



State of New Mexico
Commissioner of Public Lands

310 OLD SANTA FE TRAIL P.O. BOX 1148

SANTA FE, NEW MEXICO 87504-1148

RAY POWELL, M.S., D.V.M.
COMMISSIONER

(505) 827-5760
FAX (505) 827-5766

December 11, 1997

Vernon E. Faulconer, Inc.
P.O. Box 7995
Tyler, Texas 75711

Attn: Ms. Joan Mullenax

Re: 1998 Plan of Development
Hackberry Hills Unit
Eddy County, New Mexico

Dear Ms. Mullenax:

The Commissioner of Public Lands has, of this date, approved the above-captioned Plan of Development. Our approval is subject to like approval by all other appropriate agencies.

The possibility of drainage by wells outside of the unit area and the need for further development of the unit may exist. You may be contacted at a later date regarding these possibilities.

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M.
COMMISSIONER OF PUBLIC LANDS

A handwritten signature in cursive script, appearing to read "Jami Bailey".

BY:
JAMI BAILEY, Director
Oil, Gas and Minerals Division
(505) 827-5744

RP/JB/cpm
xc: Reader File

OCD

BLM

2181

SOIL CONSERVATION SERVICE
NEW MEXICO



State of New Mexico
Commissioner of Public Lands

RAY POWELL, M.S., D.V.M.
COMMISSIONER

310 OLD SANTA FE TRAIL P.O. BOX 1148

SANTA FE, NEW MEXICO 87504-1148

(505) 827-5760
FAX (505) 827-5766

October 31, 1995

Vernon E. Faulconer, Inc.
P.O. Box 7995
Tyler, Texas 75711

Attention: Ms. Joan Mullenax

Re: Resignation/Designation of Successor Unit Operator
Hackberry Hills Unit
Eddy County, New Mexico

Dear Ms. Mullenax:

This office is in receipt of a letter of October 13, 1995, from Vernon E. Faulconer, Inc., wherein Pennzoil Exploration and Production Company has resigned as unit operator of the Hackberry Hills Unit and designated Vernon E. Faulconer, Inc. as the successor unit operator of the Hackberry Hills Unit Area, Eddy County, New Mexico.

The Commissioner of Public Lands has this date approved the resignation of Pennzoil Exploration and Production Company and the designation of Vernon E. Faulconer, Inc. as the successor unit operator of this unit. This change in operators is effective September 19, 1995. In accordance with this approval, Vernon E. Faulconer, Inc. is now responsible for all operations and the reporting of all production from the unit.

Vernon E. Faulconer, Inc.

Page 2

October 31, 1995

If you have any questions, or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M.
COMMISSIONER OF PUBLIC LANDS

BY: 

LARRY KEHOE, Director
Oil, Gas and Minerals Division
(505) 827-5744

RP/LK/cpm

Enclosure

cc: Reader File

Pennzoil Exploration & Production Company

OCD

TRD

BLM



2181

State of New Mexico
Commissioner of Public Lands

RAY POWELL, M.S., D.V.M.
COMMISSIONER

310 OLD SANTA FE TRAIL P.O. BOX 1148

(505) 827-5760
FAX (505) 827-5766

Pennzoil Petroleum Company
P. O. Box 2967
Houston, Texas 77252-2967

SANTA FE, NEW MEXICO 87504-1148

Attn: Mr. Jim Covey

Re: Hackberry Hills Unit
Operator Name Change - Chevron PBC, Inc. to
Pennzoil Petroleum Company
Eddy County, New Mexico

Dear Mr. Covey:

Reference is made to our letter of April 5, 1994 to Chevron USA Production Company wherein as unit operator of the Hackberry Hills Unit, a 1994 plan of development was requested.

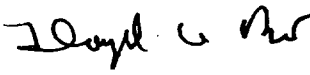
This office is in receipt of your letter of April 14, 1994 wherein you have advised this office that a name change has occurred and Chevron PBC, Inc. has now changed to Pennzoil Petroleum Company.

We have reviewed the Certificate of Amendment which you submitted wherein this name change was consummated. Please be advised that this office hereby accepts the name change from Chevron PBC, Inc. to Pennzoil Petroleum Company and our records will be noted to reflect this change. Pennzoil Petroleum Company is now responsible for all unit operations in the Hackberry Hills Unit. Please submit a copy of your 1994 plan of development for this unit.

If you have any questions, or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

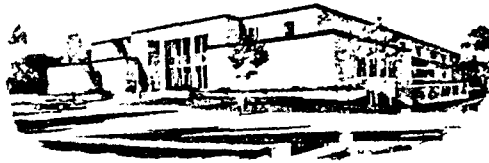
Very truly yours,

RAY POWELL, M.S., D.V.M.
COMMISSIONER OF PUBLIC LANDS

BY: 
FLOYD O. PRANDO, Director
Oil/Gas and Minerals Division
(505) 827-5744
RP/FOP/pm

cc: Reader file, BLM-Roswell, OCD-Santa Fe, Chevron USA, Inc.
OCD-Ben Stone

State of New Mexico



W.R. HUMPHRIES
COMMISSIONER

Commissioner of Public Lands

P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

May 22, 1989

#2181

Chevron U.S.A. Inc.
P.O. Box 670
Hobbs, New Mexico 88240

ATTN: R.C. Anderson
Division Manager, Production Department

RE: 1989 Plan of Development
Hackberry Hills Unit
Eddy County, New Mexico

Gentlemen:

The Commissioner of Public Lands has this date approved the above captioned 1989 Plan of Development. Our approval is subject to like approval by all other appropriate agencies.

Enclosed is an approved copy for your files. If we may be of further help, please do not hesitate to contact us.

