2987

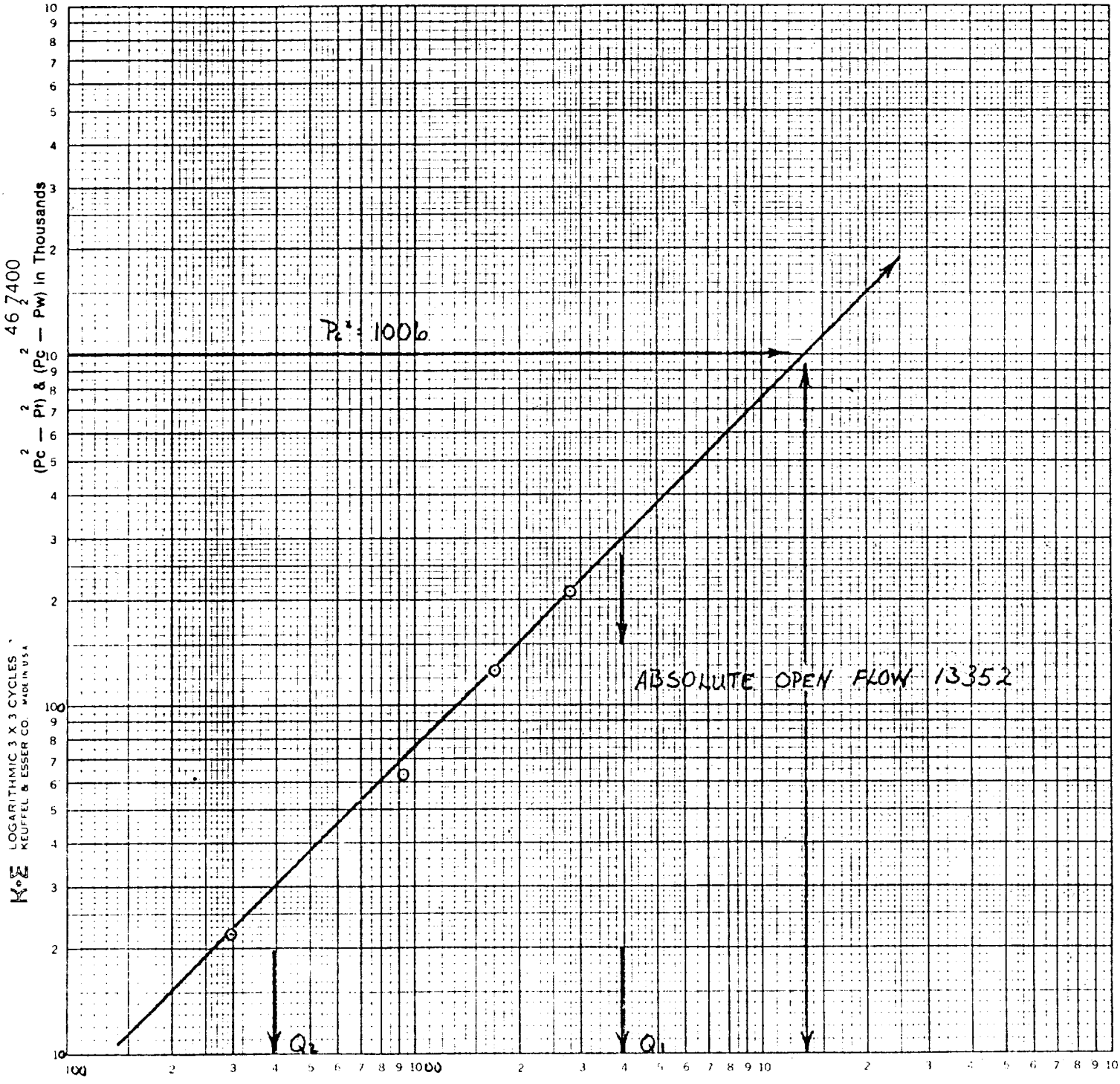
BACK PRESSURE CUR

Operator Stevens Operation Lease Nichols Dale Fed Well No. 7

County Chaves Field Pecos Slope Location 33 7S 26E

Date of Test 1-16-84 Slope "n" 1.000 Angle of Slope 45

Calc. Abs. Potential 13352 MCF/D



$\overline{\Delta P_1^2}$ $P_c^2 - P_w^2 =$ 300

$\overline{\Delta P_2^2}$ $P_c^2 - P_w^2 =$ 30

$Q_1 =$ 3950

$Q_2 =$ 395

LOG $Q_1 =$ 3.5966

LOG $Q_2 =$ 2.5966

$n =$ 1.000

"L your Interest in Measurement be our Concern

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

RECEIVED BY
JAN 23 1984
O. C. D.
ARTESIA

Run No. 117-1
Date Run 01/17/84
Date Sampled 01/1 /84

Analysis For: STEVENS OPERATING CORP
Lease: #7 Nichols Dale Federal
Location: Pecos Slope
Purpose: Well Test
Sampling Temp. 35 °F
Volume/day
Pressure on Bomb 625

Producer: Stevens Operating Corp
County: Chaves State: New Mexico
Sampled By: B & C WRLN.
Atmos Temp. °F
Formation: ABO
PSIG; Line Pressure 638.2 PSIA PSIG

Gas Component Analysis Press. Base: 14.73

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO_2	8.672		
Oxygen O_2	.061		
Nitrogen N_2	4.988		
Hydrogen Sulfide H_2S			
Methane C1	78.420		13.261
Ethane C2	4.082		1.089
Propane C3	1.701		.467
Iso-Butane IC4	.308		.101
Nor-Butane NC4	.665		.209
