Chevron

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

R. C. Anderson
Division Manager
Production Department
Hobbs Division

December 16, 1987

APPLICATION TO DOWNHOLE COMMINGLE
DRINKARD (NCT-B) WELL NO. 7
BLINEBRY AND TUBB ZONES, LOCATED
IN UNIT K, SECTION 30-T22S-R38E
LEA COUNTY, NEW MEXICO

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

Gentlemen:

Pursuant to the provision of Statewide Rule 303-C, Chevron respectfully requests administrative approval to commingle production within the subject wellbore from the Blinebry and Tubb pools. The subject well is currently a dual producer pumping both the Blinebry and Tubb through separate tubing strings. Both zones are marginal producers, therefore to continue to dually complete cannot be justified due to the high operating cost associated with dual tubing strings. In the interest of conservation and prevention of waste, we propose to downhole commingle the Blinebry and Tubb in the subject well.

Enclosed is pertinent data supporting this application as outlined in Rule No. 303-C. If additional information is necessary, please contact Byron Hebert at (505) 393-4121.

Yours very truly,

for R. C. ANDERSON

DJK/cjw

Attachments

cc: J. T. Sexton
Oil Conservation Division
P.O. Box 1980
Hobbs, NM 88240

Hobbs Division
Chevron U.S.A. Inc.
Downhole Commingle Application
Drinkard (NCT-B) Well No. 7
Data Sheet

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

2. Lease, Well, Well Location: Drinkard (NCT-B) Well No. 7, 1980' FWL and 2120' FSL of Section 30, Unit K, T-22-S, R-38-E, Lea County, New Mexico

3. Producing Zones: Blinebry and Tubb

4. Decline Curve: The Blinebry is expected to decline at 20% per year after an IP of 5 BOPD and 40 MCFGPD. The Tubb is expected to decline at 20% per year after an IP of 5 BOPD and 180 MCFGPD.

5. Bottom Hole Pressure: The calculated BHP for the Blinebry is 541 psi at a depth of 5705'. The measured BHP for the Tubb is 786 psi at 6298'.

6. Fluid Characteristics: The Blinebry and Tubb are currently surface commingled at the battery.
There had been no evidence of fluid incompatibility to date.

7. Well History: This well was spudded 8/2/85 and completed to a total depth of 6450. Ten and three-fourths inch casing was set at 1195 with 775 sacks of cement which was circulated to surface. Seven inch casing was set at 6449 with 750 sacks and 1100 sacks of cement in two stages with both stages circulated. The DV tool is at 4471'. The well was plugged back to 6401'. The Tubb was perforated at 6049' - 6268', acidized with 7000 gals 15% NEFE HCL and fraced with 80,000 gals 70 Quality form pads and 122 lbs of sand. The upper Tubb was perforated at 5898' - 5992', acidized with 1800 gals 15% NEFE HCL and fraced with 39,000 gals 70 Quality form pad and 60,000 lbs of sand. The Blinebry was perforated at 5607' - 5803', acidized with 3500 gals 15% NEFE HCL and fraced with 114,000 gals X-linked gel pad with 273,000 lbs of sand.

8. Value of Commingled Fluids: The subject pools are surface commingled, therefore downhole commingling will not affect the price.

9. Current Production: The Blinebry was last tested on 6/17/87, at which time it was producing 16 BOPD, 4 BWPD and 390 MCFPD. The Tubb was last tested on 3/13/87 at which time it was producing 8 BOPD, 0 BWPD, and 473 MCFGPD.

10. Recommended Oil and Gas Allocations: Based on expected IP's and decline rates

Blinebry		Tubb
50%	Oil	50%
18%	Gas	82%

11. Ownership and Royalty Interests: Ownerships of the two pools is common and correlative rights will not be violated.

12. Future Secondary Recovery Operations: Commingling will not jeopardize the efficiency of future secondary recovery operations.

13. Production Methods: The commingled production will be rod pumped. The fluid level will be monitored to maintain a pumped off condition and to eliminate the possibility of cross flow between reservoirs.

