TESORO PETROLEUM CORPORATION

Suite 2000 First of Denver Plaza Building

633 Seventeenth Street

DENVER, COLORADO 80202

Rocky Mountain District

(303) – 825-2000

September 23, 1977

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

Re: Application to convert Hospah Sand Unit No. 49 to Water Injection,
Unit G, Section 1, T17N, R9W, McKinley Co., New Mexico
(NMOCC - R2807 with amendments A and B)

Dear Mr. Ramey:

We are applying for approval to convert Hospah Sand Unit well number 49 from a shut-in, uneconomic producer to a water injection well.

NMOCC order R-2807, R-2807A, and R-2807B established the Hospah Sand Unit, and administrative approval of additional production and injection wells, so long as they were no closer than 330 feet to the unit boundary nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary.

Attached is a plat (Figure 1) showing the location of this well; 330 feet from the north line and 1380 feet from the east line of Section 1, Township 17 north, Range 9 west, McKinley County, New Mexico. There is a water injection well, Hospah Sand Unit No. 66, between this well and the closest unit boundary. The water-injection wells are designated with a triangle on the plat.

In order to insure maximum recovery of oil in the area bounded by Well No's 50, 48, 19, 20, 51, 23, 1-Y, it is necessary for us to inject water into the Upper Hospah Sand in Well No. 49. We are unable to inject water into Well No. 66 after many workover attempts. Our latest structure maps place a possible fault midway between Well No's 49 and 66. Hospah Sand Unit No. 49 is the logical

injection well in this part of the reservoir.

A cross-section, Figure 2, between Well No's 20, 49, and 66 is included. Two things are apparent from these logs:

1. The Upper Hospah Sand is between 42 and 50 feet thick, and

2. There are shale streaks present that could prevent effective injection into all potential pay zones if these zones are not open to the well bore.

Well No. 49 has penetrated only 27 feet of the Upper Hospah, and we intend to deepen only 10 feet. The Upper and Lower Hospah are separated by 10 to 18 feet of shale in this area; we would thus have 15 to 23 feet of formation between the proposed TD and top of the lower sand. Communication of injected water to the lower zone should be prevented.

A diagramatic sketch of the proposed completion is attached (Figure 3). We intend to inject produced water from the Hospah Sand Unit at the rate of 600 to 1000 BPD with a 500 to 800 psi injection pressure. Produced water from the Upper and Lower Hospah on the SFRR "A" lease is used for makeup. We intend to use additional produced water (Upper and Lower Hospah) from our SFRR and Hanson leases for makeup water in the near future.

If any additional information is necessary for approval of this application, please feel free to call me or Mr. Fred Kastner collect at (303) 825-2000.

