

Sun Exploration and
Production Company
901 W Wall
Post Office Box 1861
Midland Texas 79702
915 685 0300

July 29, 1982

*Copy Osborne
915-685-0335*

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Michael E. Stogner

Re: Application for approval of downhole
commingling of production in the
Linam Hardy #1, Unit A, Sect. 29,
T-21-S, R-37-E, Lea County, New Mexico

Dear Mr. Stogner:

Sun's Linam Hardy Com. #1 is a dually completed Blinebry gas and Tubb gas well. (Note: the Blinebry completion was named the V. Linam #3 until recently when it was renamed the Linam Hardy Com. #1 and reclassified as a gas well.) The two zones were produced separately thru two strings of 2-1/16" tubing. (See attached wellbore sketch). The upper Blinebry zone was on rod pump while the lower Tubb zone flowed. The most recent tests were as follows:

Blinebry: 2 BOPD X 1 BWPD X 130 MCFGPD (5-26-82)
Tubb: 0 BOPD X 0 BWPD X 56 MCFGPD (5-28-82)

A recent problem that occurred has prompted Sun to seek permission for downhole commingling at this time.

Approximately four weeks ago, the wellhead on the subject well subsided about 10 inches. Upon closer inspection after digging down 5 feet around the wellhead, it was discovered that the 9-5/8" intermediate casing string had developed circumferential corrosion causing the casing to collapse. Downhole equipment including rods, pump, tubing, and packers were subsequently pulled from the well. The well is now secured and the casing has been repaired. It is Sun's intent to return the well to production. However, it is proposed to run only a single string of tubing and downhole commingle production from the Blinebry and Tubb pools. This production method should simplify our operations and ultimately reduce costs. Without downhole commingling, the Tubb zone cannot be produced economically. Also production may be increased when the hydrostatic head on the Tubb zone is reduced. No recent BHP's are available. Since the tubing and packer had to be pulled from the well, it is not possible to obtain a BHP now. (See attached data sheet for SIP's).

what?

9 5/8"

Administrative approval to downhole commingle is requested. The additional information concerning this application is attached for your consideration.

Sincerely yours,



Coby Osborne
Production Engineer

CO/nc

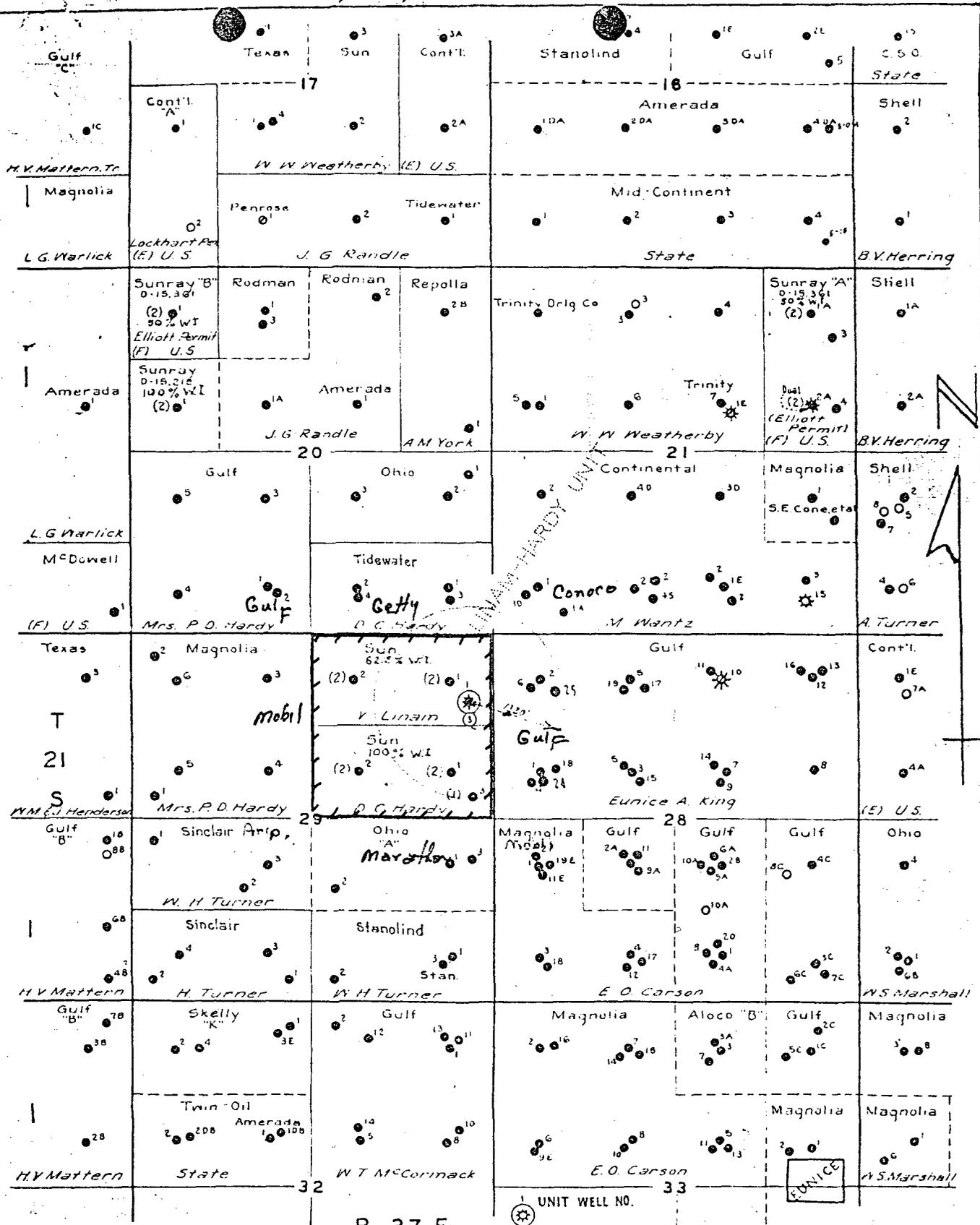
cc: Tom Golden
Fritz Brandes
Julian McLean
Deann Demp
Well File