Iso-Pentane IC5	.263		.096
Nor-Pentane NC5	.312		.113
Hexanes plus	.527		.229
Hexanes C6			
Heptanes			
Heptanes Plus C7+			
Total	100.000		15.565
Pentane + G.P.M.			.437
Propane + GPM			1.214
Ethane + GPM			2.304
Lb Gasoline			1.027

BTU Dry	994
BTU Wet	993
Calc. Specific Gravity	.736
@ Std. Press. 14.696	
BTU Dry	991
BTU Wet	991
Calc. Vap. Press. #/Sq.In.	
Reid Vap. Press. #/Sq In.	
Z Factor	.9974
N Value	1.3021
Ave Mol Wt	21.2637
Ave Cu Ft/Gal	

Run by: Jeffrey A. Propp

Calculated By: Jeffrey A. Propp

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 - CATHEY

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

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY STEVENS OPERATING WELL NAME NICHOLS DALE FEDERAL #7

DATE OF TEST 1-16-84 FORMATION PAGE 1 OF 1

COMPANY MAN MIKE VOWELL

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3#37882 RANGE 3500 LBS.

CLOCK NUMBER 27744 RANGE 48 HOUR

ELEMENT NUMBER RPG3#7201 RANGE 3200 LBS.

CLOCK NUMBER 31768 RANGE 48 HOUR

TIME WELL SHUT IN 0500 HOUR 1-10-84

TIME CLOCK STARTED 1026 HOUR 1-16-84

DEAD WEIGHT ELEMENT ON SURFACE 898.2 PSIA SHUT IN LBS.

TIME ELEMENT REACHED BOTTOM 1100 HOUR 1-16-84

DEAD WEIGHT ELEMENT ON BOTTOM 898.2 PSIA SHUT IN LBS.

ELEMENT SET AT 4180 FEET

TEMPERATURE 4180 FT. 105 °F.