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

OFFSET OPERATORS

Petro - Lewis Corporation
P.O. Box 90500
Houston, TX 77290

Summit Energy Inc.
1925 Mercantile Dallas Bldg.
Dallas, TX 75201

Texaco Producing Inc.
P.O. Box 3109
Midland, TX 79705

Amoco Production Company
P.O. Box 3092
Houston, TX 77210

Certified Mail - Return Receipt Requested

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

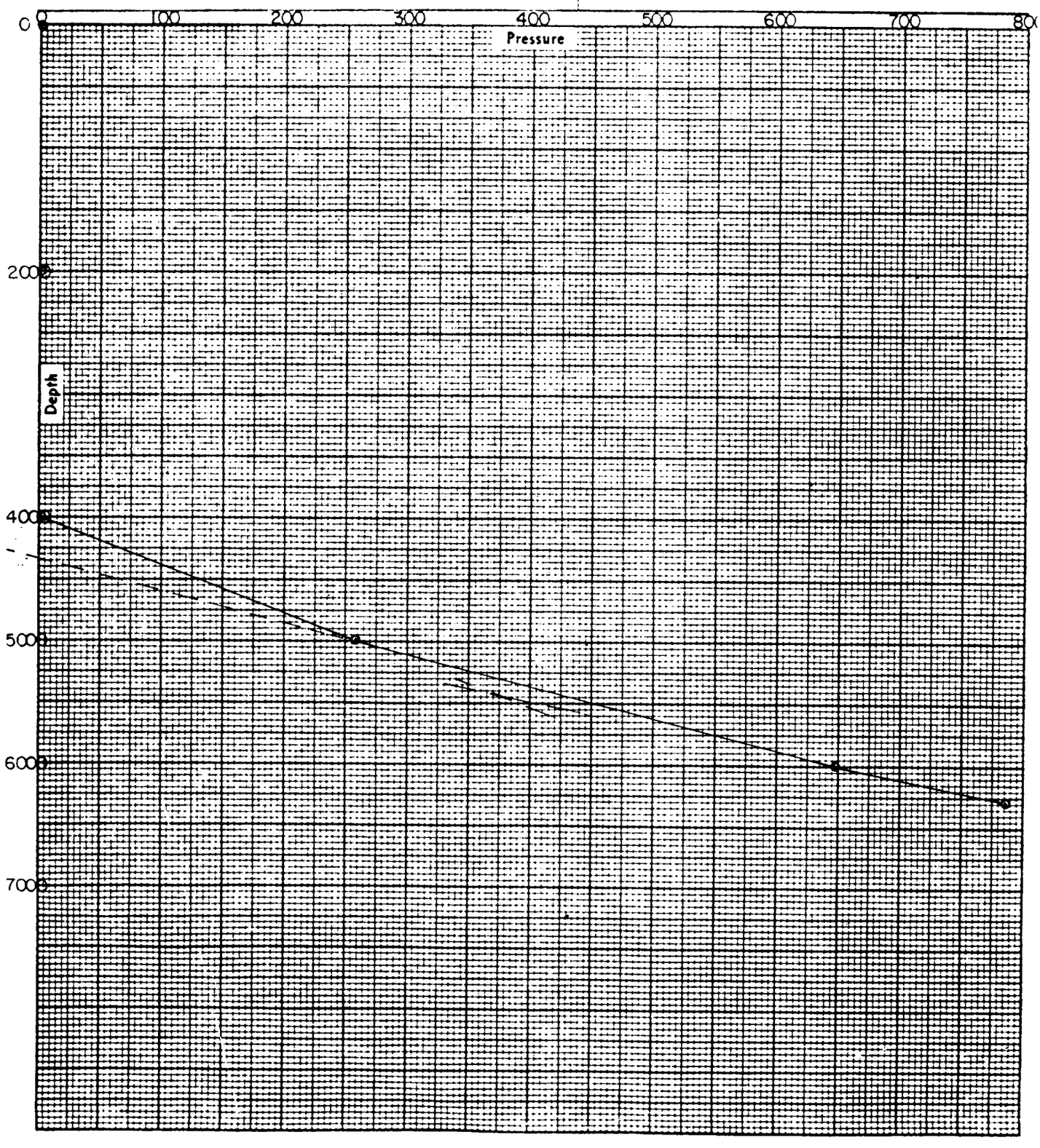
TELEPHONES 393-3942
393-3117

BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR CHEVRON U S A, INC.
LEASE Drinkard "B"
WELL NO. 7
FIELD Tubbs
DATE 4-24-87 TIME 5:00 P.M.

