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

R. C. Anderson
Division Manager
Hobbs Division
Production Department

January 8, 1986

APPLICATION TO DOWNHOLE COMMINGLE
CHEVRON'S HARRY LEONARD (NCT-F)
WELL NO. 17 LOCATED IN UNIT A,
SECTION 2-T21S-R37E, LEA COUNTY
NEW MEXICO

Richard L. Stamets
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 within the wellbore from the Drinkard and Wantz Abo Pools of the subject well. The Harry Leonard (NCT-F) Well No. 17 was drilled in 1954 as a Blinebry producer. The well was temporarily abandoned in 1967. In September of 1985 the wellbore was reentered and deepened to the Wantz Abo. After completion tests from the Abo, the well was plugged back and tested in the Drinkard. With the indicated marginal production from both zones, installation of dual equipment cannot be justified. In the interest of conservation and prevention of waste, we propose to downhole commingle the Drinkard and Wantz Abo 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 Mike Casey at (505)-393-4121.

Yours very truly,

R. C. Anderson

R. C. ANDERSON

MWC/jc

Attachments

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

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

2. Lease, Well, and Location: Harry Leonard (NCT-F) Well No. 17, 897' FNL and 990' FEL of Section 2-T21S-R37E, Lea County, N.M.

3. Producing Zones: Drinkard and Abo.

4. Decline Curve: The Drinkard is expected to decline at 15% per year after an IP of 0 BOPD with 13 MCFGPD. The Abo is expected to decline at 15% per year after an IP of 6 BOPD with 20 MCFGPD.

5. Bottom Hole Pressure: Drinkard calculated BHP of 973 psi. at depth of 6911' ABO BHP measured 1750 psi at depth of 6911'.

6. Fluid Characteristics: The Drinkard and Abo are currently surface commingled at the battery under Commingling Order PC489. To date there has been no evidence of fluid incompatibility.

7. Well History: The subject well was spudded 10-30-85 and drilled to a total depth of 5980'. Thirteen and three-eights inch surface pipe was set at 327' and cement was circulated to the surface. Eight and five-eights inch casing was set at 3098' and cement was circulated to the surface. Five and one-half inch casing was set at 5924' and cemented with 750 sacks, calculated top of cement at 1842'. The well was open hole completed in the Blinebry.

   03/56: Fraced with 8000 gallons lease oil with 8000 lb sand

   05/59: Perforated Blinebry at 5856' - 5904', fraced with 16,000 gallons oil and 20,000 lbs sand

   04/67: TA'd wellbore

   09/85: Reentered TA'd well, drilled to a total depth of 7554' and set 4" liner at 7554' with top of liner at 5536; cemented with 135 sacks, circulated to the top of liner. Perforate Abo from 7062' - 7507'. Acidize with 41,000 gallons acid. IP'd at 6 BOPD, 4 BWPD, and 20 MCFGPD.

   10/85: Set plug at 7040' and perforate the Drinkard from 6809' - 7012'. Acidize w/ 28,000 gallons acid. IP'd at Trace of oil, 24 BWPD, and 13 MCFGPD.

   12/85: Drilled out plug at 7040'. Set packer at 7043'. Run bottom hole pressure test in Abo. Pumping from Abo below the packer, Drinkard is closed in pending authorization to downhole commingle.

8. Value of Commingled Fluids: The Drinkard and Abo are being surface commingled on the subject Lease as authorized by Division Order PC489. Therefore, downhole commingling will not effect the price.

9. Current Production: Drinkard tested 0 BOPD, 24 BWPD, and 13 MCFGPD, in October of 1985. The Abo tested 6 BOPD, 4 BWPD, and 20 MCFGPD in December of 1985.

