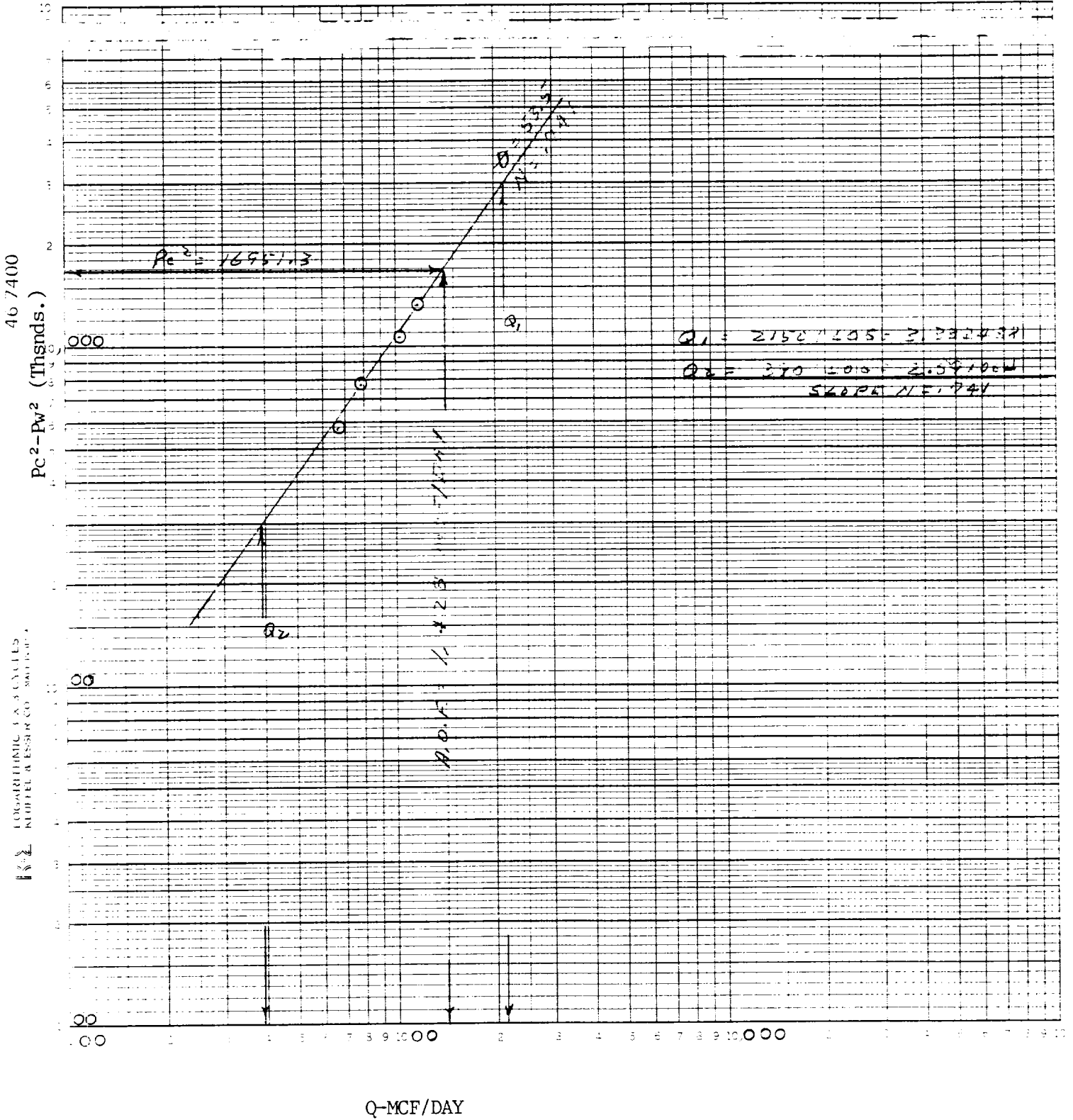


CISF
File

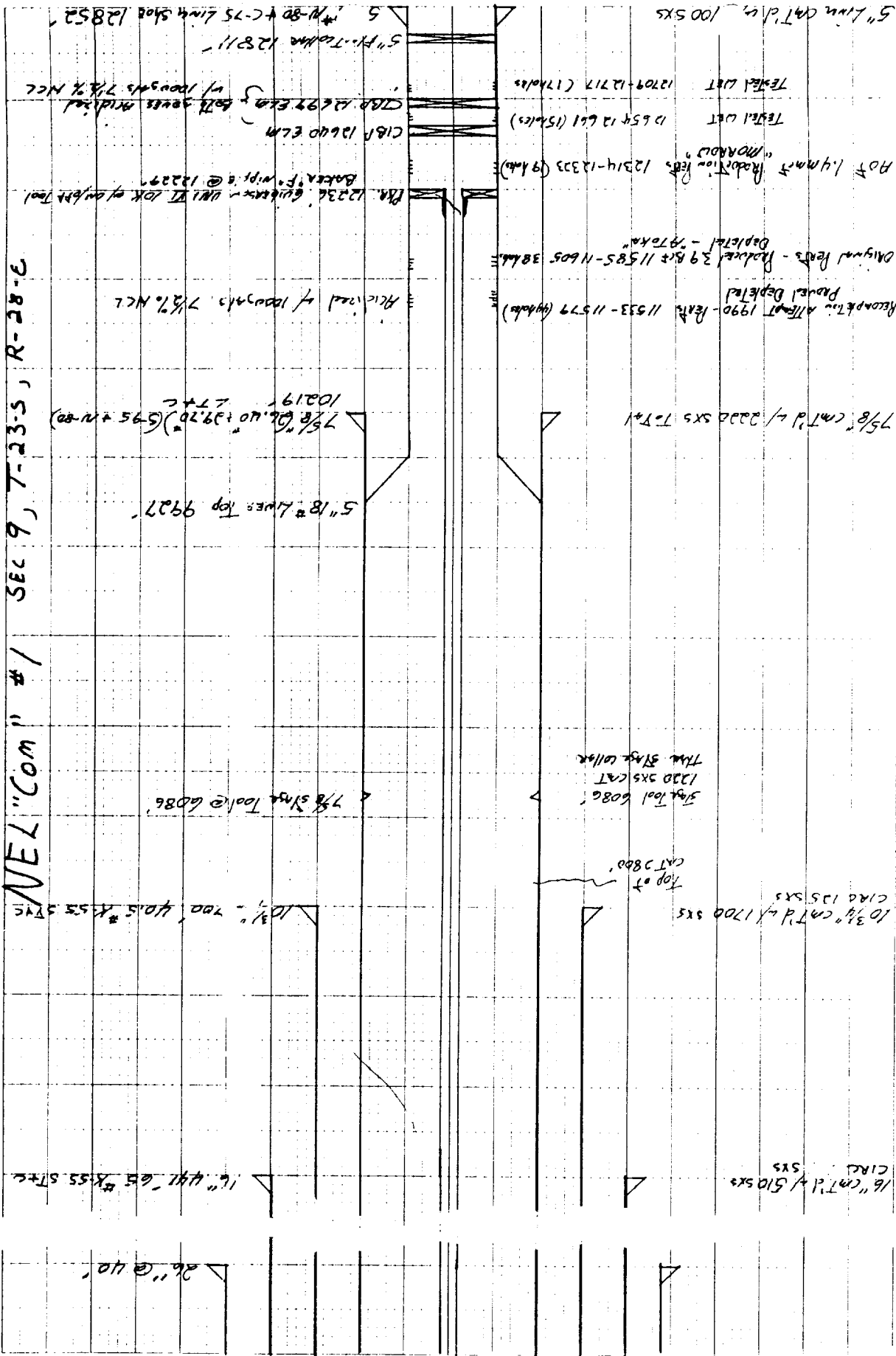
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		Test Date 07-15-90		RECEIVED							
Company D... ..g Company			Connection								
Completion Date 07-13-90			Total Depth 12,852		Plug Back TD 12,640						
Csg. Size 5"		Wt. 18#	Set At	Perforations: From 12,314 To 12,323							
Tbg. Size 2 3/8		Wt. 4.7	Set At 1,995	Perforations: From OPEN To END							
Type Well - Single - Orifices - G.C. or G.O. Multiple Single				Packer Set At 12,236							
Producing Thru Tbg.		Reservoir Temp. °F 196 @ 12,236	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2							
L 12,236	H 12,236	G _g .582	% CO ₂ 1.21	% N ₂ .27	% H ₂ S ----						
Prover		Meter Run 3.068	Taps Flg.								
FLOW DATA			TUBING DATA		CASING DATA						
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							4104		PKR		18 hrs
1.	3	X	1.000	509	21.20	86	3327		PKR		1 hr.
2.	3	X	1.000	518	28.10	79	3021		PKR		1 hr.
3.	3	X	1.000	527	48.30	78	2497		PKR		1 hr.
4.	3	X	1.000	536	62.41	85	1958		PKR		1 hr.
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow				
1	4.789	105.22	522.2	.9759	1.311	1.019	657				
2	4.789	122.17	531.2	.9822	1.311	1.041	784				
