

N MEXICO OIL CONSERVATION COMM: IN
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special					Test Date 4-24-72	
Company Great Western Drilling Company				Connection None		
Pool Townsend Morrow Gas				Formation Morrow		Unit
Completion Date 4-19-72		Total Depth 12,183 TVD		Plug Back TD 12,114 TVD		Elevation 4022 GR
Farm or Lease Name Low State		Well No. 1				
Csq. Size 4 1/2"	Wt. 13.5#	d	Set At 12,183 TVD	Perforations: From 12,056 To 12,071 TVD		
Tqg. Size 2"	Wt. 4.7#	d	Set At 11,754 TVD	Perforations: From Open ended To		Unit Sec. Twp. Rge. H 17 T-16-S 35-E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11,695 TVD		County Lea
Producing Thru Tubing 12,449		Reservoir Temp. °F 198 @ 12,056'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2
State New Mexico						
L 12,449	H 12,056	G _g .642	% CO ₂ 0.45	% N ₂ 0.89	% H ₂ S 0	Prover 2"
Meter Run		Taps				

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	Duration of Flow
SI							4670				
1.	2"		7/16"	136.0		69	4220				1.0 hr.
2.	2"		5/8"	128.0		52	3701				1.0 hr.
3.	2"		5/8"	201.0		66	2944				1.0 hr.
4.	2"		5/8"	294.0		74	1639				1.5 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	3.408		149.2	0.9915	1.248	1.013	637
2	6.473		141.2	1.0080	1.248	1.014	1158
3	6.473		214.2	0.9943	1.248	1.020	1755
4	6.473		307.2	0.9868	1.248	1.028	2517
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ 46.0 Mct/bbl.
1	.22	529	1.44	.975	A.P.I. Gravity of Liquid Hydrocarbons _____ 0.642 Deg.
2	.21	512	1.39	.972	Specific Gravity Separator Gas _____ 0.710
3	.32	526	1.43	.962	Specific Gravity Flowing Fluid _____ 0.710
4	.46	534	1.45	.947	Critical Pressure _____ 673 P.S.I.A.
5					Critical Temperature _____ 368 R

P _c 4683.2 P _c ² 21932					
NO	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \underline{\underline{1.678}}$
1		4234.6	17932	4000	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{\underline{1.567}}$
2		3721.8	13852	8080	
3		2978.1	8869	13063	
4		1716.8	2947	18985	
5					

Absolute Open Flow _____ 2750 Mcfd @ 15.025			Angle of Slope θ _____	Slope, n _____ .861
Remarks: _____				
Approved By Commission: _____		Conducted By: Northern Natural Gas		Calculated By: R. I. Comstock
				Checked By: _____

RECEIVED

MAY 21 1972

OIL CONSERVATION COMM.
HOBBS, N. M.