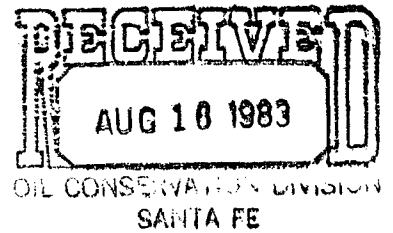


8/25/83

Frank Chavez's recommendation was to approve this application. ~~The~~ Well was not adequately ~~plugged~~ cemented but BLM was going to require them to repair it.

2PQ

HIXON DEVELOPMENT COMPANY
P. O. BOX 2810
FARMINGTON, NEW MEXICO 87401



August 9, 1983

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

Subject: Request for Administrative Approval
Downhole Commingling
A.P. Hixon #1
1850' FNL, 880' FWL, Sec.21, T25N,R11W
San Juan County, New Mexico
Lease No. NOO-C-14-20-5242

Dear Mr. Ramey:

The subject well was recently drilled as a marginally productive Basin Dakota and Bisti Lower Gallup oil well. The well is a farmout to Hixon Development Company from Tenneco Oil & Gas Company. We respectfully request administrative approval to downhole commingle the two zones in this well. If administrative approval is not possible, we then request an earliest possible hearing date. This is necessary because this well's lease is expiring October 19, 1983.

The well is located on a Navajo Allotted lease and does not have a shut in well delay rental provision. We will be in jeopardy of losing the well's Dakota proration unit if production is not established across the lease expiration date.

The Dakota zone in this well tested 4 BOPD, 28 BWPD, 218 MCFD on 6/3/83. The 218 MCFD producing rate does not satisfy gas pipeline hookup requirements of 400 MCFD. Consequently the only way this production can be salvaged is through downhole commingling.

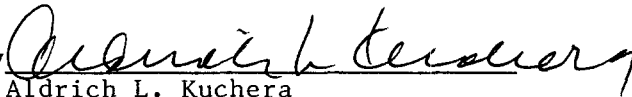
As a precedent for this request, the following Bisti Field area Gallup-Dakota wells have been approved for commingling: Merry May #1 (24-24N-9W); 1-E Big Eight (8-24N-9N) and July Jubilee #1 (30-24N-9W).

August 9, 1983
Page 2

Enclosed for your review is information pertaining to Rule 303
Section C. Please give this request your earliest consideration.

Very truly yours,

Hixon Development Company

by 
Aldrich L. Kuchera
Executive Vice President

attachements

ALK:jja

Rule 303-C Downhole Commingling Data
A.P. Hixon Well No. 1
SW/4 NW/4 Section 21, T25N, R11W
San Juan County, New Mexico

1.-(a) (1) Daily oil production

<u>Zone</u>	<u>Perfs</u>	<u>BOPD</u>	<u>Date</u>
Dakota	5880'-94'	4	6-3-83
Gallup	4976'-92'	13	7-27-83

NOTE: The well is shut in waiting on a gas pipeline hookup.

(2) Both the Gallup and Dakota Zones will require artificial lift.

(3) Well tests showed production as follows:

<u>Zone</u>	<u>Date</u>	<u>BOPD</u>	<u>BWPD</u>	<u>MCFD</u>	<u>GOR</u>
Gallup	7/27/83	13	8	124	9,538
Dakota	6/03/83	4	28	218	54,500

NOTE: The Dakota was fraced w/ 444 bbl 2% KCL water. Only 236 bbl of load fluid were recovered by 6/3/83. The 28 BWPD is expected to decrease to less than 10 BWPD after all frac fluid is recovered.

(4) Both the Gallup and Dakota produced water salinity are comparable and compatible with chlorides in the range of 29,000 ppm. Combining these two fluids will not result in formation damage.

(5) The total value of the crude oil will not be reduced by commingling. The oil gravity of the two crudes is in the range of 39 and 42 API. Both crudes will receive the same oil price.