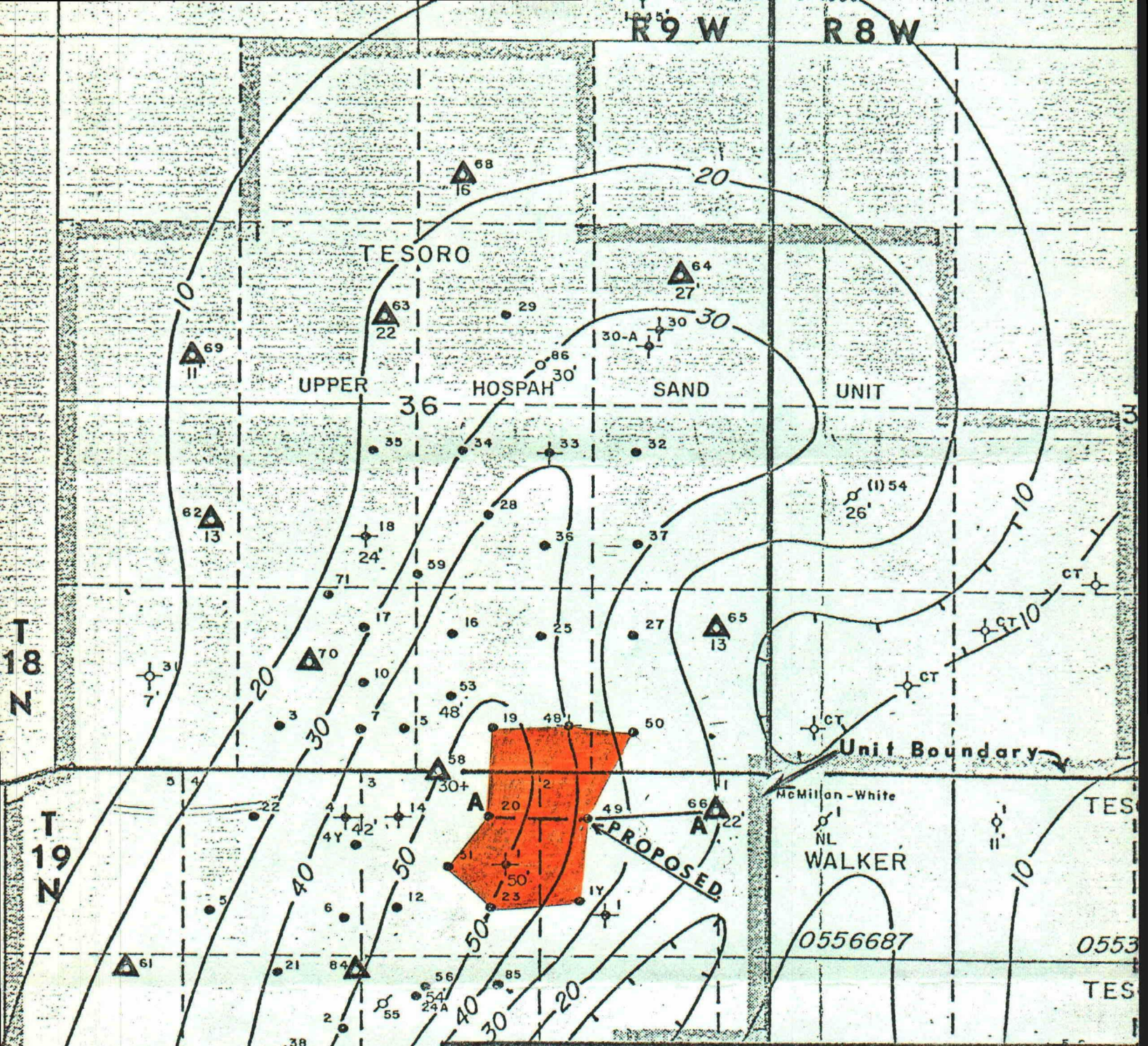
Yours very truly,

ILLEGIBLE

W. F. Parks

WFP/FEK/iw

3 Attachments
cc: Mr. A. R. Kendrick, Supervisor, NMOCC-District III
1000 Rio Brazos Road
Aztec, New Mexico 87410



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HOSPAH AREA

McKinley County, New Mexico

(Figure 1)

UPPER HOSPAH SAND SAND ISOPACH

1000 500 0 1000 2000

△ Water Injection Wells

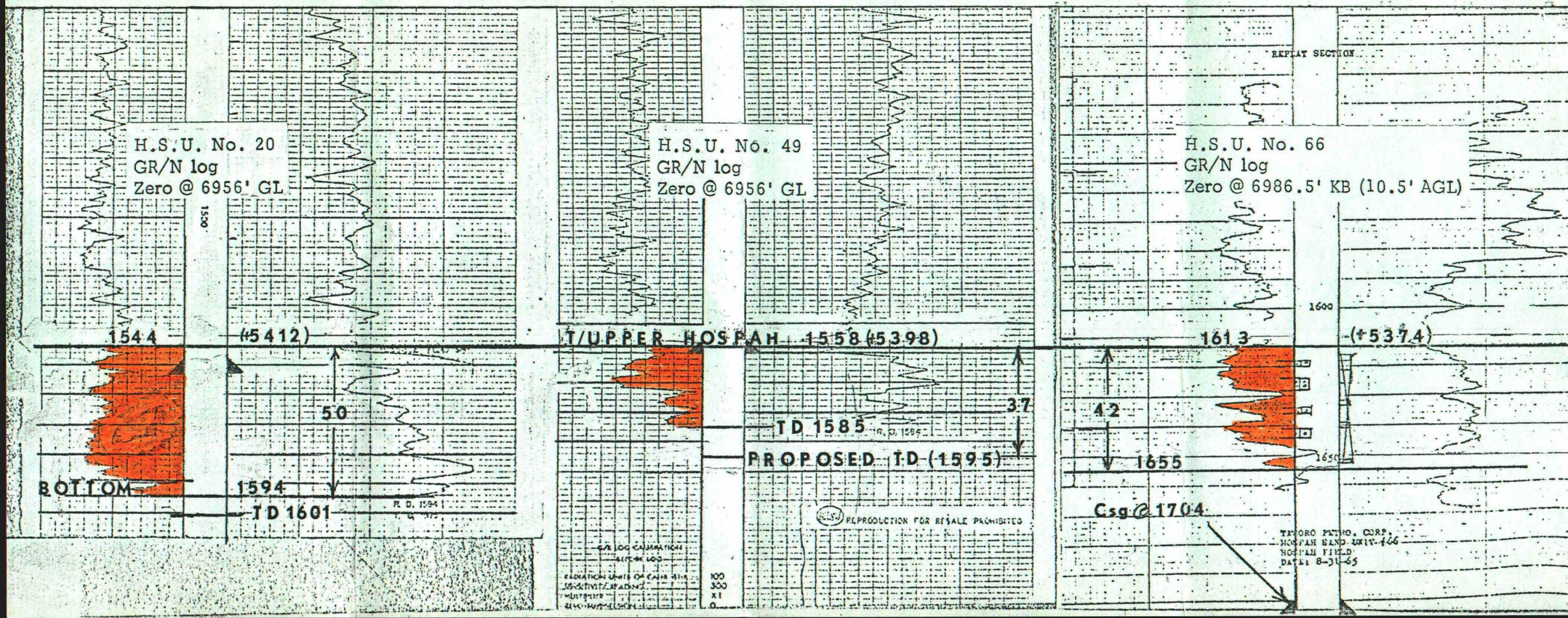
By: H. A. S.	Scale: 1" = 1000'	Date: 5-76

TESORO PETROLEUM CORPORATION

HOSPAH SAND UNIT
(Figure 2)

CROSS-SECTION A-A'

9/23/77 F.E.K.