3	4.789	161.53	540.2	.9831	1.311	1.041	1,038				
4	4.789	185.14	549.2	.9768	1.311	1.033	1,173				
5											
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>dry gas</u> Mcf/bbl.						
1.	.77	632	1.81	.964	A.P.I. Gravity of Liquid Hydrocarbons <u>dry</u> Deg.						
2.	.78	539	1.54	.922	Specific Gravity Separator Gas <u>.582</u> X X X X X X X X						
3.	.79	538	1.54	.922	Specific Gravity Flowing Fluid <u>X X X X X</u>						
4.	.81	545	1.56	.937	Critical Pressure <u>*676</u> P.S.I.A. P.S.I.A.						
5.					Critical Temperature <u>*349</u> R R						
P _e 4117.2 P _e ² 16951.3					(1) $\frac{P_e^2}{P_e^2 - R_w^2} = 1.303$ (2) $\left[\frac{P_e^2}{P_e^2 - R_w^2} \right]^n = 1.217$						
NO.	P ₁ ²	P _w	P _e ²	P _e ² - R _w ²	AOF = 0 $\left[\frac{P_e^2}{P_e^2 - R_w^2} \right]^n = 1.428$						
1		3342.9	11175.1	5776.0							
2		3038.4	9231.6	7719.7							
3		2518.7	6344.0	10607.3							
4		1985.0	3940.4	13010.9							
5											
Absolute Open Flow <u>1,428</u>		Mcf @ 15.025			Angle of Slope @ <u>53.5</u>		Slope, n <u>.741</u>				
Remarks: <u>* corrected to 1.21 % CO₂</u> <u>No Fluid produced during test</u>											
Approved By Division			Conducted By:			Calculated By:			Checked By:		