(6) Ownership of both zones is common as follows:

	<u>WI</u>
Hixon et al	0.875
Tenneco Oil & Gas	0.125

Allotted Indian land royalty on both oil and gas is 16-2/3%.

- (7) Commingling is not expected to jeopardize the efficiency of present or future secondary recovery operations. This area has been waterflooded in the past.

1.--(b) (1) The Dakota "B" zone is not commercial if produced through a separate tubing string. Our Gas Purchase Agreement with the Gas Company of New Mexico specifies 400 MCFD production against a 400 psi line pressure. In the absence of commingling the Dakota Zone will be plugged and abandoned and this resource will be lost.

(2) The measured 72 hour Dakota shut in bottom hole pressure (mid-perf) is 770 psia. The Gallup measured bottom hole (mid perf) pressure is 339 psia producing and 648 psia shut in after 72 hours. No significant zone crossflow is expected.

(3) Both zones produce comparable salinity fluids. Formation damage is not anticipated.

(4) Both the Dakota and Gallup fluids are compatible on the basis of comparable water analysis.

(5) Both zones have common ownerships and royalty.

(6) The lower Dakota zone pressure is higher than the upper Gallup pressure (770 psia vs. 648 psia).

2. (a) Hixon Development Company
P.O. Box 2810
Farmington, NM 87499

(b) Navajo Lease- N00-C-14-20-5242
A.P. Hixon #1
1850' FNL, 880' FWL, Sec. 21-25N-12W
San Juan County, New Mexico
Pools- Basin Dakota
Bisti Lower Gallup

- (c) Plat attached. Ownership map attached. Note: This and all offset acreage is owned/assigned to Hixon Development Company and by Tenneco. A copy of this application is being sent to Tenneco Oil & Gas Company.
- (d) Current production test of the Gallup is per the attached Form C-116. The Dakota zone was shut in temporarily plugged back 6/6/83. The Dakota tested 4 BOPD, 28 BWPD, 218 MCFD on 6/3/83.
- (e) Attached are completion reports showing completion information. The Gallup zone was IP'd at 56 BOPD, 28 BWPD, 20 MCFD on 7/14/83. After two weeks of pumping the well tested 13 BOPD, 8 BWPD, 124 MCFD on 7/27/83. The latter test appears to be stabilized production.
- (f) Measured bottom hole pressure (6/6/83) of the Dakota is 770 psia. Measured Gallup BHP on 8/10/83 is 648 psia.
- (g) The Dakota produces 0.7 specific gravity natural gas, a green paraffin based oil (40 API) and produced water. The produced water is comparable in salinity ion/cation components to the Gallup produced water. The Gallup produces comparable paraffin based oil and gravity natural gas.
- (h) Production Value
Commingled is as follows:

		<u>\$/Day</u>
(17BOPD)(\$29.60/BO)	=	503.20
(342 MCFD)(\$2.00/MCF)	=	<u>684.00</u>
Commingled daily revenue		<u>\$1187.20</u>

Production value without commingling will be based on the Gallup only because the Dakota will be plugged and abandoned.

(13 BOPD)(\$29.60/BO) = 384.80

(124 MCFD)(\$2.00/MCF) = 248.00

Non-commingled daily revenue \$632.80

- (i) Production will be allocated on the basis of current well testing and calculated reserves. Attached is a computer printout showing the projected ratio of oil and gas production for the two zones. Production will be allocated as a ratio of oil and gas produced by both zones taking into consideration differential declining reserves.

The first year's production will be allocated as follows:

Dakota Gas = Total Gas Produced x 218/342

Gallup Gas = Total Gas Produced x 124/342

Dakota Oil = Total Oil Produced x 4/17

Gallup Oil = Total Oil Produced x 13/17

- (j) Tenneco Oil Company is the owner of the well's lease. Offset leases are per the attached map and are owned/assigned to Tenneco and Hixon Development Company. Tenneco has been notified of this commingling request in writing.

