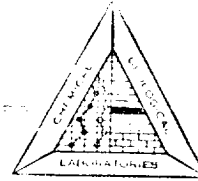


CHEMICAL & GEOLOGICAL LABORATORIES

CHEMISTS CORE ANALYSTS ENGINEERS



1000 P.O. BOX
CAMELTON, WYOMING

February 4, 1958

Kay Kimbell Oil Properties
H. W. Gooden
623 Lubbock National Bank Building
Lubbock, Texas

Re: Back Pressure Test
Federal No. 1-27
Jicarilla Wildcat
Rio Arriba County,
New Mexico

Dear Sir:

Attached are the results of the back pressure test on your Federal No. 1-27, taken January 25, 1958.

Absolute open flow potential calculated by the results of the three point back pressure test is 570 Mcf per day. The shut-in well head pressure measured 856 psig.

Pressures at the sand face were measured with a bottom hole pressure gage run on a wire line making it unnecessary to calculate weight of gas column. A gravity of 0.70 was used to calculate gas volume.

Chemical & Geological Laboratories were happy to have been of service to you and your firm, and we trust this work is completed to your satisfaction.

Very truly yours,

CHEMICAL & GEOLOGICAL LABORATORIES

F. Raymond Wheeler
Registered Petroleum Engineer
State of Wyoming - No. 262

FRW:ch

CHEMICAL & GEOLOGICAL LABORATORIES

GLENDIVE CASPER FARMINGTON
EDMONTON CALGARY REGINA

GAS WELL BACK PRESSURE TEST

Field: **Jicarilla Wildcat** County: **Rio Arriba** State: **New Mexico**
Well Owner: **Kay Kimbell** Lease: **Federal** Well No: **1-27**
Location: **Sec. 27-25N-6W** Date of Test: **January 25, 1958**
Elevation: **6762 GL** Top Perforation: **3502** T.D.: **3800 P.B.**
Bottom Perforation: **3610**
Date Completed: **January 20, 1958** Midpoint:
Formation: **Laventana** Casing: **5-1/2" @ 7221**
Tubing: **2" E.U.E. @ 3609**
Average Gravity of gas: **0.70** Bottom-hole Temperature: **124° F**

FIELD DATA

Run No.	Time of Run	Choke	Temperature	Stabilized Pressure psia
1	4 hours	1/8	50	743.4
2	5 hours	3/16	44	528.4
3	3 hours	1/4	40	299.4

VOLUME CALCULATIONS

Run No.	Stabilized Pressure psia	Coefficient	Gravity Factor	Temperature Factor	Compressibility Factor	Volume Mcf per day
1	743.4	0.3418	0.9258	1.0098	1.106	262.7
2	528.4	0.7851	0.9258	1.0157	1.077	420.1
3	299.4	1.4030	0.9258	1.0198	1.041	508.6

PRESSURE CALCULATIONS

P _s	952.4	MPSE	907.1		
P _{f1}	800.4	MPSE	640.6	MPSE MPSE	266.5
P _{f2}	572.4	MPSE	327.6	MPSE MPSE	579.5
P _{f3}	318.4	MPSE	101.4	MPSE MPSE	805.1
P _{f4}		MPSE		MPSE MPSE	

Absolute potential, **570 MCFGPD**

Shut-in well head pressure: **856 psig**

CHEMICAL & GEOLOGICAL LABORATORIES

Casper, Glendive, Edmonton

Company **Kay Kimbell**
 Field **Jicarilla Wildcat**
 Lease and Well **Federal No. 1-27**
 Date **January 25, 1958**

