

WELL NAME & NUMBER Apache "25" Fed. #1

LOCATION Sec. 25, T22S, R30E
(Give Unit, Section, Township and Range)

OPERATOR Mitchell Energy Corp. 400 W. Illinois, Ste. 1000 Midland, Tx. 79701

DRILLING CONTRACTOR Grace Drilling Company P.O. Box 13480 Odessa, Tx. 79768

The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above-described well and that he has conducted deviation tests and obtained the following results:

<u>DEGREES @ DEPTH</u>	<u>DEGREES @ DEPTH</u>	<u>DEGREES @ DEPTH</u>	<u>DEGREES @ DEPTH</u>
0.25 375	1.25 7326		
0.50 550	1.25 7731		
0.50 1026	2.00 8199		
0.75 1520	1.75 8691		
1.00 2005	1.00 9228		
1.00 2532	1.25 9702		
0.50 3032	1.25 10523		
1.00 3255	2.25 11013		
1.00 3800	1.75 11529		
0.75 4299	1.25 12516		
0.50 4800	1.25 12663		
0.50 5300	1.50 12951		
0.25 5800	1.50 13068		
1.00 6335	2.00 13625		
1.50 6821	1.75 14191		

Drilling Contractor Grace Drilling Company

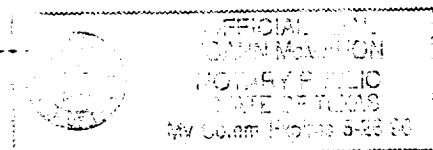
By L. V. Bohannon, Drlg. Supt.

Subscribed and sworn to before me this 13 day of July, 19 93

Joanna McMahon
Notary Public

My Commission Expires _____

Ector County TX



Submit in duplicate to
appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

c/s.f.
File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator MITCHELL ENERGY						Lease or Unit Name Apache 25					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 10-15-93		Well No. 1			
Completion Date 10-13-93		Total Depth 14430		Plug Back TD 13635		Elevation		Unit Ltr. - Sec. - TWP - Rge. 25-22S-30E			
Csg. Size 4 1/2	Wt. 13.5	d 3.920	Set At 14430	Perforations: From: 12982 To: 12992				County Eddy			
Tbg. Size 2 7/8	Wt. 6.5	d 2.441	Set At 11950	Perforations: From: To:				Pool <i>San Medanos Atoka</i>			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single				Packer Set At 12900'				Formation ATOKA			
Producing Thru TBG.		Reservoir Temp. °F 206		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2		Connection AIR			
L 12987	H 12987	Gg .666	% CO ₂ 5.96	% N ₂ 1.13	% H ₂ S	Prover		Meter Run 3.826		Taps flng.	

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
SI						1563.2			
1.	3.826 X	1.000	540	6	96	1433.2		PKR.	
2.	3.826 X	1.000	550	15	105	1313.2			
3.	3.826 X	1.000	600	50	115	1093.2			
4.	3.826 X	1.000	520	40	120	533.2			
5.									

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	4.758	57.61	553.2	.9671	1.225	1.043	339
2.	4.758	91.91	563.2	.9594	1.225	1.043	536
3.	4.758	175.1	613.2	.951	1.225	1.035	1005
4.	10.88	146.04	533.2	.9469	1.225	1.031	1900
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.80	556	1.53	.920	dry gas	
2.	.81	565	1.55	.919	A.P. I. Gravity of Liquid Hydrocarbons dry	Deg.
3.	.88	575	1.58	.933	Specific Gravity Separator Gas .666	XXXXXXXXXX
4.	.77	580	1.59	.940	Specific Gravity Flowing Fluid XXXXXX	
5.					Critical Pressure 694 P.S.I.A.	P.S.I.A.
					Critical Temperature 364 R	R

P_c *1588.9 P_c² 2524.6

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.		1444.9	2087.7	436.9
2.		1319.0	1739.8	784.8
3.		1069.1	1143.0	1381.6
4.		574.4	329.9	2194.7
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.150$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.150$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2186$

Absolute Open Flow	2186	Mcf/d @ 15.025	Angle of Slope θ	45°	Slope, n	1.0
--------------------	-------------	----------------	------------------	------------	----------	------------

Remarks: *CALCULATED FROM KNOWN BHP

NO LIQUID PRODUCED DURING TEST.

Approved By Division	Conducted By: PRO WELL TESTERS	Calculated By: KS	Checked By: KS
----------------------	--	-----------------------------	--------------------------