INFORMATION AS OUTLINED IN RULE 303-C

1. Commingling is necessary to permit the Tubb Zone to be produced which would not otherwise be economically producible.
2. There will be no crossflow between zones to be commingled.
3. Neither zone is producing from fluid-sensitive sands, thus there will be no damage from water or other produced liquids.
4. Production from the Tubb Zone is dry gas. Therefore, no problem exists concerning compatibility of fluids of the zones to be commingled.
5. Ownership of the zones to be commingled is common.
6. Recent bottom hole pressures are not available, refer to letter.

- A. OPERATOR:
Sun Exploration and Production
Sun Production Division
P. O. Box 1861
Midland, Texas 79702
- B. LEASE:
Linam Hardy Com #1
Unit A, Sec. 29, T-21-S, R-37-E
Lea County, New Mexico
- C. Well is completed in the Blinebry and Tubb as a dual completion as per Order No. DC-411.
- D. The most recent productivity tests of the Blinebry and Tubb Zones are referenced in the letter.
- E. Production decline curves for both the Blinebry and Tubb Zones are attached.
- F. BOTTOM HOLE PRESSURE DATA:
No recent BHP's are available, only surface SIP's
Blinebry: SIP 675 psi (5-26-80)
Tubb: SIP 465 psi (5-26-80)
- G. FLUID CHARACTERISTICS:
There is no evidence of fluid incompatibility. The Blinebry Zone produces oil and gas whereas the Tubb Zone produces only dry gas.
- H. VALUE OF COMMINGLED FLUIDS:
There will be no loss in value of the produced fluids due to commingling.
- I. ALLOCATION FORMULAS:

$$X = \frac{Y}{Z} (100)$$
Where X = percent allocation of commingled production to desired zone
Y = Latest daily gas rate of desired zone, MCFPD
Z = Total combined Blinebry and Tubb daily gas rate, MCFPD
- Blinebry: $X = \frac{130}{(130 + 56)} (100)$
= 69.9%
- Tubb: $X = \frac{56}{(130 + 56)} (100)$
= 30.1%
- J. All offset operators have been notified by a copy of this application.
- | | |
|---|--|
| 1) Arco Oil and Gas Company
P. O. Box 1610
Midland, Texas 79702 | 4) Gulf Oil Exploration and Production
P. O. Box 670
Hobbs, New Mexico 88240 |
| 2) Conoco, Inc.
P. O. Box 460
Hobbs, New Mexico 88240 | 5) Marathon Oil Company
P. O. Box 552
Midland, Texas 79701 |
| 3) Getty Oil Company
P. O. Box 1231
Midland, Texas 79701 | 6) Mobil Producing Company
P. O. Box 633
Midland, Texas 79701 |

