

q/sf
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O.C.D.

Type Test ☒ Initial ☐ FOUR POINT ☐ Annual ☐ Special		Test Date 0-28-83		ARTESIA, OFFICE	
Company DEPCO		Connection AIR NEW WELL			
Pool PECOS SLOPE U.D. 260		Formation ABO		Unit E	
Completion Date 10-25-82		Total Depth 4695		Plug Bars 4654	
				Elevation 3763 3773.	
Well Size 4.500		Wt. 10.5		Set At 4.052	
				Set At 4694	
Perforations: From 4277 To 4309		Well No. 2			
Perforations: From 4343 To 4379		Unit E		Sec. 34	
		Twp. 7S		Rge. 26E	
Type Well - Single - Freedom - G.O. or G.O. Multiple SINGLE		Packer Set At NONE		County CHAVES	
Producing thru TUBING		Reservoir Temp. °F 100 @ 4328		State N.M.	
Mem Annual Temp. °F 60		Baro. Press. - P _a 13.2			
L 4328	H 4328	Q _g 0.715	% CO ₂ 7.39	% H ₂ 5.13	% H ₂ S 0
Prover 0		Meter Run 2.00		Type 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. in.	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	CHOKE	
SI							983		1118		73.0 HRS
1.	2.03	X	1.250	290	13.0	50	947	59	1092	9/64	1 HR
2	2.03	X	1.250	290	42.0	46	907	60	1061	20/64	1 HR
3	2.03	X	1.250	300	78.0	46	859	58	1022	21.5/64	1 HR
4	2.03	X	1.250	550	91.0	54	764	55	951	26/64	1 HR
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{P/P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor F _{sp}	Rate of Flow Q, MscfD
1	8.18	62.78	303.2	1.0098	1.1824	1.0307	632
2	8.18	112.85	303.2	1.0137	1.1824	1.0318	1141
3	8.18	156.30	313.2	1.0137	1.1824	1.0329	1582
4	8.18	226.39	563.2	1.0058	1.1824	1.0562	2325
5							

NO.	P _r	Temp. °R	Q	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	0.44	510.	1.39	0.941		0.715		XXXXXX	690	368
2	0.44	506.	1.37	0.939						
3	0.45	506.	1.37	0.937						
4	0.82	514.	1.40	0.896						
5										

P _r 995.5		P _w 991		(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 3,7193$		(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2,5905$	
NO	P _r	P _w	P _r ²	P _w ²	P _r ² - P _w ²		
1	1221	973	947	44			
2	1154	946	896	95			
3	1072	913	833	158			
4	930	851	725	266			
5							

$$AOF = Q \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 6024.$$

Absolute Open Flow	6024.	Mscf @ 15.023	Angle of Slope	54.1	Slope, n	0.725
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Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA PRESSURE ELEMENTS.

