

Log of Borehole

Borehole IRP-6

page -1- of 1

Project <u>Anderson AFB IRP</u>	Total Depth <u>575 feet</u>	START
Location <u>N201923 E223516 GZ 538.5</u>	Borehole Dia <u>10.75 inches</u>	Date <u>2/18/87</u>
Geologic Log by <u>M. Shafer</u>	Depth to Fluid <u>514.6 feet bgl</u>	Time <u>1655</u>
Driller <u>Marianas Drilling</u>	Rig <u>CP 650W</u>	How Left <u>Open</u>
Geophysics by <u>M. Shafer</u>	Bit(s) <u>10.75 inch Percussion Hammer</u>	hole with surface
Weather <u>Prtly cldy, brz, n 92 deg F</u>	Fluid <u>Fresh water with foam/air</u>	casing and lock

Depth	Pene. Rate (FPM)	Circulation Q (gpm)	OVA (ppm)	Sample		Geologic and Hydrologic Description	
				#	Interval	Lith. Symbol	
0					X		0.0'-5.0': LS fill material.
					X		
					X		10.0'-15.0': LS - cuttings from 1 to <1 composed of med. grained size sand, grains subangular to s rounded, cuttings mod. crumb mod. to poorly cnt., mod. v por., white N9 except for 5-cuttings mod. red orange 10R6
25	1.16	5			X		
	New Day 2/19/87				X		
					X		
					X		20.0'-30.0': Same as above except cutti <18mm.
					X		
50	0.74				X		35.0'-40.0': Same as above except pred. med. sand size, subangular, occ o: sharp frag <3mm.
					X		
					X		45.0'-60.0': Same as above except 75% medium coarse sand, very crumbly, su rounded, 25% sharp frag moderate hard, concol fracture 50% porous LS cutting moderately friable.
					X		
75	0.68				X		70.0'-75.0': Same as above except 50% frag 50% porous cuttings.
					X		
					X		80.0'-105.0': Same as above except 75% poro cuttings, 1 to 15mm, 25% cryst. line LS <3mm, blocky, hard.
100	0.83		0		X		
					X		110.0'-115.0': Same as above except 85% very hie porosity, trace of fossil cut tings from 1 to 15mm, moderatel hard.
					X		
125	0.81	5			X		120.0'-150.0': Same as above except 50% wic decreased porosity, very unifor in size (2mm), 50% sharp frag <4mm.
					X		
					X		155.0'-160.0': Very homogeneous, moderate to 1 vis. porosity, 1 to 10mm moderate hard, subangular, WH N9
150	0.66				X		
					X		165.0'-170.0': Same as above except 50% lit moderate vis. porosity.
					X		
					X		175.0': Same as above except cuttings u; to 18mm.
175	0.74				X		

Log of Borehole

Borehole _____

page 2 of 4

Project <u>Anderson AFB IRP</u>	Total Depth <u>575 feet</u>	START <u>FINISH</u>
Location <u>N201923 E223516 QZ 538.5</u>	Borehole Dia <u>10.75 inches</u>	Date <u>2/18/87</u> <u>2/22/87</u>
Geologic Log by <u>M. Shafer</u>	Depth to Fluid <u>514.6 feet bgl</u>	Time <u>1635</u> <u>1425</u>
Driller <u>Marianas Drilling</u>	Rig <u>CP 650W</u>	How Left <u>Open</u>
Geophysics by <u>M. Shafer</u>	Bit(s) <u>10.75 inch Percussion Hammer</u>	hole with surface
Weather <u>Prtly cldy, brz, w 92 deg F</u>	Fluid <u>Fresh water with foam/air</u>	casing and lock box.

