



MORNINGSTAR
PARTNERS

TO Adrienne Sandoval, Director
 Oil Conservation Division
 New Mexico Department of Energy, Mineral, and Natural Resources
 1220 South Saint Francis Drive
 Santa Fe, New Mexico 87505

FROM MorningStar Operating LLC, OGRID 330132

DATE June 1, 2022

RE Application for Downhole Commingling (Identical Ownership)
 Abo Reef and Blinebry Pools, STATE AN #3, Lea County

Dear Ms. Sandoval,

MorningStar Operating LLC hereby makes an application requesting the administrative approval and authorization to downhole commingle the Abo Reef and Blinebry Pools for oil and gas production from the following well:

Well: State AN #3
API: 30-025-03103
Location: 1650 FNL, 2310 FEL, Unit Letter G, Sec 7, Twnshp 18S, R 35E
 N.M.P.M., Lea County, New Mexico

The subject well is an existing vertical wellbore originally drilled and completed in 1962 in the Vacuum; Abo Reef Pool. It was Temporarily Abandoned in 2000, and Plugged and Abandoned in 2005. The wellbore was re-entered in September of 2010 and was perforated and recompleted in the Blinebry Pool. The recompletion will be accomplished by drilling out two bridge plugs to reopen the Abo Reef Pool (61780), and production will be downhole commingled with the Blinebry Pool (61850). The value of production is not expected to decrease due to commingling.

For your reference, a similar downhole commingle application, DHC-4739, was approved in 2015 for the State AN #2H (30-025-03102).

Enclosed is the following documentation in support of this application:
Application Checklist
Form C-107A
Form C-102 Plats

400 WEST 7TH STREET ★ FORT WORTH, TX 76102

Interest Owner List, Copy of Interest Owner Notice, and Copy of Certified Mail Label
Current and Proposed Wellbore Diagrams

Thank you for your consideration and review of this application. If further information is needed, please do not hesitate to contact me.

Respectfully,

A handwritten signature in blue ink, appearing to read "Connie Blaylock", with a long horizontal flourish extending to the right.

Connie Blaylock
Regulatory Analyst
MorningStar Partners, L.P. / MorningStar Operating LLC / Cross Timbers Energy, LLC

Revised March 23, 2017

| | | | |
|-----------|-----------|-------|---------|
| RECEIVED: | REVIEWER: | TYPE: | APP NO: |
|-----------|-----------|-------|---------|

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505

**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND
 REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: MORNINGSTAR OPERATING LLC **OGRID Number:** 330132
Well Name: NEW MEXICO STATE AN #3 **API:** 30-025-03103
Pool: VACUUM; BLINBRY AND ABO REEF **Pool Code:** 61850 / 61780

**SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION
 INDICATED BELOW**

- 1) **TYPE OF APPLICATION:** Check those which apply for [A]
 A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]

[I] Commingling – Storage – Measurement

☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- 2) **NOTIFICATION REQUIRED TO:** Check those which apply.

- A. ☐ Offset operators or lease holders
 B. ☒ Royalty, overriding royalty owners, revenue owners
 C. ☐ Application requires published notice
 D. ☒ Notification and/or concurrent approval by SLO
 E. ☐ Notification and/or concurrent approval by BLM
 F. ☐ Surface owner
 G. ☒ For all of the above, proof of notification or publication is attached, and/or,
 H. ☐ No notice required

FOR OCD ONLY

- ☐ Notice Complete
☐ Application
 Content
 Complete

- 3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

CONNIE BLAYLOCK

Print or Type Name

Connie Blaylock

Signature

06/07/2022

Date

817-334-7882

Phone Number

cblaylock@mspartners.com

e-mail Address

District I
1625 N. French Drive, Hobbs, NM 88240

District II
811 S. First St., Artesia, NM 88210

District III
1000 Rio Brazos Road, Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-107A
Revised August 1, 2011

APPLICATION TYPE
☒ Single Well
☐ Establish Pre-Approved Pools
EXISTING WELLBORE
☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

Operator MORNINGSTAR OPERATING LLC Address 400 W 7TH ST, FORT WORTH, TX 76102
Lease STATE AN 3 Well No. G 7 35E 18S Unit Letter-Section-Township-Range LEA County
OGRID No. 330132 Property Code 331882 API No. 30-025-03103 Lease Type: ☐ Federal ☒ State ☐ Fee

| DATA ELEMENT | UPPER ZONE | INTERMEDIATE ZONE | LOWER ZONE |
|---|---|-----------------------|--|
| Pool Name | VACUUM; BLINEBRY | N / A | VACUUM; ABO |
| Pool Code | 61850 | | 61780 |
| Top and Bottom of Pay Section (Perforated or Open-Hole Interval) | 5836 - 6348 | | 8262 - 8879 |
| Method of Production (Flowing or Artificial Lift) | PUMPING | | PUMPING |
| Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone) | 655 PSI | | 690 PSI |
| Oil Gravity or Gas BTU (Degree API or Gas BTU) | 38.7 OIL GRAVITY | | 39.5 OIL GRAVITY |
| Producing, Shut-In or New Zone | PRODUCING | | PLUGGED |
| 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: 03/01/2022 Rates: 10.2 / 6.4 / 9.1 | Date: N / A Rates: | Date: 06/01/1996 Rates: 7.8 / .9 / 17 |
| Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.) | Oil 67 % Gas 91 % | Oil % Gas % | Oil 33 % Gas 9 % |

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes ☒ No ☐
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes ☐ No ☐
Are all produced fluids from all commingled zones compatible with each other? Yes ☒ No ☐
Will commingling decrease the value of production? Yes ☐ No ☒
If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes ☒ No ☐
NMOCD Reference Case No. applicable to this well: _____

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 working, royalty and overriding royalty interests for uncommon interest cases.
Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools
List of all operators within the proposed Pre-Approved Pools
Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
Bottomhole pressure data.

