MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Revised 9-1-65

RECEIVED
NOV 22 1982
O. C. D.
ARTESIA, OFFICE

C/SF File

Type Test: [X] Initial FOUR POINT [ ] Annual [ ] Special

Test Date: 11-2-82

Company: DEPCO, INC.	Connection: AIR NEW WELL	Unit:	
Pool: PECOS SLOPE ~~U.D.~~	Formation: ABO		
Completion Date: 11-2-82	Total Depth: 4,250	Plug Back T.D.: ~~4100~~	Elevation: ~~NONE~~
Farm or Lease Name: BENEDICT Fed. Com			
Csg. Size: 4.500 / Wt.: 11.6 / d: 4.000 / Set At: ~~4250~~ 4249	Perforations: From 3746 To ~~3821~~ 3825	Well No.: 1	
Tbg. Size: 2.375 / Wt.: 4.7 / d: 1.995 / Set At: 3670	Perforations: From ~~3843~~ To ~~3895~~	Unit: C / Sec.: 18 / Twp.: 5S / Rge.: 25E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE	Packer Set At: NONE	County: CHAVES	
Producing Thru: TUBING	Reservoir Temp. °F: 100 @ 3820	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2
State: NEW MEXICO			

L	H	G_g	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
3820	3820	0.668	1.58	7.27	0	0	2.00	FLANGE

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	B.H.P. DATA: Press. p.s.i.g.	CHOKE	Duration of Flow
SI					858	61	950		70.0 HRS
1.	2.00 X 1.500	310	4.0	70	838	62	933	12/64	1 HR
2	2.00 X 1.500	310	8.2	65	814	63	915	15/64	1 HR
3	2.00 X 1.500	310	18.0	60	781	63	891	17.5/64	1 HR
4	2.00 X 1.500	310	36.0	49	722	64	856	19.5/64	1 HR
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	13.20	35.96	323.2	0.9905	1.2234	1.0272	591
2	13.20	51.64	323.2	0.9952	1.2234	1.0284	854
3	13.20	76.27	323.2	1.0000	1.2234	1.0296	1268
4	13.20	107.87	323.2	1.0107	1.2234	1.0314	1816
5							

NO.	P_t	Temp. °R	T_g	Z
1	0.49	530	1.48	0.948
2	0.49	525	1.47	0.946
3	0.49	520	1.46	0.943
4	0.49	509	1.42	0.940
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas 0.668 XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 663 P.S.I.A. _____ P.S.I.A.
Critical Temperature 357 R _____ R

P_c 870.1 P_c^2 757

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	895.	855	731	26
2	862	839	704	53
3	818	817	668	89
4	756.	786	618	139
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 5.4481$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.1439$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 5710.$

