

4/28/08 DATE IN	SUSPENSE	W Jones ENGINEER	4/28/08 LOGGED IN	DHC TYPE 4032	PKVR0811952298 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - 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

**Application Acronyms:**

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [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 - Simultaneous Dedication  
 NSL  NSP  SD
- Check One Only for [B] or [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
- [D] Other: Specify \_\_\_\_\_
- [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

2008 APR 28 PM 1 56  
 RECEIVED

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **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.**

<u>Kanicia Carrillo</u> Print or Type Name	<u></u> Signature	<u>Regulatory Analyst</u> Title	<u>04/17/08</u> Date
		<u>kcarrillo@conchoresources.com</u> e-mail Address	



RECEIVED

April 24, 2008

2008 APR 28 PM 1 56

New Mexico Oil Conservation Division  
Attn: Will Jones  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Re: Request for Down Hole Commingling and Measurement of Hydrocarbon Production for:  
White Oak State #5  
Eddy County, NM  
API # 30-015-31347

Pools:  
(96210) Empire; Glorieta-Yeso  
(51300) Red Lake; Queen-Grayburg-SA

Dear Mr. Jones,

COG Operating LLC as operator of the above mentioned wells respectfully requests approval for down hole commingling and measurement of production.

COG proposes to commingle production from the above mentioned pools. Production will be measured at the White Oak State #5 battery located in the NE/4 NE/4, Section 23, T17S, R28E. The lease has common interest in both pools. Testing will be conducted and allocation percentages will be sent to OCD after completion of this well. The percentages will be used to allocate production based on increased production from the Grayburg/San Andres formation.

Please contact me at 432-685-4332 or e-mail at [kcarrillo@conchoresources.com](mailto:kcarrillo@conchoresources.com) if you need additional information.

Thank you for your attention in this matter.

Sincerely,

COG Operating LLC

Kanicia Carrillo  
Regulatory Analyst

Attachments: C-107A's and C-102's for both formations

Submit 3 Copies To Appropriate District Office  
 District I  
 1625 N. French Dr., Hobbs, NM 88240  
 District II  
 1301 W. Grand Ave., Artesia, NM 88210  
 District III  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

Form C-103  
 May 27, 2004

OIL CONSERVATION DIVISION  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

WELL API NO. <b>30-015-31347</b>
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name <b>WHITE OAK STATE</b>
8. Well Number <b>5</b>
9. OGRID Number <b>229137</b>
10. Pool name or Wildcat <b>EMPIRE; GLORIETA-YESO 96210</b>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <b>3707 GR</b>

**SUNDRY NOTICES AND REPORTS ON WELLS**  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well  Gas Well  Other

2. Name of Operator  
**COG Operating LLC**

3. Address of Operator  
**550 W. Texas Ave., Suite 1300 Midland, TX 79701**

4. Well Location  
 Unit Letter **A** : **990** feet from the **North** line and **330** feet from the **East** line  
 Section **23** Township **17S** Range **28E** NMPM County **EDDY**

Pit or Below-grade Tank Application  or Closure

Pit type **DRILLING** Depth to Groundwater **125'** Distance from nearest fresh water well **1000'** Distance from nearest surface water **1000'**

Pit Liner Thickness: **12 mil** Below-Grade Tank: Volume \_\_\_\_\_ bbls; Construction Material \_\_\_\_\_

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

<b>NOTICE OF INTENTION TO:</b>		<b>SUBSEQUENT REPORT OF:</b>	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <u>Recomplete to SA and DHC SA w/ Yeso</u> <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

COG Operating LLC proposes to recomplete to the SA as follows:

MIRU pulling unit. POOH w/ pump, rods and tubing, stand up. MIRU WLU. RIH and perforate San Andres zone, 2495 – 2852.5, 2SPF, 36 holes. RIH w/ 4-1/2" RBP and RTTS. Set RBP @ 2960' w/ 32jts out. Set RTTS and test RBP to 3500 psi. Unset RTTS and POOH. RIH w/ 4-1/2" PPI to 2852'. Acidize w/2,000 gals 15% HCl acid. Frac w/92,650 gals gel, 8,014# 14/30 Liteprop, 76,480, 91,840# 16/30 sand. RIH w/ 124jts 2-3/8" tbg, SN @ 4008'. RIH w/ new 2"x1-1/2"x20' RHTC trash pump.