10. Recommended Oil and Gas Allotments:

ABO		DRINKARD
100%	OIL	0%
60%	GAS	40%

11. Ownership and Royalty Interests: 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 pumped and the fluid level monitored to maintain a pumped off condition and 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

Conoco Inc.
P.O. Box 460
Hobbs, N.M. 88240

Natural Resources Group, Inc.
601 West George
Midland, Tx. 79701

Bravo Energy
P.O. Box 2160
Hobbs, N.M. 88240

Elliott Oil Company
P.O. Box 1355
Roswell, N.M. 88201

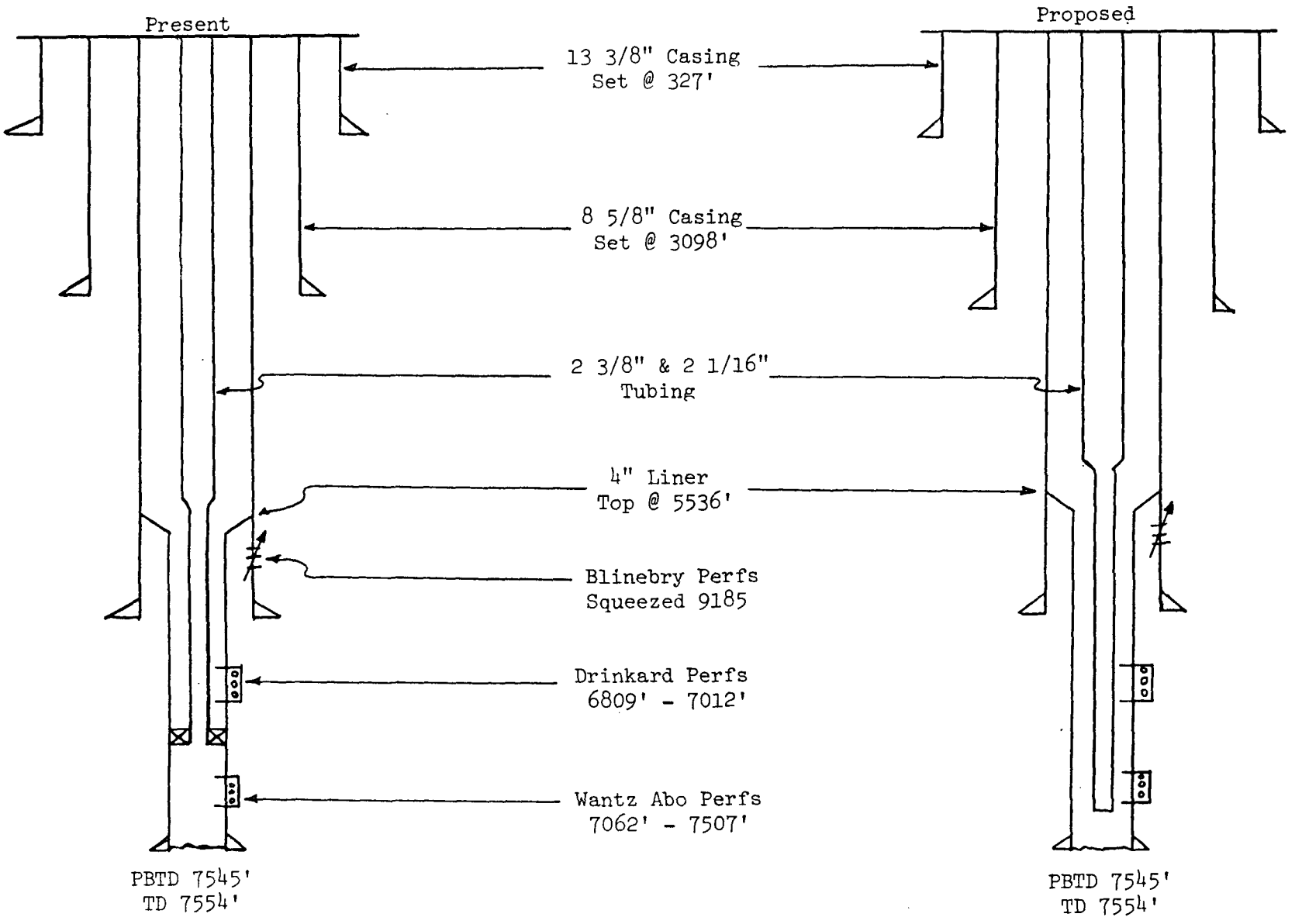
Tenneco Oil Company
P.O. Box 3249
Englewood, CO. 80155

