

MERIDIAN OILOIL CONSERVATION DIVISION
RECEIVED

NOV 24 AM 9 15

November 23, 1993

New Mexico Oil Conservation Division
 Attn.: Mr. Bill Lemay
 P.O. Box 2088
 310 Old Santa Fe Trail
 Santa Fe, NM 87501

RE: Jicarilla G # 8
 Unit G, Section 02, T26N, R05W
 Rio Arriba County, New Mexico
 Downhole Commingling Request

Dear Mr. Lemay:

Meridian Oil Inc. is applying for an administrative downhole commingling order (3 zones) for the referenced well in the Blanco Mesaverde, Blanco South Mesa Gallup, and Basin Dakota fields. The ownership of the zones to be commingled is common. Meridian holds all offset acreage to this well. The Bureau of Land Management will receive notification of this downhole commingling.

The subject well was drilled and dual completed in the Mesaverde and Dakota zones in 1970. In March 1989, downhole commingling of the Mesaverde & Dakota zones was approved per NMOCD Order #R-8658 per 1-1/2" tubing in the Jicarilla G # 8. The Gallup zone is prospective in the subject well and several successful completions are evident in the surrounding offsets. The Jicarilla G # 8 Mesaverde has produced 1,026 MMCF and 1.1 MBO while the Dakota has produced 1,669 MMCF and 7.5 MBO to date. Current production from this commingled wellbore is approximately 225 MCFD & 2 BOPD. With administrative approval of the additional Gallup zone in the referenced well, all three (3) zones may be efficiently produced up a single 2-3/8" tubing string, an initial increase of 340 MCFD is anticipated.

The reservoir characteristics of each of the subject zones are such that underground waste will not be caused by the proposed commingling. The fluids in these reservoirs are compatible and no precipitates will be formed to cause damage to any reservoir. Commingling of these three (3) zones has been authorized and successfully completed in the Jicarilla G # 9 (NE/4, Section 01, T26N, R05W, Order #R-8321). The latest 7-day shut-in surface casing pressure of the commingled Mesaverde and Dakota in the Jicarilla G # 8 is 588 psi taken September 2, 1993.

The Gallup production in offsets is quite erratic, therefore it is requested that a minimum of three (3) months actual sales line production combined with pressure and production data gathered during workover operations be utilized in developing the allocation formula for the Jicarilla G # 8. Meridian will consult with the district supervisor of the Aztec NMOCD office for approval of this allocation.

Approval of this commingling application will allow for the prevention of wasted resources and protection of correlative rights. Included with this letter are plats showing ownership of offsetting leases for the Mesaverde, Gallup, and Dakota, a copy of the letter to the BLM, a wellbore diagram, a pertinent data sheet, and the proposed workover procedure.

(See following page)

New Mexico Oil Conservation Division
Mr. Bill Lemay
Jicarilla G # 8 - Downhole Commingling Request
11/23/93

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas E. Mullins". The signature is fluid and cursive, with a large initial "T" and "M".

Thomas E. Mullins
Production Engineer

TEM
attachments

cc: Frank Chavez - NMOCD/Aztec
Well File

MERIDIAN OIL

November 23, 1993

Bureau of Land Management
1235 La Plata Highway
Farmington, New Mexico 87401

RE: **Downhole Commingling Request**
Jicarilla G # 8
Unit G, Section 02, T26N, R05W
Rio Arriba County, New Mexico

Gentlemen:

Meridian Oil Inc. is applying to the New Mexico Oil Conservation Division for administrative approval as per Rule 303 C to downhole commingle production from the Blanco Mesaverde, Blanco South Mesa Gallup, and Basin Dakota pools in the referenced well.

The purpose of this letter is to notify you of such action. If you have no objections to the proposed commingling order, please sign the attached copy of this letter and return it to this office.

Your prompt attention to this matter would be appreciated.

