

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

Form C-122
Revised 9-1-65

C/SF
C-122
USGS

Type Test ☒ Initial FOUR POINT ☐ Annual ☐ Special					Test Date 2-18-82		FEB 28 1982	
Company CLEMENTS ENERGY Inc.				Connection AIR NEW WELL			O. C. D. ARTESIA, OFFICE	
Pool WILDCAT				Formation Shaw MORROW			Unit F	
Completion Date 2-19-82		Total Depth 6918		Plug Back TD 6846'		Elevation 3432 KB		Farm or Lease Name NEW MEXICO STATE
Csg. Size 4.500	Wt. 11.6	d 4.052	Set At 6918	Perforations: From 6581 To 6660		Well No. 1-36		
Thq. Size 2.375	Wt. 4.70	d 1.995	Set At 5495	Perforations: From OPEN To ENDED		Unit Sec. Twp. Rge. F 36 13S 26E		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE					Packer Set At 6495		County CHAVES	
Producing Thru TUBING		Reservoir Temp. °F 146 @ 6620		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State NEW MEXICO
L 6620	H 6620	Gg .668	% CO ₂ 2.165	% N ₂ 2.175	% H ₂ S .6676	Prover	Meter Run 4.028	Taps 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.	Temp. °F	
SI							1559		1864		26 HRS.
1.	4.028	X	.500	300	30.0	68	1490	66	1799		1
2.	4.028	X	.500	310	61.0	79	1421	66	1714		1
3.	4.028	X	.500	315	24.0	82	1319	65	1589		1
4.	4.028	X	.500	330	50.0	80	1137	67	1370		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	1.2120	96.93	313.2	.9924	1.2235	1.0292	147
2	1.2120	140.41	323.2	.9822	1.2235	1.0281	210
3	2.7290	88.75	328.2	.9795	1.2235	1.0281	298
4	2.7290	131.00	343.2	.9813	1.2235	1.0298	442
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio Mcf/bbl.	A.P.I. Gravity of Liquid Hydrocarbons Deg.
1	.46	528	1.43	.944	Specific Gravity Separator Gas .6680	XXXXXXX
2	.48	539	1.46	.946	Specific Gravity Flowing Fluid XXXXX	
3	.49	542	1.47	.946	Critical Pressure 675 P.S.I.A.	P.S.I.A.
4	.51	540	1.46	.943	Critical Temperature 369 R	R
5						

NO.	P _c	P _w	P _w ²	P _c ² - P _w ²
1	1877.2	1812.2	3284.1	240.0
2		1727.2	2983.2	541.0
3		1602.2	2567.0	957.0
4		1383.2	1611.0	1611.0
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.1874$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 753.2$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.7040$

Absolute Open Flow	753.2	Mcfd @ 15.025	Angle of Slope °	55.7	Slope, n	.6809
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Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA PRESSURE ELEMENTS

Approved By Commission:	Conducted By: RICHARD TOWNLEY	Calculated By: BENNETT-CATHEY	Checked By:
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CLEMENTS ENERGY

