



COLEMAN PETROLEUM ENGINEERING

PHONE 393-3813

3713 W. MARLAND ST.

P. O. BOX 1829

Mobil Oil Corporation
P. O. Box 633
Midland, Texas 79701

RE: Blinebry Gas
E.O. Carson, No. 14
4-Point Back Pressure
test, Gas Sample and
Analysis test

Gentlemen:

In compliance with your instructions, a 4-Point Back Pressure Test was conducted, and the absolute open flow potential was calculated to be 1426 MCF/D. The average gas production was recorded as 471.5 MCF/D, with 41.64 BO/D, and a resulting GOR of 11323 CF Gas/D.

The average gas production for the 24.0 hour production test was recorded as 625.4 MCF/D, with 12.18 BO/D, and a resulting GOR of 51347 CF Gas/D.

The sample taken during test yielded component percentages as follows:

CARBON DIOXIDE	Trace
NITROGEN	2.24
OXYGEN	0.00
HYDROGEN SULFIDE	0.00
METHANE	84.61
ETHANE	7.84
PROPANE	3.52
ISO-BUTANE	0.36
NORMAL BUTANE	0.86
ISO-PENTANE	0.21
NORMAL PENTANE	0.20
HEXANES plus	0.07
HEPTANES	0.09

TOTAL 100.00

CALCULATED Sp. G	0.6649
CALCULATED BTU Sat dry	1117
CALCULATED BTU Sat wet	1127

Enclosures

Very Truly Yours

COLEMAN PETROLEUM ENG.CO.

Joe A. Coleman



UNITED CHEMICAL CORPORATION

OF NEW MEXICO

P. O. BOX 1499

PHONE 393-7751

HOBBS, NEW MEXICO 88240

No. 2375

Run No.

Date of Run 1-4-73

Date Secured 1-4-73

CERTIFICATE OF ANALYSIS

A Sample of E. O. Carson #14 - Mobil Oil Corporation
Secured from Coleman Engineering
At Hobbs, N. M. Secured by _____ Date _____
Time _____
Sampling conditions _____ Press _____
Temp. _____
Blinebry Gas

FRACTIONAL ANALYSIS

Percentage Composition

MOL % LIQ. % G.P.M.

Carbon Dioxide	Trace	
Air		
Nitrogen	2.24	
Oxygen		
Hydrogen sulfide		
Hydrogen		
Methane	84.61	
Ethane	7.84	
Propane	3.52	.968
Butanes		
Iso-Butane	.36	.118
N-Butane	.86	.271
Pentanes		
Iso-Pentane	.21	.077
N-Pentane	.20	.072
Hexanes	.07	.029
Heptanes	.09	.038
TOTAL	100.00	1.573

Calc. Sp. Gr. 0.6649

Calc. A.P.I. _____

Calc. Vapor Press. _____ PSI

Sp. Gr. _____

Mol. Wt. _____

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M. .968

Butanes Calc. G.P.M. .389

Pentanes Plus. G.P.M. .216

Ethane Calc. G.P.M. _____

RVP Gasoline G.P.M. _____

B.T.U./Cu. Ft. @ 14.696 P.S.I.A.

Dry Basis

1147

Wet Basis

1127

Sulfur Analysis by Titration

Gr./100 Cu. Ft.

Hydrogen Sulfide

Mercaptans

Sulfides

Residual Sulfur

Total Sulfur

Run by Deane Simpson Checked by _____ Approved by _____

Additional Data and Remarks

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 1-2-73			
Company Mobil Oil Corporation				Connection Northern Natural Gas Co.				
Pool Blinebry				Formation Blinebry Gas				Unit -
Completion Date 12-22-72		Total Depth 8220'		Plug Back TD 5910'		Elevation 3463' GL		Farm or Lease Name E.O. Carson
Csg. Size 5 1/2"	Wt. 17.0	d 4.892	Set At 8220'	Perforations: From 5738' To 5878'			Well No. 14	
Tbg. Size 2"	Wt. 4.7	d 1.995	Set At 5698'	Perforations: From Open To Ended			Unit Sec. Twp. Rge. C 33 21s 37e	
Type Well - Single - Bradenhead - G.G. or G.Q. Multiple Single				Packer Set At 5697'		County Lea		
Producing Thru Tubing		Reservoir Temp. °F 98.0 @ 5808'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico
L 5808'	H -	Gg 0.665	% CO ₂ Trace	% N ₂ 2.24	% H ₂ S 0.00	Prover	Meter Run X	Taps F