STATUS Shut-in TEST DEPTH 6,298'
TIME S.I. 14 Days LAST TEST DATE
CAS. PRES. BHP LAST TEST
TUB. PRES. 0 BHP CHANGE
ELEV. FLUID TOP 4,340'
DATUM WATER TOP 5,450'
TEMP RUN BY B.T.
CLOCK NO. 23122 GAUGE NO. 19389
ELEMENT NO. 17664 (0-2150 PSI)

DEPTH	PRESSURE	GRADIENT
000	000	
2000	000	Neg.
4000	000	Neg.
5000	259	.259
5500	434	.350
6000	648	.428
6298	786	.463



NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

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

Operator: GULF OIL CORP.			Lease: DRINKARD NCT-B	Well No.: 7
Unit Letter: K	Section: 30	Township: 22S	Range: 38E	County: LEA
Actual Footage Location: 2120 feet from the SOUTH line and 1980 feet from the WEST line				
Ground Level Elev.: 3338.2	Producing Formation: TUBB		Pool: TUBB OIL & GAS	Dedicated Acreage: 40 Acres

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

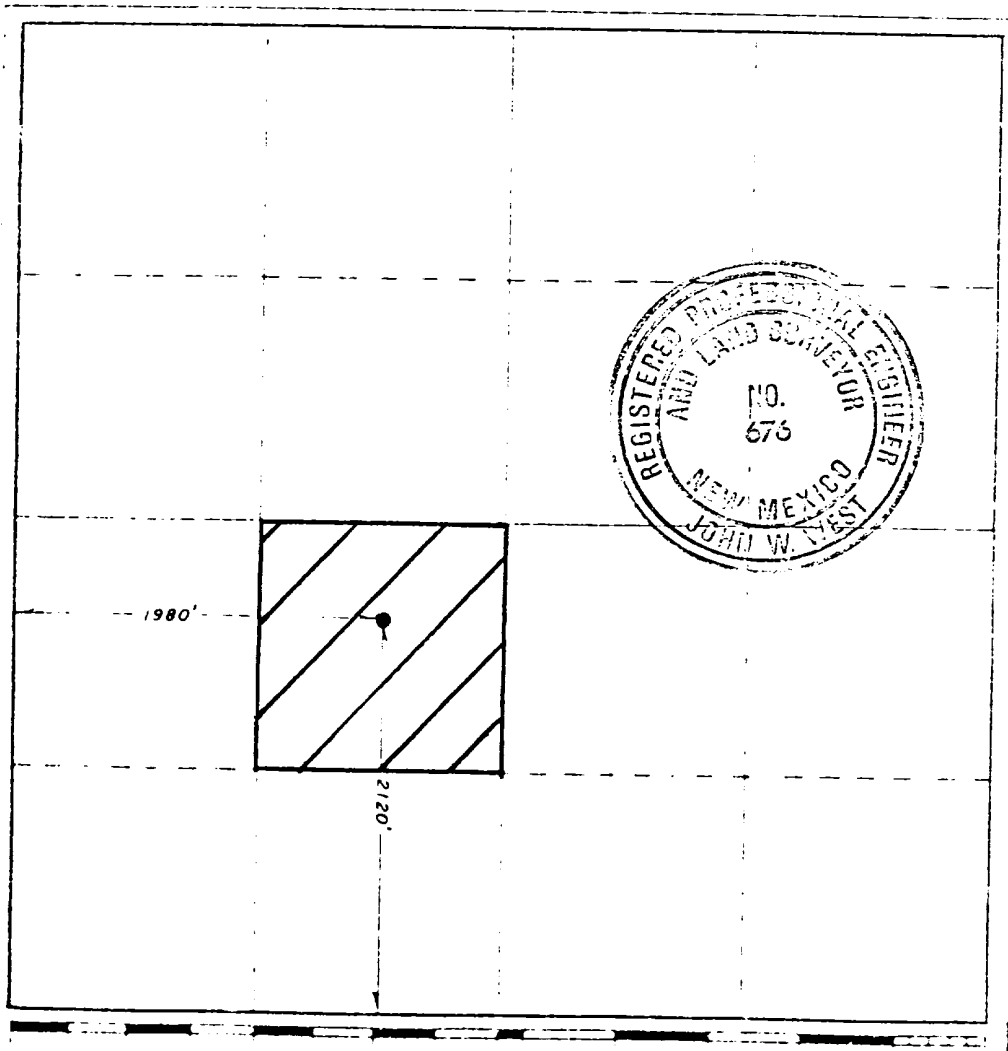
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR
NO. 676
NEW MEXICO
JOHN W. WEST

CERTIFICATION

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

M W Casey

Division Proration Engineer

Chevron U.S.A. Inc.