Very truly yours,

W.R. HUMPHRIES
COMMISSIONER OF PUBLIC LANDS

BY: *Floyd O. Prando*
FLOYD O. PRANDO, Director
Oil and Gas Division
(505) 827-5749

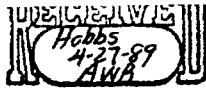
cc: OCD - Santa Fe, New Mexico
BLM
Unit Correspondence File

WRH/FOP/SMH



Chevron U.S.A. Inc.
P.O. Box 670, Hobbs, NM 88240

R. C. Anderson
Division Manager
Production Department
Hobbs Division



#2181

April 13, 1989



1988 REPORT OF OPERATIONS AND
1989 PLAN OF DEVELOPMENT FOR
BOGLE FLATS, EUNICE MONUMENT
SOUTH, NORTH HACKBERRY YATES,
STUART LANGLIE-MATTIX,
✓HACKBERRY HILLS, MALJAMAR
GRAYBURG AND WEST DOLLARHIDE
DEVONIAN UNIT (S)

United States Department of the Interior
Bureau of Land Management
Roswell District Office
P. O. Box 1397
Roswell, New Mexico 88201

Attention: Mr. Joe G. Lara
Assistant District Manager, Minerals

Gentlemen:

Attached for your viewing are three copies of the 1988 Report of Operations and 1989 Plan of Development for each of the subject Chevron U.S.A. operated Units as requested in your letter of February 1, 1989. Please note that you graciously granted us and extension to April 15, 1989 to submit these reports.

If you have any questions, please contact Mr. J. T. Dunlavey or Mr. A. W. Bohling at Chevron U.S.A. Inc., P. O. Box 670, Hobbs, New Mexico 88240; Phone (505) 393-4121.

Yours very truly,

R. C. ANDERSON

AWB/jay 04139/02

Attachments

cc: M. J. Allison w/o attachments
J. A. Awwad w/o attachments
