

MULTI POINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED BY

MAR 22 1984

O. C. D.

Form 6-122
Revised 9-1-65

ARTESIA, OFFICE

Type Test 4-POINT ☒ Initial ☐ Annual ☐ Special		Test Date 1-31-84	
Company TRANSWESTERN GAS SUPPLY CO.		Connection AIR NEW WELL	
Pool 1-31-84 <i>W. Pecos Slope</i>		Correlation ABO	
Completion Date 1-31-84	Total Depth 3800	Plug Back 2862	Elevation 4366'
Casing Size 4.500	Wt. 10.5	Set At 4.052	2862
Thy. Size 2.375	Wt. 4.7	Lot At 1.995	2732
Type Well - Single - Bradenhead - G.G. or G.O. Multiple		Packor Set At 0	Unit L
Producing Thru TUBING	Reservoir Temp. °F 92	Mean Annual Temp. °F 60.0	Baro. Press. - P _a 13.2
L 2794	H 2794	C _g 0.626	% CO ₂ 0.06
		% N ₂ 5.10	% H ₂ S 0
		Provar 0	Motor Run 2.1
			Temp. FLANGE

FLOW DATA						TUBING DATA		B.H.P. DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
51										
1.	2.07 X 1.000			140	6.0	55	0	0	1069	
2.	2.07 X 1.000			140	12.0	47	0	0	1015	12/64
3.	2.07 X 1.000			140	23.0	42	0	0	940	13.5/64
4.	2.07 X 1.000			140	50.0	45	0	0	882	14.5/64
5.							0	0	761	16.5/64

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super. Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	4.95	30.32	153.2	1.0048	1.2639	1.0135	193.
2	4.95	42.88	153.2	1.0127	1.2639	1.0142	275.
3	4.95	59.36	153.2	1.0178	1.2639	1.0146	383.
4	4.95	87.52	153.2	1.1047	1.2639	1.0144	563.

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	0.23	515.	1.46	0.973	A.P.I. Gravity of Liquid Hydrocarbons	0
2	0.23	507.	1.44	0.972	Specific Gravity Separator Gas	0.626
3	0.23	502.	1.42	0.971	Specific Gravity Flowing Fluid	XXXXXX
4	0.23	505.	1.43	0.972	Critical Pressure	663. P.S.I.A.
5					Critical Temperature	353. °R

$P_r = 1007.9$ $P_c^2 = 1016$				(1) $\frac{P_c^2}{P_r^2 - P_w^2} = 2.0608$		(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.9632$	
NO	P _r ²	P _w	P _w ²	P _r ² - P _w ²	$AOG = 0 \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1105.3$ <i>Post ID 2 3-30-84 Camp & BIK</i>		
1	1057.	958.	918.	98.			
2	909.	889.	790.	226.			
3	801.	835.	698.	318.			
4	599.	723.	523.	493.			

Absolute Open Flow	1105.3	Mcf @ 15.025	Angle of Slope	47.0	Slope, n	.933
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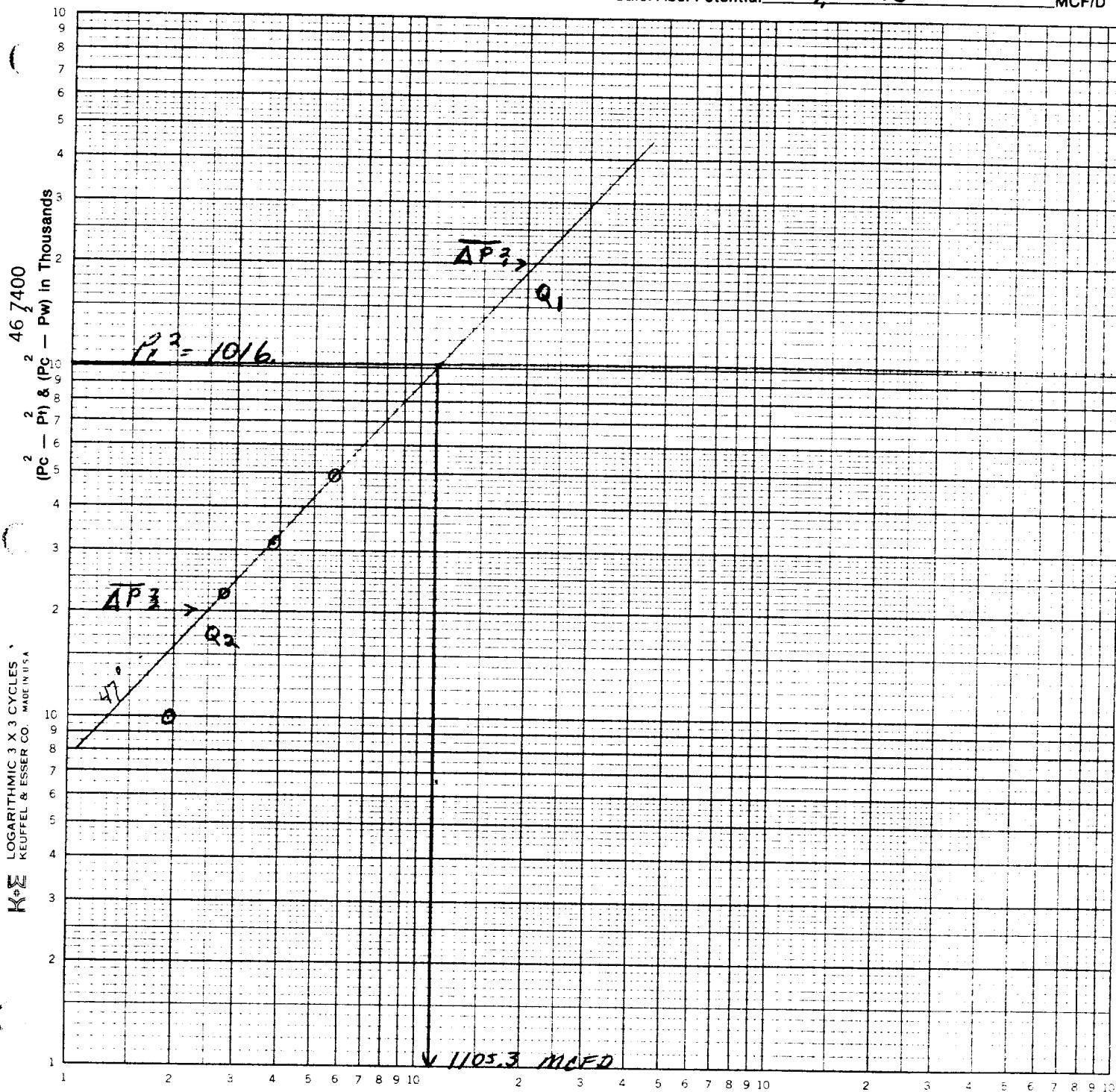
Remarks: BOTTOM HOLE PRESSURES MEASURED WITH AMERADA PRESSURE ELEMENTS.