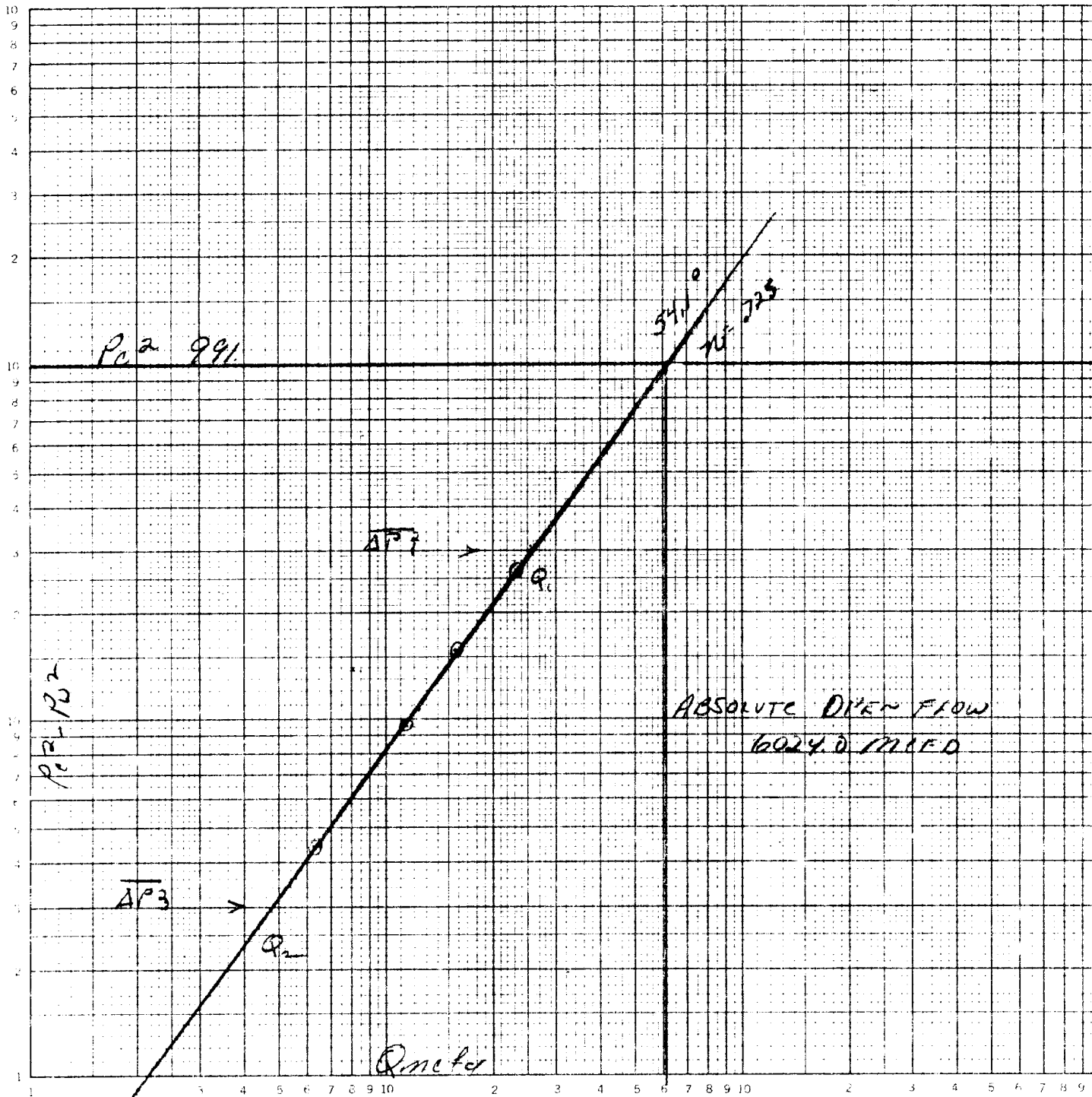
Approved By Commission:	Conducted By: DON BENNETT	Calculated By: BENNETT-CATHEY	Checked By:
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DEPT
VANCE FEDERAL A
Well No 2
UNIT E. S34, T7S, R26E
Chaves County

10-28-82

467400

LOGARITHMIC 3 CYCLES
PER 1.6 ISSUES



$$\Delta P_3 \quad P_0^2 - P_w^2 = 300$$

$$\Delta P_2 \quad P_0^2 - P_w^2 = 30$$

$$Q_1 = 2548 \text{ mcf}$$

$$Q_2 = 480 \text{ mcf}$$

$$\log Q_1 = 3.4062$$

$$\log Q_2 = 2.6812$$

$$76. = .725$$

Depco Inc.
Vance E. Federal A# 2
4 Point

2" / 250

10/28 12

Wm. Muehler

11 A.M.

12 NOON

1 P.M.

2 P.M.

3 P.M.

4 P.M.

5 P.M.

6 P.M.

7 P.M.

**NEW-TEX
LAB**

PHONE 505/393-3561

P. O. BOX 1161

611 W. SNYDER

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APR 09 1984

O. C. D.

ARTESIA OFFICE

ANALYSIS CERTIFICATE

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

ANALYSIS NUMBER: 8561
DATE OF RUN: 10/29/82
DATE SECURED: 10/28/82

SAMPLE IDENT: DEPCO - VANCE-FEDERAL WELL #2
SAMPLING PRESS: SAMPLING TEMP:

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	5.129	
CARBON DIOXIDE	7.394	
ETHANE	75.260	
ETHANE	4.800	1.280
PROPANE	1.808	0.496
ISO-BUTANE	0.314	0.102
NORMAL BUTANE	0.328	0.197
ISO-PENTANE	2.197	0.072
NORMAL PENTANE	2.113	0.277
HEXANES	0.150	0.062
HEPTANES PLUS	0.127	0.049
TOTAL	100.000	2.335

PROPANE GPM:	0.50	BUTANES GPM:	0.30
ETHANE GPM:	1.28	PENTANES PLUS GPM:	0.26

SPECIFIC GRAV (CALC): 0.7154
MOLE WEIGHT: 22.73

PRO-BTU/CL FT	PRESSURE (PSIA)	WET	DRY
14.696		974	991
14.650		971	988
14.730		976	994
14.735		977	994

ANALYZED BY: R. H. HAMILTON

APPROVED BY

[Signature]