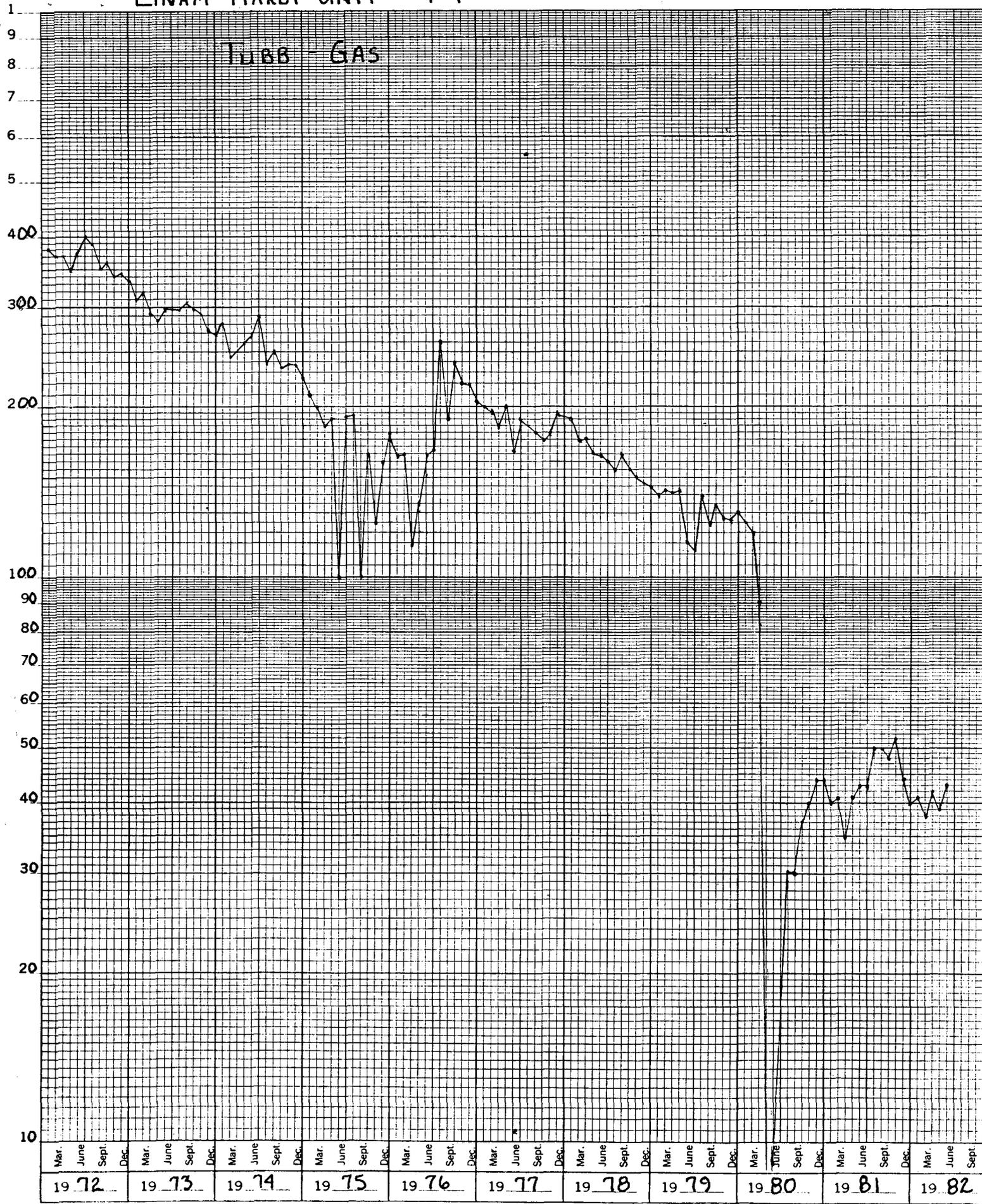


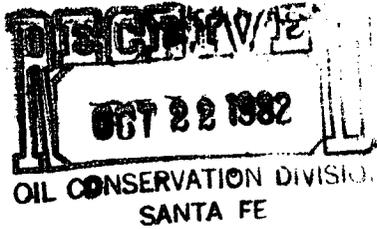
PRODUCING FORMATION		SUNRAY OIL CORPORATION		PRODUCING LEASES	
NAME	AVERAGE DEPTH	FIELD: DRINKARD		ELLIOTT B	
TUBBS SAND	6200.	DISTRICT: N&W TEXAS GROUP: EUNICE COUNTY: LEA STATE: N. MEX. SCALE 2000 1000 0 1000 2000 4000 FEET		J.G. RANDLE	
(1) LOWER MCKEE	7855			LINAM-HARDY GAS UNIT	
(2) CLEARFORK SECTION	6595			ELLIOTT A	
PERMIAN LIME				V. LINAM	
DRINKARD				D.C. HARDY	

LINAM-HARDY UNIT #1-T

TUBB-GAS

TUBB-GAS





**Sun Exploration and
Production Company**
901 W Wall
Post Office Box 1861
Midland Texas 79702
915 685 0300

October 19, 1982

State of New Mexico
Energy and Minerals Dept.
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Michael E. Stogner

Re: Application for approval of
downhole commingling of production
in the Linam Hardy #1, Unit A,
Sect. 29, T-21-S, R-37-E
Lea County, New Mexico

Dear Mr. Stogner:

In reference to our conversation on Oct. 18, 1982 concerning Rule 303-C (b) (1) information for our Linam Hardy #1 well, Sun does not believe production from the Tubb can be economically justified if downhole commingling is not permitted. To restore the Tubb to production without downhole commingling Sun would have to run a new 2-1/16" tubing string in the well. The 2-1/16" string previously pulled from the well is not considered reusable. The cost to replace the string would be \$25,955. With production from the Tubb being only 56 MCFGPD at \$0.45/MCF, a total daily income before operating expenses is \$25.20. Payout of the tubing replacement at this income rate would be 2.8 years. Sun does not feel the Tubb production can justify the tubing replacement expense. Therefore, Sun proposes to run a single string of 2-3/8" tubing and pump the downhole commingled Blinebry and Tubb zones.

