

DATE IN 3/3/97	SUSPENSE 3/24/97	ENGINEER BS	LOGGED BY KV	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1468

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
 [DD-Directional Drilling] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

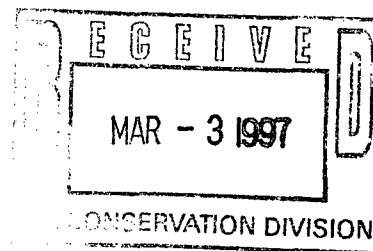
[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling
☐ NSL ☐ NSP ☐ DD ☐ SD

Check One Only for [B] and [C]

[B] Commingling - Storage - Measurement
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR



[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached

[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Carl Brown
 Print or Type Name

Carl Brown
 Signature

Petroleum Engineer
 Title

2-28-97
 Date

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980
DISTRICT II
811 South First St., Artesia, NM 88210-2835
DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

Form C-107-A
New 3-12-96

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Fasken Oil & Ranch, Ltd. 303 West Wall, Suite 1900 Midland, TX 79701-5116
Operator Address
Mobil "10" Federal 1 M 10 -T21S-R24E Eddy
Lease Well No. Unit Ltr. - Sec - Twp - Rge County
OGRID NO. 151416 Property Code 19345 API NO. 30-015-21647 Spacing Unit Lease Types: (check 1 or more)
Federal ☒ , State ☐ , (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Indian Basin (Strawn)		Atoka
2. Top and Bottom of Pay Section (Perforations)	8744' - 9187'		9344' - 9349'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) 2624 b. (Original) 2624	a. b.	a. <u>3282</u> 3282 b. 3282
6. Oil Gravity (° API) or Gas BTU Content	50°		NA
7. Producing or Shut-In?	Producing		Producing
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In, give date and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: Rates:	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 2-20-97 Rates: 144 MCFPD .3 BOPD	Date: Rates:	Date: 2-20-97 Rates: 3 MCFPD 0 BOPD
8. Fixed Percentage Allocation Formula - % for each zone	Oil: 98 % Gas: 98 %	Oil: % Gas: %	Oil: 2 % Gas: 2 %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☐ No
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No

11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☐ Yes ☐ No (If No, attach explanation)

12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No

13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)

14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No

15. NMOC Reference Cases for Rule 303(D) Exceptions: ORDER NO(S).

16. ATTACHMENTS:

- * C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- * Production curve for each zone for at least one year. (If not available, attach explanation.)
- * For zones with no production history, estimated production rates and supporting data.
- * Data to support allocation method or formula.
- * Notification list of all offset operators.
- * Notification list of working, overriding, and royalty interests for uncommon interest cases.
- * Any additional statements, data, or documents required to support commingling.

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

SIGNATURE Carl W. Brown TITLE Petroleum Engineer DATE 2/28/97

TYPE OR PRINT NAME Carl W. Brown TELEPHONE NO. (915) 687-1777



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

RECEIVED
FEB 27 1997

February 25, 1997

FASKEN OIL & RANCH, LTD.

Mr. Carl Brown, Petroleum Engineer
Fasken Oil and Ranch, Ltd.
303 West Wall Avenue, Suite 1900
Midland, TX 79701-5116

Dear Mr. Brown:

We are returning your downhole commingling application, dated February 21, 1997, for the Mobil "10" Federal No. 1.

This application is incomplete. Please complete the enclosed Administrative Application Coversheet and Form C-107-A and resubmit to our office.

Thank you for your cooperation.

Sincerely,

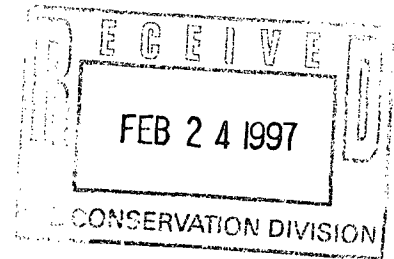
A handwritten signature in cursive script that reads "Kathy Valdes".

Kathy Valdes

FASKEN OIL AND RANCH, LTD.