J. T. Dunlavey w/o attachments
D. H. Messer Houston - w/attachments
D. H. Wilson Houston - w/attachments
Hobbs Division Central Files - Unit files w/attachment

RE: 1988 Report of Operations and 1989 Plan of Development
for the Hackberry Hills Federal Unit, Eddy County, New
Mexico.

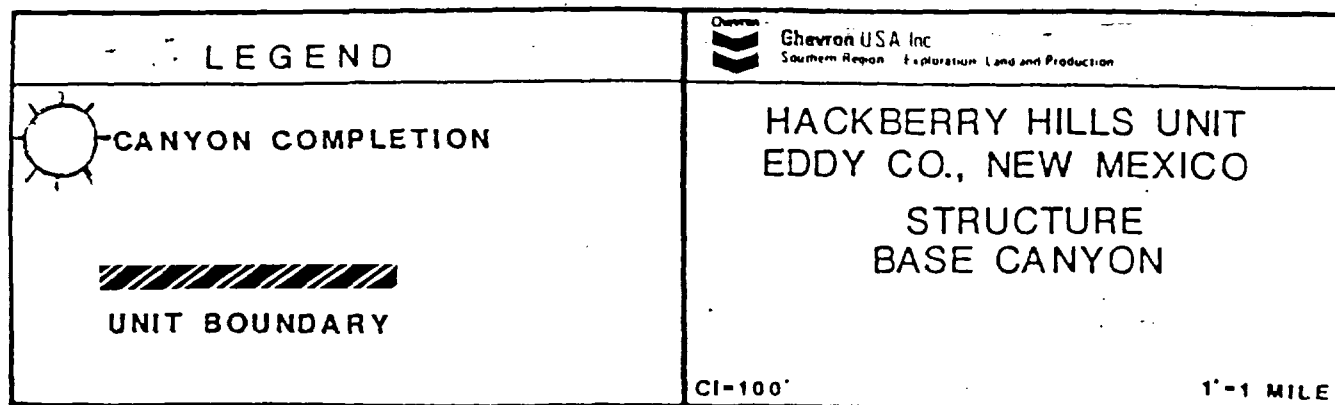
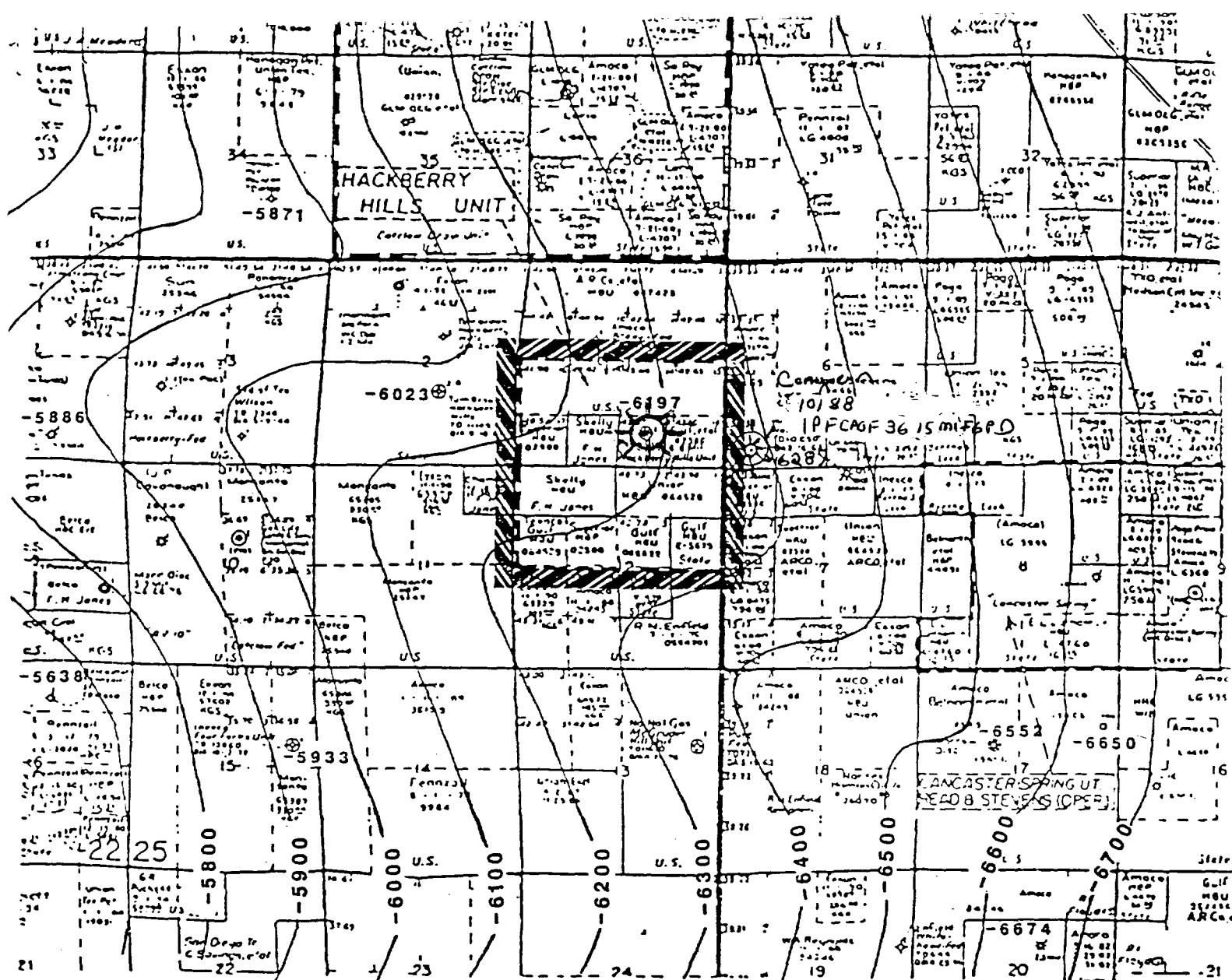
The Hackberry Hills Unit #1 (O-1-22S-25E), the only well in the subject unit, was spudded on February 20, 1961, and drilled to a total depth of 11536'. Tests in the Bone Spring (6530'-6580') and Cisco (9459'-9499') were unsuccessful. The well was completed on August 15, 1961 in the Canyon through perforations 9622'-9654' flowing 2841 MCFGPD + 101 BC. The CAOF was 6800 MCFGPD. The well was subsequently shut-in due to a lack of a nearby pipeline and was eventually shut-in due to a lack of a nearby pipeline and was eventually put on line in September, 1966. A reservoir test in 1963 showed the reservoir to be areally limited and that no further drilling to the Canyon pay was justifiable within 1 mile of the subject well. The Canyon perforations were treated with acid in April 1970, February 1972, and November 1972. Six hundred forty (640) acres are dedicated to the well. Cumulative production through December, 1988 is 5.1 BCF + 99 MBO and the well is currently capable of producing 1,000 MCFPGD + 12 BO. Ultimate production should be in the neighborhood of 6.0 BCF and 116 MBO.

