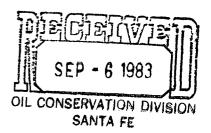
### HIXON DEVELOPMENT COMPANY

P. O. BOX 2810 FARMINGTON, NEW MEXICO 87499

September 1, 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 Irene Whitney No. 1

1850' FSL, 1650' FWL, Sec. 21, T25N, R11W

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 3.5 BOPD, 14 BWPD, 15 MCFD on 7/25/83. The 15 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).

September 1, 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

Aldrich L. Kuchera

Executive Vice President

attachments

ALK:jja

cc: Mr. Frank Chavez-OCD-Aztec Tenneco Oil Company

## Rule 303-C Downhole Commingling Data Irene Whitney No. 1 NE SW Section 21, T25N, R11W San Juan County, New Mexico

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

Zone	Perfs	BOPD	Date
Dakota	5952'-62' 5854'-64'	3.5	7/25/83
Gallup	5096'-5100' 5056!-64' 5030'-40'	10	8/30/83

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:

Zone	<u>Date</u>	BOPD	BWPD	MCFD	GOR
Gallup	8/30/83	10	<b>3</b> .	159	15,900
Dakota	7/25/83	3.5	14	15	4,286

NOTE: The Dakota was fraced with 2% KCL water. Only part of the load fluid was recovered by 7/25/83. The 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. Both crudes will receive the same oil price.
- (6) Ownership of both zones is common as follows:

	WI
Hixon et al	0.875
Tenneco Oil & Gas	0.125

Allotted Indian lease 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 past.
- 1.-(b) (1) The Dakota 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 12 hour Dakota shut in bottome hole pressure (@ + 638' Datum) is 766 psia. The Gallup measured bottom hole (mid perf) pressure is 671 psia shut in after 24 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 (766 psia vs. 671 psia).
- 2. (a) Hixon Development Company P.O. Box 2810 Farmington, NM 87499
  - (b) Navajo Lease- NOO-C-14-20-5243
    Irene Whitney No.1
    1850' FSL, 1650' 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 7/26/83. The Dakota tested 3.5 BOPD, 14 BWPD, 15 MCFD on 7/25/83.
- (e) Attached are completion reports showing completion information. The Gallup zone was IP'd at 10 BOPD, 3 BWPD, 159 MCFD On 8/30/83.
- (f) Measured bottom hole pressure (7/26/83) of the Dakota is 766 psia. Measured Gallup BHP on 8/27/83 is 671 psia.
- (g) The Dakota produces 0.7 specific gravity natural gas, a green paraffin based oil (39 API) and produced water. The produced water is comparable in salinity and 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>
(13.5 BOPD) (\$29.60/BO) =	399.60
(174 MCFD) (\$2.00/MCF) =	348.00
Commingled daily revenue	747.60

Production value without commingling will be based on the Gallup only because the Dakota will be plugged and abandoned. (10 BOPD) (\$29.60/B0) = 296.00

(159 MCFD) (\$2.00/MCF) = 318.00

Non-commingled daily revenue \$614.00

(i) Production will be allocated on the basis of current well testing and calculated reserves. 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 15/174

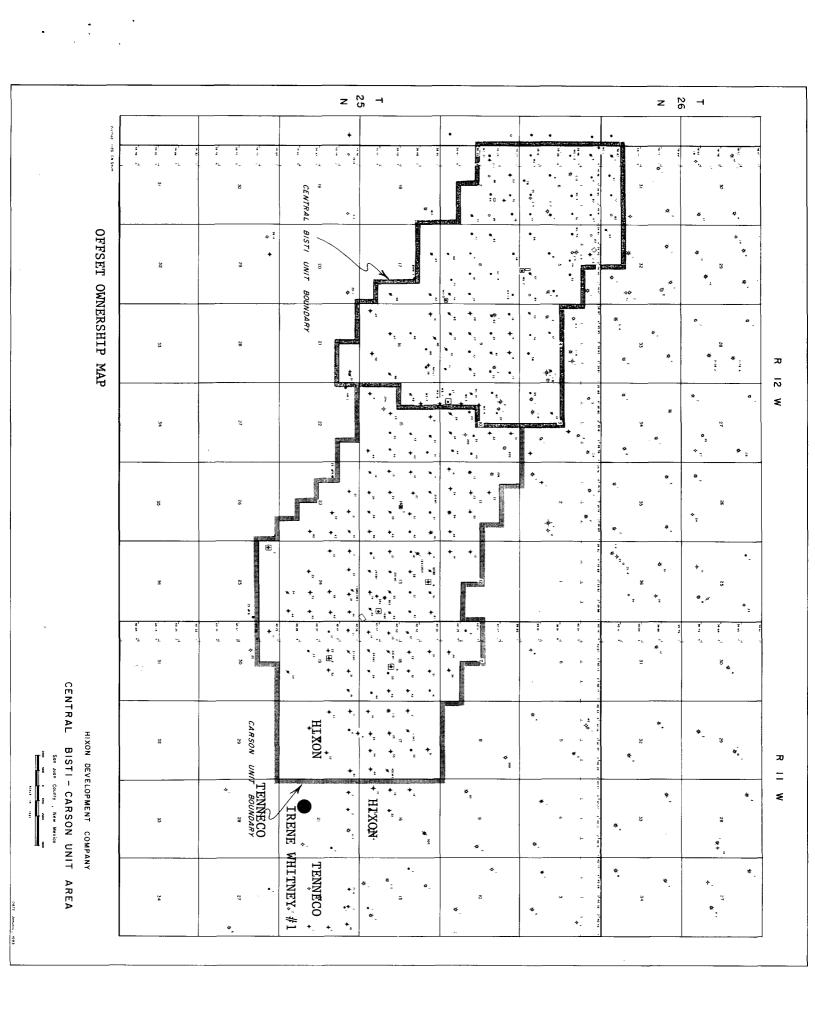
Gallup Gas = Total Gas Produced x 159/174

