STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

TONEY ANAYA
GOVERNOR

February 13, 1987

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DHC-637

RE: Proposed:
MC_____
DHC XXX
NSL_____
NSP_____
SWD_____
WFX_____
PMX_____

Gentlemen:

I have examined the application for the:

Chevron USA Inc. Vivian #8-D 30-22-37
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

I don't see any problem with the DHC, but it seems like a large volume for administrative approval.

Yours very truly,

Jerry Sexton
Supervisor, District 1

/mc

Chevron

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

R. C. Anderson
Division Manager
Production Department
Hobbs Division

Hobbs, New Mexico
January 30, 1987

APPLICATION TO DOWNHOLE COMMINGLE CHEVRON'S VIVIAN WELL NO. 8 LOCATED IN UNIT D SECTION 30-T22S-R38E LEA COUNTY, NEW MEXICO

W. J. Lemay
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

Pursuant to the provisions of statewide Rule 303-C, Chevron U.S.A. Inc. respectfully requests administrative approval to commingle production from the Drinkard and Brunson South Abo Pools within the subject wellbore.

The Vivian No. 8 was drilled and completed in 1974 as a dual producer in the Drinkard and Wantz Granite Wash. The Wantz Granite Wash was abandoned in January 1987 for recompletion as a dual producer in the Drinkard and Brunson South Abo Pools. The Drinkard and Abo communicated during fracture stimulation of the Abo. Verbal approval was obtained from the OCD District Office in Hobbs to temporarily downhole commingle the two zones. It should be noted that several offset wells in the vicinity of the subject well are currently downhole commingled in the Drinkard and Abo formations (see attachment).

In the interest of conservation and prevention of waste, we propose to continue producing the well in the Brunson South Abo and Drinkard Pools. Enclosed is pertinent data supporting this application as outlined in Rule 303-C. If additional information is necessary, please contact Byron Hebert at (505) 393-4121.

Yours very truly,

R. C. Anderson

BPH/ds

Attachments

cc: J. T. Sexton
District 1 Supervisor
Oil Conservation Division
P.O. Box 1980
Hobbs, New Mexico 88240

Offset Operators (list attached)
B. P. Hebert
C. L. Morrill

1. OPERATOR: Chevron U.S.A. Inc., P.O. Box 670, Hobbs, N.M. 88240.

2. LEASE, WELL, AND LOCATION: Vivian Well No. 8, 510' FNL and 430' FWL of Section 30-T22S-R38E, Lea County, N.M.

3. PRODUCING ZONES: Drinkard and Brunson S. Abo.

4. DECLINE CURVE: The Drinkard was producing 0 BOPD, 0 BWPD, and 191 MCFGPD, prior to completion of the Abo and is expected to continue to decline at 14% per year. The Abo is expected to decline at 14% per year after an IP of 2 BOPD, 1 BWPD, and 754 MCFGPD, (total flowrate of 945 MCFGPD less 191 MCFGPD).

5. BOTTOM HOLE PRESSURE: Drinkard calculated BPH of 350 psi at a depth of 6305'. Abo pressure not measured. Zones communicated during completion of Abo and were downhole commingled at that time with verbal approval from OCD District Office in Hobbs, N.M. Crossflow between zones is not anticipated as there are several wells in the vicinity of the subject well that are currently downhole commingled in the Drinkard and Abo (see attachment).

6. FLUID CHARACTERISTICS: The Drinkard produces dry gas so fluid incompatibility is not a problem.

7. WELL HISTORY: The subject well was spudded 5-16-74 and drilled to a total depth of 7324'. Nine and five-eights inch surface pipe was set at 1199' and cement was circulated to the surface. Seven inch casing was set at 7323' and cemented with 840 sacks. A temperature survey indicated the top of cement to be at 2230'. The well was completed as a dual producer in the Wantz Granite Wash and Drinkard formations. The Wantz Granite Wash was perforated from 7124-7287 with 4 JHPF (40 holes total) and acidized with 1000 gals. 15% HCL. The formation was frac'd with 37,500 gals. gelled BW and 40,000 lbs. sand and IP'd pumping 36 BOPD and 9 BWPD. The Drinkard was perforated from 6200-6410 with 4 JHPF (64 holes total) and acidized with 1250 gals. 15% HCL. The formation was frac'd with 35,000 gals. gelled BW and 37,500 lbs. sand and IP'd flowing 12 BOPD, 26 BWPD, and 1240 MCFGPD.

