

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

c/sf
F. 1e
Form C-122
Revised 9-1-65

OCT 14 1982

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 9-14-82		O.C.D.	
Company Amoco Production Co.				Connection Conoco		ARTESIA, OFFICE	
Pool UND Shugart Penn <i>atoka</i>				Formation Penn <i>atoka</i>		Unit Greenwood Pregrayburg <i>unit</i>	
Completion Date 11-2-80		Total Depth 11876.		Plug Back TD 11415.		Elevation 3653.	
Farm or Lease Name Federal D Com							
Csg. Size 5.500	Wt. 15.5	d 4.950	Set At 11875	Perforations: From 10090 To 11111		Well No. 1	
Tbg. Size 2.375	Wt. 4.7	d 2.041	Set At 11111.	Perforations: From 0 To 0.		Unit Sec. Twp. Rge. C 26-18 31	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10980		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 167 @ 11111.		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 13.2	
State New Mexico							
L 11111.	H 11111.	G _g 0.694	% CO ₂ 0.35	% N ₂ 2.55	% H ₂ S 0.	Prover 0.	Meter Run 4.0
						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	Press. p.s.i.g.	
SI										
1.	4.03 x 2.000			335.	2.0	100.	1358.	60.		
2.	4.03 x 2.000			360.	14.0	89.	1205.	60.	0.	0.
3.	4.03 x 2.000			378.	25.0	84.	915.	60.	0.	0.
4.	4.03 x 2.000			384.	33.0	82.	807.	60.	0.	0.
5.							652.	60.	0.	0.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	19.81	26.39	348.2	0.9636	1.2006	1.0302	623.
2	19.81	72.28	373.2	0.9732	1.2006	1.0348	1732.
3	19.81	98.89	391.2	0.9777	1.2006	1.0374	2386.
4	19.81	114.49	397.2	0.9795	1.2006	1.0383	2770.
5							

NO.	R _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	0.52	560.	1.47	0.942	A.P.I. Gravity of Liquid Hydrocarbons	0.
2.	0.56	549.	1.44	0.934	Specific Gravity Separator Gas	0.694
3.	0.59	544.	1.43	0.929	Specific Gravity Flowing Fluid	X X X X X X X X
4.	0.60	542.	1.43	0.928	Critical Pressure	665. P.S.I.A.
5.					Critical Temperature	380. R

P _c 1371.2 P _c ² 1880.				
NO	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	1484.	1222.	1493.	387.
2	862.	977.	955.	925.
3	673.	925.	856.	1024.
4	442.	836.	699.	1181.
5				

