

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

157

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 07-23-91	
Company Kaiser - Francis Oil Co.				Connection Vented	
Pool So. Carlsbad <i>Morrow</i>				Formation Morrow	
Completion Date 7/17/91		Total Depth 12205		Elevation 3146	
Csg. Size 4 1/2		Set At 12205		Perforations From 11531 To 11544	
Thq. Size 2 3/8"		Set At 11491		Perforations From To	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Multiple				Packer Set At 11491	
Producing Thru Tubing		Reservoir Temp. °F 188 # 11443		Mean Annual Temp. °F 60	
Baro. Press. - P _g 13.2		State New Mexico		County Eddy	
L * 11443	H *11443	G ₁ .602	% CO ₂ 1.33	% N ₂ 5.48	% H ₂ S Proves
Meter Run 2.067				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							3080		PKR		72 hrs.
1.	2	X	1.000	100	2.00	64	2880		PKR		1 hr.
2.	2	X	1.000	100	4.00	64	2700		PKR		1 hr.
3.	2	X	1.000	100	8.00	64	2382		PKR		1 hr.
4.	2	X	1.000	100	20.00	64	1900		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	4.946	15.05	113.2	.9962	1.289	1.005	96
2.	4.946	21.28	113.2	.9962	1.289	1.005	136
3.	4.946	30.09	113.2	.9962	1.289	1.005	192
4.	4.946	47.58	113.2	.9962	1.289	1.005	304
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>DRY GAS</u> Mcf/bbl.
1.	.17	524	1.50	.991	A.P.I. Gravity of Liquid Hydrocarbons <u>DRY</u> Deg.
2.	.17	524	1.50	.991	Specific Gravity Separator Gas <u>.602</u> X X X X X X X X
3.	.17	524	1.50	.991	Specific Gravity Flowing Fluid <u>X X X X X</u>
4.	.17	524	1.50	.991	Critical Pressure <u>**662</u> P.S.I.A. P.S.I.A.
5.					Critical Temperature <u>**348</u> °R °R

P _c 3689.0		P _c ² 13608.7		(1) $\frac{P_c^2}{P_r^2 - P_w^2} = 1.983$		(2) $\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 1.676$	
NO	P _r ²	P _w ²	P _r ²	P _r ² - P _w ²	AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = .510$		
1	3523.6	12415.8	1192.9				
2	3352.0	11235.9	2373.3				
3	3060.9	9369.1	4239.6				
4	2597.4	6746.5	6862.2				
5							

Absolute Open Flow <u>510</u> Mhd @ 15.025	Angle of Slope θ <u>53.0</u>	Slope, n <u>.755</u>
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Remarks: **=BHP instrument set @ this depth
**=corrected to 1.33% CO₂ & 5.48 % N₂

NO FLUID PRODUCED DURING TEST

Approved By Division _____ Conducted By: _____ Calculated By: _____ Checked By: _____