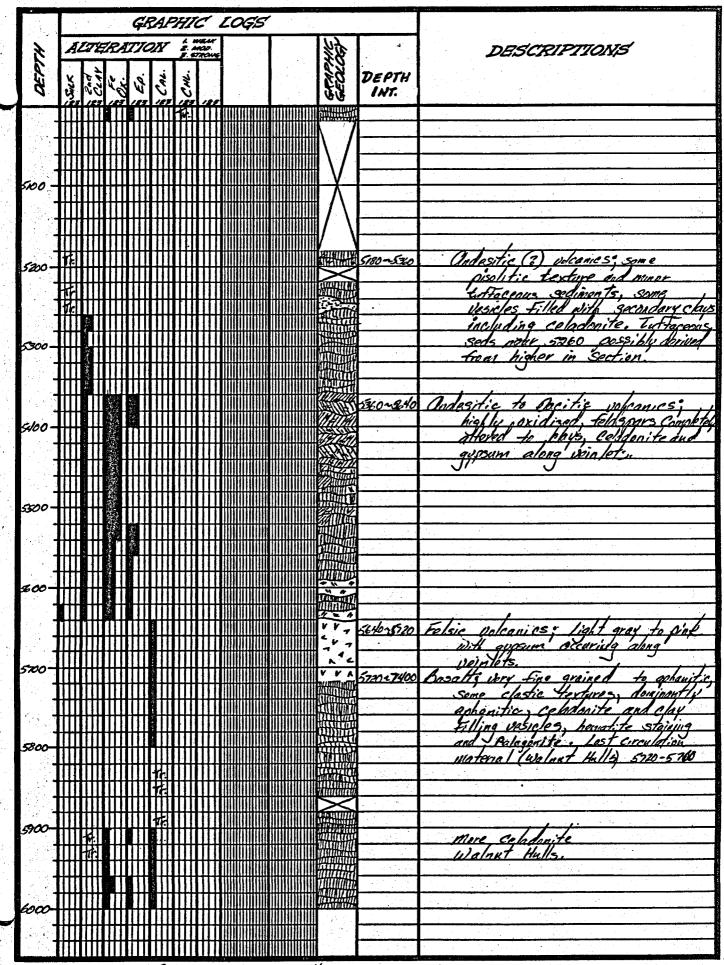
DRILL HOLE RICHARD WEISHAUPT # 1 LOCATION SE, Sec. 1, T. 19N., R. 30 E., CHURPHIL Co., Ver.

1		GRAPHIC LOGS		<u> </u>	
	*	ALTERATION & MEAN 2. MAD. 2. MAD. 2. STROME	12/2		DESCRIPTIONS
	<b>CEPTH</b>	4/2 . 2 2 60	22	DEPTH	
	4	20 12 12 12 12 12 12 12 12 12 12 12 12 12	<b>E</b>	INT.	
	3100 -				
	3200-			VX5.	
					Pyrite and cakete dithin veinlets
	3300-				
	3400-		7.7.	3380-3440	Tottocenys adiments, light gray to
			Ť. Ť.		white, pyritic, colearends coment
				3/14/023460	
					.sediments.
	3500·				-1.1.
				3520~3660	Tuttaceous sediments and minor inter lovered hasaltic valcanies.
- <b>)</b>					sodiegat are clay-rich and
er en Erst	3600-		7		pyritie
			diction		
				• • • •	
	57 <i>0</i> 0-		7.4	3680-3840	
			4	Ĭ	Chundant tachylite and Crystaliae foxture mear 3820-3840.
			20.25		
	ممدا				
	<b>3800</b> .				
			7.7	- Q/A - 20-	Coarse grouned Inffaceous solments,
	<i>7100</i>		2.4.4	3804300	Coarse grained Intracting Sommes,
				3900-394	Catachestite, quanty withing and pritice
				3960-412	Basic to intermediate incames, dominant
	4000				ly 1166 to phaneritie; quarte colorte
		<del>-1113</del> 1143111			Stating
				3-11	J

DRILL HOLE RICHARD WEISHAUPT #1 LOCATION S. Sec. 1, T.19N., R.30 E., CHIRCHUI Co., Mes.

	GRAPHIC LO	is'			
1	ALTERATION & MALE		1/8		DESCRIPTIONS
DEPTH	Sult Con. Con.		22	DEPTH INT.	
4100-					
-			n n	420~4160	Araillically aftered Felsic Volcanics.
					Basic to intermediate volcaries.
1200 -				HOT	PISOlitics celatorite ocurs
					hematite staining Jurerbended
					MUASTONO IS MYGOR.
4300 -					
11/2-					
4400 -					
4500-					
4600-					
					Colodonite anyodules and ibinlets.
1700 -					Gypsom and anhydrite as
			$\setminus$		
4800 -			X		
1900-					Glickerside Surfaces apparent an
	m line in the line				Some grains (Not BIT Gouge). Quarty winders present:
5000 <del>-</del>					
			#		

DRILL HOLE RICHARD WENHAUPT # 1
LOCATION SE, Sec., 1, T.AN., R.SOE., CHURCHILL Co, NEV LOGGED BY BLACKETT



DRILL HOLE RICHARD WEISHAUFT # 1 LOCATION SE, Sec. 1, T. 19N., R. 30E, CHURCHILL CO., NEV.