898.2 PSIA DEAD WEIGHT AT THE END OF 157 HOURS 45 MINUTES

FOUR POINT BACK PRESSURE TEST

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
1-16-84	SIP	1800		990	13.2	1003.2	
START TEST	0	1845		990	13.2	1003.2	
	1/4	1900		981	13.2	994.2	
	1/2	1915		979	13.2	992.2	
	3/4	1930		979	13.2	992.2	
END RATE 1	1	1945		978	13.2	991.2	
	1 1/4	2000		964	13.2	977.2	
	1 1/2	2015		957	13.2	970.2	
	1 3/4	2030		953	13.2	966.2	
END RATE 2	2	2045		950	13.2	963.2	
	2 1/4	2100		923	13.2	936.2	
	2 1/2	2115		910	13.2	923.2	
	2 3/4	2130		903	13.2	916.2	
END RATE 3	3	2145		897	13.2	910.2	
	3 1/4	2200		855	13.2	868.2	
	3 1/2	2215		830	13.2	843.2	
	3 3/4	2230		811	13.2	824.2	
END RATE 4	4	2245		797	13.2	810.2	

TEST DATE:	1-16-84	
TEST DEPTH:	4180 FT.	
ELEMENT NO.:	RPG3#37882	RPG3#7201
RANGE:	3500 LBS.	3200 LBS.
CLOCKS:	27744	31768
RANGE:	48 HOUR	48 HOUR
OPERATOR:	RICHARD TOWNLEY	