NEW MEXICO STATE 1-36

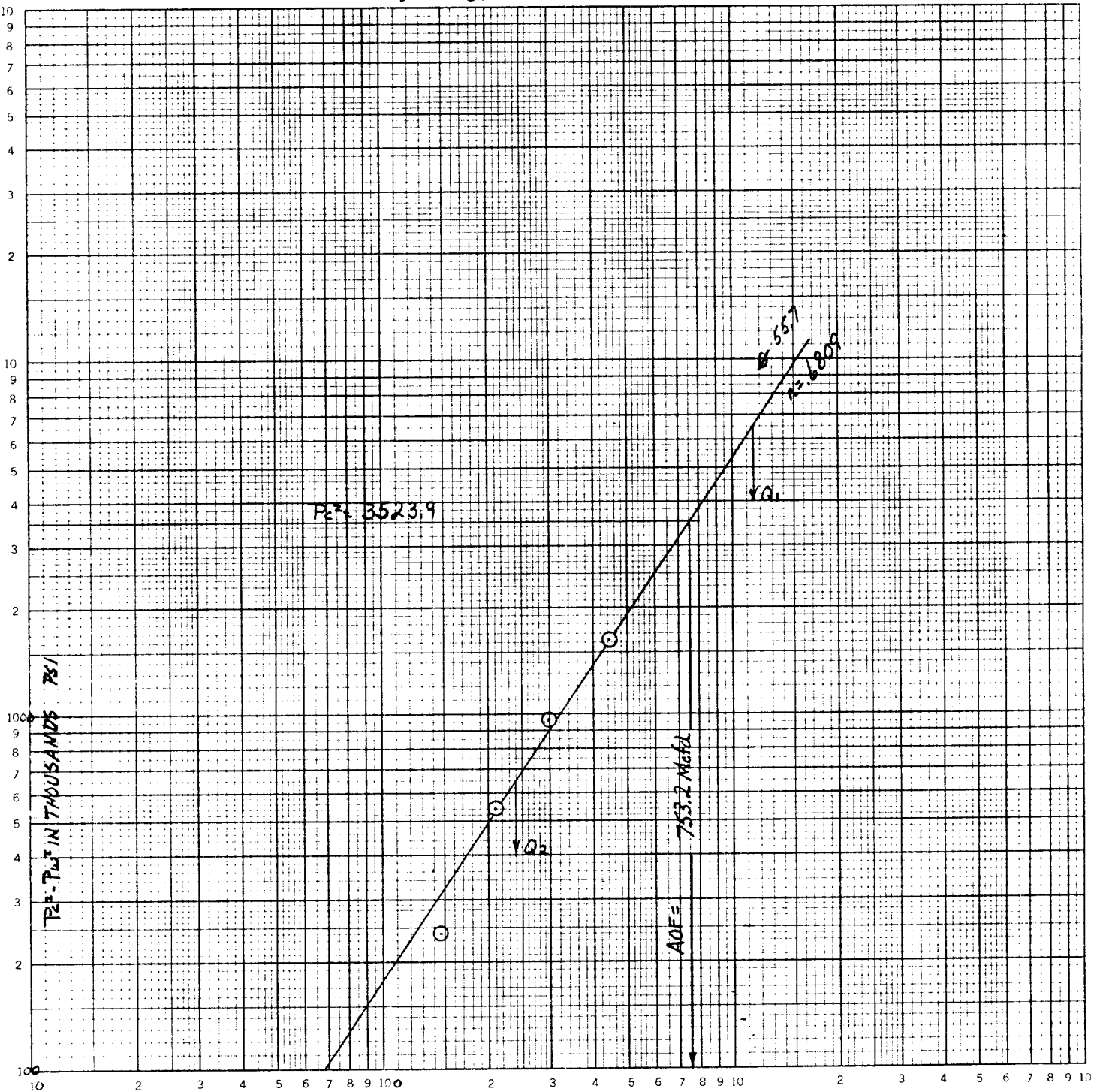
UNIT F SEC. 36 TWP 13S RGE. 26E

CHAVES COUNTY

2-18-82

46 7400

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



$$\Delta \bar{P}_1 \quad P_2 - P_W = 6500$$

Q, Mctd

$$\log Q_1 = 2.38021$$

$$\Delta \bar{P}_2 \quad P_2 - P_W = 650$$

$$\log Q_2 = 3.06111$$

$$Q_1 = 1151$$

$$n = .6809$$

$$Q_2 = 246$$

NEW-TEX LAB
P.O. BOX 1161
HOBBS NM 88241-1161
505-393-3561

ANALYSIS NUMBER: 6727
DATE OF RUN: 02/19/82
DATE SECURED: 02/18/82

ANALYSIS CERTIFICATE

SAMPLE IDENT: CLEMENTS ENERGY - NEW MEXICO STATE 1-36

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

SAMPLING PRESS: 0 PSIG SAMPLING TEMP: 0 DEG F
STATION NUMBER:

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	2.1748394	
CARBON DIOXIDE	2.1654761	
METHANE	85.1445770	
ETHANE	6.6050410	1.7615600
PROPANE	2.1611736	0.5932420
ISO-BUTANE	0.3362943	0.1097330
NORMAL BUTANE	0.6844663	0.2151960
ISO-PENTANE	0.1696097	0.0619245
NORMAL PENTANE	0.2116167	0.0764783
HEXANES	0.1474652	0.0604902
HEPTANES PLUS	0.1994406	0.0917826
TOTAL	100.0000000	2.9704100

PROPANE GPM: 0.59 BUTANES GPM: 0.32
ETHANE GPM: 1.76 PENTANES PLUS GPM: 0.29

SPECIFIC GRAV (CALC): .6677
MOLE WEIGHT: 19.36

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
14.696		1079	1098
14.650		1075	1095
14.730		1081	1101
14.735		1082	1101

ANALYZED BY:

APPROVED BY:

Dean Simpson

COMPANY CLEMENTS ENERGY, INC. WELL NAME NEW MEXICO STATE WELL NO. 1-36
DATE OF TEST 2-18-82 FORMATION _____ PAGE 1 OF 1

ELEMENT NUMBER	RPG3 #46950	RANGE	0-7,000 LBS.
CLOCK NUMBER	B3443	RANGE	6 HOURS
TIME WELL SHUT IN	2-17-82 0630 HOURS		
TIME CLOCK STARTED	0743 HOUR		
DEAD WEIGHT ELEMENT ON SURFACE	1572 PSIA SHUT IN		LBS.
TIME ELEMENT REACHED BOTTOM	0812 HOURS 2-17-82		
DEAD WEIGHT ELEMENT ON BOTTOM	1572 PSIA SHUT IN		LBS.
ELEMENT SET AT	6,620		FEET.
TEMPERATURE	6,620	FT.	146 °F.
DEAD WEIGHT AT THE END OF	26 HOURS	15	MINUTES.

Bryan Printers & Stationers, Inc

TEST DATE: 2-18-82
TEST DEPTH: 6,620 FEET

ELEMENT NO.: Rpg3 #46950
RANGE: 7,000 LBS.