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

SIGNATURE Connie Blaylock TITLE Regulatory Analyst DATE 06/01/2022
TYPE OR PRINT NAME Connie Blaylock TELEPHONE NO. (817) 334-7882
E-MAIL ADDRESS cblaylock@mspartners.com

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---|---|--|
| ¹ API Number 30-025-03103 | ² Pool Code 61780 | ³ Pool Name VACUUM; ABO REEF |
| ⁴ Property Code 331882 | ⁵ Property Name STATE AN | ⁶ Well Number 3 |
| ⁷ OGRID No. 330132 | ⁸ Operator Name MORNINGSTAR OPERATING LLC | ⁹ Elevation 3970 GL |

¹⁰ Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| G | 7 | 18S | 35E | | 1650 | N | 2310 | E | LEA |

¹¹ Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |

| | | | |
|-------------------------------------|-------------------------------|----------------------------------|-------------------------|
| ¹² Dedicated Acres 40 | ¹³ Joint or Infill | ¹⁴ Consolidation Code | ¹⁵ Order No. |
|-------------------------------------|-------------------------------|----------------------------------|-------------------------|

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

| | | |
|--|--|--|
| ¹⁶ | ¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. | |
| | Signature <u>Connie Blaylock</u> Date <u>06/01/2022</u> | |
| | Printed Name <u>CONNIE BLAYLOCK</u> | |
| | E-mail Address <u>cblaylock@mspartners.com</u> | |
| NAD 83 LAT 32.7651558 LONG -103.4959335 | ¹⁸ SURVEYOR CERTIFICATION 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 belief. | |
| | Date of Survey _____ | |
| | Signature and Seal of Professional Surveyor: _____ | |
| | Certificate Number _____ | |

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|---|---|--|
| ¹ API Number 30-025-03103 | ² Pool Code 61850 | ³ Pool Name VACUUM; BLINEBRY |
| ⁴ Property Code 331882 | ⁵ Property Name STATE AN | ⁶ Well Number 3 |
| ⁷ OGRID No. 330132 | ⁸ Operator Name MORNINGSTAR OPERATING LLC | ⁹ Elevation 3970 GL |

¹⁰ Surface Location

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| G | 7 | 18S | 35E | | 1650 | N | 2310 | E | LEA |

¹¹ Bottom Hole Location If Different From Surface

| UL or lot no. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| | | | | | | | | | |

| | | | |
|-------------------------------------|-------------------------------|----------------------------------|-------------------------|
| ¹² Dedicated Acres 40 | ¹³ Joint or Infill | ¹⁴ Consolidation Code | ¹⁵ Order No. |
|-------------------------------------|-------------------------------|----------------------------------|-------------------------|

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

| | | |
|---|---|--|
| ¹⁶ | ¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. | |
| | Signature: <u>Connie Blaylock</u> Date: <u>06/01/2022</u> | |
| | Printed Name: <u>CONNIE BLAYLOCK</u> | |
| | E-mail Address: <u>cblaylock@mspartners.com</u> | |
| ¹⁸ SURVEYOR CERTIFICATION 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 belief. | | Date of Survey Signature and Seal of Professional Surveyor: Certificate Number |
| NAD 83 LAT 32.7651558 LONG -103.4959335 | | |
| | | |



MORNINGSTAR
PARTNERS

LAND OWNERSHIP STATUS

Application of MorningStar Operating LLC for Administrative Approval to Downhole
Commingle the Abo Reef and Blinebry Pools:

New Mexico State AN #3, API 30-025-03103
1650' FNL, 2310' FEL, Unit Letter G, Sec 7, Township 18S, Range 35E
Lea County, New Mexico

Lease Owner – 100% WI

MorningStar Operating LLC
400 W 7th St.
Fort Worth, TX 76102

Royalty Owner – 12.5% Royalty

State of New Mexico
Commissioner of Public Lands
P.O. Box 1148
Santa Fe, New Mexico 87504-1148

The New Mexico State AN #3 well was originally completed as an Abo producer but was later recompleted in the Blinebry. The Abo will be reopened, and the two zones commingled. The ownership is identical between the two pools.

By: Connie Blaylock

Connie Blaylock, Regulatory Analyst



MORNINGSTAR
PARTNERS

Certified Mail – Return Receipt

Date: June 7, 2022

Re: Downhole Commingling Application (Identical Ownership)
New Mexico State AN #3

Dear Sir/Madam:


Enclosed please find a copy of MorningStar Operating LLC's application for downhole commingle for well New Mexico State AN #3, located in Lea County, New Mexico, filed this date with the New Mexico Oil Conservation Division (NMOCD). The two pools proposed for downhole commingle are Vacuum; Blinebry and Vacuum; Abo Reef.

In the area of this well, these pools are commonly downhole commingled. The value of production is not expected to decrease due to commingling.

For questions regarding this application, please contact me at 817-334-7882, or by email at cblaylock@mspartners.com.

