

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 12-6-87		660 FSL	
Company SUN EXPLORATION & PROD.		Connection TO AIR		2030 FWL	
Pool SHOEBAR ATOKA GAS		Formation ATOKA		Unit	
Completion Date 12-4-87 9:30AM		Total Depth 12248		Plug Back TD 12173	
Csg. Size 5.500		Set At 4.778		Elevation 3945	
Tub. Size 1.875		Set At 11992		Perforations: From 12035 To 12070	
Type Well - Single - Brdenhead - G.C. or G.O. Multiple SINGLE		Packer Set At 11970		Unit Sec. Twp. Rge. 15 17S 35E	
Producing Thru TUBING		Reservoir Temp. °F 202		Mean Annual Temp. °F 60°	
L 12042		H 12042		Csg. % CO ₂ 0.6331	
				% N ₂ 0.822	
				% H ₂ S 0	
				Prover 0	
				Meter Run 4.026	
				Type FLNG	

FLOW DATA						TUBING DATA		BHP 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.	
1.	4.026	2.000	260	7.5	86	2097	72	2879		53 HRS.
2.	4.026	2.000	265	16.5	80	2007	72	2772		60 MIN.
3.	4.026	2.000	270	38.0	70	1956	70	2711		60 MIN.
4.	4.026	2.000	270	87.5	65	1837	67	2591		60 MIN.
5.						1625	65			60 MIN.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super. Factor, F _{sv}	Rate of Flow Q, Mscf/d
1.	19.81	45.27	273.2	.9759	1.2568	1.0220	1124
2.	19.81	67.75	278.2	.9813	1.2568	1.0235	1695
3.	19.81	103.74	283.2	.9905	1.2568	1.0259	2625
4.	19.81	157.42	283.2	.9952	1.2568	1.0266	4005

NO.	I _h	Temp. °R	T _g	Z	Gas/Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	0.408	546	1.49	0.957	392.5	57.8	.6331	XXXXXX	671	366
2.	0.416	540	1.48	0.955				XXXXXX		
3.	0.423	530	1.45	0.950				XXXXXX		
4.	0.423	525	1.44	0.949						

NO.	P _i	P _w	P _w ²	P _i ² - P _w ²
1.		2046	4185	327
2.		2004	4017	495
3.		1914	3662	850
4.		1746	3047	1465

(1) $\frac{P_c^2}{P_i^2 - P_w^2} = 3.0808$ (2) $\left[\frac{P_c^2}{P_i^2 - P_w^2} \right]^n = 2.4878$

LOG = Q $\left[\frac{P_i^2}{P_i^2 - P_w^2} \right]^n = 9963.7$

Absolute Open Flow	9964	Mscf @ 15.025	Angle of Slope θ	51.0	Slope, n	.810
Remarks: BHP WITH AMARADA BOMBS						

Approved By Division JS	Conducted By:	Calculated By:	Checked By:
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