

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-79

RECEIVED

C/SF C-122

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 8-25-81		660 SEP 17 1981	
Company CARL A. SCHELLINGER /				Connection AIR - NEW WELL		660 FWLO C.D.	
Pool WILDCAT <i>Penn.</i>				Formation PENN		Unit ARTESIA, OFFICE	
Completion Date 8-18-81		Total Depth 6800		Plug Back TD 6570		Elevation 3882 KB	
Form or Lease Name CAMPBELL STATION UNIT				Well No. 1			
Csg. Size 5.50	Wt. 15.5	d 4.950	Set At 6793	Perforations: From 6373 To 6388		Unit Sec. Twp. Rge. M 34 8S 27N	
Tbg. Size 2.375	Wt. 4.7	d 1.995	Set At 6274	Perforations: From OPEN To ENDED			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 6274		County CHAVES	
Producing Thru TUBING		Reservoir Temp. *F 144 @ 6270		Mean Annual Temp. *F 60		Baro. Press. - P _a 13.2	
State NEW MEXICO							
L 6380 1/2	H 6380 1/2	Gg 0.6301	% CO ₂ 1.925	% N ₂ 3.637	% H ₂ S 0	Prover 0	Meter Run 4"
						Taps FLANGE	

FLOW DATA							TUBING DATA		CASING 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	B.H.P.	Temp. *F	
51							1975	86	2361		72
1.	4"	X	2.250	410	.75	82	1690	86	1817		1
2.	4"	X	1.250	410	4.00	88	1730	86	1948		1
3.	4"	X	1.250	410	7.80	80	1520	83	1719		1
4.	4"	X	1.250	410	12.10	78	1155	70	1329		1
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	26.30	18.40	423.2	.9795	1.2599	1.0303	615
2	7.6610	41.14	423.2	.9741	1.2599	1.0298	398
3	7.6610	57.45	423.2	.9813	1.2599	1.0309	561
4	7.6610	71.56	423.2	.9831	1.2599	1.0309	700
5.							

NO.	P _f	Temp. *R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	.63	542	1.54	.942	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	.63	548	1.55	.943	Specific Gravity Separator Gas .6300 XXXXXXXXXX
3	.63	540	1.53	.941	Specific Gravity Flowing Fluid .6300 XXXXXX
4	.63	538	1.53	.941	Critical Pressure 673 _____ P.S.I.A.
5.					Critical Temperature 352 _____ R

NO.	P _f	P _w	P _f ²	P _w ²	P _f ² - P _w ²
1	2374.2	5636.8			
1		1830.2	3349.6	2287	
2		1961.2	3846.3	1791	
3		1732.2	3000.5	2636	
4		1342.2	1801.5	3835	
5					

(1) $\frac{P_f^2}{P_f^2 - P_w^2} = 1.4698$ (2) $\left[\frac{P_f^2}{P_f^2 - P_w^2} \right]^n = 1.3310$

AOF = Q $\left[\frac{P_f^2}{P_f^2 - P_w^2} \right]^n = 931.7$

At Absolute Open Flow 932 931.7 Mcfd @ 15.025 Angle of Slope θ 53.4 Slope, n .7423