Post-FD-2 11-26-82 Comp + BK

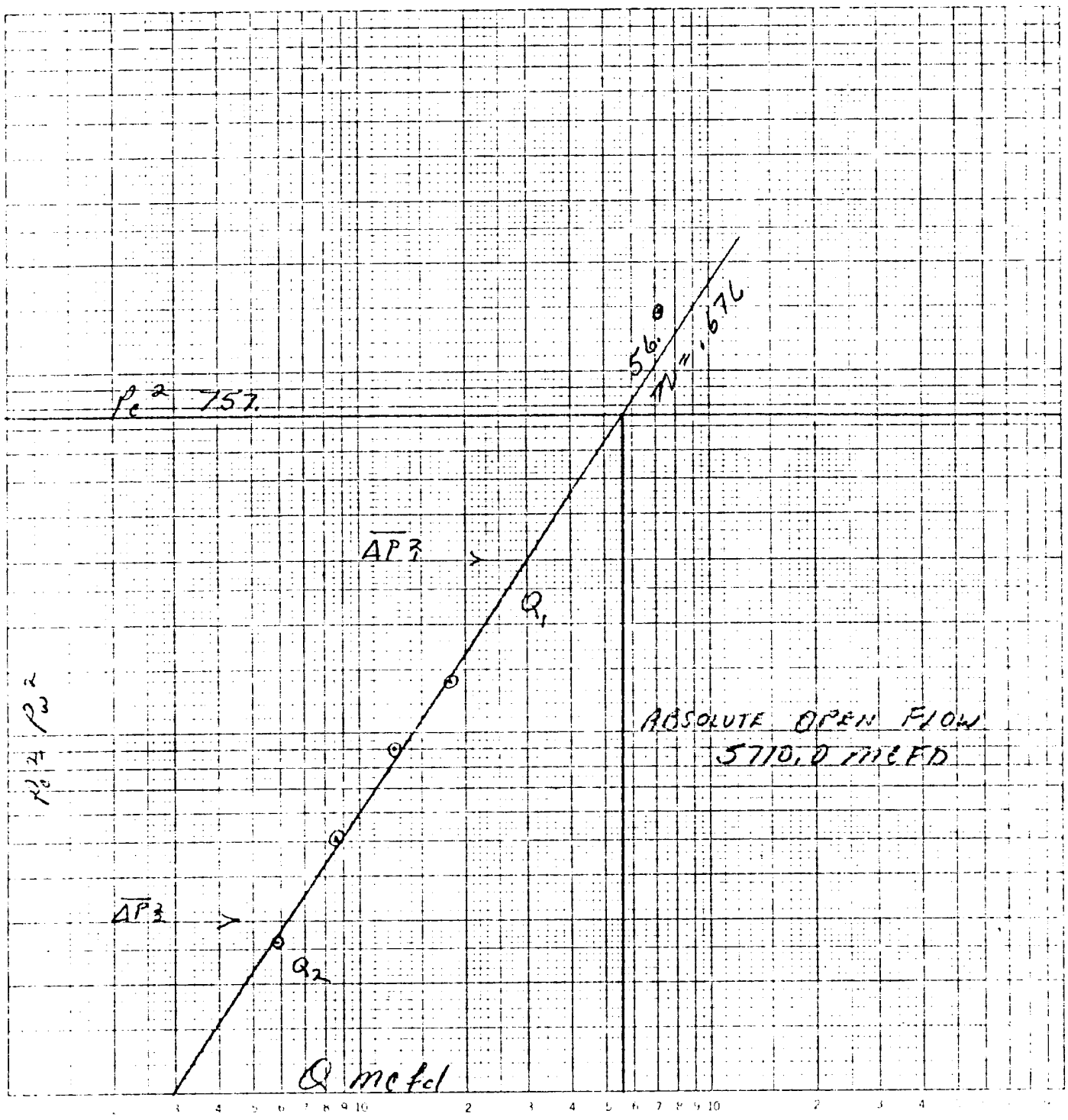
Absolute Open Flow 5710. McfD @ 15.025 | Angle of Slope @ 56.0 | Slope, n 0.676

Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA PRESSURE ELEMENTS

Approved By Commission: | Conducted By: LYON BENNETT | Calculated By: BENNETT-CATHEY | Checked By:

Benedum
Well No 1
Unit C, Sec. 755, R 25E
Union County

11:32 -



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

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

Q_1 3000.0 mcfd

Q_2 652.4 mcfd

$\log Q_1 = 3.477$

$\log Q_2 = 2.801$

$n = .676$

NEW-TEX LAB

PHONE 505/393-3561 • P. O. BOX 1161 • 611 W. SNYDER • HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT:	BENNETT & CATHEY INC.	ANALYSIS NUMBER:	BASIC
P.O./LEASE:	BOX 787	DATE OF RUN:	11 9 92
CITY, STATE:	ARTESIA, NM 88210	DATE SECURED:	11 8 92

SAMPLE IDENT: DEPOT - BENEDICT #1
SAMPLING PRESS: SAMPLING TEMP:

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	7.175	
CARBON DIOXIDE	1.581	
METHANE	80.179	
ETHANE	4.579	1.221
PROPANE	1.706	3.468
ISO-BUTANE	0.303	0.299
NORMAL BUTANE	0.621	0.196
ISO-PENTANE	0.187	0.068
NORMAL PENTANE	0.205	0.074
HEXANES	0.158	0.068
HEPTANES PLUS	0.206	0.098
TOTAL	100.000	1.000

