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NEW MEXICO OIL CONSERVATIC COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-6

RECEIVED
JAN 12 '89
O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 12-27-88
Company: Marathon Oil		Connection: To air		Unit
Pool: Indian Basin (U) Penn		Formation: Upper Penn		
Completion Date: 12/20/88	Total Depth: 7710	Plug Back TD: 7500	Elevation: 3879.5 GL	Farm or Lease Name: Indian Basin "A"
Csg. Size: 5½ / Wt.: 15.5 / d: 4.950 / Set At: 7800		Perforations: From 7319 To 7378		Well No.: ~~A Federal~~ #2
Tbg. Size: 2-3/8 / Wt.: 4.7 / d: 1.995 / Set At: 7189		Perforations: From To		Unit: K / Sec.: 22 / Twp.: 21S / Rge.: 23E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 7189		County: Eddy County, NM
Producing Thru	Reservoir Temp. °F: 140 @ 7324	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
.7324	7324	.633	0.52	.87	0.00	0.0	4.0	Flange

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					1230	58			72.0
1.	4.03 x 1.250	800	4.0	8	1151	63	0	0	1.0
2.	4.03 x 1.250	800	13.5	93	1080	63	0	0	1.0
3.	4.03 x 1.250	800	30.0	96	973	63	0	0	1.0
4.	4.03 x 1.250	800	50.0	96	865	63	0	0	1.0
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	7.47	57.03	813.2	0.9813	1.2566	1.0679	561
2.	7.47	104.78	813.2	0.9697	1.2566	1.0618	1013
3.	7.47	156.19	813.2	0.9671	1.2566	1.0605	1504
4.	7.47	201.64	813.2	0.9671	1.2566	1.0605	1941
5.							

NO.	P_t	Temp. °R	T_f	Z
1.	1.21	540	1.48	0.877
2.	1.21	553	1.51	0.887
3.	1.21	556	1.52	0.889
4.	1.21	556	1.52	0.889
5.				

Gas Liquid Hydrocarbon Ratio 105.0 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 58.1 Deg.
Specific Gravity Separator Gas 0.633 xxxxxxxxx
Specific Gravity Flowing Fluid xxxxx 0.659
Critical Pressure 672 P.S.I.A. 670 P.S.I.A.
Critical Temperature 366 R 374 R

P_c 1244.9 P_c^2 1550

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	1355	1166	1360	189
2	1195	1102	1215	335
3	973	1009	1019	531
4	771	923	852	698
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.2202$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.1222$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4210$

Post TD-2
2-3-89
comp + BK

Absolute Open Flow 4210 Mcfd @ 15.025 Angle of Slope θ 46.7 Slope, n 0.943

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	W-11 Testing, Monahans	Well Testing, Monahans	Carl A. Bagwell