Sincerely,



Thomas E. Mullins
Production Engineer

The above downhole commingling request is hereby approved:

Date: _____

TEM

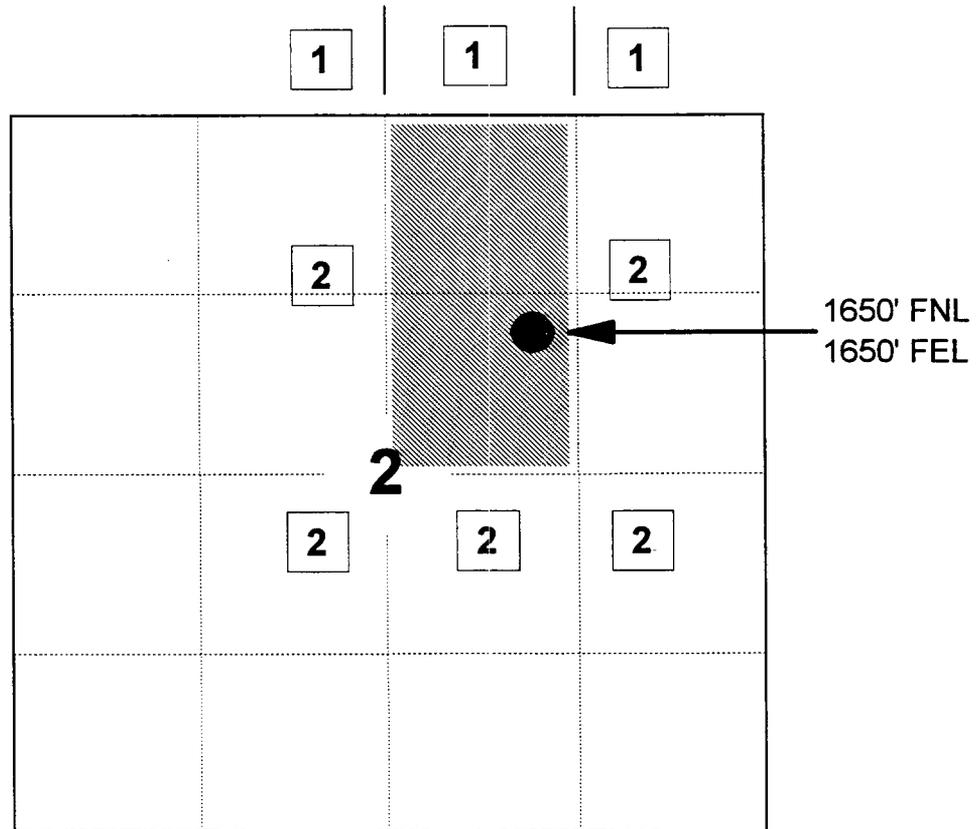
MERIDIAN OIL INC

JICARILLA G #8

OFFSET OPERATOR \ OWNER PLAT

Mesaverde, Dakota & Gallup Commingle Well

Township 26 North, Range 5 West



1) Meridian Oil Inc

2) Meridian Oil Inc & Southland Royalty Company

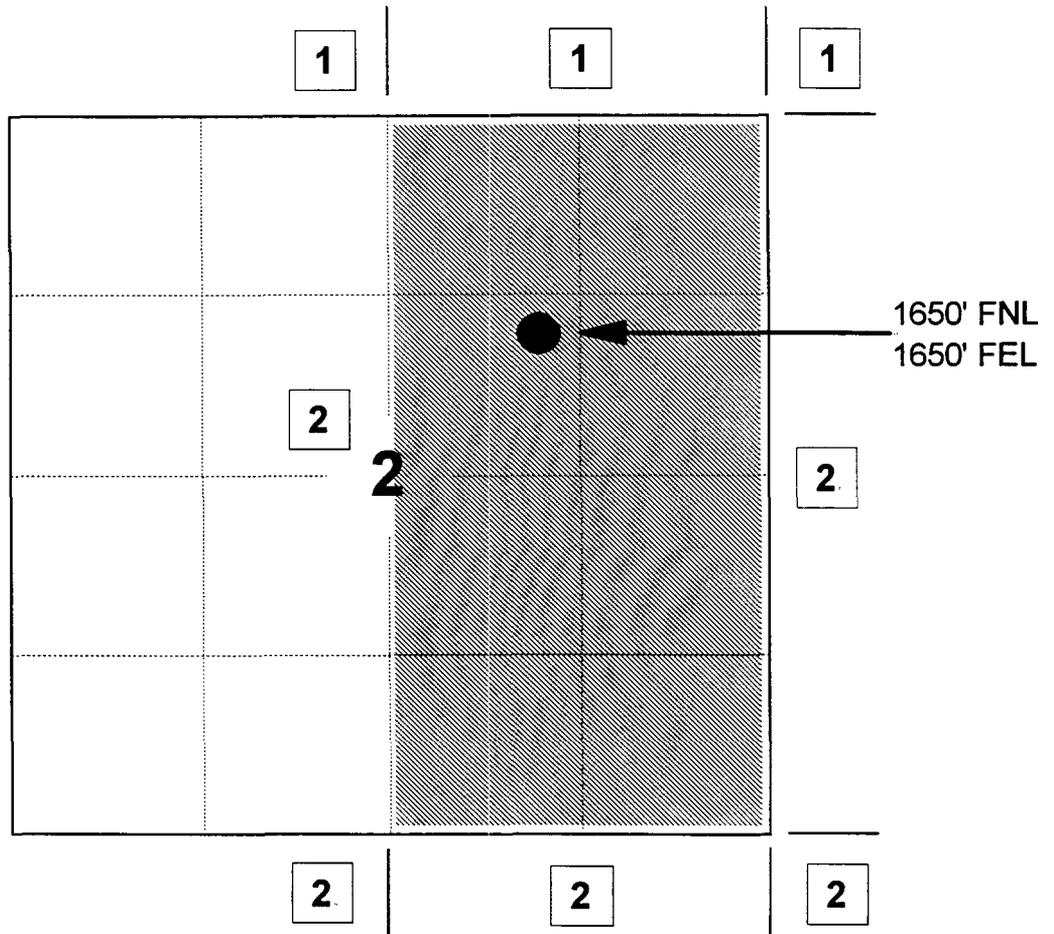
MERIDIAN OIL INC

JICARILLA G #8

OFFSET OPERATOR \ OWNER PLAT

Mesaverde, Dakota & Gallup Commingle Well

Township 26 North, Range 5 West



1) Meridian Oil Inc

2) Meridian Oil Inc & Southland Royalty Company

Meridian Oil Inc.
11/08/93

Pertinent Data Sheet-Jicarilla G # 8

Location: Unit G Section 02, T25N-R05W Rio Arriba County, New Mexico
1650' FNL, 1650' FEL

Field: Blanco Mesaverde **Elevations:** 6671' GL **TD:** 7869'
Basin Dakota (Commingled) DHC # R-8658 6685' KB **PBTD:** 7833'

Completed: 09-29-70 **DP #:** 35903 (MV) 35904 (DK)
Spud: 09-12-70 **GWI:** 62.5000 % 62.5000 %
NRI: 54.6875 % 54.6875 %

Casing Record:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Wt & Grade</u>	<u>Depth Set</u>	<u>Sxs Cement</u>	<u>TOC</u>	
13-3/4"	10-3/4"	32.75# H-40	307'	250 sxs	Surface	Circulated good cmt