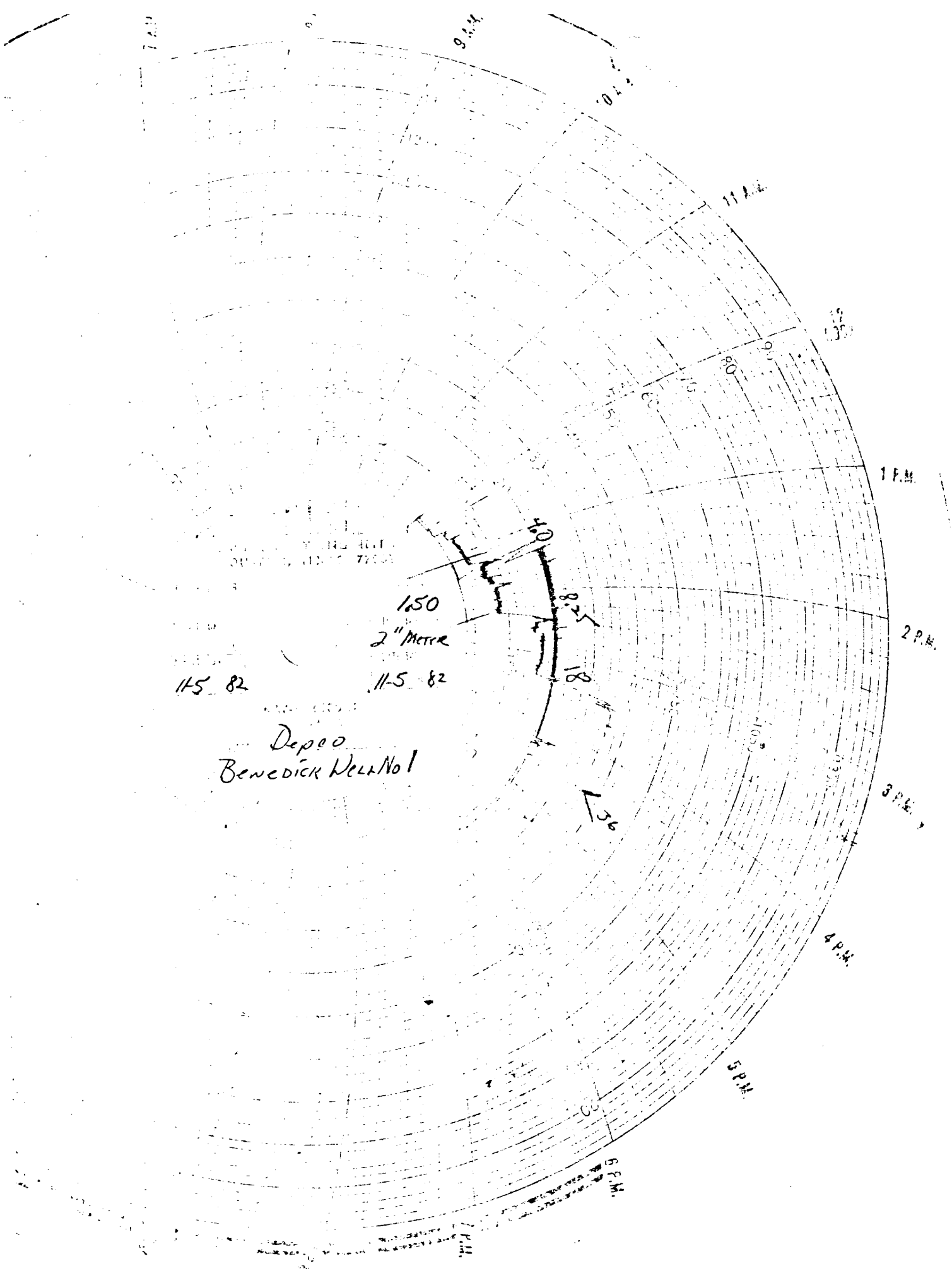
BUTANES GPM:	0.47	ETHANE GPM:	0.29
PENTANES GPM:	0.11	PENTANES PLUS GPM:	0.32

CALCULATED BTU (DRY):	1,161
REAL GRAVITY:	0.67

BTU/CU FT	PRESSURE (PSIA)	NET	DRY
	14.696	1121	1229
	14.652	1098	1204
	14.730	1117	1231
	14.735	1014	1032

ANALYZED BY: [illegible]