CLOCKS: B3443
RANGE: 6 HOURS

OPERATOR: RICHARD TOWNLEY

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

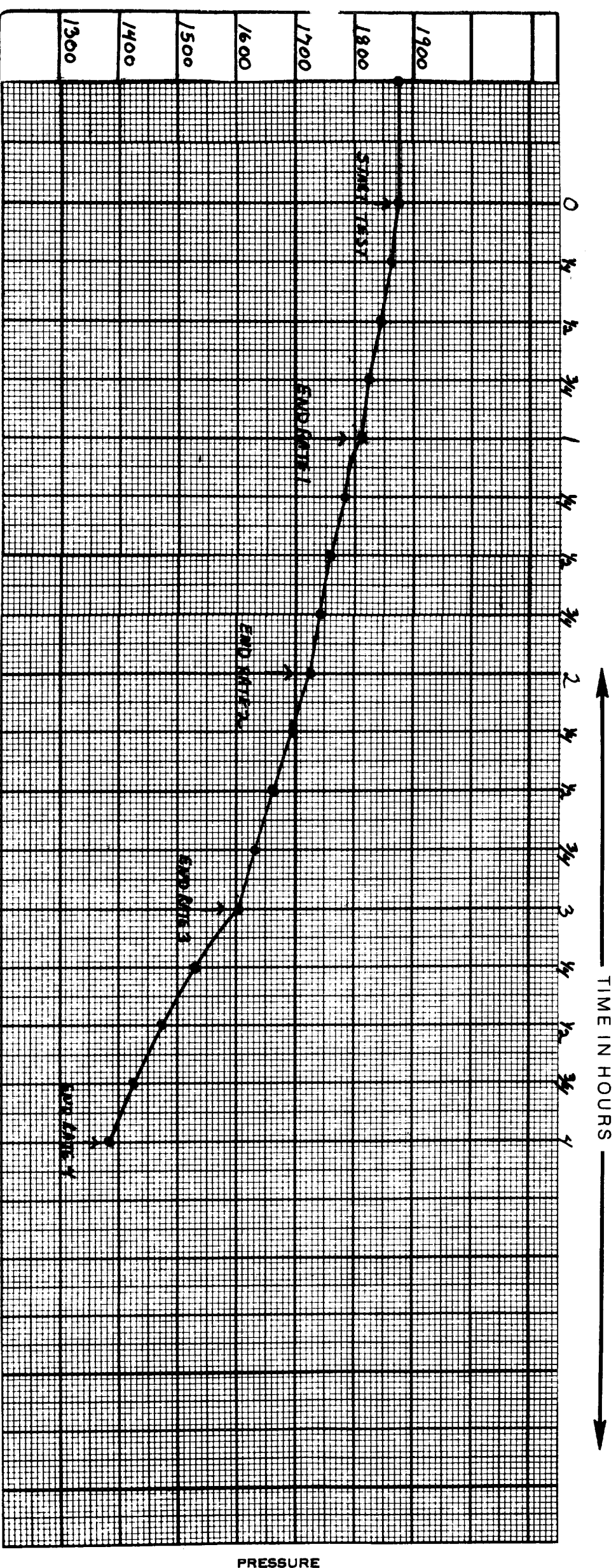
FOUR POINT BACK PRESSURE TEST

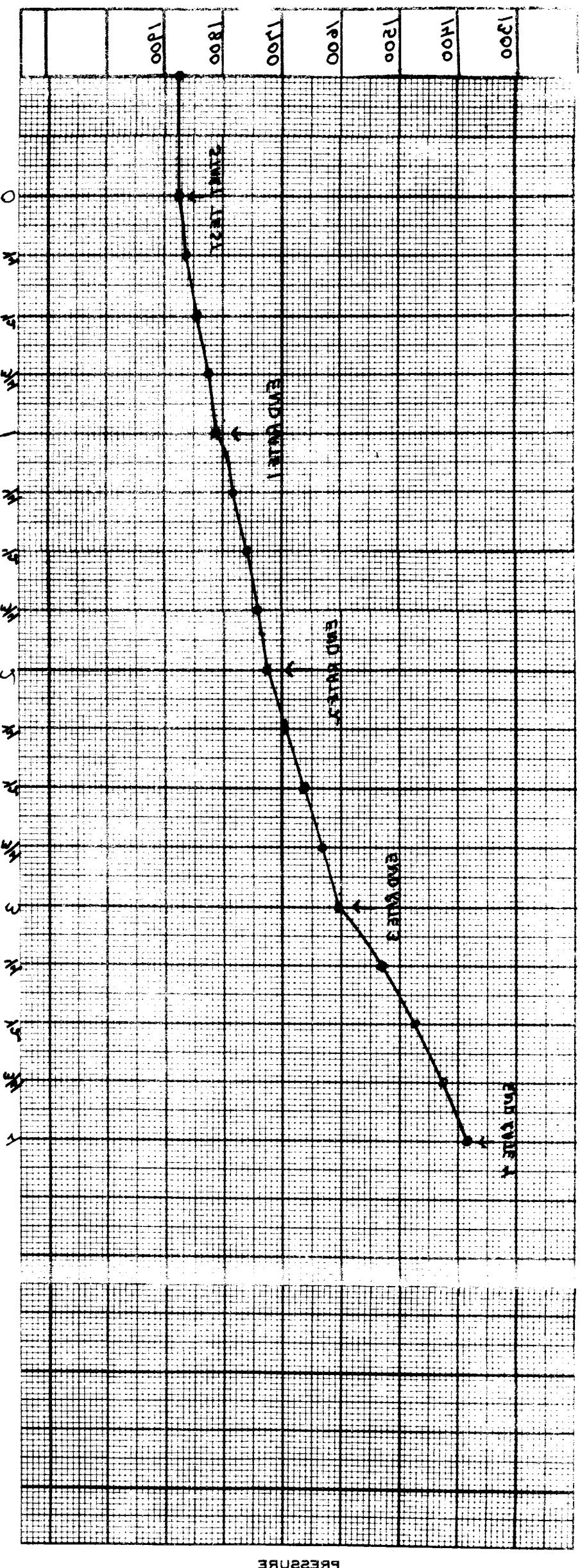
RICHARD PAYNE

NEW MEXICO STATE WELL NO. 1-36

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

BENNETT-
CATHEY
WELL SERVICES





LONG SOLID BACK PRESSURE TEST

And Time.