9-7/8"	7-5/8"	26.40# K-55	3600'	1050 sxs	Surface	Need to verify!
6-3/4"	5-1/2" Liner	15.5# K-55	3469'-7869'	700ft3	3469'	Circ 10 bbls

Tubing & Rod Record:

<u>Tubing Size:</u>	<u>Wt & Grade</u>	<u>Depth Set</u>	
1-1/2"	2.90# EUE	7696'	1 jt, standard SN, 79 jts, 8 blast jts, 160 jts. SN @ 7664' Blast Joints from 5026'-5188'

Formation Tops:

Ojo Alamo:	2667'	Mancos:	6700'
Kirtland:	3005'	Tocito:	6997'
Fruitland:	3145'	Greenhorn:	7500'
Pictured Cliffs:	3405'	Graneros:	7553'
Lewis:	3574'	Dakota (Two Wells):	7600'
Cliff House:	5040'	(Paguete):	7692'
Menefee:	5178'	(1st Cubero):	7730'
Point Lookout:	5554'	(2nd Cubero):	7766'
		(Oak Canyon):	7812'
		(Encino):	7835'

Logging Record: Dens, Temp, IND, CBL 09-25-70

Stimulation: Perf 1st Stage Dakota 1 SPF (0.48" holes) 7694'-7716', 7740'-7750', 7774'-7784' (45 holes total) Frac w/ 86,520 gal water & 50,000# 20/40, 20,000# 10/20, 500# 12/20 glass at 52 BPM 3500 psi, 2500 ISIP Perf 2nd Stage Dakota (0.48" holes) 7596'-7614' (19 holes total) Frac w/46,600 gal water & 20,000# 20/40, 10,000# 10/20 at 41 BPM 3300, 2700 ISIP Perf Cliffhouse (0.48" holes) 5042'-5060', 5076'-5088', 5106'-5118', 5124'-5142', 5148'-5156', 5160'-5166' (80 holes total) Frac w/72,724 gal water & 20,000# 20/40 60,000# 10/20 at 77 BPM 2000, drop 50 balls 1000 ISIP