APPROVED BY [signature]


11 A.M.
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
150
2" Meter
11-5 82
11-5 82
Depco
Benedick Well No 1

BENNET · CATHEY
(505) 748—3354 / Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY DEPCO, INC. WELL NAME BENEDICT WELL NO. 1
DATE OF TEST 11-5-82 FORMATION PAGE 1 OF 1
COMPANY MAN DANNY HOKETT

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3 #16150N RANGE 2,000 LBS.
CLOCK NUMBER 3443 RANGE 12 HOURS
TIME WELL SHUT IN 1524 HOURS 11-2-82
TIME CLOCK STARTED 1205 HOURS 11-5-82
DEAD WEIGHT ELEMENT ON SURFACE 871 PSIA SHUT IN LBS.
TIME ELEMENT REACHED BOTTOM 1322 HOURS 11-5-82
DEAD WEIGHT ELEMENT ON BOTTOM 871 PSIA SHUT IN LBS.
ELEMENT SET AT 3,820 FEET.
TEMPERATURE 3,820 FT. 100 °F.
871 PSIA DEAD WEIGHT AT THE END OF 69 HOURS 58 MINUTES.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
11-5-82							
START TEST	0	1340		950	13.2		963
	1/4	1355		944	13.2		957
	1/2	1410		939	13.2		952
	3/4	1425		935	13.2		948
END RATE 1	1	1440		933	13.2		946
	1-1/4	1455		927	13.2		940
	1-1/2	1510		921	13.2		934
	1-3/4	1525		918	13.2		931
END RATE 2	2	1540		915	13.2		928
	2-1/4	1555		905	13.2		918
	2-1/2	1610		899	13.2		912
	2-3/4	1625		894	13.2		907
END RATE 3	3	1640		891	13.2		904
	3-1/4	1655		871	13.2		884
	3-1/2	1710		864	13.2		877
	3-3/4	1725		859	13.2		872
END RATE 4	4	1740		856	13.2		869

TEST DEPTH: 5,820

ELEMENT NO.: RPG3 #16150N
RANGE: 2,000 LBS.

CLOCKS: 3443
RANGE: 12 HOURS

OPERATOR: DON BENNETT

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

DEPCO, INC.

