

MIKE

45P
File

Type Test ☒ Initial ☐ FOUR POINT ☐ Annual ☐ Special		Test Date 7-9-82		1880 FSL	
Company TRANSWESTERN GAS SUPPLY		Connection AIR NEW WELL		1980 FEL	
Field U.D. PECOS SLOPE <i>File</i>		Formation ABO		Unit <i>E</i>	
Completion Date 6-19-82 6-25-82		Total Depth 3711 3751		Plug Back TD 3711	
Elevation 4198		Perforations: From 3284 To 3354		Name of Lease Owner FIVE MILE TANK FEDER	
Well No. 2-Z		Unit J		Sec. 9	
Twp. 6S		Rge. 23			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE		Packer Set At NONE		County CHAVES	
Producing thru TUBING		Reservoir Temp. °F 98		Mean Annual Temp. °F 60°	
Baro. Press. - P _a 13.2		State NEW MEXICO			
L 3319		H 3319		G _g .5863	
% CO ₂ .236		% N ₂ 6.635		% H ₂ S 2.00	
Prover 2.00		Meter Run		Flange 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. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	CHOKE	Duration of Flow
1	2.00	X	1/8	514	.00	94	778	82	850		89-1/4
2	2.00	X	3/16	375	.00	88	733	92	800	6/64	4 HR
3	2.00	X	3/16	385	.00	76	655	92	717	8/64	4 HR
4	2.00	X	7/32	305	.00	68	465	76	654	12/64	4 HR
5	2.00	X					399	68	616	13/64	4 HR

RATE OF FLOW CALCULATIONS							
NO	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super. Comp. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	.2716	.00	527.2	.9688	1.3063	1.0271	186
2	.6237	.00	388.2	.9741	1.3063	1.0212	315
3	.6237	.00	398.2	.9850	1.3063	1.0238	327
4	.8608	.00	318.2	.9924	1.3063	1.0201	362

NO	P ₁	Temp. °F	T ₁	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	.80	554	1.67	1.948			.5860		662	332
2	.59	548	1.65	.959						
3	.60	536	1.61	.954						
4	.48	528	1.59	.961						

NO	P ₁	P ₂	P ₁ ²	P ₂ ²	P ₁ ² - P ₂ ²
1	813.2	661.3	661.3	84.0	
2	730.2	533.2	533.2	212.0	
3	667.2	445.2	445.2	300.0	
4	629.2	395.9	395.9	349.0	

(1) $\frac{P_1^2}{P_2^2 - P_1^2} = 2.1350$		(2) $\left[\frac{P_1^2}{P_2^2 - P_1^2} \right]^n = 1.4612$	
AOP = Q $\left[\frac{P_1^2}{P_2^2 - P_1^2} \right]^n = 528.9$			

Absolute Open Flow		Mcfd @ 15.025		Angle of Slope °		Slope, n	
528.9		63.4		5000			

Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA PRESSURE GAUGE.