Kind Regards,

MorningStar Operating LLC

By: 

Connie Blaylock
Regulatory Analyst

400 WEST 7TH STREET ★ FORT WORTH, TX 76102

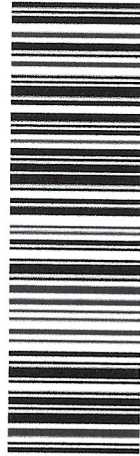
MorningStar Operating LLC
400 W 7TH ST
FORT WORTH TX 76102-4701

\$5.31 US POSTAGE
FIRST-CLASS
Jun 08 2022
Mailed from ZIP 76102
3 oz First-Class Mail Flats Rate
11923275



062S0012913542

USPS CERTIFIED MAIL



9407 1118 9876 5877 2646 97

State of New Mexico
Commissioner of Public Lands
PO BOX 1148
SANTA FE NM 87504-1148



**CURRENT
WELLBORE DIAGRAM**

State AN #3

LOCATION

| | |
|------------------|---------------------|
| State | New Mexico |
| County | Lea |
| Surface Location | 1650 FNL, 2310 FEL |
| | Sec 7, R-35E, T-18S |
| | Unit G |

CASING DETAIL

| | |
|--------------------------|---------------------|
| Surface Csg. | |
| Size: | 13-3/8" |
| Wt.: | 36# |
| Set @: | 334' |
| Sxs cmt: | 350sx |
| TOC: | Surface |
| Hole Size: | 17-1/4" |
| Intermediate Csg. | |
| Size: | 8-5/8" |
| Wt.: | 24# & 32# J-55 |
| Set @: | 3300' |
| Sxs Cmt: | 1600sx |
| TOC: | 1650' (temp survey) |
| Hole Size: | 11" |
| Production Csg. | |
| Size: | 5-1/2" |
| Wt.: | 15.5 & 17# |
| Set @: | 8983' |
| Sxs Cmt: | 750sx |
| TOC: | 3300' (temp survey) |
| Hole Size: | 7-7/8" |

WELL ID INFORMATION

| | |
|------------|--------------|
| Lease Name | State AN #3 |
| Field | Vacuum |
| Reservoir | Blinebry |
| API # | 30-025-03103 |

KB: 3982'

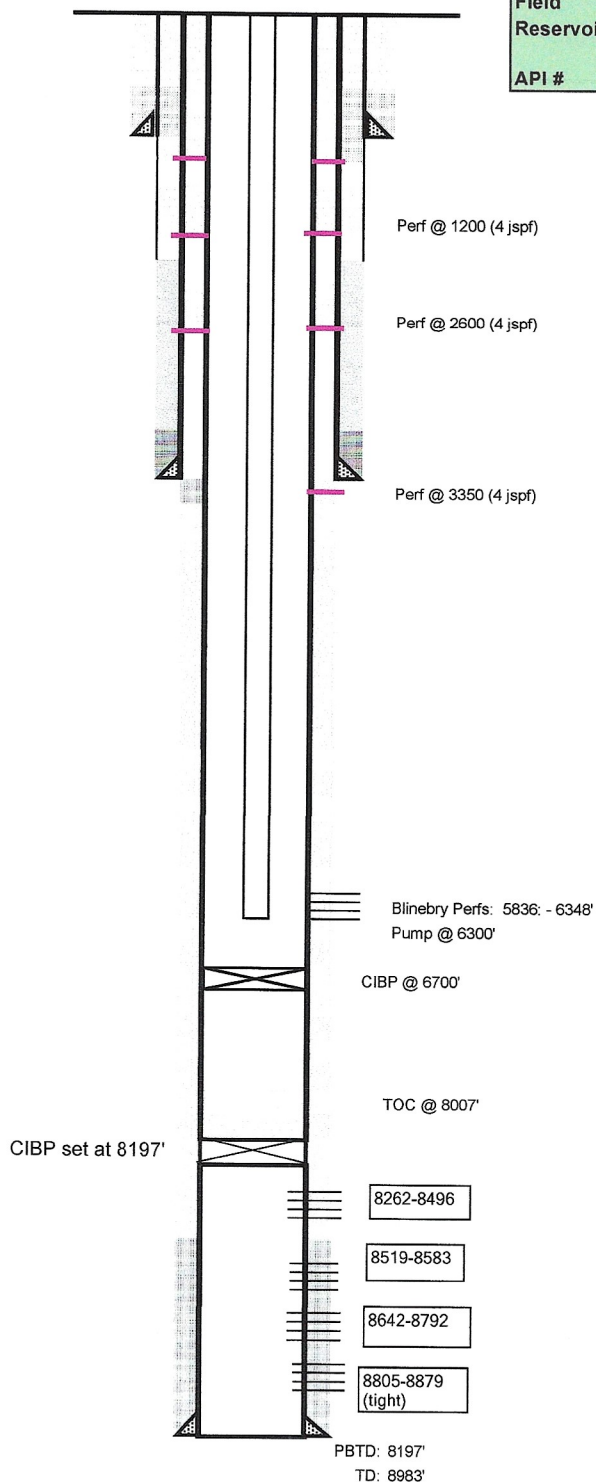
DF: 3981'

GL: 3970'

