

NEW MEXICO OIL CORPORATION COMPLETION LOG MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form O-122
Revised 6-1-65

Type of Test: ☒ Initial ☐ Annual ☐ Special		Date: 5-13-78		SPIN DATE: 2-22-79	
Company: Petroleum Development Corp.		Location: Air		Unit: G	
Well: North Luck		Formation: Morrow		Date of Lease: Sun McKay Federal	
Completion Date: 5-13-78	Total Depth: 13093	Plug back To: 13075	Elevation: 3661 GL	Well No. 2	
Csg. Size: 5 1/2	Set At: 13093	Perforations: From 12778 To 13052	Unit Sec. Twp. Range: G 10 19 32		
Tub. Size: 2 3/8	Set At: 12720	Perforations: From To	County: Lea		
Type Well - Single - Brodenhead - G.G. or G.O. Multiple			Packer Set At: 12720	State: New Mexico	
Producing thru: Tbr.	Reservoir Temp. °F: 201 @ 12720	Mean Annual Temp. °F: 13.2	Meter Run: 4" Flg.		
L: 12720	H: 12720	Gg: .662	% CO ₂	% N ₂	% H ₂ S

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							3700				72 hrs.
1.	4	x	1.000	280	13.5	105	2700				1 hr.
2.	4	x	1.000	280	20.0	95	2294				1 hr.
3.	4	x	1.000	280	38.0	74	1870				1 hr.
4.	4	x	1.000	280	60.0	64	1345				1 hr.
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. Compens. Factor, Fpv	Rate of Flow O, Mld
1	4.753	62.91	293.2	.9594	1.229	1.024	361
2	4.753	76.58	293.2	.9680	1.229	1.025	444
3	4.753	105.55	293.2	.9868	1.229	1.029	626
4	4.753	132.63	293.2	.9962	1.229	1.030	795
5							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio: 37.100 Mcl/Sol.
1	.44	565	1.49	.954	A.P.L. Gravity of Liquid Hydrocarbons: 56 @ 60° Deg.
2	.44	555	1.47	.951	Specific Gravity Separator Gas: .662
3	.44	534	1.41	.945	Specific Gravity Flowing Fluid: .740
4	.44	524	1.39	.942	Critical Pressure: 670 P.S.I.A.
5					Critical Temperature: 378 R

P _c 3713.2 P _w 13787.9				(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.157$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.157$	
NO.	P _c	P _w	P _w ²	P _c ² - P _w ²		
1		2716.8	7381.0	6406.9		
2		2312.3	5346.7	8441.2		
3		1889.9	3571.7	10216.2		
4		1368.1	1871.7	11916.2		
5						

Absolute Open Flow: 920 Mld @ 15.025		Angle of Slope: 45°	Slope, n: 1.000
Remarks:			
Approved by: <u>Original Signed by: Clements</u> Conducted By: <u>Petroleum Development Corp</u> Calculated By: <u>Rick Pagan</u> Checked By:			