Note: See Attached Sheet for Tabulation of Pressure

OPERATOR: RICHARD TOMLIN

RANGE: 0-1000

CLOCKS: 0-1000

RANGE: 0-1000

ELEMENT NO: 0000000000

TEST DEPTH: 0-1000

TEST DATE: 0-10-85

DISM B1	Scale: As Shown
Box 181	Address: N.W. 88510
BENNETT-CATHEY WIRE LINE SERVICE	
202\140-3581	
NEW MEXICO STATE WELL LOG 100	
RICHARD TOMLIN	



COMPANY CLEMENTS ENERGY WELL NAME NEW MEXICO STATE WELL NO. 1-36
DATE OF TEST 12-18-82 TO 2-21-82 FORMATION MORROW PAGE 1 OF 1

ELEMENT NUMBER	RPG3 #46950	RANGE	7,000 LBS.
CLOCK NUMBER	G3179	RANGE	72 HOURS
TIME WELL SHUT IN	1340 HOURS	12-18-82	
TIME CLOCK STARTED	1323 HOURS		
DEAD WEIGHT ELEMENT ON SURFACE	1141 FLOWING		LBS.
TIME ELEMENT REACHED BOTTOM	1338 HOURS		
DEAD WEIGHT ELEMENT ON BOTTOM	1141 FLOWING		LBS.
ELEMENT SET AT	6,620		FEET.
TEMPERATURE	6,620	FT.	147 °F.
DEAD WEIGHT AT THE END OF	81 HOURS	28	MINUTES.

1707 PSIG

[illegible]

TEST DATE: CLEMENTS ENERGY
TEST DEPTH: 6,620 FEET

ELEMENT NO.: RPG3 #46950
RANGE: 7,000 LBS.