No significant operations are anticipated within the unit during 1989.

Plan of Development
APPROVED

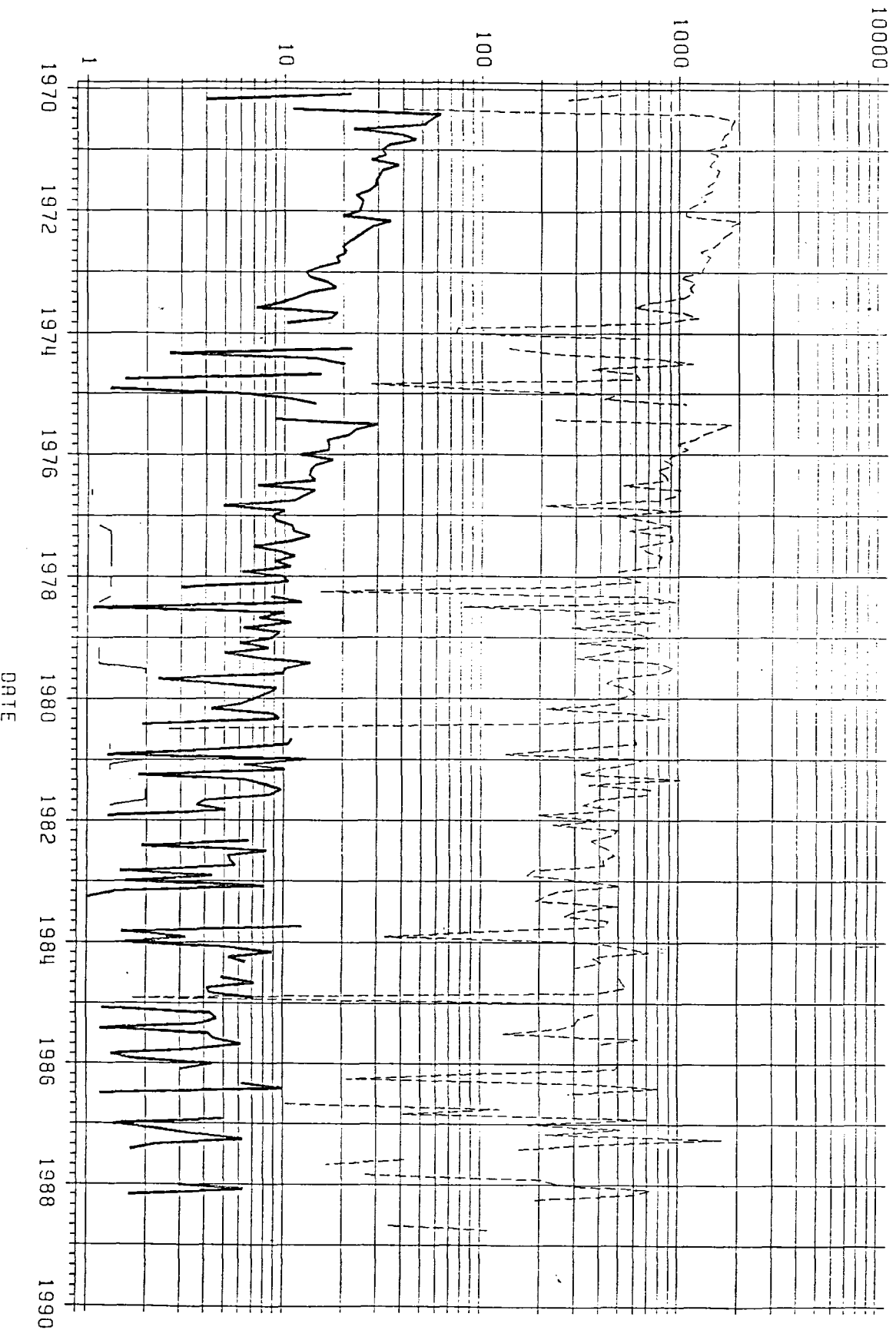
APR 26 1989

Joe D. Lara
DISTRICT MANAGER
BUREAU OF LAND MANAGEMENT



RATE VS. TIME PLOT

FD=HACKBERRY HILLS CANYON (GRS) LS=HACKBERRY HILLS UNIT WELLNO=001 OP=CHEVRON U.S.A. INC.



HEAVY SOLID LINE=BOPD
SOLID LINE=BMPD
LIGHT DRSHFD INF=MCFD

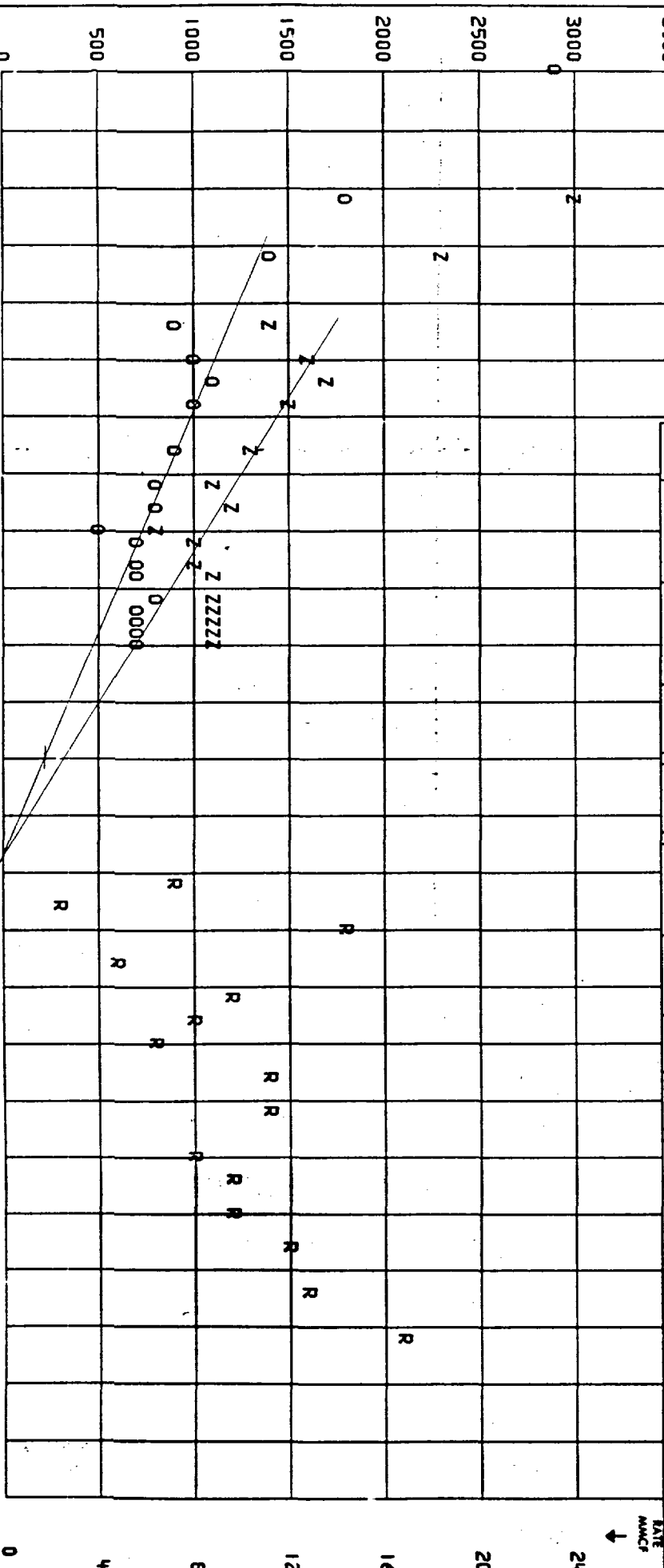
PAGE NO
2250

SYMBOLS:
WHIP = O
BHP/2 = Z
COMMON = C

6 MOS TOTAL MMCF/6 = R
(RATE/CUM SCALE ON RIGHT SIDE)
TEMP GRAD: .924

IDENTIFYING NO.	LOCATION	OPERATOR	WELL NAME	WELL #
22525E01000PN	10 225 25E01EUPON U 5 R INC	HOCKBERRY HILLS UNIT	HOCKBERRY HILLS UNIT	133
STATE	FIELD NO.	FIELD NAME	RESERVOIR	ACT GNM
NEWMEXICO	8032274HOCKBERRY HILLS CANYON (GAS)	PN		240