Spud Date: 3/24/1962

Compl. Date: 5/12/1962

P&A Date: 1/12/2005



WELLBORE DIAGRAM**State AN #3****LOCATION**

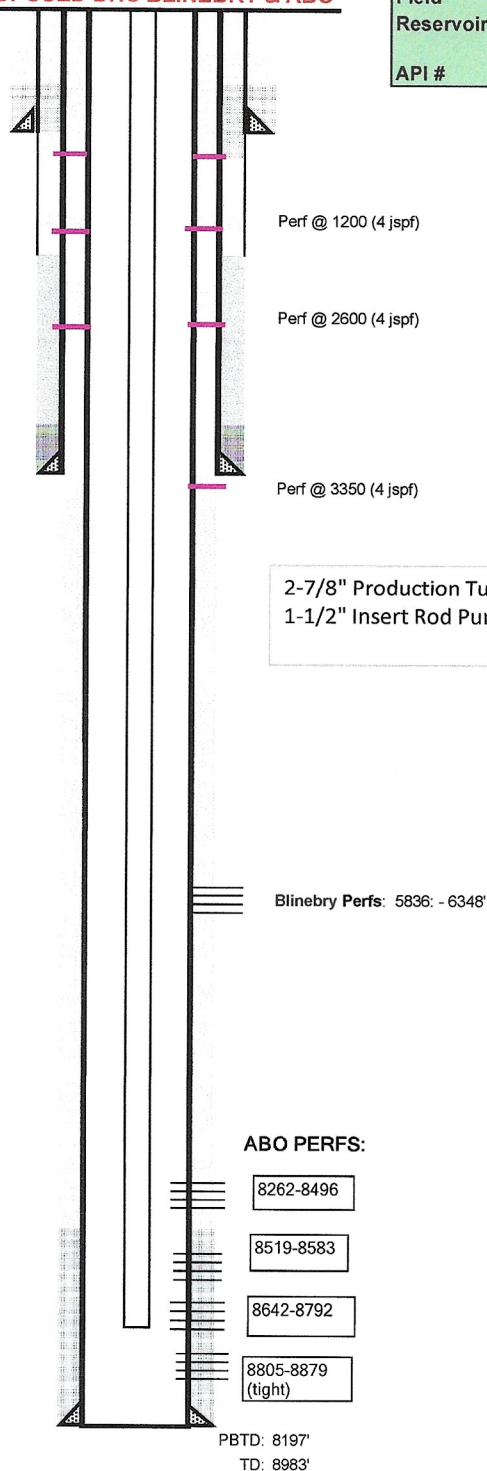
| | |
|------------------|---|
| State | New Mexico |
| County | Lea |
| Surface Location | 1650 FNL, 2310 FEL Sec 7, R-35E, T-18S Unit G |

WELL ID INFORMATION

| | |
|------------|--------------|
| Lease Name | State AN #3 |
| Field | Vacuum |
| Reservoir | Blinebry |
| API # | 30-025-03103 |

CASING DETAIL

| | |
|--------------------------|---------------------|
| Surface Csg. | |
| Size: | 13-3/8" |
| Wt.: | 36# |
| Set @: | 334' |
| Sxs cmt: | 350sx |
| TOC: | Surface |
| Hole Size: | 17-1/4" |
| Intermediate Csg. | |
| Size: | 8-5/8" |
| Wt.: | 24# & 32# J-55 |
| Set @: | 3300' |
| Sxs Cmt: | 1600sx |
| TOC: | 1650' (temp survey) |
| Hole Size: | 11" |
| Production Csg. | |
| Size: | 5-1/2" |
| Wt.: | 15.5 & 17# |
| Set @: | 8983' |
| Sxs Cmt: | 750sx |
| TOC: | 3300' (temp survey) |
| Hole Size: | 7-7/8" |

PROPOSED DHC BLINEBRY & ABO

KB: 3982'

DF: 3981'

GL: 3970'

Spud Date: 3/24/1962

Compl. Date: 5/12/1962

P&A Date: 1/12/2005

Perf @ 1200 (4 jsf)

Perf @ 2600 (4 jsf)

Perf @ 3350 (4 jsf)

2-7/8" Production Tubing w/
1-1/2" Insert Rod Pump

Blinebry Perfs: 5836' - 6348'

ABO PERFS:

8262-8496

8519-8583

8642-8792

8805-8879
(tight)

PBDT: 8197'

TD: 8983'

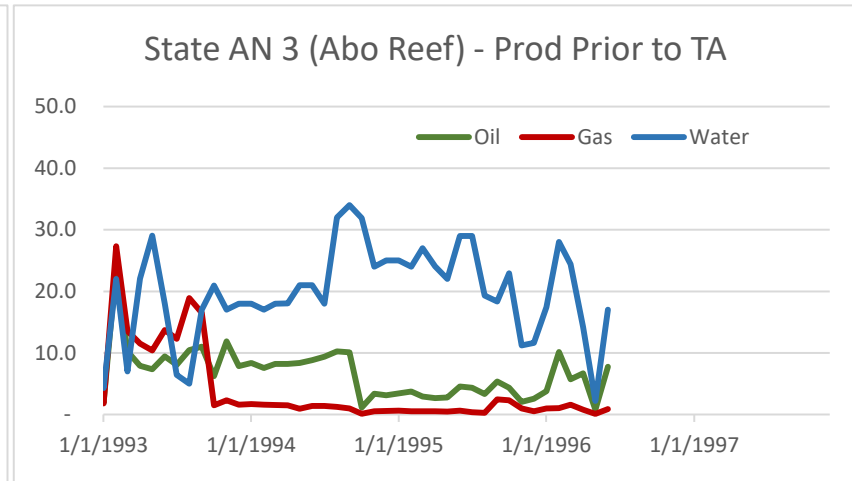
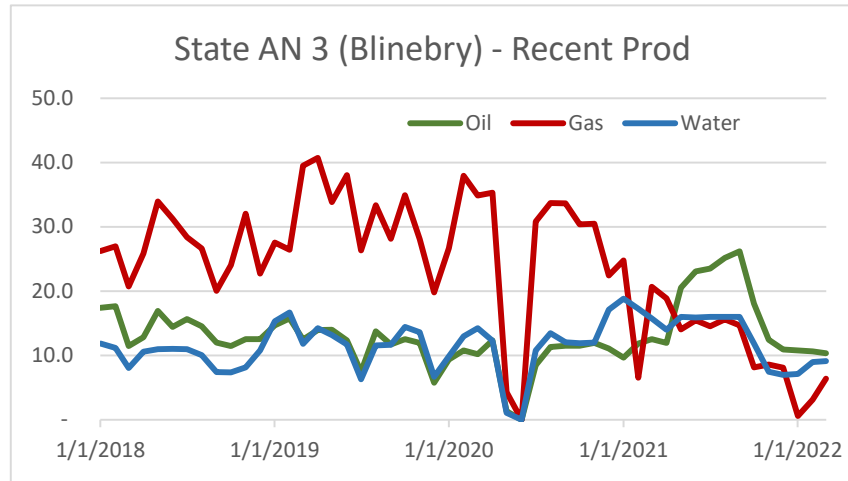
Morningstar Operating
State AN 3
Proposed Commingling Allocation