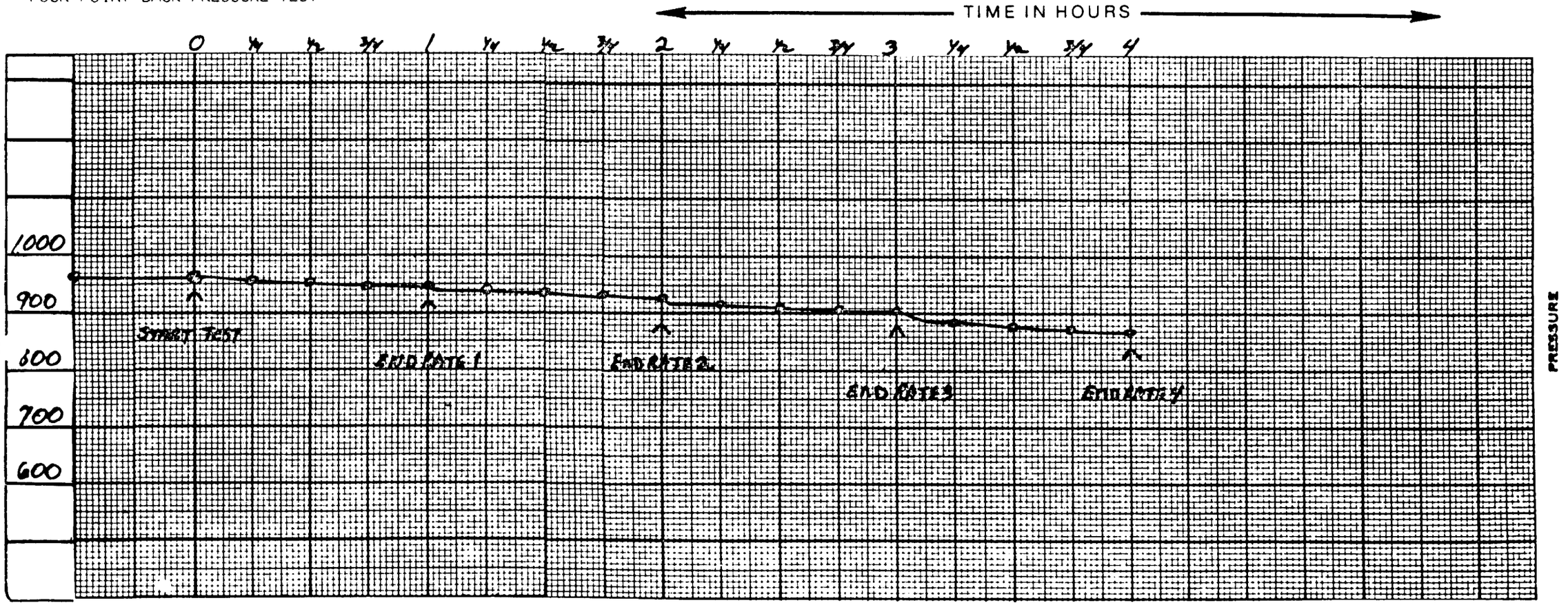
BENEDICT WELL NO. 1

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



BENNET · CATHEY
(505) 748—3354 / Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY DEPCO, INC. WELL NAME BENEDICT WELL NO. 1
DATE OF TEST 11-2-82 - 11-5-82 FORMATION PAGE 1 OF 2
COMPANY MAN DANNY HOKETT

RECEIVED
NOV 22 1982
O. C. D.
ARTESIA, OFFICE

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

ELEMENT NUMBER RPG3 #16150N RANGE 2,000 LBS.
CLOCK NUMBER 27192 RANGE 72 HOURS
TIME WELL SHUT IN 1524 HOURS 11-2-82
TIME CLOCK STARTED 1437 HOURS 11-2-82
DEAD WEIGHT ELEMENT ON SURFACE 652 PSIA SHUT IN LBS.
TIME ELEMENT REACHED BOTTOM
DEAD WEIGHT ELEMENT ON BOTTOM 400 PSIA FLOWING LBS.
ELEMENT SET AT 3,820 FEET.
TEMPERATURE 3,820 FT. 100 °F.
871 PSIA DEAD WEIGHT AT THE END OF 69 HOURS 58 MINUTES.

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psia	PRESSURE AT MID-POINT OF PERFORATIONS psia
11-2-82	0	1524		553	13.2		566
	1/4	1539		739	13.2		752
	1/2	1554		788	13.2		801
	3/4	1609		804	13.2		817
	1	1624		813	13.2		826
	1-1/4	1639		820	13.2		833
	1-1/2	1654		826	13.2		839
	1-3/4	1709		831	13.2		844
	2	1724		835	13.2		848
	2-1/4	1739		838	13.2		851
	2-1/2	1754		842	13.2		855
	2-3/4	1809		846	13.2		859
	3	1824		849	13.2		862
	3-1/4	1839		851	13.2		864
	3-1/2	1854		854	13.2		867
	3-3/4	1909		856	13.2		869
	4	1924		858	13.2		871
	4-1/4	1939		860	13.2		873
	4-1/2	1954		862	13.2		875
	4-3/4	2009		864	13.2		877
	5	2024		866	13.2		879
	5-1/2	2054		868	13.2		881
	6	2124		871	13.2		884
	6-1/2	2154		874	13.2		887
	7	2224		876	13.2		889
	7-1/2	2254		879	13.2		892
	8	2324		881	13.2		894
	8-1/2	2354		883	13.2		896
	9	2424		885	13.2		898
	9-1/2	2454		887	13.2		900
11-3-82	10	0124		888	13.2		901
	11	0224		891	13.2		904
	12	0324		894	13.2		907
	13	0424		897	13.2		910
	14	0524		899	13.2		812
	15	0624		901	13.2		914
	16	0724		903	13.2		916
	18			907	13.2		920