DIS. N.O.	COUNTY OR PARISH	DATE COMP	DATE 1ST PROD	GAS GRAVITY	INIT TEST DATE	POTENTIAL	WHIP	BHP	LATEST BHP/2	INIT BHP/2	TEST WTR BBS/DAY	ACF/ MONTH	SIX MONTH PERFORATIONS	SIX MONTH GNM	PERMI
1 2	EDDY	081561	081561	75.081461	6800	2897	960	4455	1936	2044	2132	2173	2203	2252	2306
7 81	102713	42852	42852	42852	7 2 81	683	8235	1001	1936	2044	2132	2173	2203	2252	2306
1 82	75747	178460	43602	44344	44219	6 3 82	734	9620	1087						
7 83	60907	134369	44953	45552			760	9280	1132						
1 84	49192	109124	46044	45558	7 2 83										
7 84	70572	46750	47439	46920	8 3 84	738	9680	1094	2173						
1 85	68947	139519	47858	48064	8 8 85	716	9380	1056	2203						
7 86	50266	92187	48361	48967											
7 86	60633	92293	49284	48968	8 6 86	723	9470	1058	2252						
1 87	31660	50170	50333	50186	8 20 87	721	9450	1065	2306						
7 88	88617	104935	50795												
1 88	16318														
7 88	46151														



BCF PRESSURE → 01.0 02.0 03.0 04.0 05.0 06.0 07.0 08.0 09.0 10.0 11.0 12.0
→ BCF RATE 6.200 6.000 5.800 5.600 5.400 5.200 5.000 4.800 4.600 4.400 4.200 4.000

HACKBERRY HILLS FEDERAL UNIT #1

CUM PROD THRU 1987 5,043,980 MCF
 98,317 BC
 2,000 BW

1988 PROD.

<u>MONTH</u>	<u>OIL</u>	<u>GAS</u>	<u>WAT</u>	<u>DAYS</u>	<u>DAILY RATE</u>
1	190	22,069		31	6/712
2	50	17,739		20	3/887
3	20	5,510		6	3/918
4					
5					
6		833		1	-/833
7					
8		1,063		2	-/532
9		3,323		2	-/1662
10					
11	271			12	23/-
12	245	22,024		21	12/1049

CUM '88 Gas per committee book = 72561 MCF

CUM PROD thru '88 = 5,116,541 MCF
 99,093 BO
 2,000 BW

WRS COMPLETION REPORT

COMPLETIONS SEC 6 TWP 22S RGE 26E
 PI# 30-T-0006 02/13/89 30-015-25965-0000 PAGE 1

NMEX EDDY * 467FSL 660FWL SEC SW SW
 STATE COUNTY FOOTAGE SPOT
 MEMBOURNE OIL D WSD
 OPERATOR WELL CLASS INIT FIN

1
 WELL NO. LEASE NAME
 361KB 3595GR FEDERAL "N"

UNNAMED
 FIELD POOL AREA
 OPER ELEV 361KB 3595GR
 API 30-015-25965-0000
 PERMIT OR WELL ID. NO.

09/08/1988 10/31/1988 ROTARY
 SPUD DATE COMP. DATE
 11500 CANYON W E K DRLG 2 RIG SUB 15
 PROJ. DEPTH PROJ. FORM CONTRACTOR
 DTD 11500 PB 11478 FM/TD BARNETT
 DRILLERS ID. LOG ID. PLUG BACK ID. OLD ID. FORM ID.

LOCATION DESCRIPTION
 5 MI W CARLSBAD, NM

WELL IDENTIFICATION/CHANGES
 PROJ FM CHGD FROM MORROW

11/08/89 11/15/89 (11/15)

FIELD CHGD FROM HAPPY VALLEY

CSG 13 3/8 @ 450 W/ 650 SACKS
 CSG 9 5/8 @ 2590 W/ 1600 SACKS
 CSG 5 1/2 @ 11500 W/ 2620 SACKS

TBG 2 3/8 AT 9709

IPF CANYON PERF 3615 MCFD

SITP 940
 1175MCFD TP 750 BHFP 659
 1453MCFD TP 670 BHFP 538
 1717MCFD TP 600 BHFP 477

9780- 9808

24HRS

Copyrighted 1989
 Petroleum
 Information Corporation

CONTINUED IC# 300157013288
Petroleum Information
 BB a company of
 The Dun & Bradstreet Corporation

PI-WRS-GET
 Form No 187

10,000' SE
 well

COMPLETIONS
 PI# 30-T-0006 02/13/89 SEC 6 TWP 22S R

30-015-25965-0000

MEWBOURNE OIL
 1

FEDERAL "N"

INITIAL POTENTIAL

BH 953 1790MCFD TP 570 BHFP 451
 GTY 67.0 GOR 305 FPCAOF 3615MCFD
 GAS GTY .695
 1ST THRU 4TH PT TEST IN 60 MINS, CKS-NO D
 SHUT-IN GAS WELL

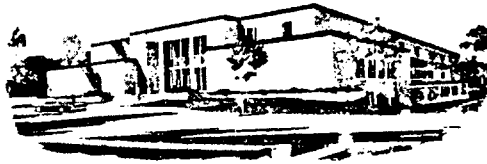
TYPE	FORMATION	LTH	TOP	DEPTH/SUB	BSE D
LOG	DELWR SD		2296	1315	
LOG	BONE SP3		7970	-4359	
LOG	WOLFCAMP		8450	-4839	
LOG	CISCO		9010	-5399	
LOG	CANYON		9490	-5879	
LOG	STRAWN		9900	-6289	
LOG	ATOKA		10178	-6567	
LOG	MORROW		10505	-6894	
LOG	MRW CLSC		10904	-7293	

State of New Mexico

2181



W.R. HUMPHRIES
COMMISSIONER



Commissioner of Public Lands

SLO REF NO OG-808
P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

June 6, 1988

Chevron U.S.A. Inc.
Attn: Mr. R. C. Anderson
P. O. Box 670
Hobbs, New Mexico 88240

Re: 1988 Plan of Development
Hackberry Hills Unit
Eddy County, New Mexico

Gentlemen:

The Commissioner of Public Lands has this date approved your 1988 Plan of Development for the above captioned unit area.

Our approval is subject to like approval by all other appropriate agencies.

Enclosed is an approved copy for your files.

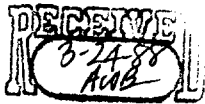
If we may be of further help please do not hesitate to call on us.