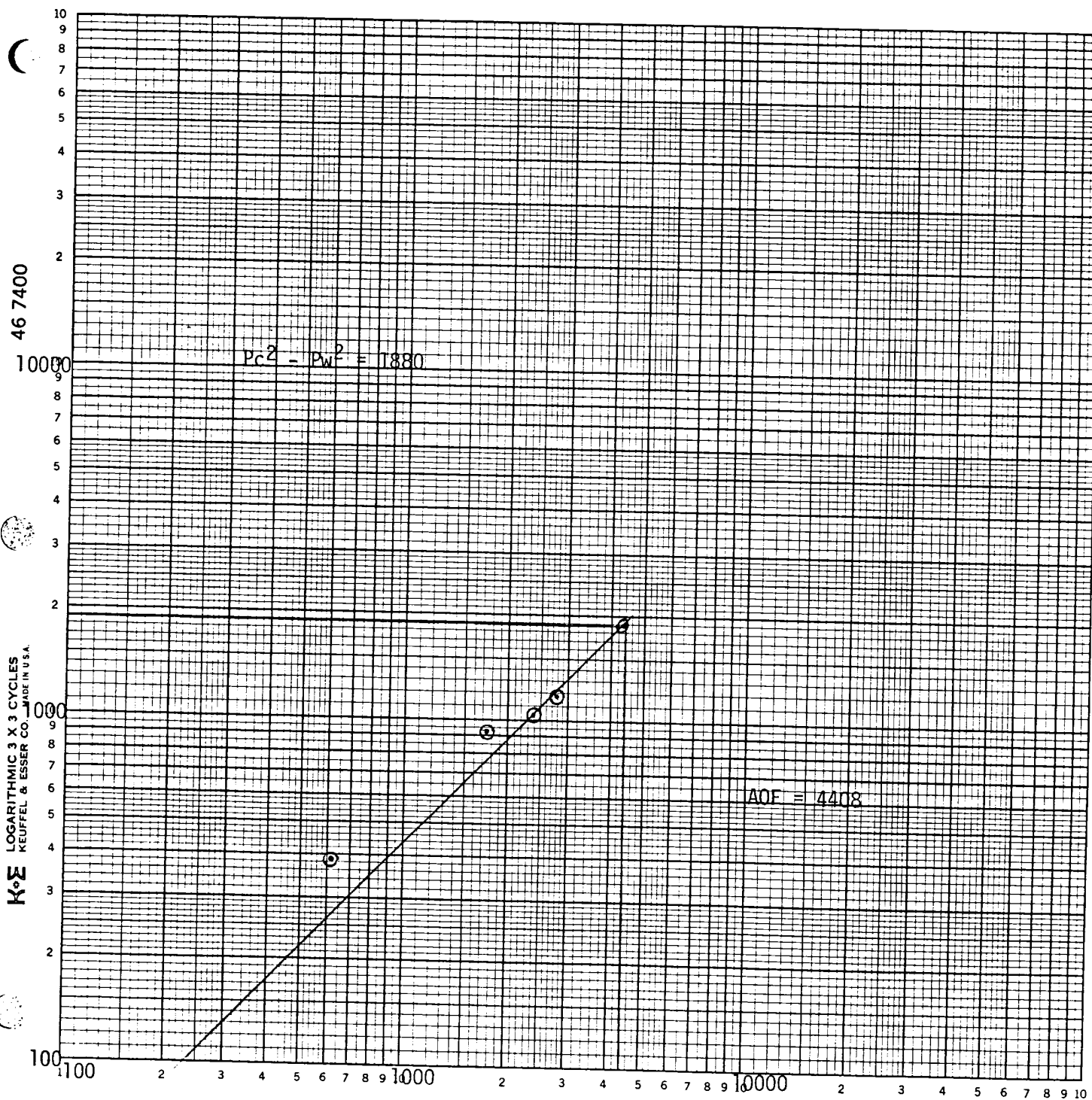
(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.5914$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5914$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4408.$

Absolute Open Flow	4408.	Mcf/d @ 15.025	Angle of Slope °	45.0	Slope, n	1.000
Remarks:						

Approved By Commission:	Conducted By: John West	Calculated By: Barbara Wagner	Checked By: Steven Lesikar
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GREENWOOD PREGRAYBURG FEDERAL D COM #1



Q = MCF

SUGGESTED FIELD DATA SHEET (Not Required To File)

Type Test ☒ INITIAL ☐ ANNUAL ☐ SPECIAL	Test Date 9-14-82	Lease No. or Serial No.
Company Amaco Production Co.	Connection CONOCO	Allottee
Field Reservoir	Location	Unit
Completion Date	Total Depth 11876'	Plug Back TD
Elevation 3653.4' GL	Form or Lease Name Greenwood Prod. Rayburg Unit	Well No. 1
Cog. Size 5 1/2"	Wt. 17#-20#	Set At 4.892
Perforation: From 11512'-514'	To 11574'-584'	11623'-636'
Ybg. Size 2 3/8"	Wt. 4.7#	Set At 1.995
Perforation: From OPEN ENDED	To	
Type Completion (Description) SINGLE	Procter Set At	County or Parish EDDY
Producing Time Tbg.	Reservoir Temp. F 60°	Mean Annual Temp. F 60°
Bar. Press. - P _g 13.2	Store	N.M.