Workover History:

03/1988 Applied for Commingled. DHC # R-8658
10/1988 Pulled MV 1-1/2", Pulled DK 1-1/2", Milled Model 'D' @ 7490', POOH, Ran tubing as above.
03/21/89 Allocation formula approved Mesaverde: 33% Gas, 22% Oil Dakota: 67% Gas, 78% Oil

Production History:

	<u>Cum Gas MCF</u>	<u>Cum Oil bbls</u>	<u>Rem Gas MCF</u>	<u>Pipeline Pressure:</u>	200 psi
Mesaverde:	1,026,888	1,175	1,327,465	<u>Current Rate Gas:</u>	225 MCFD
Dakota:	1,669,183	7,530	785,716	<u>Current Rate Oil:</u>	2 BOPD

Transporter:

Oil/Condensate: Meridian Oil Inc.
Gas: Gas Company of New Mexico

Jicarilla G # 8
T26NR05W02G
 Recompletion & Commingle

Current

KB: 6685'
 GL: 6671'

Proposed

KB: 6685'
 GL: 6671'

13-3/4" Hole
 10-3/4" 32.75#
 Casing
 @ 307'
 w/ 250 sxs to Surf

1-1/2" Tubing
 @ 7696'

Liner Top @ 3469'

9-7/8" Hole
 7-5/8" 26.4# Casing
 @ 3600'
 w/1050 sxs

TOC 7-5/8" @ surface
 Will Verify!

2-3/8" Tubing
 @ 7700'

TOC 5-1/2" @ 3469'
 Will Verify!

Formation Tops	
Ojo Alamo	2667'
Kirtland	3005'
Fruitland	3145'
Pict. Cliffs	3405'
Lewis	3574'
Cliff House	5040'
Menefee	5178'
Point Lookout	5554'
Mancos	6700'
Tocito	6997'
Greenhorn	7500'
Graneros	7553'
Dakota	7600'

Mesaverde Perforations
 1 SPF 5042'-5166'

Mesaverde Perforations
 1 SPF 5042'-5166'
 1 SPF 5268'-5719'

Tocito Gallup Perforations
 4 SPF 7106'-7115'

6-3/4" Hole
 5-1/2" 15.5# Liner
 @ 7869'
 w/ 700 ft³

Dakota Perforations
 1 SPF 7596'-7614'
 1 SPF 7694'-7784'

Dakota Perforations
 2 & 1 SPF 7513'-7614'
 2 & 1 SPF 7694'-7784'

PBTD: 7833'
 TD: 7869'

PBTD: 7833'
 TD: 7869'

Production was commingled per DHC # R-8658
 in the Mesaverde & Dakota in 1988.

Above demonstrates the tri-mingled production wellbore
 schematic for the Mesaverde, Tocito Gallup, & Dakota.

ILM
 11-16-93

PROCEDURE FOR WORKOVER

Jicarilla G # 8

Unit G, Sec 02-T26N-R05W

Mesaverde/Dakota

Add Point Lookout, Meneffee, & Tocito to Wellbore & Commingle

Prior to Starting Operation. Inspect Location. Dig & Fence Work Pit. Test & Install Anchors if necessary. Contact Gas Company of New Mexico to obtain Drill Gas Meter for workover operation. Comply with all BLM, NMOCD & MOI rules and regulations. Always Hold Safety Meetings!!