Approved By Commission	Conducted By	Calculated By	Checked By
	RICHARD TOWNLEY	BENNETT & CATHEY	

BACK PRESSURE CURVE

Operator TRANSWESTERN GAS Supply Lease Eppers Fedman Well No. 1
 County Chaves Field Pecos Slope Location L
 Date of Test 1-31-84 Slope "n" 47.0 Angle of Slope .933

Calc. Abs. Potential 1105.3 MCF/D



$$\frac{\Delta P_1^2}{\Delta P_2^2} \frac{P_c^2 - P_w^2}{P_c^2 - P_w^2} = \frac{2000}{200}$$

$$Q_1 = \underline{2142.9}$$

$$Q_2 = \underline{250.0}$$

Q in MCF/Day

$$\text{LOG } Q_1 = \underline{3.331}$$

$$\text{LOG } Q_2 = \underline{2.398}$$

$$n = \underline{.933}$$

FIELD DATA SHEET										660 FWL	
										1980 FSL	
Type Test: ☒ Initial ☐ Annual ☐ Special					Test Date		Lease No. or Serial No.				
4-POINT					1-31-84						
Company					Connection		Allottee				
TRANSWESTERN GAS SUPPLY CO.					TO AIR NEW WELL						
Field					Reservoir		Location		Unit		
ABO											
Completion Date		Total Depth		Plug Back TD		Elevation		Farm or Lease Name			
1-31-84		3800		2862				EPPERS FEDERAL			
Csg. Size	Wt.	d	Set At	Perforations: From		To		Well No.			
4.500	10.5		2862	2780		2808		#1			
Tbg. Size	Wt.	d	Set At	Perforations: From		To		Sec.		Twp - Blk	Rge - Sur
.375	4.7	1.995	2732	OPEN		ENDED		34		5S	21E
Type Completion (Describe)								Packer Set At		County or Parish	
SINGLE								0		CHAVES	
Producing Thru		Reservoir Temp. F		Mean Ground Temp. F		Baro. Press. - P		State			
TUBING		60°		13.2°		a		NEW MEXICO			
L		H		G _g		% CO ₂		% N ₂		% H ₂ S	
2794		2794									
								Prover		Meter Run	Taps
										2.067	FLANGE

DATE	ELAP. TIME	WELLHEAD WORKING PRESSURE			METER OR PROVER				REMARKS	
		Tbg. Psig	Csg. Psig	Temp. F	Pressure Psig	Diff.	Temp. F	Ori. fice		
0910	SIP	1001	1000						CHOKE	
0915	START									
0930	1/4	987	998		140	8.0	54	.500		
0945	1/2	990	998		200	12.0	53	"		
1000	3/4	988	998		200	12.0	50	"		
1015	1	987	998		200	12.0	50	"	"	
1030	1 1/4	985	998		200	12.0	50	.500	12/64	
1045	1 1/2	985	998		200	12.0	47	"	"	
1100	1 3/4	985	998		200	12.0	45	"	"	
1115	2	985	998		200	12.0	47	"	"	
1130	2 1/4	978	985		160	8.0	47	.500	CHANGED PLATES AT 11:30AM	
1145	2 1/2	967	980		150	6.0	47	"	12/64	
1200	2 3/4	958	970		150	6.0	47	"	"	
1215	3	955	970		145	4.0	48	"	"	
1230	3 1/4	958	970		140	4.0	48	.500	12/64	
1245	3 1/2	955	965		140	4.0	48	"	"	
1300	3 3/4	954	960		140	6.0	48	"	"	
1315	4	950	960		140	6.0	48	"	"	
1330	4 1/4	950	960		140	6.0	48	.500	12/64	
1345	4 1/2	947	960		140	6.0	49	"	"	
1400	4 3/4	950	960		140	6.0	50	"	"	
1415	5	944	960		140	6.0	51	"	"	
1430	5 1/4	948	960		140	4.0	54	.500	12/64	
1445	5 1/2	945	960		140	6.0	55	"	"	
1500	5 3/4	945	960		140	6.0	55	"	"	
1515	6	950	960		140	6.0	55	"	"	
181 MCFD										
CHANGE RATES										