November 5, 1985

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: RESTAKED 1/15/85
1/24/84

Registered Professional Engineer and/or Land Surveyor

John W. West

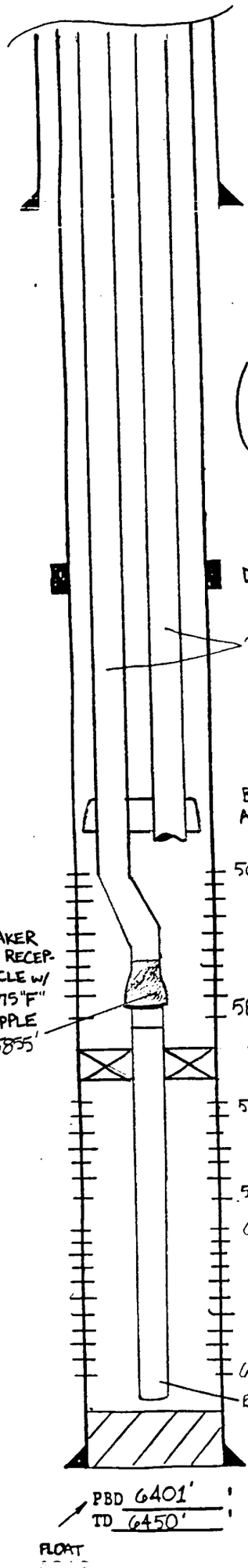
Certificate No. JOHN W. WEST, 676

WELL DATA SHEET

WELL NO. DRINKARD (NCT-B) #7 FIELD/POOL BLINEBRY OIL & GAS DATE 8-20-85

ATION 1980 FEET FROM WEST LINE AND 2120 FEET FROM SOUTH LINE

SECTION 30 T22S R38E UNIT K COUNTY LEA STATE NM



Date Completed AUG. 1985

Initial Formation BLINEBRY & TUBB

From: ' to ' GOR

Initial: Production ☐ bopd bwpd

Or: Injection ☐ bwpd @ psi

Completion Data:

PERF'D TUBB @ 6049, 50, 76, 77, 96, 97, 6103, 04, 29, 30, 39, 40, 58, 59, 96, 97, 6210, 11, 24, 25, 44, 45, 67 & 68 w/ 1 JHPF. ACIDIZE w/ 7000 GALS 15% NEFE HCL w/ 1500 SCF N_2 PER BBL. DROPPED 1-1.3SG RCNBS EVERY 5 BBLS FOR 1ST 3000 GALS & EVERY 2 BBLS FOR REMAINDER. FRAC'D w/ 80,000 GALS 70Q FOAM & 122,000 # 20-40 SAND @ 20 BPM & 4700 PSI. SET RBP & PERF'D UPPER TUBB @ 5898-5900, 5918-20, 5960-62 & 5990-92 w/ 1 JHPF. BROKE DOWN w/ 300 GALS NEA & ACIDIZED w/ 1500

Subsequent Workover or Reconditioning:

GALS 15% NEFE HCL & 1500 SCF N_2/BBL @ 6 BPM. FRAC'D UPPER TUBB w/ 39,000 GALS 70Q FOAM & 60,000 # 20-40 SAND @ 20 BPM

PERF'D BLINEBRY @ 5607, 38, 55, 71, 89, 5702, 35, 63 & 5803 w/ 1 JHPF. BROKE DOWN w/ 500 GALS 15% NEFE HCL & ACIDIZED w/ 3000 GALS 15% NEFE HC DROPPING A TOTAL OF 21 BALLS. AIR&P 4 BPM & 250 PSI. FRAC'D w/ 114000 GALS 40# X-LINKED GEL & 273,000 # 20-40 SAND @ 17 BPM & 3850 PSI. TUBED UP AS DUAL. BLINEBRY IPP 16 BOPD, 49 BWPD & 166 MCFGPD. TUBB CI PENDING GAS CONNECTION. (PUMPED 26 BOPD, 10 BWPD & 41 MCFGPD AFTER FRAC)