Dakota Oil = Total Oil Produced x 3.5/13.5

Gallup Oil = Total Oil Produced x 10/13.5

(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.

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PRODUCTION CASI Hole size:	5096' 5854' 5952' PBD 6	-5100 -64' -62' 031'		-64'	5854' 5864' 5952! 5962'			retrievable ug @ 5150'



Trene Whitney Hixon Development Company UIL CO. SELVATION DIVIDION County Township SANTA FE 25 North ll West San Juan tive) Festage Location of Well: feet from the West South ice! from the Dedicated Acreage: | Producing Formerion Bisti Lower Gallup Lower Gallup 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? If answer is "yes," type of consolidation \_ Yes. Il 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 comtoined herein is true and complete to the Aldrich L. Kuchera Petroleum Engineer Hixon Development Company April 5, 1983 NOO-C-14-20-5244 NOO-C-14-20-5243 NAVAJO ALLOTTED NAVAJO ALLOTTED DAKOTA DEDICATED ACREAGE GALLUP DEDICATED ACREAGE Imic Surveyed March 29, 1983 1850 Registered Frelessional Engineer and/or Land Surveyor Edgar L. Risenhoover,

1 - 1 - 1

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Revised 1-1-65

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No well will be assigned an allowable greater than the amount of oil product on the officer	OIL CONSERVATION DIVISION SANTA FE	Irene Whitney		r r v r N M		P.O. Box 2810 F	Hixon Development
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No well will be assigned an allowable greater than the amount of oil produced on the official test.

lineased allowables when authorized by the Commission. 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

£ ... 6 0.06. Gas volumes must be reported in MCF measured at a pressure base of 15,025 pale and a temperature of 60° F. Specific gravity base

Report casing pressure in lieu of tubing pressure for any well producing through casing.

stati original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with

I hereby certify that the above information is true and complete to the best of my known ledge and belief. WAILED

SEP 1 1983

(Signature)

September 1, 1983

Petroleum Engineer

(Tide)

Z> (1) - 1	OIL CONSERVATION DIVISION SANTA FE	Trene Whitney		T RASE NAME		Fig. Box 2810. Farmingto	Hixon Development	
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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 than set allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15,025 pale and a temperature of 60° F. Specific gravity base

Report casing pressure in itsu of tubing pressure for any well producing through casing.

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(Signature)

Petroleum Engineer (Tide)

September 1, 1983

SUBMIT P. DUFLICATE!

Form --

## NSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State allows. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions. If use this time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation, and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments

should be listed on this form, see item 35.

Hem 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. or Federal office for specific instructions. Consult born State

item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments, items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producting interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified,

for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Hen 29: "Nacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