FIELD DATA SHEET										660 FWL	
										1980 FSL	
Type Test: ☒ Initial ☐ Annual ☐ Special Test Date: 1-31-84										Lease No. or Serial No.	
Company: TRANSWESTERN GAS SUPPLY CO. Connection: TO AIR NEW WELL										Allottee	
Field		Reservoir		Location				Unit			
1-31-84		ABO									
Completion Date		Total Depth		Plug Back TD		Elevation		Farm or Lease Name			
1-31-84		3800		2862				EPPERS FEDERAL			
Csg. Size	Wt.	d	Set At	Perforations: From		To		Well No.			
4.500	10.5		2862	2780		2808		#1			
Tbg. Size	Wt.	d	Set At	Perforations: From		To		Sec. Twp - Blk Rge - Sur			
.375	4.7	1.995	2732	OPEN		ENDED		34 5S 21E			
Type Completion (Describe)								Packer Set At		County or Parish	
SINGLE								Ø		CHAVES	
Producing Thru		Reservoir Temp. F		Mean Ground Temp. F		Baro. Press. - P		State			
TUBING		a		60°		13.2 °		NEW MEXICO			
L	H	G _g	% CO ₂	% N ₂	% H ₂ S	Prover		Meter Run	Taps		
2794	2794							2.067	FLANGE		
DATE	ELAP. TIME	WELLHEAD WORKING PRESSURE			METER OR PROVER				REMARKS		
Time of Reading	Hrs.	Tbg. Psig	Csg. Psig	Temp. F	Pressure Psig	Diff.	Temp. F	Ori-fice	(Include liquid production data: Type - API Gravity - Amount)		
2ND RATE											
1530	6 1/4	919	940		140	16.0	55	1.000	13.5/64		
1545	6 1/2	909	930		140	17.0	54	"	"		
1600	6 3/4	894	920		140	18.0	54	"	"		
1615	7	884	905		140	16.0	54	"	"		
1630	7 1/4	877	899		140	14.0	54	1.000	13.5/64		
1645	7 1/2	869	895		140	18.0	53	"	"		
1700	7 3/4	862	880		140	17.0	53	"	"		
1715	8	858	860		140	14.0	52	"	"		
1730	8 1/4	860	860		140	13.0	52	1.000	13.5/64		
1745	8 1/2	860	860		140	10.0	52	"	"		
1800	8 3/4	860	860		140	10.0	52	"	"		
1815	9	854	860		140	12.0	51	"	"		
1830	9 1/4	855	855		140	12.0	50	1.000	13.5/64		
1845	9 1/2	857	855		140	12.0	50	"	"		
1900	9 3/4	835	940		140	24.0	50	"	"		
1915	10	845	945		140	10.0	50	"	"		
1930	10 1/4	850	845		140	12.0	50	1.000	13.5/64		
1945	10 1/2	835	840		140	16.0	50	"	"		
2000	10 3/4	825	840		140	14.0	49	"	"		
2015	11	830	840		140	12.0	49	"	"		
2030	11 1/4	835	840		140	12.0	49	1.000	13.5/64		
2045	11 1/2	835	840		140	12.0	49	"	"		
2100	11 3/4	840	840		140	12.0	47	"	"		
2115	12	840	840		140	12.0	47	"	"	258 MCFD	
CHANGE RATES											

