

Well Log Washington County

TEXAS - REDDING GASSNOR COOPER MTN. #1 Location: 553' S. and 884' W. of E $\frac{1}{4}$ cor. of sec. 25
T. 1 S., R. 2 W. Elev. 782.6'.

Depth: 9263'

Cored Intervals	Noteworthy Details		Generalized Description of Lithologic Units
	Trays	Recovery and Thicknesses	
981- 987	1		Fine gr. vesic. bas.
1072-1082	1-2		Fine gr. clay sh., to tuffcs. Silty sh., iron-stained.
1094-1106	1-3		Massive gray tuffcs. clay - silt, carb. frags., ash and pumice layers.
1106-1118	1-2		Bedded brown to gray fine gr. conch. fract. clay sh., <u>hard</u> .
1118-1129		7'	Same.
	1-2	4'	Gray highly micaceous silt, carb. frags.
1133-1145	1-2		Coarse basalt (clay) breccia, frags. up to $\frac{1}{2}$ ".
1361-1381	1		Fine gr. green clay sh.
	2		Silty micaceous mottled, gray, fslfrs. shale.
	3		Same, well bedded, thin coaly layers.
	4		Same.
	5		Becoming coarser, tuffcs., massive to the contact with -
	6		Fine gr. tuffcs. micaceous ss.
	7		Fine gr. conch. fract. clay sh.
1430-1459	1		Gray micaceous silt w. abdt. carb. frags., some megaf. (small).
	2-3		Same.
	4		Medium gr. massive tuffcs. ss.
	5-6		Loose unconsol. med. to coarse gr. gray sandstone.

Cored Intervals	Noteworthy Details		Generalized Description of Lithologic Units
	Trays	Recovery and Thicknesses	
-594-1614	1		Fine gr. cg. and coarse bas. sand, much mica.
	2		Fine gr. massive brown ss.
	3		Med. gr. friable brown massive ss., micaceous.
	4		Same
	5		Same, with 1" large ang. qtz. pebbles $\frac{1}{4}$ ". Pyrite fine gr.
	6		Same, basaltic, w. fine pebbles.
	7		Same.
1980-2000	1		Fine grained brown massive siltstone.
	2		Same, with 1" layer of ang. qtz. pebbles $\frac{1}{2}$ ". Pyrite fine gr.
	3		Fine gr. br. massive siltstone.
	4		Fine gr. br. micaceous ss.
	5		Same, occ. coarse lenses.
	6		Same, occ. carb. frags.
	7		Coarse gr. br. silt, shaley layers.
	8		Coarse gr. br. silt.
2192-2204	1		Green siltstone.
	2		Massive dark gray shale.
, 2204-2209	1		Green siltstone.
	2		Green siltstone.
2435-2447	1-5		Massive fine gr. green ss. micaceous.
2447-2457	1-5		Same, megafsl in #4 (Mytilus).
2457-2467	1-4		Same.
2467-2477	1-4		Same.
2477-2488	1-4		Same. A few fssls.

Cored Intervals	Noteworthy Details		Generalized Description of Lithologic Units
	Trays	Recovery and Thicknesses	
2498-2508	1-4		Same - shale last 6".
2744-2754	1		Coarse gr. angular micaceous highly fsslfirs., basaltic and shaley ss. or fine cg.
	2		Shell - bed, 60% fossils, Mytilus, etc.
	3	4"	Shell bed.
		2"	Green shale.
		1"	Carbonaceous sh.
		6"	Green silt.
		3"	Fine shale breccia.
		1'	Blocky shale.
2754-2764		3"	Carb. shale.
	1-2'		Fine shale, carb. frags.
		1"	Boney coal.
		6"	Shale breccia.
	2-3		Green fine gr. ss. with ang. sh. frags. 10-20% up to $\frac{1}{2}$ ".
	4		Green siltstone w. shale frags.
2764-2775	1-4		Med. gr. mic. ss. and green shale alternating with shale breccia.
2775-2784	1	B	Brown shale breccia, frags. up to $\frac{1}{2}$ ".
	2	6"	Shale breccia.
		1'	Coal bone.
		1"	Sheared and slicked clay.
	3		Sheared and slicked clay.
	4	2'	Sheared and slicked clay.
		1'	Bone.

Cored Intervals	Noteworthy Details		Generalized Description of Lithologic Units
	Trays	Recovery and Thicknesses	
2784-2796	1	2'	Bone.
		2'	Clay breccia and siltstone.
	2	2'	Siltstone 2. plant frags.
		6"	Carbonized log.
		1'	Coarse tuffs. and andesitic grit.
	3	4"	Carb. sh. and bone.
	2'	Brown coarse gr. ss.	
2796-2806	1-2		Coarse gr. ss. to coarse grit (brown).
	3		Med. to coarse gr. ss. w. occ. shell.
	4		Fine to coarse gr. grit. Fssls. abdt., esp. in coarser phases.
	5	3"	Fine conch. shale.
		3'	Med. to coarse gr. ss. some grit layers.
2808-2820			(6 to 10" layers of shells in coarse grit, separated by 6" to 2' of coarse ss.)
	1	6"	Shells in grit.
		10"	Shells in coarse ss.
		6"	Shells in grit.
		12"	Med. Gr. ss.
		6"	Shells in grit and breccia.
	2	28"	Coarse ss. w. occ. shells.
		1'	Shells in ss.
	3	3'	Breccia made up of shale and shell frags.
	4	4"	Shells in fine cg.
		1'	Coarse ss.
	1'	Shell frags. in fine cg.	