Artesia, New Mexico 88210

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY DEPCO, INC. WELL NAME BENEDICT WELL NO. 1

DATE OF TEST 11-2-82 - 11-5-82 LOCATION PAGE 2 OF 2

CHART READINGS AND CALCULATIONS FOR BUILDUP OR DRAWDOWN TEST

DATE	HOUR	TIME	DEFLECTION in/inches	CALCULATED PRESSURE psig	CORRECTION P ± PC psig	CORRECTED PRESSURE psig	PRESSURE AT MID-POINT OF PERFORATIONS psig
11-3-82	20	1124		910	13.2		923
	22	1324		913	13.2		926
	24	1524		916	13.2		929
	26	1724		918	13.2		931
	28	1924		920	13.2		933
	30	2124		922	13.2		935
11-4-82	35	0224		928	13.2		941
	40	0724		933	13.2		946
	45	1224		937	13.2		950
	50	1724		940	13.2		953
	55	2224		942	13.2		955
11-5-82	60	0324		945	13.2		958
	65	0824		948	13.2		961
	68	1124		949	13.2		962

TEST DEPTH: 3,820

ELEMENT NO.: RPG3 #16150N
RANGE: 2,000 LBS.

CLOCKS: 27192
RANGE: 72 HOURS

OPERATOR: BO FAULKENBERRY

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

DANNY HOKETT

DEPCO, INC.