FIELD DATA SHEET										660 FWL	
										1980 FSL	
Type Test:		☒ Initial		☐ Annual		☐ Special		Test Date		Lease No. or Serial No.	
4-POINT								1-31-84			
Company						Connection				Allottee	
TRANSWESTERN GAS SUPPLY CO.						TO AIR NEW WELL					
Field		Reservoir		Location						Unit	
ABO											
Completion Date		Total Depth		Plug Back TD		Elevation				Farm or Lease Name	
1-31-84		3800		2862						EPPERS FEDERAL	
Csg. Size		Wt.		Set At		Perforations: From		To		Well No.	
4.500		10.5		2862		2780		2808		#1	
Tbg. Size		Wt.		Set At		Perforations: From		To		Sec. Twp - Blk Rge - Sur	
.375		4.7		2732		OPEN		ENDED		34 5S 21E	
Type Completion (Describe)						Packer Set At				County or Parish	
SINGLE						0				CHAVES	
Producing Thru		Reservoir Temp. F		Mean Ground Temp. F		Baro. Press. - P				State	
TUBING		60°		60°		13.2°				NEW MEXICO	
L		H		G _g		% CO ₂		% N ₂		% H ₂ S	
2794		2794								Prover Meter Run Taps	
										2.067 FLANGE	
DATE	ELAP. TIME	WELLHEAD WORKING PRESSURE			METER OR PROVER				REMARKS		
Time of Reading	Hrs.	Tbg. Psig	Csg. Psig	Temp. F	Pressure Psig	Diff.	Temp. F	Ori-fice	(Include liquid production data: Type - API Gravity - Amount)		
3RD RATE											
2130	12 1/4	710	840		140	30.0	47	1.000	14.5/64		
2145	12 1/2	725	825		140	30.0	49	"	" STARTED MAKING FLUID (H ₂ O)		
2200	12 3/4	710	825		140	30.0	49	"	"		
2215	13	730	820		140	30.0	49	"	"		
2230	13 1/4	715	820		140	25.0	49	1.000	14.5/64		
2245	13 1/2	720	820		140	25.0	49	"	"		
2300	13 3/4	720	820		140	25.0	49	"	"		
2315	14	715	820		140	24.0	49	"	"		
2330	14 1/4	720	820		140	22.0	47	1.000	14.5/64		
2345	14 1/2	715	820		140	20.0	47	"	"		
2400	14 3/4	700	815		140	20.0	47	"	"		
2415	15	690	815		140	18.0	47	"	"		
2-1-84											
2430	15 1/4	730	810		140	22.0	47	1.000	14.5/64		
2445	15 1/2	720	810		140	24.0	45	"	"		
0100	15 3/4	710	810		140	24.0	45	"	"		
0115	16	720	810		140	24.0	45	"	"		
0130	16 1/4	740	810		140	23.0	44	1.000	14.5/64		
0145	16 1/2	750	807		140	23.0	43	"	"		
0200	16 3/4	665	800		140	30.0	43	"	"		
0215	17	690	800		140	24.0	43	"	"		
0230	17 1/4	710	800		140	23.0	43	1.000	14.5/64		
0245	17 1/2	760	800		140	23.0	42	"	"		
0300	17 3/4	760	800		140	23.0	42	"	"		
0315	18	750	800		140	23.0	42	"	" 357 MCFD		
CHANGED RATES											

FIELD DATA SHEET

660 FWL

1980 FSL

Type Test:		☒ Initial		☐ Annual		☐ Special		Test Date		1-31-84		Lease No. or Serial No.	
4-POINT												Allottee	
Company		TRANSWESTERN GAS SUPPLY CO.		Connection		TO AIR NEW WELL							
Field		Reservoir		ABO		Location						Unit	
Completion Date		1-31-84		Total Depth		3800		Plug Back TD		2862		Elevation	
Csg. Size		Wt.		d		Set At		Perforations: From		To		Farm or Lease Name	
4.500		10.5				2862		2780		2808		EPPERS FEDERAL	
Tbg. Size		Wt.		d		Set At		Perforations: From		To		Well No.	
1.375		4.7		1.995		2732		OPEN		ENDED		#1	
Type Completion (Describe)		SINGLE						Packer Set At		Ø		Sec. Twp - Blk Rge - Sur	
												34 5S 21E	
Producing Thru TUBING		Reservoir Temp. F		Mean Ground Temp. F		Baro. Press. - P						County or Parish	
		2794		60°		13.2 °						CHAVES	
L		H		G _g		% CO ₂		% N ₂		% H ₂ S		State	
2794		2794										NEW MEXICO	
												Prover Meter Run Taps	
												2.067 FLANGE	

DATE	ELAP. TIME	WELLHEAD WORKING PRESSURE			METER OR PROVER				REMARKS	
Time of Reading	Hrs.	Tbg. Psig	Csg. Psig	Temp. F	Pressure Psig	Diff.	Temp. F	Orifice	(Include liquid production data: Type - API Gravity - Amount)	
4TH RATE										
0330	18 1/4	750	835		140	40	42	1.000	16.5/64	
0345	18 1/2	685	800		140	50	42	"	"	
0400	18 3/4	650	800		140	50	42	"	"	
0415	19	650	780		140	45	42	"	"	
0430	19 1/4	643	780		140	50	42	1.000	16.5/64	
0445	19 1/2	642	760		140	50	41	"	"	
0500	19 3/4	638	760		140	50	41	"	"	
0515	20	635	760		140	50	41	"	"	
0530	20 1/4	633	740		140	50	40	1.000	16.5/64	
0545	20 1/2	631	740		140	50	40	"	"	
0600	20 3/4	632	740		140	50	40	"	"	
0615	21	633	740		140	50	40	"	"	
0630	21 1/4	637	740		140	50	40	1.000	16.5/64	
0645	21 1/2	642	740		140	50	38	"	"	
0700	21 3/4	645	740		140	50	38	"	"	
0715	22	650	740		140	50	38	"	"	
0730	22 1/4	590	720		140	50	38	1.000	16.5/64	
0745	22 1/2	592	720		140	50	40	"	"	
0800	22 3/4	593	720		140	50	42	"	"	
0815	23	598	720		140	50	42	"	"	
0830	23 1/4	605	720		140	50	42	1.000	16.5/64	
0845	23 1/2	605	720		140	50	43	"	"	
0900	23 3/4	616	720		140	50	45	"	"	
0915	24	617	720		140	50	45	"	"	542 MCFD

FIELD DATA SHEET

660 FWL

1980 FSL

Type Test:

4-POINT

☒ Initial

☐ Annual

☐ Special

Test Date

1-31-84

Lease No. or Serial No.