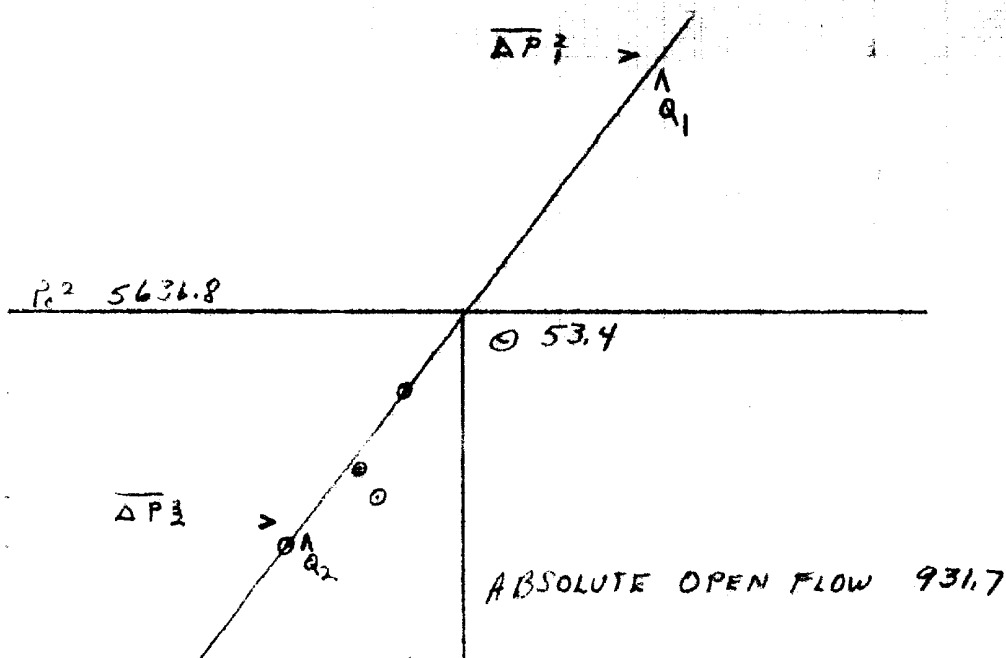
Remarks: KNOWN BOTTOM HOLE PRESSURES MEASURED WITH TANDEM AMERADA PRESSURE ELEMENTS.

Approved By Commission:	Conducted By: DON BENNETT	Calculated By: WOHLFORD & JENKINS	Checked By:
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*Posted ID-2
a Comp. Book
Anal - Wildcat Penn
8-25-81*

CARL H. JOHNSON
 CAMPBELL STATION UNIT W-1
 UNIT M, SEC. 34, TWP. 8S,
 CHAVES COUNTY, NEW MEXICO

$P_c^2 - P_w^2$



Q mfd

$$\Delta P_1, P_c^2 - P_w^2 = 20,000$$

$$\Delta P_2, P_c^2 - P_w^2 = 2,000$$

$$Q_1 = 2,480.0 \text{ mfd}$$

$$Q_2 = 449.1 \text{ mfd}$$

$$\log Q_1 = 3.3946$$

$$\log Q_2 = 2.6523$$

$$N = 7423$$

FOUR POINT &
24 HOUR FLOW

BENNETT - CATHEY
Artesia, New Mexico 88210
SUBSURFACE PRESSURE MEASUREMENTS

COMPANY CARL A. SCHELLINGER WELL NAME CAMPBELL STATION UNIT #1
DATE OF TEST 8-25-81 TO 8-26-81 FORMATION PENN PAGE 1 OF 2