Cored Intervals	Noteworthy Details		Generalized Description of Lithologic Units
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3170-3180	1-2		Med. Gr. porph. andesite? Vesicular.
3310-3321	1-6	← Sand and tuffs	Fresh, dense, fine-grained aphanitics dark gray lava, some red veinlets.
3321-3333	1		
3500-3512	1		Fine grained basaltic - appearing shale, calcite zones, slickensides.
	2		Coarse grained siltstone, olive brown, micaceous.
	3-4		Same.
3512-3524	1-4		
3524-3534	1-4	← Sand and tuffs	Same.
3625-3637	1-4		Sheared and altered red black and green volcanic breccia. Lava frags. w. interstitial palagonite and nontronite(?).
3637-3649	1-4		Same as above. Some veins.
3657-3668	1-3		Same, fine grained.
	4	6"	Same.
		28"	Purplish black tuff.
3668-3680	1-4		Fine gr. alt. tuff-breccia, green, some coarse gr.
3788-3794	1-2		Black volcanic breccia.
4247-4258	1-3		Andesitic volcanic breccia.
4258-4268	1		Tuffcs. siltstone.
	2		Fine ss. and tuff-breccia, black, basaltic.
	3		Same, w. carb. frags.
	4		Fine siltstone, w. clamshell. This core shows calc. Xine replacement in patches.
4268-4278	1		Shaley ss., with ang. frags. and xtals. (tuff-breccia).

Cored Intervals	Noteworthy Details		Generalized Description of Lithologic Units
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	2	Goble ----- Cowlitz	Cnt. of Goble-Cowlitz, tuff-breccia over siltstone.
	3		Massive gray micaceous siltstone.
	4-5		Same w. carb. frags. and frams.
4278-4290	1-4		Fine gray micaceous massive siltstone with mega and micro-fossils.
4404-4411	1		Fine gr. silt and shale.
4411-4414	1		Fine gr. gray micaceous massive siltstone.
4490-4501	1-4		Medium to coarse gr. gray micaceous siltstone, massive.
4501-4511	1-4		Fine-grained spotted gray poorly bedded siltstone or silty shale.
4720-4732	1-4		Same - numerous small mega and micro- fossils.
4732-4744	1-4		Same.
4906-4918	1-2		Same w. fish scales.
4918-4930	1-6		Same w. megafossils, hard.
4930-4938	1-3		Still same, hard, jointed.
4938-4948	1-4		Fine grained, hard, badly sheared and broken gray micac. shale.
5087-5099	1		Fine gr. lt. gray tuff.
5099-5111	1-5		Same.
5111-5123	1-4	6"	Same. Remainder all like sample (igneous).
5271-5283	1-3	1' 6"	Hd. tuffaceous ss. Remainder all like samples (massive).
5283-5293	1-3		Same as above (see sample).
5300-5310	1-3		Same as above (see sample).
5587-5599	1-3		Uniformly same as samples (massive), except upper 4" which is same as previous 3 cores.

Cored Intervals	Noteworthy Details		Generalized Description of Lithologic Units
	Trays	Recovery and Thickness	
5599-5611	1-5	6"	Hd. crs. gravely ss.
		1'	Hd. shaly ss.
		7'	Hd. crs. gravely ss (gray to brown).
5742-5744		3' — Shale	Hd. fine gr. gray siltstone.
5754-5766	1-5		Hd. gray to brownish gray sdy. siltstone. Small pelecypods.
5766-5778	1-5		Hd. gray (sometimes mottled brown) siltstone; vein filled fractures in lower 8" of tray 4.
5778-5787	1-3		Same.
5787-5797	1-4		Same. Two slickensided surfaces in tray 2.
5797-5809 5810-5822	1 and 2		Tray of fragmental hd. shl. broken up in drlg.
7258-7270	1-4		Same lithology but darker gray color and harder. Whole core shot full of vein-filled fracture planes at all angles and directions.
7270-7282 7283-7294 7295-7306 7307-7318	1-5 Head Shale Sandstone Shale		Same lithology and color. Core somewhat broken up considerably veined. Signs of motion along some of the fracture planes.
7804-7816	1-4	5'	Hd., greenish-gray fine to coarse grained ststone. (about 6" conglomeratic).
		4"	Dk., brownish massive sh. and sdy. sh.
7816-7820 7821-7832 7833-7844	1 Shale		Same sh. w/4" very hd. fine gr., greenish-gray ss. at bottom.
7950-7967 7968-7979 7980-7991	1-4 Head Shale		Sec. 11 Same sh. s/2' of greenish near center of core.
8596-8607 8608-8619	1-2 Head Shale		Sec. 3' Core badly broken up, but appears to be same sh. but much veined and pyritized and very hard.
8694-8714	1-5	Core #82 Rec. 14	"Few bubbles of gas on sheath; no flash" Hd., med. to crs. gr., lt. to dk. gray ss. Considerable fracturing of veining. Evidence of movement along fracture planes.