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Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC029406B

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
30-025-44141

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. (319782)
ZEPPO 5 FEDERAL COM 25H

2. Name of Operator COG OPERATING LLC (229137)

9. API Well No.

3a. Address
600 West Illinois Ave Midland TX 79701

3b. Phone No. *(include area code)*
(432)683-7443

10. Field and Pool, or Exploratory (44500)
MALJAMAR / YESO, WEST

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWNE / 2490 FNL / 2210 FEL / LAT 32.864093 / LONG -103.7875605
At proposed prod. zone SWSE / 121 FSL / 2308 FEL / LAT 32.8422506 / LONG -103.7875605

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 5 / T17S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*
1.5 miles

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
121 feet

16. No. of acres in lease
1606.8

17. Spacing Unit dedicated to this well
240

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
205 feet

19. Proposed Depth
6200 feet / 13944 feet

20. BLM/BIA Bond No. on file
FED: NMB000215

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
4100 feet

22. Approximate date work will start*
10/14/2017

23. Estimated duration
15 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Robyn Odom / Ph: (432)685-4385	03/31/2017

Title
Regulatory Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	10/12/2017

Title	Office
Supervisor Multiple Resources	CARLSBAD

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

KZ
10/24/17

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Operator Certification Data Report

10/18/2017

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Robyn Odom **Signed on:** 03/31/2017

Title: Regulatory Analyst

Street Address: 600 W Illinois Ave

City: Midland **State:** TX **Zip:** 79701

Phone: (432)685-4385

Email address: rodom@concho.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

AFMSS

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Application Data Report

10/18/2017

APD ID: 10400012076 **Submission Date:** 03/31/2017

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400012076 **Tie to previous NOS?** 10400005154 **Submission Date:** 03/31/2017

BLM Office: CARLSBAD **User:** Robyn Odom **Title:** Regulatory Analyst

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMLC029406B **Lease Acres:** 1606.8

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO **APD Operator:** COG OPERATING LLC

Operator letter of designation:

Operator Info

Operator Organization Name: COG OPERATING LLC

Operator Address: 600 West Illinois Ave **Zip:** 79701

Operator PO Box:

Operator City: Midland **State:** TX

Operator Phone: (432)683-7443

Operator Internet Address: RODOM@CONCHO.COM

Section 2 - Well Information

Well in Master Development Plan? NO **Mater Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** MALJAMAR **Pool Name:** YESO, WEST

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** ZEPPO 5 FED COM **Number:** 5

Well Class: HORIZONTAL **Number of Legs:**

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 1.5 Miles **Distance to nearest well:** 205 FT **Distance to lease line:** 121 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: Zeppo_5_Federal_Com_25H_C102_03-14-2017.pdf

Well work start Date: 10/14/2017 **Duration:** 15 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	2490	FNL	2210	FEL	17S	32E	5	Aliquot SWNE	32.864093	-103.7875605	LEA	NEW MEXICO	NEW MEXICO	F	NMLC029406B	4100	0	0
KOP Leg #1	2490	FNL	2210	FEL	17S	32E	5	Aliquot SWNE	32.864093	-103.7875605	LEA	NEW MEXICO	NEW MEXICO	F	NMLC029406B	-1599	5699	5699
PPP Leg #1	2310	FSL	2217	FEL	17S	32E	5	Aliquot NWSE	32.864093	-103.7875605	LEA	NEW MEXICO	NEW MEXICO	F	NMLC029406B	-2120	6500	6220

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
EXIT Leg #1	121	FSL	2308	FEL	17S	32E	8	Aliquot SWSE	32.8422506	-103.7875605	LEA	NEW MEXICO	NEW MEXICO	F	NMLC064149	-2100	13944	6200
BHL Leg #1	121	FSL	2308	FEL	17S	32E	8	Aliquot SWSE	32.8422506	-103.7875605	LEA	NEW MEXICO	NEW MEXICO	F	NMLC064149	-2100	13944	6200

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

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BUREAU OF LAND MANAGEMENT

Bond Info Data Report

10/18/2017

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB000215

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

APD ID: 10400012076 **Submission Date:** 03/31/2017

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

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Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Zeppo_5_Federal_Com_25H_Vicinity_plat_03-14-2017.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Zeppo_5_Federal_Com_25H_New_Road_plat_03-14-2017.pdf

New road type: RESOURCE

Length: 115 Feet **Width (ft.):** 30

Max slope (%): 3 **Max grade (%):** 1

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 20

New road access erosion control: Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage and to be consistent with local drainage patterns.
New road access plan or profile prepared? YES

New road access plan attachment:

New_Access_Road_Plan_03-14-2017.pdf

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: See attached New Access Road Plan.