		GRAPHIC LO	as'			
	7	ALTERATION & MEAN & MOD & STRONG		44		DESCRIPTIONS
•	DEPTH			28		DESCRIT TIGIP
	8	1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		27	DEPTH INT.	
-		185 125 185 185 185 185 185				Besaltie and Andesitie volcanes
						continued some Flori pliqued.
	ν, -					Mornhland Phonocrysts, visicles
	٠.					Clavs.
	6100-					
					4.	
	-					
	-	· · · · · · · · · · · · · · · · · · ·				
	6 <b>2</b> 00 –			語		
	6300-					
	-					Celadraite es posicle tilling
	-					
in a	-					
	<i>es</i> 600-					
	-				73	achydrite (gypsum) or Wainlets.
	_					
	-					
	6500 -					
	-			$\times$		
					1. 16.55	
	400					
	-					Calcite as Weinlets
	<del>-</del>					
99						
	6700-					
					tair is in a	
	6800					What a think and
						Abandant colodonite amyglulos.
	, ,, <sup>,</sup>					
	]					
	6900-					Caladarite and oursum lanhydrite
						as Ven Filling
				差割		1 2 20 11 2 2 11 11 1
						7 / // // //
	7000-					Microcrystalline great or baselic
						ARUSTIC POSTINECA.
	-					
ı				±		

DRILL HOLE RICHARD WEISHAUPT # 1 LOCATION SE, Sec., 1, T.19U., 2.30 E., CHURCHIU Co., NO.

	Π			GI	RAI	?H!	C	ZO	<i>55</i>	,			
7	A	T 2	[RA			2.					1/2		DESCRIPTIONS
DEPTH	Sur	100 X	ين ي	B.	007	CHL.					EQU	DEPTH INT.	
<del> </del>	117			í	111							/ N/.	
	Ш	Ш	Ш	Ш		Ш	IIII						
-	$\parallel \parallel$	H	H	-			╂┼┼┼						
7100-	Щ	Щ	Щ	Ш		Ш	<b>1</b>		Ш				
-	₩	$\parallel \parallel$	$\mathbb{H}$	$\mathbb{H}$			╂┼┼┤						
	Ш	Ш	Ш				$\prod$						
-	₩	$\mathbb{H}$	$\parallel \parallel$	$\mathbb{H}$									
7200-	Ш	Щ	Щ	Щ	Ш		Ш						
-	₩	$\mathbb{H}$	₩				$\{ \} \} \}$						
	Щ	Щ			Щ	Ш							
2300-	₩	₩			$\parallel \parallel \parallel$								
	Щ	Щ				Ш							
	₩	HH			+								
2400-	Ш	Ш								Ш		7/0. 7000	
•	₩	$\parallel \parallel$			4	2					~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	7400-7520	Felsic Tuff: Now fine grained prob.
	Ш	Ш	Ш	Ш			Ш			Ш	4 5 A	<u> </u>	pymolastic textures and quarty
	╫	Ж								Ш	200		ikining. Calcite as cekent!
7520	Ш	Ш	Щ	Ш						Ш	3 60	7520×7900	
	╫	H									4		Mixed with telse volcanies from above. Some Calcite winders.
	Ш	Щ	Щ										borgaing gatively matic valeanies
200 -													Sown inves
	Ш		Щ		Ш	Ш							
-	₩	$\parallel \parallel$	$\parallel \parallel \parallel$		4								
7700-	Щ	Щ	Щ		M	Щ	Ш						
-	₩	$\mathbb{H}$	╂┼┼┤			HH							
	Щ	Щ	Щ			$\prod$	Ш						
	₩	$\parallel \parallel$	₩		+	HH			₩			<b>}</b>	
200-	Щ	Щ	Щ			$\prod$							
-	₩	$\parallel \parallel$	HH			HH	HH						
	Щ	벢	Щ			Щ	Ш						
7900-	₩	₩	₩	₩		H						7900-7940	
	脚	Ш	Щ	Щ	Щ		Щ						M. xad
	₩	₩		₩			##					7700-840	Bosalt: Chloritie, dark brown, mosice,
5000-	協	Ш		<b> </b>	1		Ш						
	₩	₩	₩	╫	H		HH					<u> </u>	
	Ш	Ш	Ш	<u>                                     </u>	Ш	Ш		Ш					