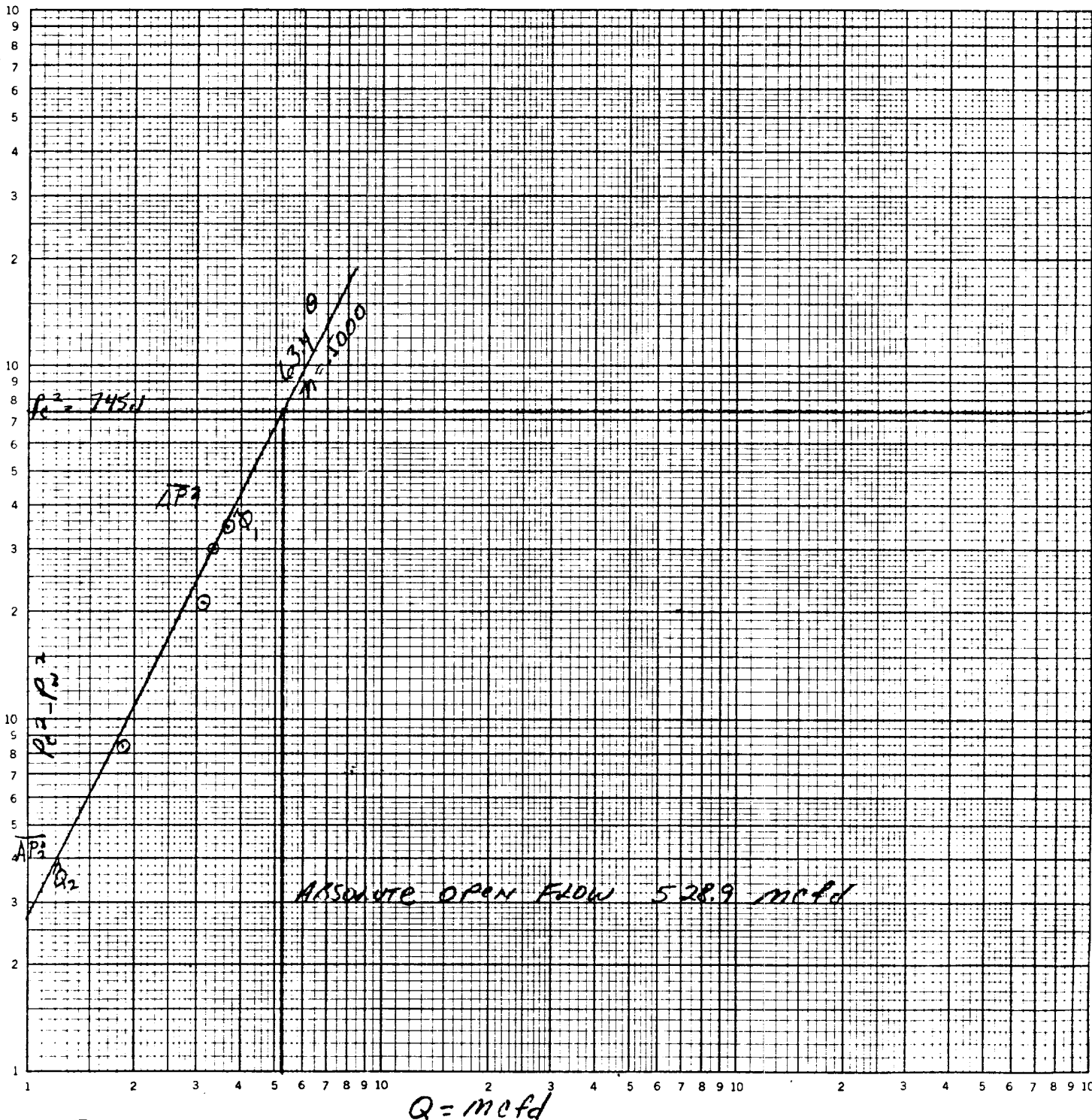
Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	JOHN SIEGWEIN	BENNETT - CATHEY	

Post ID-2
12-3-82
Camp & BK

ANSWERTON GAS Supply
 1st Mine TANK Federal 2-2
 Unit T, Sec 9, Twp 6S, Rge 23E
 CHAVES COUNTY
 7-9-82

46 7400

K·E LOGARITHMIC 3 X 3 CYCLES
 KEUFFEL & ESSER CO. MADE IN U.S.A.