A handwritten signature in cursive script that reads "Coby Osborne".

Coby Osborne
Production Engineer

CO/nc

cc: Tom Golden
Tom Fox
Fritz Brandes
Julian McLean
Well file

WELL COMPLETION SKETCHES

SUN-6641-A

V. LINAM #3 / LINAM HARDY UNIT #1
WELL

7-6-78

DATE

S44

FIELD

EL: 3482-KB
3487-DP
3471-GL

PRESENT COMPLETION

SUGGESTED COMPLETION

ORIGINAL COMP.

WELL CLASS _____

PERMANENT WELL BORE DATA

17 1/4" hole
13 3/8", 72# N-80 @ 315' w/ 300sx cmc
12" hole
5 1/2" CUT OFF + CSC BOWL TIE-
BACK @ 387'

9 5/8", 32# H-40 @ 2850' w/ 200sx cmc
7 1/8" hole

TOC: 5 1/2" hole 3350' BY T.O.

BLINEART PERFS: 3SPF
5600'-50'

5656, 62, 69, 5701, 04, 07, 10
57, 85, 5818, 42, 43, 58, 77
79, 5902, 15, 36, 57

TUBB PERFS: 4SPF

6150-75, 6193-6230, 248 holes

PBTD 6965'

CINPC 6975' w/ 10' cmc SWWD

WANTZ-ABD PERFS:

7210-58, 6SPF, 288 holes

PBTD -7338'

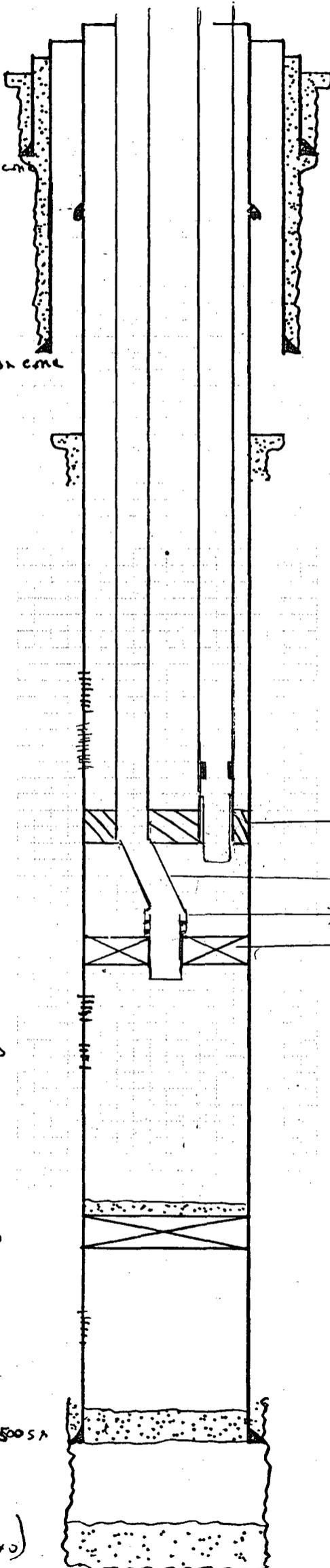
5 1/2", 15.5 + 17" J-55 @ 7382' w/ 500sx

PBTD -7725' (50 SX PLUG
7725-7940)
TD -7941'

DATA ON THIS COMPLETION

LONG STRING: LHGU #1
SHORT STRING: V. LINAM #3

UT & LT: 2 1/16" STRINGS



→ PARALLEL ANCHOR 6008'

→ 2 1/2 (34') 2 1/16" TBG

→ O57512

→ OTIS PERMALACH P&R
@ 6052'

OIL CONSERVATION DIVISION
DISTRICT I

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

DATE August 13, 1982

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

Gentlemen:

I have examined the application for the:

Sun Exploration & Prod. Co. Linam Hardy No. 1-A 29-21-37
Operator Lease and Well No. Unit, S - T - R

and my recommendations are as follows:

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

Yours very truly,



/mc

RECEIVED
AUG 20 1982
OIL CONSERVATION DIVISION
SANTA FE