

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12-23-85			
Company T.H. McElvain Oil & Gas Co.				Formation To Air					
Pool Wildcat				Formation Atoka				Unit	
Completion Date 12-18-85		Total Depth 12,183		Plug Back TD 12,070		Elevation 3941		Farm or Lease Name New Mexico AC St.	
Csg. Size 5 1/2"	Wt. 20&23	d 4.778	Set At 12,183	Perforations: From 11996 To 12006				Well No. 1	
Tbg. Size 2 7/8"	Wt. 6.5	d 2.441	Set At 11,920	Perforations: From Open-Ended				Unit Sec. Twp. Rge. H 22 17S 35E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 11,920		County Lea			
Producing Thru Tubing		Reservoir Temp. °F 158 @ 11,920		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State New Mexico	
L 11,920	H 11,920	G _g .6656	% CO ₂ 5.04	% N ₂ .5412	% H ₂ S	Prover	Meter Run 4026	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							4134		PKR	Choke	72 Hrs.
1.	4.026 X 2.000			580	6	75°	4073	68°		7/64	1 Hr.
2.	4.026 X 2.000			580	14	66	4025	68		8.5/64	1 Hr.
3.	4.026 X 2.000			580	28	62	3978	68		10/64	1 Hr.
4.	4.026 X 2.000			600	46	56	3879	68		13/64	1 Hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super. Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	19.81	59.66	593.2	.9859	1.225	1.045	1492
2	19.81	91.13	593.2	.9943	1.225	1.052	2313
3	19.81	128.88	593.2	.9981	1.225	1.052	3284
4	19.81	167.99	613.2	1.004	1.225	1.059	4334
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ 97.1 Mcf/bbl.
1	.8597	535	1.4617	.915	A.P.I. Gravity of Liquid Hydrocarbons _____ 52.4 @ 60° Deg.
2	.8597	526	1.4372	.904	Specific Gravity Separator Gas _____ .6656 X X X X X X X X
3	.8597	522	1.4262	.904	Specific Gravity Flowing Fluid _____ X X X X X
4	.8887	516	1.4098	.892	Critical Pressure _____ 690 P.S.I.A. _____ P.S.I.A.
5					Critical Temperature _____ 366 R _____ R

P _c 5469.2 P _c ² 29912.1				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		5404.2	29205.4	706.75
2		5364.2	28774.6	1137.5
3		5319.2	28293.9	1618.2
4		5227.2	27323.6	2588.5
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{29912.1}{1618.2}$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 17.8563$$

$$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 54.972$$

Absolute Open Flow _____ 54,972 Mcfd @ 15.025	Angle of Slope @ _____ 46°	Slope, n _____ .966
---	----------------------------	---------------------

Remarks: Test calculated from known BHP from Kuster Gauge 34912, well also made 4.9 Bbls. condensate, 52.5 @ 60° during test.

Approved By Commission:	Conducted By: W.S.	Calculated By: J.D.	Checked By: J.D.
-------------------------	-----------------------	------------------------	---------------------