

N MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 3-10-81	
Company Shell Oil Company				Connector None			
Pool Antelope Ridge				Formation Morrow		Unit Antelope Ridge	
Completion Date 3-10-81		Total Depth 13,850		Plug Back TD		Elevation 3475.4 GR	
Csg. Size 5"		Wt. 18#		Set At 13,846'		Perforations: From 13,324 To 13,564	
Tbg. Size 2 7/8"		Wt.		Set At 11,358		Perforations: From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple						Packer Set At 11,224	
Producing Thru TBG		Reservoir Temp. °F 180° @ 12810		Mean Annual Temp. °F 82		Baro. Press. - P _a New Mexico	
L		H		Gg 0.618		Prover	
				% CO ₂		% N ₂	
				% H ₂ S		Meter Run 4.026	
						Taps FLOWING	

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							4700	43			28 days
1.	4	4/64	1.000	570	8	83	4052	57	PACKER		1 hr.
2.	4	5/64	1.000	575	14	89	3702	61			1 hr.
3.	4	6/64	1.000	585	22	80	3325	62			1 hr.
4.	4	7/64	1.000	585	26	68	2940	62			1 hr.
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, Fpv	Rate of Flow Q, Mcfd
1	4.753	68.31	583.2	0.9786	1.272	1.046	423
2	4.753	90.75	588.2	0.9732	1.272	1.044	557
3	4.753	114.72	598.2	0.9813	1.272	1.049	714
4	4.753	124.71	598.2	0.9924	1.272	1.053	788
5.							

NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.	0.87	543	1.50	0.914	A.P.I. Gravity of Liquid Hydrocarbons 0.618 _____ Deg.
2.	0.88	549	1.52	0.917	Specific Gravity Separator Gas _____ X X X X X X X X
3.	0.89	540	1.49	0.919	Specific Gravity Flowing Fluid _____ X X X X X
4.	0.89	528	1.46	0.902	Critical Pressure 671 _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature 362 _____ R _____ R

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		5368.5	28821	7950
2		4937.0	24374	12397
3		4459.9	19891	16880
4		4053.8	16433	20338
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1808$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.477$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1164$

P_c 6063.9 P_c² 36771

Absolute Open Flow 1164 _____ Mcfd @ 15.025		Angle of Slope θ _____		Slope, n 0.659	
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Remarks: *BOTTOM HOLE PRESSURE 10977'		USED FOR PRESSURE CALCULATIONS	
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Approved By: _____	Conducted By: _____	Calculated By: _____	Checked By: _____
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