WELL NAME A. P. HIXON NO. 1
LOCATION 1850' FNL, 880' FWL SECTION 21 T 25N R 11W
COUNTY San Juan STATE New Mexico

GLE 6505'
RBM 6519'
DF 6517'
KB 14'

SURFACE CASING

Hole size: 12-1/4"
Casing: 8-5/8" 24# J-55
Casing set @ 437'

FORMATION TOPS

Pictured Cliffs	1318'
Lewis	1520'
Cliffhouse	1668'
Point Lookout	3809'
Mancos	3972'
Upper Gallup	4870'
Lower Gallup	4960'
Greenhorn	5706'
Dakota "B"	5859'

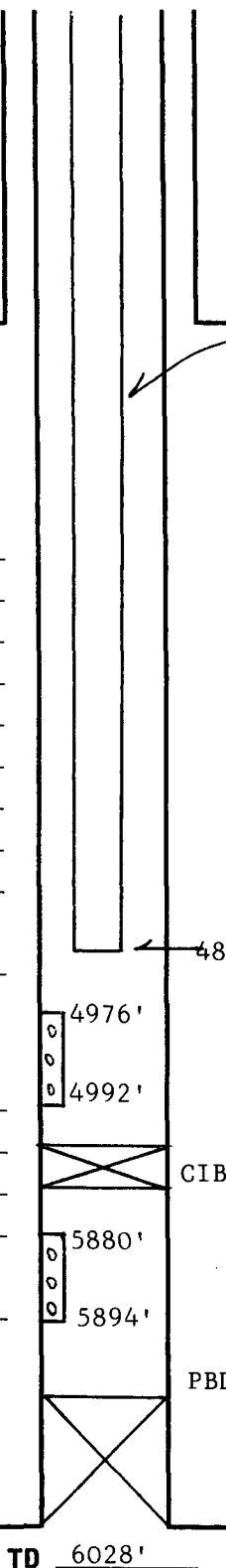
CEMENT TOP 2102'

PERFORATIONS Gallup 4976'-92'
Dakota 5880'-94'

PBD 5993' KB

PRODUCTION CASING

Hole size: 7-7/8"
Casing: 5-1/2" 15.5# 8rd ST&C K-55
Casing set @ 6026' 700 sacks



2-3/8" tubing with rod pump assembly

WELL HISTORY

Spud date: 5/3/83
Original owner: _____
IP _____ BOPD _____ BWPD _____
GOR _____ MCF _____
Completion treatment: _____

CURRENT DATA

Pumping Unit _____
Tubing 4876' 2-3/8" 4.7#
Pump size _____
Rod string _____
Remarks _____