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

MIKE VOWELL

STEVENS OPERATING

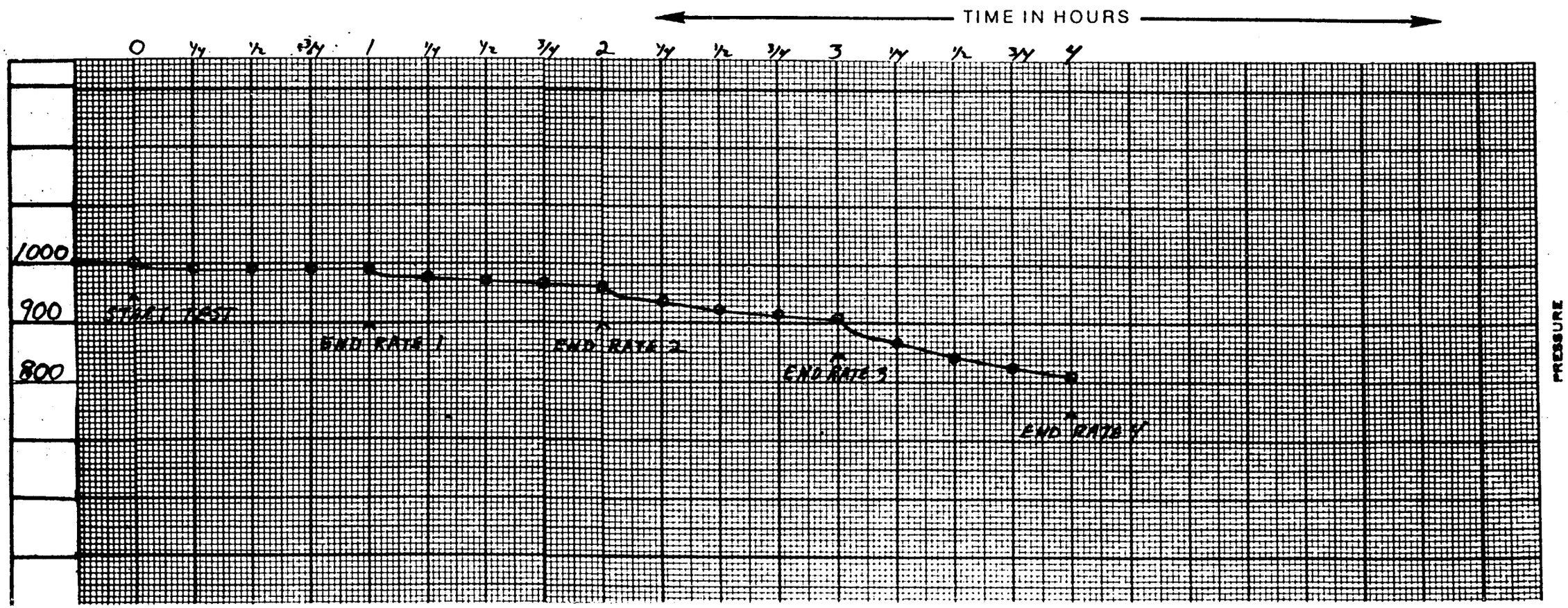
NICHOLS DALE FEDERAL #7

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

Drawn By Scale: As Shown

BENNETT-CATHEY WELL SERVICES

4 POINT BACK RPESSURE TEST



BENNETT - CATHEY

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

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY STEVENS OPERATING WELL NAME NICHOLS DALE FEDERAL #7

DATE OF TEST 1-16-84 TO 1-17-84 FORMATION PAGE 1 OF 1

COMPANY MAN MIKE VOWELL

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3#37882 RANGE 3500 LBS.

CLOCK NUMBER 27744 RANGE 48 HOUR

ELEMENT NUMBER RPG3#7201 RANGE 3200 LBS.

CLOCK NUMBER 31768 RANGE 48 HOUR

TIME WELL SHUT IN 1045 HOUR 1-16-84

TIME CLOCK STARTED 1026 HOUR 1-16-84

DEAD WEIGHT ELEMENT ON SURFACE 638.2 PSIA SHUT IN LBS.

TIME ELEMENT REACHED BOTTOM 1100 HOUR 1-16-84

DEAD WEIGHT ELEMENT ON BOTTOM 638.2 PSIA SHUT IN LBS.

ELEMENT SET AT 4180 FEET

TEMPERATURE 4180 FT. 105° °F.

895.2 PSIA DEAD WEIGHT AT THE END OF 36 HOURS 34 MINUTES

35 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
1-16-84	0	2245		797	13.2	810.2	
	1/4	2300		905	13.2	918.2	
	1/2	2315		933	13.2	946.2	
	3/4	2330		945	13.2	958.2	
	1	2345		952	13.2	965.2	
	1 1/4	2400		957	13.2	970.2	
	1 1/2	2415		961	13.2	974.2	
	1 3/4	2430		965	13.2	978.2	
	2	2445		966	13.2	979.2	
1-17-84	2 1/2	0115		968	13.2	981.2	
	3	0145		972	13.2	985.2	
	3 1/2	0215		973	13.2	986.2	
	4	0245		975	13.2	988.2	
	4 1/2	0315		976	13.2	989.2	
	5	0345		977	13.2	990.2	
	6	0445		979	13.2	992.2	
	7	0545		979	13.2	992.2	
	8	0645		980	13.2	993.2	
	10	0845		982	13.2	995.2	
	15	1345		985	13.2	998.2	
	20	1845		987	13.2	1000.2	
	25	2345		988	13.2	1001.2	
	30	0445		989	13.2	1002.2	
	35 1/4	1000		990	13.2	1003.2	

TEST DATE:	1-16-84 TO 1-17-84	
TEST DEPTH:	4180 FT.	
ELEMENT NO.:	RPG3#37882	RPG3#7201
RANGE:	3500 LBS.	3200 LBS.
CLOCKS:	27744	31768
RANGE:	48 HOUR	48 HOUR
OPERATOR:	BO FAULKENBERRY	