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.		Temp. °F
SI	4		1.250				1507		PACKER		72.0 Hrs
1.	4 1 1/4		1.250	186	30	34	915	46	-	-	2.0
2.	4 1 1/2		1.250	186	17	30	1021	47	-	-	1.0
3.	4 1 3/4		1.250	186	8	28	1101	48	-	-	1.0
4.	4 2		1.250	186	2	24	1285	46	-	-	1.0
5.											

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	7.469	77.30	199.2	1.026	1.226	1.023	743.0
2	7.469	58.23	199.2	1.030	1.226	1.024	562.4
3	7.469	39.91	199.2	1.032	1.226	1.024	386.2
4	7.469	19.96	199.2	1.037	1.226	1.025	194.3
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
					11323	
1.	0.30	494	1.34	0.955	A.P.I. Gravity of Liquid Hydrocarbons 44.5	Deg.
2.	0.30	490	1.33	0.954	Specific Gravity Separator Gas 0.665	XXXXXXX
3.	0.30	488	1.32	0.953	Specific Gravity Flowing Fluid XXXXX	
4.	0.30	484	1.31	0.952	Critical Pressure 665 P.S.I.A.	- P.S.I.A.
5.					Critical Temperature 369 R	- R

P_c 1841.2 P_c² 3390.0

NO.	P _r ²	P _w *	P _w ²	P _c ² - P _w ²
1	-	1286.2	1654.3	1735.7
2	-	1443.2	2082.8	1307.2
3	-	1581.2	2500.2	889.4
4	-	1716.2	2945.3	444.7
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.953$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.919$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1426$

Absolute Open Flow	1426	Mcf/d @ 15.025	Angle of Slope @ 45° 45'	Slope, n 0.974
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Remarks: * BHP @ (-2345') 5808' used for pressure calculations

Approved By Commission	Conducted By:	Calculated By:	Checked By:
	COLEMAN PET.ENG.CO.	JOE A. COLEMAN	JOE A. COLEMAN

