

Gulf Oil Exploration and Production Company

R. C. Anderson
PRODUCTION MANAGER, HOBBS AREA

May 28, 1981

P. O. Box 670
Hobbs, NM 88240

Re: Harry Leonard (NCT-F) No. 1
Unit R Sec 2 T21S R37E
Lea County, New Mexico

Mr. Joe D. Ramey, Director
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Sir:

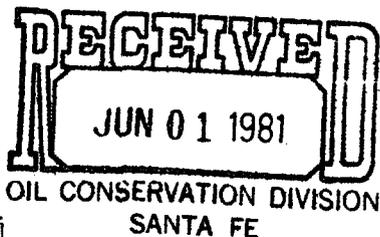
Your administrative approval is requested for an exception to Rule No. 303-C to permit down-hole commingling of marginal Tubb and Drinkard production in the well.

The subject well was drilled and completed in 1951 in the Hare Pool. In 1963 the Hare was abandoned and the Drinkard completed. In 1975 the Drinkard was abandoned and Tubb completed. It is proposed if an exception is granted to re-open the Drinkard and down-hole commingle with the Tubb. ABD

There is no evidence of incompatibility of fluids. Reservoir damage from down-hole commingling in the wellbore is not expected to occur. Ownership in the two pools is common and corelative rights will not be violated. Tubb and Drinkard production is surface commingled on the lease per commingling order PC-489 dated November 18, 1974.

If this application is approved, the existing pumping equipment will be used to produce the Tubb and Drinkard production. All offset operators have been notified by copy of this proposal to down-hole commingle the subject well.

Should secondary recovery operations become practical in the future, the two zones could be separated at that time without damaging either reservoir.



RQH/skj
Att'd

cc: Oil Conservation Division - Hobbs
C. F. Kalteyer - Midland
All Offset Operators
Division Director (Duplicate)

Yours very truly,

R. C. Anderson
R. C. ANDERSON

Oil
50% to DR
50% to TB
Gas
30% to TB
70% to DR



OFFSET OPERATORS - Harry Leonard (NCT-F) #1 Sec 2 T21S R37E Lea County, NM

Conoco, Inc.
P. O. Box 460
Hobbs, New Mexico 88240

Elliot Oil Co.
P. O. Box 1355
Roswell, New Mexico 88201

Exxon Co. U.S.A
P. O. Box 1600
Midland, Texas 79701

Kirby Exploration Co.
P. O. Box 1745
Houston, Texas 77001

Southland Royalty Co.
1100 Wall Towers West
Midland, Texas 79701

Shell Oil Co.
P. O. Box 1509
Midland, Texas 79702

Tubb
142 Oil
2000 GOR
284 MCF
Driskard
142 Oil
600 GOR
852

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OIL CONSERVATION DIVISION
SANTA FE

1. Operator: Gulf Oil Corporation P. O. Box 670
Hobbs, New Mexico 88240
2. Lease, Well and Location: Harry Leonard (NCT-F) No. 1, Unit R,
Sec 2 T21S R37E Lea County, New Mexico
3. Producing Zones: Currently producing the Tubb pool, which is to be commingled with the abandoned Drinkard pool if approved. The Drinkard was abandoned with a cast-iron bridge plug and 10 feet of cement, January 2, 1975.
4. Decline Curves: see attached.
5. Bottom Hole Pressures: A bottom hole pressure survey was run on the Tubb (see attached C-124) and was found to be 424 psi, at the midpoint of the perforations, 6436' (2944 subsea). The fluid was 1186' above the midpoint of the perforations 6436' (2944' subsea)

The estimated bottom-hole pressure from off-set producers is estimated to be 500 psi in the Drinkard at the midpoint of the perforations, 6693' (3201' subsea)
6. Fluid Characteristics: Drinkard and Tubb production on the Harry Leonard (NCT-F) Lease is currently commingled in surface facilities per commingling order PC-489 dated November 18, 1974. To date, there has been no evidence of fluid incompatibility.
7. Well History: The well was spudded 10-3-51 and drilled to a total depth of 8350'. Seven inch production casing was set at 8350' with 800 sacks of cement. The temperature survey indicated top of cement at 3665'. Initial completion was in the Hare, 2905 - 25', 7945' - 65', 7980 - 8010', 8220 - 50' with (4) ½" JHPF. June 9, 1958 the Hare was treated with 8000 gallons of acid solution with 7020 pounds walnut shells. The Hare was abandoned 5-21-63 with a cast-iron bridge plug at 7850' and capped with (7) feet of cement.

The Drinkard was completed 5-22-63, 6625.5 - 6627', 6659.5 - 6661', 6702 - 6703.5', 6759 - 6760.5' with (6) jet holes per interval. The Drinkard was acidized with 6250 gallons 15% HCL Acid initially. The Drinkard was abandoned 2-2-75 with a cast-iron bridge plug at 6600' and (10) feet of cement.