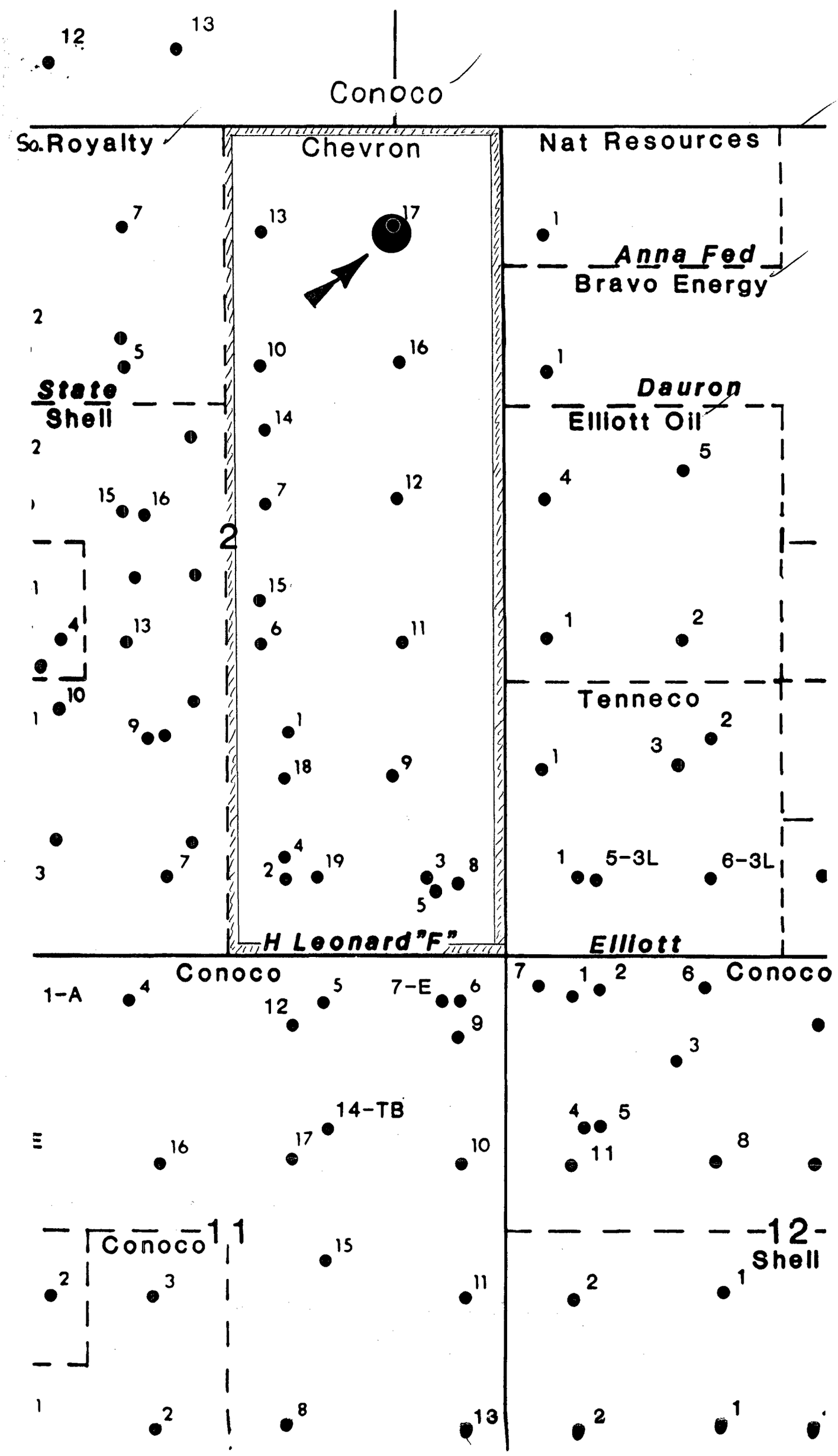
Shell
P.O. Box 2463
Houston, Tx. 77001

Southland Royalty Company
21 Desta Dr.
Midland, Tx. 79701

Certified Mail - Return Receipt Requested

CHEVRON U.S.A. Inc.
Harry Leonard (NCT-F) Well No. 17
WELLBORE DIAGRAMS




Conoco
So. Royalty
Chevron
Nat Resources
Anna Fed
Bravo Energy
State
Shell
Dauron
Elliott Oil
Tenneco
H Leonard "F"
Elliott
Conoco
Conoco
Conoco
Shell
1-A
7-E
14-TB
5-3L
6-3L
2
11
12

WELL L. .CATION AND ACREAGE DEDICATION F(T