Present Inj. ☐ bwpd @ psi Date

Present Prod. ☐ bopd bwpd Date

GAS MCFPD

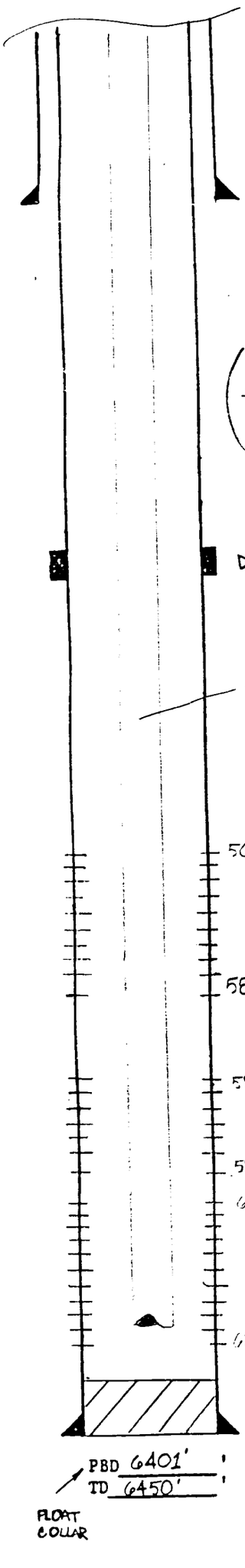
Remarks Or Additional Data:

WELL DATA SHEET

WELL NO. DRINKARD (NCT-B) #7 FIELD/POOL BLINEBRY OIL & GAS DATE 8-20-85

ATION 1980 FEET FROM WEST LINE AND 2120 FEET FROM SOUTH LINE

SECTION 30 T22S R38E UNIT K COUNTY LEA STATE NM



Date Completed AUG. 1985

Initial Formation BLINEBRY & TUBB

From: ' to ' GOR

Initial: Production ☐ bopd bwpd

Or: Injection ☐ bwpd @ psi

Completion Data:

PERF'D TUBB @ 6049, 50, 76, 77, 96, 97, 6103, 04, 29, 30 39, 40, 58, 59, 96, 97, 6210, 11, 24, 25, 44, 45, 67 & 68 W/ 1 JHPF. ACIDIZE W/ 7000 GALS 15% NEFE HCL W/ 1500 SCF N_2 PER BBL. DROPPED 1-1.3SG RCNBS EVERY 5 BBLS FOR 1ST 3000 GALS & EVERY 2 BBLS FOR REMAINDER, FRAC'D W/ 80,000 GALS 70 Q FOAM & 122,000 # 20-40 SAND @ 20 BPM & 4700 PSI, SET RBP & PERF'D UPPER TUBB @ 5898-5900, 5918-20, 5960-62 & 5990-92 W/ 1 JHPF. BROKE DOWN W/ 300 GALS NEA & ACIDIZED W/ 1500 GALS 15% NEFE HCL & 1500 SCF N_2/BBL @ 6 BPM. FRAC'D UPPER TUBB W/ 39,000 GALS 70 Q FOAM & 60,000 # 20-40 SAND @ 20 BPM

Subsequent Workover or Reconditioning:

PERF'D BLINEBRY @ 5607, 38, 55, 71, 89, 5702, 35, 62 & 5803 W/ 1 JHPF. BROKE DOWN W/ 500 GALS 15% NEFE HCL & ACIDIZED W/ 3000 GALS 15% NEFE HCL DROPPING A TOTAL OF 21 BALLS. AIR SP 4 BPM & 2500 PSI. FRAC'D W/ 114000 GALS 40# X-LINKED GEL & 273,000 # 20-40 SAND @ 17 BPM & 3850 PSI. TUBED UP AS DUAL. BLINEBRY IPP 16 BOPD, 49 BWPD & 166 MCFGPD. TUBB CI PENDING GAS CONNECTION (PUMPED 2% BOPD, 10 BWPD & 41 MCFGPD AFTER FRAC)

Present Inj. ☐ bwpd @ psi Date

Present Prod. ☐ bopd bwpd Date

GAS MCFPD

Remarks Or Additional Data:

7" " OD 26 # LT&C Thd

Gr. K-55 , Csg.