   1/87 - Abandoned Granite Wash by setting a CIBP at 7052', capped with 35' of cement. Perforated Brunson S. Abo from 6469-6914 with 2 JHPF (36 holes total) and acidized with 5750 gals. 15% HCL. Swabbed and flowed 119 bbls. water in 7½ hours. Began acid frac designed to pump 27,000 gals. 20% gelled HCL, 61,500 gals. 40

lb. x-linked gel, 7,500 gals. 15% "slick" HCL, and 21,000 gals. 40 lb. non x-linked gel with 30% nitrogen. Pumped a total of 9000 gals. 20% gelled HCL and 18,350 gals. 40 lb. x-linked gel at 15 BPM with maximum and minimum pressures of 8760 psi and 2000 psi, when communication with Drinkard occurred (returns out of casing). Shut down frac job received OCD approval from Paul Kautz on 1-7-87 to set the treating packer above the Drinkard and proceed with the frac and to temporarily downhole commingle Drinkard and Abo formations (30 days to file formal application). Reset packer above Drinkard and pumped remainder of frac fluids at 15 BPM with maximum and minimum pressures of 8710 psi and 900 psi. Dropped a total of 95 - 1.1 SG RCNBS in an effort to block of Drinkard perfs and divert frac to the Abo formation. Well flowed 214 bbls. water in 15½ hours. Flowed trace of oil, 142 bbls. water, and 1.25 MMCFGPD during next 24-hour period, with 200 psi FTP on 24/64 choke. Flow tested for 1½ hours at beginning of next 24-hour period. Recovered 1 bbl. water with well flowing at a rate of 1.26 MMCFGPD. Killed well to POH with workstring and run producing equipment. Subsequent testing yielded a stabilized rate of 2 BOPD, 1 BWPD, and 945 MCFGPD.

8. VALUE OF COMMINGLED FLUIDS: Drinkard is currently classified as NGPA Section 104 gas. Expect to receive the same classification for Abo gas, so a reduction in revenue is not anticipated.

9. CURRENT PRODUCTION: Drinkard producing at an average rate of 0 BOPD, 0 BWPD, and 191 MCFGPD (6 month average from June-November 1986). Abo IP'd flowing 2 BOPD, 1 BWPD, and 754 MCFGPD.

10. RECOMMENDED OIL AND GAS ALLOTMENTS:

Abo	Drinkard
100% Oil	0% Oil
80% Gas	20% Gas

11. OWNERSHIP AND ROYALTY INTEREST: Ownership of the two pools to be commingled is common and correlative rights will not be violated.

12. FUTURE SECONDARY OPERATIONS: Commingling will not jeopardize the efficiency of future secondary recovery operations in either zone.

13. PRODUCTION METHODS: The commingled production will be flowed with minimum instances of shutting the well in, to prevent cross flow between reservoirs.

14. Copies of this application have been furnished to all offset operators by certified mail.

OFFSET OPERATORS

Hanson Operating Company Inc.
Box 1515
Roswell, N.M. 88202-1515

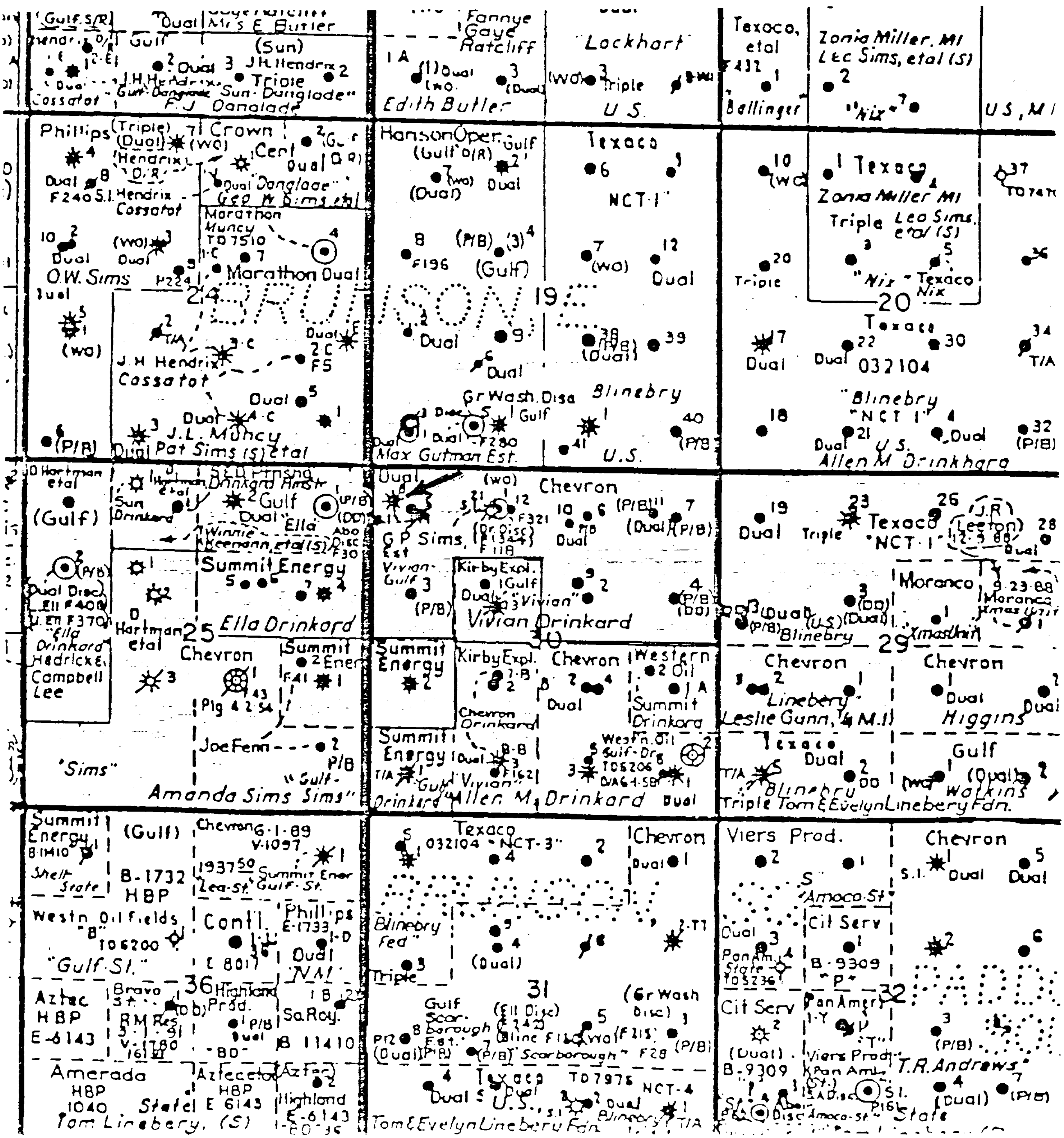
Texaco Producing Inc.
Box 3109
Midland, T.X. 79705