$$\overline{AP}_1^2 \quad P_1^2 - P_w^2 = 400$$

$$\overline{AP}_3 \quad P_1^2 - P_w^2 = 40$$

$$Q_1 = 382.6 \text{ MCFD}$$

$$Q_2 = 81.0 \text{ MCFD}$$

$$\log Q_1 \quad 2.5827$$

$$\log Q_2 \quad 2.0827$$

$$n = .5000$$

NEW-TEX LAB
P.O. Box 1161
Hobbs, New Mexico 88240

ANALYSIS CERTIFICATE

CLIENT: BENNETT & CATHEY
ADDRESS: BOX 787
CITY, STATE: ARTESIA NM 88210

ANALYSIS NUMBER: 7744
DATE OF RUN: 7 5 82
DATE SECURED: 7 4 82

SAMPLE IDENT: TRANSWESTERN GAS SUPPLY - 5 MILE TANK FEDERAL #2 C
SAMPLING PRESS: SAMPLING TEMP:

***** GAS ANALYSIS *****

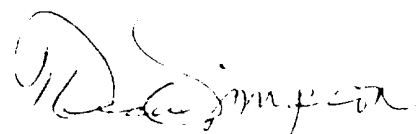
	MOLE PERCENT	GAL/ MCF
NITROGEN	6.635	
CARBON DIOXIDE	0.236	
METHANE	92.637	
ETHANE	0.445	0.119
PROPANE	0.042	0.012
ISO-BUTANE	0.003	0.001
NORMAL BUTANE	0.002	0.001
ISO-PENTANE	0.000	0.000
NORMAL PENTANE	0.000	0.000
HEXANES	0.000	0.000
HEPTANES PLUS	0.000	0.000
TOTAL	100.000	0.133