SHOW ALL IMPORTANT ZONES O DEFTH INTERVAL TESTED, CUBH	TESTED, CUBITON	ROSITY AND CONTENTS	SHOW ALL INTERVAL TESTED, CUBIION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES	38. GEOLG	GEOLOGIC MARKERS	
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Point Lookout	3833'					
Mancos	40281					
Upper Gallup	49261					
Lower Gallup	5010'					
Sanostee	5385'					
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Burro Canyon	6050'					
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DEPARTMENT OF THE INTERIOR I DEAST DESTRUCTOR AND SERIAL NO It only: Side GEOLOGICAL SURVEY NOO-C-14-2(1-5243 C. IF INDIAN. ALLOTTEL OF TRIBE NAME WELL COMPLETION OR RECOMPLETION REPORT AND LOG\* Navajo Allotted 18. TYPE OF WELL: WELL X WELL 7. UNIT AGREEMENT NAME b. TYPE OF COMPLETION: WELL X RESVR. FARM OR LEASE NAME Oth 2 NAME OF OPERATOR Irene Whitney 6 1983 WELL NO. Hixon Development Company 3. ADDRESS OF OPERATOR OIL CONSERVATION DIVISION 10. FIELD AND POOL, OR WILDCAT P.O. Box 2810, Farmington, New Mexico 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements) Basin Dakota 1850' FSL, 1650' FWL, 21-25-11 11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA At top prod. interval reported below Section 21, T25N, R11W At total depth 14. PERMIT NO. DATE ISSUED 12. COUNTY OR 13. STATE PARISH San Juan NM 16. DATE T.D. REACHED | 17. DATE COMPL. (Ready to prod.) 15 DATE SPEEDED 19. ELEV. CASINGHEAD 18. ELEVATIONS (DF, REB, RT, GR. ETC.)\* 6595' KB 7/9/83 7/1/83 7/25/83 6583' GLE 21. PLUG, BACK T.D., MD & TVD 20. TOTAL DEPTH, MD & TVD 22. IF MULTIPLE COMPL., 23. INTERVALS ROTARY TOOLS CABLE TOOLS DRILLED BY 60771 6031 Х 24. PRODUCING INTERVAL(S). OF THIS COMPLETION-TOP, BOTTOM, NAME (MD AND TVD)\* 25. WAS DIRECTIONAL SURVEY MADE 5854'-5864', 5952'-5962' Basin Dakota yes 26. TYPE ELECTRIC AND OTHER LOGS RUN 27. WAS WELL CORED Induction Electric and Compensated Density Neutron Gamma Ray no CASING RECORD (Report all strings set in well) WEIGHT, LB./FT DEPTH SET (MD) HOLE SIZE CEMENTING RECORD CARING SIZE AMOUNT PULLED 8-5/8" 521' 325 ff 24# 12-1/4" Class B w/2% CaCl, 北#/sx cello 60721 7-7/8" 5-1/2" 15.5 %620 ft Class H poz, 4% D-20 gel, ½#/sx D-29 cello, 0.6% D-60 flac. 410 ft 65/35 Class H poz, 2% D-20 gel, ½#/sx cello, .6% flac, LINER RECORD 29 30. TUBING RECORD D-44 salt BOTTOM (MD) SACKS CEMENT\* TOP (MD) SCREEN (MD) SIZE SIZE DEPTH SET (MD) PACKER SET (MD) 31. PERFORATION RECOED (Interval, size and number) ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED 5854'-5864' 5854'-5864' 21 holes 24 barrels 15% HCl acid and 5952'-5962' 5952'-5962' 21 holes 13,000# 20/40 sand using 545,980 SCF nitrogen & 20260 gal 70 quality foam 33.\* PRODUCTION PRODUCTION METHOD (Flowing, gas lift, pumping-size and type of pump) DATE FIRST PRODUCTION WELL STATUS (Producing or shut-in) swabbing shut in CHOKE SIZE PROD'N. FOR DATE OF TEST HOURS TESTED OIL-BBL. GAS-MCF. WATER-BBL. GAS-OIL RATIO TEST PERIOD 7/25/83 12 .250 1.75 7.5 4286 FLOW, TUBING PRESS. CASING PRESSURE CALCULATED OIL-PBL GAS-MCF. WATER-BBL. OIL GRAVITY-API (CORR.) 24-HOUR RATE 220 15 14 34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY To Be sold OMB 35. LIST OF ATTACHMENTS certify that the foregoing and attached information is complete and correct as determined from all available records teres FITTE Petroleum Engineer \*(See Instructions and Spaces for Additional Data on Reverse Side)

SURMIT IN DUPLICATE.

Form approved. Sugar : Bureau No. 42-HRES.

UNITED STATES

South Reads Burn milk

# INSTRUCTIONS

or both, pursuant to applicable Eederal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for submitted prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, annule and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

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Point Lookout	3833'				
Mancos	40281				
Upper Gallup	4926'				
Lower Gallup	5010'				
Sanostee	5385'				
Greenhorn	5762'				
Dakota "A"	58061				
Dakota "B"	59481				
Burro Canyon	6050'				
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## STATE OF NEW MEXICO

## **ENERGY AND MINERALS DEPARTMENT**

## OIL CONSERVATION DIVISION AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD AZTEC, NEW MEXICO 87410 (505) 334-6178

BOX 2088 SANTA FE, NEW MEXICO 87501  DATE 9/7/83	SEP - 8 1983
RE: Proposed MC Proposed DHC	OIL CONSERVATION DIVISION SANTA FE
Gentlemen:	
I have examined the application	dated 9/6/83
for the Sisan Development Co. Operator	AreneWhitney #1 K-ZI-ZSN-11W Lease and Well No. Unit, S-T-R
and my recommendations are as fo	
V	
Yours truly,	
Bruh? Day	