Pogo Producing Company
 Federal N.E.L. Com., Well #1
 09-23S-28E
 Eddy County, New Mexico
 07-15-90



ANEL "Com" #1 / SEC 9, T-23-S, R-28-E





Laboratory Services

1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

RECEIVED

JUL 19 1990

MIDLAND

FOR: Pro Well Testing & Wireline
Attention: Mr. Kieth Norvell
P. O. Box 791
Hobbs, New Mexico 88241

SAMPLE
IDENTIFICATION: Fed. N. E. L. Com #1
COMPANY: Pogo Producing Co.
LEASE:
PLANT:

SAMPLE DATA:	DATE SAMPLED:	07/15/90 10:10AM	GAS (XX)	LIQUID ()
	ANALYSIS DATE:	07-15-90	SAMPLED BY:	Kieth Norvell
	PRESSURE - PSIG	535.00	ANALYSIS BY:	Rolland Perry
	SAMPLE TEMP. °F	78.00		
	ATMOS. TEMP. °F	70.00		

REMARKS:

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM	
OXYGEN	(O2)			
Hydrogen Sulfide	(H2S)	0.00		
Nitrogen	(N2)	0.27		
Carbon Dioxide	(CO2)	1.21		
Methane	(C1)	96.07		
Ethane	(C2)	2.06	0.547	
Propane	(C3)	0.24	0.066	
I-Butane	(IC4)	0.03	0.010	
N-Butane	(NC4)	0.02	0.008	
I-Pentane	(IC5)	0.01	0.004	
N-Pentane	(NC5)	0.01	0.004	
Hexane	(C6)	0.08	0.034	
Heptanes Plus	(C7+)	0.00	0.000	
		<u>100.00</u>	<u>0.673</u>	
BTU/CU.FT. - DRY		1019	MOLECULAR WT	16.8553
AT 14.650 DRY		1016		
AT 14.650 WET		998	26# GASOLINE -	0.045
AT 15.025 DRY		1042		
AT 15.025 WET		1024		
SPECIFIC GRAVITY -				
CALCULATED		0.582		
MEASURED		0.000		