COG proposes to down hole commingle the Empire; Glorieta-Yeso, (96210) with Red Lake; Queen-Grayburg-SA, (51300).

Commingling will not reduce the value of the total remaining production.

The proposed intervals are as follows:

Red Lake; Queen-Grayburg-SA 2495' – 2852.5'

Empire; Glorieta-Yeso 3750' – 4023'

Percentages to be determined after completion.

Ownership in all zones is the same.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines , a general permit  or an (attached) alternative OCD-approved plan .

SIGNATURE  TITLE Regulatory Analyst DATE 04/16/08

Type or print name **Kanicia Carrillo** E-mail address: **kcarrillo@conchoresources.com** Telephone No. **432-685-4332**  
**For State Use Only**

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of Approval (if any): \_\_\_\_\_

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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 June 10, 2003  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-31347		<sup>2</sup> Pool Code 51300		<sup>3</sup> Pool Name Red Lake; Queen-Grayburg-SA	
<sup>4</sup> Property Code 302584		<sup>5</sup> Property Name White Oak State			<sup>6</sup> Well Number 5
<sup>7</sup> OGRID No. 229137		<sup>8</sup> Operator Name COG OPERATING LLC			<sup>9</sup> Elevation 3707

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	23	17S	28E		990	North	330	East	Eddy

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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		<p><sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>[Signature]</i> Signature</p> <p>Kanicia Carrillo Printed Name</p> <p>Regulatory Analyst Title and E-mail Address</p> <p>04/17/08 Date</p>
		<p><sup>18</sup> 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.</p> <p>Referred Original Survey</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p>
		<p>Certificate Number</p>

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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 June 10, 2003  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-31347		<sup>2</sup> Pool Code 96210		<sup>3</sup> Pool Name Empire; Glorieta-Yeso	
<sup>4</sup> Property Code 302584		<sup>5</sup> Property Name White Oak State			<sup>6</sup> Well Number 5
<sup>7</sup> OGRID No. 229137		<sup>8</sup> Operator Name COG OPERATING LLC			<sup>9</sup> Elevation 3707

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	23	17S	28E		990	North	330	East	Eddy

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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

	<p><sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature: <i>Kanicia Carrillo</i></p> <p>Printed Name: Kanicia Carrillo</p> <p>Title and E-mail Address: Regulatory Analyst</p> <p>Date: 04/17/08</p>
	<p><sup>18</sup> 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.</p> <p>Referred Original Survey</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p>
	<p>Certificate Number</p>

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-107A  
Revised June 10, 2003

District II  
1301 W. Grand Avenue, Artesia, NM 88210

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

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

District III  
1000 Rio Brazos Road, Aztec, NM 87410

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

**APPLICATION FOR DOWNHOLE COMMINGLING**

**COG OPERATING LLC**

**550 W. Texas, Suite 550**

**Midland, TX 79701**

Operator

Address

**White Oak State**

**5**

**Unit A, Sec 23, T-17S, R-28E**

**Eddy**

Lease

Well No.

Unit Letter-Section-Township-Range

County

OGRID No. 229137 Property Code 302584 API No. 30-015-31347 Lease Type:  Federal  State  Fee

DATA ELEMENT	UPPER ZONE <i>UNDES</i>	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Red Lake, Queen-Grayburg-SA (Oil)	Empire; Glorieta-Yeso (Oil)	
Pool Code	51300	96210	
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	2495 - 2852.5	3750 - 4023	
Method of Production (Flowing or Artificial Lift)	Pump	Pump	
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)			
Oil Gravity or Gas BTU (Degree API or Gas BTU)			
Producing, Shut-In or New Zone	New Zone	Producing	
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: 2/24/06 Oil/Gas/Water Rates: 7 / 6 / 6	Date: 10/01/05 Oil/ Gas /Water Rates: 2 / 8 / 25	Date: Rates:
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil 78% Gas 43%	Oil 22% Gas 57%	Oil % Gas %

**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 *Kanicia Carrillo* TITLE Regulatory Analyst DATE 04/24/08

TYPE OR PRINT NAME Kanicia Carrillo TELEPHONE NO. ( 432 ) 685-4332

E-MAIL ADDRESS kcarrillo@conchoresources.com