

KEYS #1-28

LITHOLOGIC LOG

<u>LITHOLOGY</u>	<u>DEPTH</u>	<u>SURVEYS, TESTS, SHOWS, ETC.,</u>
INTERBEDDED FLOWS OF BASALT/TUFF	- 802'	RAN 9 5/8" J-55 & CMTD 1/2°
BASALT & ANDESITE FLOWS	802' - 960'	.45'
TUFF/COAL INTBD	960' - 1020'	
TUFF, FIRM	10208-1170'	
ANDESITE/TUFF & WELDED TUFF	1170' - 1370'	FRESH WATER FLOW 300 GALLONS PER MIN., SLIGHTLY GASSY
TUFF, FIRM	1370' - 1990'	CONT FRESH WATER FLOW
COAL/TUFF	1990' - 2060'	
TUFF, FIRM	2060' - 2306'	
COAL/TUFF	2306' - 2325'	
TUFF, FIRM	2325' - 2550'	INCREASE MUD FROM 9.3 TO 10.5 LBS/GALLON
CLAY/TUFF	2550' - 3210'	
TUFF WELDED IN PART	3210' - 3280'	
CLAYSTONE, BLK, CARB	3280' - 3260'	TR BLU GRN AND GOLD FLUOR NO CUT
SS/CONG/TUFF, INTBD, CARB,	3260' - 3650'	REAM AND JAR TIGHT HOLE PACK OFF
SS, TUFF, INTBD	3650' - 3840'	TIGHT HOLE, CAVING FORMATION
ANDESITE/SS	3840' - 3995'	TR PET. VAPORS NO CUT NO FLUOR 4° - 3949'
SS, GREEN, FRACTURES TR CONGLOMERATE NEAR BOTTOM	3995' - 5136'	LOSS OF CIRCULATION/ CONT. LOSS. 2° AT 5130', POOH AND TWIST OFF AT 1498', BACK OFF 3 TOOL JTS AND FISH, SET PLUG AT 3200' AND K.O.

## KEYS #1-28 RD#1

LITHOLOGIC LOG

<u>LITHOLOGY</u>	<u>DEPTH</u>	<u>SURVEYS, TESTS, SHOWS, ETC.,</u>
SS, VOLCANIC DERIVED	3330'-3360'	KOP 3327', TR ORNG MIN FLUOR NO CUT, DRILL DIRECTIONAL HOLE
TUFF/SLTSTN, CARB	3360'-3560'	8° @ N25W @ 3418', 7.75° N72W AT 3518', CHROM = 90% c1, 6.1% c2 3% c3, TR c4.
SS/TUFF, BLK/DKBRWN, CARB/CARB SLTSTN	3560'-3680'	FLUOR IN CUTTINGS BLUE GREEN /STRMNG BLU WH CUT, FLUOR IN MUD, BLU YEL, ALL CUTS VERY FAST, CHROM=85.7% c1, 7.3% c2, 4.14% c3, 1.67% c4, 1.7% nc4, TR c5 PENTANE PLUS. 7.25° 3660'
SLTSTN/SS/TUFF, VERY CARB,	3680'-3965'	CONTINUED FLUOR IN CUTTINGS, NO FLUOR IN MUD, FLUOR BLU-WH /FAST BLUE-WHITE STRMNG CUT, 7.75°-N18W AT 3762',
ANDESITE/VOLCANICS	3965'-4000'	RAN ELECTRIC LOGS AND SET 7" CSG W/870 SAX CEMENT @ 3953', DRILL AHEAD/ 6 1/8" BIT, 8° AND N12W AT 3987' (END OF CONTROLLED SURVEY DEVIATION).
SS/CLAY AND SAND, OCC WSRT, FN/MED GRAIN, TUFFACEOUS	4000'-4520'	8° AT 4103'.
SS, GREEN, FRACTURED/10- 30% CALCITE CRYSTALS	4520'-4540'	COMPLETE LOSS OF CIRCULATION, RETURNS GAINED AFTER ADD OF LCM
SS/INTBDD TUFF, WELDED IN PART	4540'-4625'	
SS/SLTSTN, FRACTURES/CALCITE CRYSTALS, BYPASS SHAKER AT 4660'	4625'-4770'	LOSS OF CIRCULATION/20-30% FLUID RETURN
NO RETURNS	4770'-5225'	DEPOSIT MUD AND CUTTINGS IN FORMATION, DRILLING BLIND
SND/TUFF, WH	5225'-5315'	SLIGHT RETURNS 20% m
VOLCANICS, RYOLITE, ANDESITE, INTBDD/ TUFFS	5315'-5455'	CHROM=68.6% c1, 23.5% c2, 7.8% c3 60% RETURNS
TUFF/SLTSTN, CARB IN PART	5455'-5550'	CONT LOSS OF DRILL FLUIDS

<u>LITHOLOGY</u>	<u>DEPTH</u>	<u>SURVEYS, TEST, SHOWS, ETC.,</u>
ANDESITE/SS AND TUFF INTBDD PORPHERITIC ANDESITE, REWRKD TUFF, SNDY TUFF	5550'-5710'	CONT. LOSS OF DRILL FLUIDS
ANDESITE, HARD, TUFF, WELDED	5710'-5870'	CONT. LOSS OF DRILL FLUIDS
	5870'-5935'	A/A
SS/SND/CLAY AND TUFF, WH/BLU, SILICEOUS AND CALCIC,	5935'-6045'	LOSS OF FLUIDS ABOUT 10%
VOLCANICS/SS, ANDESITE, TUFF, KAO CLAY	6045'-6145'	CALCITE SEAMS ALONG FRACURES
VOLCANICS, ALTERED/SS ZEOLITIC, CALCIC, GREEN ALTERED SND GRAINS	6145'-6325'	RETURNS OF ABOUT 95%
VOLCANICS, ANDESITE/ALTERED MINERAL'S,	6325'-6410'	RETURNS OF 98%
METAMORPHICS, SHIST	6410'-6539TD	