- **** Require Two-hundred-fifty-five (255) joints 2-3/8" 4.7# J-55 EUE tubing on location.
 - **** Require Four (4) 3-1/8" Drill collars, all changeovers, floats, & subs.
 - **** Require (7500') 3-1/2" 9.3# N-80 Upset Frac Tubing String on location for Frac.
 - **** Five (5) -400 bbl Frac Tanks & one (1) 400 bbl rig tank w/ 1% KCl water filtered 25 micron
-

1. Move on Location. Obtain & Record Bradenhead, Casing, & Tubing Pressure on Report. Lay manifold & all lines. Pump 50 bbls 1% KCl water down casing, followed by 20 bbls 1% KCl water down tubing. ND WH. NU BOP & stripping rubber. Open well on blooie line.
2. TOOH & LD 1-1/2" 2.9# EUE tubing from 7696'. (NOTE: 2-1/16" Blast Joints) Set plug in SN @ 7664' if necessary to TOOH. Contact Engineering if tubing is stuck.
3. RU wireline. Run 5-1/2" 15.5# casing gauge ring to 7550'. POOH. Run 5-1/2" wireline set RBP. Set RBP#1 @ 7550'. Note Liner top @ 3469'. Make additional run with dump bailer. Place 2 sxs sand on top of RBP#1.
4. PU 5-1/2" RBP & 5-1/2" Fullbore PKR assembly and TIH on 2-3/8" tubing. TIH to first RBP @ 7550'. Pump 55 bbls 1% KCl water to fill hole to Mesaverde. Set PKR and test RBP#1 @ 7550' & tubing to 3500 psi for 10 min. Pull tubing uphole and reset PKR @ 5200' Test 5-1/2" casing from 5200' to 7550' to 3000 psi for 10 min.
5. Pull tubing uphole. w/2-3/8" tubing, set RBP#2 @ 5000' (approx 50' above top MV perf). w/ PKR set above RBP. Test RBP#2 & tubing to 3500 psi. Hold and record pressure 10 minutes. Release pressure. Fill hole from bottom with 1% KCl water, approx 200 bbls to remove any gas pockets. TOOH. Fill hole full prior to logging.
6. RU wireline. Under Packoff, Run GR-CCL-CBL from RBP#2 to surface with 500 psi pressure. No Gaps. Record all cement tops on Report. When out of hole, pressure test casing from surface to 1000 psi. Hold pressure for 10 minutes. Engineering will evaluate Bond for potential squeeze.
7. TIH w/ retrievinghead on 2-3/8". Engage RBP#2 @ 5000', equalize pressure, & TOOH with RBP#2 & standback tubing.
8. RU wireline. Under Packoff, Run GR-CCL-CBL from 7550' to 5000'. Note: Hole should be full from RBP#1 to 5200'. POOH. Under Packoff, Run GR-Dual Spaced Cased Hole Neutron from 7550' to 5200'. POOH. Supply all logs to Production Engineering prior to perforating, to verify zones.
9. Prepare to Perforate Tocito Gallup as follows: w/ 4" HSC gun GOEX-116 19 gram charges 0.44" dia holes 4 SPF.

Holes from 7106' to 7115' (9' total of 36 holes).

10. Change out rams, elevators, & rubbers. PU 5-1/2" fullbore PKR, (2.75" ID) 'F' nipple, & 3-1/2" 9.3# N-80 Upset Frac String (2.992" ID, 3.75" OD). TIH with Frac string to 7000' Set PKR @ 7000' +/- on pipe with good bond. Stimulate Tocito Gallup Interval per attached schedule. **STAGE # 1.** Nitrogen Foam & 63,000# 20/40 brady @ 15 BPM. All sand will be tagged w/ 0.3mc/1000# Ir-192. Max Pressure is 6000 psi. Flow well until closure on 1/8" choke. Release Stimulation Company.

11. Flow well back until returns of sand & liquid are minimal. Release PKR, TOOH & stand back 3-1/2" frac tubing string. **MINIMIZE FLUID PUMPED DOWN TUBING TO COME OUT OF HOLE.** Set plug in profile nipple if necessary.

12. RU wireline. Run 5-1/2" wireline set RBP. Set RBP @ 5750'. Make additional run with dump bailer. Place 2 sxs sand on top of RBP. Note Plug has not been tested!

13. Prepare to Perforate Point Lookout & Meneffee under a full lubricator as follows: w/ 3-1/8" HSC gun select fire GOEX-116 12 gram charges 0.30" dia holes 1 SPF bottom up. (Total of 26 holes).