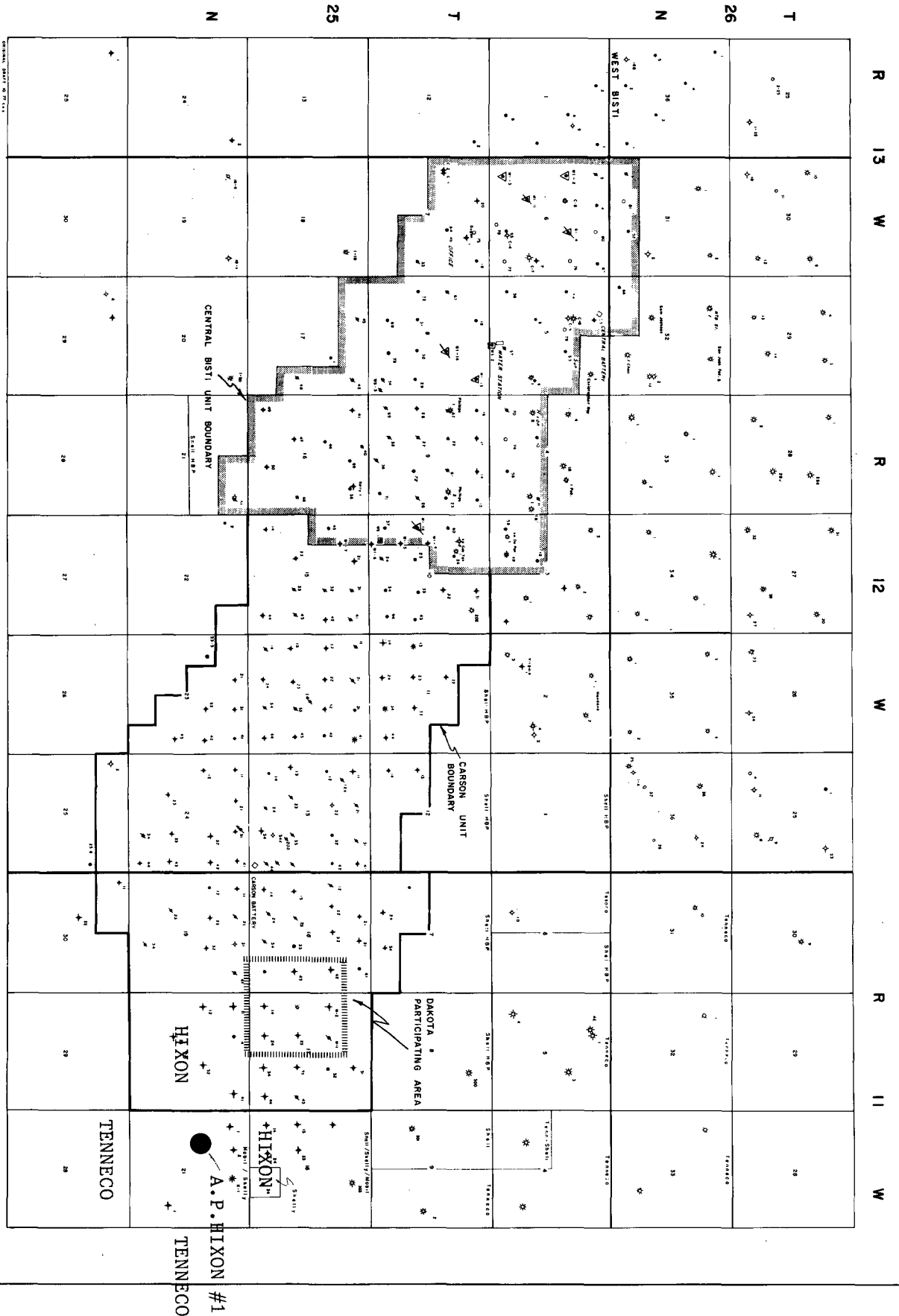
RECEIVED
AUG 3 1983
OIL CON. DIV.
DIST. 3

CIBP @ 5260'

PBD 5993'

TD 6028'

OFFSET OWNERSHIP MAP



HIXON DEVELOPMENT COMPANY
CENTRAL BISTI - CARSON UNIT AREA

San Juan County, New Mexico
Scale in Feet
0 1000 2000 3000

NO. 2700, EMB. 2700, 2700, 2700

DATE: January, 1978

OIL CONFIRMATION DIVISION

NEW MEXICO
LAND DEPARTMENT

SANTA FE, NEW MEXICO 87501

FILED
RECEIVED

All distances must be from the outer boundaries of the Section.

REC-110
#1
AUG 3 - 1983

Operator: Hixon Development Company			Lease: A. P. Hixon		
Well No.:					
Initial Letter: E	Section: 21	Township: 25 North	Range: 11 West	County: San Juan	
Actual Footage Location of Well: 1850 feet from the North line and 880 feet from the West					
Ground Level Elev. 6505	Producing Formation: Lower Gallup		Pool: Bisti Lower Gallup		Dedicated Acreage: 80 Acres