Marathon Oil Company
Box 552
Midland, T.X. 79702

Summit Energy, Inc.
1925 Mercantile Dallas Bldg.
Dallas, T.X. 75201

Kirby Exploration Company of Texas
Box 1745
Houston, T.X. 77251

John H. Hendrix Corporation
P.O. Box 910
Eunice, N.M. 88231

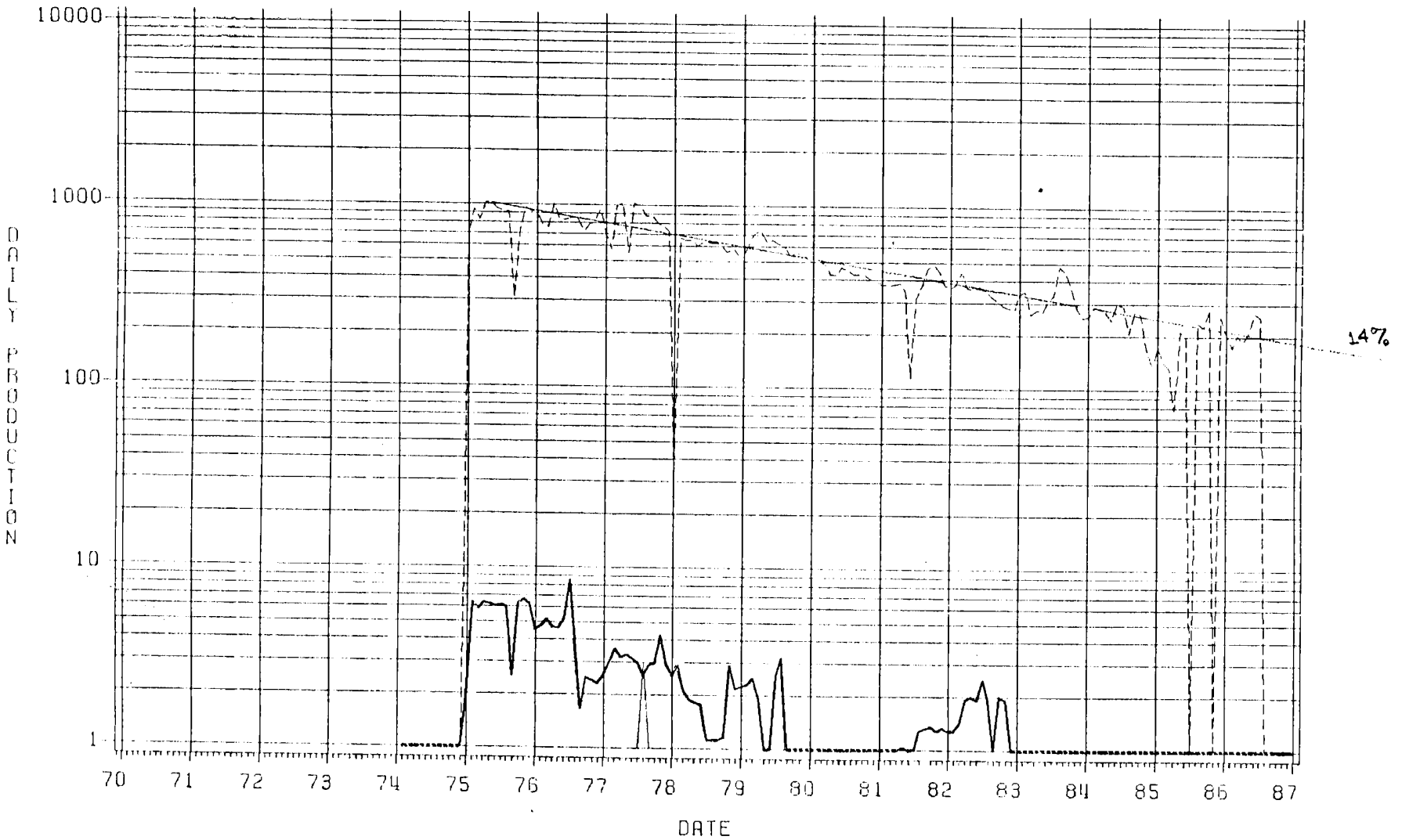


Mrs E Butler
(Sun)
J.H. Hendrix
Triple
F.J. Danglade
Fannye Gaye Ratcliff
Edith Butler
Lockhart
U.S.
Texaco, etal
Ballinger
Zonia Miller, MI
Leo Sims, etal (S)
U.S., MI
Phillips
Crown Cent
Hanson Oper.
Gulf
Texaco
NCT-1
Zonia Miller MI
Leo Sims, etal (S)
Marathon Muncy
TD 7510
Marathon
O.W. Sims
J.H. Hendrix
Cossatot
J.L. Muncy
Pat Sims (S) etal
24
19
20
Texaco
032104
Blinebry
Gr Wash. Disc
Max Gutman Est.
U.S.
Allen M. Drinkhard
Chevron
Sun Drinkard
Gulf
Ella
G.P. Sims, Est
Vivian Gulf
Summit Energy
Kirby Expl.
Vivian Drinkard
Texaco
NCT-1
Moranco
Ella Drinkard
Hartman etal
25
30
29
Chevron
Summit Energy
Western Oil
Summit Drinkard
Leslie Gunn, 4 M.I.
Higgins
Campbell Lee
Joe Fenn
"Sims"
Amanda Sims Sims"
Allen M. Drinkard
Texaco
Gulf
Watkins
Triple Tom & Evelyn Lineberry Fdn.
Summit Energy
(Gulf)
B-1732 HBP
Westn Oil Fields
TD 6200
"Gulf-St."
Contl.
Phillips
E-1733
36
Aztec HBP E-6143
Amerada HBP 1040
State
Tom Lineberry, (S)
Texaco
032104 "NCT-3"
Chevron
Blinebry Fed
31
Gulf Scarborough Est.
Texaco
TD 7976
NCT-4
Tom & Evelyn Lineberry Fdn.
Viers Prod.
Amoco-St
Cit Serv
B-9309
32
Chevron
T.R. Andrews
State

PRODUCTION DATA PLOT

PETROLEUM INFORMATION

WELLNA=VIVIAN WELLNO=008 FLDRESNA=DRINKARD OPERNA=CHEVRON U.S.A. INC.



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

CHEVRON U.S.A. INC.
VIVIAN WELL NO. 8

DRINKARD FORMATION BHP CALCULATION

Reservoir Pressure	=	Static Bottom Hole Pressure	=	Shut-in Tubing Pressure	+	Gas Column Pressure	+	Oil & Water Column Pressure

Shut-In Tubing Pressure = 300 psi (measured during packer leakage test performed 4/10/86)

Gas Column Pressure = 50.4 psi (based on a gas gravity = 0.7 & mid-perf depth = 6305)

Oil & Water Column Pressure = 0 (Drinkard producing dry gas)