100 C. D.

COMPANY MAN DANNY HOKETT

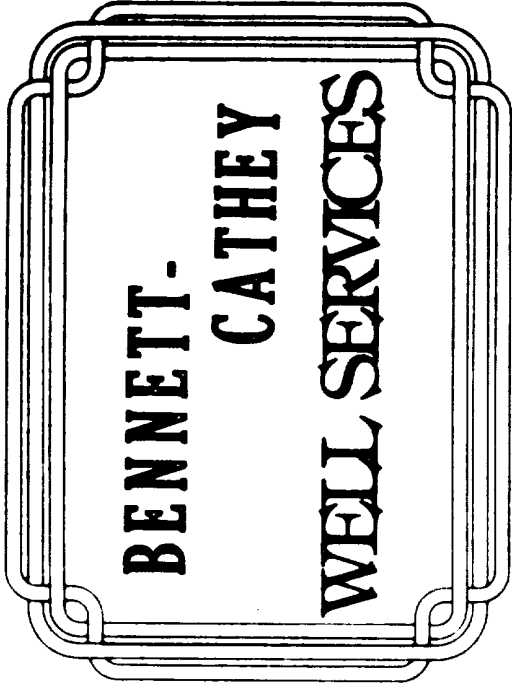
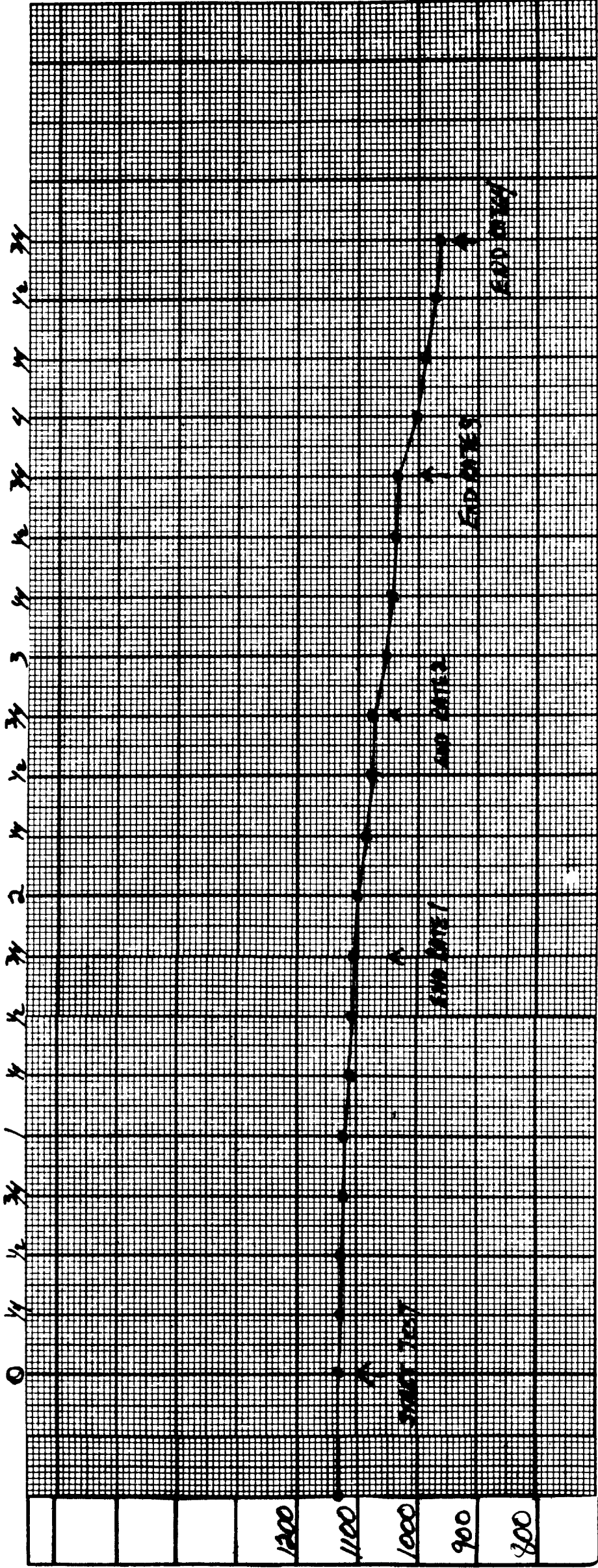
994 PSIA DEAD WEIGHT AT THE END OF 71 HOURS 52 MINUTES

TEST DATE: 10-28-82
TEST DEPTH: 4,328
ELEMENT NO.: RPG3 #21121N
RANGE: 5,000 LBS.
CLOCKS: 3443
RANGE: 12 HOURS
OPERATOR: DON BENNETT

