

CORRECTED COPY**REPLACEMENT**

MULTI-POINT BACK PRESSURE TEST FOR GAS W.

Pool Undesignated		Formation Devonian		County Lea	
Initial X	Annual	Date of Test MAY 26 11 07 AM '66		Date of Test May 19, 1966	
Company TEXACO Inc.		Lease Cotton Draw Unit		Well No. 64	
Unit C	Sec. 18	Twp. 25-S	Range 32-E	Purchaser None	
Casing 7-5/8	Wt. 33.7#	I.D. 6.765	Set at 11832	Perf.	To
Tubing See Back Side	Wt.	I.D.	Set at	Perf.	To
Gas Pay:	From 16490	To 16537	L 16537	G 0.580	GL 9591
				Bar. Press. 13.2	
Producing Through:		Casing X	Tubing X	Type Well - Single - Braden head - G.G. or G.O. Dual Single	
Date of Completion May 19, 1966		Packer 11752		Reservoir Temp. 197	

OBSERVED DATA

TESTED THROUGH								Type of Taps		
Tested Through:		Prover ☐	Choke ☐		Meter ☒			Flange		
FLOW DATA						TUBING DATA		CASING DATA		DURATION OF FLOW HR.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig.	Diff. h _w	Temp. °F.	Press. psig.	Temp. °F.	Press. psig.	Temp. °F.	
SI						5407	70			72
1.	4.026	3.000	523	13.8	118	5315	78			1
2.	4.026	3.000	540	28.0	84	5201	79			1
3.	4.026	3.000	635	55.5	40	4850	82			1
4.	4.026	3.000	950	81.0	40	4025	82			1
5.										

FLOW CALCULATIONS

No.	Coefficient (24 Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCF P D @ 15.025 psia
1.	66.67	86.02	536.2	.9485	1.0171	1.030	5699
2.	66.67	124.5	553.2	.9777	1.0171	1.036	8552
3.	66.67	189.7	648.2	1.0198	1.0171	1.061	13918
4.	66.67	279.3	963.2	1.0198	1.0171	1.095	21149
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **Dry** cf/bbl. Specific Gravity Separator Gas **0.580**
 Gravity of Liquid Hydrocarbons **--** deg. Specific Gravity Flowing Fluid **--**
 $F_c = (1 - e^{-S})$ $P_c = 5420.2$ $P_c^2 = 29378$

No.	$\frac{P_w}{P_t}$ psia	P_t^2	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2 (1 - e^{-S})$	P_w^2	$P_c^2 - P_w^2$	Cal P_w	$\frac{P_w}{P_c}$
1.	5328.2	28390			799	29189	189	5403	.9968
2.	5214.2	27188			1801	28989	389	5384	.9933
3.	4863.2	23651			4768	28419	959	5331	.9835
4.	4038.2	16307			11006	27313	2065	5226	.9642
5.									

ABSOLUTE POTENTIAL: **92,000** MCFPD; n **.553**COMPANY **TEXACO Inc.** WITNESSED **R. F. Montgomery**ADDRESS **Box 1270, Midland, Texas** COMPANY **Llano, Inc.**AGENT AND TITLE **F.W. Moore** **District Supervisor (Gas)** **660 PNL 1650 PNL**

Flow channel consists of the following:

Surface to	700'	2-7/8 OD	2.229 I.D.	Plastic Coated Tubing
700' to	11,768'	2-7/8 OD	2.347 I.D.	Plastic Coated Tubing
11,768' to	11,832'	7-5/8 OD	6.765 I.D.	Casing
11,832' to	11,874'	10-3/4 OD	9.565 I.D.	Casing
11,874' to	11,919'	4-1/2 OD	3.686 I.D.	Drill Pipe
11,919' to	15,727'	3-1/2 OD	2.602 I.D.	Drill Pipe
15,727' to	16,537'	5" OD	2.250 I.D.	Drill Collars

NEW MEXICO OIL CONSERVATION COMMISSION
MULTI JOINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 12-1-55

Pool Undesignated		Formation Devonian		County Lea	
Initial X		Annual		Special MAY 25 11 29 AM '66	
Company TEXACO Inc.		Lease Cotton Draw Unit		Well No. 64	
Unit C	Sec. 18	Twp. 25-S	Range 32-E	Purchaser None	
Casing 7-5/8	Wt. 33.7#	I.D. 6.765	Set at 11,832	Perf.	To
Tubing See Back Side	Wt.	I.D.	Set at	Perf.	To
Gas Pay:	From 16,490	To 16,537	L 16,537	G 0.580	GL 95-91
				Bar. Press. 13.2	
Producing Through:		Casing		Tubing X	
				Type Well - Single - Braden head - G.G. or G.O. Dual Single	
Date of Completion May 19, 1966		Packer 11,752		Reservoir Temp. 197	

OBSERVED DATA

Tested Through: Prover ☐ Choke ☐ Meter ☒								Type of Taps Flange		
FLOW DATA						TUBING DATA		CASING DATA		DURATION OF FLOW HR.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig.	Diff. h _w	Temp. °F.	Press. psig.	Temp. °F.	Press. psig.	Temp. °F.	
SI						5407	70			72
1.	4.026	3.000	523	13.8	118	5315	78			1
2.	"	"	540	28.0	84	5201	79			1
3.	"	"	635	55.5	40	4850	82			1
4.	"	"	950	81.0	40	4025	82			1
5.										

