

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 10-11-90			
Company Mewbourne Oil Company				Connection Vented				Office	
Pool North Illinois Comp Morrow				Formation Morrow				Unit A	
Completion Date 09-13-90		Total Depth 10141		Plug Back TD 10100		Elevation 3634 KB		Farm or Lease Name Federal T	
Csg. Size 4"	Wt. 10.46	Set At 10141	Perforations: From 10008 To 10054				Well No. 1		
Thq. Size 2 3/8	Wt. 4.7	Set At 9842	Perforations: From OPEN To END				Unit Sec. Twp. Rge. A 12 18S 27E		
Type Well - Single - Brasshead - G.C. or G.O. Multiple Single						Packer Set At 8888		County Eddy	
Producing Thru TBG		Reservoir Temp. °F 174 @ 10031		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico	
L 10031	H 10031	G _g .656	% CO ₂ 2.293	% N ₂ .39	% H ₂ S ---	Prover	Meter Run 2.067	Taps Flg.	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							2745		PKR		72 hrs
1.	2	X	1.250	67	12.96	56	2590		PKR		1 hr.
2.	2	X	1.250	167	14.44	50	2470		PKR		1 hr.
3.	2	X	1.250	179	65.61	47	2110		PKR		1 hr.
4.	2	X	1.250	299	94.09	54	1630		PKR		1 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor F _{pv}	Rate of Flow Q, Mhd
1.	8.120	32.24	80.2	1.004	1.235	1.010	328
2.	8.120	51.01	180.2	1.010	1.235	1.020	527
3.	8.120	112.30	192.2	1.013	1.235	1.021	1165
4.	8.120	171.39	312.2	1.006	1.235	1.036	1791
5.							

NO.	P _r	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio	61.2	Mcf/bbl.
1.	.12	516	1.38	.981	A.P.L. Gravity of Liquid Hydrocarbons	58.0 @ 60°	Deq.
2.	.26	510	1.37	.962	Specific Gravity Separator Gas	.656	XXXXXX
3.	.28	507	1.36	.959	Specific Gravity Flowing Fluid	XXXXX	
4.	.46	514	1.38	.932	Critical Pressure	*678	P.S.I.A.
5.					Critical Temperature	*372	R

P _c 2817.3	P _c ² 7937.2	(1) $\frac{P_c^2}{P_r^2 - R_w^2} = 1.561$	(2) $\left[\frac{P_c^2}{P_r^2 - R_w^2} \right]^n = 1.521$
NO	P _r ²	P _w ²	P _r ² - P _w ²
1		2696.2	7269.5
2		2555.8	6532.1
3		2173.1	4722.4
4		1689.2	2853.4
5			

Absolute Open Flow		2,724	Mhd @ 15.025	Angle of Slope @	46.7	Slope, n	.942
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Remarks: * = corrected to 2.293% CO₂ & .39% N₂
Well made 2.6 BBLs 58.0 API CONDENSATE during test & .5 BBL H₂O

Approved By Division	Conducted By:	Calculated By:	Checked By:
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Mewbourne Oil Company
 Federal T, Well #1
 Eddy County, New Mexico
 12 - 18S - 27E
 10-11-90

