

N MEXICO OIL CONSERVATION COMM ON
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

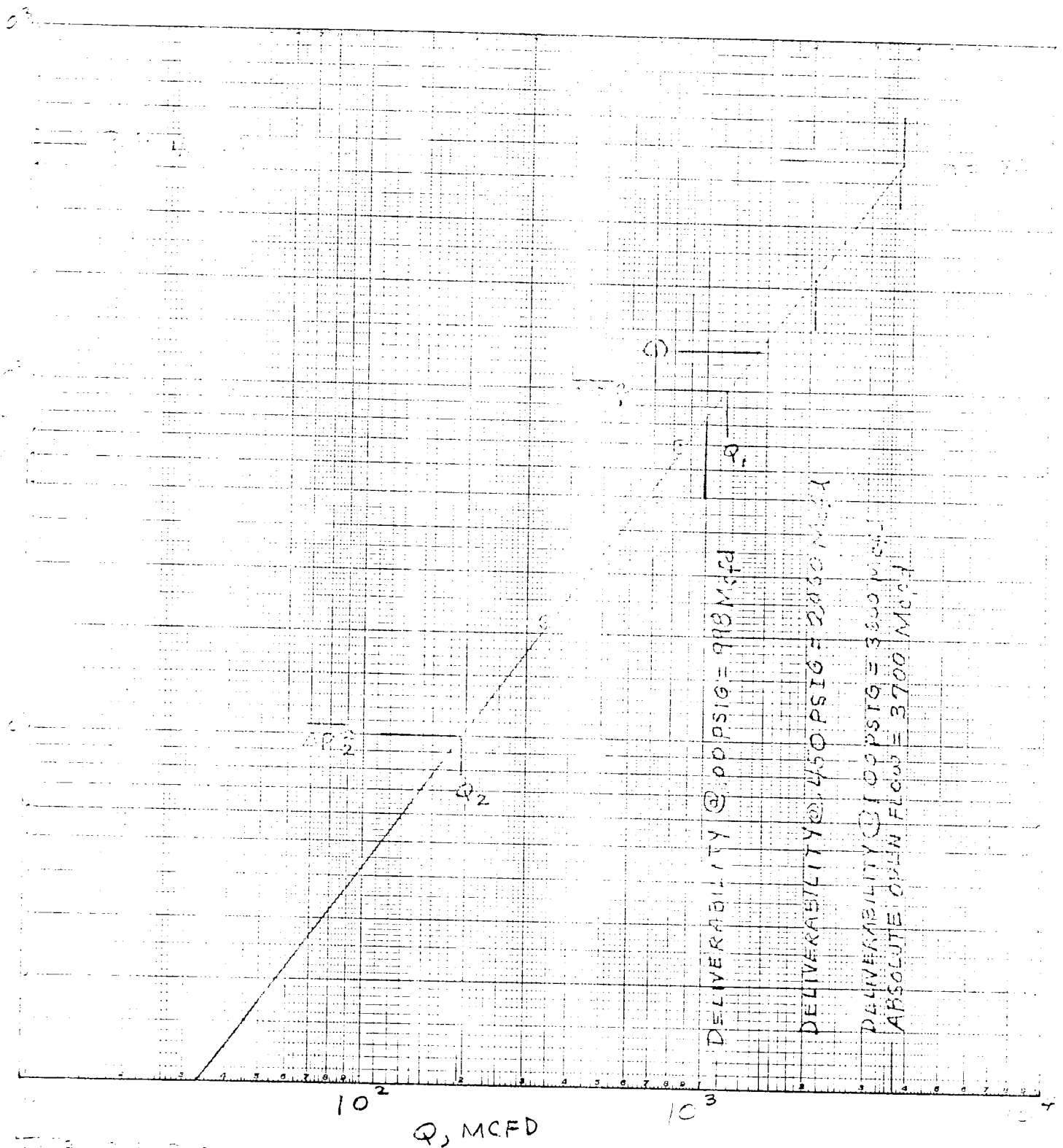
Form C-122
Revised 9-1-65

HOBBBS OFFICE O. C. C.

Dec 21 11 22 AM '66

Type Test ☐ Initial ☐ Annual ☒ Special											
Company Continental Oil Co.		Production 1 Paso Natural Gas Co.									
Pool Lumont		Formation Queen									
Completion Date		Total Depth	Unit L								
		Perforations: From 3501 To 3695	Form or Lease Name Lockhart B-23								
Well Size 5 1/2"	Wt. 17	Set At	Well No. 3								
Tbg. Size 2.3/8"	Wt. 4.70	Set At 1-995 3458	Unit Sec. Twp. Rge. L 28 21 36								
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single			Packer Set At 3458								
Producing Thru Tbg.		Reservoir Temp. °F 90 @	Mean Annual Temp. °F 60								
		Baro. Press. - P _a 13-2	State N.M.								
L 3458	H 3458	G _g .675	% CO ₂ % N ₂ % H ₂ S Prover Meter Run - - - - 4"								
FLOW DATA											
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	TUBING DATA		CASING DATA		Duration of Flow
							Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
1.	4	X	1.000	378	8.4	65	664	60	Pkr.	-	72
2.	4	X	1.000	370	39.0	72	647	60			24
3.	4	X	1.000	442	44.0	76	622	60			24
4.							604	60			24
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _a	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd				
1	4.770	56.35	311.2	.9971	1.217	1.044	341				
2	4.770	120.13	313.2	.9887	"	1.041	718				
3	4.770	139.45	453.2	.9850	"	1.040	836				
4											
5											
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio Dry Gas Mcf/bbl.						
1	.58	523	1.36	.917	A.P.I. Gravity of Liquid Hydrocarbons ---- Deg.						
2	.57	532	1.38	.923	Specific Gravity Separator Gas .675 XXXXXXXXX						
3	.68	536	1.39	.911	Specific Gravity Flowing Fluid XXXXXX Dry Gas						
4					Critical Pressure 669 P.S.I.A. P.S.I.A.						
5					Critical Temperature 285 °R °R						
P _c 664 P _c ² 438.6											
NO.	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.326$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2929$							
1	435.9	437.2	21.4								
2	403.5	409.3	49.3								
3	380.9	388.6	79.0	Q = 1 $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3525$							
4											
5											
At Flow Rate 3525					Mcf @ 15.025 Angle of Slope θ Slope, n .770						
Remarks:											
Approved By Commission:		Conducted By: T. D. Howard		Calculated By: T. D. Howard		Checked By:					

COMPANY Continental Oil Comp.
 WELL LOCKHART B-28 NO. 3
 LOCATION L 28-21-36
 COUNTY LEA
 DATE 12-4-66



$\Delta P_1 = P_1 - P_{wf} = 100$

$\Delta P_2 = P_2 - P_{wf} = 10$

$\log Q_1 = 3.05309$

$\log Q_2 = 2.28330$

$n = .76979$

$= .770$