Last 36 Months Production Averages

| | Oil | Gas | Water | Production Period |
|----------|------|------|-------|-------------------|
| Abo Reef | 6.1 | 2.3 | 20.2 | 7/1993 - 6/1996 |
| Blinebry | 12.5 | 21.8 | 11.9 | 4/2019 - 3/2022 |

Proposed Allocation Factors

| | Oil | Gas | Water | Production Period |
|----------|-----|-----|-------|-------------------|
| Abo Reef | 33% | 9% | 63% | 7/1993 - 6/1996 |
| Blinebry | 67% | 91% | 37% | 4/2019 - 3/2022 |



Morningstar Operating

State AN #3 - Blinbry Production History

Ending 36m Avg**12.5****21.8****11.9**

| Date | Oil | Gas | Water | Oil | Gas | Water |
|-----------|-----|-------|-------|------|------|-------|
| 1/1/2018 | 540 | 813 | 367 | 17.4 | 26.2 | 11.8 |
| 2/1/2018 | 494 | 755 | 313 | 17.6 | 27.0 | 11.2 |
| 3/1/2018 | 355 | 641 | 249 | 11.5 | 20.7 | 8.1 |
| 4/1/2018 | 385 | 776 | 317 | 12.8 | 25.9 | 10.6 |
| 5/1/2018 | 525 | 1,053 | 341 | 16.9 | 34.0 | 11.0 |
| 6/1/2018 | 433 | 938 | 331 | 14.4 | 31.3 | 11.0 |
| 7/1/2018 | 486 | 880 | 341 | 15.7 | 28.4 | 11.0 |
| 8/1/2018 | 451 | 826 | 312 | 14.5 | 26.6 | 10.1 |
| 9/1/2018 | 360 | 602 | 222 | 12.0 | 20.1 | 7.4 |
| 10/1/2018 | 356 | 746 | 229 | 11.5 | 24.1 | 7.4 |
| 11/1/2018 | 377 | 964 | 245 | 12.5 | 32.0 | 8.1 |
| 12/1/2018 | 388 | 705 | 335 | 12.5 | 22.7 | 10.8 |
| 1/1/2019 | 456 | 855 | 475 | 14.7 | 27.6 | 15.3 |
| 2/1/2019 | 441 | 741 | 467 | 15.8 | 26.5 | 16.7 |
| 3/1/2019 | 386 | 1,221 | 365 | 12.5 | 39.5 | 11.8 |
| 4/1/2019 | 419 | 1,222 | 427 | 14.0 | 40.7 | 14.2 |
| 5/1/2019 | 434 | 1,050 | 408 | 14.0 | 33.9 | 13.2 |
| 6/1/2019 | 370 | 1,141 | 351 | 12.3 | 38.0 | 11.7 |
| 7/1/2019 | 232 | 816 | 195 | 7.5 | 26.3 | 6.3 |
| 8/1/2019 | 427 | 1,035 | 358 | 13.8 | 33.4 | 11.5 |
| 9/1/2019 | 351 | 844 | 350 | 11.7 | 28.1 | 11.7 |
| 10/1/2019 | 388 | 1,083 | 447 | 12.5 | 34.9 | 14.4 |
| 11/1/2019 | 359 | 846 | 410 | 11.9 | 28.1 | 13.6 |
| 12/1/2019 | 178 | 614 | 208 | 5.7 | 19.8 | 6.7 |
| 1/1/2020 | 291 | 827 | 306 | 9.4 | 26.7 | 9.9 |
| 2/1/2020 | 313 | 1,100 | 377 | 10.8 | 37.9 | 13.0 |
| 3/1/2020 | 316 | 1,078 | 440 | 10.2 | 34.9 | 14.2 |
| 4/1/2020 | 371 | 1,059 | 369 | 12.4 | 35.3 | 12.3 |
| 5/1/2020 | 82 | 262 | 65 | 1.3 | 4.3 | 1.1 |
| 6/1/2020 | - | - | - | - | - | - |
| 7/1/2020 | 264 | 956 | 334 | 8.5 | 30.8 | 10.8 |
| 8/1/2020 | 351 | 1,045 | 418 | 11.3 | 33.7 | 13.5 |
| 9/1/2020 | 346 | 1,010 | 362 | 11.5 | 33.7 | 12.1 |
| 10/1/2020 | 358 | 944 | 369 | 11.5 | 30.4 | 11.9 |
| 11/1/2020 | 359 | 916 | 360 | 12.0 | 30.5 | 12.0 |
| 12/1/2020 | 343 | 695 | 531 | 11.1 | 22.4 | 17.1 |
| 1/1/2021 | 300 | 768 | 584 | 9.7 | 24.8 | 18.8 |
| 2/1/2021 | 332 | 183 | 484 | 11.9 | 6.5 | 17.3 |
| 3/1/2021 | 387 | 640 | 487 | 12.5 | 20.7 | 15.8 |
| 4/1/2021 | 359 | 566 | 420 | 12.0 | 18.9 | 14.0 |
| 5/1/2021 | 637 | 435 | 496 | 20.5 | 14.0 | 16.0 |
| 6/1/2021 | 692 | 464 | 477 | 23.1 | 15.5 | 15.9 |
| 7/1/2021 | 729 | 450 | 496 | 23.5 | 14.5 | 16.0 |
| 8/1/2021 | 781 | 484 | 496 | 25.2 | 15.6 | 16.0 |
| 9/1/2021 | 786 | 441 | 480 | 26.2 | 14.7 | 16.0 |
| 10/1/2021 | 559 | 253 | 368 | 18.0 | 8.2 | 11.9 |
| 11/1/2021 | 374 | 259 | 225 | 12.4 | 8.6 | 7.5 |
| 12/1/2021 | 339 | 251 | 217 | 10.9 | 8.1 | 7.0 |
| 1/1/2022 | 334 | 19 | 221 | 10.8 | 0.6 | 7.1 |
| 2/1/2022 | 298 | 88 | 252 | 10.6 | 3.1 | 9.0 |
| 3/1/2022 | 315 | 195 | 279 | 10.3 | 6.4 | 9.1 |

