

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-63

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 3-28-81			
Company Energy Reserves Group, Inc.				Production To Atmosphere					
Pool Undesignated				Location Cisco				Unit	
Completion Date 3-20-81		Total Depth 7874		Casing Depth 7820		Elevation 4375 G.L.		Name or Lease Name Miller	
Csg. Size 4 1/2	Wt. 11.6#	d 4.000"	Set At 7874	Perforations: From 7546 To 7580		Well No. 1			
Tbg. Size 2 3/8	Wt. 4.6#	d 1.995"	Set At 7510	Perforations: From Open Ended To		Unit Sec. Twp. Rge. M 12 6S 33 35E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE 7510						Packer Set At		County ROOSEVELT	
Producing Thru TUBING		Reservoir Temp. °F 172 @ 7563		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State New Mexico	
L 7563	H 7563	Gg 7588	% CO ₂ .139	% N ₂ 10.51	% H ₂ S -0-	Prover	Meter Run 4"	Taps 1 flg	

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							1937		PKE	Choke	24 Hrs.
1.	4	x	1.5	465	4"	86°	1910	53°		8/64	45 Min.
2.	4	x	1.5	480	11"	72°	1892	54°		10/64	30 Min.
3.	4	x	1.5	490	43"	73°	1831	58°		15/64	45 Min.
4.	4	x	1.5	490	88"	65°	1737	59°		20/64	30 Min.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, F _{spv}	Rate of Flow Q, Mscf/d
1	10.88	43.74	478.2	.9759	1.148	1.049	559.28
2	10.88	73.66	493.2	.9887	1.148	1.052	956.94
3	10.88	147.10	503.2	.9877	1.148	1.054	1912.71
4	10.88	210.43	503.2	.9952	1.148	1.061	2775.26
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.G. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	757	546	1.43	.909	46.16		.758		649	382
2	760	532	1.39	.904						
3	775	533	1.40	.901						
4	775	525	1.37	.889						
5.										

* $P_c = 1950.2$ $P_c^2 = 3803.3$

NO.	P_L^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		1934.5	3742.4	60.9
2		1913.6	3661.8	141.5
3		1868.7	3492.0	311.3
4		1803.5	3252.6	550.7
5				

(i) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.91$

(ii) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.566$

(iii) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 12.669$

Absolute Open Flow	12,669	Mscf @ 15.025	Angle of Slope	51° 50'	Slope, n	7858
--------------------	--------	---------------	----------------	---------	----------	------

Remarks: Made 3.5 BBLs condensate during test

* Calculated from known Bottom Hole Pressures

Approved By J. L. S. J. L. S.	Conducted By W. S.	Calculated By M. K.	Checked By M. K.
----------------------------------	-----------------------	------------------------	---------------------