

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

MAR 26 1984

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special										Test Date MAR 26 1984		
Company Enserch Exploration, Inc. ✓					Connection Liquid Energy Corporation							
Pool Undesignated					Formation Pennsylvanian					Unit ✓		
Completion Date 5/4/82			Total Depth 6950'		Plug Back TD 6815'		Elevation 4047.9'		Farm or Lease Name J.G. O'Brien			
Csg. Size 5-1/2"	Wt. 15.5#/ft	d 4.95	Set At 6949'		Perforations: From 6761 To 6768				Well No. 4			
Thq. Size 2-3/8"	Wt. 4.70#/ft	d 1.995	Set At 6644'		Perforations: From Open To Ended				Unit L	Sec. 31	Twp. 75	Rge. 29E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At No packer				County Chaves			
Producing Thru Tubing		Reservoir Temp. °F 132° @ 6700'		Mean Annual Temp. °F 70°		Baro. Press. - P _a 13.2			State New Mexico			
L 6761	H 6761	Gg 0.669	% CO ₂ 1.243	% N ₂ 6.433	% H ₂ S 0.0	Prover		Meter Run X	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	72 Hours						759	70	932	70	
1.	2" x 0.75"			112	10	51	611	44	881	44	60 min.
2.	2" x 0.75"			114	20	54	521	46	815	46	60 min.
3.	2" x 0.75"			115	26	57	440	50	740	50	60 min.
4.	2" x 0.75"			115	34	60	378	52	688	52	60 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 Fpv	Rate of Flow Q, Mcfd
1	2.709	35.384	125.2	1.0160	1.223	1.014	120.8
2	2.709	50.438	127.2	1.0140	1.223	1.013	171.6
3	2.709	57.734	128.2	1.0100	1.223	1.013	195.7
4	2.709	66.021	128.2	1.0080	1.223	1.012	223.1
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NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcfd/bbl.
1.	0.19	511	1.40	0.973	A.P.I. Gravity of Liquid Hydrocarbons Dry Gas		Deq.
2.	0.19	514	1.41	0.974	Specific Gravity Separator Gas 0.669		XXXXXXX
3.	0.19	517	1.42	0.975	Specific Gravity Flowing Fluid XXXXX		Dry
4.	0.19	520	1.43	0.976	Critical Pressure 662 P.S.I.A.		P.S.I.A.
5.					Critical Temperature 364 °R		°R

NO.	P _i ²	P _w	P _w ²	P _e ² - P _w ²
1		894.2	779.6	113.8
2		828.2	685.9	207.5
3		753.2	567.3	326.1
4		701.2	491.7	401.7
5				

(1) $\frac{P_e^2}{P_e^2 - P_w^2} = 2.224$ (2) $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1.512$

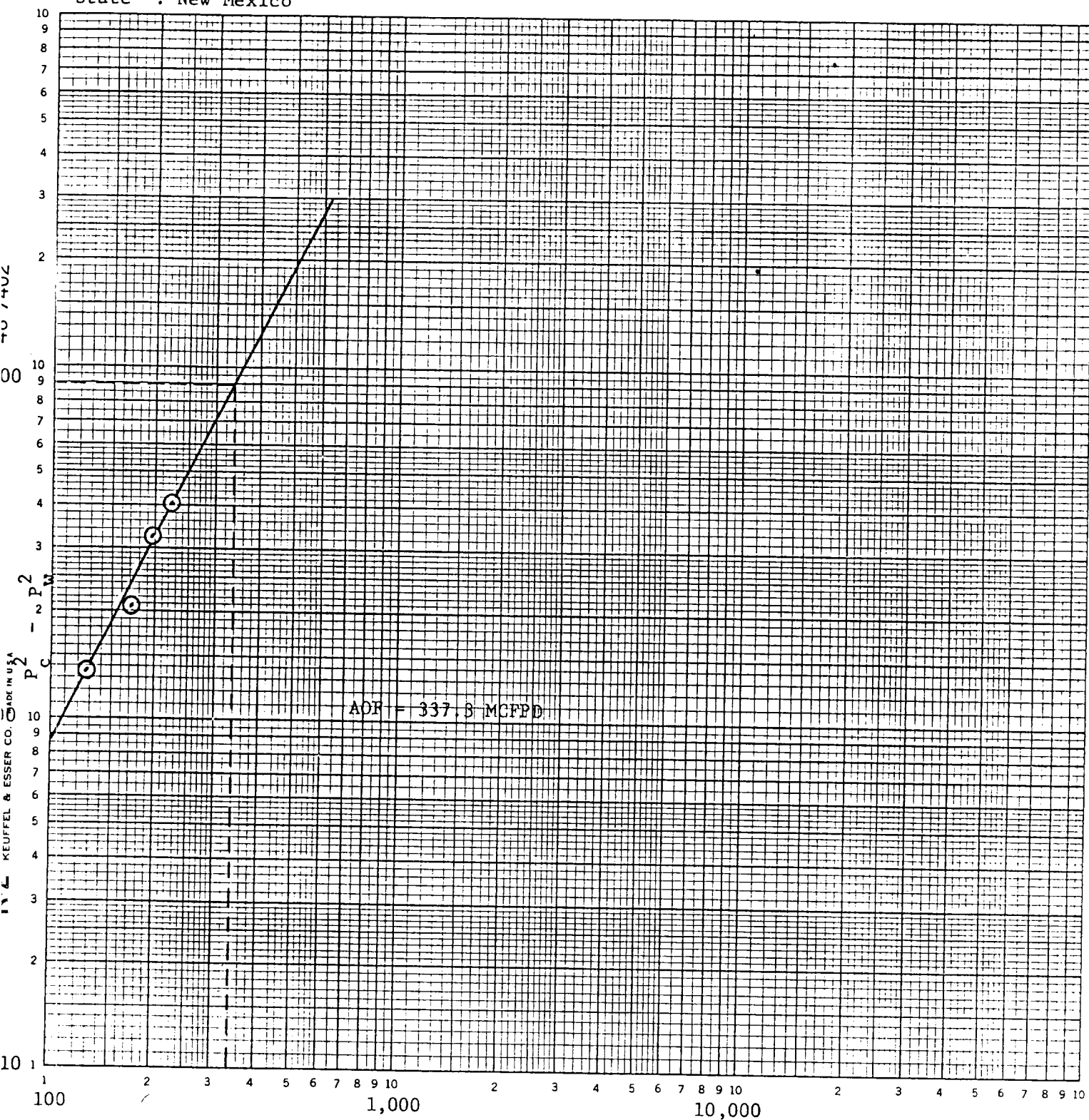
AOF = Q $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 337.3$ MCFPD

Absolute Open Flow	337.3	Mcfd @ 15.025	Angle of Slope °	62.67°	Slope, n	0.517
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Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
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Company: Enserch Exploration, Inc.
 Well : J.G. O'Brien #4
 Field : Pennsylvanian Undesignated
 County : Chaves
 State : New Mexico



$Q_1 = 355 \text{ MCFPD}$ $\log Q_1 = 2.550228$
 $Q_2 = 108 \text{ MCFPD}$ $\log Q_2 = 2.033424$
 $n = 0.516804 = 0.517$