FLOW CALCULATIONS

No.	Coefficient (24 Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCF PD @ 15.025 psia
1.	66.67	86.02	536.2	.9485	1.0171	1.030	5699
2.	"	124.5	553.2	.9777	"	1.036	8552
3.	"	189.7	648.2	1.0198	"	1.061	13918
4.	"	279.3	963.2	1.0198	"	1.095	21149
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **Dry** cf/bbl. Specific Gravity Separator Gas **0.580**
 Gravity of Liquid Hydrocarbons **-** deg. Specific Gravity Flowing Fluid **-**
 F_c **(1-e^{-S})** P_c **5420.2** P_c² **29,378**

No.	$\frac{P_w}{P_t}$ psia	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-S})	P _w ²	P _c ² - P _w ²	Gal P _w	$\frac{P_w}{P_c}$
1.	5328.2	28,390			622.3	29012	366	5386	.9893
2.	5214.2	27,188			1401	28589	789	5347	.9752
3.	4863.2	23,651			3711	27362	2016	5231	.9297
4.	4038.2	16,307			8573	24880	4498	4988	.8096
5.									

ABSOLUTE POTENTIAL: **92,000** MCFPD; n **.553**

COMPANY **TEXACO Inc.** WITNESSED **R. F. Montgomery**

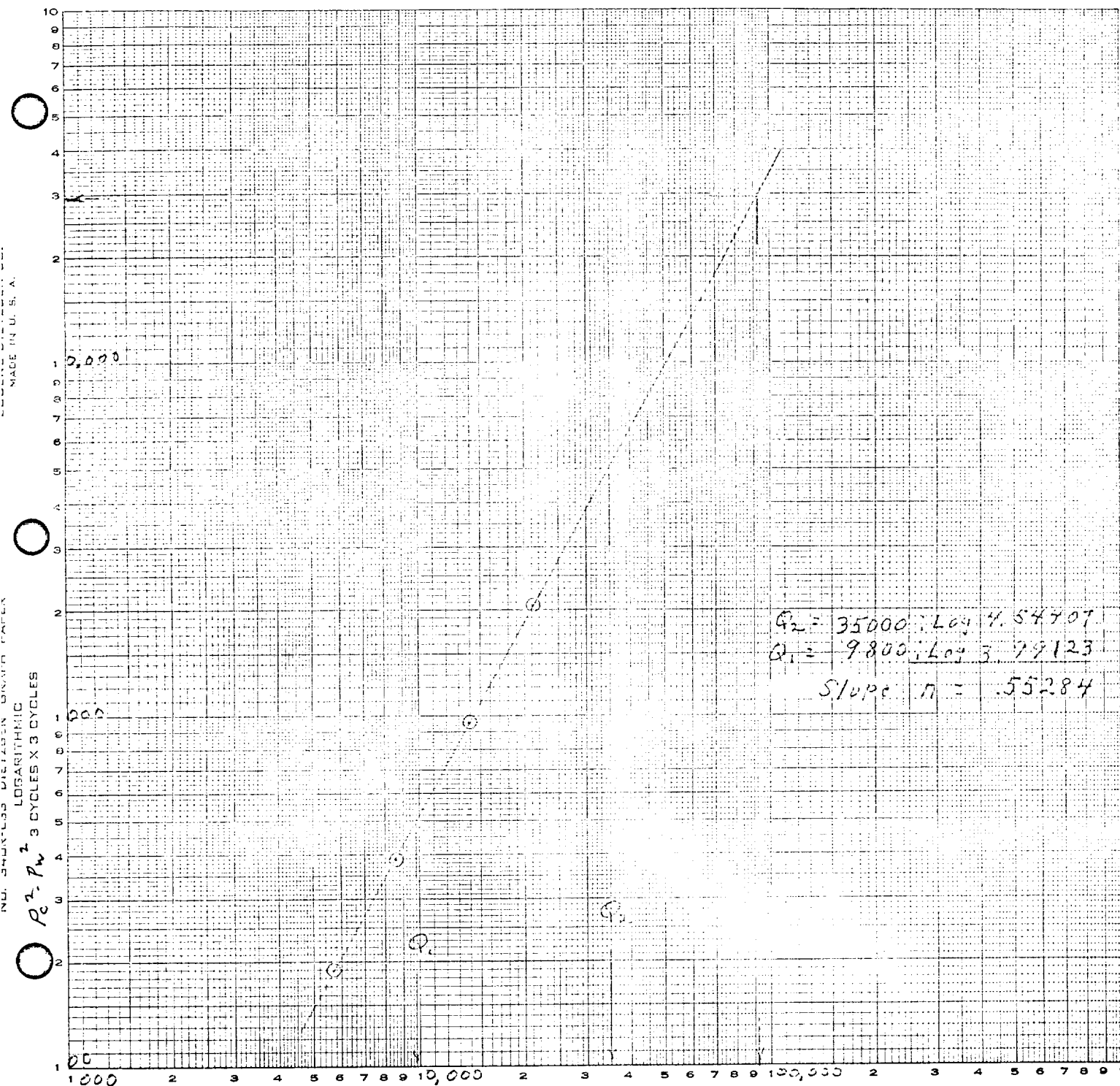
ADDRESS **Box 1270, Midland, Texas** COMPANY **Llano, Inc.**