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

35 HOUR BUILD UP TEST

MIKE VOWELL

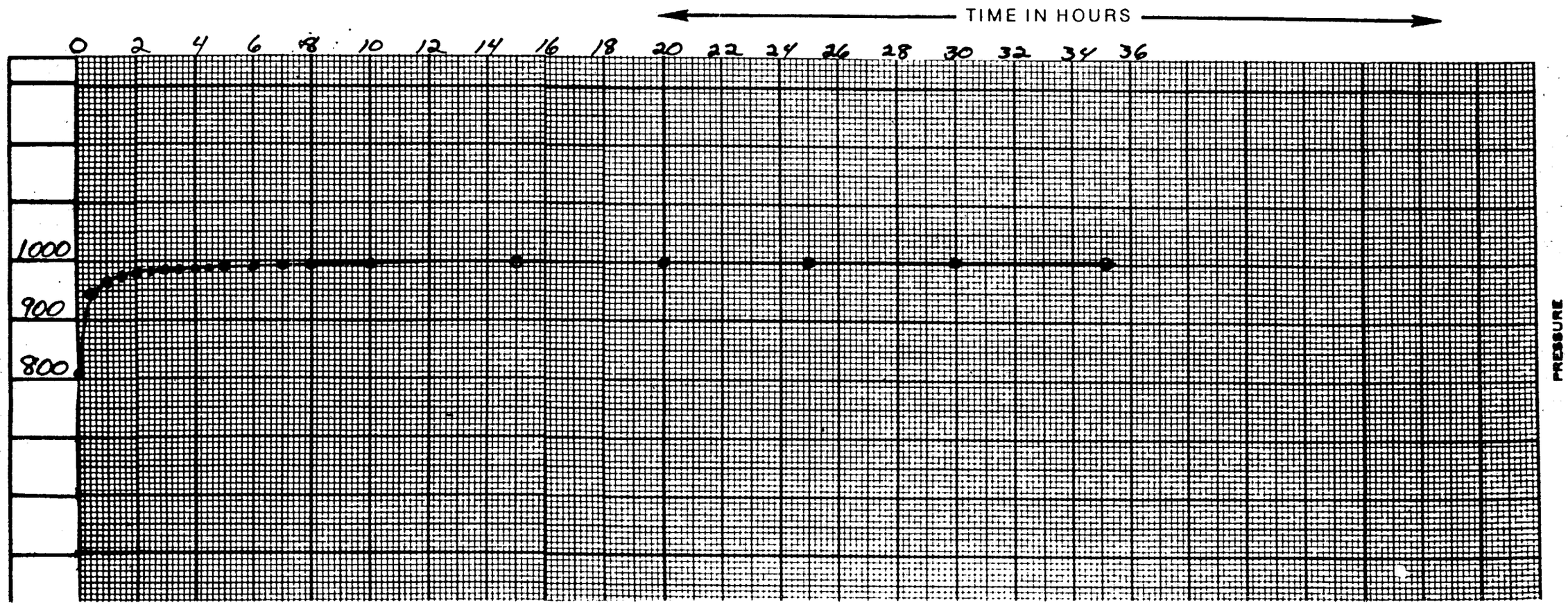
STEVENS OPERATING

NICHOLS DALE FEDERAL #7

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