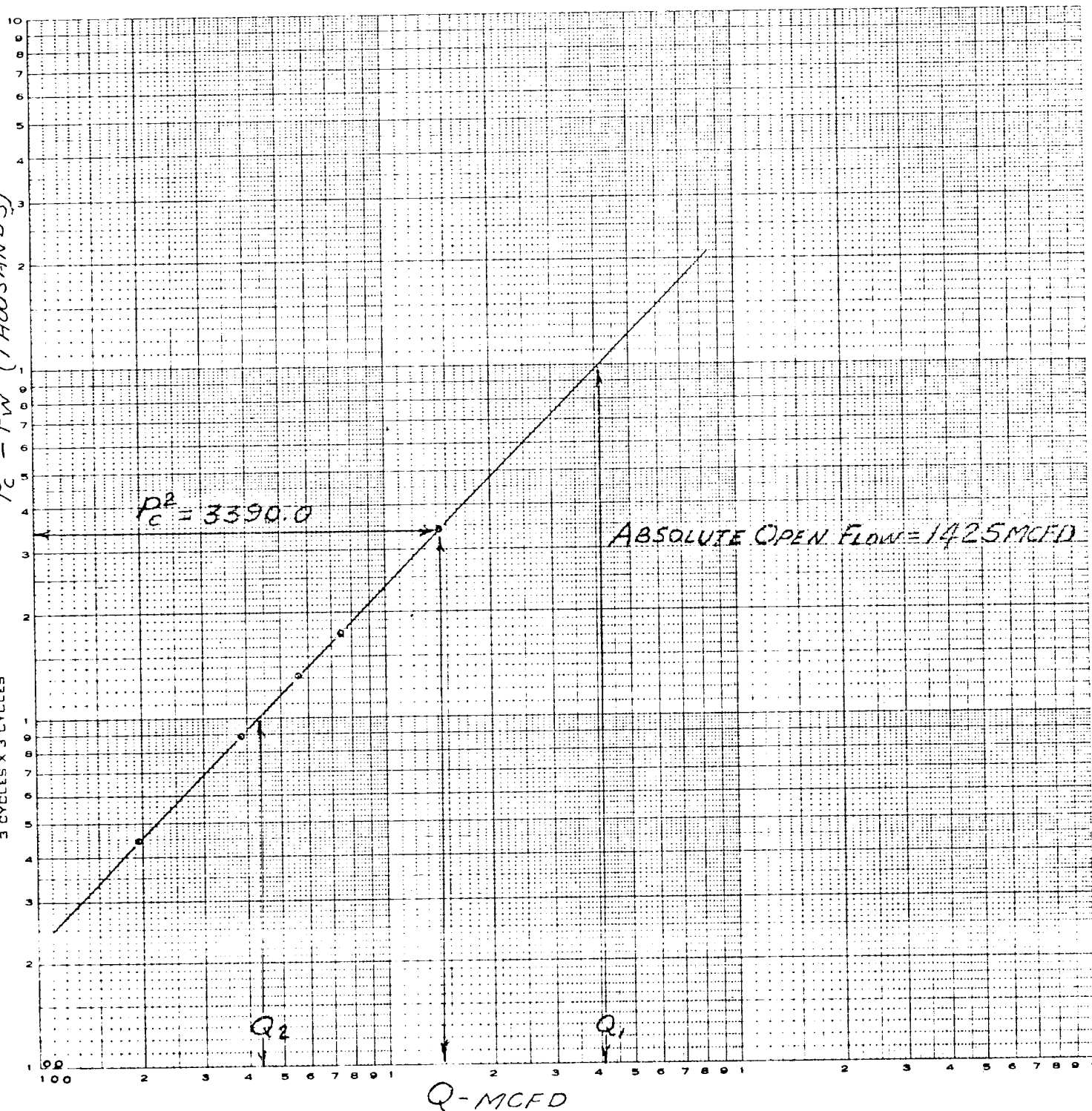
COMPANY MOBILE OIL CORPORATION
 WELL E. O. CANTON, NO. 14
 LOCATION UNIT C, Sec. 33 21 s 37 e
 COUNTY Lea New Mexico
 DATE January 2, 1973

EUGENE DIETZGEN CO.

NO. 340R-L33 DIETZGEN GRAPH PAPER

LOGARITHMIC
3 CYCLES X 3 CYCLES

$P_c^2 - P_w^2$ (THOUSANDS)



$$Q_1 = 4100 \text{ MCFD}; \log Q_1 = 3.61278$$

$$Q_2 = 435 \text{ MCFD}; \log Q_2 = 2.63849$$

$$n = 0.97429 = 0.974$$



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P. O. BOX 1829

HOBES, NEW MEXICO 88240

BOTTOM HOLE PRESSURE RECORD

OPERATOR Mobil Oil Corporation

FIELD Blinebry FORMATION Blinebry Gas

LEASE E. O. Carson WELL No. 14

COUNTY Lea STATE New Mexico

DATE 1-2-73 TIME 10:00 Am

Status Shut In Test depth 5808'