CLOCKS: G3179
RANGE: 72 HOURS

OPERATOR: BO FAULKENBERRY

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

RICHARD PAYNE

CLEMENTS ENERGY

NEW MEXICO STATE WELL NO. 1-36

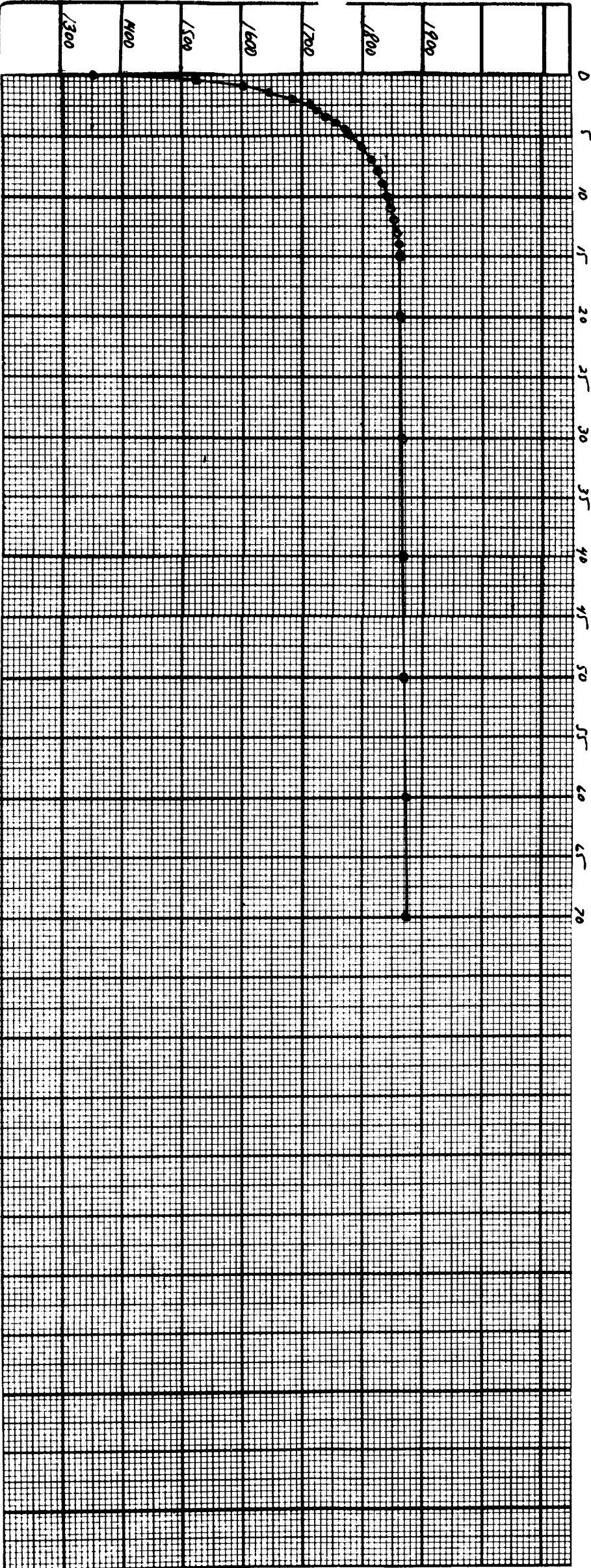
BENNETT-CATHEY WIRE LINE SERVICE
Box 787 Artesia, N.M. 88210 505/746-3281