DRILL HOLE PICHARD WEISHAUPT # 1 LOCATIONSE, Sec. 1, T. 19N., D. 30E., CHURCHILL Co, NEW

	Т			GL	841	947	C .	LOG	5	-	_		0 01	
*	A	LTE	TRA		_		NEM NGO. THOME	1/2						DESCRIPTIONS
DEPTH	Sur	CLAN	13%	£6.	CA.	1						EQQ	DEPTH INT.	
<b>/</b>	1	117	<b>I</b>	117			188					3.0		Alored hazalt (as above ) and folice
			Ш	Ш		Ш	Ш				Ш	30	8040-8110	tutto pyroclastic textures.
	Щ	₩									Щ	200	8040-8100	Mostly basalf with some Febre tuff
2100		╫	##								Ш			and silkstone.
8100-	Ш	Ш	Ш		Ш	Ш	Ш						8100-8360	Bosalt: massue, chloritie, mixed
	$\blacksquare \Box$	₩		4		$\blacksquare$	Ш		Ш			田田		with minor lighter gray tuttacenes
	╂╫	╂╫╫	###		H		-							rocks.
<i>5210-</i>	Ш	Ш	Ш	XII	Ш	Ш	Ш				Ш	a Trada		
<b>.</b>	₩	$\parallel \parallel \parallel \parallel$			$\parallel \parallel \parallel \parallel$		$ \!\! \!\! $				Ш			Ayate wink to
	╫		HHH	4	₩	<b>!</b>	$\parallel \parallel \parallel \parallel$		₩		#	1.1.1 million	8240~8260	tokic toff: luft and mail.
	Ш	Ш	Ш		Ш	Ш	Ш					$\geq \leq$	VEN 0600	air tall-
8300-	₩	Ш	$\parallel \parallel \parallel \parallel$	Щ	Щ	<b> </b>	$\parallel \parallel \parallel$		Щ					
	╂┼┼┼			H										
	Ш	Ш	Ш		Ш	Ш								
-	$\blacksquare$			Ш					Ш		Ш		83A-840	Tuffand Luffaceous Sedimentary racks;
<i>8400</i> -	₩			###	╫						₩			light gray to white with Miner
	Ш	Ш										计雕	9420-8180	Mixed Basolt and tuttocenus maks.
	₩		$\coprod$	411		Ш			Ш		Щ	語		some andesite(3), calcite and
	HH		+++	H	#		+++				$\blacksquare$	計畫	- 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	pyrite vein lets.
850 -	Ш	Ш	Ш		Ш	Ш								abundant lost circulation motorial
		Ш	Щ	311	Ш		1111				Щ			(Mica)
		HH	###	H			<del>.    </del>				₩	- 444		Percelastic textures of hourstite
8600-	Ш	Ш	Ш	Ш		Ш	Ш				Ш			Stoined test.
-	Ш	Ш	Ш	Ш	Ш		<b>     </b>		Щ		Щ	-	14 54	
	##	A	+++		+++		╫╢				₩			
			Ш	Ш	Ш	Ш	Ш							
8700-		1111	<b>    </b>	Щ.	Ш		Ш		Ш		$\parallel \parallel$	$\geq \leq$		
	$\mathbb{H}$	<b>     </b>	╫╫	₩	+++		╫╫				₩	出		
	Ш	Ш	Ш	Ш		Ш	Ш					<b>猫</b>		
]	Щ		Щ	Щ	Щ	Щ	Щ		Щ	ЩЩ				
5800-	$\parallel \parallel \parallel$	4	╫	++	$\mathcal{H}$		<del>    </del>				#		9750-9.100	Tuttaceous claustone and Sittstone,
	Ш	1	<b>     </b>		<b>4</b>		<b>     </b>				<b>   </b>  :	<b>-</b>		material appearing in Samples.
	Ш	Ш	Ш	Ш		Ш	Ш							appearing in Surifice
	$\mathbb{H}$	HH	HH	$\mathbb{H}$	₩		<del>         </del>		$\blacksquare$		₩			
3900-	H		Ш	Ш	$\mathbf{m}$		Ш					7		Tuttaceous rocks Continued Lolf
1 ]	Ш	Ш	Ш	Щ	Щ	Ш	Ш		Ш			<u> </u>		gray to white don't fine graniest,
-		}	<del>         </del>	$\mathbf{H}$	##	<b>           </b>	HH				₩:	<u> </u>		- Good shipplite to applite able flow
2000	$\parallel \parallel$	<b>    </b>	<u>   </u>	$\parallel \parallel$	<b>X</b> H		<u>                                      </u>				#			full and inferstratified purtall
9000-	Щ	Ш	Ш	Ш	Щ	Ш	Ш		Ш					MALLEN I
<b>'</b>		₩	<del>∐</del>	$\parallel \parallel$	₩	<b>     </b>	HH					-		
	Щ	III	Щ		THE			<u> </u>	ЩЩ	mmill	Щ	بلسسي		

DRILL HOLE PICHARD (1) EISHAUPT # 1
LOCATION SE, Sec. 1, T. 19 N., R. 30 E., CHIRCHILL Co., NEV.