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.	Harry Leonard (NCT-F)	17

Unit Letter	Section	Township	Range	County
A	2	21S	37E	Lea

Actual Footage Location of Well:
897 feet from the North line and 990 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3525	Drinkard : Abo	Drinkard : Abo	37.14 Acres

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

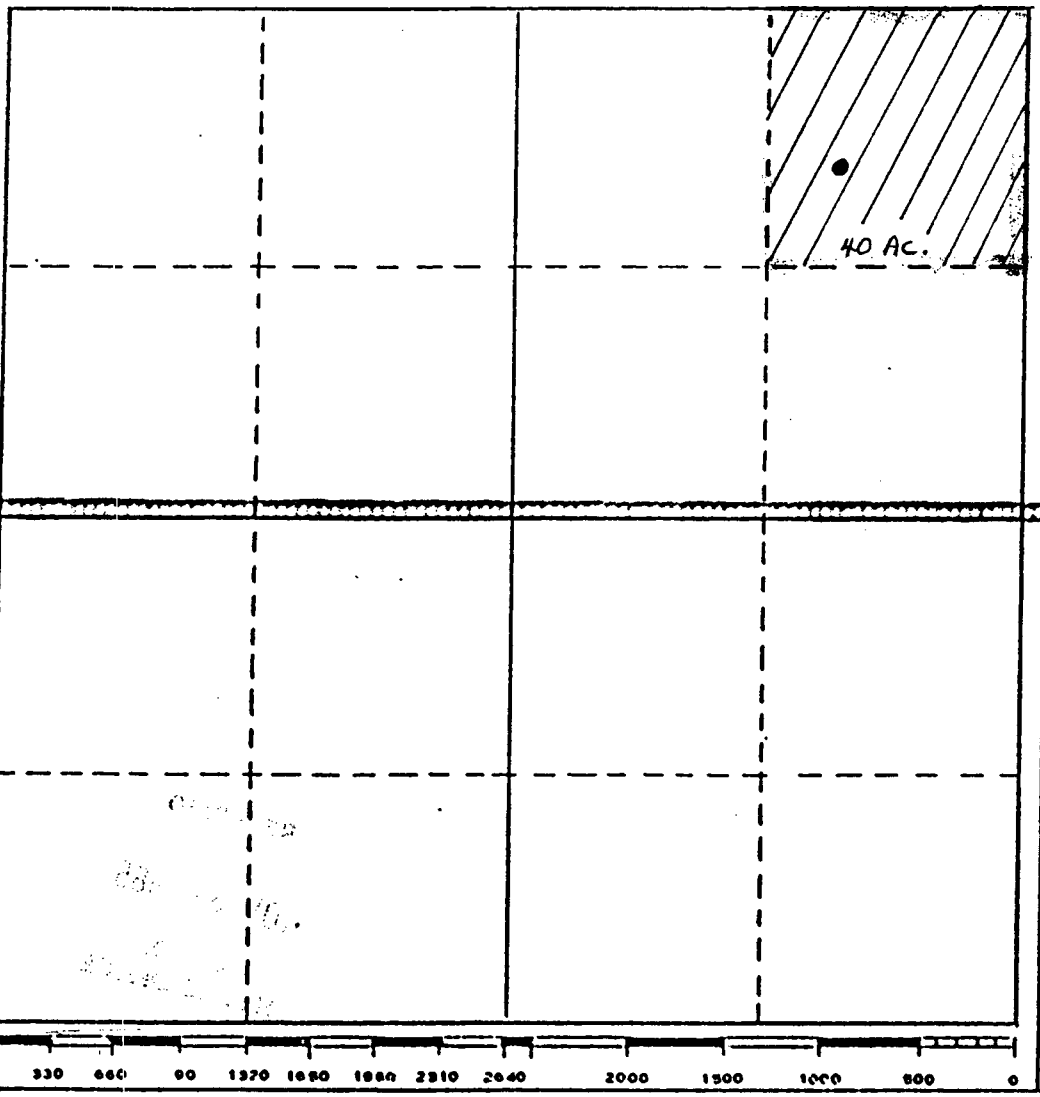
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.

