

c15F
File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 02-11-91		MAR 12 1991					
Company Bass Enterprises Prod. Co.				Connection National Gas Pipeline							
Pool Sand Dunes Atoka W				Formation Atoka							
Completion Date 10-11-84				Total Depth 15090		Plug Back TD 14450					
Elevation KB 3339				Farm or Lease Name James Ranch Unit							
Ceq. Size 5"		Wi. 18		Set At 4.276		15090					
Perforations: From 13522 To 13528		Well No. 15									
Thq. Size 2 3/8		Wi. 4.7		Set At 1.995		13450					
Perforations: From To		Unit M		Sec. 8		Twp. 23S					
Age 31E											
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 13450		County Eddy					
Producing Thru Tubing		Reservoir Temp. °F 188 @ 13405		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2					
State New Mexico											
L 13,450		H 13,186		G _g 0.60		% CO ₂ 0.50					
% N ₂ 0.75		% H ₂ S		Prover 4.03		Meter Run 4.03					
Taps Flange											
FLOW DATA						TUBING DATA		BHP		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	Duration of Flow
SI	4.03						4297.		5642.	111.	209.0
1.	4.03	x	1.500	645.	12.0	90.	3045.	60.	4764.	111.	8.0
2.	4.03	x	1.500	720.	16.0	90.	2457.	60.	4196.	111.	8.0
3.	4.03	x	1.500	727.	19.0	93.	2310.	60.	3799.	111.	8.0
4.	4.03	x	1.500	757.	28.0	90.	2023.	60.	3360.	111.	8.0
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	10.84	88.87	658.2	.9723	1.2910	1.0458	1265.				
2	10.84	108.31	733.2	.9723	1.2910	1.0510	1549.				
3	10.84	118.59	740.2	.9697	1.2910	1.0504	1691.				
4	10.84	146.85	770.2	.9723	1.2910	1.0536	2106.				
5.											
NO.	R _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 412.3 Mcf/bbl.						
1	.98	550.	1.55	.914	A.P.I. Gravity of Liquid Hydrocarbons 56 (est) Deg.						
2	1.09	550.	1.55	.905	Specific Gravity Separator Gas .600 XXXXXXXXX						
3	1.10	553.	1.56	.906	Specific Gravity Flowing Fluid XXXXX 607						
4	1.14	550.	1.55	.901	Critical Pressure 673 P.S.I.A. 673 P.S.I.A.						
5					Critical Temperature 356 R 358 R						
P _c P _c ²					(1) $\frac{P_F^2}{P_F^2 - P_S^2} =$ (2) $\left[\frac{P_F^2}{P_F^2 - P_S^2} \right]^n =$						
NO.	P _F ²	P _S	P _S ²	P _F ² - P _S ²	AOF = Q $\left[\frac{P_F^2}{P_F^2 - P_S^2} \right]^n = 2726$						
1	4779	22838	9163		Part ID-2						
2	4211	17733	14268		4-5-91						
3	3814	14547	17454		comp H2O						
4	3375	11391	20609								
5											
Absolute Open Flow 2726 Mcfd @ 15.025					Angle of Slope 56.0					Slope, n .676	
Remarks: AOF calculated from Bottomhole pressure give by Bass Enterprises to tesing company.											
Approved By Division				Conducted By:				Calculated By: 3-7-91			
								Checked By:			

BACK PRESSURE CURVE

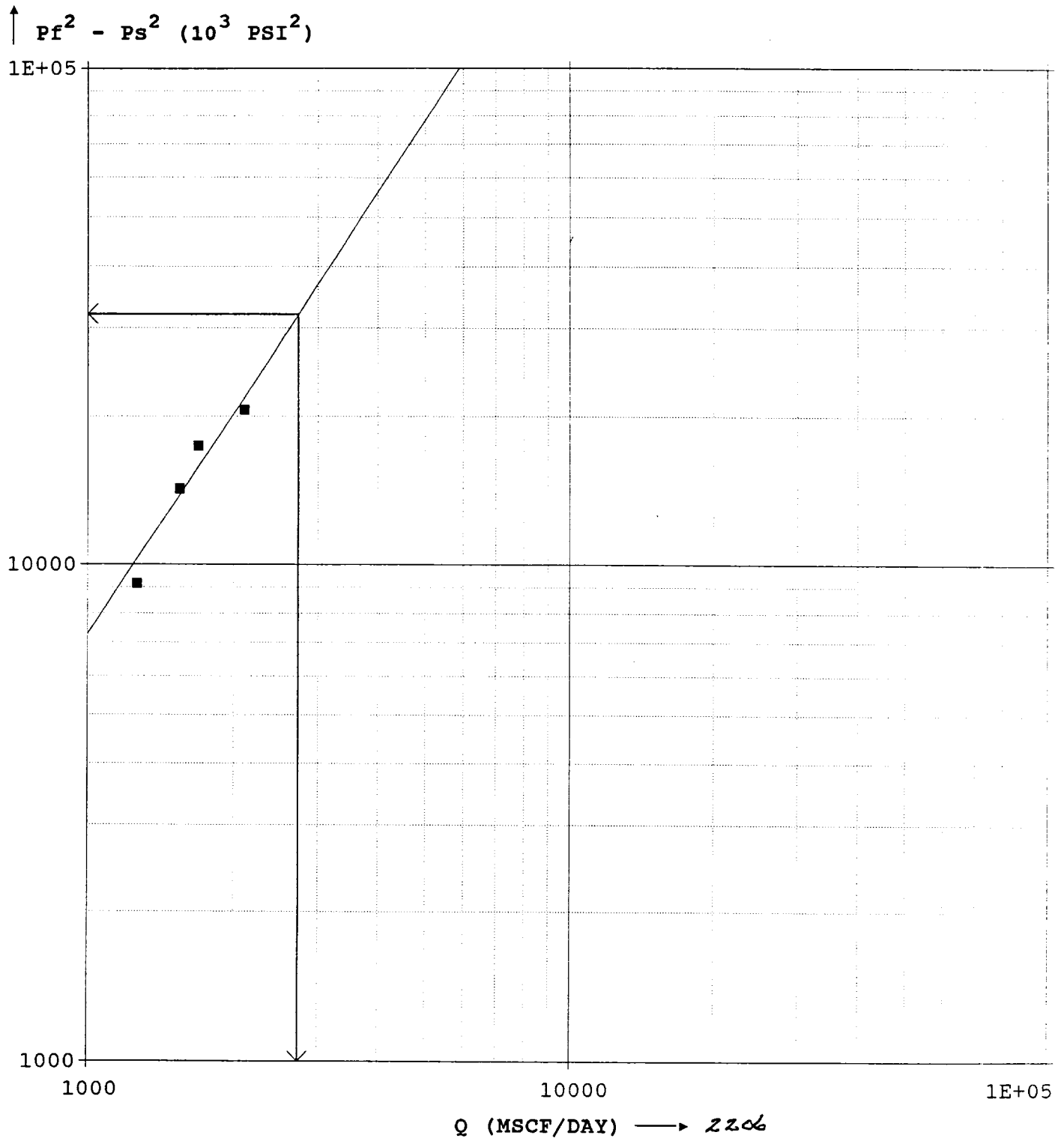
CLIENT: Bass Enterprises Prod. Co.

WELL: James Ranch #15

Test Date: 11-FEB-1991

County: Eddy, New Mexico

Calculated From BHP recorded Downhole



Well Tester:

[Signature] 3-7-91

SCHLUMBERGER Testing

θ = 55.941 degrees

n = 0.6760

AOF = 2725.6 MSCF/DAY