NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPO AND ONE POINT BACK PRESSUR EST FOR GAS WELL

Form C-122
Revised 9-1-65

45F
File

RECEIVED BY
JUL 17 1984
O. C. D.
ARTESIA, OFFICE

Type Test: 4 POINT ☒ Initial ☐ Annual ☐ Special			Test Date: 7-9-84	1980 FWL	
Company: MCKAY OIL COMPANY		Connection: TO AIR		660 FNL	
Pool: Penasco Draw Ft.		Formation: ABO		Unit: H	
Completion Date: 7-9-84	Total Depth: 4800.		Plug Back T.D.: 4604.	3776.	Farm or Lease Name: MCKAY WINSTON
Csg. Size: 4.500	Wt.: 10.5	d: 4.052	Set At: ~~4604.~~ 4650	Perforations: From 4268. To 4470.	Well No.: #1
Tbg. Size: 2.375	Wt.: 4.7	d: 1.995	Set At: 4250.	Perforations: From 0 To 0	Unit: C; Sec.: 3; Twp.: 8S; Rge.: 26E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: Ø		County: CHAVES
Producing Thru: TUBING	Reservoir Temp. °F: 115.° 4369.		Mean Annual Temp. °F: 60.0	Baro. Press. – P_a: 13.2	State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
4369.	4369.	0.639	0.02	4.72	0.	2.0	0.	FLANGE

FLOW DATA / TUBING DATA / B.H.P. DATA

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.	CHOKE	Duration of Flow
SI							866.	72.	910.		170.0
1.	2.00	X	0.063	850.	0.	90.	852.	115.	900.	12/64	1.0
2.	2.00	X	0.094	827.	0.	92.	827.	115.	900.	12/64	1.0
3.	2.00	X	0.125	788.	0.	92.	788.	115.	850.	12/64	1.0
4.	2.00	X	0.188	700.	0.	90.	660.	115.	770.	12/64	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 Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	0.06	0.	863.2	0.9723	1.2510	1.0624	71.
2	0.14	0.	840.2	0.9706	1.2510	1.0599	152.
3	0.26	0.	801.2	0.9706	1.2510	1.0571	272.
4	0.61	0.	713.2	0.9723	1.2510	1.0517	554.
5							

NO.	P_t	Temp. °R	T_r	Z
1	1.30	550.	1.54	0.886
2	1.27	552.	1.54	0.890
3	1.21	552.	1.54	0.895
4	1.08	550.	1.54	0.904
5				

Gas Liquid Hydrocarbon Ratio 0. Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 0. Deg.
Specific Gravity Separator Gas 0.639 XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX 0.639
Critical Pressure 662. P.S.I.A. 662. P.S.I.A.
Critical Temperature 358. R 358. R

P_c 877.6 P_c^2 770.

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	749.	858.	737.	33.
2	706.	834.	695.	75.
3	642.	796.	633.	137.
4	453.	672.	451.	319.
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.4160$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.1981$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1217.$

Post It 2
7-20-84
temp + pH

Absolute Open Flow 1217. Mcfd @ 15.025 Angle of Slope θ 48.2 Slope, n 0.893

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	RICHARD TOWNLEY	BENNETT & CATHEY	

"Let yo[illegible]nterest in Measurement be our Concern"

PRECISION SERVICE INC.

Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

Run No. 710-1
Date Run 07/10/84
Date Sampled 07/09/84

Analysis For: BENNETT & CATHEY WRLN.
Base: McKay Winston Sta#1 — Producer: McKay
Location: Pecos Slope — County: Chaves — State: New Mexico
Purpose: — Sampled By: B & C Wrln.
Sampling Temp. 90 °F — Atmos Temp 90 °F
Volume/day 350 MCF/Day — Formation ABO
Pressure on Bomb 700 — PSIG, Line Pressure 713.2 PSIA PSIG

Gas Component Analysis — Press. Base: 14.73

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO_2	.016		
Oxygen O_2	.067		
Nitrogen N_2	4.722		
Hydrogen Sulfide H_2S			
Methane C1	87.320		14.800
Ethane C2	4.725		1.264
Propane C3	1.757		.484
i-Butane IC4	.285		.093
n-Butane NC4	.576		.182
i-Pentane IC5	.182		.067
n-Pentane NC5	.193		.070
Hexanes plus	.157		.072
Hexanes C6			
Heptanes			
Heptanes Plus C7+			
Total	100.000		17.032
Butane + G.P.M.			.209
Propane + GPM			.968
Lb Gasoline			.778

BTU Dry 1066
BTU Wet 1065
Calc. Specific Gravity .639

@ Std. Press. 14.696
BTU Dry 1064
BTU Wet 1062

Calc. Vap. Press. #/Sq.In.
Reid Vap. Press. #/Sq.In.