Company

TRANSWESTERN GAS SUPPLY CO.

Connection

TO AIR NEW WELL

Allottee

Field

Reservoir
ABO

Location

Unit

Completion Date

1-31-84

Total Depth

3800

Plug Back TD

2862

Elevation

Farm or Lease Name

EPPERS FEDERAL

Csg. Size

4.500

Wt.

10.5

d

Set At

2862

Perforations: From

2780

To

2808

Well No.

#1

Tbg. Size

.375

Wt.

4.7

d

1.995

Set At

2732

Perforations: From

OPEN

To

ENDED

Sec.

34

Twp - Blk

5S

Rge - Sur

21E

Type Completion (Describe)

SINGLE

Packer Set At

0

County or Parish

CHAVES

Producing Thru
TUBING

Reservoir Temp. F

60°

Mean Ground Temp. F

60°

Baro. Press. - P

13.2°

State

NEW MEXICO

L

2794

H

2794

G_g

% CO₂

% N₂

% H₂S

Prover

Meter Run

2.067

Taps

FLANGE

DATE

ELAP.
TIME

WELLHEAD WORKING PRESSURE

METER OR PROVER

REMARKS

Time of
Reading

Hrs.

Tbg.
Psig

Csg.
Psig

Temp.
F

Pressure
Psig

Diff.

Temp.
F

Ori-
fice

(Include liquid production data:
Type - API Gravity - Amount)

1015

25

627

720

140

35

50

1.000

1115

26

643

720

140

30

52

"

1215

27

650

720

140

15

55

"

1315

28

656

740

140

16

60

"

1415

29

673

745

140

14

60

"

1515

30

593

720

140

50

60

"

542 MCFD

WELL SLUGGING FLUID AFTER SIX HOURS EXTENDED FLOW,
THERE WAS NO INDICATION IT WAS CLEANING UP.

"Let your Interest in Measurement be our Concern"



PRECISION SERVICE INC.
Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

Run No. 202-1
Date Run 02/02/84
Date Sampled 02/01/84

Analysis For: BENNETT & CATHEY WRLN.

Lease: Eppers Federal #1 Producer: Trans Western Gas
Location: _____ County: Chaves State: New Mexico
Purpose: Well Test Sampled By: B & C WRLN.
Sampling Temp. 60 °F Atmos Temp. 60 °F
Volume/day: 510 MCF Formation: ABO
Pressure on Bomb: 550 PSIG: Line Pressure 563.2 PSIA PSIG

Gas Component

Analysis

Press. Base: 14.73

Mol. % Liq. % GPM
Per MCF

Carbon Dioxide CO ₂	<u>.090</u>		
Oxygen O ₂	<u>.063</u>		
Nitrogen N ₂	<u>5.098</u>		
Hydrogen Sulfide H ₂ S			
Methane C ₁	<u>89.367</u>		<u>15.112</u>
Ethane C ₂	<u>2.949</u>		<u>.787</u>
Propane C ₃	<u>1.266</u>		<u>.348</u>
Iso-Butane IC ₄	<u>.188</u>		<u>.061</u>
Nor-Butane NC ₄	<u>.440</u>		<u>.138</u>
Iso-Pentane IC ₅	<u>.125</u>		<u>.046</u>
Nor-Pentane NC ₅	<u>.175</u>		<u>.063</u>
Hexanes plus	<u>.239</u>		<u>.110</u>
Hexanes C ₆			
Heptanes			
Heptanes Plus C ₇ +			
Total	<u>100.000</u>		<u>16.666</u>
Pentane + G.P.M.			<u>.219</u>
Propane + GPM			<u>.766</u>
Gasoline			<u>.736</u>

BTU Dry 1037
BTU Wet 1036
Calc. Specific Gravity .626

@ Std. Press. 14.696

BTU Dry 1034
BTU Wet 1034

Calc. Vap. Press. #/Sq.In. _____

Reid Vap. Press. #/Sq.In. _____

Z Factor .9978
N Value 1.3037
Ave Mol Wt 18.0910
Ave Cu Ft/Gal _____

Run by Jeffrey A. Propp

Calculated By Jeffrey A. Propp

Ethane + GPM 1.553

Remarks: BTU Wet adjusted to flowing conditions as established by FERC Order #93/93-A and calculated per GPA Reference Bulletin 181-82.

