

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 08-12-91	
Company Kaiser - Francis Oil Co.			Connection Vented		
Pool Hume - Atoka Gas			Formation Atoka		Unit
Completion Date 08-01-91		Total Depth 12,600	Plug Back TD 12,445	Elevation 4152 Gr.	Form or Lease Name TCH Ranch "C"
Cas. Size 5 1/2	Wt. 20	Set At 12,600	Perforations From 12,396 To 12,442		Well No. 1
Thq. Size 2 7/8	Wt. 6.5	2.441	Set At 12,309	Perforations From 12,396 To 12,442	Unit Sec. Twp. Rge. X 6 16-S 34-E
Type Well - Single - Dragoonhead - G.C. or G.O. Multiple Single				Packer Set At 12,309	County Lea
Producing Thru Tubing		Reservoir Temp. °F 198 @ 12,396	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2	State New Mexico
L * 12,396	H 12,396	G ₁ .721	% CO ₂ .30	% H ₂ 2.12	% H ₂ S P. over Meter Run 3.068 Taps Flange

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. in. H ₂ O	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							2010		PKR		72 hrs.
1.	3	X	1.250	870	2.00	80	1885		PKR		1 hr.
2.	3	X	1.250	900	3.00	80	1810		PKR		1 hr.
3.	3	X	1.250	890	20.00	80	1520		PKR		1 hr.
4.	3	X	1.250	900	37.00	80	1315		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, Mscf/d
1	7.577	42.03	883.2	.9813	1.178	1.109	408
2	7.577	52.34	913.2	.9813	1.178	1.113	510
3	7.577	134.40	903.2	.9813	1.178	1.112	1,309
4	7.577	183.82	913.2	.9813	1.178	1.113	1,792
5.							

					DRY GAS		Mcf/bbl.
NO.	P _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Deq.
1.	1.33	540	1.38	.813		DRY	
2.	1.37	540	1.38	.807			
3.	1.36	540	1.38	.809			
4.	1.37	540	1.38	.807			
5.							

				Specific Gravity Separator Gas		Specific Gravity Flowing Fluid		Critical Pressure		Critical Temperature	
NO.	P _f	P _w	P _u	P _f - P _w							
1		2057.7	4234.1	661.1							
2		1987.4	3949.8	945.4							
3		1737.6	3019.3	1875.9							
4		1544.5	2385.5	2509.7							
5											

(1) $\frac{P_c^2}{P_f^2 - P_w^2} = 1.951$

(2) $\left[\frac{P_c^2}{P_f^2 - P_w^2} \right]^n = 1.951$

AOF = Q $\left[\frac{P_c^2}{P_f^2 - P_w^2} \right]^n = 3.496$

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons _____ Deq.

Specific Gravity Separator Gas .721 XXXXXXXXXX

Specific Gravity Flowing Fluid XXXXX

Critical Pressure ***665 P.S.I.A. _____ P.S.I.A.

Critical Temperature ***392 °R _____ °R

Absolute Open Flow	3,496	Mscf @ 15.025	Angle of Slope θ	45	Slope, n	1,000
--------------------	-------	---------------	------------------	----	----------	-------

Remarks: * Extrapolated to 12,396
** corrected to 2.12% N₂
NO FLUID PRODUCED DURING TEST

Approved By Division	Conducted By Pro Well Testers	Calculated By BM	Checked By BM
----------------------	----------------------------------	---------------------	------------------

RECEIVED

SEP 03 1991

GAS

MOBILS OFFICE