Drawn By Scale: As Shown

BENNETT-CATHEY WELL SERVICES



BENNETT-CATHEY WIRE LINE SERVICE

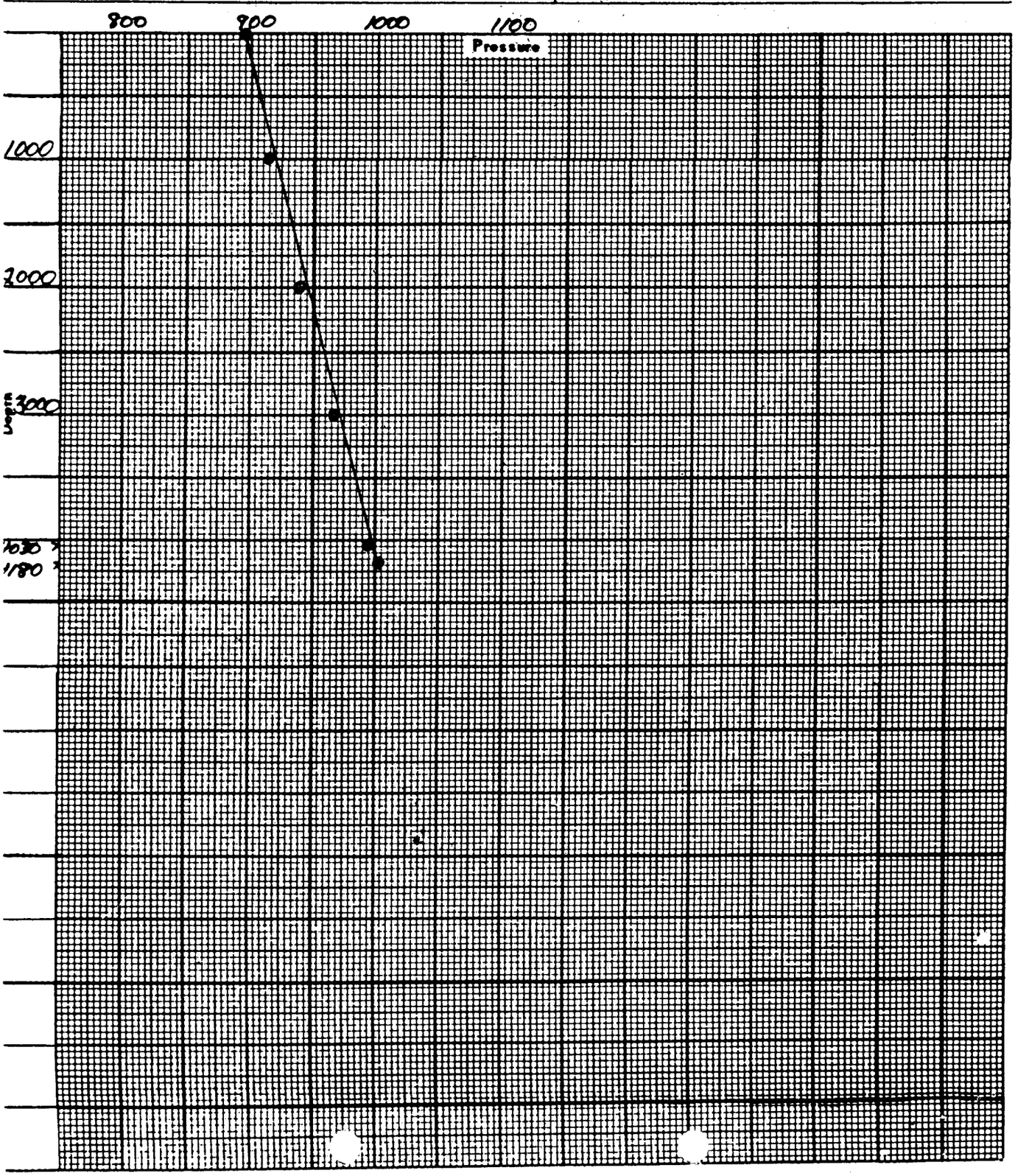
P. O. BOX 787
ARTESIA, NEW MEXICO 88210
Phone (505) 746-3281