Distribution: _____

BENNETT - CATHE'

(505) 746-3354 / Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY TRANSWESTERN GAS SUPPLY CO. WELL NAME EPPERS FEDERAL #1
DATE OF TEST 1-31-84 TO 2-4-84 FORMATION PAGE 1 OF 3
COMPANY MAN HANK SPURILL

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3#37882 RANGE 3500 LBS.
CLOCK NUMBER 20915 RANGE 120 HOUR
ELEMENT NUMBER RPG3#21121N RANGE 5175 LBS.
CLOCK NUMBER 28657 RANGE 120 HOUR
TIME WELL SHUT IN
TIME CLOCK STARTED 0806 HOUR 1-31-84
DEAD WEIGHT ELEMENT ON SURFACE 1014.2 PSIA SHUT IN LBS.
TIME ELEMENT REACHED BOTTOM 0840 HOUR 1-31-84
DEAD WEIGHT ELEMENT ON BOTTOM 1014.2 PSIA SHUT IN LBS.
ELEMENT SET AT 2732 FEET
TEMPERATURE 2732 FT. 92 °F.
DEAD WEIGHT AT THE END OF HOURS MINUTES

FOUR POINT PRIOR TO BUILD UP TEST

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
1-31-84	SIP			1066	13.2	1079.2	1082.2
1-31-84	0	0915		1066	13.2	1079.2	1082.2
	1/4	0930		1065	13.2	1078.2	1081.2
	1/2	0945		1062	13.2	1075.2	1078.2
	3/4	1000		1060	13.2	1073.2	1076.2
	1	1015		1056	13.2	1069.2	1072.2
	1 1/4	1030		1053	13.2	1066.2	1069.2
	1 1/2	1045		1053	13.2	1066.2	1069.2
	1 3/4	1100		1053	13.2	1066.2	1069.2
	2	1115		1053	13.2	1066.2	1069.2
	2 1/4	1130		1047	13.2	1060.2	1063.2
	2 1/2	1145		1042	13.2	1055.2	1058.2
	2 3/4	1200		1027	13.2	1040.2	1043.2
	3	1215		1018	13.2	1031.2	1034.2
	3 1/4	1230		1023	13.2	1036.2	1039.2
	3 1/2	1245		1023	13.2	1036.2	1039.2
	3 3/4	1300		1023	13.2	1036.2	1039.2
	4	1315		1020	13.2	1033.2	1036.2
	4 1/4	1330		1016	13.2	1029.2	1032.2
	4 1/2	1345		1016	13.2	1029.2	1032.2
	4 3/4	1400		1013	13.2	1026.2	1029.2
	5	1415		1012	13.2	1025.2	1028.2
	5 1/4	1430		1009	13.2	1022.2	1025.2
	5 1/2	1445		1012	13.2	1025.2	1028.2
	5 3/4	1500		1012	13.2	1025.2	1028.2
	6	1515		1012	13.2	1025.2	1028.2
	6 1/4	1530		997	13.2	1010.2	1013.2
	6 1/2	1545		975	13.2	988.2	991.2
	6 3/4	1600		965	13.2	978.2	981.2
	7	1615		948	13.2	961.2	964.2
	7 1/4	1630		953	13.2	953.2	956.2
	7 1/2	1645		929	13.2	942.2	945.2
	7 3/4	1700		921	13.2	934.2	937.2
	8	1715		917	13.2	930.2	933.2

BENNETT WIRE LINE SERVICE

Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY TRANSWESTERN GAS SUPPLY

WELL NAME EPPERS FEDERAL #1

DATE OF TEST 1-31-84 TO 2-4-84

LOCATION _____

PAGE 2 OF 3

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psig	PRESSURE AT MID-POINT OF PERFORATIONS psig
	8 1/4	1730		917	13.2	930.2	933.2
	8 1/2	1745		919	13.2	932.2	935.2
	8 3/4	1800		917	13.2	930.2	933.2
	9	1815		912	13.2	925.2	928.2
	9 1/4	1830		913	13.2	926.2	929.2
	9 1/2	1845		912	13.2	925.2	928.2
	9 3/4	1900		897	13.2	910.2	913.2
	10	1915		894	13.2	907.2	910.2
	10 1/4	1930		914	13.2	927.2	930.2
	10 1/2	1945		894	13.2	907.2	910.2
	10 3/4	2000		892	13.2	905.2	908.2
	11	2015		894	13.2	907.2	910.2
	11 1/4	2030		913	13.2	926.2	929.2
	11 1/2	2045		905	13.2	918.2	921.2
	11 3/4	2100		921	13.2	934.2	937.2
	12	2115		937	13.2	950.2	953.2
	12 1/4	2130		877	13.2	890.2	893.2
	12 1/2	2145		872	13.2	885.2	888.2
	12 3/4	2200		869	13.2	882.2	885.2
	13	2215		863	13.2	876.2	879.2
	13 1/4	2230		859	13.2	872.2	875.2
	13 1/2	2245		858	13.2	871.2	874.2
	13 3/4	2300		856	13.2	869.2	872.2
	14	2315		857	13.2	870.2	873.2
	14 1/4	2330		856	13.2	869.2	872.2
	14 1/2	2345		856	13.2	869.2	872.2
	14 3/4	2400		857	13.2	870.2	873.2
	15	2415		857	13.2	870.2	873.2
	15 1/4	2430		843	13.2	856.2	859.2
	15 1/2	2445		850	13.2	853.2	866.2
2-1-84	15 3/4	0100		865	13.2	878.2	881.2
	16	0115		850	13.2	863.2	866.2
	16 1/4	0130		847	13.2	860.2	863.2
	16 1/2	0145		842	13.2	855.2	858.2
	16 3/4	0200		840	13.2	853.2	856.2
	17	0215		847	13.2	860.2	863.2
	17 1/4	0230		893	13.2	906.2	909.2
	17 1/2	0245		915	13.2	928.2	931.2
	17 3/4	0300		927	13.2	940.2	943.2
	18	0315		879	13.2	892.2	895.2
	18 1/4	0330		855	13.2	868.2	871.2
	18 1/2	0345		838	13.2	861.2	854.2
	18 3/4	0400		818	13.2	831.2	834.2
	19	0415		806	13.2	819.2	822.2
	19 1/4	0430		800	13.2	813.2	825.2
	19 1/2	0445		796	13.2	809.2	812.2
	19 3/4	0500		793	13.2	806.2	809.2
	20	0515		788	13.2	801.2	804.2