303 WEST WALL AVENUE, SUITE 1900
MIDLAND, TEXAS 79701-5116
(915) 687-1777

February 21, 1997



The Oil Conservation Division
Energy, Minerals, and Natural Resources Department
2040 South Pacheco
Santa Fe, New Mexico 87505

Attention: Mr. David Catanach

Re: Downhole Commingle
Strawn and Atoka Zones
Mobil "10" Federal #1
Indian Basin (Strawn) Pool
Sec 10, T21S, R24E
Eddy County, New Mexico

Dear Mr. Catanach:

Mr. Tim Gum informed us by phone February 3, 1997 that our request in my letter dated September 3, 1996 for waiver of the downhole commingle requirement is denied. Therefore, Fasken hereby respectfully requests your consideration of the attached application for downhole commingling of the subject zones.

Without the commingling authority the Atoka zone would have to be isolated. This would require pulling the packer and dumping packer fluid on the Strawn. This could damage irreparably the already marginal (147 mcfpd) production.

Thank you for your help in this matter.

Sincerely,

Carl W. Brown

Carl W. Brown
Petroleum Engineer

CWB/cb
cc: Tim Gum, Artesia OCD
File

**MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-17
Effective 1-1-65

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

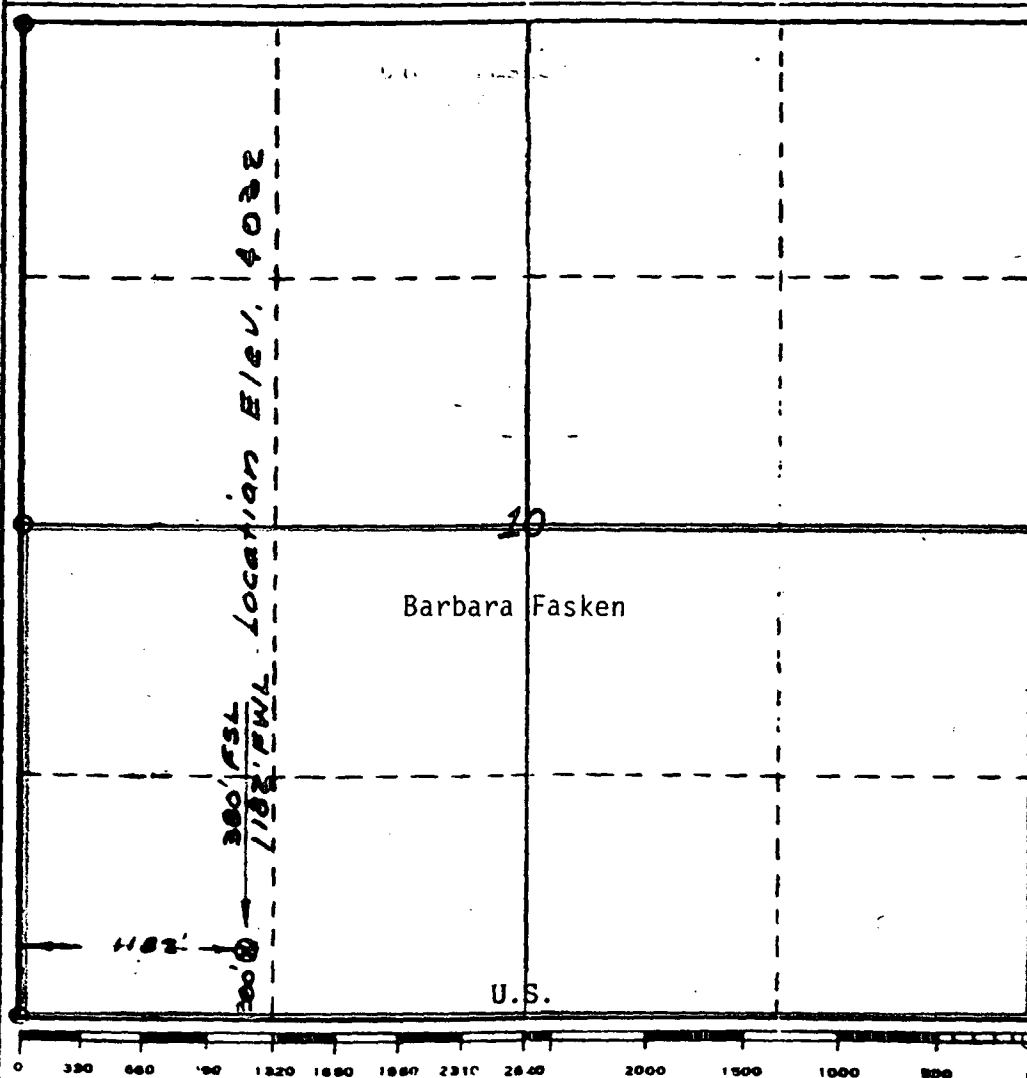
Operator Barbara Fasken			Lease Mobil "10" Federal		Well No. 1
Unit Letter M	Section 10	Township 21 South	Range 24 East	County Eddy	
Actual Footage Location of Well: 380 feet from the South line and 1182 feet from the West line					
Ground Level Elev. 4032'	Producing Formation Atoka Strawn		Pool Indian Basin	Dedicated Acreage 320 Acres	