Drawn By

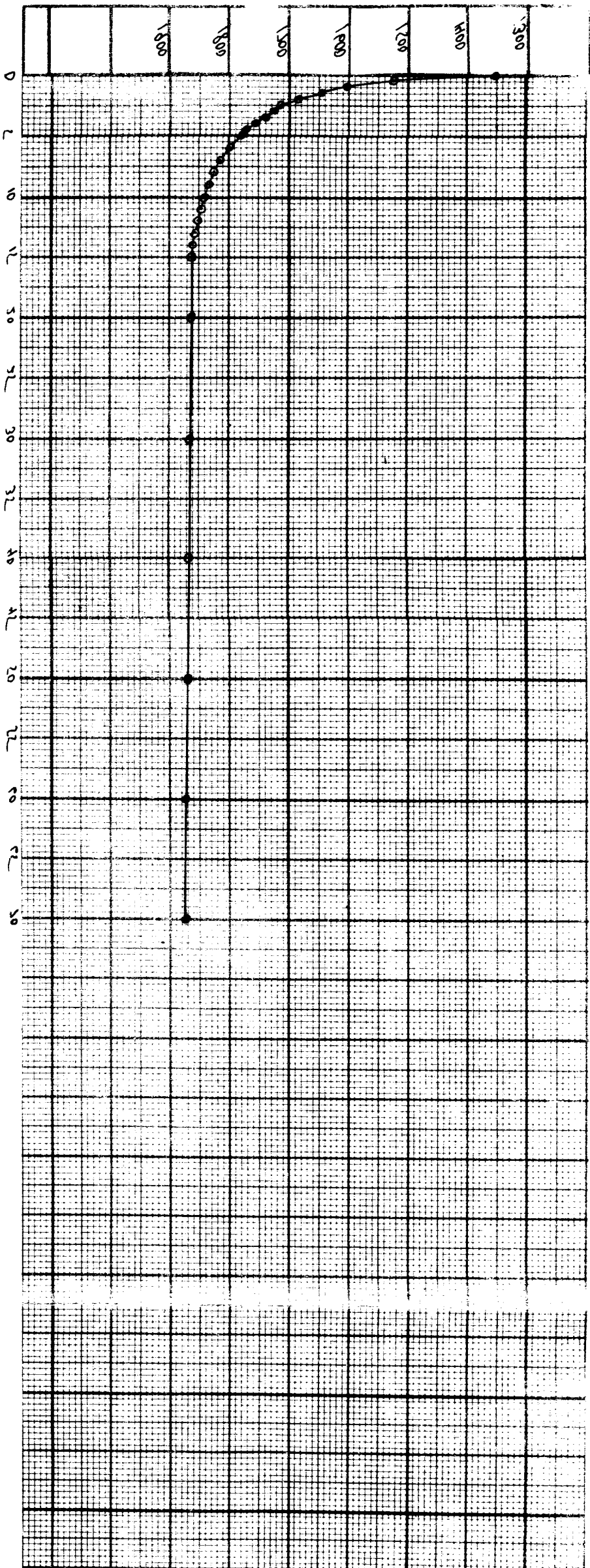
Scale: As Shown

BENNETT-
CATHEY
WELL SERVICES

TIME IN HOURS



PRESSURE



And Time.

Note: See Attached Sheet for Tabulation of Pressure

OPERATOR: BO LAMBERBERG

RANGE: 35 HOURS

CLOCKS: GRID

RANGE: 1000 LBS.

ELEMENT NO.: 3003 #H020

TEST DEPTH: 100 FEET

TEST DATE: 1961 FEB 1

Drawn By	Scale: As Shown
Box 181	Algebra N.W. 88510 202146-3581
BENNETT-CATHEY WIRE LINE SERVICE	
NEW MEXICO STATE METER NO. 1-10	
ELEMENTS FUTURE	
RECEIVED DATE	





BENI ATT-CATHEY WIRE LINE SERVICE

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



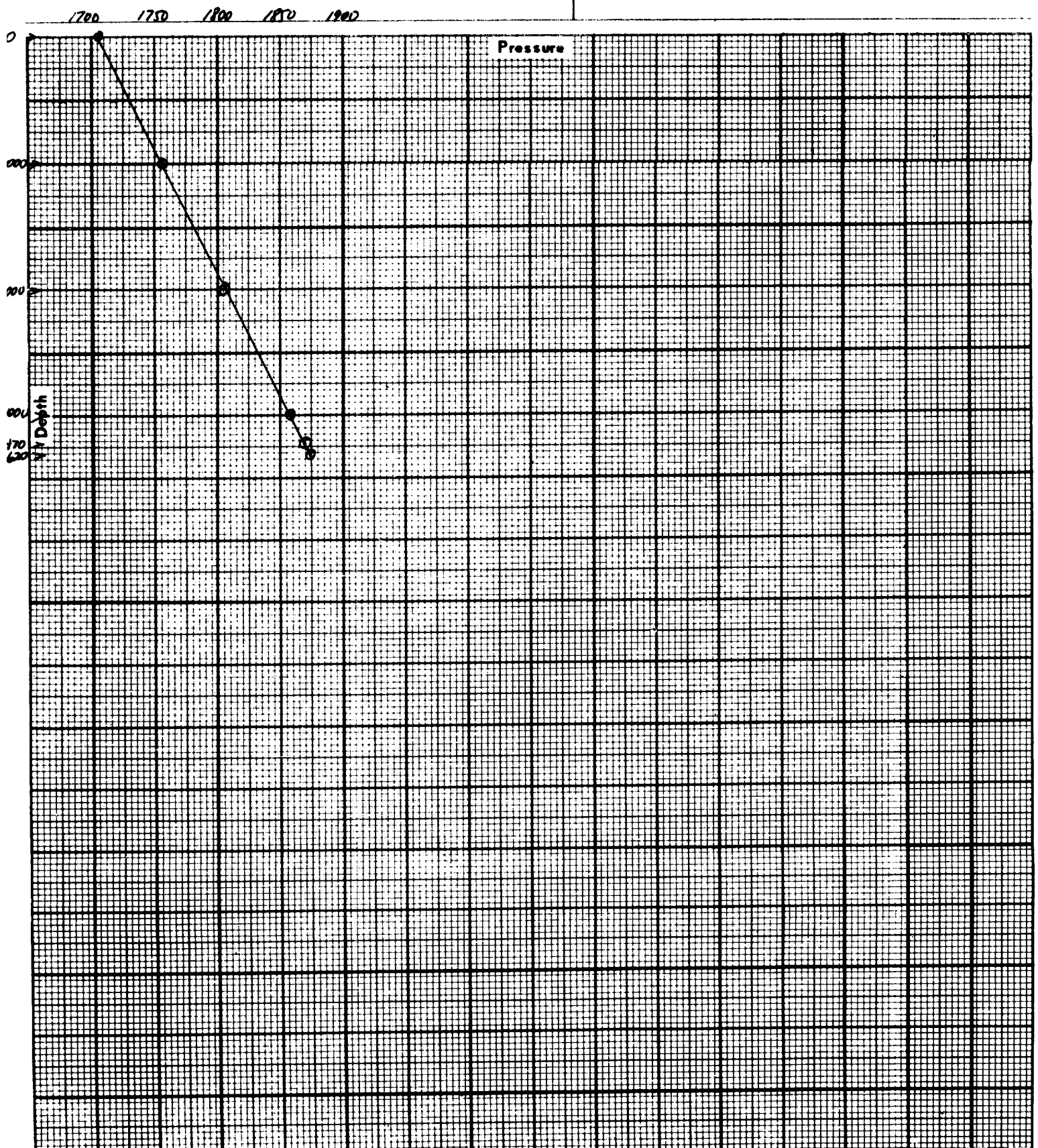
BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR CLEMENTS ENERGY
LEASE NEW MEXICO STATE
WELL NO. 1-36
POOL FORMATION MORROW
DATE 2-21-82 TIME 2208 HOURS
STATUS SHUT IN TEST DEPTH 6,620
TIME S.I. 1340 HRS. LAST TEST DATE 1ST TEST
CAS. PRES. 12-18-82 BHP LAST TEST
TUB. PRES. 1707 BHP CHANGE
ELE. FLUID TOP
DATUM PLANE WATER TOP
DATUM PSIA 1874 RUN BY BOB HERREN
TEMP 147° PRESSURE RANGE 7,000 LBS.
CLOCK NO. B3443 6 HOURS
ELEMENT NO. RPG3 #46950

