

NEW MEXICO  
OIL CONSERVATION COMMISSION  
Back Pressure Data Sheet

Form C-122

DUAL COMPLETION

Pool: Wildcat (Tubb Gas) Date: July 21, 1952

Company: Markham, Cone & Redfern Lease: Eubanks Well No. 2

County: Lea Sec. 14 Twp. 21 S Rge. 37 E Loc. C NW/4 SW/4 Section 14

4.950" ID casing set @ 6567 ; 1.995" ID tubing 2.375" OD tubing set @ 6420 on packer

Pay zone from 6055' to 6230'; Separator gas gr 3.700/ Barometer rdg. \_\_\_\_\_

Reservoir temperature 152 °F / Produced through: csg. X/ (annular space) \_\_\_\_\_ tbg. \_\_\_\_\_

Average gas/liquid ratio during test: 40,000 Cu. ft. / bbl. / gravity of liquid 70 ° API est.

Size of meter run or prover: 2-inch critical flow prover  
(Unable to save condensate during test; therefore, gas-liquid ratio and liquid gravity are estimates).

OBSERVED DATA

Wellhead shut-in pressure, P<sub>w</sub> Casing 2041.3 Tubing 40\* PSIA  
\*Tubing pressure that of Drinkard oil zone, flowing.

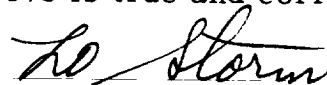
Run No.	Orifice Size	Orifice x Line	Prover Meter Pressures		Coefficient C/24 hr	Wellhead Pr.		Flowing Temp.	
			Static P <sub>m</sub> Abs.	Diff. h <sub>w</sub>		Casing P <sub>wc</sub> Abs.	Tubing P <sub>wc</sub> Abs.	Meter	Wellhead
1	3/4"		266.3		12.490	266.3			75
2	1/2"		439.3		5.653	439.3			74
3	7/16"		540.3		4.503	540.3			72
4	1/4"		1225.3		1.436	1225.3			69

DATA FOR PLOTTING CURVE

Run No.	Delivery Rate in MCF per 24 hours (Q) @ 14.65 psi PB	P <sub>f</sub> <sup>2</sup> - P <sub>s</sub> <sup>2</sup> (thousands)
1	3,3136	6,020
2	2,389	5,854
3	2,374	5,711
4	1,862	3,964
5		