**5719', 5734', 5697', 5661', 5652', 5600', 5585', 5583', 5582', 5579', 5577', 5575', 5569',
5550', 5536', 5530', 5497', 5481', 5475', 5400', 5557', 5331', 5295', 5291', 5283', 5268'**

14. Run 5-1/2" fullbore PKR, profile nipple, & 3-1/2" 9.3# N-80 Frac String. TIH with Frac string to 5730'. TEST RBP to 3500 psi prior to stimulation for 10 min. Pull up & set PKR @ 5200' on pipe with good bond. Breakdown Point Lookout & Meneffee Interval w/ 1000 gallons 15% HCl w/ 2gal/1000 corrosion inhibitor, 1gal/1000 surfactant, & 1gal/1000 iron control. Drop 50-7/8" RCN 1.3 sp gravity ball sealers in sets of 10 every 200 gallons. Ball off perforations to 3500 psi. Release Pressure, TIH and knock balls off perforations. Pull up and reset PKR @ 5200'.

15. **STAGE # 2** Frac well per attached schedule. 1% KCl water & friction reducer & 93,000# 20/40 brady @ 40 BPM. Max Pressure is 6000 psi. Sand will be tagged w/ 0.3mc/1000# Ir-192.

16. Flow well back until returns of sand & liquid are minimal. Release PKR, TOOH & LD 3-1/2" frac tubing string. **MINIMIZE FLUID PUMPED DOWN TUBING TO COME OUT OF HOLE.** Set plug in profile nipple if necessary. Change out rams, elevators, & rubbers.

17. TIH w/ 4-3/4" bit, float, & 2-3/8" tubing. Clean hole out to RBP @ 5750' with gas, Flare well. Clean well up and obtain good pitot gauge on entire Mesaverde. Record 15 min, 30 min, 45 min, & 1 hr. TOOH.

18. PU one jt 2-3/8" openended, SN, 6' perf sub, 5-1/2" PKR, & remaining 2-3/8" tubing. Set PKR @ 5250'. Set slips, close pipe rams. Continue to flow test well. Obtain good pitot gauge on Point Lookout & Meneffee.

19. RU wireline. Run 24hr digital pressure bomb. Set bomb in SN. Flow well 2 hrs, followed by shut-in for 22 hrs. Pull bomb from well. Release PKR & TOOH w/ 2-3/8".

20. PU retrieving head. TIH on 2-3/8" and engage RBP @ 5750'. Equalize pressure & TOOH with RBP.

21. TIH w/ 4-3/4" bit, float, & 2-3/8" tubing. Clean hole out to RBP @ 7550' with gas, Flare well. Clean well up and obtain good pitot gauge on Mesaverde & Tocito. Record 15 min, 30 min, 45 min, & 1 hr. TOOH.

22. PU one jt 2-3/8" openended, SN, 6' perf sub, 5-1/2" PKR, & remaining 2-3/8" tubing. Set PKR @ 7050'. Set slips, close pipe rams. Continue to flow test Tocito. Obtain good pitot gauge on Tocito.

23. RU wireline. Run 24 hr digital pressure bomb. Set bomb in SN. Flow well 2 hrs, followed by shut-in for 22 hrs. Pull bomb from well. Release PKR & TOOH w/ 2-3/8".

24. PU retrieving head. TIH on 2-3/8" and engage RBP @ 7550'. Equalize pressure & TOOH with RBP.

25. PU 4-3/4" bit, float, & four (4) 3-1/8" drill collars on 2-3/8" tubing. Clean well out to 7833' with gas. Flare well. Pull above Dakota Perforations & pitot test well. Record 15 min, 30 min, 45 min, & 1 hr. TOOH.

26. RU wireline. Run After-Frac Gamma-Ray Log across New Zones. POOH. Prepare to Re-perforate Dakota as follows under full lubricator: w/ 4" HSC gun GOEX-116 19 gram charges 0.44" dia holes 2 SPF. (Total of 116 holes).

7513'-7535' (22'-44 holes)	7818'-7826' (8'-16 holes)	7775'-7780' (5'-10 holes)
7696'-7709' (13'-28 holes)	7628'-7630' (2'-4 holes)	7600'-7608' (8'-16 holes)

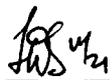
27. PU 5-1/2" fullbore PKR & TIH on 2-3/8" tubing. Set PKR @ 7800'. Establish Rate below PKR & pump 400 gallons 15% HCl acid w/ 2gal/1000 corrosion inhibitor, 1gal/1000 iron sequestering agent, 3 gal/1000 acetic acid & drop 20-7/8" RCN 1.30 sp gravity ball sealers in two sets of ten (10) balls. Pump @ maximum rate and pressure. Ball off Perforations & displace acid. Max pressure 3500 psi. Release Pressure & PKR. DO NOT KNOCK BALL SEALERS OFF YET.