Time S. 1.72.0 Hrs Last test date Initial

Tub Pres. 1507 DWT BHP last test -

Cas. Pres. PKR BHP change -

Elev. 3463' GL Fluid top NONE

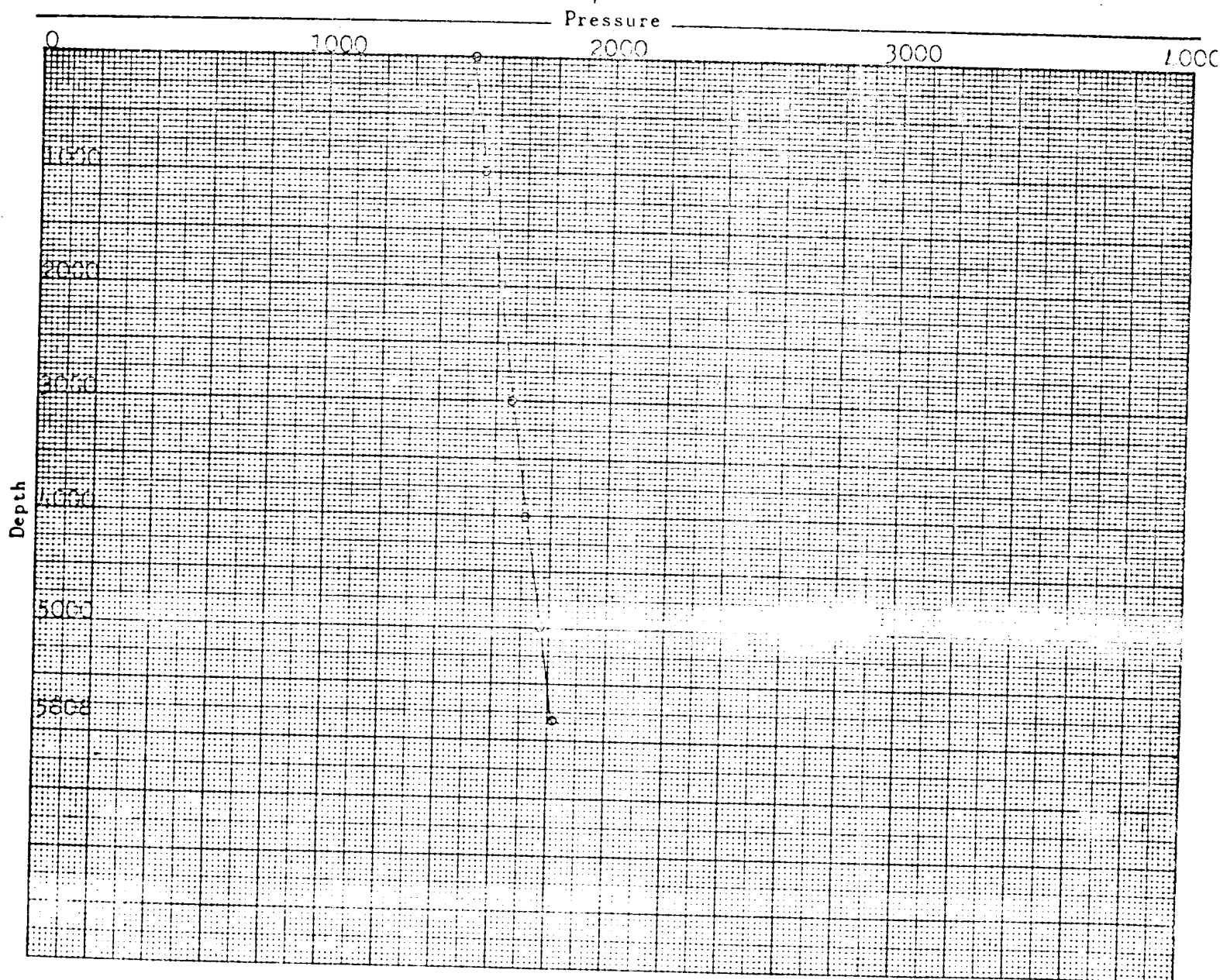
Datum (-2345') ** Water top NONE

Temp. @ 98°F Run by Weaver

Cal. No. A2410N Chart No. 1

Depth	Pressure	Gradient
0	1507	-
1000	1559	.052
2000	1612	.053
3000	1667	.055
4000	1724	.057
5000	1781	.057
5808 (-2345)	1828**	.058