Very truly yours,

W. R. HUMPHRIES
COMMISSIONER OF PUBLIC LANDS

BY: *Floyd O. Prando*
FLOYD O. PRANDO, Director
Oil and Gas Division
(505) 827-5744

WRH/FOP/pm
encls.
cc: OCD
BLM



RE: 1987 Report of Operations and 1988 Plan of Development for
the Hackberry Hills Federal Unit, Eddy County, New Mexico.

The Hackberry Hills Unit #1 (O-1-22S-25E), the only well in the subject unit, was spudded on February 20, 1961, and drilled to a total depth of 11536'. Tests in the Bone Spring (6530'-6580') and Cisco (9459'-9499') were unsuccessful. The well was completed on August 15, 1961 in the Canyon through perforations 9622'-9654' flowing 2841 MCFGPD + 101 BC. The CAOF was 6800 MCFGPD. The well was subsequently shut-in due to a lack of a nearby pipeline and was eventually put on line in September, 1966. A reservoir test in 1963 showed the reservoir to be areally limited and that no further drilling to the Canyon pay was justifiable within 1 mile of the subject well. The Canyon perforations were treated with acid in April 1970, February 1972, and November 1972. Six hundred forty (640) acres are dedicated to the well. Cumulative production through December, 1986 is 4.9 BCF + 97 MBO and the well is currently capable of 810 MCFGPD + 6 BO.

No significant operations are anticipated within the unit during 1988.

Plan of Development
APPROVED

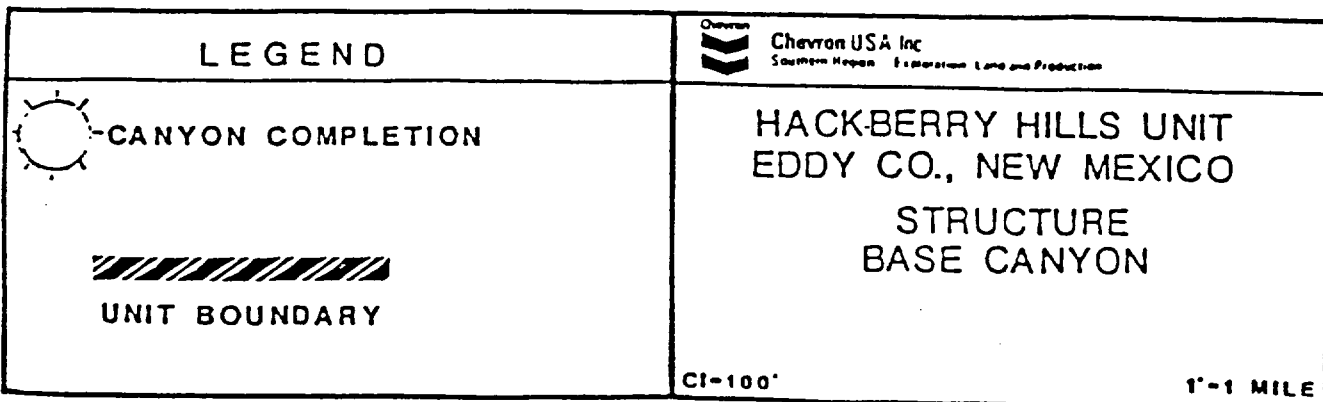
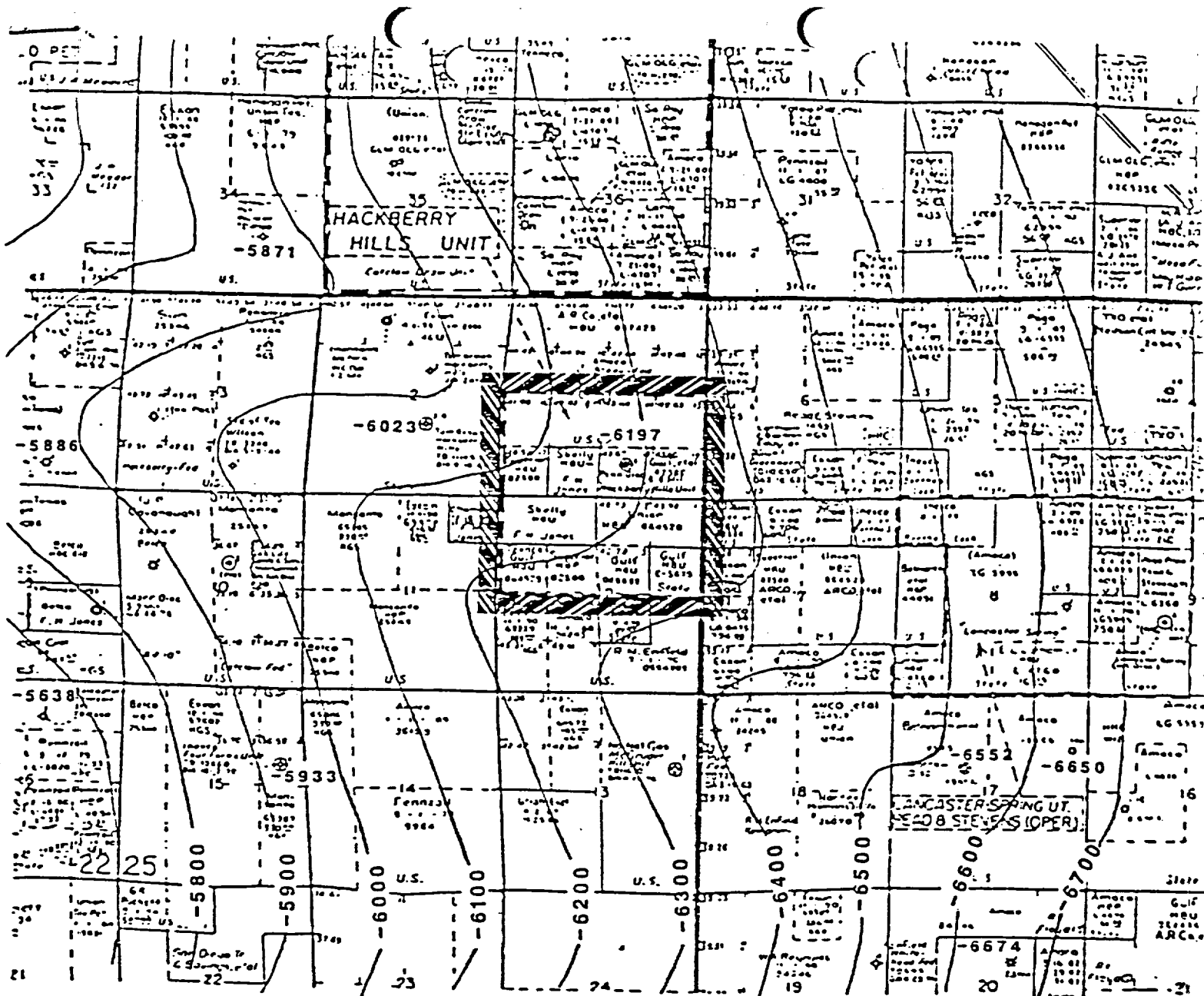
MAR 21 1988