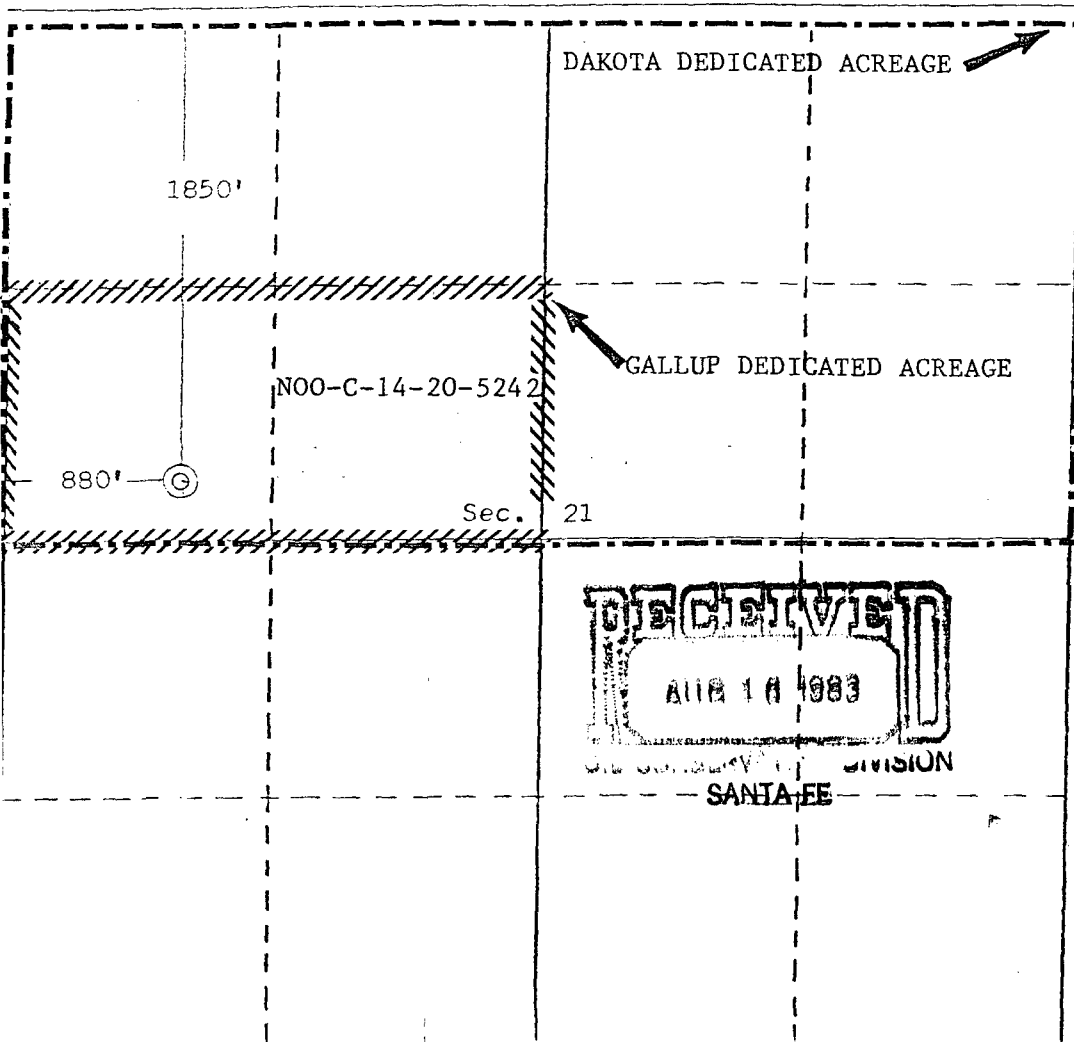
OIL CON. DIV.
DIST. 3

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 Dakota being consolidated

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 Division.



CERTIFICATION

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

Edgar L. Risenhoover
Name

Aldrich L. Kuchera

Position
Petroleum Engineer

Company
Hixon Development Company

Date
March 4, 1983

EDGAR L. RISENHOOVER
NEW MEXICO
5979
REGISTERED LAND SURVEYOR
I hereby certify that the location of the well is as shown on the plat and that the same is correct to the best of my knowledge.

