NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
JUL 23 1971
O. C. C.
ARTESIA, OFFICE

Type Test: ☐ Initial ☐ Annual ☒ Special				Test Date: 6-17-71	
Company: Pennzoil United, Inc.			Connection: Transwestern Pipeline Co.		
Pool: South Carlsbad Gas (Morrow)			Formation: Morrow		Unit: J
Completion Date: 2-20-71	Total Depth: 11,925		Plug Back TD: 11,835	Elevation: 3233.6	Farm or Lease Name: Echols
Csg. Size: 4 1/2 / Wt.: 11.6 / d: 4.82 / Set At: 11,925			Perforations: From 11,499 To 11,716		Well No.: 1
Tbg. Size: 2 3/8 EUE / Wt.: 4.7 / d: 1.995 / Set At: 11,716			Perforations: From 11,703 To 11,716		Unit: J / Sec.: 12 / Twp.: 23-S / Rge.: 26-E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 11,453		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 194 @ 11,607	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
11,607	11607	.580	.98	.30			X	

FLOW DATA / TUBING DATA / CASING DATA

NO.	Prover Line Size	X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Tubing Press. p.s.i.g.	Tubing Temp. °F	Casing Press. p.s.i.g.	Casing Temp. °F	Duration of Flow
SI						3240	82			72 Hrs SI
1.	2	1.250	805	16"	78	2749	86	Packer		190 Min
2.	2	1.250	805	33"	77	2380	94	Packer		190 Min
3.	2	1.250	830	55"	77	1985	92	Packer		190 Min
4.	2	1.250	830	73	74	1630	82	Packer		190 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	8.120	114.4	818.2	.9831	1.313	1.058	1269
2.	8.120	164.3	818.2	.9840	1.313	1.058	1823.6
3.	8.120	215.3	843.2	.9840	1.313	1.060	2394.2
4.	8.120	248.0	843.2	.9868	1.313	1.062	2770.9
5.							

NO.	P_t	Temp. °R	T_f	Z
1.	1.21	538	1.54	.893
2.	1.21	537	1.54	.893
3.	1.25	537	1.54	.890
4.	1.25	534	1.53	.887
5.				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons None produced Deg.
Specific Gravity Separator Gas .580 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 676 P.S.I.A. _____ P.S.I.A.
Critical Temperature 349 R _____ R

P_c 3253.2 P_c^2 10583

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2772	7684	2899
2		2428	5895	4688
3		2058	4235	6348
4		1724	2972	7611
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{10583}{6348}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.5191$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3637$

Absolute Open Flow 3637 Mcfd @ 15.025 Angle of Slope θ 50° 43' Slope, n .818

Remarks: Sub-Surface Pressures Observed w/Amerada Type RPG-3 Pressure Gauge.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	W. M. Cates	H. L. Hagler	

West Texas Engineering Service, Inc.
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