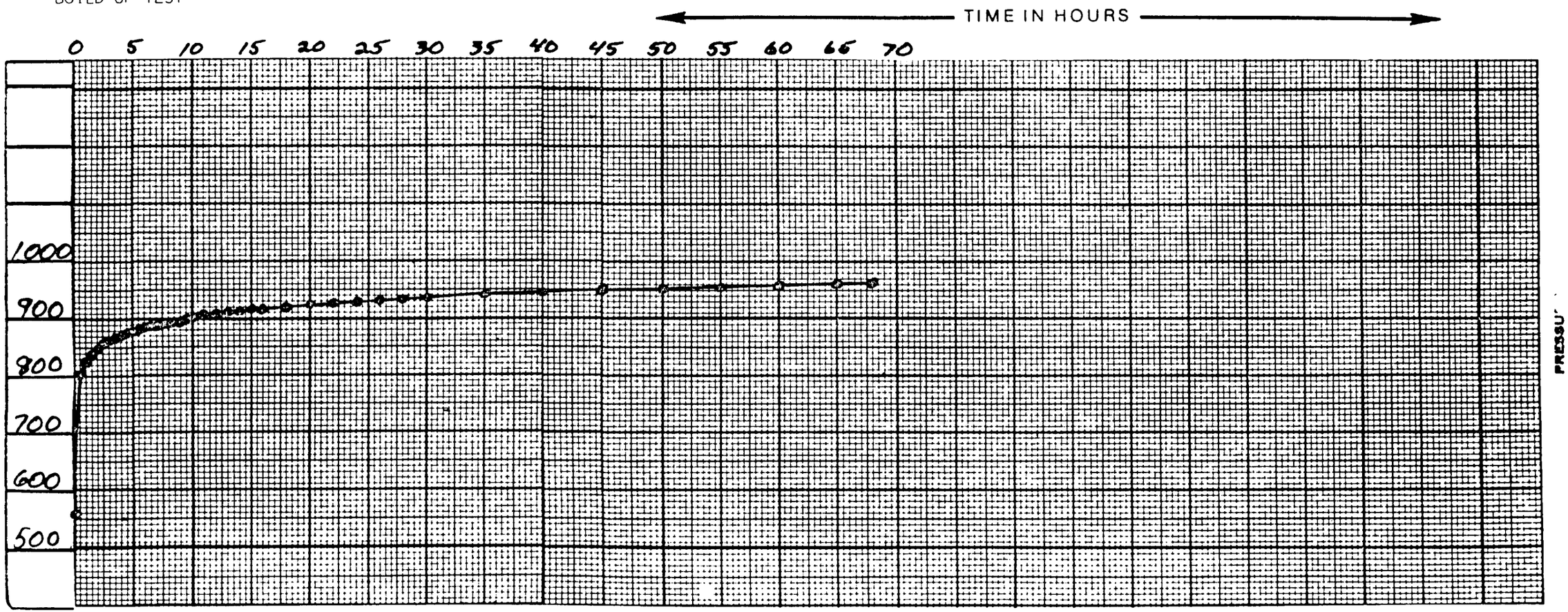
BENEDICT WELL NO. 1

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

Drawn By ' Scale: As Shown

BENNETT-
CATHEY
WELL SERVICES

BUILD UP TEST



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

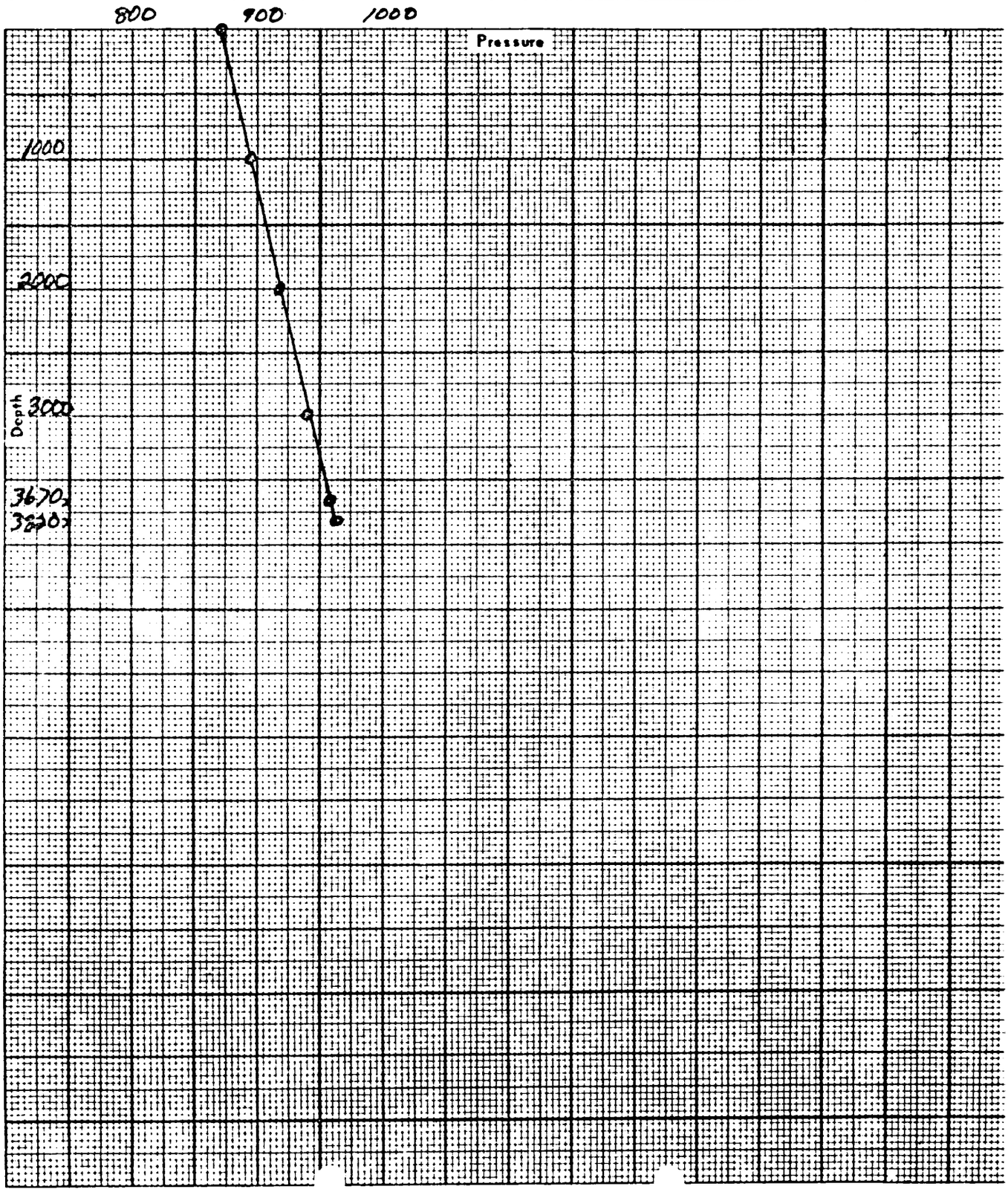
BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR DEPCO, INC.
LEASE BENEDICT
WELL NO. 1
POOL _____ **FORMATION** _____
DATE 11-5-82 **TIME** 1322 HOURS
CO. MAN DANNY HOKETT
STATUS SHUT IN **TEST DEPTH** 3,820
TIME S.I. 1524 HRS **LAST TEST DATE** FIRST TIME
11-2-82 **BHP LAST TEST** _____
TUB. PRES. 871 **BHP CHANGE** _____
CAS. PRES. _____ **FLUID TOP** _____
DATUM PLANE _____ **WATER TOP** _____
DATUM PSIA 963 **RUN BY** BO FAULKENBERRY
TEMP 102 **CLOCK #** 3443
PRESSURE RANGE RPG3 #16150N
ELEMENT NO. 2,000 LBS.