	Ī		x-1,:10. 1	GH	ZAP.	2470		LOG	5				
7	A	TE.	RA			1. H 2. M 3. S7			T		19%		DESCRIPTIONS
QEPTH	W.	- A					nave		1		22	A	
8	S	Cin	59	3	Cal.	CML	• {			•	33	DEPTH INT:	
				m	Ń							9020-40	Stickensides; possible foult
-	Ш		Ш	Ш	И		Ш						No fragmental textures apparent.
_	╫╫	$\mathbb{H}$	HH		$\mathbb{H}$				Ш				
9100 -	<b>1</b>	$\coprod$	N	Ш		$\dagger \dagger \dagger$	$\dagger \dagger \dagger \dagger$				7.7.5		
-	Ш	$\coprod$	Ш		$ \mathbf{M} $	Ш	Ш					900-9120	Tuffaceous rocks; with basaltchips
	╂┼┼		H	Ш	Ш	+++	HH				芸芸	91222	Compasing ~30% of the sample.
_	Ш		存				Ш					1120~	THE THE TENTE OF T
9200-	Ш		<b>)</b>		Ш	Ш	Ш				1-74	7.3.	
- Committee of the Comm	<b>1</b>	#	$\ \cdot\ $	HH			+ + + +					7.0.	
	<b>1</b> 1111	Ш	Ш	Ш	Ш	Ш	Ш						
-		Ш	Ш			<b>     </b>	$\coprod$						
220-	<b>1</b>	HH					HH				$\Rightarrow$		
	Ш	Ш	Ш		Ш	Ш	Ш				7-2-		ten forguental textures
-	$\parallel \parallel \parallel$	Ш	$\parallel \parallel \parallel$	$\parallel \parallel \parallel$	Ш		$\parallel \parallel$				<u> </u>	5.8	Accasional blobs of Magnetite
7400 -	<b>1</b> 111	##	$\parallel \parallel \parallel \parallel$		HH		++++				T5		(1000 SICHA I SILEDS CI IMAGNETITE
1400 -	Ш	Щ	Ш		Ш	Ш	Ш				$\bowtie$		
-		14	-				HH						Most at unit largely were fine
	1111		Ш				$\dagger \dagger \dagger$						Hextures and hornebland and
800-	Ш	Ш	Ш		Ш		$\prod$						piotite micro phonocrusts locally
-	╫╫	Ш	Ш				+++						present.
					Ш		$\dagger \dagger \dagger$				IX		
	Ш	Ш	Щ			Ш	$\coprod$		Ш		<u> </u>		01 1 1 1 1 1 1 1 1 1
9600 -			##	HH	3++		+++				4		Obundant lost Cincaportion material
	Ш					Ш	Ш						(dica, Walnut hulls, etc.).
	Ш	Щ	Ш		Ш		+++						
2		Ш	HH		<b>}</b> #		HH				Ā		
9200 -	Ш	Ш	Ш	Ш	Ш	Щ	Ш				7.7.		
	$\parallel \parallel \parallel$	Ш	$\parallel \parallel \parallel$	$\blacksquare$	Щ	$\parallel \parallel \parallel \parallel$	H				-0		
		HH		HH	#	<del>    </del>	##						
7800-	Щ	Щ	Ш	Ш	$\prod$	Щ	Щ		Щ		4 - 4		
	$\parallel \parallel \parallel$	HH		+++	##	<del>         </del>	+ + +						
		Ш		***			##				V		
	Ш	Щ	Ш	Ш	Ш	Ш	Ш		Ш		$ \Lambda $		
9950		Ш		+++	Щ	<del>         </del>	$+\!\!+\!\!+\!\!+\!\!+$				<u> </u>		
	Ш	Ш		HH			Ш				AT A		Calcite occurring as variets
	Ш	Щ	Ш	Щ	1	$\coprod$	Щ		$\mathbf{H}$		7.7		Felsic tuffacents rocks mixed
	₩	HH		+++			+++				<u>.</u>		with Basaltic MRNs and Dlock Shale (2) Frogments.
15,000 -		Ш	Ш			Ш	Ш				<u> </u>	_	Comme (1) reagments.
	Ш	Щ	$\prod$	Ш	Щ		$\prod$		111111			T5:10,014	
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