SANTA FE, NEW MEXICO 87501

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C/SF File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: 4 POINT [X] Initial [ ] Annual [ ] Special		Test Date: 11-04-87	
Company: WESTERN OIL PRODUCERS	Connection: TO AIR		
Pool: CARLSBAD ~~EAST~~	Formation: WOLFCAMP		Unit

Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name
11-01-87	9950	9835	GL 3089	BASS

Csg. Size	Wt.	d	Set At	Perforations: From	To	Well No.
4.500	11.6	4.000	9835	9742	9804	2

Tbg. Size	Wt.	d	Set At	Perforations: From	To	Unit	Sec.	Twp.	Rge.
2.375	4.7	1.995	9600	OPEN	ENDED	L	1	22S	27E

Type Well – Single – Bradenhead – G.G. or G.O. Multiple	Packer Set At	County
SINGLE	9600	EDDY

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. – P_a	State
TUBING	170 @ 9773	60	13.2	NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
9773	9773	0.685	0.97	0.54	Ø	Ø	4.026	FLNG.

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	BHP DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI						2495	70	3685.4	170	72 HRS.
1.	4.026	1.750	90	2.0	56	2425	71	3625.9	170	60 MIN.
2.	4.026	1.750	120	15.0	54	2277	72	3499.0	170	60 MIN.
3.	4.026	1.750	122	27.0	56	2167	72	3341.5	170	60 MIN.
4.	4.026	1.750	190	78.0	50	1832	71	3014.6	170	60 MIN.
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	14.93	14.37	103.2	1.0039	1.2081	1.0115	263
2.	14.93	44.70	133.2	1.0058	1.2081	1.0152	823
3	14.93	60.42	135.2	1.0039	1.2081	1.0152	1110
4.	14.93	125.90	203.2	1.0098	1.2081	1.0239	2347
5.							

NO.	P_r	Temp. °R	T_r	Z
1	0.15	516	1.35	0.977
2.	0.20	514	1.35	0.970
3.	0.20	516	1.35	0.970
4.	0.30	510	1.34	0.954
5				

Gas Liquid Hydrocarbon Ratio 7.572 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 63.3 Deg.
Specific Gravity Separator Gas 0.685 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX 0.980
Critical Pressure 672 P.S.I.A. 657 P.S.I.A.
Critical Temperature 382 R 474 R

P_c 2264.9 P_c^2 5130

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		2215	4907	222
2		2110	4453	677
3		1982	3929	1200
4		1726	2979	2150
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.3854$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.3069$

$AOF = Q\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 5415$

Post ID 2 11-20-87 comp & BK

Absolute Open Flow 5415 Mcfd @ 15.025 Angle of Slope θ 46.1 Slope, n 0.962

Remarks: BOTTOM HOLE PRESSURES W/ AMARADA GAUGES

Approved By Division	Conducted By:	Calculated By:	Checked By:
	BENNETT & CATHEY	Richard Townley	