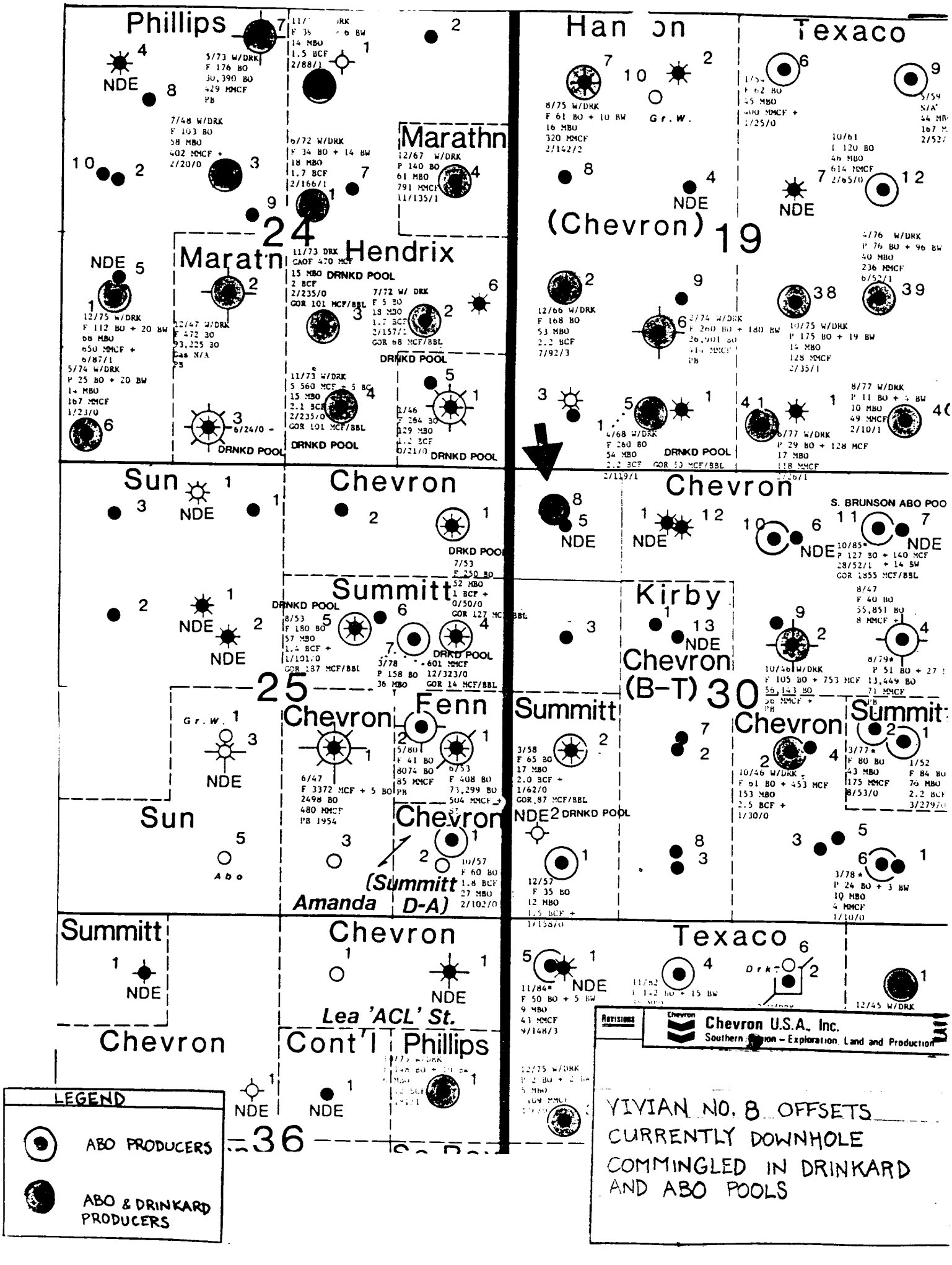
Reservoir Pressure = 300 psi + 50.4 psi + 0 psi
Reservoir Pressure = 350.4 psi

CHEVRON U.S.A. Inc.
VIVIAN WELL NO. 8

OFFSET WELLS CURRENTLY DOWNHOLE
COMMINGLED IN DRINKARD AND ABO POOLS

Lease & Well No.	Operator	Location	Production as of 9/86
Cossatot "C" Well #4	Hendrix	T22S, R37E, Sec 24 Unit O, Lea Co., NM	3.9 BOPD 212 MCFGPD 0 BWPD
Cossatot "C" Well #2	Hendrix	T22S, R37E, Sec 24 Unit I, Lea Co., NM	1.3 BOPD 142 MCFGPD 1 BWPD
Cossatot "C" Well #3	Hendrix	T22S, R37E, Sec 24 Unit J, Lea Co., NM	2.7 BOPD 212 MCFGPD 0 BWPD
Max Gutman Well #5	Hanson	T22S, R38E, Sec 19 Unit N, Lea Co., NM	2.4 BOPD 139 MCFGPD 2 BWPD
Max Gutman Well #2	Hanson	T22S, R38E, Sec 19 Unit L, Lea Co., NM	2.4 BOPD 66 MCFGPD 1 BWPD
A. H. Blinebry Fed. Well #41	Texaco	T22S, R38E, Sec 19 Unit 0, Lea Co., NM	2.3 BOPD 22 MCFGPD 0 BWPD
A. H. Blinebry Fed. Well #40	Texaco	T22S, R38E, Sec 19 Unit P, Lea Co., NM	0.5 BOPD 1.7 MCFGPD 0 BWPD

Note: This is just some of the wells in the immediate vicinity of the Vivian #8. There are several others in surrounding sections.


