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MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8/26/82		O. C. D.							
Company Exxon Company USA ✓		Connection None		ARTESIA, OR							
Fuel CND Burton Flats - Morrow		Formation Morrow		Unit							
Completion Date 8/23/82		Total Length 11679' 11,680		Plug Back TD 11637' 11,639							
Elevation 3195' GL+18'		Perforations: From 11479' To 11498'		Perforations: Open Ended To							
Cac. Size 5 1/2"		Well No. 1		Well No.							
Trg. Size 2 7/8"		Well No. 6.5#		Well No.							
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Packer Set At 11421'		County Eddy							
Producing Thru Tubing		Reservoir Temp. °F 192 @ 11450'		Mean Annual Temp. °F 60							
Baro. Press. - P _a 13.2		State New Mexico		State							
L 11489'		H -		Cg 0.6108							
% CO ₂ 1.170		% N ₂ 0.328		% H ₂ S -							
Prover 2.900		Meter Run 2.900		Taps F							
FLOW DATA											
NO	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g. DWT	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							3600	60	PACKER		24.0 hrs
1	2.900	7/64	1.500	555	10	92	3440				1.0 hr
2	2.900	8.5/64	1.500	515	19	90	3385				1.0 hr
3	2.900	10/64	1.500	525	43	88	3295				1.0 hr
4	2.900	12/64	1.500	550	73	84	3180				1.0 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, Mscf/d				
1	11.23	75.38	568.2	0.9706	1.279	1.039	1091.85				
2	11.23	100.18	528.2	0.9723	1.279	1.038	1452.21				
3	11.23	152.13	538.2	0.9741	1.279	1.038	2209.36				
4	11.23	202.76	563.2	0.9777	1.279	1.041	2964.07				
5											
NO	R _g	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio 175.646 Mcl/ubl.						
1	0.84	552	1.55	0.927	A.P.I. Gravity of Liquid Hydrocarbons 56 Deg.						
2	0.78	550	1.54	0.929	Specific Gravity Separator Gas 0.6108 XXXXXXXXXX						
3	0.79	548	1.54	0.928	Specific Gravity Flowing Fluid XXXXX						
4	0.83	544	1.53	0.923	Critical Pressure 678 P.S.I.A. - P.S.I.A.						
5					Critical Temperature 356 °R - °R						
F _c 4681.2 P _c ² 21913.6											
NO	P _i ²	P _w *	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 7.309$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6.372$						
1		4570.2	20886.7	1026.9	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 18887$						
2		4529.2	20513.7	1399.9							
3		4440.2	19715.4	2198.2							
4		4349.2	18915.5	2998.1							
5											
Absolute Open Flow 18887 Mcl/d @ 15.025 Angle of Slope 47° 5' Slope, n 0.931											
* BHP @ (-8294)11489' USED FOR PRESSURE CALCULATIONS											
WELL PRODUCED 1.80 BBLS CONDENSATE IN 4.0 HRS. = 10.80 BC/D											
Approved By Division											
Checked By Jarrel Well Testing Inc. Joe A. Coleman											
Calculated By Joe A. Coleman											
Checked By PE #2208 Joe A. Coleman											