

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 5-21-81	
Company Shell Oil Company				Connection None	
Pool Custer Ellenberger				Formation Ellenberger	
Completion Date 5-21-81		Total Depth 12950		Plug Back TD 12861	
				Elevation 3258 GL	
Farm or Lease Name State B COM					
Casing Size 7" / 8"	Well 23#26#29#	Set At 12950	Perforations: From 12333 To 12585		Well No. 2
Thq. Size 2 7/8	Wt. 6.5	Set At 12220	Perforations: From Open To End		Unit J Sec. 36 Twp. 24 Area 36
Type well - Single - Blindhead - G.G. or G.O. Multiple Single				Packer Set At 12220	
Producing Thru Tbg.		Reservoir Temp. °F 197 12333		Mean Annual Temp. °F 60	
				Baro. Press. - P _o 13.2	
State New Mexico					
L 12222	H 12222	Gg .585	% CO ₂	% N ₂	% H ₂ S
Prover		Meter Run 4"		Taps Flg.	

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							1246				72 hr.
1.	4 X 2.000			215	12.00	74	1223	72			1 hr.
2.	4 X 2.000			220	37.00	77	1188	75			1 hr.
3.	4 X 2.000			600	30.00	76	1116	76			1 hr.
4.	4 X 2.000			600	52.00	72	1020	79			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	52.33	228.2	.9868	1.307	1.018	1,361
2	19.81	92.89	233.2	.9840	1.307	1.019	2,412
3	19.81	135.63	613.2	.9850	1.307	1.049	3,625
4	19.81	178.57	613.2	.9887	1.307	1.048	4,791
5							

NO.	$\bar{r}$	Temp. °R	T_r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	.34	534	1.53	.965	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	.35	537	1.53	.964	Specific Gravity Separator Gas .585 XXXXX
3	.91	536	1.53	.910	Specific Gravity Flowing Fluid XXXXX
4	.91	532	1.52	.910	Critical Pressure 672 P.S.I.A.
5					Critical Temperature 350 R

NO.	BHP	P _w	P _c ²	P _c ² - P _w ²
1	*1668.4	1285.6	1652.8	19.6
2	*1658.0	1272.4	1619.0	53.4
3	*1640.5	1254.2	1573.0	99.4
4	*1616.1	1230.2	1513.4	159.0
5	*1584.7			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 10.518$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.123$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 19.753$

Absolute Open Flow 19,753 Mcfd @ 15.025

Angle of Slope 59.0

Slope, n 602

Remarks: Made 2.62 bbls. of H₂O during test.

*=Static BHP. **=Flowing BHP's. ***=Static BHP calculated to surface shut-in.

Approved by Division Jerry Sexton Dist. L. Supv.	Conducted by: Murray	Calculated by: Murray	Checked by:
--	-------------------------	--------------------------	-------------

101-111111

RECEIVED
JUN 15 1981
OIL CONSERVATION DIV.