Morningstar Operating

State AN #3 - Abo Reef Production History

Ending 36m Avg 6.1 2.3 20.2

| Date | Oil | Gas | Water | Oil | Gas | Water |
|-----------|-----|-----|-------|------|------|-------|
| 1/1/1992 | 353 | 196 | 496 | 11.4 | 6.3 | 16.0 |
| 2/1/1992 | 242 | 193 | 493 | 8.3 | 6.7 | 17.0 |
| 3/1/1992 | 212 | 163 | 651 | 6.8 | 5.3 | 21.0 |
| 4/1/1992 | 228 | 132 | 660 | 7.6 | 4.4 | 22.1 |
| 5/1/1992 | 228 | 197 | 651 | 7.4 | 6.4 | 21.0 |
| 6/1/1992 | 186 | 126 | 551 | 6.2 | 4.2 | 18.4 |
| 7/1/1992 | 165 | 99 | 806 | 5.3 | 3.2 | 26.0 |
| 8/1/1992 | 181 | 142 | 682 | 5.8 | 4.6 | 22.0 |
| 9/1/1992 | 91 | 33 | 480 | 3.0 | 1.1 | 16.0 |
| 10/1/1992 | 99 | 77 | 496 | 3.2 | 2.5 | 16.0 |
| 11/1/1992 | 149 | 181 | 720 | 5.0 | 6.0 | 24.0 |
| 12/1/1992 | 230 | 257 | 494 | 7.4 | 8.3 | 15.9 |
| 1/1/1993 | 60 | 56 | 133 | 1.9 | 1.8 | 4.3 |
| 2/1/1993 | 674 | 765 | 616 | 24.1 | 27.3 | 22.0 |
| 3/1/1993 | 317 | 420 | 217 | 10.2 | 13.5 | 7.0 |
| 4/1/1993 | 236 | 344 | 660 | 7.9 | 11.5 | 22.1 |
| 5/1/1993 | 228 | 323 | 900 | 7.4 | 10.4 | 29.0 |
| 6/1/1993 | 283 | 412 | 540 | 9.4 | 13.7 | 18.0 |
| 7/1/1993 | 250 | 381 | 200 | 8.1 | 12.3 | 6.5 |
| 8/1/1993 | 324 | 586 | 155 | 10.5 | 18.9 | 5.0 |
| 9/1/1993 | 331 | 496 | 510 | 11.0 | 16.5 | 17.0 |
| 10/1/1993 | 194 | 46 | 651 | 6.2 | 1.5 | 20.9 |
| 11/1/1993 | 356 | 69 | 510 | 11.9 | 2.3 | 17.0 |
| 12/1/1993 | 243 | 50 | 558 | 7.8 | 1.6 | 18.0 |
| 1/1/1994 | 260 | 52 | 558 | 8.4 | 1.7 | 18.0 |
| 2/1/1994 | 211 | 45 | 476 | 7.5 | 1.6 | 17.0 |
| 3/1/1994 | 254 | 47 | 558 | 8.2 | 1.5 | 18.0 |
| 4/1/1994 | 245 | 45 | 540 | 8.2 | 1.5 | 18.1 |
| 5/1/1994 | 259 | 29 | 651 | 8.4 | 0.9 | 21.0 |
| 6/1/1994 | 265 | 42 | 630 | 8.8 | 1.4 | 21.0 |
| 7/1/1994 | 291 | 43 | 558 | 9.4 | 1.4 | 18.0 |
| 8/1/1994 | 318 | 39 | 992 | 10.3 | 1.3 | 32.0 |
| 9/1/1994 | 303 | 30 | 1,020 | 10.1 | 1.0 | 34.0 |
| 10/1/1994 | 35 | 4 | 992 | 1.1 | 0.1 | 31.9 |
| 11/1/1994 | 101 | 16 | 720 | 3.4 | 0.5 | 24.0 |
| 12/1/1994 | 96 | 18 | 775 | 3.1 | 0.6 | 25.0 |
| 1/1/1995 | 106 | 19 | 775 | 3.4 | 0.6 | 25.0 |
| 2/1/1995 | 104 | 15 | 672 | 3.7 | 0.5 | 24.0 |
| 3/1/1995 | 90 | 17 | 837 | 2.9 | 0.5 | 27.0 |
| 4/1/1995 | 79 | 15 | 720 | 2.6 | 0.5 | 24.1 |
| 5/1/1995 | 86 | 14 | 682 | 2.8 | 0.5 | 22.0 |
| 6/1/1995 | 137 | 19 | 870 | 4.6 | 0.6 | 29.0 |
| 7/1/1995 | 135 | 12 | 899 | 4.4 | 0.4 | 29.0 |
| 8/1/1995 | 103 | 8 | 598 | 3.3 | 0.3 | 19.3 |
| 9/1/1995 | 161 | 74 | 550 | 5.4 | 2.5 | 18.3 |
| 10/1/1995 | 135 | 72 | 713 | 4.3 | 2.3 | 22.9 |
| 11/1/1995 | 62 | 30 | 336 | 2.1 | 1.0 | 11.2 |
| 12/1/1995 | 79 | 17 | 360 | 2.5 | 0.5 | 11.6 |
| 1/1/1996 | 117 | 31 | 540 | 3.8 | 1.0 | 17.4 |
| 2/1/1996 | 294 | 30 | 812 | 10.1 | 1.0 | 28.0 |
| 3/1/1996 | 174 | 48 | 744 | 5.7 | 1.6 | 24.4 |
| 4/1/1996 | 201 | 23 | 425 | 6.7 | 0.8 | 14.2 |
| 5/1/1996 | 24 | 3 | 68 | 0.8 | 0.1 | 2.2 |
| 6/1/1996 | 233 | 27 | 510 | 7.8 | 0.9 | 17.0 |