Artesia, New Mexico 88210

COMPANY TRANSWESTERN GAS SUPPLY WELL NAME EPERS FEDERAL #1
DATE OF TEST 1-31-84 TO 2-4-84 LOCATION _____ PAGE 3 OF 3

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SUBSURFACE PRESSURE MEASUREMENTS

COMPANY TRANSWESTERN GAS SUPPLY CO. WELL NAME EPPERS FEDERAL #1
DATE OF TEST 2-1-84 TO 2-4-84 FORMATION ABO PAGE 1 OF 1
COMPANY MAN HANK SPURILL

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3#37882 RANGE 3500 LBS.
CLOCK NUMBER 20915 RANGE 120 HOUR
ELEMENT NUMBER RPG3#21121 RANGE 5175 LBS.
CLOCK NUMBER 28657 RANGE 120 HOUR
TIME WELL SHUT IN 1515 HOUR 2-1-84
TIME CLOCK STARTED 0806 HOUR 1-31-84
DEAD WEIGHT ELEMENT ON SURFACE 1014.2 PSIA SHUT IN LBS.
TIME ELEMENT REACHED BOTTOM 0840 HOUR 1-31-84
DEAD WEIGHT ELEMENT ON BOTTOM 1014.2 PSIA SHUT IN LBS.
ELEMENT SET AT 2732 FEET
TEMPERATURE 2732 FT. 92 °F.
985.2 PSIA DEAD WEIGHT AT THE END OF 72 HOURS 45 MINUTES

70 HOUR BUILD UP TEST

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
2-1-84	0	1515		745	13.2	758.2	761.2
	1/4	1530		814	13.2	827.2	830.2
	1/2	1545		858	13.2	871.2	874.2
	3/4	1600		871	13.2	884.2	887.2
	1	1615		887	13.2	900.2	903.2
	1 1/4	1630		897	13.2	910.2	913.2
	1 1/2	1645		908	13.2	921.2	924.2
	1 3/4	1700		914	13.2	927.2	930.2
	2	1715		920	13.2	933.2	936.2
	2 1/4	1730		926	13.2	939.2	942.2
	2 1/2	1745		931	13.2	944.2	947.2
	2 3/4	1800		935	13.2	948.2	951.2
	3	1815		936	13.2	949.2	952.2
	4	1915		947	13.2	960.2	963.2
	5	2015		956	13.2	969.2	972.2
	6	2115		963	13.2	976.2	979.2
	7	2215		969	13.2	982.2	985.2
	8	2315		975	13.2	988.2	991.2
	9	2415		979	13.2	992.2	995.2
2-2-84	10	0115		982	13.2	995.2	998.2
	12	0315		989	13.2	1002.2	1005.2
	14	0515		994	13.2	1007.2	1010.2
	16	0715		998	13.2	1011.2	1014.2
	18	0915		1003	13.2	1016.2	1019.2
	20	1115		1006	13.2	1019.2	1022.2
	25	1615		1014	13.2	1027.2	1030.2
	30	2115		1020	13.2	1033.2	1036.2
2-3-84	35	0215		1025	13.2	1038.2	1041.2
	40	0715		1029	13.2	1042.2	1045.2
	45	1215		1032	13.2	1045.2	1048.2
	50	1715		1035	13.2	1048.2	1051.2
	55	2215		1037	13.2	1050.2	1053.2
2-4-84	60	0315		1039	13.2	1052.2	1055.2
	65	0815		1040	13.2	1053.2	1056.2
	70	1315		1041	3.2	1054.2	1057.2