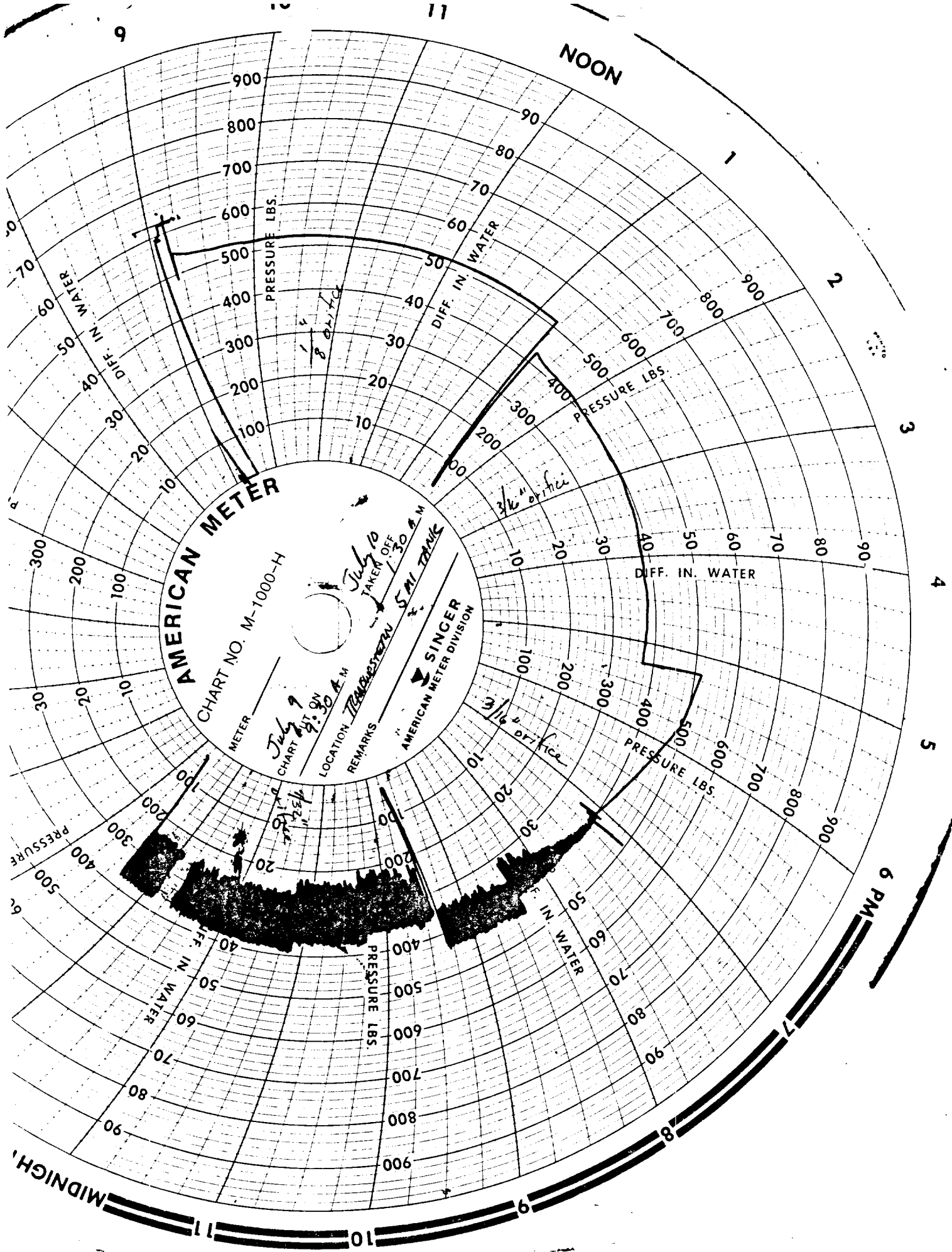
PROPANE GPM:	0.01	BUTANES GPM:	0.00
ETHANE GPM:	0.12	PENTANES PLUS GPM:	0.00

SPECIFIC GRAV (CALC):	0.5863
MOLE WEIGHT:	16.98

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
	14.696	928	945
	14.650	925	942
	14.730	930	947
	14.735	931	947

ANALYZED BY: DEANE SIMPSON


APPROVED BY:



9

11

NOON

1

2

3

4

5

6 PM

7

8

9

10

11

MIDNIGHT

SUGGESTED FIELD DATA SHEET (Not Required To File)

Type Test ☒ Initial ☐ Annual ☐ Special	Test Date 7-9-82	Lease No. or Serial No.
Company TRANSWESTERN GAS SUPPLY	Connection AIR NEW WELL	Allotment
Field V.D. PECOS SLOPE	Location ABO	Unit
Completion Date 6-19-82	Total Depth 3711	Perforations From To 4198
Perforations To 3711	Perforations From To 3150 3284 3354	Perforations From To 2-2
Perforations From To 4.50 10.5 4.052 3150	Perforations From To 2.375 4.7 1.995 3150	Perforations From To OPEN ENDED
Type Completion (Describe) SINGLE	Perforations From To NONE	Perforations From To 9 65 23E
Production Rate TUBING	Reservoir Temp. F 98	Mean Annual Temp. F 60°
Production Rate 3319	Reservoir Temp. F 3319	Mean Annual Temp. F 5863
Production Rate 3319	Reservoir Temp. F 3319	Mean Annual Temp. F 236
Production Rate 3319	Reservoir Temp. F 3319	Mean Annual Temp. F 6.635
Production Rate 3319	Reservoir Temp. F 3319	Mean Annual Temp. F 2.00