From: [Engineer, OCD, EMNRD](#)
To: [Connie Blaylock](#)
Cc: [McClure, Dean, EMNRD](#); [Kautz, Paul, EMNRD](#); [Wrinkle, Justin, EMNRD](#); [Powell, Brandon, EMNRD](#); [lisa@rwbyram.com](#); [Dawson, Scott](#)
Subject: Approved Administrative Order DHC-5223
Date: Wednesday, September 14, 2022 12:25:36 PM
Attachments: [DHC5223 Order.pdf](#)

NMOCD has issued Administrative Order DHC-5223 which authorizes MorningStar Operating, LLC (330132) to downhole commingle production within the following well:

Well Name: [State AN #3](#)
Well API: [30-025-03103](#)

The administrative order is attached to this email and can also be found online at OCD Imaging.

Please review the content of the order to ensure you are familiar with the authorities granted and any conditions of approval. If you have any questions regarding this matter, please contact me.

Dean McClure
Petroleum Engineer, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
(505) 469-8211

From: [Connie Blaylock](#)
To: [McClure, Dean, EMNRD](#)
Subject: [EXTERNAL] RE: EXTERNAL:downhole commingling application DHC-5223
Date: Friday, September 9, 2022 3:10:12 PM

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Hi Dean,
Estimated BTUs are:
Blinbry 1390
Abo Reef 1407

Thank you,

Connie Blaylock

Regulatory Compliance

MorningStar Partners, L.P. | MorningStar Operating LLC | Cross Timbers Energy, LLC | Southland Royalty Company, LLC

400 West 7th Street | Fort Worth, Texas 76102

Direct Line: 817.334.7882

cblaylock@mspartners.com

From: McClure, Dean, EMNRD <Dean.McClure@state.nm.us>
Sent: Friday, September 09, 2022 3:39 PM
To: Connie Blaylock <cblaylock@mspartners.com>
Subject: EXTERNAL:downhole commingling application DHC-5223

Ms. Blaylock,

I am reviewing downhole commingling application DHC-5223 which involves the commingling of pools within the well bore of the State AN #3 (30-025-03103) and is operated by MorningStar Operating, LLC (330132).

Please provide known or estimated BTU values for the gas from each of these pools from this well.

Dean McClure
Petroleum Engineer, Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
(505) 469-8211

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**APPLICATION FOR DOWNHOLE COMMINGLING
SUBMITTED BY MORNINGSTAR OPERATING, LLC**

ORDER NO. DHC-5223

ORDER

The Director of the New Mexico Oil Conservation Division (“OCD”), having considered the application and the recommendation of the Engineering Bureau, issues the following Order.