BENNETT-CATHEY WIRE LINE SERVICE

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Phone (505) 746-3281



BOTTOM HOLE PRESSURE SURVEY REPORT

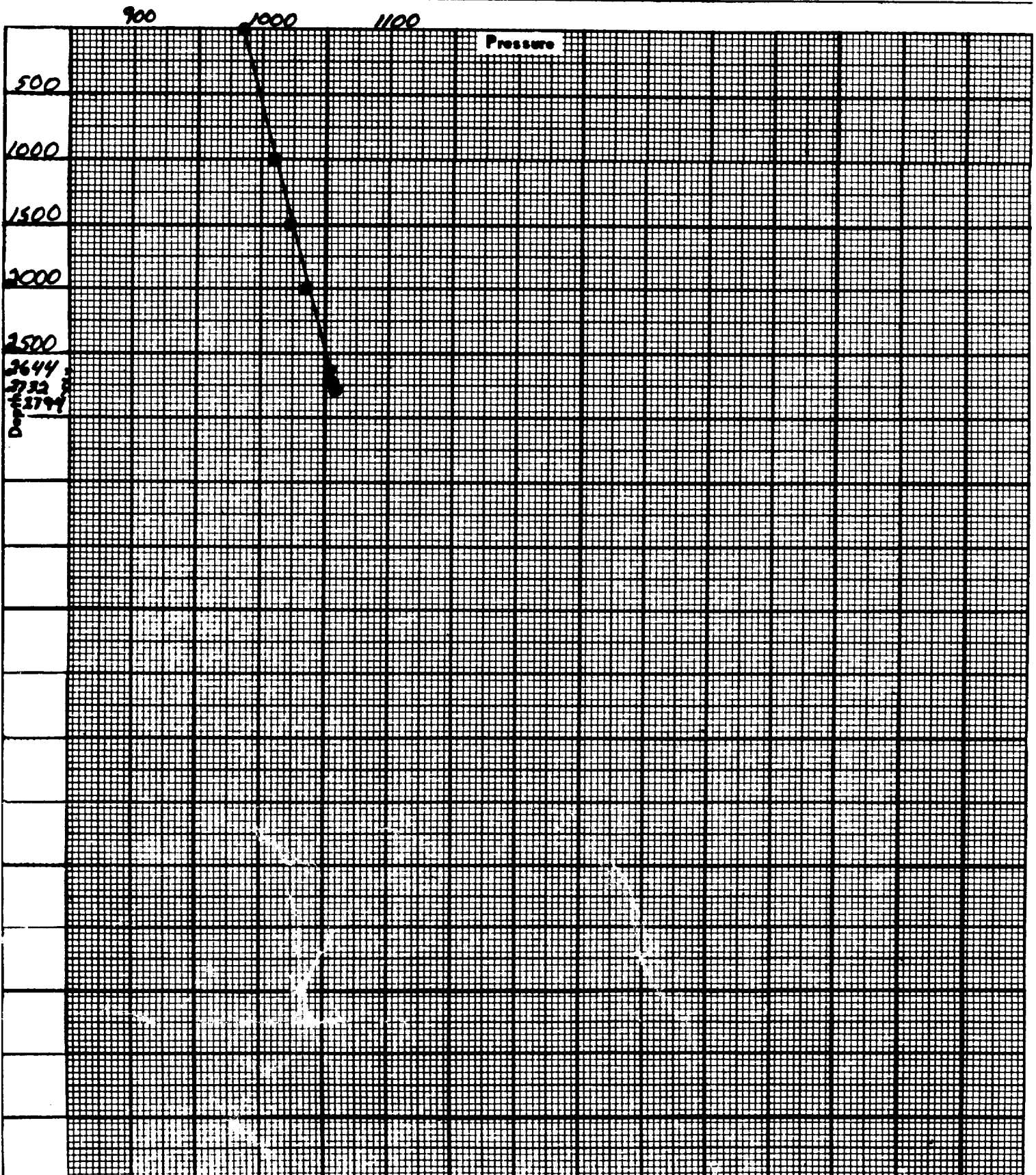
OPERATOR TRANSWESTERN GAS SUPPLY CO.
LEASE EPPERS FEDERAL
WELL NO. #1
POOL FORMATION
DATE 1-31-84 TIME 1600 HOUR
CO. MAN HANK SPURILL
STATUS SHUT IN TEST DEPTH 2732 FEET
TIME S.I. 1515 HR LAST TEST DATE 1ST TEST
2-1-84 BHP LAST TEST
TUB. PRES. 985.2# BHP CHANGE
CAS. PRES. FLUID TOP
DATUM PLANE WATER TOP
DATUM PSIA 1059.2# RUN BY BO FAULKENBERRY
TEMP 92° CLOCK # B-3443
PRESSURE RANGE 3800 LBS.
ELEMENT NO. RPG3#37882

DEPTH	PRESSURE	GRADIENT
0	985.2	
1000	1009.2	2.4
1500	1023.2	2.8
2000	1036.2	2.6
2644	1053.2	2.6
2732	1059.2	3.4
2794	1059.2	4.5

2794 FEET WAS EXTRAPOLATED.

TIME B.H.P. MEASURED 1600 HOUR.
LENGTH OF TIME WELL SHUT IN 72HR 45MIN.

PERFORATIONS FROM 2780 TO 2808 FT.



TEST DATE: 2-1-66 TO 2-4-66
TEST DEPTH: 2732 FEET

ELEMENT NO.: RFG#37882 RFG#21121
RANGE: 3500 LBS. 5175 LBS.

CLOCKS: 20915 28657

RANGE: 120 HOUR 120 HOUR

OPERATOR: BO FAULKENBERRY

Note: See Attached Sheet for Tabulation of Pressure
And Time.

70 HOUR BUILD UP TEST

HANK SPURILL

TRANSWESTERN GAS SUPPLY CO.

EPPERS FEDERAL #1

BENNETT-CATHEY WIRE LINE SERVICE
Box 787 Artesia, N.M. 88210 505/746-3281

Drawn By

Scale: As Shown

BENNETT-
CATHEY
WELL SERVICES

TIME IN HOURS