Time of Reading	Type-A.P. (Type-A.P. or Gravity Anomaly)	Wellhead Working Pressure			METER LOG PRESSURE			REMARKS	
		Thy. Patg.	Cog. Patg.	Temp. F	Pressure Patg.	Diff.	Temp. F	Orifice	
9:15A	0	778	777	78					SHUT IN 1600 HOURS 7-5-82
9:30	START								
9:45	1/4	769	768	79	533		84	1/8	
10:00	1/2	763	763	81	528		83	1/8	
10:15	3/4	759	759	81	525		81	1/8	
10:30	1	756	756	81	524		84	1/8	
10:45	1-1/4	753	753	83	523		87	1/8	
11:00	1-1/2	751	751	83	522		87	1/8	
11:15	1-3/4	748	748	84	520		87	1/8	
11:30	2	747	747	85	518		88	1/8	
11:45	2-1/4	744	744	86	518		89	1/8	
12:00	2-1/2	742	742	87	518		91	1/8	
12:15P	2-3/4	741	741	88	517		91	1/8	
12:30	3	739	739	89	517		92	1/8	
12:45	3-1/4	737	737	90	517		93	1/8	
01:00	3-1/2	736	736	90	516		93	1/8	
01:15	3-3/4	735	735	91	515		93	1/8	
01:30	4	733	733	92	514		94	1/8	6/64
01:45	4-1/4	723	725	92	417		91	3/16	
02:00	4-1/2	715	716	92	415		91	3/16	
02:15	4-3/4	708	709	92	408		89	3/16	
02:30	5	702	703	92	403		87	3/16	
02:45	5-1/4	697	698	92	400		89	3/16	
03:00	5-1/2	692	692	91	396		87	3/16	
03:15	5-3/4	688	688	92	398		92	3/16	
03:30	6	683	683	92	393		88	3/16	
03:45	6-1/4	679	679	93	390		92	3/16	
04:00	6-1/2	674	675	92	384		85	3/16	
04:15	6-3/4	670	671	92	383		85	3/16	
04:30	7	665	666	91	381		89	3/16	
04:45	7-1/4	664	664	92	382		89	3/16	
05:00	7-1/2	660	661	91	380		89	3/16	
05:15	7-3/4	657	657	92	377		88	3/16	
05:30	8	655	655	92	375		88	3/16	8/64

SUGGESTED ELD DATA SHEET (Not Required To File)

Type Test ☒ Initial 4 POINT ☐ Annual ☐ Special		Test Date 7-9-82	Lease No. or Serial No.
Company TRANSWESTERN GAS SUPPLY		Connection AIR NEW WELL	Alottee
Field V.D. PECOS SLOPE	Reservoir ABO	Location	Unit
Completion Date 6-19-82	Total Depth 3711	Plug back To 3711	Elevation 4198
Log Size 4.50	Wt. 10.5	d 4.052	Set At 3711
Perforations From 3284	To 4198	Rate of Loss, %/hr FIVE MILE TANK FEDER	
Log Size 2.375	Wt. 4.7	d 1.995	Set At 3150
Perforations From OPEN	To ENDED	Well No. 2-7	
Type Completion (Describe) SINGLE	Produce Set At NONE	Sec. Twp. Rge. 9 6S 23E	
Producing Time TUBING	Reservoir Temp. F 98	Mean Annual Temp. F 60	Bottom Pressure, P _o 13.2
3319	3319	.5863	.236
			6.635
			2.00

DATE Time of Reading	I.C. APP. TIME Hrs.	Wellhead Working Pressure			METER ON PROVER				REMARKS (Include fluid production data) Type-A, B, C, Gravity, Anhydrous
		Thy. Pres.	Cog. Pres.	Temp. F	Pressure Pres.	Diff.	Temp. F	Orifice	
05:45	8-1/4	636	636	92	503		88	3/16	
06:00	8-1/2	623	623	91	495		87	3/16	
06:15	8-3/4	598	615	92	472		87	3/16	
06:30	9	574	612	91	450		87	3/16	
06:45	9-1/4	549	606	90	432		86	3/16	
07:00	9-1/2	529	603	90	417		85	3/16	
07:15	9-3/4	514	600	89	403		83	3/16	
07:30	10	515	599	85	403		82	3/16	
07:45	10-1/4	4512	597	84	393		80	3/16	
08:00	10-1/2	504	596	82	385		79	3/16	
08:15	10-3/4	494	595	80	375		77	3/16	
08:30	11	490	593	78	360		76	3/16	
08:45	11-1/4	4474	593	77	405		76	3/16	
09:00	11-1/2	2470	592	76	395		76	3/16	
09:15	11-3/4	4466	589	76	385		76	3/16	
09:30	12	465	583	76	385		76	3/16	12/64
09:45	12-1/4	4455	583	76	310		74	7/32	
10:00	12-1/2	2452	581	75	290		74	7/32	
10:15	12-3/4	4445	581	74	285		73	7/32	
10:30	13	440	578	74	310		73	7/32	
10:45	13-1/4	4437	574	73	305		73	7/32	
11:00	13-1/2	2434	572	73	300		72	7/32	
11:15	13-3/4	4432	569	73	295		72	7/32	
11:30	14	420	565	72	320		70	7/32	
11:45	14-1/4	4420	550	70	320		70	7/32	
12:00	14-1/2	2415	556	69	320		70	7/32	
12:15	14-3/4	4414	554	69	315		69	7/32	
12:30	15	410	551	69	315		69	7/32	
12:45	15-1/4	4405	551	69	310		69	7/32	
01:00A	15-1/2	2405	551	68	310		69	7/32	
01:15	15-3/4	4400	550	68	305		69	7/32	
01:30	16	399	545	68	305		68	7/32	13/64

