

New Well.....

Workover.....

Re-Test.....

Reclassified.....

Oil to Gas.....

RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISIONForm GWT-1
Back Pressure Test
for Gas Wells

RRC Dist. Field. **Burnet** Reservoir. **Tates** County. **Lea**
 Well Owner **Sinclair Oil & Gas Company** Lease. **State 176** Well No. **3**
 Field Office Address. **520 East Broadway Street - Hobbs, N.M.** Location (Nearest town) **NE NW SE 19-215 36E**
 Date of Test. **1-10-56** Acres. **160** Pipe Line Conn. Survey.
 Gravity (Raw Gas) **.676** Avg. Shut-In Temp. **552 R** Bottom Hole Temp. **565 R** @ **Fraser 03579'**
 Size CSG. **7"** " Wt./Ft. **24** Lbs. I. D. CSG. **6.336** Set at **3883**
 Size TBG. **2.5** " Wt./Ft. **6.5** Lbs. I. D. TBG. **2.141** Set at **3798**
 Prod. Section From **3520' - 3620'** Avg. Prod. Length, (L) **3736'**
 Elevation **3663'** Date of Completion **12-20-55** Producing through Tubing **X** through Casing.....
 Angle of Slope, $\theta = 42$; $n = .900$

FIELD DATA

Run No.	Time of Run Min.	Choke Size	Coefficient	Choke Press PSIA	Choke Temp. °F	Wellhead Press P_w PSIA	Wellhead Flow Temp. °F	P_w^2 (Thousands)
Shut-In	2 1/2 Hour					1000	68	1000
1	180					940	68	884
2	180					880	70	774
3	180					835	72	697
4	180					777	72	604
5								

VOLUME CALCULATIONS

Run No.	Size Line Fig.-Tap	Size Orifice	Meter Coeff. 24 Hrs.	Static P_m	Diff. h_w	Flow Temp. °F	Temp. Factor F_T	Gravity Factor F_g	Compress Factor F_{pr}	Volume MCF/Day
1	2" STD	1 1/4"	1.100	940		68	.9924	.9421	1.108	1363
2		5/16"	2.163	880		70	.9905	.9421	1.103	1950
3		3/8"	3.064	835		72	.9887	.9421	1.091	2600
4		7/16"	4.990	777		72	.9887	.9421	1.085	3447
5										

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

PRESSURE CALCULATIONS

Gravity of Liquid Hydrocarbons.....Deg.

Gas produced into pipe line during

testMCF.

$$(D e_{ff})^{8/3} = 10.806 \quad \sqrt{T} = \sqrt{518} = 22.74$$

$$C = \frac{1118 \times (D e_{ff})^{8/3}}{\sqrt{T}} = \frac{1118 \times (10.806)}{\sqrt{518}} = 516$$

$$\sqrt{GL} = \sqrt{2526} = 50.26 \quad \frac{\sqrt{GL}}{C} = \frac{50.26}{516} = .0974$$

$$G_{mix} = .676$$

Run No.	R	R^2 (Thousands)	P_i	R_w/P_i	F	K	$S = \frac{1}{Z}$	E^{KS}	$\frac{P_i}{P_s} a$	$\frac{P_i^2}{P_s^2} a$	$P_i^2 - P_s^2$
Shut-In						.0872	1.257	1.115	1115	1243	
1	132.8	17.6	941	.999	.999	.0865	1.221	1.111	1044	1090	153
2	189.9	36.1	900	.978	.989	.0864	1.206	1.110	977	955	288
3	253.2	64.01	872	.958	.979	.0864	1.199	1.107	924	854	389
4	335.7	112.69	846	.918	.940	.0828	1.192	1.104	858	736	507
5											

OPEN FLOW TEST:

Shut-In Press	Psig
Time Shut-In.....	Hrs.
Producing Through.....	
In. H ₂ O	In. Hg.....
Time	Time
Reading	Reading
15	25
20	30

Absolute Open Flow.....**7,600** MCF/Day
@ 15.025

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 instru-
ment, 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