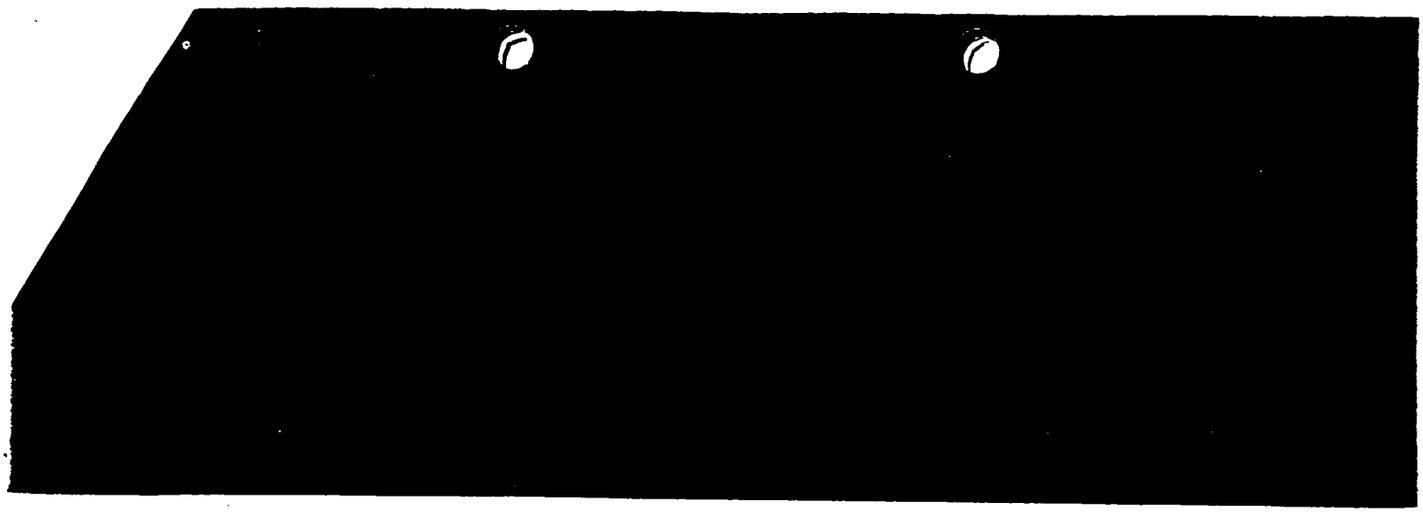
set @ 6449 ' w/ sx

Cmt Circulated? YES

TOC @ ' by TS

1ST STAGE: 750 SKS, CIRC 150 SKS

2ND STAGE: 1100 SKS, CIRC 178 SKS



R 38 E

(Gulf) (BI–T GAS)
Texaco
Texaco
Marathon
Hanson Oil
Nix
24
19
20
Texaco
Muncy
Gutman
Blinebry
Blinebry
Gulf
Gulf
Texaco
Ella
Petro-Lewis
Blinebry
Summit
Below T/Tubb
Drinkard
Vivian
Sun
25
Summit
30
Summit
Gulf
29
Gulf
(Gulf)
Gulf
Lineberry
Higgins
Texaco
Gulf
Amanda
Drinkard (B)
Blinebry
Watkins
Summit
Texaco
Amoco
Gulf
Blinebry
Gulf
36
31
Cities
32
Scarborough Est.
Andrews
Gulf
Pike
1
6
5

GAS-OIL RATIO TESTS

Operator: Chevron, USA, Inc.

Pool: Tubb & Blinebry

County: Lea

P.O. Box 670 Hobbs, NM 88240

TYPE OF TEST - (X) Scheduled [ ] Completion [ ] Special [X]

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	Length of Test Hours	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT./
						Tubbs side on dual well										
Rinkard NCT-B	7	K	30	22	38	3/13/87	P	2" wo	55	11	24	0	35.7	8	473.0	59125
						Blinebry side on dual well										
Rinkard NCT-B	7	K	30	22	38	6/17/87	P	2" wo	50	11	24	4	36.5	16	390.0	24375
		These Tests Are For CDH														
		Permisson Only														

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules.