Depth	Pene. Rate (FPM)	Circulation Q (gpm)	OVA (ppm)	Sample		Lith. Symbol	Geologic and Hydrologic Description
				#	Interval		
175					X		
					X		
					X		
					X		
200	0.66	5	0		X		180.0'-190.0': LS - 20% high vis. porosity, <17mm, mod. hard, WH N9, 80% crystalline LS, very poor vis. porosity, angular cuttings <10mm, hard to very hard, between white and very pale orange 10YR8/2.
					X		
					X		195.0'-210.0': Same as above except 50% WH N9, 50% very pale orange.
					X		
					X		215.0'-220.0': Same as above except 75% grayish orange, - mod. to high vis. porosity, mod. to high fossil, cuttings from 2 to 12mm, some sharp frags with no vis. porosity.
225	0.83				X		
					X		
					X		225.0'-235.0': Same as above except grayish orange, and pale orange, staining variable.
					X		
250	0.93	5	0		X		255.0'-260.0': Same as above except 100% very pale orange, from poor to mod. vis. porosity, round cuttings to sharp frags, from 2-23mm.
					X		
					X		265.0'-270.0': Same as above except abundant fossil frags, trace orange staining.
275	0.69				X		
					X		275.0': Same as above except trace orange stain, very high vis. porosity.
					X		
					X		280.0'-285.0': Same as above except trace orange frags, sharp, no porosity, conchoidal fracturing, decrease in fossil.
300	0.74	5			X		
					X		
	Drill Break				X		290.0'-300.0': Tri-colored appearance of cuttings becoming more apparent: WH N9 5%, very pale orange 10YR8/2 95%, pale yellow orange 10YR8/6.
					X		
	Drill Break				X		
325	0.69		0		X		305.0'-320.0': Same as above exc. 100% very pale org., varies in por., from 1 to 20mm.
	New Day 2/21/87				X		
					X		
					X		325.0': Same as above exc. trace frags with light brown stain 5YR5/6.
					X		
350	0.42				X		

Log of Borehole

Borehole

page -3-

Project <u>Anderson AFB IRP</u>				Total Depth <u>575 feet</u>		START	
Location <u>N201923 E223516 QZ 538.5</u>				Borehole Dia <u>10.75 inches</u>		Date <u>2/18/87</u>	
Geologic Log by <u>M. Shafer</u>				Depth to Fluid <u>514.6 feet bgl</u>		Time <u>1655</u>	
Driller <u>Marianas Drilling</u>				Rig <u>CP 650W</u>		How Left <u>Open</u>	
Geophysics by <u>M. Shafer</u>				Bit(s) <u>10.75 inch Percussion Hammer</u>		hole with surfa	
Weather <u>Prtly cldy, brz, n 92 deg F</u>				Fluid <u>Fresh water with foam/air</u>		casing and lock	

Depth	Pene. Rate (FPM)	Circulation Q (gpm)	OVA (ppm)	Sample		Lith. Symbol	Geologic and Hydrologic Description
				#	Interval		
350					X		330.0'-370.0': Pale yellow-orange staining creases to 335.0' then diminishes very pale orange stain constant.
					X		
					X		
					X		
375	0.31	5					375.0'-395.0': Lost circulation (of cutt only) due to cavity at 370.0'
		0					
400	0.71	5	0		X		400.0'-425.0': LS - 75% pale yellow orange, wh., poor to good vis. por., hard, occas. friable. cutn 50% sharp frags, 50% rnd cuttings, from 1 to <10mm, show fossil frags.
					X		
					X		430.0': Same as above exc. from 1 to 6
					X		435.0'-450.0': Same as above with 50% white pale yellow-orange and pink-g staining.
					X		
425	0.22	5			X		450.0'-455.0': Predom. LS - 40% white, 20% p yel. orng., 20% pink gray (LS as above), 20% sltstn., gry olive grn., well rnd cuttings, from 1 to 12mm. occ dark & qtz. min. incl., m brittle., por. vis. por., occ light brn. cuttings 5YR5/6.
					X		
					X		456.0': Aluton Formation as picked fr Borehole Natural Gamma Log.
					X		
					X		460.0'-465.0': LS (25%) & Sltstn. (75%), pre lt. olive gray, abun. dark m incl., mod fri., shrded., ve poor vis. por., trace brit shale (lt. olive gray).
					X		
					X		470.0': LS (15%) & Sltstn. (85%).
					X		475.0': LS (10%), Sltstn (80%), S (10%).
500	0.54				X		480.0'-490.0': Sltstn. (50%)-olive gray, from to 5mm, mod. hard, britt., -as fri., qtz. & dark min. in (40%), Shale (10%), light oliv gray, shrp to shrded., mod hard.
					X		
					X		
					X		
525		5			X		

Page 4 of 4

0