DATE		ELAR TIME		Wellhead Working Pressure		METER OR PROVER				REMARKS	
Time of Reading	Min.	Tbg. Psig.	Cog. Psig.	Temp. F	Pressure Psig.	Diff.	Temp. F	Orifice		(Include Liquid Production data) Type-A.P.I. Gravity-Amount	
11:40		1358#								SHUT-IN PRESSURE	
11:45		1358#								START - TEST	
RATES ARE FIELD CALCULATED											
12:00	.15	1240#	PKR	60°	335#	4"	104°	2.00"	RATE I	CHOKE 1 1/4"	
12:15	.30	1251#	PKR	60°	335#	3"	100°	2.00"			
12:30	.45	1218#	PKR	60°	335#	2"	100°	2.00"			
12:45	1.00	1205#	PKR	60°	335#	2"	100°	2.00"	END RATE	404 mcf/d	
1:00	1.15	1001#	PKR	60°	348#	11"	98°	2.00"	RATE II	CHOKE 1 5/8"	
1:15	1.30	934#	PKR	60°	348#	16"	94°	2.00"			
1:30	1.45	915#	PKR	60°	348#	14"	93°	2.00"			
1:45	2.00	915#	PKR	60°	360#	14"	89°	2.00"	END RATE	1673 mcf/d	
2:00	2.15	850#	PKR	60°	372#	28"	87°	2.00"	RATE III	CHOKE 1 7/8"	
2:15	2.30	835#	PKR	60°	372#	26"	84°	2.00"			
2:30	2.45	815#	PKR	60°	378#	26"	84°	2.00"			
2:45	3.00	807#	PKR	60°	378#	25"	84°	2.00"	END RATE	2300 mcf/d	
3:00	3.15	750#	PKR	60°	384#	34"	83°	2.00"	RATE IV	CHOKE 2 1/4"	
3:15	3.30	685#	PKR	60°	384#	37"	82°	2.00"			
3:30	3.45	665#	PKR	60°	384#	33"	82°	2.00"			
3:45	4.00	652#	PKR	60°	384#	33"	82°	2.00"	END RATE	2668 mcf/d	
WELL MADE 19.25 bbls of oil											
GRAVITY OF FLUID											
46. @ 78											