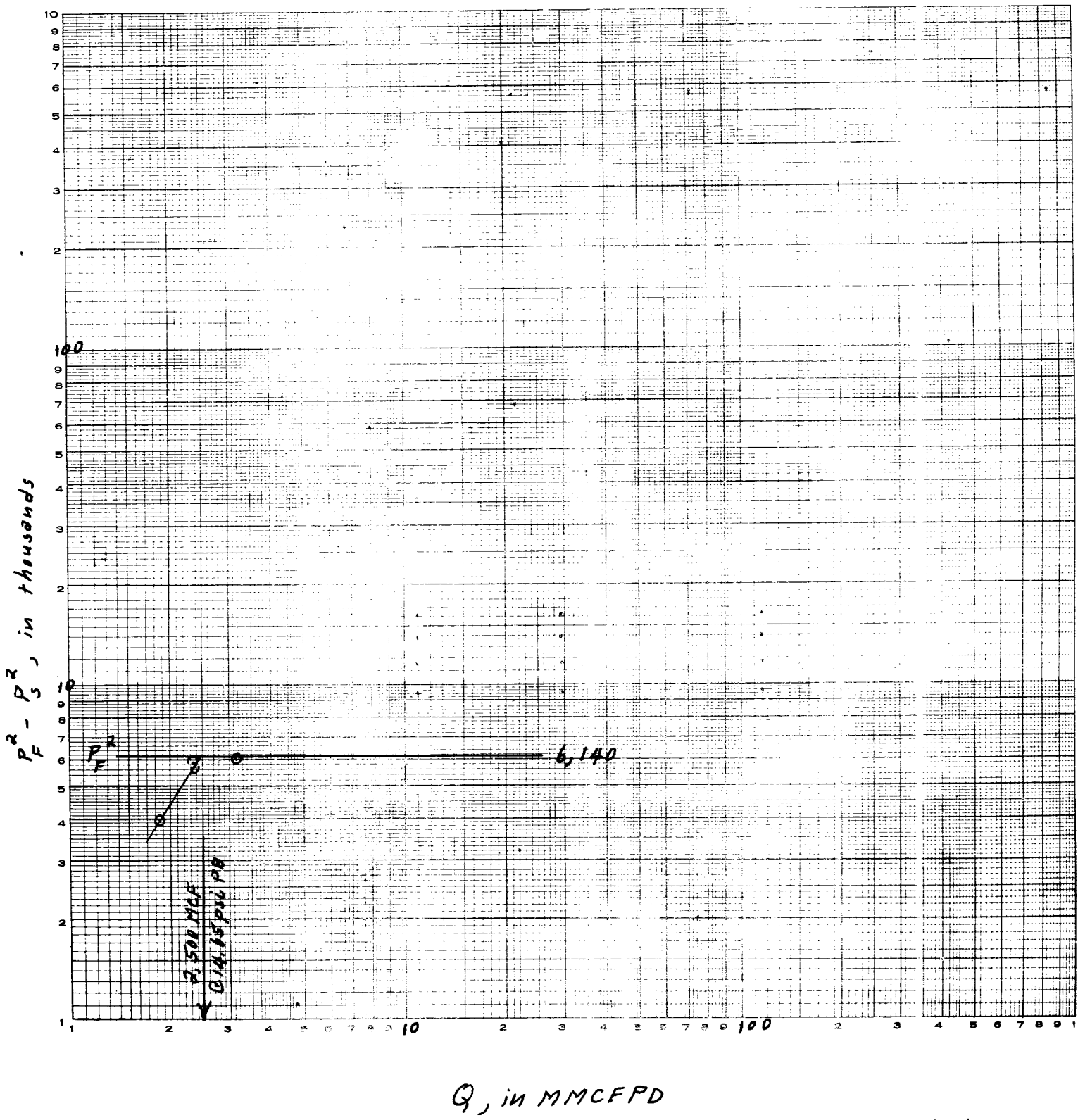
Absolute Open Flow 2,438 MCF @ 15.025 psi PB

CERTIFICATION: I hereby swear or affirm that, to the best of my knowledge, the information given above is true and correct.

Name: L. O. Storm  Position: Engineer

Company: Markham, Cone & Redfern Address: 209 Turner Drive, Hobbs, New Mexico

Please plot curve on back



New Well **X (Dual Comp.)**

Workover.....

Re-Test.....

Reclassified.....

Oil to Gas.....

**RAILROAD COMMISSION OF TEXAS  
OIL AND GAS DIVISION**

Form GWT-1  
Back Pressure Test  
for Gas Wells

RRC Dist. .... Field **Drinkard** Reservoir **Tubb** County **Lea, New Mexico**

Well Owner **Cone, Markham, & Redfern** Lease **Eubanks** Well No. **2**

Field Office Address..... Location (Nearest town).....

Date of Test **7-9-52** Acres..... Pipe Line Conn..... Survey.....