DEPTH	PRESSURE	GRADIENT
0	1707	
2,000	1757	2.5
4,000	1807	2.5
6,000	1858	2.6
6,470	1870	2.6
6,620	1874	2.7

TIME B.H.P. MEASURED: 2208 HOURS

LENGTH OF TIME WELL SHUT IN: 81 HRS.
28 MIN.





BEN J. CATHHEY WIRE LINE SERVICE

P.O. BOX 187
ARTEZIA, NEW MEXICO 88210
PHONE 146-3281



BOTTOM HOLE PRESSURE SURVEY REPORT

DEPTH	PRESSURE	GRADIENT
0	1707	
5,000	1752	0.01
10,000	1801	0.01
15,000	1858	0.01
20,000	1870	0.01
25,000	1874	0.01

TIME B.H.P. MEASURED 12:00 HOURS
LENGTH OF TIME WELL SHUT IN 2 HOURS
28 MIN.

OPERATOR _____ ELEMENTS ENERGY
LEASE _____ NEW MEXICO STATE
WELL NO. _____ 1-26
POOL _____ FORMATION _____
DATE _____ 2-21-62 TIME _____ 2208 HOURS
STATUS _____ SHUT IN TEST DEPTH 0,000
TIME S.I. 12:00 HRS. LAST TEST DATE 1ST EST
CAS. PRES. 12-1-52 BHP LAST TEST
TUB. PRES. 100 BHP CHANGE
ELE. _____ FLUID TOP
DATUM PLANE _____ WATER TOP
DATUM PSIA 1874 RUN IN BOB HERRIN
TEMP _____ PRESSURE RANGE 7,000 LBS.
CLOCK NO. 33443 6 HOURS
ELEMENT NO. 4963 #00950