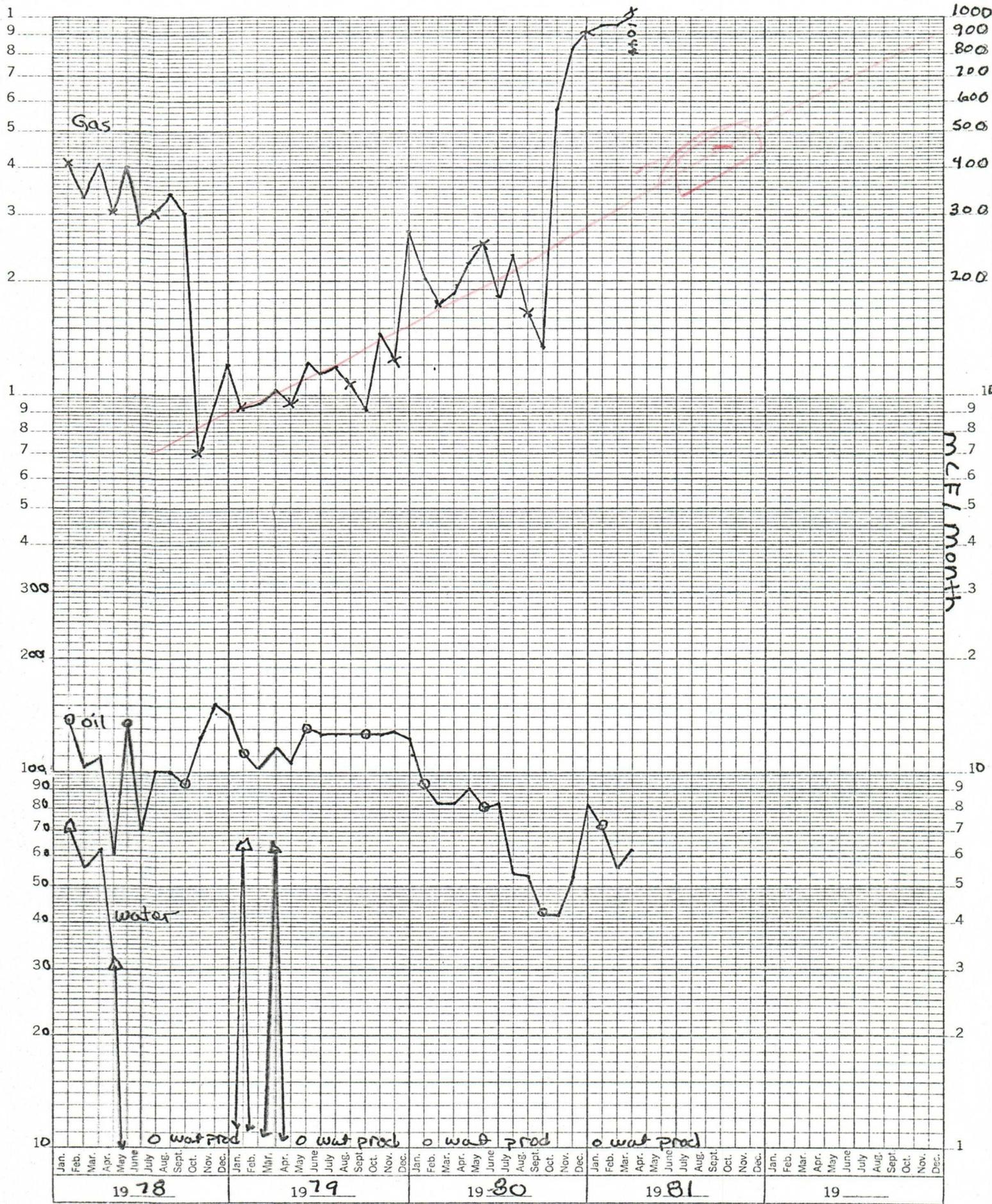
The Tubb was completed 2-2-75, 6332 - 6334', 6408 - 6410', 6464 - 6466', 6488 - 6490', 6538 - 6540', with (2) 0.72" JHPF. The Tubb was initially treated with 1600 gallons 15% HCL Acid and a 20,000 gel frac with 1 - 2# SPG. October 16, 1975 the Tubb was acidized with 1000 gallons 15% HCL Acid. The Tubb is currently producing.

8. Value of Commingled Fluids: Tubb and Drinkard production on the H. Leonard Lease is currently being surface commingled per commingling order PC-489 dated November 18, 1974.
9. Current Production: See attached C-116.
10. All offset operators are being notified by copy of this application.



