...EST AND MULTI-POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [x] Initial [ ] Annual [ ] Special			Test Date: 5-13-77	
Company: Mewborne Oil Company	Connection: None			
Pool: Wildcat	Formation: Morrow			Unit
Completion Date: 5-13-77	Total Depth: 13030	Plug Back TD: 13210	Elevation: 4161 Gr.	Farm or Lease Name: State E Com
Csg. Size: 5.50" / Wt.: 20.00# / d: 4.778" / Set At: 13030		Perforations: From 12906 To 12923		Well No.: 1
Tbg. Size: 2.375EUE / Wt.: 4.70# / d: 1.995" / Set At: 12750		Perforations: From To		Unit: 6 / Sec.: 6 / Twp.: 16S / Rge.: 34E
Type Well – Single – Bradenhead – G.C. or G.O. Multiple: Single Completion		Packer Set At: 12750		County: Lea
Producing Thru: Tubing	Reservoir Temp. °F: 190	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
12915	12915	0.685	0.00	0.00	0.00		X	

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							4294	64			
1.	3.00		2.00	410	2.00"	20	3362	71			1.00 Hr.
2.	3.00		2.00	410	3.90"	22	3075	72			1.00 Hr.
3.	3.00		2.00	410	4.90"	35	2673	75			1.00 Hr.
4.	3.00		2.00	410	6.00"	40	2215	77			1.00 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 Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	21.32	29.093	423.20	1.0408	1.2082	1.0650	831
2.	21.32	40.626	423.20	1.0387	1.2082	1.0580	1150
3.	21.32	45.538	423.20	1.0249	1.2082	1.0680	1284
4.	21.32	50.390	423.20	1.0198	1.2082	1.0580	1401
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	0.63	480	1.24	0.865
2.	0.63	482	1.24	0.885
3.	0.63	495	1.28	0.865
4.	0.63	500	1.29	0.885
5.				

Gas Liquid Hydrocarbon Ratio: 11942 Mcf/bbl.

A.P.I. Gravity of Liquid Hydrocarbons: 54.40 Deg.

Specific Gravity Separator Gas: 0.685 | xxxxxxxxx

Specific Gravity Flowing Fluid: xxxxx | 0.920

Critical Pressure: 669 P.S.I.A. | 662 P.S.I.A.

Critical Temperature: 388 R | 464 R

P_c 4307.2 P_c^2 18552

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		3573.3	12768	5783
2		3146.3	9899	8653
3		2814.8	7923	10629
4		2304.7	5312	13240
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.40117$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.2463$

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1746$

Absolute Open Flow: 1746 Mcfd @ 15.025 | Angle of Slope θ: 56.86 | Slope: 0.653

Remarks:

WEST TEXAS CONSULTING SERVICE, INC.

Approved by Commission: | Conducted By: | Calculated By: | Checked By:

RECEIVED
MAY 23 1977
OIL CONSERVATION COMM.
HOBBS, N. M.