** Mid point of casing perforations





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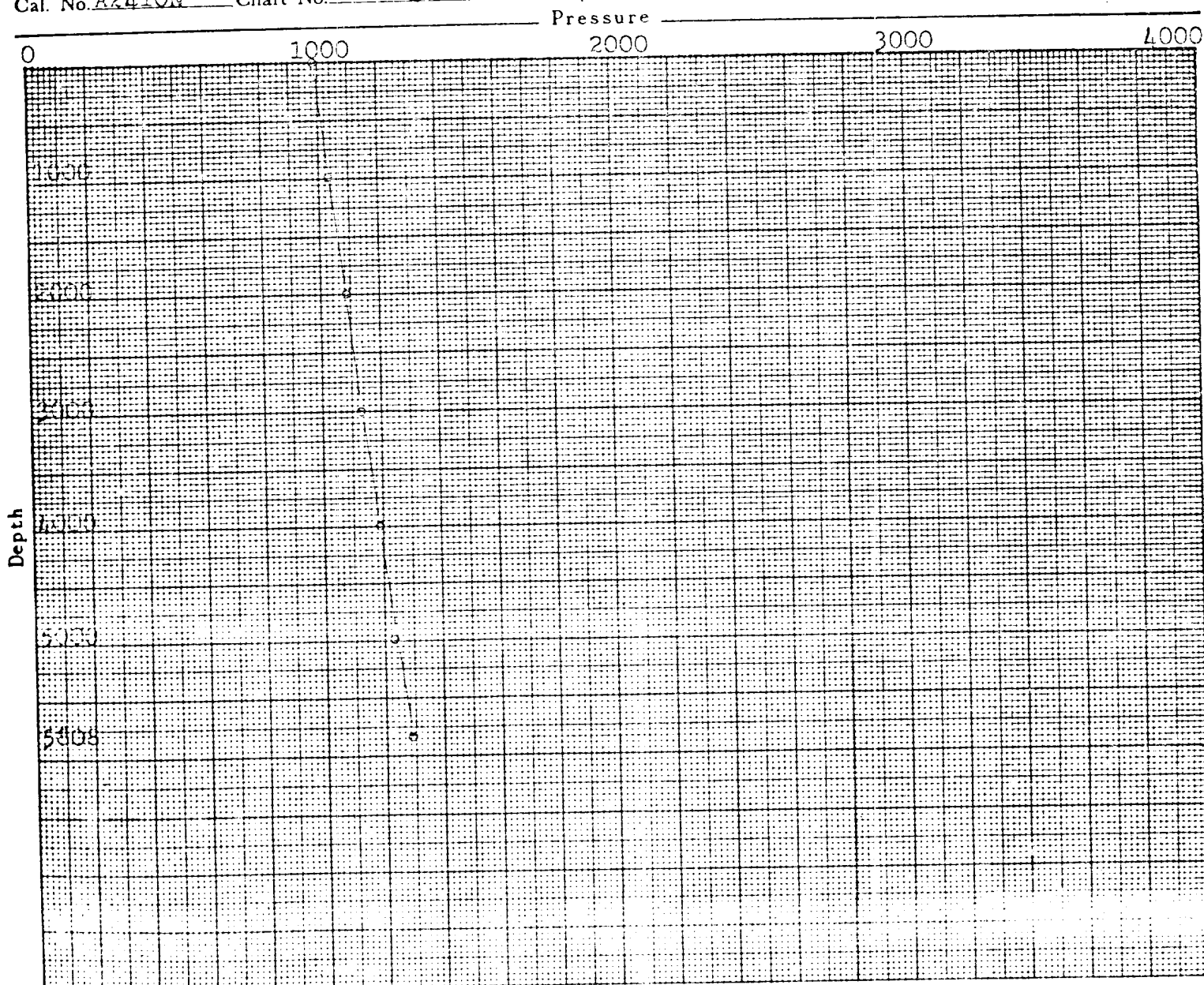
HOBBS, NEW MEXICO 88240

BOTTOM HOLE PRESSURE RECORD

OPERATOR Mobil Oil Corporation
FIELD Blinebry FORMATION Blinebry Gas
LEASE E.O. Carson WELL No. 14
COUNTY Lea STATE New Mexico
DATE 1-2-73 TIME 7:00 Pm
Status Flowing On Test depth 5808'
~~Flowing On~~ 14/64" ch Last test date -
Tub Pres. 990 BHP last test -
Cas. Pres. PKR BHP change -
Elev. 3463' GL Fluid top NONE
Datum (-2345') ** Water top NONE
Temp. @ 98°F Run by Weaver
Cal. No. A2410N Chart No. 2

Depth	Pressure	Gradient
0	990	-
1000	1043	.053
2000	1092	.049
3000	1145	.053
4000	1194	.049
5000	1248	.054
5808 (-2345)	1292**	.054