(Figure 3)

Well: Hospah Sand Unit No. 49
Field: Hospah Upper Sand
Location: 330 FN 1380 FE Sec 1 -T 17N -R9W
County: McKinley State: New Mexico
Zero Elevation: 6956 GL ft. (N.A. AGL) GL: 6956
TD: 1585 ft. PBTD: N.A. ft.
Spudded: 6/23/46 Completed: 8/21/46

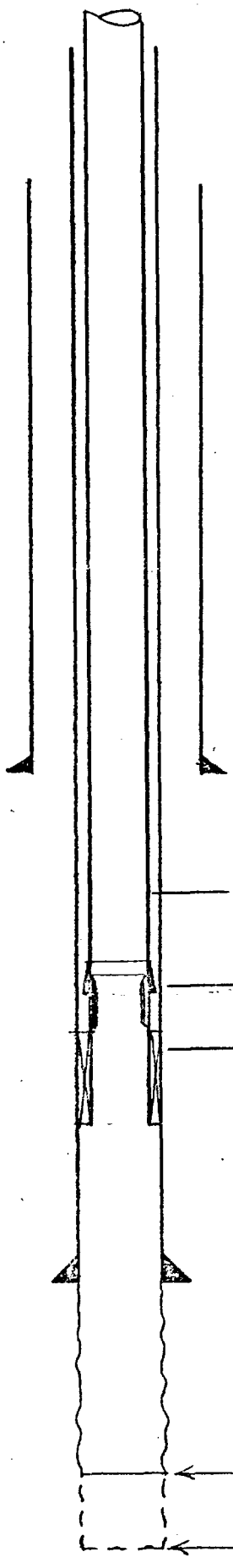
Wellhead:

Tubing String:

Centralizers:

_____"OD ____LB_____GR._____THRD.
@_____FT. w/_____SX (_____FT^3) cmt.
in _____" hole (CMT. CLASS-ADDITIVES:
_____)
T.O.C. @ _____ BY: _____

NO RECORD OF SURFACE PIPE DATA



2 3/8", 4.7 lb., J-55 tubing
Tubing/Casing annulus w/ gelled, inhibited packer-fluid.

Guiberson Type-L On/Off tool w/ 1 25/32" Seating Nipple profile

Guiberson Unipacker VI w/ middle of packer rubbers at approximately 1530'.

5½ "OD 17 LB ? GR 10R THRD.
@ 1560 FT. w/ 55 SX (64.90 FT^3) cmt.
in 8¼ " HOLE (CMT. CLASS-ADDITIVES:
_____)
T.O.C. @ 1245' BY: Volumetric Estimate

4 3/4" Open Hole from 1560' to 1585'.

CURRENT TD @ 1585'

PROPOSED TD @ 1595'

UPDATED BY: F. E. K. DATE: 9/23/77

TESORO PETROLEUM CORPORATION

Suite 2000 First of Denver Plaza Building

633 Seventeenth Street

DENVER, COLORADO 80202

Rocky Mountain District

(303)—825-2000

OCT 03 1977

September 30, 1977

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

Re: Application for Conversion of Hospah Sand Unit No. 49 to Water Injection,
Unit A, Section 1, T17N, R9W, McKinley Co., New Mexico

Dear Mr. Ramey:

Attached is the lease plat requested by Mr. C. G. Ulvog.

As can be seen on the attached map, no offset operators will be affected by injection into Hospah Sand Unit No. 49. This well is an inside injector with already approved injection wells to the north, east, and west. The closest offset operator is Tenneco Oil Co., approximately 5000 feet south of this well. There are two faults separating the Hospah Sand Unit from the South Hospah area, with dry holes between the faults.

If any additional information is necessary for approval of this application, please feel free to again call me collect at (303) 825-2000. Thank you for calling us on this request.

Yours very truly,

F. E. Kastner

F. E. Kastner

Attachment
cc: Mr. A. R. Kendrick
Supervisor, NMOCC - District III
1000 Rio Brazos Road
Aztec, New Mexico 87410

FEK:iw

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

OIL CONSERVATION COMMISSION
Hobbs DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

Carl Ulvog

DATE 9-26-77

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX ✓
Proposed PMX _____

Gentlemen:

I have examined the application dated 9-23-77

for the Tesoro Petroleum Corp. Hospah Sand Unit #49
Operator Lease and Well No. Unit, S-T-R A-1-17N-9W

and my recommendations are as follows:

Approve Conversion

(corrected location)

Yours very truly,

A R Kendrick

SEP 27 1977