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3#36641 RANGE 0-4,000 LBS.
CLOCK NUMBER 21850 RANGE _____
TIME WELL SHUT IN _____
TIME CLOCK STARTED 1053 HOURS
DEAD WEIGHT ELEMENT ON SURFACE 1988 LBS.
TIME ELEMENT REACHED BOTTOM 1140
DEAD WEIGHT ELEMENT ON BOTTOM 1988 LBS.
ELEMENT SET AT 6,271 FEET.
TEMPERATURE 6,271 FT. 144 °F.
DEAD WEIGHT AT THE END OF _____ HOURS _____ MINUTES.
*TANDEM BOMBS USED #2 - RPG3#46950, 0-7,000 LBS.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
8-25-81	0	1140		2,361	13.2		2,374
	1	1240		2,362	13.2		2,375
	2	1340		2,364	13.2		2,377
	3	1440		2,366	13.2		2,379
START HEATER	4	1540		2,352	13.2		2,365
START TEST	0	1545		2,352	13.2		2,365
	1/4	1600		2,295	13.2		2,308
	1/2	1615		2,060	13.2		2,073
	3/4	1630		1,876	13.2		1,889
END RATE 1	1	1645		1,817	13.2		1,830
	1 1/4	1700		1,967	13.2		1,980
	1 1/2	1715		1,962	13.2		1,975
	1 3/4	1730		1,950	13.2		1,963
END RATE 2	2	1745		1,948	13.2		1,961
	2 1/4	1800		1,868	13.2		1,881
	2 1/2	1815		1,801	13.2		1,814
	2 3/4	1830		1,752	13.2		1,765
END RATE 3	3	1845		1,719	13.2		1,732
	3 1/4	1900		1,535	13.2		1,548
	3 1/2	1915		1,423	13.2		1,436
	3 3/4	1930		1,360	13.2		1,373
END TEST	4	1945		1,329	13.2		1,342
START 24 HR.	1	2000		1,433	13.2		1,446
FLOW	1 1/4	2100		1,723	13.2		1,736
	1 1/2	2200		1,801	13.2		1,814
	1 3/4	2300		1,874	13.2		1,887
	1 3/4	2400		1,892	13.2		1,905
8-26-81	5 1/4	0100		1,892	13.2		1,905
	6 1/4	0200		1,829	13.2		1,842
	7 1/4	0300		1,817	13.2		1,830
	8 1/4	0400		1,856	13.2		1,869
	9 1/4	0500		1,878	13.2		1,891
	10 1/4	0600		1,888	13.2		1,901
	11 1/4	0700		1,831	13.2		1,844
	12 1/4	0800		1,794	13.2		1,807
	13 1/4	0900		1,774	13.2		1,787
	14 1/4	1000		1,762	13.2		1,775
	15 1/4	1100		1,788	13.2		1,801

Artesia, New Mexico 88210

COMPANY CARL A. SCHELLINGER

WELL NAME CAMPBELL STATION UNIT #1

DATE OF TEST 8-25-81 TO 8-26-81

LOCATION

PAGE 2 OF 2

[illegible]

NEW-TEX LAB

P. O. BOX 1161
HOBBS, N.M. 88240

CERTIFICATE OF ANALYSIS

No. _____
Run No. _____
Date of Run _____
Date Secured _____

A Sample of Coal Schellinger M 34-8-27
Secured from _____
At _____ Secured by Penn # 6373-88
Time _____ Date _____
Sampling conditions _____ Press _____
Temp. _____

FRACTIONAL ANALYSIS

Percentage Composition

MOL % LIQ. % G.P.M.

Carbon Dioxide			
Air			
Nitrogen			
Oxygen			
Hydrogen sulfide			
Hydrogen			
Methane			
Ethane			
Propane			
Butanes			
Iso-Butane			
N-Butane			
Pentanes			
Iso-Pentane			
N-Pentane			
Hexanes			
Heptanes			
Octanes			
TOTAL			

Calc. Sp. Gr. _____
Calc. A.P.I. _____
Calc. Vapor Press. _____ PSIA
Sp. Gr. _____
Mol. Wt. _____

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M. _____
Butanes Calc. G.P.M. _____
Pentanes Plus. G.P.M. _____
Ethane Calc. G.P.M. _____
RVP Gasoline G.P.M. _____
B.T.U./Cu. Ft. @ 14.696 P.S.I.A.
Dry Basis _____
Wet Basis _____
Sulfur Analysis by Titration
Gr./100 Cu. Ft. _____
Hydrogen Sulfide _____
Mercaptans _____
Sulfides _____
Residual Sulfur _____
Total Sulfur _____