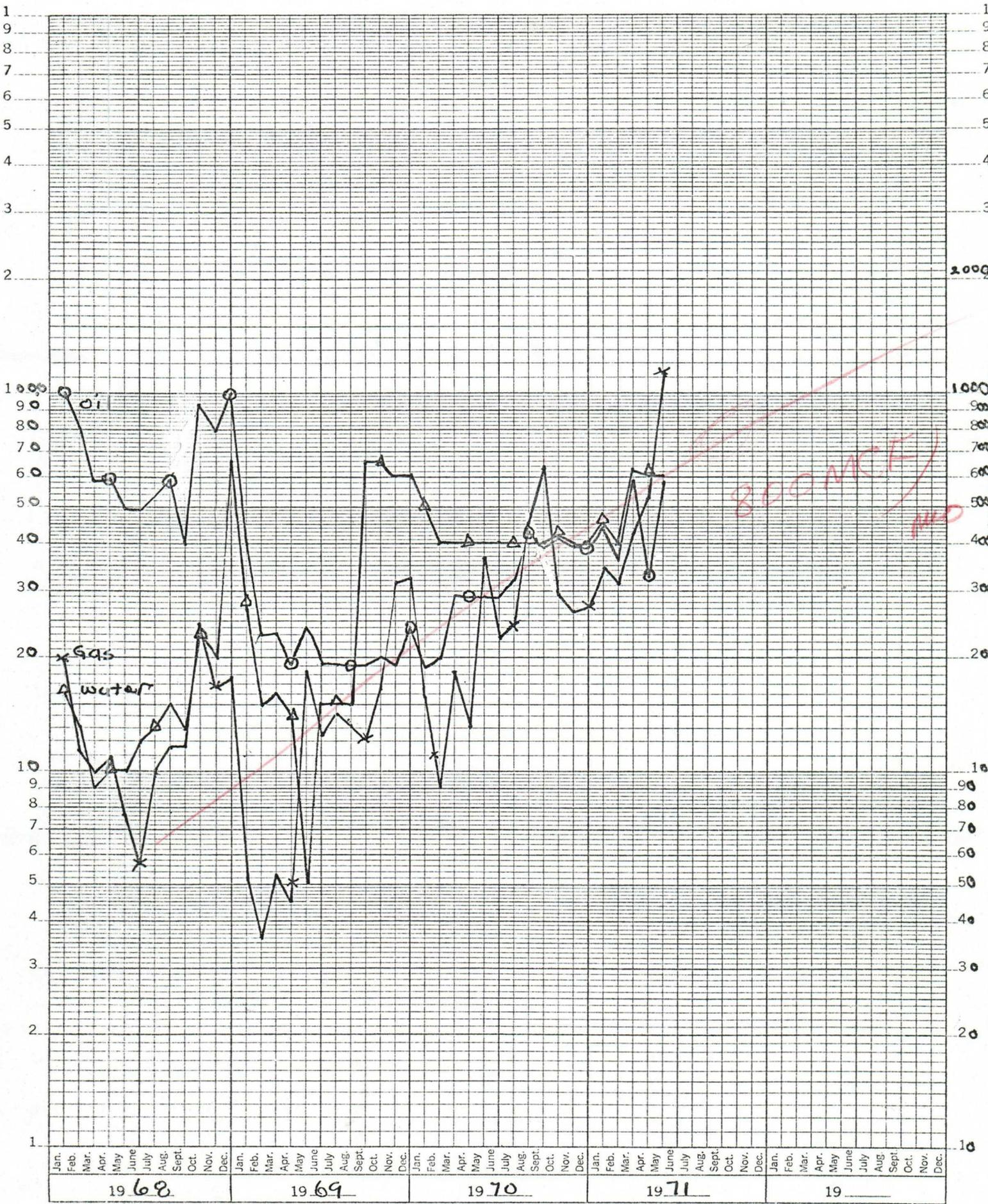
46 6690

5 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.



46 6690

5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.



Operator: Gulf Oil Corporation
 Address: P.O. Box 677 Hobbs, NM 88240
 Pool: Tubbs
 County: Lea Co., NM

| LEASE NAME | WELL NO. | LOCATION | | | | DATE OF TEST | TYPE OF TEST - (X) | CHOKER SIZE | TBG. PRESS. | DAILY ALLOW-ABLE | LENGTH OF TEST HOURS | PROD. DURING TEST | | | | GAS - OIL RATIO CU.FT/88L |
|-----------------------|----------|----------|---|----|----|--------------|--------------------|-------------|-------------|------------------|----------------------|-------------------|------------------|------------|------------|---------------------------|
| | | U | S | T | R | | | | | | | WATER BBL.S. | GRAV. OIL BBL.S. | OIL BBL.S. | GAS M.C.F. | |
| Harry Leonard (NCT-F) | 1 | R | 2 | 21 | 37 | 4-29-81 | P | 2"wo | 30 | 12 | 24 | 0 | 38.6 | 15 | 22.0 | 1467 |

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 SANTA FE

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 information is true and complete to the best of my knowledge and belief.

A. E. [Signature]
 Well Tester
 (Signature)

May 6, 1981
 (Title)

OIL CONSERVATION DIVISION
DISTRICT I

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SANTA FE

341

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

DATE June 1, 1981

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

Gentlemen:

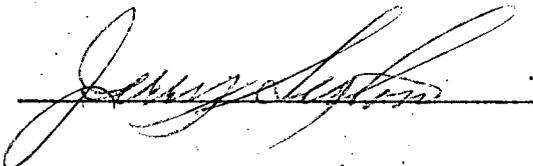
I have examined the application for the:

Gulf Oil Corporation Harry Leonard NCT-F Well No. 1-R 2-21-37
Operator Lease and Well No. Unit, S - T - R

and my recommendations are as follows:

OK -- JS --

Yours very truly,



/mc

Gett Y B20E
Sie 25 N 5 W