



Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
50				Cuttings (cont'd)	0'-5' Silty sand. Average grain size 0.10". 20'-25' Clay present (less than 10%). 30'-40' Gravelly clay zone.
55	√√√√√++++		19		
60	++++√√√√		11		
65	++++√√√√		7		65'-70' Andesite replacing rhyolite in volcanic fraction.
70	++++√√√√		9		
75	++++√√√√		7		75'-80' Decrease in average grain size to 0.10".
80	++++√√√√		18		80'-85' Average grain size 0.4".
85	++++√√√√		7		
90	++++√√		15		
95	++++√√√√		10		
100	++++√√√√		14		100'-105' Average grain size decreased to 0.2".
105	++++√√√√		10		105'-110' Bimodal grain size distribution: Gravel 0.6" and sand 0.1 average.
110	++++√√√√		4		
115	++++√√√√		12		

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
115				Cuttings (cont'd)	
120	+++++VVV		19		
125	+++++VVV		10		
130	+++++VVV		7		
135	+++++VVV		12		
140	+++++VVV		18		
145	+++++VVV		20		
150	+++++VVV		55		150'-155' Alluvium became more consolidated. Samples contain cuttings of alluvial matrix. This matrix is included in caliche percentages.
155	+++++VVV		56		
160	VVVV++++		49		160'-415' <u>Limestone (Panther Seep)</u> : Interbedded grayish olive to olive gray (10 Y 4/2 - 5 Y 3/2) silty limestones and siltstones; medium dark gray (N4) shaley limestones; brownish gray, dark gray (N3) to grayish black (N2) micritic to fossiliferous limestones and grayish black to medium light gray (N6-N2) dolomites. "+" symbol represents all lithologies in formation.
165	+++++		80		
170	+++++		155		160'-165' Abrupt decrease in cutting size, and increase in angularity. Increase in amount of calcite.
175	+++++		14		169'-180' Sandy, silty limestone.
180	+++++		54		

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180				Cuttings (cont'd)	180'-200' Silty limestone with calcite and limonite.
185	+++++		27		
190	+++++		32		
195	+++++		21		
200	+++++		50		200'-205' Dark gray crystalline limestone with calcite fracture filling evident. Significant decrease in "siltiness".
205	+++++		47		205'-210' Dark gray limestone. Calcite-filled fractures. Brown/gold siltstone.
210	+++++		3		210'-215' Dark gray limestone. Cuttings are very fine-grained (fine sand size). Some siltstone and calcite present.
215	+++++		19		215'-220' Silty limestone, drab olive laminated siltstone, black, possibly shaley limestone.
220	+++++		41		220'-225' Cuttings are predominantly very fine grained (average .03"). Silts interbedded with limestone. Possibly some shales (fissility evident).
225	+++++		41		225'-230' Silty limestone. Large percentage of (60%) olive gray-brown siltstone. Black limestone. Some hematite staining on siltstone. Fractures evident (calcite-filled). Average cutting size .10".
230	+++++		26		230'-235' 98% dark gray-black micritic limestone. Calcite fracture fillings evident.
235	+++++		27		235'-240' Slightly finer grained. Same as above.
240	+++++		27		240'-245' 15% light gray limestone, 80% black limestone, possibly shaley silts -clayey.
245	+++++		30		

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
245				Cuttings (cont'd)	245'-250' Light gray to black shaley limestone. Some (10%) siltstone.
250	+++++		18		250'-255' Olive-brown to rust gold iron-stained siltstones and dark gray-black limestone. with calcite-filled fractures. Much white calcite present (5%).
255	+++++		19		255'-260' Black shaley limestone. 5% siltstone (olive-brown). 1% calcite (fracture-fill).
260	+++++		22		260'-265' Black calcareous shale, fissile platy cuttings.
265	+++++		29		265'-270' Limestone-black to dark gray; (40%) calcite-filled fractures. Siltstone-olive, calcareous, laminated, hematite-limonite staining (60%).
270	+++++		22		270'-275' Silty, shaley limestone. Some limonite staining of siltstone. Calcite filled fractures in limestone apparent.
275	+++++		26		275'-280' Silty limestone. Calcite and calcite filled fractures evident. Cuttings are predominantly fine to medium sand-sized.
280	+++++		27		280'-290' Dark gray to black limestone. Fracture-fill calcite evident.
285	+++++		54		
290	+++++		23		290'-295' Same as above with 5% siltstone.
295	+++++		35		295'-300' Cuttings are very fine grained (less than .02" to .10"). Light gray to brownish gray. Slight amount siltstone. Calcite from fracture-fill evident.
300	+++++		73		300'-305' Medium gray-brown hard crystalline limestone. Some iron staining.
305	+++++		91		305'-310' Dark gray crystalline limestone. Calcite-filled fractures evident.
310	+++++		15		

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
310				Cuttings (cont'd)	310'-320' Dark gray to black fractured dolomite. Calcite-filled fractures. Some iron staining.
315	+++++		16		
320	+++++		13		320'-335' Dark gray to black dolomitized limestone. Calcite-filled fractures. Some iron staining.
325	+++++		21		
330	+++++		16		
335	+++++		20		335'-340' Same. Some limonite(<1%).
340	+++++		18		340'-345' Dark gray to light gray dolomitized limestone. Some fracture-fill calcite evident. <1% limonite.
345	+++++		20		340'-380' Limonite stained siltstone.
350	+++++		20		345'-350' Light gray to dark gray fractured limestone slightly dolomitized. Calcite filled fractures. <1% limonite. <5% brownish gray limestone.
355	+++++		15		350'-355' Predominantly medium gray limestone. (20% dark gray). Slightly dolomitized. Some limonite (<1%). Calcite-filled fractures. (≈5%). 10% brownish-gray limestone.
360	+++++		10		355'-375' Dark gray-black dolomitized limestone. 1% calcite fracture fill.
365	+++++		15		
370	+++++		15		
375	+++++		15		

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375				Cuttings (cont'd)	
380	+++++		14		375'-380' Dark gray-black dolomitized limestone. Calcite present as fracture-fill. Fractured zone evident (bit chatter).
385	+++++		11		380'-385' Same. Few fragments siltstone. Average cutting size increased to .2" (fairly uniform).
390	+++++		14		385'-390' Same. Slight increase in siltstone (2%). Range in cutting size from fine sand to .3".
395	+++++		13		390'-395' Same. Dark gray. Slightly more dolomitization. Less siltstone (few fragments). Calcite still evident.
400	+++++		34		395'-400' Dark gray-black dolomitized limestone. Slight increase in gold-olive silt stone (1%). Fracture-fill calcite still evident.
405	+++++		16		400'-405' Dolomite - Dark gray-black. Fractures evident. Calcite filled cuttings fairly uniform in size average 25".
410	+++++		11		405'-410' Same. Cuttings less uniform in size.
415	+++++		not logged		405'-410' Same. Cuttings slightly finer.
420					TD = 415'
425					*NOTE: Sounded borehole at 409.9' on 06/01/90.
430					
435					
440					