Gravity (Raw Gas) **700** (Assumed) Avg. Shut-In Temp. **106°F** Bottom Hole Temp. **152°F** @ **6142**

Size CSG. **5 1/2** " Wt./Ft..... Lbs. I. D. CSG..... Set at **6567**

Size TBG. **2** " Wt./Ft..... Lbs. I. D. TBG..... Set at **6420**

Prod. Section From **6055-75, 6100-30, 6140-6230** Avg. Prod. Length, (L) **6142**

Elevation **3422 (DF)** Date of Completion **6-24-52** Producing through Tubing..... through Casing **X**

Angle of Slope,  $\theta =$ ..... ;  $n =$ ..... **FIELD DATA** (Annulus)

Run No.	Time of Run Min.	PLATE Size	Coefficient	Pressure PSIA	Choke Temp. °F	Wellhead Press P <sub>w</sub> PSIA	Wellhead Flow Temp. °F	P <sub>w</sub> <sup>2</sup> (Thousands)
Shut-In								
1		3/4"	12.4900	266.3	75	2041.3		70.915
2		1/2"	5.6530	439.3	74	266.3		192.984
3		7/16"	4.5030	540.3	72	439.3		291.924
4		1/4"	1.4360	1225.3	69	540.3		1,501.360
5						1225.3		

**VOLUME CALCULATIONS**

Run No.	Size Line Fig.-Tap	Size Orifice	Meter Coeff. 24 Hrs.	Static P <sub>m</sub>	Diff. h <sub>w</sub>	Flow Temp. °F	Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress Factor F <sub>cp</sub>	Volume MCF/Day
1							.9859	.9258	1.033	3,136
2							.9868	.9258	1.053	2,389
3							.9887	.9258	1.066	2,374
4							.9915	.9258	1.153	1,862
5										

Gas Liquid Hydrocarbon Ratio.....MCF per Bbl.

**PRESSURE CALCULATIONS**

Gravity of Liquid Hydrocarbons.....Deg.

Gas produced into pipe line during

$$(D e_{ff})^{8/3} = 36.403 \dots \sqrt{T} = \sqrt{566} = 23.75 \text{ test } \dots \text{MCF.}$$

$$C = \frac{1118 \times (D e_{ff})^{8/3}}{\sqrt{T}} = \frac{1118 \times 36.403}{23.75} = 1714$$

$$\sqrt{GL} = \sqrt{4299} = 65.57 \dots \frac{\sqrt{GL}}{C} = \frac{65.57}{1714} = 0.03826$$

$$G_{mix} =$$

Run No.	R	R <sup>2</sup> (Thousands)	P <sub>i</sub>	R <sub>w</sub> /P <sub>i</sub>	F	K	S = 1/Z	E <sup>KS</sup>	P <sub>F</sub> <sup>2</sup> a	P <sub>S</sub> <sup>2</sup> a	P <sub>F</sub> <sup>2</sup> - P <sub>S</sub> <sup>2</sup>
Shut-In											
1	120.0	14.40	292	.912	.957	.1348	1.254	1.184	346	120	6,020
2	91.4	8.35	448	.980	.990	.1395	1.278	1.194	535	286	5,854
3	90.8	8.24	548	.986	.993	.1399	1.275	1.195	655	429	5,711
4	71.2	5.07	1226	.999	1.000	.1409	1.313	1.203	1,475	2,176	3,964
5											

**OPEN FLOW TEST:**

Shut-In Press	<b>2028</b>		Psig
Time Shut-In			Hrs.
Producing Through			
In. H <sub>2</sub> O	In. Hg	Psig	
Time	Reading	Time	Reading
15		25	
20		30	

Absolute Open Flow.....**2,500**.....MCF/Day

Comm: .....

Conn: .....

Co: .....

Other: .....  
Signatures

(See Reverse Side)

REMARKS:

AFFIDAVIT

STATE OF TEXAS

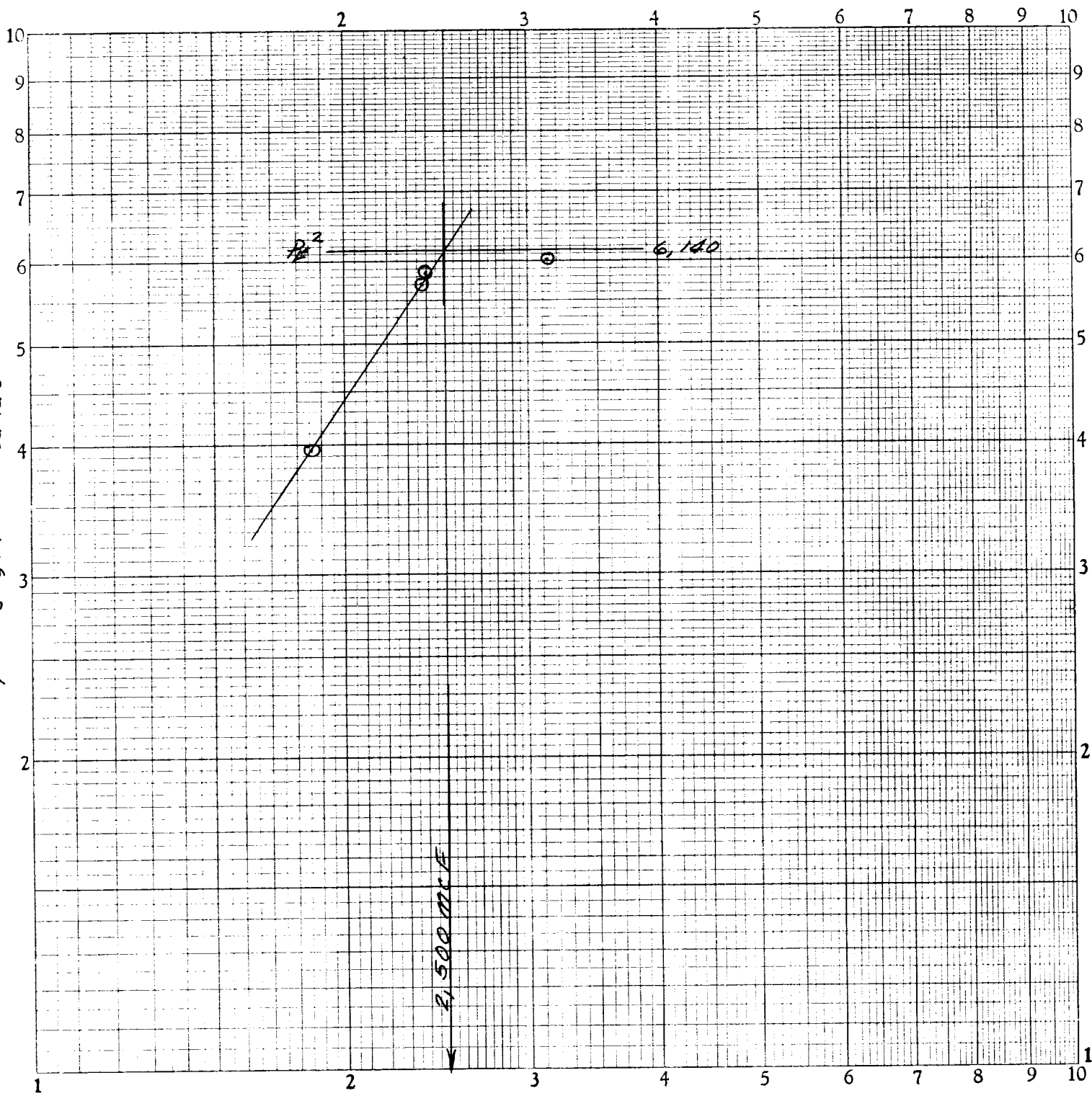
COUNTY OF.....}

BEFORE me, the undersigned authority, on this day personally appeared....., known to me to be the person whose name is subscribed to this instrument, who, after being by me duly sworn on oath, states that he is employed by or associated with..... in the capacity of.....; that these tests were made by affiant or under the supervision of affiant; that the test data and factual data shown hereon are true and correct; and that no pertinent matter inquired about in said report has been omitted.

Subscribed and Sworn to before me on this the.....day of....., 19.....

Notary Public in and for.....  
County, Texas

$P_2 - P_3$ , in Thousands



$Q$ , in MMCF PD