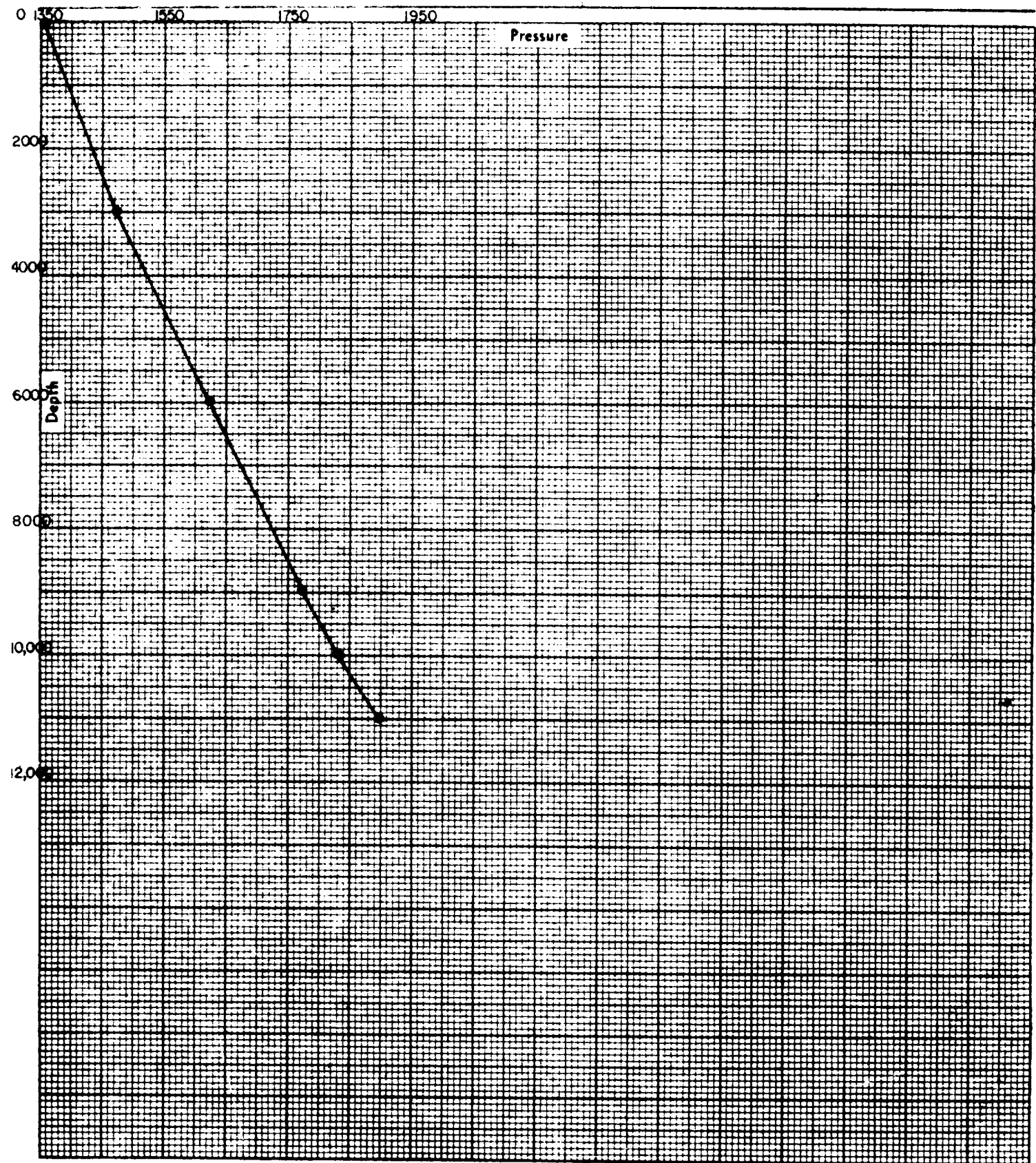
JOHN W. WEST ENGINEERING COMPANY
412 NORTH DAL PASO, HOBBS, NEW MEXICO

TELEPHONES 393-3942
393-3117

BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR AMOCO PRODUCTION COMPANY
LEASE Greenwood Pregrayburg Unit Fed. "D" Com
WELL NO. 1
FIELD
DATE 9-14-82 TIME 11:30 A.M.
STATUS Shut-In TEST DEPTH 11,000'
TIME S.I. LAST TEST DATE
CAS PRES BHP LAST TEST
TUB PRES 1358 BHP CHANGE
ELEV FLUID TOP
DATUM WATER TOP
TEMP RUN BY J.W.
CLOCK NO B-13032 GAUGE NO. 19389
ELEMENT NO 34911 (0-6000 psi)

DEPTH	PRESSURE	GRADIENT
000	1358	
3000	1473	.038
6000	1623	.050
9000	1771	.049
10000	1831	.060
11000	1898	.067



TEST DATE: SEPTEMBER 14, 1982
TEST DEPTH: 11,000 FEET

ELEMENT NO: 34911
RANGE: 0-6000 PSI
CLOCK NO: B-13032
RANGE: 0-12 Hour

TEST CONDUCTED BY:
JOHN WEST ENGINEERING COMPANY

DATE
9-14-82

TIME
11:40 A.M.
11:45 A.M.
12:00 Noon
12:15 P.M.
12:30 P.M.
12:45 P.M.

CUM HRS./MIN.

00 Hrs. 00 Min.
00 15
00 30
00 45
01 00

1:00 P.M.
1:15 P.M.
1:30 P.M.
1:45 P.M.

01 15
01 30
01 45
02 00

2:00 P.M.
2:15 P.M.
2:30 P.M.
2:45 P.M.

02 15
02 30
02 45
03 00

3:00 P.M.
3:15 P.M.
3:30 P.M.
3:45 P.M.

03 15
03 30
03 45
04 00

PSIG @ 11,000 FEET

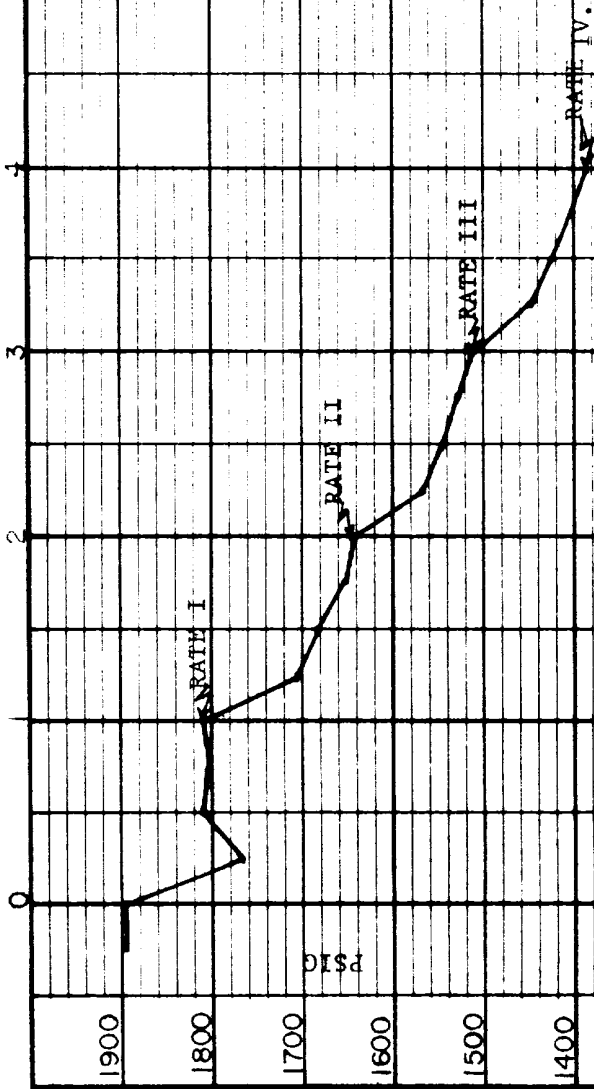
1898 Gauge reached bottom
1898 Begin 4-Point
1768 10/64 Choke
1807
1801
1813 End Rate I