Phillips
NDE
5/73 W/DRK
F 176 BO
30,390 BO
429 MMCF
PB
7/48 W/DRK
F 103 BO
58 MBO
402 MMCF +
2/20/0
6/72 W/DRK
F 34 BO + 14 BW
18 MBO
1.7 BCF
2/166/1
Marathn
12/67 W/DRK
P 140 BO
61 MBO
791 MMCF
11/135/1
24
Maratn
Hendrix
11/73 DRK
CAOF 470 MCF
15 MBO DRNKD POOL
2 BCF
2/235/0
GOR 101 MCF/BBL
7/72 W/ DRK
F 5 BO
18 MBO
1.7 BCF
2/157/1
GOR 88 MCF/BBL
DRNKD POOL
12/75 W/DRK
F 112 BO + 20 BW
68 MBO
650 MMCF +
6/87/1
5/74 W/DRK
P 25 BO + 20 BW
14 MBO
167 MMCF
1/23/0
12/67 W/DRK
F 472 BO
93,225 BO
Gas N/A
PB
6/24/0 -
DRNKD POOL
11/73 W/DRK
S 560 MCF + 5 BO
15 MBO
2.1 BCF
2/235/0
GOR 101 MCF/BBL
DRNKD POOL
6/46
F 264 BO
129 MBO
1.2 BCF
6/231/0
DRNKD POOL
Han on
8/75 W/DRK
F 61 BO + 10 BW
16 MBO
320 MMCF
2/142/2
Gr. W.
Texaco
10/61
I 120 BO
46 MBO
614 MMCF
2/65/0
(Chevron) 19
12/66 W/DRK
F 168 BO
53 MBO
2.2 BCF
7/92/3
2/74 W/DRK
F 260 BO + 180 BW
26,901 BO
PB
10/75 W/DRK
P 175 BO + 19 BW
14 MBO
128 MMCF
2/35/1
4/76 W/DRK
P 76 BO + 96 BW
40 MBO
236 MMCF
6/52/1
4/68 W/DRK
F 260 BO
54 MBO
2.2 BCF
2/119/1
DRNKD POOL
GOR 53 MCF/BBL
6/77 W/DRK
P 29 BO + 128 MCF
17 MBO
118 MMCF
8/77 W/DRK
P 11 BO + 4 BW
10 MBO
49 MMCF
2/10/1
Sun
NDE
Chevron
DRKD POOL
7/53
F 250 BO
52 MBO
1 BCF +
0/50/0
GOR 127 MCF/BBL
Summitt
DRNKD POOL
8/53
F 180 BO
57 MBO
1.4 BCF +
1/101/0
GOR 187 MCF/BBL
3/78
P 158 BO
36 MBO
12/323/0
GOR 14 MCF/BBL
25
Chevron
S. BRUNSON ABO POO
10/85*
P 127 BO + 140 MCF
28/52/1 + 14 BW
GOR 1855 MCF/BBL
Kirby
Chevron
(B-T) 30
8/47
F 40 BO
55,851 BO
8 MMCF +
8/79*
P 51 BO + 27
13,449 BO
71 MMCF
10/46 W/DRK
F 105 BO + 753 MCF
55,143 BO
PB
Gr. W.
Chevron
Fenn
6/47
F 3372 MCF + 5 BO
2498 BO
480 MMCF
PB 1954
5/80
F 41 BO
8074 BO
85 MMCF
PB
6/53
F 408 BO
73,299 BO
504 MMCF +
Summitt
3/58
F 65 BO
17 MBO
2.0 BCF +
1/62/0
GOR 87 MCF/BBL
DRNKD POOL
12/57
F 35 BO
12 MBO
1.5 BCF +
1/158/0
Chevron
Summit
10/46 W/DRK
F 61 BO + 453 MCF
153 MBO
2.5 BCF +
1/30/0
3/77*
F 80 BO
43 MBO
175 MMCF
8/53/0
1/52
F 84 BO
76 MBO
2.2 BCF
3/279/0
Sun
Abo
Chevron
10/57
F 60 BO
1.8 BCF
27 MBO
2/102/0
(Summitt
Amanda D-A)
3/78 *
P 24 BO + 3 BW
10 MBO
4 MMCF
1/10/0
Summitt
NDE
Chevron
Lea 'ACL' St.
Texaco
11/84*
F 50 BO + 5 BW
9 MBO
43 MMCF
9/148/3
12/45 W/DRK
Chevron
Cont'l Phillips
NDE
36
LEGEND
ABO PRODUCERS
ABO & DRINKARD PRODUCERS
Chevron U.S.A. Inc.
Southern Region – Exploration, Land and Production
VIVIAN NO. 8 OFFSETS
CURRENTLY DOWNHOLE
COMMINGLED IN DRINKARD
AND ABO POOLS

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
Chevron U.S.A. Inc.	Vivian	8

Unit Letter	Section	Township	Range	County
D	30	22S	38E	Lea

Actual Footage Location of Well: 510 feet from the North line and 430 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3320' GL	Abo	Brunson S. Abo	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