Z Factor .9977
N Value 1.3001
Ave Mol Wt 18.4837
Ave Cu Ft/Gal

Run by Joe H. Kroum
Calculated By Jeffrey A. Propp

Ethane + GPM 2.231

Remarks: BTU Wet @ 14.73 from GPA Reference Bulletin 181-82 Heating Value Conversion Table. Factor: .9849

Distribution:

2987

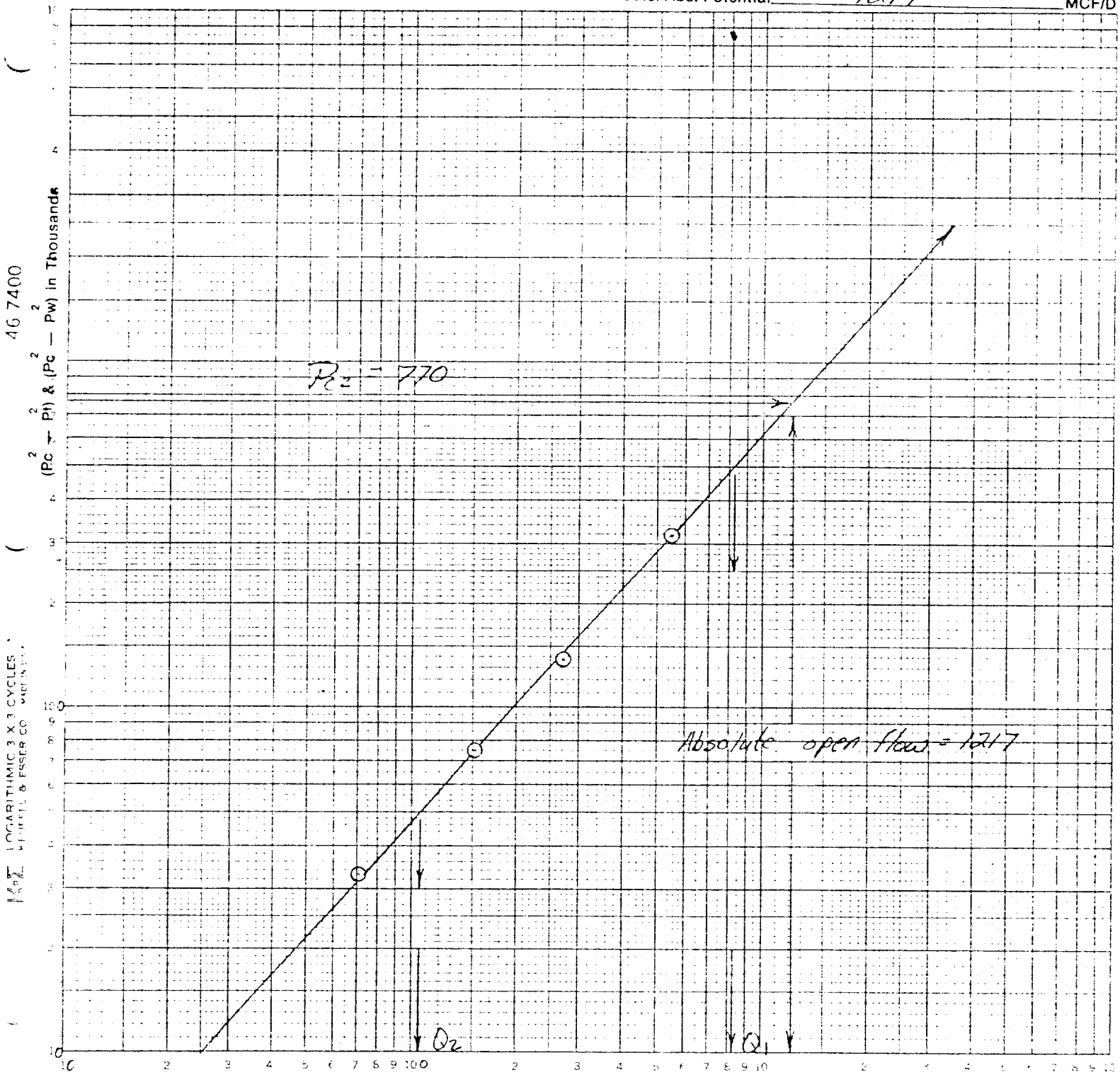
BACK PRESSURE CURVE

Operator Kerr Lease Kerr Webster Well No. 1

County Chaves Field _____ Location 2 8S 26E

Date of Test 7-9-84 Slope "n" .893 Angle of Slope 46.2

Calc. Abs. Potential 1217 MCF/D



$\overline{\Delta P_1^2}$ $P_c^2 - P_w^2 =$ 500

$\overline{\Delta P_2^2}$ $P_c^2 - P_w^2 =$ 50