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

[illegible]

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY TRANSWESTERN GAS SUPPLY WELL NAME FIVE MILE TANK FEDERAL WELL NO. 2-Z
 DATE OF TEST 7-8-82 FORMATION ABO PAGE 1 OF 2
 COMPANY MAN. HANK SPRUILL

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3 #16150N RANGE 2,000 LBS.
 CLOCK NUMBER 17245 RANGE 36 HOURS
 TIME WELL SHUT IN 1600 HOURS 7-5-82
 TIME CLOCK STARTED 1634 HOURS 7-7-82
 DEAD WEIGHT ELEMENT ON SURFACE 792 PSIA SHUT IN LBS.
 TIME ELEMENT REACHED BOTTOM 1655 HOURS 7-7-82
 DEAD WEIGHT ELEMENT ON BOTTOM 792 PSIA SHUT IN LBS.
 ELEMENT SET AT 3,319 FEET.
 TEMPERATURE 3,319 FT. 98 °F.
 DEAD WEIGHT AT THE END OF _____ HOURS _____ MINUTES.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
START TEST	0	0930		850	13.2		863
	1/4	0945		840	13.2		853
	1/2	1000		834	13.2		847
	3/4	1015		830	13.2		843
	1	1030		827	13.2		840
	1-1/4	1045		824	13.2		837
	1-1/2	1100		821	13.2		834
	1-3/4	1115		819	13.2		832
	2	1130		817	13.2		830
	2-1/4	1145		812	13.2		825
	2-1/2	1200		810	13.2		823
	2-3/4	1215		808	13.2		821
	3	1230		806	13.2		819
	3-1/4	1245		805	13.2		818
	3-1/2	1300		803	13.2		816
	3-3/4	1315		801	13.2		814
END RATE 1	4	1330		800	13.2		813
	4-1/4	1345		797	13.2		810
	4-1/2	1400		785	13.2		798
	4-3/4	1415		777	13.2		790
	5	1430		771	13.2		784
	5-1/4	1445		765	13.2		778
	5-1/2	1500		759	13.2		772
	5-3/4	1515		754	13.2		767
	6	1530		748	13.2		761
	6-1/4	1545		744	13.2		757
	6-1/2	1600		740	13.2		753
	6-3/4	1615		735	13.2		748
	7	1630		731	13.2		744
	7-1/4	1645		728	13.2		741
	7-1/2	1700		725	13.2		738
	7-3/4	1715		721	13.2		734
END RATE 2	8	1730		717	13.2		730

TEST DEPTH: 3,319

ELEMENT NO.: RFG3 #16150N

RANGE: 2,000 LBS.