Lee J. Linn
ASS. DISTRICT MANAGER
BUREAU OF LAND MANAGEMENT

RE: 1987 Report of Operations and 1988 Plan of Development for
the Hackberry Hills Federal Unit, Eddy County, New Mexico.

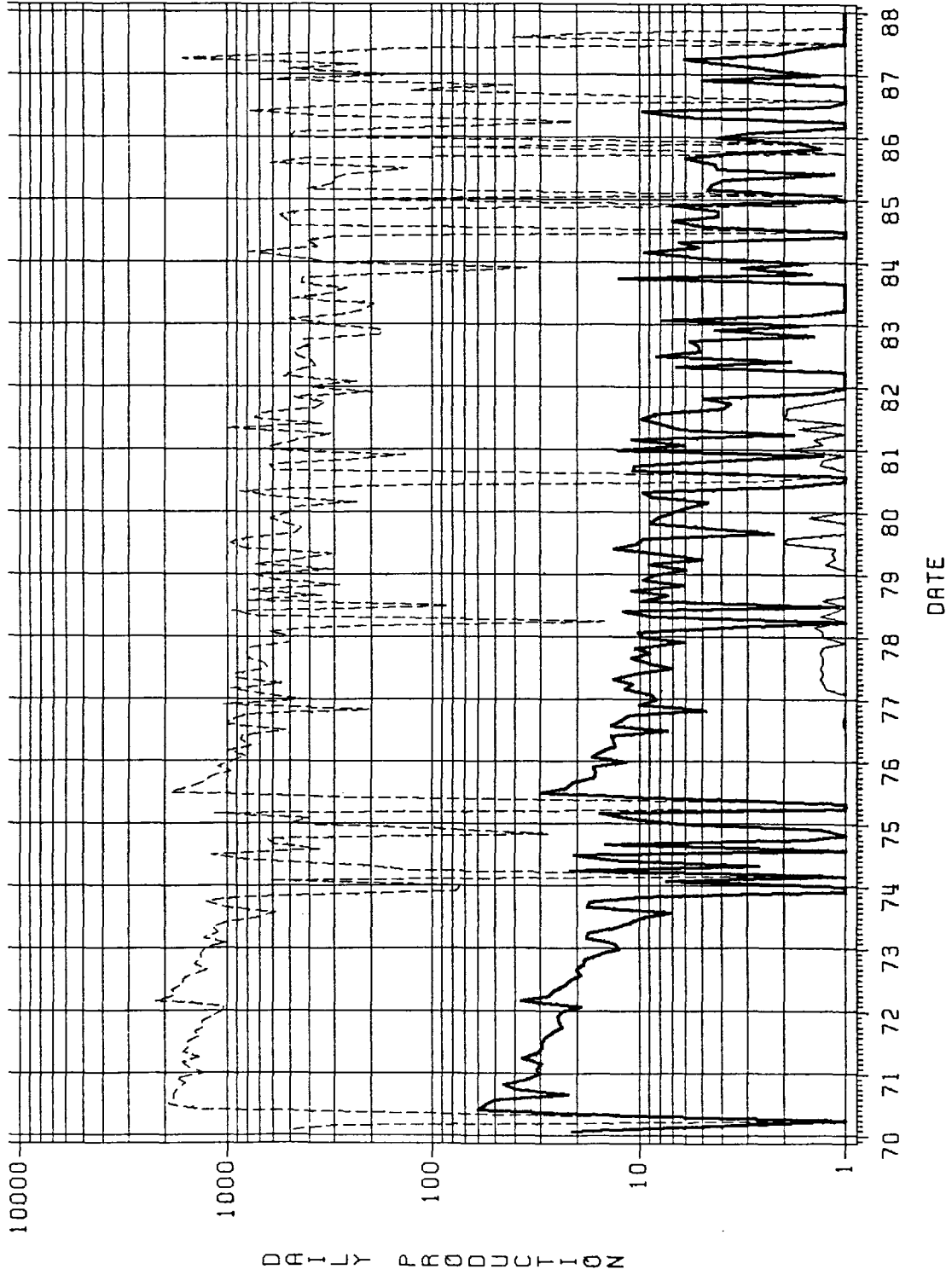
The Hackberry Hills Unit #1 (O-1-22S-25E), the only well in the subject unit, was spudded on February 20, 1961, and drilled to a total depth of 11536'. Tests in the Bone Spring (6530'-6580') and Cisco (9459'-9499') were unsuccessful. The well was completed on August 15, 1961 in the Canyon through perforations 9622'-9654' flowing 2841 MCFGPD + 101 BC. The CAOF was 6800 MCFGPD. The well was subsequently shut-in due to a lack of a nearby pipeline and was eventually put on line in September, 1966. A reservoir test in 1963 showed the reservoir to be areally limited and that no further drilling to the Canyon pay was justifiable within 1 mile of the subject well. The Canyon perforations were treated with acid in April 1970, February 1972, and November 1972. Six hundred forty (640) acres are dedicated to the well. Cumulative production through December, 1986 is 4.9 BCF + 97 MBO and the well is currently capable of 810 MCFPGD + 6 BO.