Date Surveyed
March 3, 1983

Registered Professional Engineer
and/or Land Surveyor

Edgar L. Risenhoover
Certificate No. 5979
Edgar L. Risenhoover, L.S.

NEW MEXICO OIL CONSERVATION COMMISSION GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Hixson Development Company		Pool		Bisti Lower Gallup		County		San Juan										
LEASE NAME		WELL NO.		LOCATION		DATE OF TEST		TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>		Completion <input checked="" type="checkbox"/>		Special <input type="checkbox"/>				
				U	S	T	R			CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST	GAS - OIL RATIO CU.FT/BBL			
A. P. Hixson		1		E	21	25N	11W	7/27/83	P	0.375	25	-	24	8	39	13	124	9538

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 Commission.

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 Commission 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.

Albert L. Lee
(Signature)
Petroleum Engineer

7/29/83
(Date)

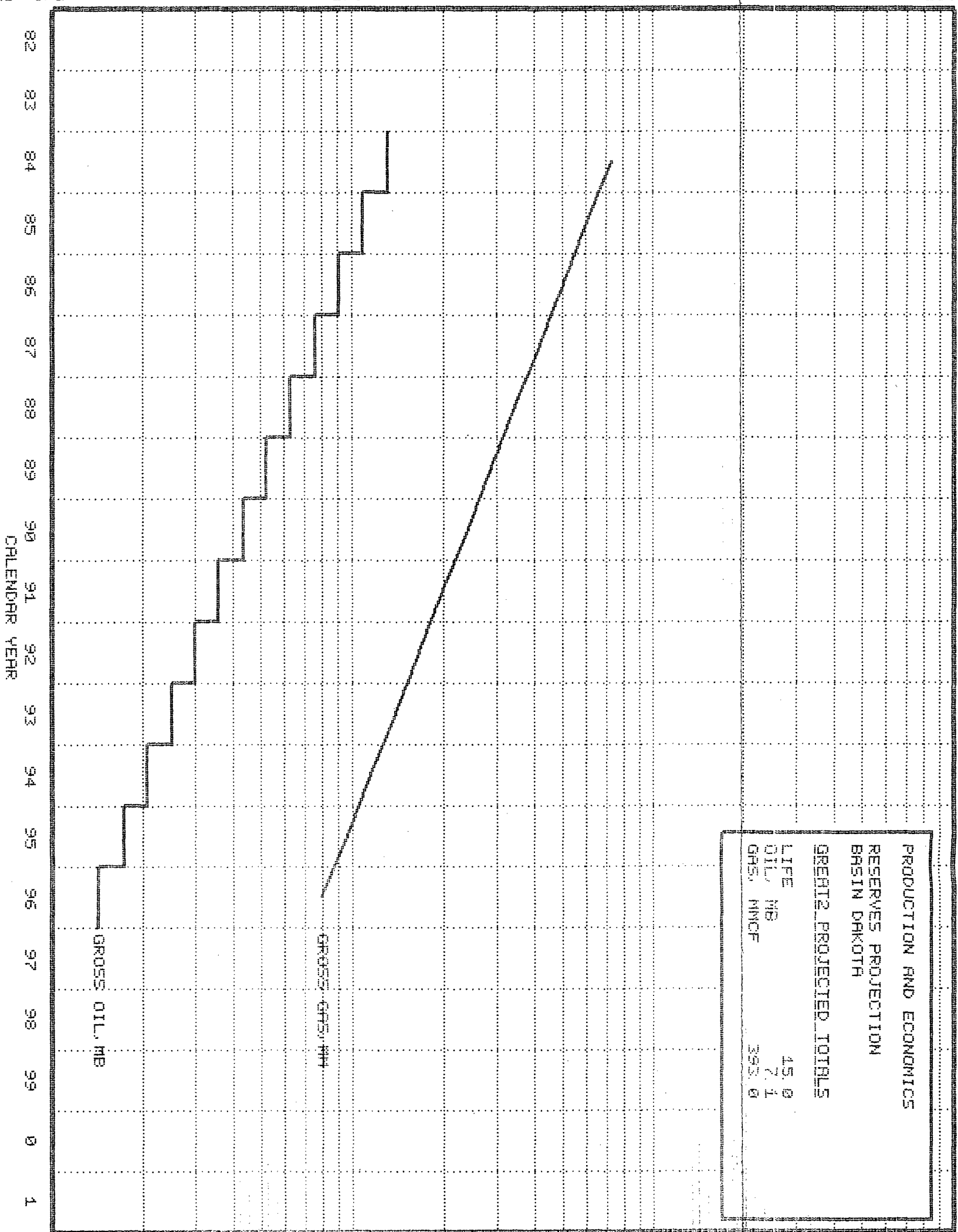
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GROSS OIL, MB 0.1