DEPTH	PRESSURE	GRADIENT
0	871	
1,000	895	2.4
2,000	919	2.4
3,000	942	2.3
3,670	959	2.5
3,820	963	2.7

TIME B.H.P. MEASURED: 1322 HRS

LENGTH OF TIME WELL SHUT IN: 69 HRS 58 MIN.



NM OIL CONS. COMMISSION
Drawer DD
Artesia, NM 88210

RECEIVED
NOV 24 1982
C. D.
ARTESIA, OFFICE

c/SF

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND SERIAL NO.: NM-15289

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

DRC

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

NOV 22 1982

OIL & GAS
MINERALS MGMT. SERVICE
ROSWELL, NEW MEXICO

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Benedict Federal Com

9. WELL NO.: 1

2. NAME OF OPERATOR: DEPCO, INC.

3. ADDRESS OF OPERATOR: 800 CENTRAL, ODESSA, TX 79761

10. FIELD AND POOL, OR WILDCAT: Pecos Slopes Abo

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: C-660 FNL & 1980 FWL, Sec. 18, T-5-S, R-25-E
At top prod. interval reported below
At total depth

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 18, 5,25

14. PERMIT NO. | DATE ISSUED

12. COUNTY OR PARISH: Chaves | 13. STATE: New Mexico

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
10-11-82	10-20-82	11-5-82	3914 GR	3914 GR

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
4250'	4190'		→	0-4250	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
3746-3895 21 - .44" holes Abo

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN
DLL & CNL

27. WAS WELL CORED: No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
10 3/4"	40.5#	975'	14 3/4"	765 sx. Circ 75 sx.	None
4 1/2"	10.50 & 11.6#	4249'	7 7/8"	1425 sx. w/DV tool @ 2188' Circ 55 sxs.	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	3670'	

31. PERFORATION RECORD (Interval, size and number)
Perf 1 - .44" hole @ 3746', 48', 3817-21', 3843'-45', 47', 48', 50', 51', 53', 55', 57', 3890'-95'

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
3746'3895'	4250 gal 7 1/2% Abo acid
	112,000 SCF N_2,72,000 gal MM III-30
	52,000# 20/40 sand
	22,000# 10/20 sand

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
10-29-82	Flowing	Shut-in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
11-5-82	4	12-19.5/64"		0	189	0	0

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
933-856#	950 BHP		0	1132	0	0

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
Shut in waiting on P.L. Connection

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
DLL, CNL, Dev. Survey, C-122

ACCEPTED FOR RECORD
(ORIG. SGD.) DAVID R. GLASS
NOV 24 1982
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED R.L. Denney R.L.Denney TITLE Chief Production Clerk DATE 11-18-82

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
MEASURED FROM KB		
San Andres	637'	
P-1	874'	
Glorieta	1511'	
Yeso	1622'	
Tubb	3090'	
Abo	3656'	
TD	4250'	

U.S. GOVERNMENT PRINTING OFFICE : 0-43—16—83828-1