

MULTIPLE POINT AND ONE POINT BACK PRESURE TEST FOR GAS WELL

Revised 1-1-65

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 1-25-79	
Company Grace Petroleum Corporation		Connection Gas Company of New Mexico	
Pool South Salt Lake		Formation Morrow	
Completion Date 11-6-78		Total Depth 14300	Plug Back TD 14080
Circ. Size 5 1/2"		Wt. 20.00	Elevation 3686 KB
Thru. Size 2 7/8"		Wt. 6.50	Perforations From 13803 To 14034
Type Well - Single - Rodenthead - G.G. or G.O. Multiple Single		Packer Set At 13464	Form or Lease Name New Mexico Federal "F"
Producing Thru Tubing		Reservoir Temp. °F 172°	Mean Annual Temp. °F 13.2
L 13.464		H -	County Lea
Cg .614		% CO ₂ 0.90	% N ₂ 0.36
		% H ₂ S None	Prevor -
		Meter Run 4"	Tests Flange

FLOW DATA

NO.	Prevor Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	TUBING DATA		CASING DATA		Direction of Flow
							Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
1.	4.025		2"	504	6.2	60	4570	30	Packer		
2.	4.025		2"	533	23.0	50	3680	60			60
3.	4.025		2"	548	44.9	62	2840	68			60
4.	4.025		2"	578.5	67.2	64	2040	72			60
5.							850	75			60

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, Mcfd
1.	19.81	56.627	517.2	1.000	1.276	1.047	1499
2.	19.81	112.083	546.2	1.010	1.276	1.054	3016
3.	19.81	158.738	561.2	.9981	1.276	1.052	4213
4.	19.81	199.422	591.7	0.9962	1.276	1.054	5292
5.							

NO.	P _r	Temp. °R	T _r	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.	.77	520	1.44	.912	136	54	.614	XXXXXX	671	362
2.	.81	510	1.41	.900				XXXXXX		
3.	.84	522	1.44	.903						
4.	.88	524	1.45	.901						
5.										

NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1.	3901.6	15222	5783		1.06846	1.06846
2.	2878.0	8283	12722			
3.	2012.1	4049	16956			
4.	1160.3	1346	19659			
5.						

$Q = \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5654$

Absolute Open Flow	5654	Mcf/d @ 15.025	Angle of Slope	45°	Slope, n	1.00
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Approved by Commission:	Conducted By: Leon Arnett	Calculated By: H. L. Haaler	Checked By: Leon Arnett
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