

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

4559
JAN 16 '91

Type Test		☒ Initial		☐ Annual		☐ Special		Test Date		1/4/91					
Company				Connection				JAN 16 '91							
Pacific Enterprises Oil Co. (USA)				NGPL											
Pool				Formation				Unit							
Frontier Hills				Strawn				O. G. D.							
Completion Date		Total Depth		Plug Back TD		ARTESIA OFFICE		Form or Lease Name							
8/8/90		11,950		11,817		3358.5 G.L.		PEOC 21 Fed. Com.							
Well Size	Wt.	Set At	Perforations:		Well No.										
5 1/2	17 & 20	11,950	From 10,178 To 10,316		1										
Thg. Size	Wt.	Set At	Perforations:		Unit		Sec.	Twp.	Rge.						
2 3/8	4.7	10,140	From open To end		21		23S	26E							
Type Well - Single - Broadhead - G.G. or G.O. Multiple						Packer Set At		County							
Single						10,126		Eddy							
Producing Thru		Reservoir Temp. °F		Mean Annual Temp. °F		Baro. Press. - P _a		State							
Tbg.		176 @ 10,178		60		13.2		NM							
L	H	G _g	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Taps							
10,140	10,140	.640	0.50	0.52	--		4.026	Flg.							
FLOW DATA						TUBING DATA		CASING DATA		Duration					
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. in. Hg	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	of Flow				
SI							4050		Pkr.		24 Hrs.				
1.	4 x	2.250	481	10.00	97	4027			Pkr.		1 Hr.				
2.	4 x	2.250	514	30.00	64	3922			Pkr.		1 Hr.				
3.	4 x	2.250	554	72.00	82	3728			Pkr.		1 Hr.				
4.	4 x	2.250	585	96.00	77	3585			Pkr.		1 Hr.				
5.															
RATE OF FLOW CALCULATIONS															
NO.	Coefficient (24 Hour)	$\sqrt{P_a P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor F _{sp}	Rate of Flow Q, Mscf								
1	25.64	70.30	494.2	.9662	1.250	1.039	2,262								
2	25.64	125.76	527.2	.9962	1.250	1.054	4,232								
3	25.64	202.09	567.2	.9795	1.250	1.051	6,668								
4	25.64	239.64	598.2	.9840	1.250	1.054	7,966								
5															
NO.	R	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio 293.4 Mscf/bbl.										
1	.73	557	1.49	.927	A.P.I. Gravity of Liquid Hydrocarbons 57.2 @ 60 Deg.										
2	.78	524	1.40	.901	Specific Gravity Separator Gas .640 XXXXXXXXXX										
3	.84	542	1.45	.906	Specific Gravity Flowing Fluid XXXXXX GMIX .650										
4	.89	537	1.44	.900	Critical Pressure 670 P.S.I.A. 670 P.S.I.A.										
5					Critical Temperature 372 R 375 R										
P _c 4063.2 P _w 16509.6															
NO.	P _i ²	P _w ²	R _w ²	P _i ² - R _w ²	(1) $\frac{P_c^2}{P_i^2 - R_w^2} = 12.494$ (2) $\left[\frac{R_w^2}{P_i^2 - R_w^2} \right]^n = 3.526$										
1		4061.9	16499.0	10.6	AOF = Q $\left[\frac{R_w^2}{P_i^2 - R_w^2} \right]^n = 28.088$										
2		4017.5	16140.3	369.3											
3		3948.3	15589.1	920.5											
4		3897.2	15188.2	1321.4											
5															
Absolute Open Flow 28,088 Mscf @ 15.025					Angle of Slope @ 63.5					Slope, n .499					
Remarks: Well made 3.00 Bbls. of 57.2 HPI Gr. Condensate															
AOF Curve had to be expanded due to low draw down on first rate															
Approved By Division				Conducted By:				Calculated By:				Checked By:			
				West Engineering				BM				BM			