28. Pull tubing uphole & Reset PKR @ 7400' on good bonded pipe. Establish rate below PKR w/ 1% KCl water. Pump 1000 gallons 15% HCl acid, followed by 1500 gallons 1% KCl water, followed by 1000 gallons 15% HCl acid, flush with 1% KCl water. Ball off entire Dakota interval by dropping 350 -7/8" RCN 1.30 specific gravity ballsealers in fourteen sets of twenty-five (25) balls. Pump at maximum rate & maximum pressure. Release PKR, and run in w/ PKR to 7800', knocking balls off of perforations. DO NOT GO BELOW 7800' w/ PKR. TOOH w/ PKR.

29. PU notched collar, float, & TIH w/ 2-3/8" tubing clean well out with gas to 7833'. Pull above Dakota and obtain good pitot gauge on entire well. Record 15 min, 30 min, 45 min, & 1 hr. TOOH.

30. TIH rabbiting tubing with production string as follows. One (1) jt 2-3/8" tubing opened, expendable check 'F' nipple (1.81" ID), eighteen (18) joints 2-3/8" tubing, One (1) 20' 3.062" blast joint for Tocito, forty-eight (48) joints 2-3/8" tubing, Four (4) 20' blast joints for Mesaverde, & remaining one-hundred-seventy-eight (178) jts 2-3/8" tubing. Land tubing @ 7700'. ND BOP, NU WH. Pump off expendable check and obtain final pitot test up 2-3/8" tubing for 15 min, 30 min, 45 min, & 1 hr. RD and release rig to next location.

31. Production Engineering will finalize Commingle Allocation Formula and submit it to the NMOCD. With Well shut-in, RU wireline and set 7day dip-in btm hole bomb in nipple. Recover bomb. Notify marketing that well will be restored to production.


TDS

Approved:


Drilling Superintendent

Suggested Vendors:

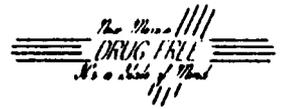
Stimulation Work:	Western Co. North America	327-6222
Logging/Perforating	Petro Wireline	326-6669
Pressure Bombs	Tefteller Inc.	325-1731
BP/PKR/Blast jts	Baker Service Tools	325-0216
3-1/2" Frac String	Cave Enterprises	325-3401
Radioactive Tagging	Protechnics Intl	326-7133
Engineering	T. E. Mullins	326-9546-H
	<i>JEM 11-14-93</i>	325-9361-W



STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE



BRUCE KING
GOVERNOR

OIL CONSERVATION DIVISION
RECEIVED

'93 DEC 20 AM 9 49

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6170

Date: _____

DHC-959

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

RE: Proposed MC _____
Proposed NSL _____
Proposed WFX _____
Proposed NSP _____

Proposed DHC x _____
Proposed SWD _____
Proposed PMX _____
Proposed DD _____

Gentlemen:

I have examined the application received on 11/24/93

for the Meridian OPERATOR Jacinto G #8 LEASE & WELL NO.

G-2-26N-5W and my recommendations are as follows:
UL-S-T-R

Approve

Yours truly,

[Signature]

MERIDIAN OIL

Cont 150

OIL CONSERVATION DIVISION
RECEIVED
RECEIVED
BLM
93 NOV 24 AM 11:23
94 JAN 8 AM 10 08
070 FARMINGTON, NM

November 23, 1993

Bureau of Land Management
1235 La Plata Highway
Farmington, New Mexico 87401

DHC- 959

RE: **Downhole Commingling Request**
Jicarilla G # 8
Unit G, Section 02, T26N, R05W
Rio Arriba County, New Mexico

Gentlemen:

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The purpose of this letter is to notify you of such action. If you have no objections to the proposed commingling order, please sign the attached copy of this letter and return it to this office.

Your prompt attention to this matter would be appreciated.

Sincerely,



Thomas E. Mullins
Production Engineer

The above downhole commingling request is hereby approved:

(Original Signed) HECTOR A. VILLALOBOS

Date: DEC 21 1993

TEM

RECEIVED
DEC 23 1993
OIL CONSERVATION DIVISION