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

FOUR POINT BACK PRESSURE TEST

← TIME IN HOURS →



DANNY HOKETT
DEPCO INCORPORATED
VANCE FEDERAL A WELL NO. 2
BENNETT-CATHEY WIRE LINE SERVICE Box 787 Artesia, N.M. 88210 505/746-3281
Drawn By Scale: As Shown

BENNET - CATHEY

(505) 748-3354 / Artesia, New Mexico 81001

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY DEPCO WELL NAME VANCE FEDERAL A WELL NO. 2
 DATE OF TEST 10-25-82 TO 10-28-82 FORMATION ARTESIA PAGE 1 OF 1
 COMPANY MAN DANNY HOKETT

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3 #21121 RANGE 5,000 LBS.
 CLOCK NUMBER 27191 RANGE 72 HOURS
 TIME WELL SHUT IN 1210 HOURS 10-25-82
 TIME CLOCK STARTED 1123 HOURS 10-25-82
 DEAD WEIGHT ELEMENT ON SURFACE 193 PSIA FLOWING LBS.
 TIME ELEMENT REACHED BOTTOM 1152 HOURS 10-25-82
 DEAD WEIGHT ELEMENT ON BOTTOM 248 PSIA FLOWING LBS.
 ELEMENT SET AT 4,328 FEET.
 TEMPERATURE 4,328 FT. 100 °F.
 DEAD WEIGHT AT THE END OF 71 HOURS 52 MINUTES.

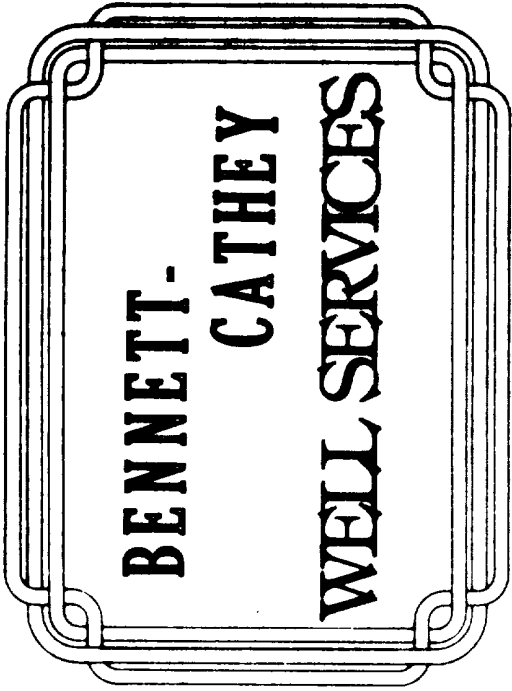
DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
10-25-82	0	1210		794	13.2		807
	1/4	1225		961	13.2		974
	1/2	1240		1007	13.2		1020
	3/4	1255		1020	13.2		1033
	1	1310		1033	13.2		1046
	1-1/4	1325		1041	13.2		1054
	1-1/2	1340		1048	13.2		1061
	1-3/4	1355		1053	13.2		1064
	2	1410		1059	13.2		1072
	2-1/2	1440		1065	13.2		1078
	3	1510		1070	13.2		1083
	3-1/2	1540		1074	13.2		1087
	4	1610		1079	13.2		1092
	4-1/2	1640		1082	13.2		1095
	5	1710		1084	13.2		1097
	6	1810		1087	13.2		1100
	7	1910		1090	13.2		1103
	8	2010		1094	13.2		1107
	9	2110		1096	13.2		1109
	10	2210		1098	13.2		1111
	12	2410		1100	13.2		1113
10-26-82	14	0210		1103	13.2		1116
	16	0410		1105	13.2		1118
	18	0610		1107	13.2		1120
	20	0810		1109	13.2		1122
	25	1310		1112	13.2		1125
	30	1810		1116	13.2		1129
	35	2310		1117	13.2		1130
10-27-82	40	0410		1117	13.2		1130
	45	0910		1118	13.2		1131
	50	1410		1118	13.2		1131
	55	1910		1118	13.2		1131
	60	2410		1118	13.2		1131
10-28-82	65	0510		1118	13.2		1131
	69-1/2	0940		1118	13.2		1131

TEST DATE: 10-25-82
TEST DEPTH: 4,328
ELEMENT NO.: RPG3 #21121N
RANGE: 5,000 LBS.
CLOCKS: 27191
RANGE: 72 HOURS
OPERATOR: BO FAULKENBERRY