10
1.0

100
10.0

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100.0

HIKON DEVELOPMENT COMPANY HP HIKON #1



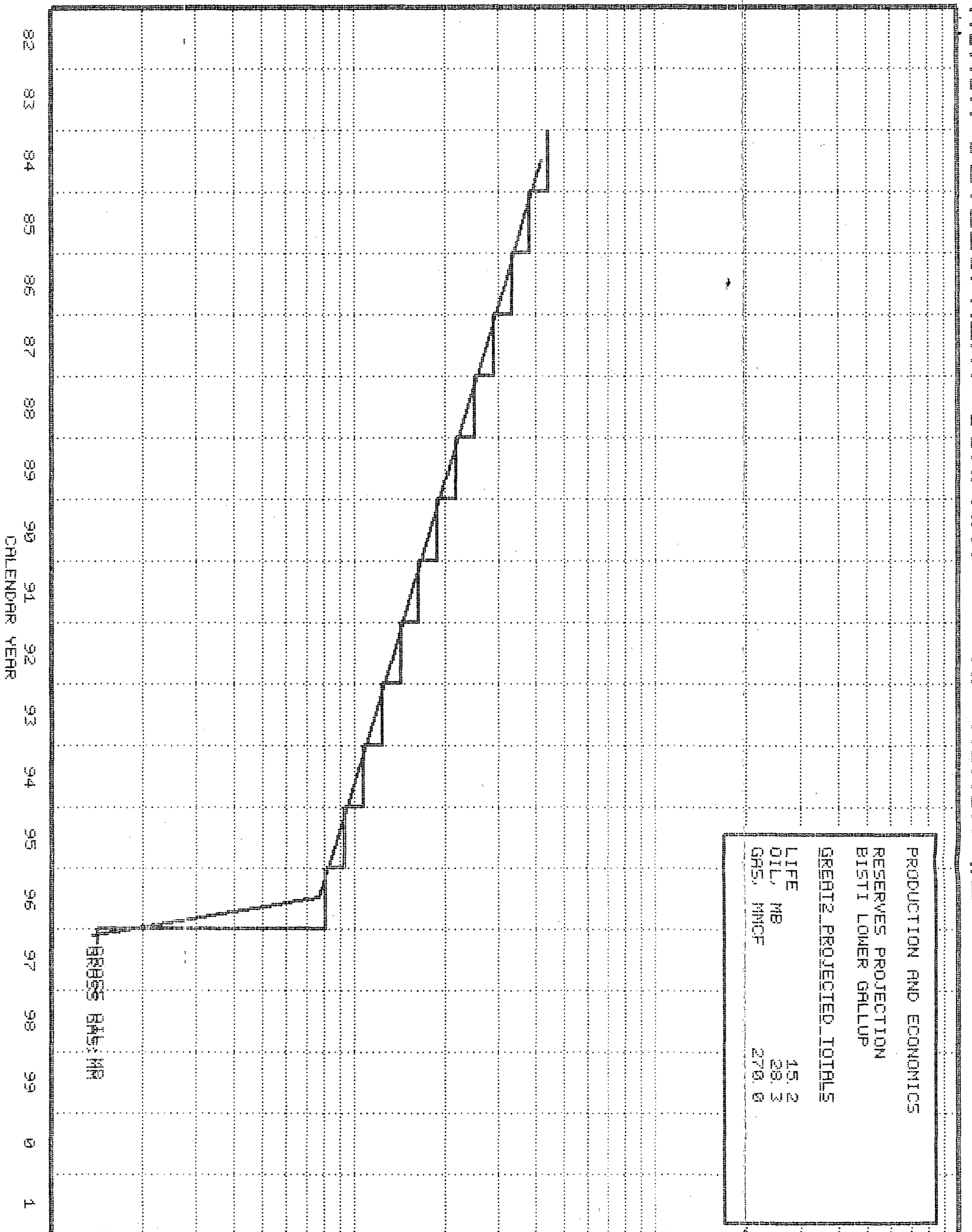
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GROSS OIL, MB 0.1