** Mid point of casing perforations





COLEMAN PETROLEUM ENGINEERING COMPANY

PHONE EXPRESS 3-3013

511 GRIMES

P. O. BOX 1820

HOBBS, NEW MEXICO

MOBIL OIL CORPORATION

WELL: E. O. CARSON, NO. 14

FIELD: BLINEBRY GAS

CHRONOLOGICAL PRESSURE & PRODUCTION DATA

DATE	STATUS OF WELL	TIME	ELAPSED TIME		PRODUCTION			SURFACE PRESSURE		BHP @ (-2345') 5808' PSI
			HRS	MIN	MCF Gas/D	BBLS Oil/D	GOR	TEG	CSG	
1973	Well shut in 72.0 hours.							(recorder)		
1-2	Ran static gradient & on bottom W/ bomb	11:00 Am	-	-	-	-	-	1507	PKR	1828
	Opened well on 14/64" ch									
	Started 1st rate	1:00 Pm	2	00				1507	-	1828
	Shut in choke to 12/64"									
	Started 2nd rate	3:00 Pm	2	00	743.0	67.44	11017	915	-	1273
	Shut in choke to 11/64"									
	Started 3rd rate	4:00 Pm	1	00	562.4	63.36	8876	1021	-	1430
	Shut in choke to 8/64"									
	Started 4th rate	5:00 Pm	1	00	386.2	35.76	10800	1101	-	1568
	Finished 4th rate	6:00 Pm	1	00	194.3	0.00	-	1285	-	1703
	Pulled bomb, changed charts, opened to 14/64" choke, ran bomb back in well & on bottom W/Bomb & Started production test	7:00 Pm	0	00	-	-	-	990	B	1292
	Flowing	8:00	1	00	-	-	-	900	-	1167
	"	9:00	2	00	-	-	-	875	-	1191
	"	10:00	3	00	-	-	-	875	-	1201
	"	11:00	4	00	-	-	-	875	-	1210
	"	12:00 Mn	5	00	-	-	-	880	-	1223
	"	1:00 Am	6	00	-	-	-	900	-	1239
	"	2:00	7	00	-	-	-	895	-	1232
	"	3:00	8	00	-	-	-	900	-	1235
	"	4:00	9	00	-	-	-	900	-	1246
	"	5:00	10	00	-	-	-	905	-	1247
	"	6:00	11	00	-	-	-	905	-	1247
	"	7:00	12	00	-	-	-	905	-	1253
	"	8:00	13	00	-	-	-	905	-	1244
	"	9:00	14	00	-	-	-	910	-	1254
	"	10:00	15	00	-	-	-	925	-	1270
	"	11:00	16	00	-	-	-	940	-	1278
	"	12:00 N	17	00	-	-	-	920	-	1256
	"	1:00 Pm	18	00	-	-	-	900	-	1251
	"	2:00	19	00	-	-	-	900	-	1242
	"	3:00	20	00	-	-	-	920	-	1253
	"	4:00	21	00	-	-	-	920	-	1239
	"	5:00	22	00	-	-	-	920	-	1244
	"	6:00	23	00	-	-	-	900	-	1244
	Pulled bomb & ran flowing gradient	7:00	24	00	625.4	12.18	51347	892	B	1253

1-3



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HOBBS, NEW MEXICO 88240

BOTTOM HOLE PRESSURE RECORD

OPERATOR Mobil Oil Corporation
FIELD Blinebry FORMATION Blinebry Gas
LEASE E.O. Carson WELL No. 14
COUNTY Lea STATE New Mexico
DATE 1-3-73 TIME 7:00 Pm
Status Flowing On Test depth 5808'
~~Test depth~~ 14/64" ch Last test date -
Tub Pres. 892 DWT BHP last test -
Cas. Pres. PKR BHP change -
Elev. 3463' GL Fluid top NONE
Datum (-2345') ** Water top NONE
Temp. @ 98°F Run by Weaver
Cal. No. A2410N Chart No. 3

Depth	Pressure	Gradient
0	892	-
1000	963	.071
2000	1022	.059
3000	1079	.057
4000	1141	.062
5000	1203	.062
5808 (-2345)	1253**	.062

** Mid point of casing perforations