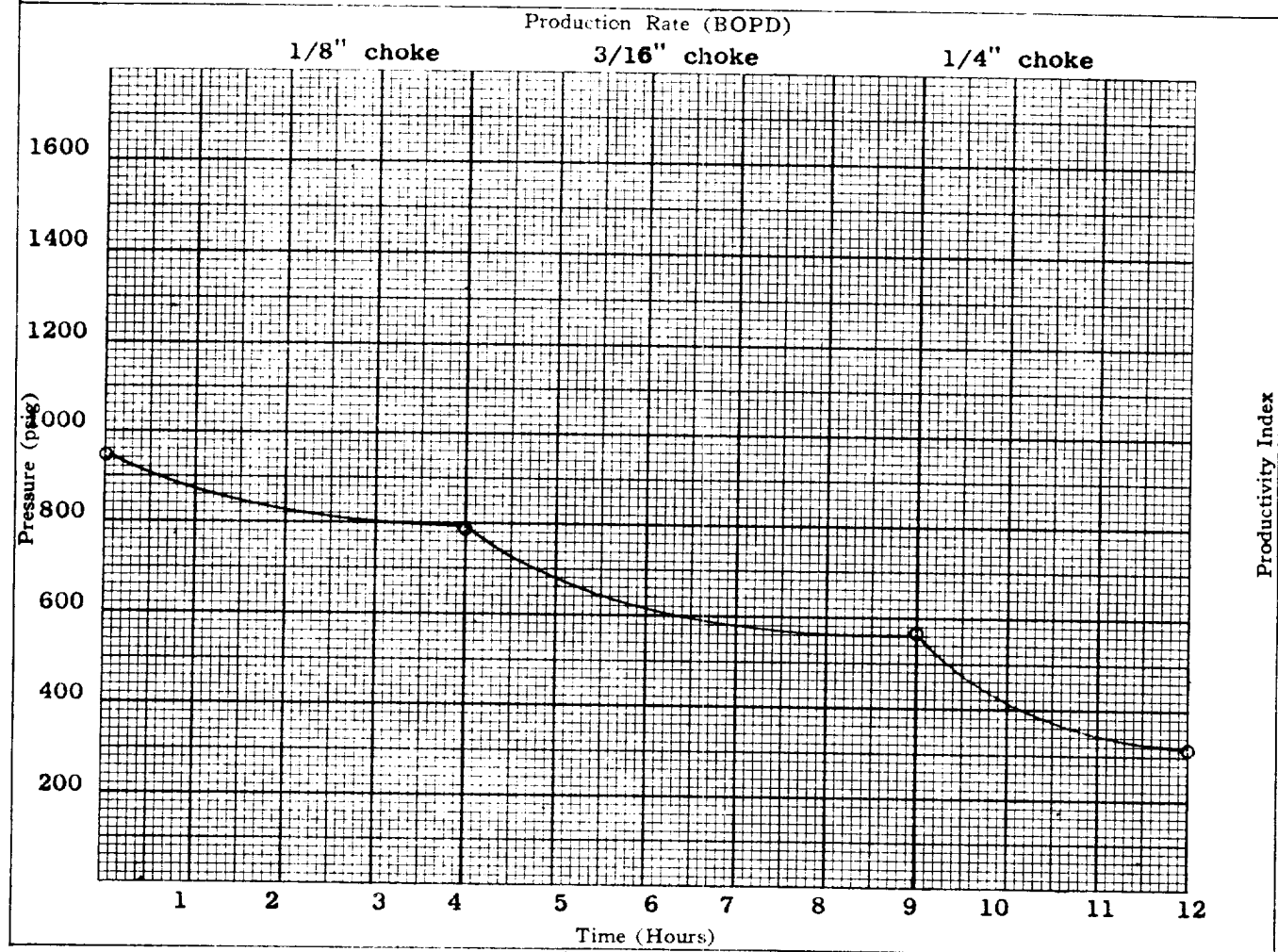
County **Rio Arriba**
 State **New Mexico**
 Formation **Laventana**
 Gauge No. **844**

Type of Test **Back Pressure Gas Well Test Using Bomb**
 Depth **3500**
 Elevation **6762 GL**
 Temperature @ Datum **124° F**

Max. Static Pressure **941 psig**
 Min. Flow Pressure **307 psig**
 Gas Gravity **0.700 est**
 Oil Gravity **-**

Time Hours	Choke Size	Prod. BOPD	Gas MCFPD	Press. @ Datum	Tubing Press.	Casing Press.	P. I.	GOR
0	Shut-in		-	941	856	856		
4	1/8	-	262.7	789	732	732		
9	3/16	-	420.1	561	522	517		
12	1/4	-	508.6	307	288	286		

REMARKS:



CHEMICAL & GEOLOGICAL LABORATORIES

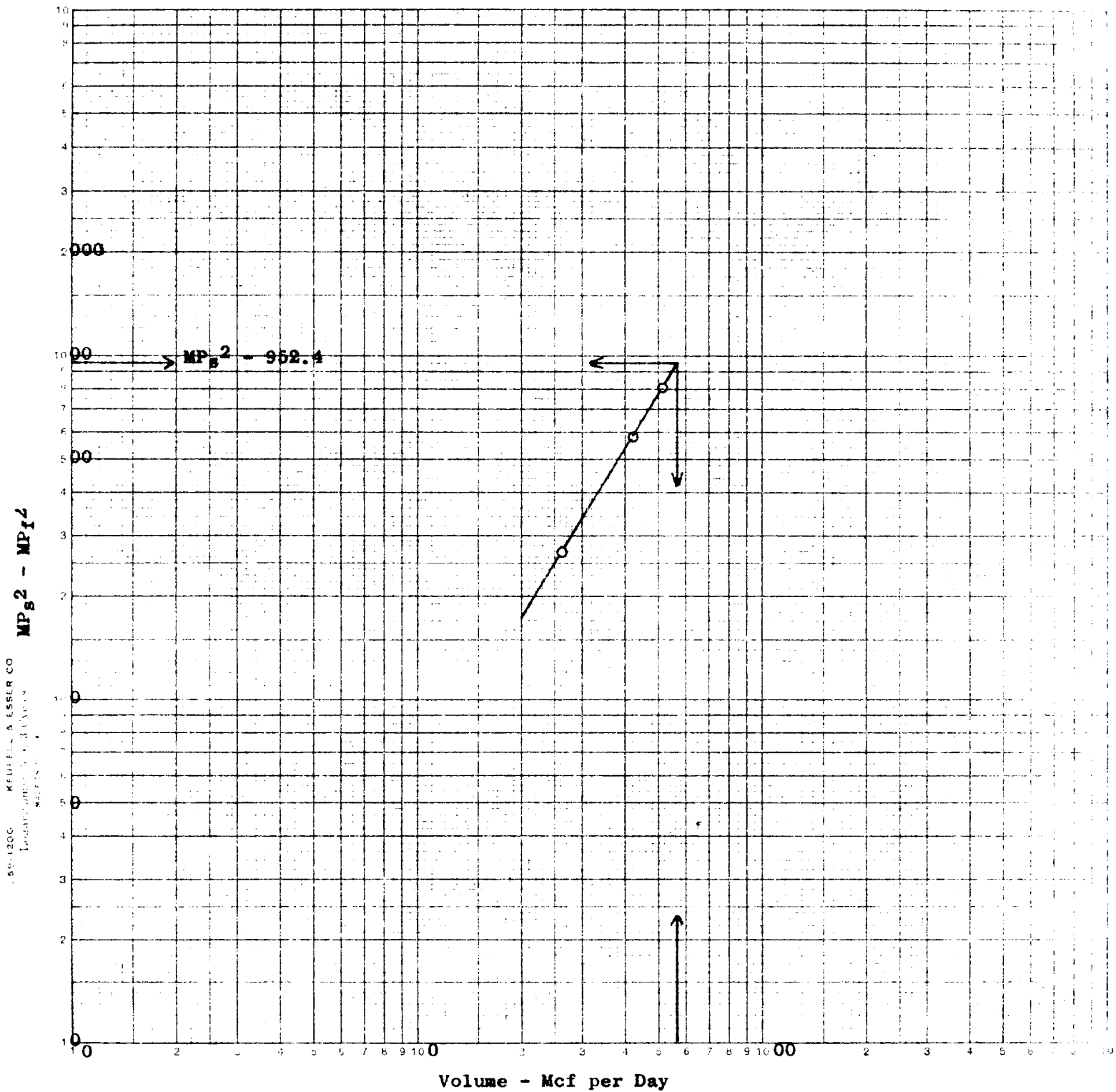
Glendive Casper Farmington
Edmonton Calgary Regina

FIELD NOTES AND READINGS

Well No. Federal No. 1-27 Location: Section 27-25N-6W
Date: January 25, 1958 Elevation: 6762 GL
Bar. Press.: 11.4 psi Top fm.: T.D. 3800 P.B.

Time Hours	Orifice Inches	Casing Pressure psig	Casing Pressure psia	Choke Temperature °F	Tubing Pressure psig	Tubing Pressure psia	P _s psig	Remarks
<u>Run No. 1</u>								
-	-	856	867.4	60	856	867.4	952.4	Shut in
0	1/8	856		60	856			P _s read directly from bottom hole pressure chart. Well open @ 12:45 PM.
1	1/8	783		48	790			
2	1/8	750		50	753			
3	1/8	734		50	734			
4	1/8	732	743.4	50	732	743.4	800.4	
<u>Run No. 2</u>								
0	3/16	732		50	732			Changed choke at 4:45 PM
1	3/16	621		48	620			
2	3/16	557		47	559			
3	3/16	525		46	528			
4	3/16	521		44	524			
5	3/16	517	528.4	44	522	533.4	572.4	
<u>Run No. 3</u>								
0	1/4	517		44	522			Changed choke at 9:45 PM
1	1/4	300		40	307			
2	1/4	291		40	294			
3	1/4	288		40	290			
4	1/4	286	297.4		288	299.4	318.4	Calculated final four hour pressure

Back Pressure Test
 Federal No. 1 -27
 Kay Kimbell Company
 Section 27-25N-6W
 Rio Arriba County, New Mexico



Absolute open flow - 500 MCFPD
 Shut-in well head pressure - 856 psig