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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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Shell Western E & P				Lease or Unit Name State Ridge "B"			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date June 11, 1996		Well No. #1	
Completion Date June 6, 1996		Total Depth 11,730		Plug Back TD 11,631		Elevation	
Csg. Size 5 1/2"	WL 17#	d	Set At 11,725'	Perforations: From: 11,518 - To: 11,532		Unit Ltr. - Sec. - TWP - Rgc. 30 17 35	
Tbg. Size 2 3/8"	WL 4.7#	d	Set At 11,445	Perforations: From: To:		County Lea	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11,445'		Formation Atoka/Morrow	
Producing Thru Tubing		Reservoir Temp. °F 170		Mean Annual Temp. °F 60		Baro. Press. - P 13.2	
* 11,525		H 11,525		Gz .754		% CO₂	
				% N₂		% H₂S	
				Prover		Meter Run 4.026	
						Taps Flange	

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							4120		0		
1.	4	X	1.500	132	12.00	46	3070		0		24 Hrs.
2.	4	X	1.500	140	31.00	47	2280		0		1 Hr.
3.	4	X	1.500	150	44.00	44	1880		0		1 Hr.
4.	4	X	1.500	150	54.00	54	1520		0		1 Hr.
5.											

RATE OF FLOW CALCULATIONS

NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	10.84	41.74	145.2	1.014	1.152	1.020	539
2.	10.84	68.91	153.2	1.013	1.152	1.021	890
3.	10.84	84.74	163.2	1.016	1.152	1.023	1,100
4.	10.84	93.88	163.2	1.006	1.152	1.022	1,205
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.21	506	1.24	.961	4.490	
2.	.22	507	1.24	.953	49.5	
3.	.24	504	1.23	.955	.754	
4.	.24	514	1.25	.957	XXXXXX	XXXXXXX
5.					667	Gmix = 1.341
					Critical Pressure	P.S.I.A.
					Critical Temperature	P.S.I.A.

P_c 5042.1 P_c 25422.8

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.170$	2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.170$
1.	**	3750.7	14067.8	11355.0		
2.	**	2790.8	7788.6	17634.2		
3.	**	2294.3	5263.8	20159.0		
4.	**	1923.2	3698.7	21724.1		
5.						

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.410$

Absolute Open Flow 1.410 Mcfd @ 15.025 Angle of Slope θ 45 Slope, n 1.000

Remarks: * = BNP's Read from mid perms. / Well produced 34.7 BBLs of condensate.

** = Calculated from known BNP's & calculated back to surface.

Approved By Division	Conducted By: Omega Prod. Servs. Inc.	Calculated By: Bob Moore	Checked By: Bob Moore
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