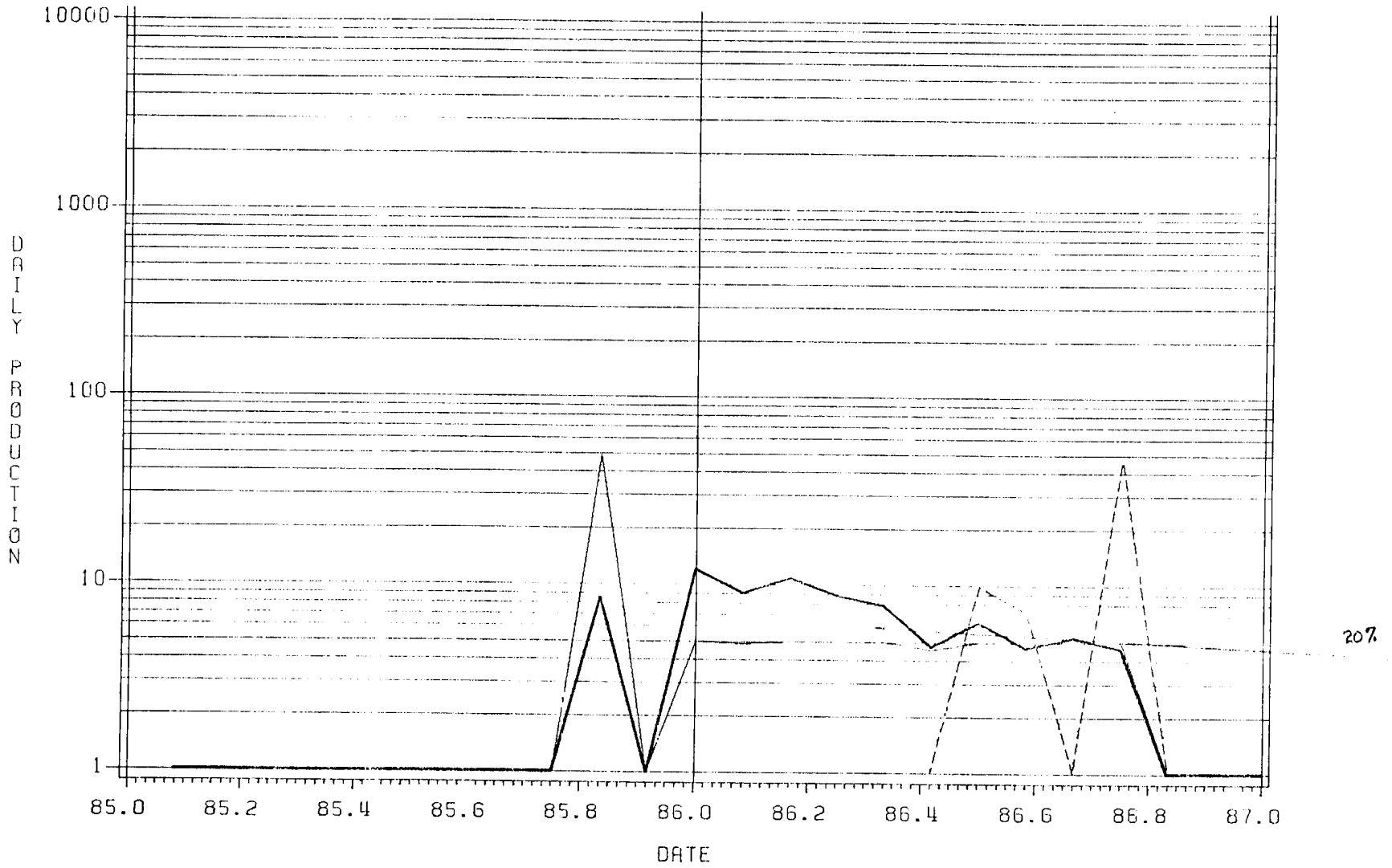
I hereby certify that the above informa
is true and complete to the best of my kn
ledge and belief.