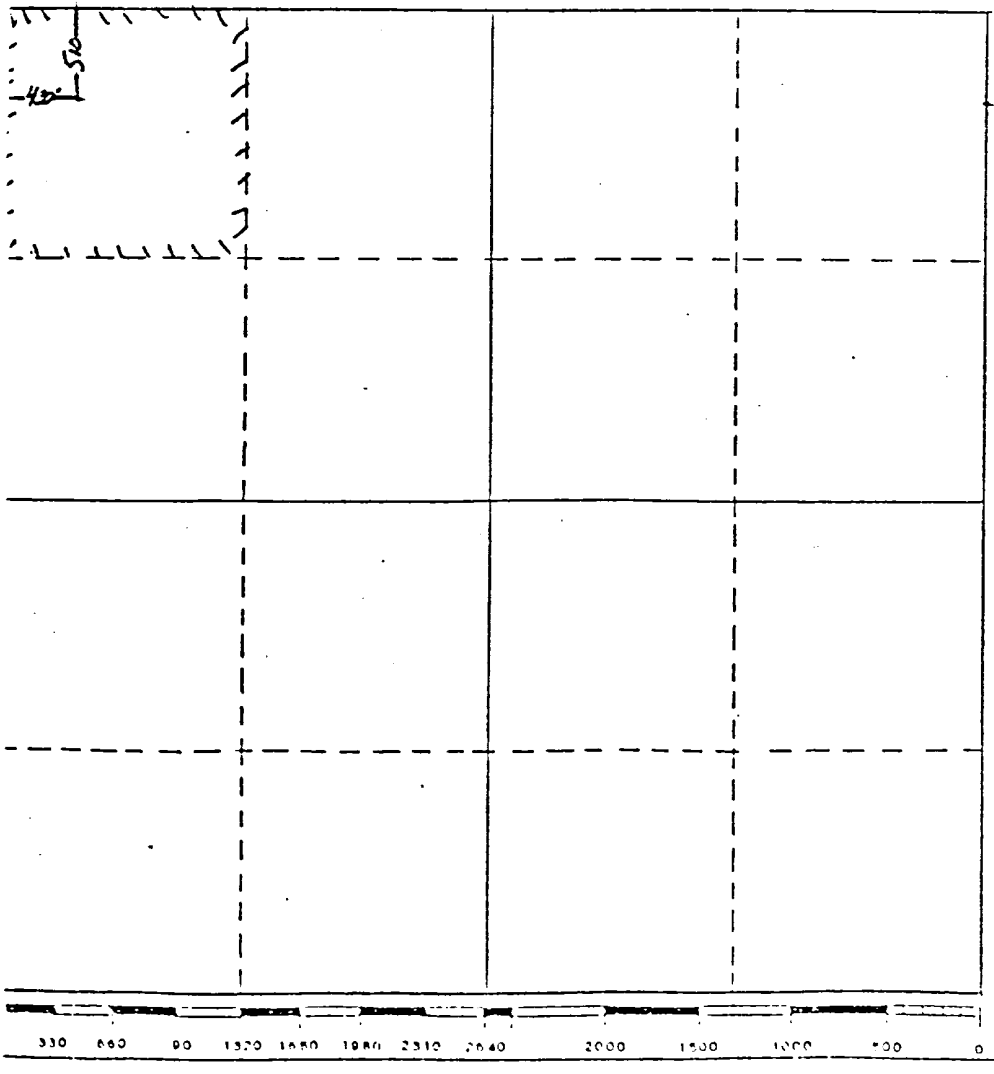
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name: M. E. Akins

Position: Staff Drilling Engineer

Company: Chevron U.S.A. Inc.

Date: 12-11-1986

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

NEW MEXICO OIL CONSERVATION COMMISSION