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 _____

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 Commission.



CERTIFICATION

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

Tommy E. Taylor

Tommy E. Taylor

Position
Drlg. & Prod. Engr.

Owner
Barbara Fasken

Date
2-2-95

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
MAY 15, 1975

Registered Professional Engineer and/or Land Surveyor

John W. Dhean

Certificate No.
1559

MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-182
Supersedes C-17
Effective 1-1-85

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

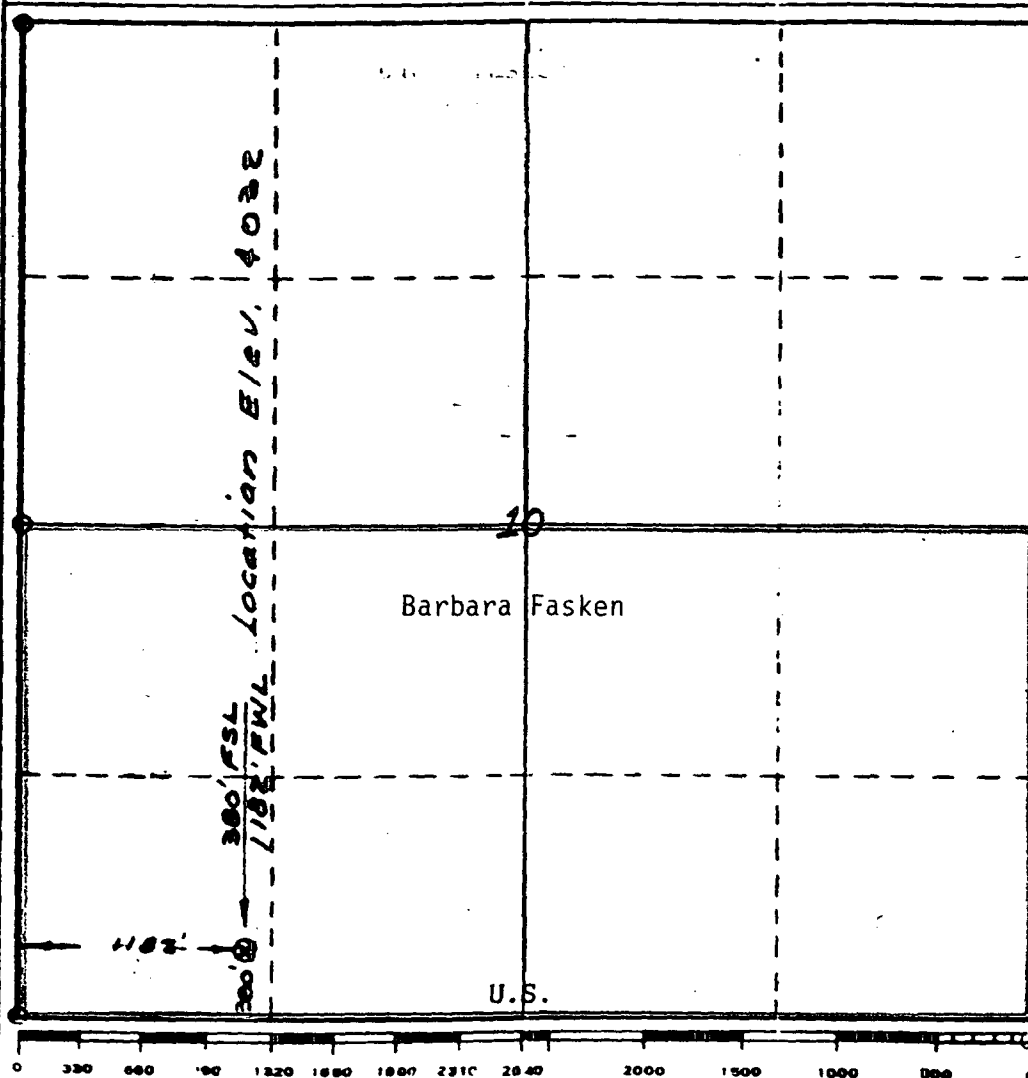
Operator Barbara Fasken			Lease Mobil "10" Federal		Well No. 1
Unit Letter M	Section 10	Township 21 South	Range 24 East	County Eddy	
Actual Footage Location of Well: 380 feet from the South line and 1182 feet from the West line					
Ground Level Elev. 4032'	Producing Formation Strawn		Pool Indian Basin		Dedicated Acreage 320 Acres