Run by _____ Checked by _____ Approved by _____

Additional Data and Remarks

TEST DATE: 8-25-81 to 8-26-81
TEST DEPTH: 6,271

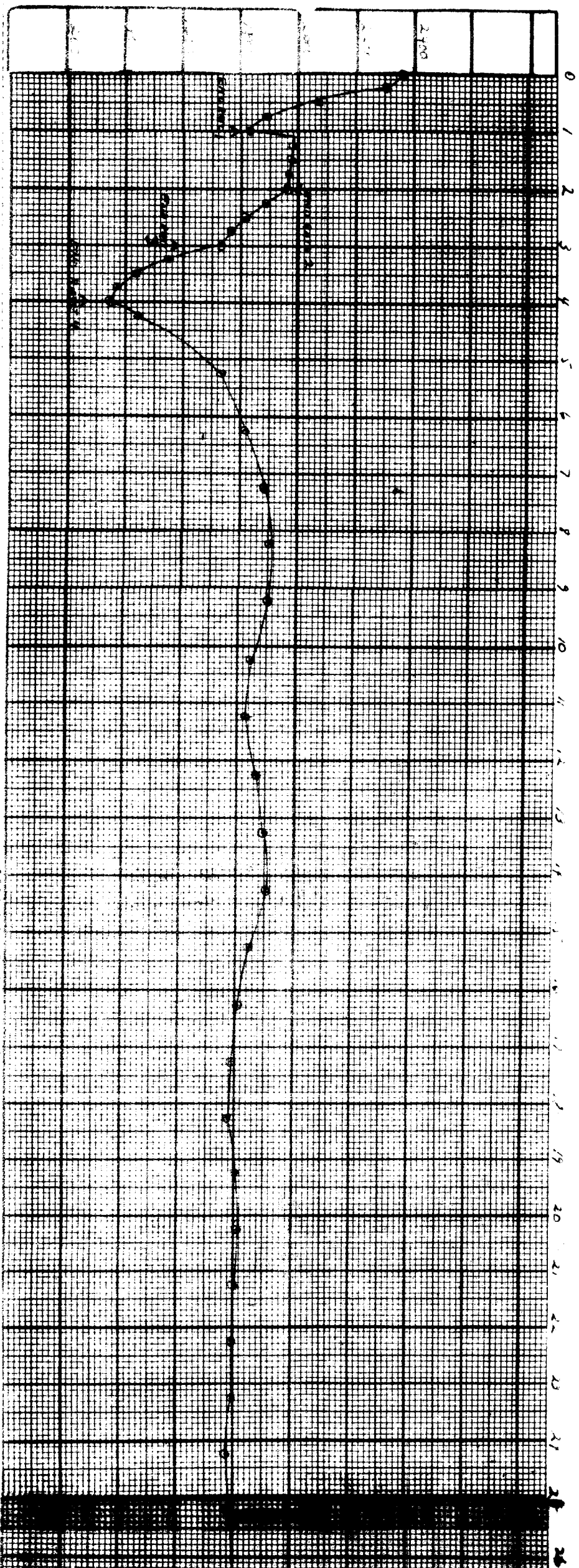
ELEMENT NO.: RPG3#36641 & RPG3#46950
RANGE: 0-4,000 LBS. & 0-7,000 LBS.

CLOCKS: 21850
RANGE: 120 HOUR

OPERATOR: BOB H.

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

FOUR POINT BACK PRESSURE TEST
AND TWENTY FOUR HOUR FLOW TEST



JIM O'BRIENT

CARL A. SCHELLINGER

CAMPBELL STATION UNIT #1

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

Drawn By

Scale: As Shown

TIME IN HOURS



BENNETT - CATHEY

Artesia, New Mexico 88210

BUILD UP

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY CARL A. SCHELLINGER
DATE OF TEST 8-26-81 TO 8-29-81

