

New Well.....  
 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. **Summit** ... Reservoir. **Intero** ... County. **Leon**  
 Well Owner. **Sinclair Oil & Gas Co.** ... Lease. **State 176** ... Well No. **3**  
 Field Office Address. **520 East Broadway Street** ... Location (Nearest town). **Robsta, New Mexico**  
 Date of Test. **1-10-51** ... Acres. **140** ... Pipe Line Conn. .... Survey. ....  
 Gravity (Raw Gas). **.676** ... Avg. Shut-In Temp. **517** ... Bottom Hole Temp. **915** @ **Factor 9 1579'**  
 Size CSG. **7"** Wt./Ft. **24** ... Lbs. I. D. CSG. **6.136** ... Set at. **3883**  
 Size TBG. **2.5** Wt./Ft. **6.5** ... Lbs. I. D. TBG. **2.111** ... Set at. **3798**  
 Prod. Section From **3552' - 3820'** ... Avg. Prod. Length, (L) **3632**  
 Elevation. **3643'** ... Date of Completion. **12-20-53** ... Producing through Tubing. **X** through Casing.

Angle of Slope,  $\theta =$  .....;  $n =$  ..... 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	<b>24 Hour</b>					<b>1000</b>	<b>68</b>	<b>1000</b>
1	<b>180</b>					<b>940</b>	<b>68</b>	<b>884</b>
2	<b>180</b>					<b>880</b>	<b>70</b>	<b>774</b>
3	<b>180</b>					<b>835</b>	<b>72</b>	<b>697</b>
4	<b>180</b>					<b>777</b>	<b>72</b>	<b>604</b>
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## 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 $F_{cp}$	Volume MCF/Day
1	<b>2" CFB</b>	<b>1/2"</b>	<b>1.100</b>	<b>940</b>		<b>68</b>	<b>.9984</b>	<b>.9421</b>	<b>1.110</b>	<b>1364</b>
2		<b>5/16"</b>	<b>2.153</b>	<b>880</b>		<b>70</b>	<b>.9985</b>	<b>.9421</b>	<b>1.098</b>	<b>1341</b>
3		<b>3/8"</b>	<b>3.054</b>	<b>835</b>		<b>72</b>	<b>.9987</b>	<b>.9421</b>	<b>1.094</b>	<b>1207</b>
4		<b>7/16"</b>	<b>4.390</b>	<b>777</b>		<b>72</b>	<b>.9987</b>	<b>.9421</b>	<b>1.087</b>	<b>1054</b>
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Gas Liquid Hydrocarbon Ratio..... MCF per Bbl.

## PRESSURE CALCULATIONS

Gravity of Liquid Hydrocarbons..... Deg.

Gas produced into pipe line during

$$(D e_{ff})^{8/3} = \dots 10.006 \dots \sqrt{\frac{T}{F}} = \sqrt{\frac{54.8}{21.4}} = \dots 21.4 \dots \text{test} \dots \text{MCF.}$$

$$C = \frac{1118 \times (D e_{ff})^{8/3}}{\sqrt{T}} = \frac{1118 \times (10.006)}{\sqrt{21.4}} = \dots 516 \dots$$

$$\sqrt{G L} = \sqrt{\frac{21.62.8}{10.68}} = \dots 10.68 \dots \frac{\sqrt{G L}}{C} = \frac{10.68}{516} = \dots .0205 \dots$$

$$G_{mix} = \dots .676 \dots$$

Run No.	R	$R^2$ (Thousands)	$P_i$	$R_w/P_i$	F	K	$S = \frac{1}{Z}$	$E^{KS}$	$P_r/P_s$ a	$P_r^2/P_s^2$ a	$P_F^2 - P_S^2$
Shut-In						<b>.0014</b>	<b>1.271</b>	<b>1.109</b>	<b>1109</b>	<b>1230</b>	
1	<b>131.5</b>	<b>17.3</b>	<b>940</b>	<b>.991</b>	<b>996</b>	<b>.0011</b>	<b>1.271</b>	<b>1.107</b>	<b>1051</b>	<b>1105</b>	<b>125</b>
2	<b>104.9</b>	<b>11.0</b>	<b>880</b>	<b>.979</b>	<b>990</b>	<b>.0010</b>	<b>1.204</b>	<b>1.104</b>	<b>974</b>	<b>988</b>	<b>212</b>
3	<b>83.1</b>	<b>6.9</b>	<b>835</b>	<b>.958</b>	<b>979</b>	<b>.0007</b>	<b>1.204</b>	<b>1.105</b>	<b>944</b>	<b>989</b>	<b>301</b>
4	<b>132.6</b>	<b>110.4</b>	<b>845</b>	<b>.980</b>	<b>940</b>	<b>.0011</b>	<b>1.199</b>	<b>1.102</b>	<b>931</b>	<b>847</b>	<b>363</b>
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## OPEN FLOW TEST:

Shut-In Press ..... Psig  
 Time Shut-In ..... Hrs.  
 Producing Through.....  
 In.  $H_2O$  ..... In. Hg. .... Psig.  
 Time Reading Time Reading

15		25	
20		30	

Absolute Open Flow..... **11,700** MCF/Day  
 @ **15.085**

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