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 _____

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 Commission.



CERTIFICATION

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

Tommy E. Taylor

Tommy E. Taylor

Position
Drig. & Prod. Engr.

Operator
Barbara Fasken

Date
2-2-95

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
MAY 15, 1975

Registered Professional Engineer and/or Land Surveyor

W. W. Dye

Certificate No. **1559**

Application for Downhole Commingling
Supporting Data

1. Operator:

Fasken Oil and Ranch, Ltd.
303 W. Wall, Suite 1900
Midland, Texas 79701-5116

2. Lease:

Mobil "10" Federal #1
Unit M, Section 10, T-21-S, R-24-E
Pools: Indian Basin (Strawn)
Indian Basin (Atoka)
This is a re-entry of a 1975 well drilled and abandoned by David Fasken.

3. Plat attached.

4. Current productivity test:

Combined production 147 MCFPD @ 250 psi 2-20-97. Zones below were perforated on original completion July, 1996.

Indian Basin (Strawn)
Perfs: 8744'-9187' (35 holes overall)

Indian Basin (Atoka)
Perfs: 9344'-9349'

5. Production decline history plot attached included both zones.

6. Bottomhole Pressure:

Indian Basin (Strawn) Upper Zone
Measured BHP @ 8752' 6-17-96: 2624 psi (0.30 psi/ft)
Zone Pressure reduce by offset production. Original gradient 0.375 psi/ft.

Indian Basin (Atoka) Lower Zone
BHP @ 8752' datum: $8752 \times 0.375 \text{ psi/ft} = \underline{3282} \text{ PSI}$

Zone pressures are within 80%. A 1975 DST on the Atoka showed only 200 psi FSIP. However, the zone was tight or damaged such that the buildup time was insufficient to reach the expected zone pressure of 3250 psi +/-.

7. Fluids from each zone are compatible.

8. The value of the commingled fluids are no less than sum of the value of the separate streams.

9. The proposed allocation formula is based on an estimate of relative productivity of each zone. The Atoka zone did not result in an increase in rate or pressure when perforated whereas the Strawn intervals did. The Strawn/Atoka was stimulated simultaneously after perforating. Production from the Atoka is, therefore, estimated to be minimal with the proposed allocation formula:

<u>Zone</u>	<u>Gas</u>	<u>Condensate</u>
Strawn	98%	98%
Atoka	2%	2%

10. The commingling is necessary to produce the Atoka zone which would not be economical to produce otherwise.
11. There is no crossflow between the zones.
12. The ownership of both zones is common for all interests.
13. The offset operators and the Bureau of Land Management have been notified in writing at the following addresses:

Daniel E. Gonzalez
P. O. Box 2475
Santa Fe, New Mexico 87504

Yates Petroleum Corporation
105 S. Fourth St.
Artesia, NM 88210

Bureau of Land Management
2920 West Second Street
Roswell, New Mexico 88201

Rate/Time Graph

Lease Name: MOBIL "10" FEDERAL ()
State, County: NM, EDDY
Location: 10/21S/24E

Field Name: INDIAN BASIN (STRAWN)
Operator: FASKEN BARBARA

Date: 2/21/1997
Time: 2:51 PM

MOBIL "10" FEDERAL - INDIAN BASIN (STRAWN)

