

OIL CONSERVATION DIVISION

P. O. BOX 2088

Form C-122
Revised 10-1-78

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial		☐ Annual		☐ Special		Test Date 1-12-82	
Company Pioneer Production Corp.				Connection			
Pool Basin Dakota				Formation Dakota			
Completion Date 1-1-82		Total Depth 6315'		Plug Back TD 6238'		Elevation 5465'	
Farm or Lease Name Shepherd & Kelsey #				Well No. 1E			
Coq. Size 4 1/2"		Wt. 11.6#		Set At 4.000		Perforations: From 5943 To 6091	
Tbg. Size 1 1/2"		Wt. 2.3#		Set At 1.380		Perforations: From open ended To	
Type Well - Single - Brdenhead - G.G. or G.O. Multiple Dual - Gas/Gas				Packer Set At 2875' RKB		County San Juan	
Producing Thru tbg.		Reservoir Temp. °F @		Mean Annual Temp. °F		Baro. Press. - P _a	
State NM		Prover		Meter Run		Tape	
L		H		G _g		% CO ₂	
						% N ₂	
						% H ₂ S	

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.	
SI	SEE REVERSE FOR DETAILS OF 8 HOUR BACK PRESSURE TEST ON THE									
1.	DAKOTA FORMATION.									
2.										
3.										
4.										
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, F _{pv}	Rate of Flow Q, Mcfd
1							
2							
3							
4							
5							

NO.	P _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature	Mcf/hbl.	Deg
1												
2												
3												
4												
5												

NO.	P _f	P _w	P _f ²	P _w ²	P _f ² - P _w ²
1					
2					
3					
4					
5					

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

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

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

Absolute Open Flow 425 Mcfd @ 15.025		Angle of Slope		Slope, n	
Remarks:					
Approved By Division		Conducted By		Checked By	

PIONEER PRODUCTION CORPORATION

Shepherd and Kelsey #1E

BACK PRESSURE TEST

Dakota Formation

2" Critical Flow Prover

½" Orifice

DAKOTA

CHACRA

<u>1-12-82</u>	<u>Tbg. Press.</u>	<u>Prover Press.</u>	<u>Tbg. Press.</u>	<u>Csg. Press.</u>
Shut In	1042 psi		998 psi	998 psi
9:15 a.m.	Opened Dakota thru separator and ½" orifice, 2" critical flow prover Began dumping fluid after 40 mins.			
9:45 a.m.	528 psi	175 psi	998 psi	990 psi
10:15 a.m.	88 psi	33 psi	998 psi	990 psi
10:45 a.m.	265 psi	117 psi	998 psi	990 psi
11:15 a.m.	110 psi	43 psi	998 psi	990 psi
12:15 a.m.	290 psi	121 psi	998 psi	990 psi
1:15 p.m.	195 psi	83 psi	998 psi	990 psi
2:15 p.m.	75 psi	24 psi	998 psi	990 psi
3:15 p.m.	87 psi	31 psi	998 psi	990 psi
4:15 p.m.	201 psi	79 psi	998 psi	990 psi
5:15 p.m.	161 psi	65 psi	1000 psi	998 psi

Well was loading up and then unloading water, causing fluctuations in pressure readings. Well produced estimated 60' bbls. of water and 1½ bbls. of oil during 8 hr. test.

Q = 425 MCFGPD

CAOF = 425 MCFGPD