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Chevron U.S.A. Inc.	Vivian	8

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D	30	22S	38E	Lea

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☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

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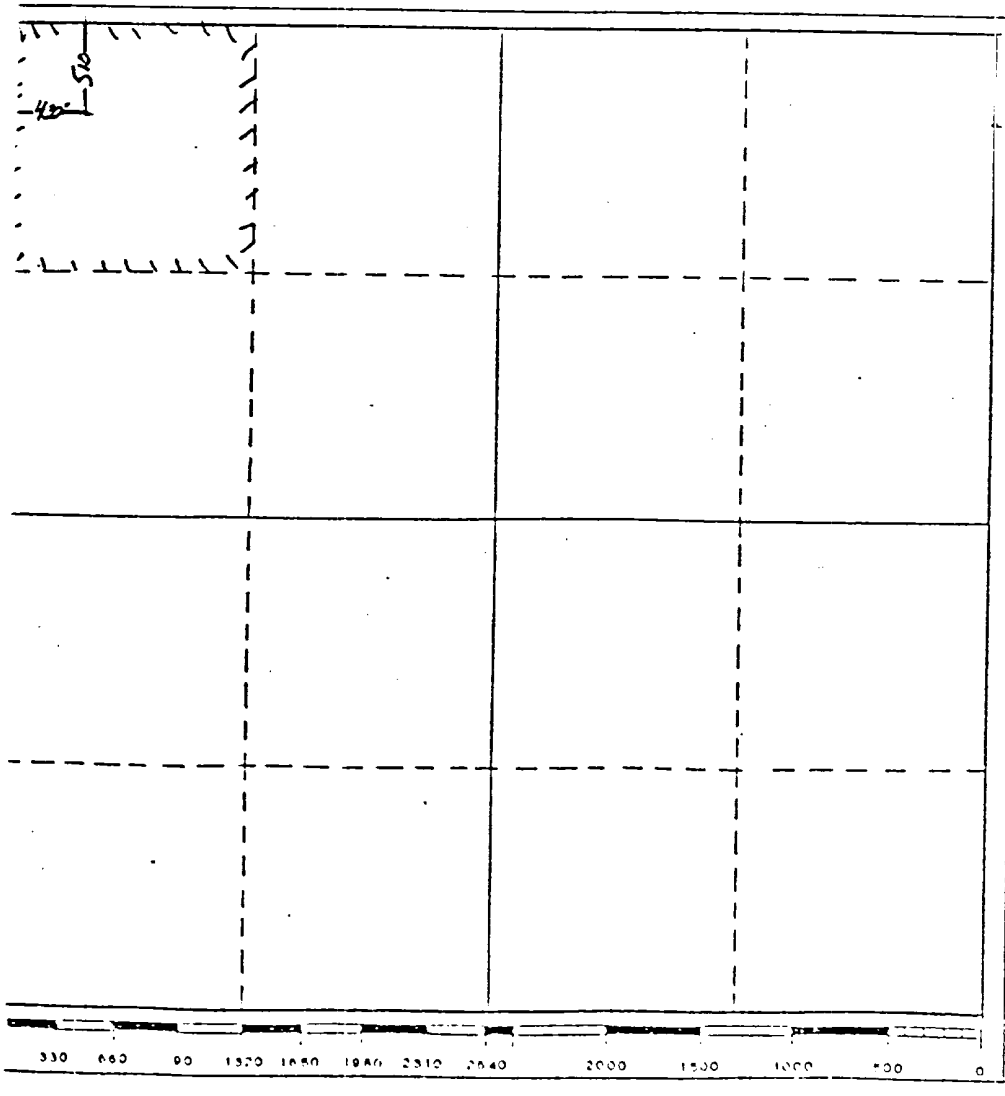