WELL NAME CAMPBELL STATION UNIT #1
FORMATION PENN

PAGE 1 OF 1

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3#36641 RANGE 0-4,000 LBS.
CLOCK NUMBER 21850 RANGE 120 HOUR
TIME WELL SHUT IN 2000 HOURS 8-26-81
TIME CLOCK STARTED 1053 HOURS 8-25-81
DEAD WEIGHT ELEMENT ON SURFACE LBS.
TIME ELEMENT REACHED BOTTOM 1140 HOURS 8-25-81
DEAD WEIGHT ELEMENT ON BOTTOM 1523 FLOWING LBS.
ELEMENT SET AT 6,271 FEET.
TEMPERATURE 6,271 FT. 144 °F.
1978 PSIA DEAD WEIGHT AT THE END OF 74 HOURS 30 MINUTES.
*TANDEM BOMBS USED #2 - RPG3#46950, 0-7,000 LBS.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
8-26-81	0	2000		1,795	13.2		1,808
	1/4	2015		1,901	13.2		1,914
	1/2	2030		2,052	13.2		2,065
	3/4	2045		2,139	13.2		2,152
	1	2100		2,186	13.2		2,199
	1 1/4	2115		2,204	13.2		2,217
	1 1/2	2130		2,213	13.2		2,226
	1 3/4	2145		2,221	13.2		2,234
	2	2200		2,230	13.2		2,243
	2 1/2	2230		2,239	13.2		2,252
	3	2300		2,243	13.2		2,256
	4	2400		2,252	13.2		2,265
	5	0100		2,259	13.2		2,272
	6	0200		2,266	13.2		2,279
8-27-81	7	0300		2,272	13.2		2,285
	8	0400		2,278	13.2		2,291
	9	0500		2,284	13.2		2,297
	10	0600		2,288	13.2		2,301
	15	1100		2,300	13.2		2,313
	20	1600		2,314	13.2		2,327
	25	2100		2,323	13.2		2,336
	30	0200		2,333	13.2		2,346
	35	0700		2,340	13.2		2,353
	40	1200		2,342	13.2		2,355
8-28-81	45	1700		2,343	13.2		2,356
	50	2200		2,345	13.2		2,358
	55	0300		2,346	13.2		2,359
	60	0800		2,347	13.2		2,360
	65	1300		2,348	13.2		2,361
	70	1800		2,349	13.2		2,362
	74 1/2	2230		2,350	13.2		2,363
8-29-81							

TEST DATE: 8-26-81 TO 8-29-81
TEST DEPTH: 6,271

ELEMENT NO.: RFG3#36641
RANGE: 0-4,000 LBS.