CLOCKS: 17245

RANGE: 36 HOURS

OPERATOR: BO FAULKENBERRY

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

HANK SPRULL

TRANSWESTERN GAS SUPPLY

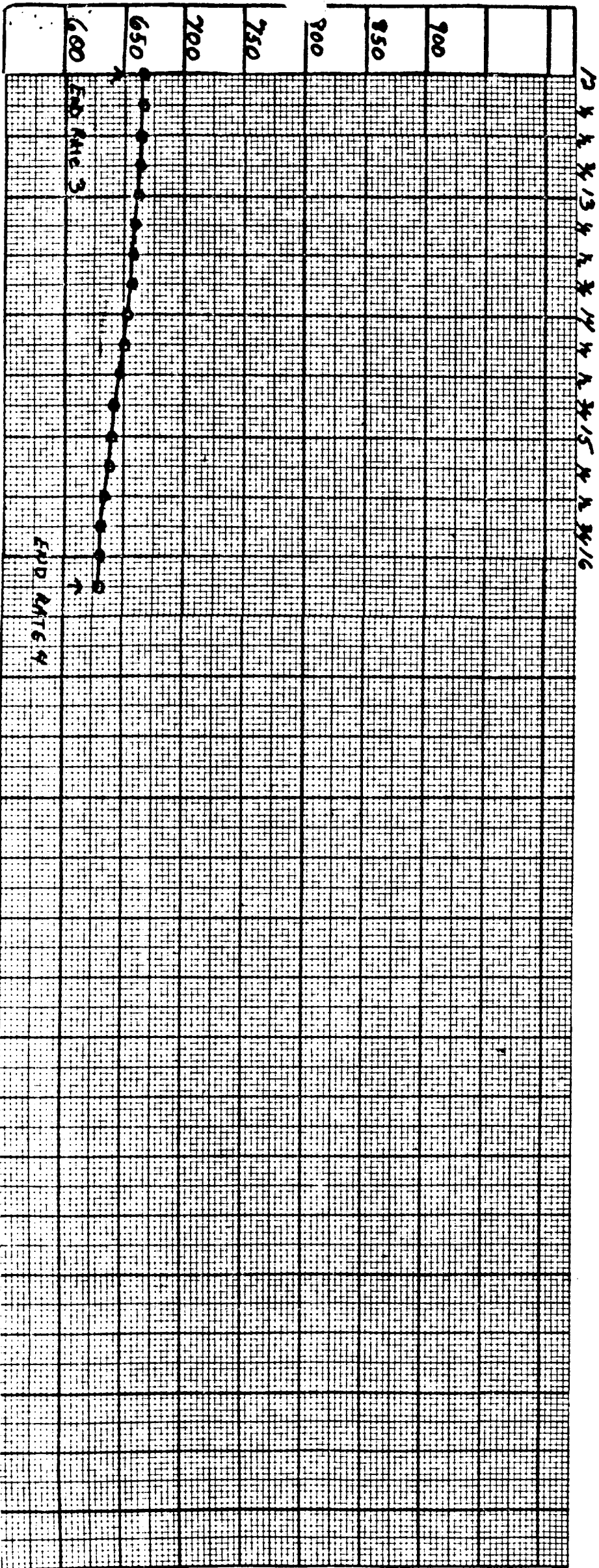
FIVE MILE TANK FEDERAL WELL NO. 2-2

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

Drawn By Scale: As Shown

FOUR POINT BACK PRESSURE TEST

TIME IN HOURS



TEST DEPTH: 3,319

ELEMENT NO.: RFG3 #16150N

RANGE: 2,000 LBS.

CLOCKS: 17245

RANGE: 36 HOURS

OPERATOR: BO FAULKENBERRY

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

HANK SPRULL

TRANSWESTERN GAS SUPPLY

FIVE MILE TANK FEDERAL WELL NO. 2-Z

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

Drawn By

Scale: As Shown

BENNETT-
CATHEY
WELL SERVICES

FOUR POINT BACK PRESSURE TEST