No significant operations are anticipated within the unit during 1988.



PRODUCTION DATA PLOT

WELLNO=001 WELLNA=HACKBERRY HILLS UNIT PETROLEUM INFORMATION OPERNA=CHEVRON U.S.A. INC. FLDRESNA=HACKBERRY HILLS CAN



HEAVY SOLID LINE=BOPD
SOLID LINE=BHPD
LIGHT DASHED LINE=MCFD

Gulf Oil Corporation

ROSWELL PRODUCTION DISTRICT

W. A. Shellshear
DISTRICT MANAGER
F. C. Mortlock
DISTRICT EXPLORATION
MANAGER
M. I. Taylor
DISTRICT PRODUCTION
MANAGER
G. A. Price
DISTRICT SERVICES MANAGER

October 4, 1960

P. O. Drawer 669
Roswell, New Mexico

CONFIDENTIAL GEOLOGICAL REPORT

PROPOSED HACKBERRY HILLS UNIT EDDY COUNTY, NEW MEXICO

THE DIRECTOR - UNITED STATES GEOLOGICAL SURVEY
WASHINGTON, D. C.

This is a proposed Federal-type Unit covering 13,920 acres to drill a 12,000 foot Devonian wildcat to be located in the northeast quarter of Section 2, Township 22 South, Range 25 East, Eddy County, New Mexico. The proposed Unit, as shown on Exhibit "A", is located on the northwest margin of the Delaware Basin, about three miles west-southwest of the city of Carlsbad, New Mexico. A seismograph interpretation, from profiles using both the conventional and "thumping" techniques, shows a large northwest-southeast trending structure approximately ten miles long and three miles wide in the Unit Area. The seismic interpretation which is shown on Exhibit "E" has approximately 650 feet of closure at the Devonian level. The Bone Spring level as shown on Exhibit "D" has approximately 200 feet of closure. The basis for the Unit boundary, as shown on the Devonian Seismograph Map, Exhibit "E", is the lowest closing contour (-8800) and a fault that bounds the anomaly on the south and west flanks which has a displacement of 120 to 280 feet.

The prospect is located in an area of relatively high topographic relief with the Yates and Tansill formations exposed at the surface. A dominant northwest-southeast trending topographic and structural feature, approximately twelve miles long and one and a half miles wide, as shown on Exhibit "C" parallels and is nearly coincident with the seismic structure. In general, the surface structures in this area are coincident with the topographic highs and appear to reflect Permian reefing; however, in view of the large size of this surface feature and the orientation (perpendicular) to the lineation of the reefing, we feel it reflects a structural ridge at depth.

The regional dip of the Devonian formation is east into the Delaware Basin at a rate of about 180 feet per mile. Subsurface control in the area is limited to five deep tests as shown on Exhibit "B". The Pan American No. 1 Guadalupe Foothills Unit well, a 13,034 foot Ellenburger failure approximately four miles southwest of the Unit, tested 7,650 feet of brackish water in the Devonian formation. In 1958, Phillips Petroleum Company re-entered this test unsuccessfully to test slight shows in the Pennsylvanian section. Approximately six miles southwest of the Unit, the Northern Natural Gas No. 1 McKittrick Hills Unit test was abandoned at a total depth of 11,890 feet after recovering 3,960 feet of



October 4, 1960

salty sulphur water from the Devonian formation. This test flowed 800,000 cubic feet of gas per day from the Lower Pennsylvanian section. The Phillips Petroleum Company No. 1 Seven Rivers Hills Unit, a 10,663 foot Mississippian failure approximately five miles northwest, flowed a small amount of gas on two tests in the Pennsylvanian section. Approximately five miles north of the Unit, the John M. Kelly No. 1 Lake McMillan Unit test was abandoned at a total depth of 11,565 feet after recovering 8,950 feet of sulphur water from the Devonian formation. Only slight shows of gas were recovered on two tests in the Wolfcamp and Pennsylvanian sections. The Honolulu Oil Corporation has recently staked location for a 12,000 foot Devonian test approximately two miles south of the Unit Area on their No. 1 McKittrick Canyon Unit.

The proposed Hackberry Hills Unit test should penetrate about 200 feet of back-reef anhydrite, limestone and sandstone of the Tansill and Upper Yates formations before encountering the Capitan Reef section. The Capitan and Goat Seep dolomite reef sections with intermittent sandstone beds, are anticipated to be about 2,000 feet thick. Approximately 1,800 feet of basin type Delaware limestone, sandstone and shale should be present. The Bone Spring section should contain about 3,500 feet of limestone and sandstone with some shale. The Wolfcamp formation may vary from 400 to 600 feet in thickness; however, on a structurally high test, this limestone and shale section could be absent. The Pennsylvanian and Mississippian formations should contain about 3,000 to 3,300 feet of dolomite, limestone, sandstone and shale. In all, the test should penetrate between 10,900 and 11,400 feet of sediments to the top of the Devonian formation. The columnar section is shown as Exhibit "E".

The potential pay zones and expected depths are as follows:

Delaware sandstone	2,200 feet
Bone Spring limestone	4,000 feet
Pennsylvanian limestone	7,900 feet
Pennsylvanian sandstone	10,000 feet
Devonian dolomite	10,900 feet.

We found by experimentation that to obtain usable data in this area, it was necessary to follow the stream valleys and areas of recent fill. Considering the inherent difficulties of obtaining seismic information in this area of rugged relief, we feel the data are of relatively good quality. The seismic maps, together with the supporting surface feature indicates the probable existence of a deep structure of considerable magnitude.

Respectfully submitted,

C. A. Engwall
District Regional Geologist

Attachments
CAE:dd