CLOCKS: 21850
RANGE: 120 HOUR

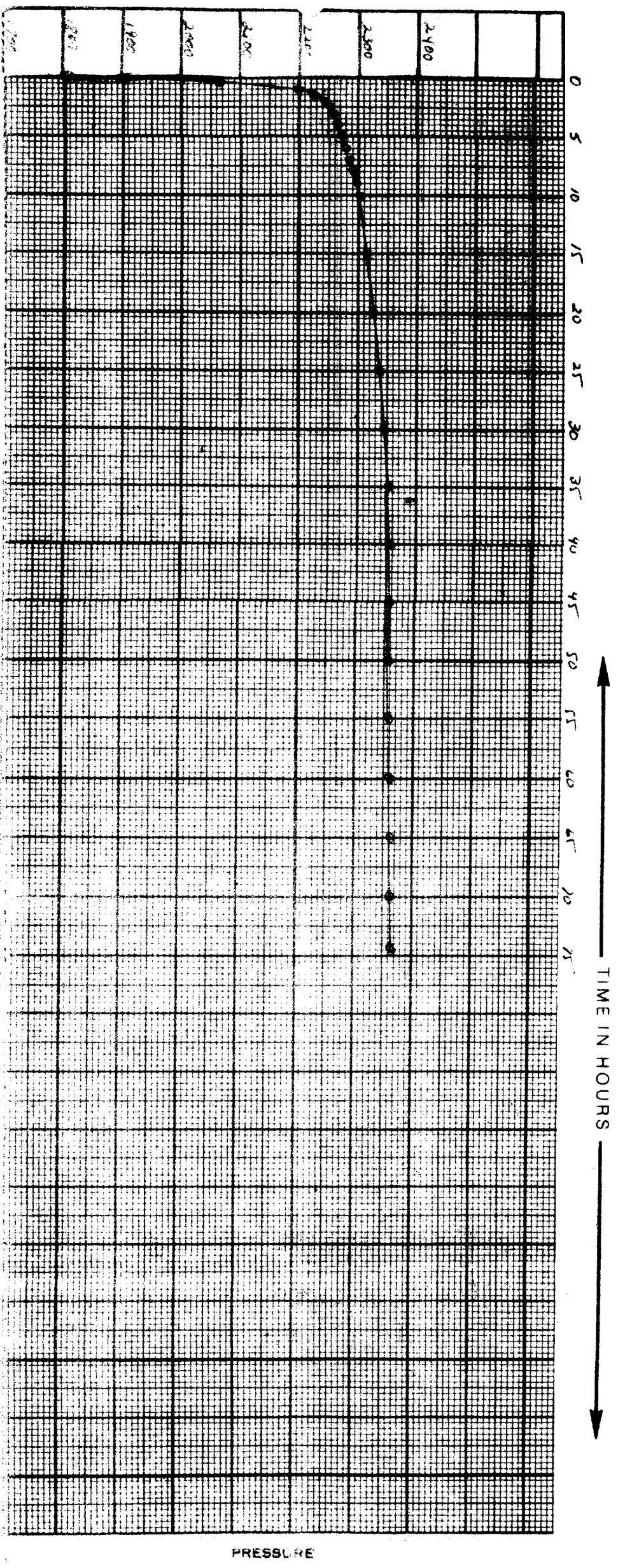
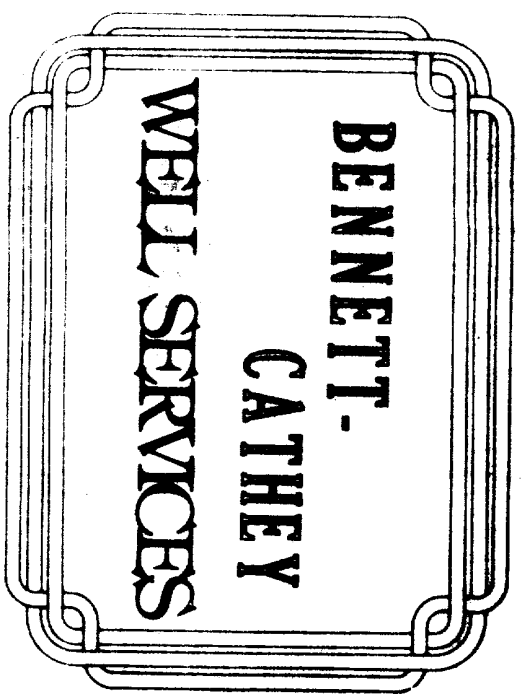
OPERATOR: BOB H.

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

JIM O'BRIENT

CARL A. SCHELLINGER
CAMPBELL STATION UNIT #1

BENNETT-CATHEY WIRE LINE SERVICE
Box 787
Artesia, N.M. 88210 505/746-3281
Drawn By Scale: As Shown