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

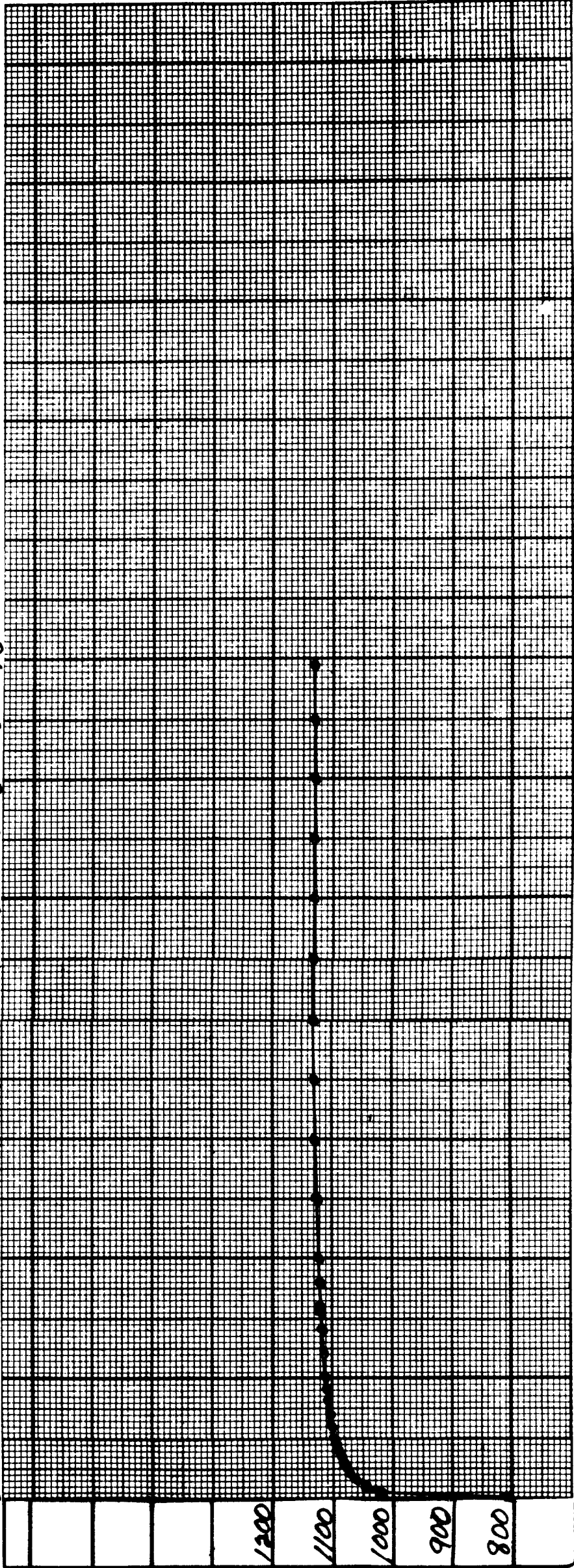
BUILD UP TEST

DANNY HOKETT
DEPCO INCORPORATED
VANCE FEDERAL A WELL NO. 2
BENNETT-CATHEY WIRE LINE SERVICE Box 787 Artesia, N.M. 88210
Scale: As Shown



← TIME IN HOURS →

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70





BENNETT CATNEY WIRE LINE SERVICE

P. O. BOX 787

ARTESIA, NEW MEXICO 88210

Phone (505) 746-3281

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APR 09 1982

BOTTOM HOLE PRESSURE SURVEY REPORT

O. C. D.

ARTESIA, OFFICE

OPERATOR DEPCO INCORPORATED
LEASE VANCE FEDERAL A
WELL NO. 2
POOL FORMATION ABO
DATE 10-28-82 TIME 1100 HOURS
CO. MAN DANNY HOKETT
STATUS SHUT IN TEST DEPTH 4,328
TIME S.I. 1210 HRS. LAST TEST DATE FIRST TIME
10-25-82 BHP LAST TEST
TUB. PRES. 994 BHP CHANGE
CAS. PRES. FLUID TOP
DATUM PLANE WATER TOP
DATUM PSIA 1131 RUN BY STEVE HARWELL
TEMP 100° CLOCK #
PRESSURE RANGE 5,000 LBS.
ELEMENT NO. RPG3 #21121N

DEPTH	PRESSURE	GRADIENT
0	994	
1,000	1021	2.7
2,000	1059	3.8
3,000	1086	2.7
4,178	1125	3.3
4,328	1131	4.0

TIME B.H.P. MEASURED: 1100 HRS.

LENGTH OF TIME WELL SHUT IN: 71 HRS.
52 MIN.