CERTIFICATION

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Name M. E. Akins

Position Staff Drilling Engineer

Company Chevron U.S.A. Inc.

Date 12-11-1986

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

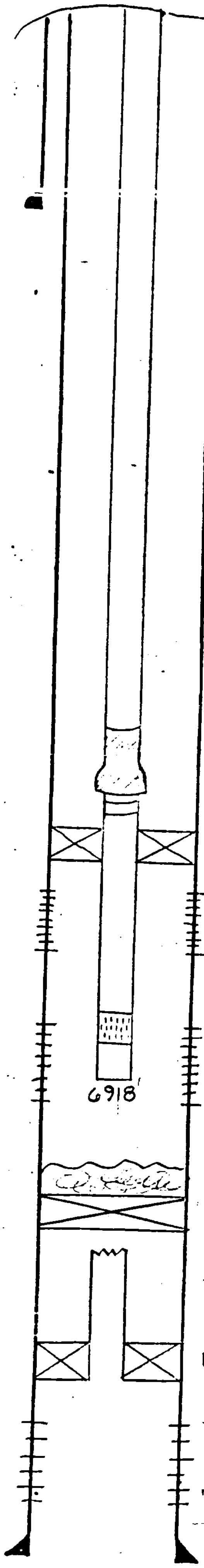
Registered Professional Engineer and/or Land Surveyor

Certificate No.

LEASE & WELL NO. VIVIAN #8 FIELD/POOL DRINKARD' BRUNSON S. ABO DATE 1-15-8

LOCATION 510 FEET FROM NORTH LINE AND 430 FEET FROM WEST LINE

SECTION 30, T22S R38E, UNIT LETTER D COUNTY LEA STATE NM



7 " OD 23 & 26 # Thd
Gr. N-80, Csg.
set @ 7323 ' w/ 840 sx
Cmt Circulated? NO
TOC @ 2230 ' by TS

PBD ____'
TD 7324 '

Date Completed / /
Initial Formation
From: ____' to ____' GOR ____
Initial: Production ☐ ____ bopd ____ bwpd
Or: Injection ☐ ____ bwpd @ ____ psi

Completion Data:

(JUNE 1974) PERF'D WGW @ 7124-26, 7154-56, 7188-9
7232-34 & [illegible] 87 w/ 4-½ JHPF. ACIDIZED w/ 1100 GAL
15% NEA. FRAC'D w/ 37,500 GALS GELLED BW w/ 0-2 PPG SD.
IP'D PUMPING 36 BOPD, 9 BWPD

Subsequent Workover or Reconditioning:

(SEPT. 1974) PERF'D DRINKARD @ 6200-02, 6230-32, 6288-90, 6307-09, 6329-31, 6355-57, 6376-78 & 6408-10 w/ 4-½" JHPF. ACIDIZED w/ 1250 GALS 15% NEA. FRAC'D w/ 10,000 GALS GELLED BW & 25,000 GALS GELLED BW w/ 1-2 PPG SD. 16 BPM & 4550 PSI. ISIP = 1500 PSI. TUBED WELL UP FOR DUAL COMPL. DRINKARD CI WAITING ON GAS CONNECTION.

(OCT 1974) DRINKARD IP'D FLOWING 12 BOPD, 26 BWPD & 1240 MCFGPD

(MAY 1981) WGW PPG 19 BOPD & 0 BWPD.
DRINKARD FLOWING 70 MCFGPD
UNABLE TO PULL PUMP FROM WGW. PULL RODS
PARTED. RAN PUMP w/ MECHANICAL HOLDDOWN

Present Inj. ☐ ____ bwpd @ ____ psi Date ____
Present Prod. ☐ ____ bopd ____ bwpd Date ____
GAS ____ MCFPD

Remarks Or Additional Data:

Long String:	Short String Reel Colgs
Baker Lockset w/ [illegible] tension	Baker J Latch
SN	SN
29 jt 2 3/8 TBG	198 jt 2 3/8
Baker Parallel Packer	8' pup
198 jt 2 3/8	6' pup.
	2' pup

Rods
mechanical holddown + 1¼" pump
155 - 3/4
85 - 7/8