PRESSURE



BECKETT-CATHEY WIRE LINE SERVICE

P. O. BOX 787
ARTESIA, NEW MEXICO 88210
Phone 746-3281



JOHN O'BRIEN

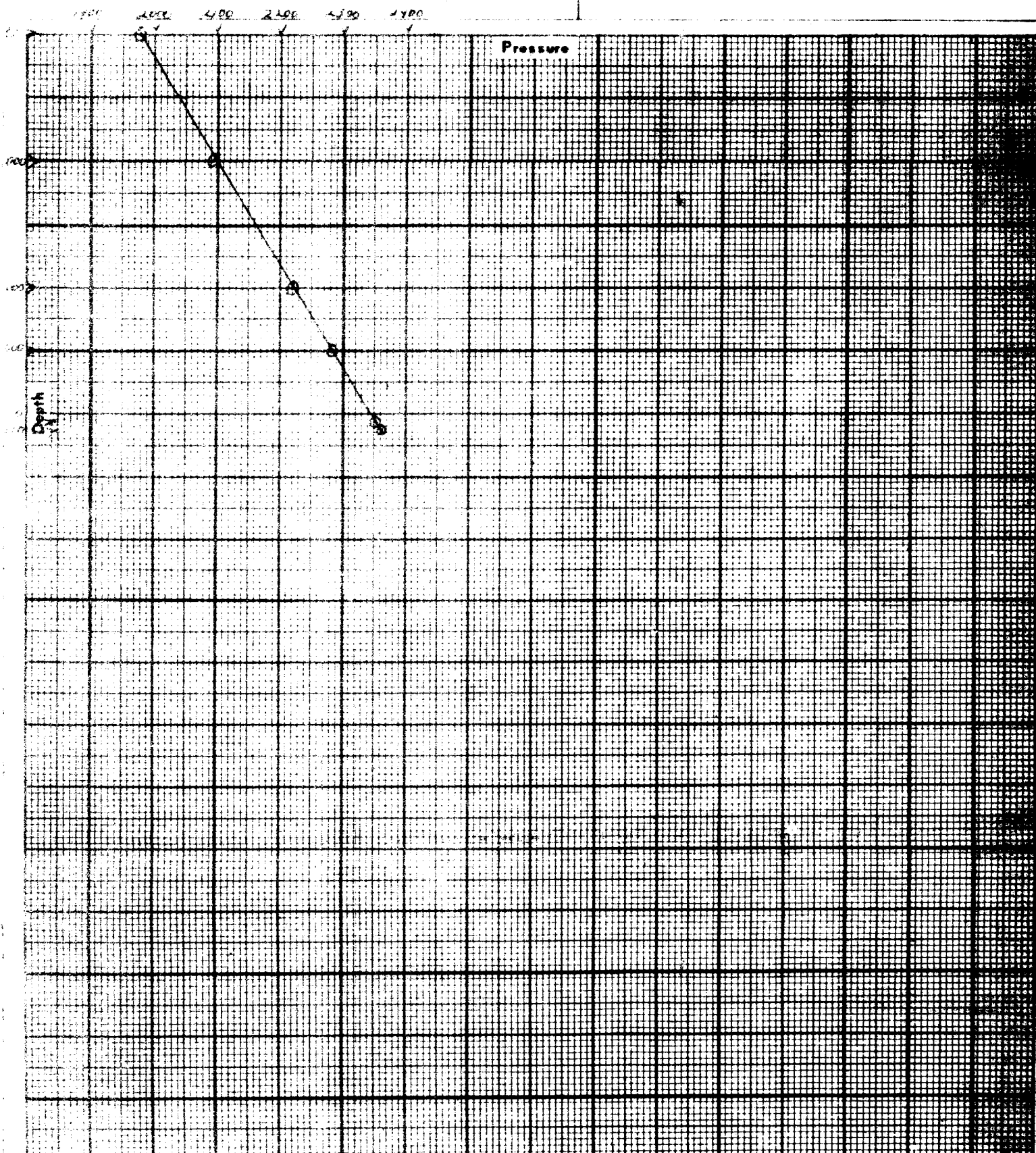
BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR CARL A. SCHELLINGER
LEASE CAMPBELL STATION UNIT
WELL NO. 1
POOL FORMATION PENN
DATE 8-29-81 TIME 2230 HOURS
STATUS SHUT IN TEST DEPTH 6,270
TIME S.I. 2000 HRS. LAST TEST DATE 8-18-81
8-26-81 BHP LAST TEST 2,378
TUB. PRES. 1,978 BHP CHANGE -15
FLS. FLUID TOP
DATUM PLANE WATER TOP
DATUM PSIA 2,363 RUN BY BOB H.
TEMP 104 PRESSURE RANGE 0-4,000
CLOCK NO.
ELEMENT NO. RPG#36691