1702 15/64 Choke
1681
1657
1642 End Rate II

1566 18/64 Choke
1545
1530
1509 End Rate III

1449 21/64 Choke
1422
1400
1383 End Rate IV

TIME IN HOURS



AMOCO PRODUCTION COMPANY

GREENWOOD PREGREYBURG UNIT FED. "D" COM NO. 1

4-POINT BACK PRESSURE TEST.

JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 9-15-82 Drawn by: bsm Scale: as shown

**NEW-TEX
LAB**

PHONE 505/393-3561

P. O. BOX 1161

611 W. SNYDER

HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT: JOHN WEST ENGINEERING
ADDRESS: 412 N DAL PASO ST
CITY, STATE: HOBBS NM 88240

ANALYSIS NUMBER: 8294
DATE OF RUN: 09/15/82
DATE SECURED: 09/14/82

SAMPLE IDENT: AMOCO PRODUCTION COMPANY - GREENWOOD PREGRAY BURG
UNIT "D" WELL #1
SAMPLING PRESS: SAMPLING TEMP:

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	2.546	
CARBON DIOXIDE	0.350	
METHANE	79.892	
ETHANE	10.964	2.924
PROPANE	4.359	1.197
ISO-BUTANE	0.504	0.164
NORMAL BUTANE	0.921	0.290
ISO-PENTANE	0.163	0.060
NORMAL PENTANE	0.146	0.053
HEXANES	0.066	0.027
HEPTANES PLUS	0.089	0.041
TOTAL	100.000	4.756

PROPANE GPM: 1.20 BUTANES GPM: 0.45
ETHANE GPM: 2.92 PENTANES PLUS GPM: 0.18

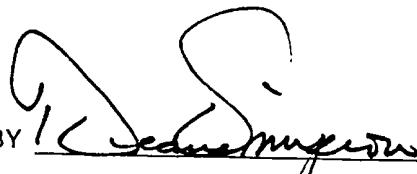
SPECIFIC GRAV (CALC): 0.6938
MOLE WEIGHT: 20.10

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
14.696	1157		1178
14.650	1153		1174
14.730	1160		1180
14.735	1160		1181

ANALYZED BY:

R H HAMILTON

APPROVED BY



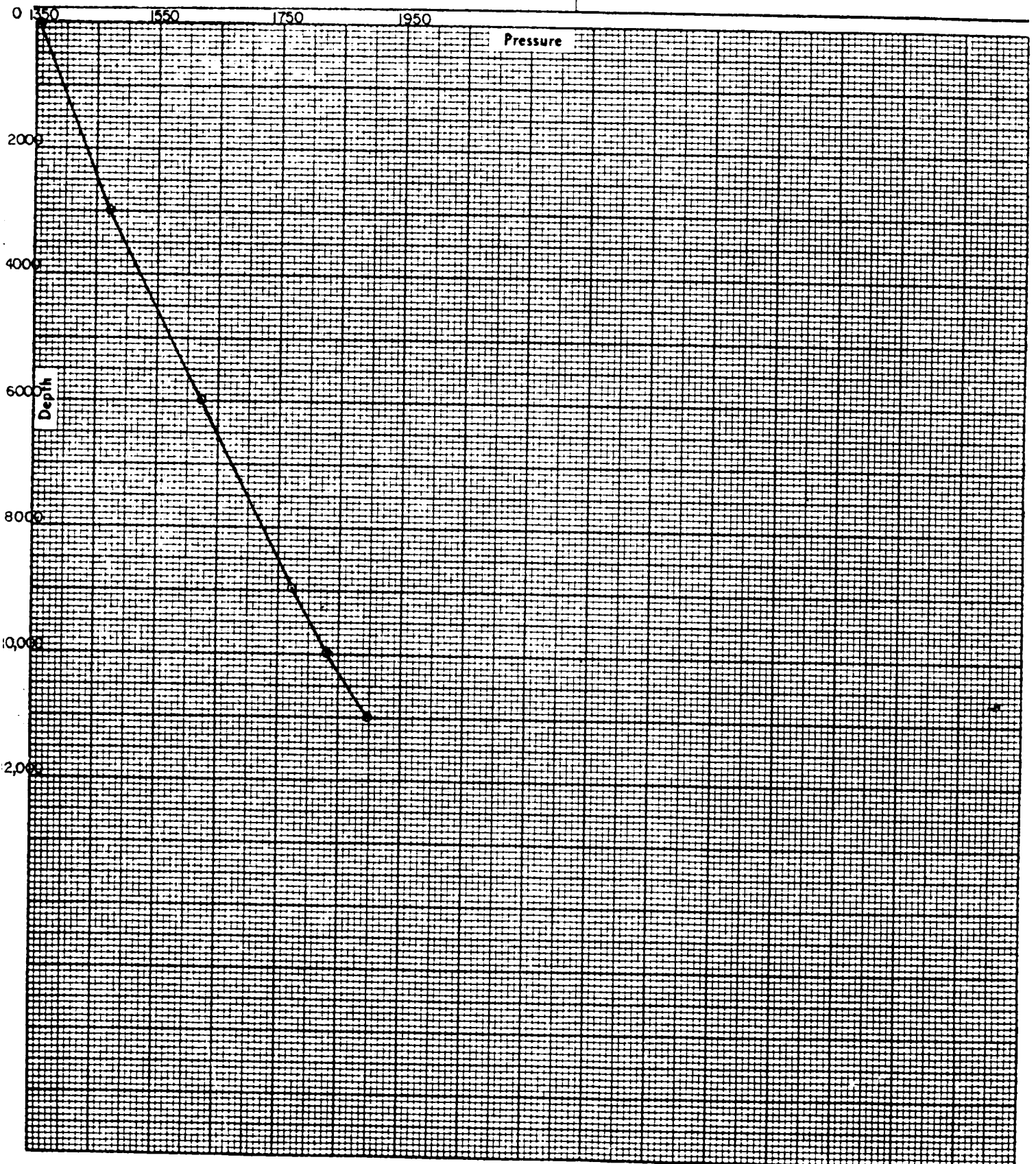
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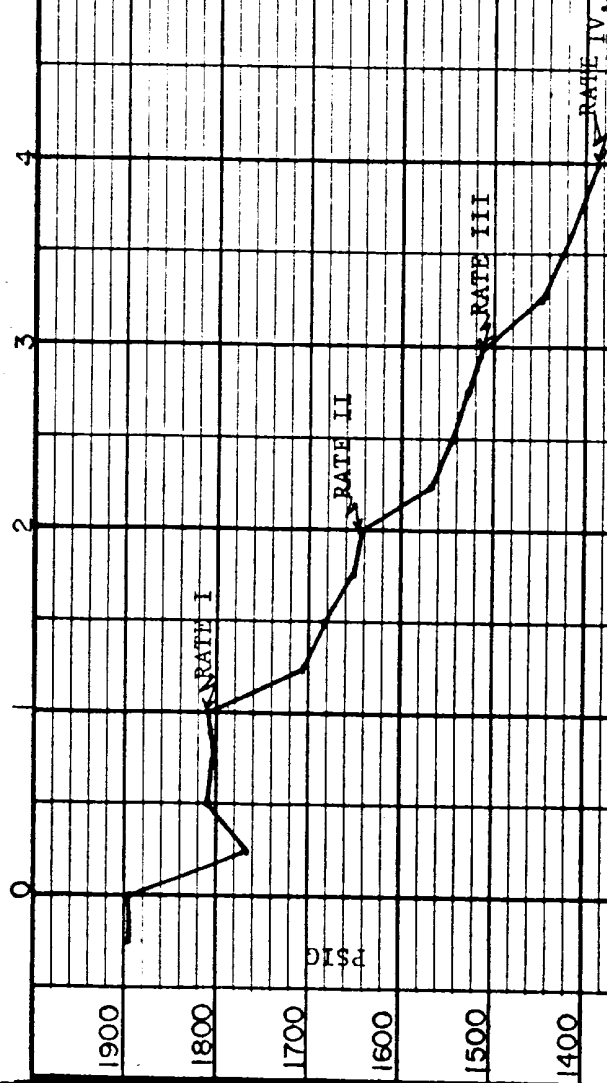
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1449 21/64 Choke
1422
1400
1383 End Rate IV

TIME IN HOURS



AMOCO PRODUCTION COMPANY

GREENWOOD PREGRAYBURG UNIT FED. "D" COM NO. 1

4-POINT BACK PRESSURE TEST.

JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 9-15-82 Drawn by: bsm Scale: as shown