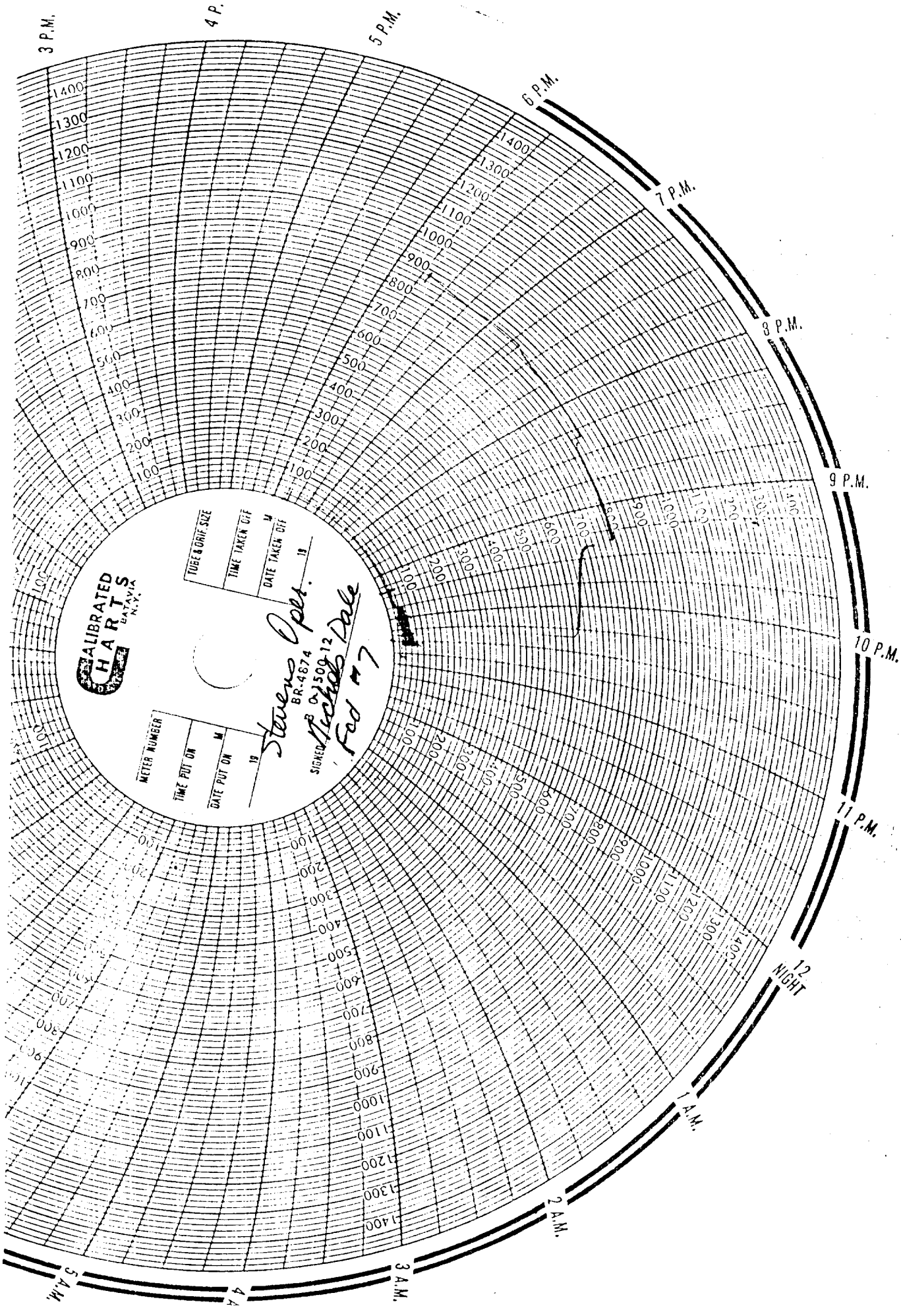
BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR STEVENS OPERATING
LEASE NICHOLS DALE FEDERAL
WELL NO. #7
POOL _____ **FORMATION** _____
DATE 1-18-84 **TIME** 1119 HOUR
CO. MAN MIKE VOWELL
STATUS SHUT IN **TEST DEPTH** 4180 FT.
TIME S.I. 1045 HR. **LAST TEST DATE** 1ST TEST
1-16-84 **BHP LAST TEST** _____
TUB. PRES. 895.2# **BHP CHANGE** _____
CAS. PRES. _____ **FLUID TOP** _____
DATUM PLANE _____ **WATER TOP** _____
DATUM PSIA 1002.2# **RUN BY** BO FAULKENBERRY
TEMP 105° **CLOCK #** B-3443
PRESSURE RANGE 3500 LBS.
ELEMENT NO. RPG3#37882

DEPTH	PRESSURE	GRADIENT
0	895.2	
1000	914.2	1.9
2000	939.2	2.5
3000	967.2	2.8
4030	996.2	2.8
4180	1002.2	4.0

TIME B.H.P. MEASURED 1119 HOUR.
LENGTH OF TIME WELL SHUT IN 37HR 34MIN.




3 P.M.
4 P.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
5 A.M.
ALIBRATED HARTS BATAVIA N.Y.
TUBE & ORIF. SIZE
TIME TAKEN OFF
DATE TAKEN OFF
METER NUMBER
TIME PUT ON
DATE PUT ON
SIGNED
Stevens Oper.
BR-4874
B 0-1500-12
Nichols Dale
Fed #7