FINDINGS OF FACT

1. MorningStar Operating, LLC (“Applicant”) submitted a complete application (“Application”) to downhole commingle the pools described in Exhibit A (“the Pools”) within the well bore of the well identified in Exhibit A (“the Well”).
2. Applicant proposed a method to allocate the oil and gas production from the Well to each of the Pools that is satisfactory to the OCD and protective of correlative rights.
3. Applicant has certified that all produced fluids from all the Pools are compatible with each other.
4. Applicant has certified that downhole commingling the Pools will not decrease the value of the oil and gas production.
5. To the extent that ownership is identical, Applicant submitted a certification by a licensed attorney or qualified petroleum landman that ownership in the Pools is identical as defined by 19.15.12.7(B) NMAC.
6. To the extent that ownership is diverse, Applicant identified all owners of interest in the Pools, provided evidence a copy of the Application was given to each person, and those persons either submitted a written waiver or did not file an objection to the Application.
7. Applicant provided notice of the Application to the Bureau of Land Management (“BLM”) or New Mexico State Land Office (“NMSLO”), as applicable.

CONCLUSIONS OF LAW

8. OCD has jurisdiction to issue this Order pursuant to the Oil and Gas Act, NMSA 1978, Sections 70-2-6, 70-2-11, 70-2-12, 70-2-16, 70-2-17, and 19.15.12 NMAC.
9. The downhole commingling of the Pools is common, or Applicant has provided evidence that the fluids are compatible and will not damage the Pools in accordance with 19.15.12.11(A)(1) NMAC.
10. The bottom perforation of the lower zone is within one hundred fifty percent (150%) of the depth of the top perforation in the upper zone or Applicant has provided evidence that the

proposed commingling of the Pools shall not result in shut-in or flowing well bore pressure in excess of the commingled pool's fracture parting pressure in accordance with 19.15.12.11(A)(3) NMAC.

11. Applicant's proposed method of allocation, as modified herein, complies with 19.15.12.11(A)(8) NMAC.
12. To the extent that ownership is diverse, Applicant identified all owners of interest in the Pools and provided evidence the application was given to those persons in accordance with 19.15.12.11(C)(1)(b) NMAC.
13. By granting the Application with the conditions specified below, this Order prevents waste and protects correlative rights, public health, and the environment.

ORDER

1. Applicant is authorized to downhole commingle the Pools described in Exhibit A within the well bore of the well identified in Exhibit A.
2. Applicant shall allocate a fixed percentage of the oil and gas production from the Well to each of the Pools as described in Exhibit A.
3. If an alteration is made to the Well or a condition within the Well changes which may cause the allocation of production to the Pools as approved within this Order to become inaccurate, then no later than sixty (60) days after that event, Applicant shall submit Form C-103 to the OCD Engineering Bureau describing the event and include a revised allocation plan. If OCD denies the revised allocation plan, this Order shall terminate on the date of such action.
4. If any of the pools being commingled is prorated, or the Well's production has been restricted by an OCD order in any manner, the allocated production from each producing pool in the commingled well bore shall not exceed the top oil or gas allowable rate for a well in that pool or rate restriction applicable to the well.
5. If the Well is deepened, then no later than forty-five (45) days after the Well is deepened, Applicant shall conduct and provide logs to OCD that are sufficient for OCD to determine which pool(s) each new completed interval of the Well will produce from.
6. If the downhole commingling of the Pools reduces the value of the oil and gas production to less than if it had remained segregated, no later than sixty (60) days after the decrease in value has occurred Applicant shall submit a new downhole commingling application to OCD to amend this Order to remove the pool that caused the decrease in value. If Applicant fails to submit a new application, this Order shall terminate on the following day, and if OCD denies the application, this Order shall terminate on the date of such action.
7. If a completed interval of the Well is altered from what is submitted within the Application as identified in Exhibit A, then no later than sixty (60) days after the alteration, Applicant shall submit Form C-103 to the OCD Engineering Bureau detailing the alteration and completed interval.

8. If OCD determines that Applicant has failed to comply with any provision of this Order, OCD may take any action authorized by the Oil and Gas Act or the New Mexico Administrative Code (NMAC).
9. OCD retains jurisdiction of this matter and reserves the right to modify or revoke this Order as it deems necessary.

**STATE OF NEW MEXICO
OIL CONSERVATION DIVISION**



**ADRIENNE E. SANDOVAL
DIRECTOR**

9/14/2022

DATE: _____

State of New Mexico
Energy, Minerals and Natural Resources Department

Exhibit A

Order: **DHC-5223**

Operator: **MorningStar Operating, LLC (330132)**

Well Name: **State AN #3**

Well API: **30-025-03103**

Pool Name: **VACUUM; BLINEBRY**

Upper Zone

Pool ID: **61850**

Current: **X**

New:

Allocation: **Fixed Percent**

Oil: **67%**

Gas: **91%**

Interval: **Perforations**

Top: **5,836**

Bottom: **6,348**

Pool Name:

Intermediate Zone

Pool ID:

Current:

New:

Allocation:

Oil:

Gas:

Interval:

Top:

Bottom:

Bottom of Interval within 150% of Upper Zone's Top of Interval:

Pool Name: **VACUUM; ABO REEF**

Lower Zone

Pool ID: **61780**

Current:

New: **X**

Allocation: **Fixed Percent**

Oil: **33%**

Gas: **9%**

Interval: **Perforations**

Top: **8,262**

Bottom: **8,879**

Bottom of Interval within 150% of Upper Zone's Top of Interval: **NO**

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 118124

CONDITIONS

| | |
|--|--|
| Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102 | OGRID: 330132 |
| | Action Number: 118124 |
| | Action Type: [C-107] Down Hole Commingle (C-107A) |

CONDITIONS

| | | |
|------------|--|----------------|
| Created By | Condition | Condition Date |
| dmcclure | Please review the content of the order to ensure you are familiar with the authorities granted and any conditions of approval. If you have any questions regarding this matter, please contact me. | 9/14/2022 |