

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

Form C-122
Revised 6-1-65

☒ Initial ☐ Annual ☐ Special		Date: 5-13-78	SHM DATE: 2-22-78						
Company: Petroleum Development Corp.		Connection: Air							
Pool: North Lusk		Formation: Morrow	Unit: G						
Completion Date: 5-13-78	Total Length: 13093	Plug back To: 13075	Elev. 3661 GL						
Csg. Size: 5 1/2"	ID: 5.0"	Perforations: From 12778 To 13052	Fac. or Lease Name: Sun McKay Federal						
Tq. Size: 2 3/8"	ID: 2.375"	Perforations: From 12720 To	Well No.: 2						
Type Well - Single - Prodenhead - G.C. or G.O. Multiple			Unit Sec. Twp. Range: G 10 19 32						
Single		Packer Set At: 12720	County: Lea						
Producing thru Tbr.: L 12720 H 12720	Reservoir Temp. °F: 201	Mean Annual Temp. °F: 12720	State: New Mexico						
Gg: .662	% CO ₂ :	% H ₂ :	% H ₂ S: 13.2						
FLOW DATA		Prover: 4"	Type:						
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	TUBING DATA	CASING DATA	FLR.
1.	4	x	1.000	280	13.5	105	3700		72 hrs.
2.	4	x	1.000	280	20.0	95	2700		1 hr.
3.	4	x	1.000	280	38.0	74	2294		1 hr.
4.	4	x	1.000	280	60.0	64	1870		1 hr.
5.							1345		1 hr.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
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

NO.	η	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	.44	565	1.49	.954	37.100	56 @ 60°	.662	XXXXXX	670	378
2	.44	555	1.47	.951						
3	.44	534	1.41	.945						
4	.44	524	1.39	.942						

$r_c = 3713.2$ $r_w = 13787.9$	(1) $\frac{r_c^2}{r_c^2 - r_w^2} = 1.157$	(2) $\left[\frac{r_c^2}{r_c^2 - r_w^2} \right]^n = 1.157$
Absolute Open Flow: 920 Mcfd @ 15.625	Angle of Slope: 45°	Slope, n: 1.000

Approved By Commission:	Conducted By:	Calculated By:
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