

WELL LOG SUMMARY

LOCATION	COMPANY CUMBERLAND AND ALLEGHENY GAS COMPANY				DIV. 4	FIELD Negro Mountain	WELL NO. 602 G-54
	FARM U.S.A. 186-A	ACRES 639 ^{ac} Unit	LEASE NO. 8875	DISTRICT - TOWN No. 3	COUNTY Garrett		STATE Md.
	TOPO. MAP Grantsville 7 1/2"	Quadrangle	2650 8725	Ft. South Ft. West	of of	39 ° 79 °	40 / and 12 / 30"
CONTRACTOR	TOP HOLE CONTRACTOR	CONTRACTOR -			Drilled from - Ft. to - Ft.		
	CONTRACTOR	ADDRESS -			Type of Rig -		
	DRILLING CONTRACTOR	CONTRACTOR Lohmann-Johnson Drilling Company			Drilled from 0 Ft. to 8640 Ft.		
	DRILLING CONTRACTOR	ADDRESS 1917 Clark Building 717 Liberty Ave., Pittsburgh, Pa. 15222			Type of Rig Rotary		
FIRST RIG COMMENCED (DATE)		DRILLING COMPLETED (DATE)		COMPLETED TOTAL DEPTH	DATE PURCHASED	FOR. WELL NO.	
October 15, 1965		December 17, 1965		* 8640 ft.	-	-	
HOLE SIZE	BIT GAUGE (INCHES)	24"	17 1/2"	12 1/2"	7-7/8"		
	FROM-TO (FEET)	0'-31'	31'-325'	325'-2400'	2400'-8640'		
CASING AND TUBING	SIZE (O.D.)	20"	13-3/8"	8-5/8"	5 1/2"		
	WEIGHT/FOOT	53#	48#	24#	17#		
	STEEL GRADE	-	H-40	J-55	N-80 & J-55		
(All Measurements less threads)	COUPLING TYPE	-	8rdthd S.T. & C	8rdthd S.T. & C	8rdthd I.T. & C.		
	SETTING DEPTH	31'	325'	2386'	8640'		
	LEFT IN HOLE	31'	325'	2386'	8640'		
CEMENT	NO. OF SACKS	45	300	850	200		
	TYPE	Common	Common	Common	50% Common 50% Pozzolan		
	WEIGHT #/GAL.	15.5	15.5	14.3 & 15.5	14.2		
PACKER	MANUFACTURER						
	TYPE						
	SIZE						
	SETTING DEPTH						
WELL STIMULATION	TREATMENT	TYPE *	SIZE AND/OR AMOUNT	ZONE TREATED	OPEN FLOW MCF/DAY	PERFORMED BY	DATE
	Hydraulic Fracture	Water Frac.	21,000 gals. w. 22,000 lbs sand	From 8545' to 8555'	Before 770 After 8250	Halliburton	12 9 65
				From to	Before After		
				From to	Before After		
				From to	Before After		

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OPEN FLOW TEST	DATE GAUGED			FORMATION	PAY ZONE		TYPE GAUGE (SPECIFY)	PRESSURE (SPECIFY UNITS)	SIZE OPENING-IN.	OPEN FLOW	
					From	to				M.C.F. / DAY	HRS. BLOW
	12	13	65	Oriskany	From 8545'	to 8555'	Pitot Tube			8250	8
					From	to					
					From	to					
					From	to					

WELLHEAD PRESSURE TESTS	DATE TAKEN	FORMATION	MINUTE PRESSURE - PSIG						WELLHEAD PRESSURE - PSIG				
			1	3	5	10	20	30	24 HR.	48 HR.	72 HR.	MAX. PRESS.	TIME
												3050	24 hrs

MISC.	DEPTH MEASUREMENT TAKEN FROM:						DIST. TO GROUND	ELEVATION
	<input checked="" type="checkbox"/> Derrick Floor	<input type="checkbox"/> Ground	Other (Specify) _____				11 ft.	Ground 2929'
	LOGGED <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		LOGGED BY (COMPANY) Schlumberger				DATE LOGGED 12 2 65	

* Note: Form PD-17 "Well Fracture Report" to be completed and attached, if applicable

5 1/2" casing was perforated from 8545' to 8555' with 3 - 1/2" jet shots per foot.

*Bottom joint of casing filled with cement - casing open to 8605 feet.

IV. FIELD	FARM	COUNTY	WELL NO.
4 Negro Mountain	U.S.A. Tract 186-A	Garrett	602G-54

ORIGIN OF FORMATION DEPTHS Driller's Log Service Company Log Combination 3of3

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS (Water, Gas, Oil encountered-Open Flows-Rock Pressure-etc.)
Shale & Sandstone	30	65	35	
Sandstone	65	314	249	
Red Shale	314	325	11	
Sandstone & Shale	325	360	35	
Sandstone	360	385	25	
Sandstone & Shale	385	560	175	
Sandy Shale & Red Rock	560	775	215	
Limestone	775	785	10	
Sandstone & Shale	785	1211	426	
Sandstone, Shale, & Red Rock	1211	1575	364	
Sandstone & Shale	1575	1610	35	
Sandstone	1610	1625	15	
Shale	1625	1800	175	
Sandstone, Shale, & Red Rock	1800	2115	315	
Shale	2115	2205	90	
Shale & Red Rock	2205	2555	350	
Shale	2555	3205	650	
Sandstone & Shale	3205	4350	1145	
Shale	4350	4675	325	
Sandstone & Shale	4675	4980	305	
Shale	4980	5560	580	
Sandstone & Shale	5560	5665	105	
Shale	5665	5951	286	
Sandstone & Shale	5951	6150	199	
Shale	6150	7531	1381	
fully Limestone	7531	7541	10	
limy Shale	7541	7605	64	
Sandy Shale	7605	7840	235	
Shale	7840	8358	518	