AGENT AND TITLE **F. W. Moore** *F. W. Moore* **660' FNL & 1650' FWL**
District Supervisor (Gas)

Flow channel consist of the following:

Surface to 700'	2-7/8 OD	2.229 ID	Plastic Coated Tubing
700' to 11,768	2-7/8 OD	2.347 ID	Plastic Coated Tubing
11,768 to 11,832	7-5/8 OD	6.765 ID	Casing
11,832 to 11,874	10-3/4 OD	9.565 ID	Casing
11,874 to 11,919	4-1/2 OD	3.626 ID	Drill Pipe
11,919 to 15,727	3-1/2 OD	2.602 ID	Drill Pipe
15,727 to 16,537	5 OD	2.250 ID	Drill Collars

Texaco Inc.
 Cotton Draw Unit
 Well No. 64
 660' FWL, 1650 FWL
 S-18, T-25S, R-32 E
 Lea County, New Mexico
 May 19, 1966



$Q = \text{MCFD} - 15.025 \text{ PSIA}$
 Absolute Potential 92,000 MCFD
 $n = .553$

HOBBS OFFICE O.C.C.

COTTON DRAW UNIT NO. 475 11 29 AM '66
FLOW STRING CALCULATIONS
OF $(F_cQ)^2 (1-e^{-S})$

From Surface to 700', 2-7/8 OD, 2.229" I.D. Plastic Coated Tubing

$L=700$, $GL=406$, $F_c=8.360$, $1-e^{-S}=.0253$

Point No.	Flow Rate MMCFD	F_cQ	$(F_cQ)^2$	$(F_cQ)^2(1-e^{-S})$
1	5.699	47.64	2270	57.43
2	8.552	71.49	5111	129.3
3	13.918	116.4	13547	342.8
4	21.149	176.8	31258	790.8

From 700' to 11768', 2-7/8 OD, 2.347" I.D. Plastic Coated Tubing

$L=11068$, $GL=6419$, $F_c=7.184$, $1-e^{-S}=.330$

Point No.	Flow Rate MMCFD	F_cQ	$(F_cQ)^2$	$(F_cQ)^2(1-e^{-S})$
1	5.699	40.94	1676	553.1
2	8.552	61.44	3775	1246
3	13.918	99.99	9998	3299
4	21.149	151.9	23074	7614

From 11768 to 15727, All Considered 3-1/2" OD Drill Pipe, 2.602" I.D.

$L=3959$, $GL=2296$, $F_c=5.448$, $1-e^{-S}=.133$

Point No.	Flow Rate MMCFD	F_cQ	$(F_cQ)^2$	$(F_cQ)^2(1-e^{-S})$
1	5.699	31.05	964.1	128.2
2	8.552	46.59	2171	288.7
3	13.918	75.83	5750	764.8
4	21.149	115.23	13278	1766

From 15727 to 16537, 5" OD Drill Collars, 2.250" I.D.

$L=810$, $GL=478$, $F_c=8.009$, $1-e^{-S}=.0291$

Point No.	Flow Rate MMCFD	F_cQ	$(F_cQ)^2$	$(F_cQ)^2(1-e^{-S})$
1	5.699	45.64	2083	60.62
2	8.552	68.49	4691	136.5
3	13.918	111.5	12432	361.8
4	21.149	169.4	28696	835.1

10.0.0 2004 01.01

MA 52 es II 25 MA 52
STATIONARY CONTAINER
OF THE 1000 LITRE

1. The following table shows the results of the tests carried out on the container in accordance with the requirements of the standard.

Test	Result	Remarks	Pass/Fail
1.1	100%	Pressure test	Pass
1.2	100%	Leakage test	Pass
1.3	100%	Impact test	Pass
1.4	100%	Temperature test	Pass

2. The following table shows the results of the tests carried out on the container in accordance with the requirements of the standard.

Test	Result	Remarks	Pass/Fail
2.1	100%	Pressure test	Pass
2.2	100%	Leakage test	Pass
2.3	100%	Impact test	Pass
2.4	100%	Temperature test	Pass

3. The following table shows the results of the tests carried out on the container in accordance with the requirements of the standard.

Test	Result	Remarks	Pass/Fail
3.1	100%	Pressure test	Pass
3.2	100%	Leakage test	Pass
3.3	100%	Impact test	Pass
3.4	100%	Temperature test	Pass

4. The following table shows the results of the tests carried out on the container in accordance with the requirements of the standard.

Test	Result	Remarks	Pass/Fail
4.1	100%	Pressure test	Pass
4.2	100%	Leakage test	Pass
4.3	100%	Impact test	Pass
4.4	100%	Temperature test	Pass