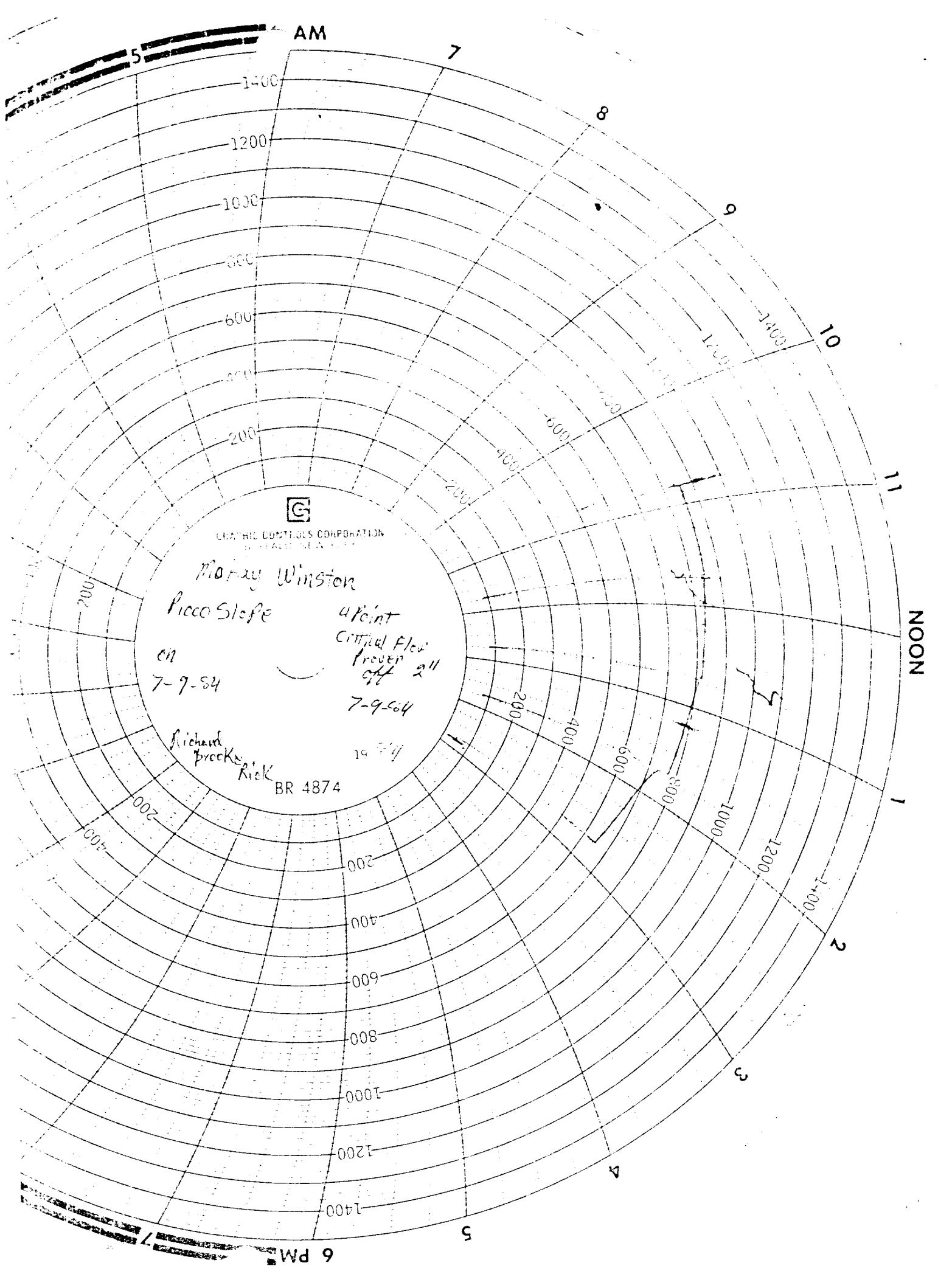
$Q_1 =$ 836

$Q_2 =$ 107

LOG $Q_1 =$ 2.9222

LOG $Q_2 =$ 2.0294

$n =$ 0.8928 = .893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GRAPHIC CONTROLS CORPORATION
Murray Winston
Pico Slope
on
7-9-84
4 Point
Critical Flow
Proven
7-9-84
Richard Brooks Rick
BR 4874

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

Revised 10-1-78

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

RECEIVED BY
JUL 17 1984
O. C. D.
ARTESIA, OFFICE

5a. Indicate Type of Lease: State ☐ Fee ☒
5. State Oil & Gas Lease No.:

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

7. Unit Agreement Name:

b. TYPE OF COMPLETION
NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER

8. Farm or Lease Name: McKay-Winston
9. Well No.: #1

2. Name of Operator: McKay Oil Corporation

10. Field and Pool, or Wildcat: ~~Wildcat~~ Abo

3. Address of Operator: P. O. Box 2014, Roswell, NM 88202-2014

4. Location of Well
UNIT LETTER C LOCATED 660 FEET FROM THE North LINE AND 1980 FEET FROM
THE West LINE OF SEC. 3 TWP. 8-S RGE. 26-E NMPM

12. County: Chaves

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
4-3-84	4-12-84	7-9-84	3766 GR	

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
4800'	4604'		→	X	

24. Producing Interval(s), of this completion — Top, Bottom, Name
4268-4281' & 4464-4470' Abo

25. Was Directional Survey Made: ~~Yes~~ No

26. Type Electric and Other Logs Run: Csg Collar & Perf Record, Computer Processed Comp. Neutron-Litho Density, Dual Laterolog Micro-SFL, Cmt Bond.

27. Was Well Cored: No

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

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	32#	844'	12¼"	350 sx Lite & 100 sx Cl "C"	- Circ
4-1/2"	10.5#	4656'	7-7/8"	250 sx 50/50 POZ	

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
2-7/8"	4250'	

31. Perforation Record (Interval, size and number)
4268-4281' (13 0.38" holes)
4464-4470' (6 0.38" holes)

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
4268-4281'	2000 gal HCL, 20000 gal/30# X-linked gel, 44000# sd
4464-4470'	750 gal 7½% HCL, 10000 gal X-linked gel, 104000# sd

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
-----	Flowing	SI WOPL

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas — Oil Ratio
7-9-84	4	12/64			203		

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)
700-850				1217		

34. Disposition of Gas (Sold, used for fuel, vented, etc.)
SI WOPL

Test Witnessed By:

35. List of Attachments
C-122 & logs as listed above (2 copies)

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED Lavaune D. Schmitt TITLE Production Analyst DATE 7-13-84

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico				Northwestern New Mexico			
T. Anhy		T. Canyon		T. Ojo Alamo		T. Penn. "B"	
T. Salt		T. Strawn		T. Kirtland-Fruitland		T. Penn. "C"	
B. Salt		T. Atoka		T. Pictured Cliffs		T. Penn. "D"	
T. Yates		T. Miss		T. Cliff House		T. Leadville	
T. 7 Rivers		T. Devonian		T. Menefee		T. Madison	
T. Queen		T. Silurian		T. Point Lookout		T. Elbert	
T. Grayburg		T. Montoya		T. Mancos		T. McCracken	
T. San Andres	804'	T. Simpson		T. Gallup		T. Ignacio Qtzte	
T. Glorieta	1885'	T. McKee		Base Greenhorn		T. Granite	
T. Paddock		T. Ellenburger		T. Dakota		T.	
T. Blinebry		T. Gr. Wash		T. Morrison		T.	
T. Tubb	3365'	T. Granite		T. Todilto		T.	
T. Drinkard		T. Delaware Sand		T. Entrada		T.	
T. Abo	4090'	T. Bone Springs		T. Wingate		T.	
T. Wolfcamp		T.		T. Chinle		T.	
T. Penn.		T.		T. Permian		T.	
T Cisco (Bough C)		T.		T. Penn. "A"		T.	

OIL OR GAS SANDS OR ZONES

No. 1, from ..... to ..... No. 4, from ..... to .....

No. 2, from ..... to ..... No. 5, from ..... to .....

No. 3, from ..... to ..... No. 6, from ..... to .....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from ..... to ..... feet. .....

No. 2, from ..... to ..... feet. .....

No. 3, from ..... to ..... feet. .....

No. 4, from ..... to ..... feet. .....

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation

HORIZON DRILLING & EXPLORATION CORPORATION

P.O. Box 2487
Roswell, New Mexico 88201

623-9537

May 2, 1984

McKay Oil Corporation
P.O. Box 2014
Roswell, New Mexico 88201

McKay-Winston #1
Section 3, T8S, R26E
Chaves County, New Mexico

Spudded 4/3/84

DEVIATION SURVEY:

576' - 1-1/2°
1072' - 1-1/4°
1650' - 1°
2177' - 1-1/2°
2675' - 1-1/4°
3203' - 1-1/4°
3638' - 1-1/4°
4162' - 1-1/4°
4659' - 1-1/4°
4800' - 1-1/4°

TD - 4800'

Released 4/15/84

Sincerely,

J.C. Johnson
President

STATE OF NEW MEXICO)
)
COUNTY OF CHAVES)

The foregoing instrument was acknowledged before me this 14th day of May, 1984 by the person known to me to be J.C. Johnson.

My Commission Expires:

3-31-84

Karen Cassen
Notary Public