P. H. Briley Jr

Name: P. H. Briley

Position: Div Drilling Manager

Company: Chevron U.S.A. Inc.

Date: 11-4-85

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.

Chevron

CALCULATION SHEET
Chevron U.S.A. Inc.

Date: 12/2/85
Prepared by: BPH
Page No.: of

Title: H. LEONARD F#17 – DOWNHOLE COMINGLE
Location:
Department:
Project Number:

DRINKARD FORMATION

$$P_{RESV} = P_{BHP\ STATIC} = P_{CSG\ PRESS} (1) + P_{GAS\ COLUMN} (2) + P_{OIL\&WATER\ COLUMN} (3)$$

(1) $P_{CSG} = 218$ PSI (MEASURED)

(2) $SG_{GAS} = 1.071$ (FROM GAS ANALYSIS)

$$\rho_{GAS} = (SG_{GAS})(\rho_{AIR}) = (1.071)(1.2929\ GM/L)(.008345\ LB/GAL / GM/L)$$

GAS GRAD. $= (0.0116\ LB/GAL)(.052) = 0.0006$ PSI/FT

$$P_{GAS\ COLUMN} = (0.0006\ PSI/FT)(5363\ FT) = 3.22\ PSI$$

(3) DRINKARD FORMATION IS CURRENTLY PRODUCING 100% WATER

FROM WATER ANALYSIS: SG = 1.1215

$$\rho = (1.1215)(8.337\ LB/GAL) = 9.35\ LB/GAL$$

$$P = (.052)(9.35)(6911 - 5363)$$

$$= 752.64\ PSI$$

$$P_{RESV} = 218 + 3.22 + 752.64$$

$$\boxed{P_{RESV} = 973.86\ PSI}$$

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

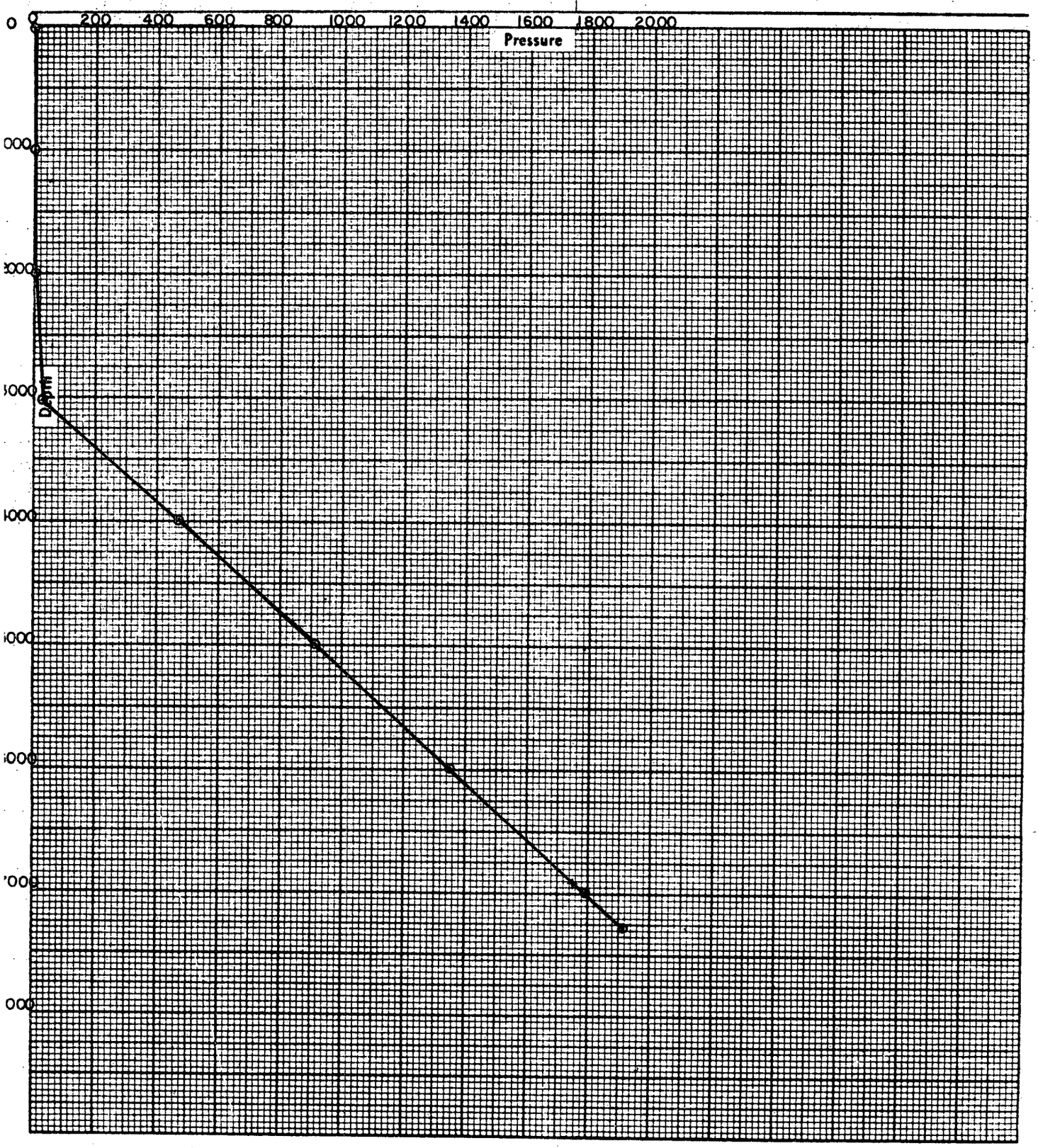