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10.0

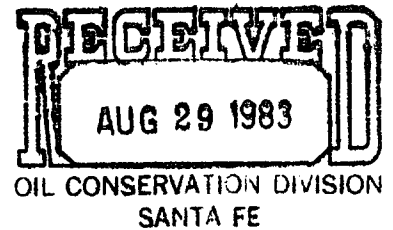
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HIXON DEVELOPMENT COMPANY AP HIXON #1



DATE : 08/11/83
TIME : 16:08CDT
FILE : GULLUP
FILE : SETDPTA
PROJ : 0

HIXON DEVELOPMENT COMPANY
P. O. BOX 2810
FARMINGTON, NEW MEXICO 87401



August 25, 1983

FILE DHC- 420

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

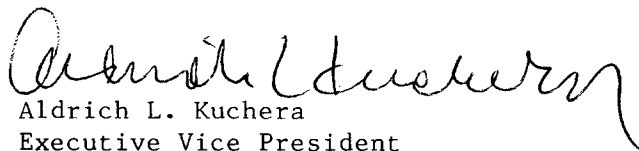
Subject: Waiver of Objection to
Downhole Commingling
A.P. Hixon #1
SW/4 NW/4 Section 21, T25N, R11W
San Juan County, New Mexico

Dear Mr. Ramey:

Enclosed is a waiver of objection to the subject downhole commingling from Tenneco Oil Exploration and Production who is an offset lease operator. This pertains to our request for administrative approval to commingle the subject well transmitted to you previously in our August 9, 1983 letter.

Very truly yours,

Hixon Development Company


Aldrich L. Kuchera
Executive Vice President

ALK:jjj

Attachment
cc: OCD-Aztec

**Tenneco Oil
Exploration and Production**

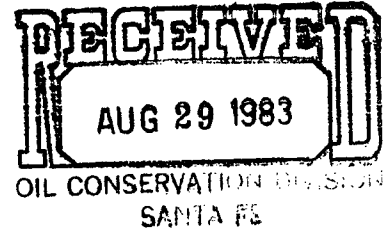
A Tenneco Company

Western Rocky Mountain Division

P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800

Delivery Address:
6061 South Willow Drive
Englewood, Colorado

August 23, 1983



Hixon Development Company
P. O. Box 2810
Farmington, New Mexico 87401

ATTENTION: ALDRICH L. KUCHERA
EXECUTIVE VICE PRESIDENT

RE: A. P. Hixon #1
1850' FNL; 880' FWL
Sec 21, T25N, R11W
San Juan County, New Mexico
Lease No. N00-C-14-10-5242

Gentlemen:

With reference to your memo of August 9, 1983 please be advised that Tenneco Oil Company has no objection to you commingling production on the above referenced lease.

Yours very truly,

TENNECO OIL COMPANY


Vernon F. Gensch
Joint Interest Manager

VFG/bs

CC: H. Hufft