D. R. Jennings
(Signature)
Production Specialist

PRODUCTION DATA PLOT

PETROLEUM INFORMATION

WELLNO=007 WELLNA=DRINKARD NCT B OPERNA=CHEVRON U.S.A. INC. FLDRESNA=BLINEBRY OIL AND GAS

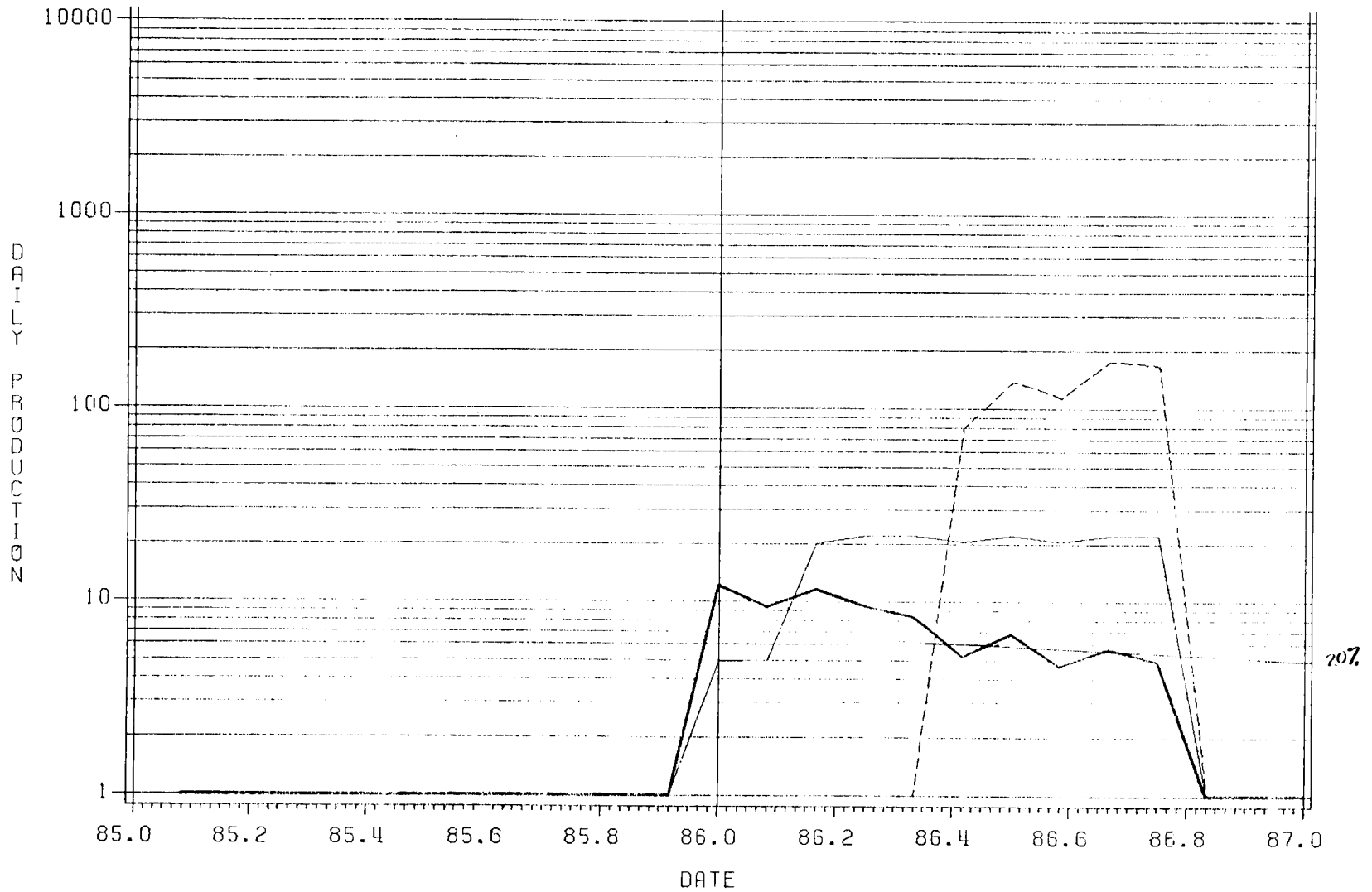


HEAVY SOLID LINE=BOPD
SOLID LINE=BWPD
LIGHT DASHED LINE=MCFD

PRODUCTION DATA PLOT

PETROLEUM INFORMATION

WELLNO=007 WELLNA=DRINKARD NCT B OPERNA=CHEVRON U.S.A. INC. FLDRESNA=TUBB OIL AND GAS



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

MEMORANDUM GO-144

TO: A.W. BOHLING — MAY 6 19 87

FROM: B.P. HEBERT

SUBJECT: DRINKARD B#7: DATA FOR DHC PERMIT APPLICATION

OUR FILE:

YOUR FILE:

BHP DATA

I) TUBB FORMATION: BHP = 786 PSI (SEE ATTACHED BUILDUP)

II) BLINEBRY FORMATION:

$$BHP = P_{GAS} + P_{LIQUID}$$

$$P_{GAS} = P_{WH\ (STATIC)}\, e^{\frac{0.01875 \times SG \times D}{SAVG \times TAVG}} \quad \text{(CRAFT \& HAWKINS CORRELATION)}$$

$$= 95\ PSI\ e^{\frac{(0.01875)(.706)(4650)}{(0.831)(110+460)}}$$

$$= 108\ PSI$$

$$P_{LIQUID} = .052 \times MW \times H$$

WHERE: MW = DENSITY OF OIL-WATER MIXTURE (50% OIL & 50% WATER)

$\varphi_{H_2O} = 8.8$ LB/GAL

$\varphi_{OIL} = 7.0$ LB/GAL (37° API)

H = HEIGHT OF FLUID COLUMN = MID PERF DEPTH − STATIC FLUID LEVEL DEPTH

$$P_{LIQUID} = .052\left[.50(7.0+8.8)\right](5705-4650)$$

$$= 433.4\ PSI$$

BHP = 541.4 PSI