TELEPHONES 393-3942
393-3117

BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR CHEVRON USA
LEASE HARRY LEONARD F-17
WELL NO. 1
FIELD
DATE 12-18-85 TIME 9:00 A.M.

STATUS Shut-In TEST DEPTH 7290 '
TIME S.I. LAST TEST DATE
CAS. PRES. BHP LAST TEST
TUB. PRES. 0 PSI BHP CHANGE
ELEV. FLUID TOP 3000'
DATUM WATER TOP
TEMP RUN BY W.S.
CLOCK NO. 24959 GAUGE NO. 16389
ELEMENT NO. 45734 (0-4000 PSI)

DEPTH	PRESSURE	GRADIENT
000	000	
1000	000	Neg.
2000	000	Neg.
3000	039	.039
4000	469	.430
5000	907	.438
6000	1346	.439
7000	1787	.441
7290	1913	.434



STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

HOBBS DISTRICT OFFICE

TONEY ANAYA
GOVERNOR

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

January 16, 1986

RECEIVED
JAN 20 1986
OIL CONSERVATION DIVISION
SANTA FE

594

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

RE: Proposed:
MC _____
DHC X
NSL _____
NSP _____
SWD _____
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Chevron USA, Inc. Harry Leonard NCT-F No. 17-A 2-21-37
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

O.K.----J.S.

Yours very truly,

Jerry Sexton
Supervisor, District 1

/mc