DEPTH	PRESSURE	GRADIENT
0	1,978	
2,000	2,095	5.85
4,000	2,220	6.25
5,000	2,283	6.3
6,120	2,352	6.2
6,270	2,363	7.3

TIME B.H.P. MEASURED - 2230 HOURS

LENGTH OF TIME WELL SHUT IN -
74 HOURS, 30 MINUTES



SUGGESTED FIELD DATA SHEET (Not Required To File)										660 FSL	
										660 FWL	
Type Test 24 HOUR FLOW TEST ☐ Initial ☐ Annual ☒ Special					Test Date 8-26-81		Lease No. or Serial No.				
Company CARL A. SCHELLINGER					Connection AIR - NEW WELL		Allottee				
Field WILDCAT		Reservoir PENN			Location		Unit M				
Completion Date 8-18-81		Total Depth 6800		Plug Back TD 6570		Elevation 3882KB		Farm or Lease Name CAMPBELL STATION UNIT			
Csg. Size 5.60		Wt. 15.5		d 4.950		Set At 6793		Perforations: From 6373		To 6388	
Tbg. Size 2.375		Wt. 4.7		d 1.995		Set At 6274		Perforations: From OPEN		To ENDED	
Type Completion (Describe) SINGLE					Packer Set At 6274		Well No. 1				
Producing Thru TUBING		Reservoir Temp. F 144 @ 6,270'		Mean Annual Temp. F 60		Baro. Press. - P _a 13.2		State NEW MEXICO			
L 6380 1/2		H 6380 1/2		G _g 0.6301		% CO ₂ 1.925		% N ₂ 3.637		% H ₂ S 0	
								Prover 0		Meter Run 4"	
										Temp FLAME	
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-A.P.I. Gravity-Amount)		
7:45 PM								1 1/2	MCFD*		
8:00 PM	1 1/2	1220		70	390	4"	78	1 1/2	7/64 - 6 1/2/64 392		
9:00 PM	1 1/2	1490		69	390	4.2"	80	1 1/2	6 1/2/64 402		
10:00 PM	2 1/2	1555		68	390	4"	73	1 1/2	392		
11:00 PM	3 1/2	1600		66	390	4"	68	1 1/2	392		
12:00 MID	4 1/2	1620		66	390	4"	64	1 1/2	392		
1:00 AM	5 1/2	1620		64	390	4"	64	1 1/2	392		
2:00 AM	6 1/2	1550		64	390	4"	68	1 1/2	392		
3:00 AM	7 1/2	1550		64	390	4"	68	1 1/2	392		
4:00 AM	8 1/2	1570		64	390	4"	62	1 1/2	392		
5:00 AM	9 1/2	1570		64	390	4"	60	1 1/2	207		
6:00 AM	10 1/2	1590		64	390	4"	68	1 1/2	392		
7:00 AM	11 1/2	1560		64	390	4"	68	1 1/2	392		
8:00 AM	12 1/2	1530		68	390	4"	72	1 1/2	392		
9:00 AM	13 1/2	1525		70	390	4"	81	1 1/2	392		
10:00 AM	14 1/2	1500		74	390	4"	90	1 1/2	392		
11:00 AM	15 1/2	1515		88	390	3.5"	90	1 1/2	369		
12:00 AM	16 1/2	1530		82	390	3.5"	92	1 1/2	MADE 1/2 BBL FLUID 369		
1:00 PM	17 1/2	1530		81	390	3.5"	90	1 1/2	369		
2:00 PM	18 1/2	1520		82	410	3.8"	91	1 1/2	395		
3:00 PM	19 1/2	1525		81	410	4"	92	1 1/2	401		
4:00 PM	20 1/2	1510		81	400	4"	92	1 1/2	MADE 1/2 BBL FLUID 400		
5:00 PM	21 1/2	1515		79	400	3.9"	90		398		
6:00 PM	22 1/2	1510		79	400	3.5"	90		374		
7:00 PM	23 1/2	1530		75	390	3.5"	87		370		
8:00 PM	24 1/2	1510		70	390	3.5"	87		370		
* RATE OF FLOW FIELD CALCULATION TOTAL FLUID MADE 1 BBL.											