Access other construction information:

Access miscellaneous information:

Number of access turnouts: 0 **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage and to be consistent with local drainage patterns.
Road Drainage Control Structures (DCS) description: Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage and to be consistent with local drainage patterns.
Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Zeppo_5_Federal_Com_25H_1mileRadius_Map_03-14-2017.pdf

Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Estimated Production Facilities description:

Production Facilities description: If the well is productive, contemplated facilities will be as follows: Two (2) proposed flowlines, will follow an archaeologically approved route to the Zeppo 5 Fed Com #15H Federal Tank Battery located in Section 5 in T17S R32E. The flowlines will be SDR 7 3" poly line laid on the surface and will be approximately 944 feet in length. Normal working pressure of the flowlines will be below 70 psi and carry a mixture of produced oil, water, and gas. Flowlines will follow existing well-traveled or proposed roads. The tank battery and facilities including all flow lines and piping

will be installed according to API specifications.

Production Facilities map:

Zeppo_5_Federal_Com_15H_Btry_Site_Layout_03-14-2017.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: DUST CONTROL, INTERMEDIATE/PRODUCTION CASING, SURFACE CASING
Water source type: GW WELL
Describe type:

Source latitude:
Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: COMMERCIAL

Water source transport method: PIPELINE,TRUCKING

Source transportation land ownership: COMMERCIAL

Water source volume (barrels): 8000
Source volume (acre-feet): 1.0311447

Source volume (gal): 336000

Water source and transportation map:

Caswell Ranch_Water Supply_11-16-2016.pdf

Loco_Hills_Water_Disposal_Co_Water_Supply_03-14-2017.pdf

Water source comments: The well will be drilled with combination brine and fresh water mud system as outlined in the drilling program. Water will be obtained from commercial water stations in the area and hauled to location by transport truck over the existing and proposed access roads shown in Vicinity Map. A fresh water source is nearby and fast line may be laid along existing road ROW's and fresh water pumped to the well. Water will originate from 1 and/or all of the 3 private wells location described on the attached "Caswell Ranch Water Supply" Map. No water well will be drilled on the location. A secondary water source will be from private wells location depicted on the attached "Loco Hills Water Disposal Co" map attached to this APD. James R. Maloney, 575-677-2118.
New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Surfacing material will consist of native caliche. Caliche will be obtained from the actual well site if available. Secondary candidate source will be Caswell Ranch owned Caliche Pit located in NESE of Section 9 Township 17 South Range 32 East. A third candidate source will be NMSLO Caliche Pit located in S2/SW4 of Sec 32, T16S, R30E.

Construction Materials source location attachment:

Construction_Turn_Over_Procedure_03-14-2017.pdf

Caswell_Ranch_Caliche_Pit_03-14-2017.pdf

NMSLO_Caliche_Pit_03-14-2017.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill cuttings and drilling fluids.

Amount of waste: 100 barrels

Waste disposal frequency : Daily

Safe containment description: Closed Loop System

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** FEDERAL

Disposal type description:

Disposal location description: R360's Disposal Site located at 4507 West Carlsbad Highway, Hobbs, NM 88240.

Waste type: PRODUCED WATER

Waste content description: Produced water

Amount of waste: 100 barrels

Waste disposal frequency : Daily

Safe containment description: Steel Tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** STATE
Disposal type description:

Disposal location description: NMOCD approved Commercial Disposal Facility. R360's Disposal Site located at 4507 West Carlsbad Highway, Hobbs, NM 88240.

Waste type: GARBAGE

Waste content description: Garbage and trash produced during drilling and completion operations.

Amount of waste: 100 pounds

Waste disposal frequency : Weekly

Safe containment description: Trash bin

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** STATE
Disposal type description:

Disposal location description: Garbage and trash to be collected in trash bin and hauled to Lea Landfill LLC. Located at mile marker 64, Highway 62-180 East, PO Box 3247, Carlsbad, NM 88221. No toxic waste or hazardous chemicals will be produced by this operation.

Waste type: SEWAGE

Waste content description: Human waste and Grey water.

Amount of waste: 100 gallons

Waste disposal frequency : Weekly

Safe containment description: Portable septic system and/or portable waste gathering system.

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Hauled to NMOCD approved waste disposal facility.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Closed loop mud system: roll-off style mud box.

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Zeppo_5_Federal_Com_25H_Well_Site_plat_03-14-2017.pdf
Zeppo_5_Federal_Com_25H_Interim_Reclamation_plat_03-14-2017.pdf
Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

Drainage/Erosion control construction: No sedimentation or erosion control will be necessary on this location as it is generally flat with little to no slope or cut and fill.
Drainage/Erosion control reclamation: No sedimentation or erosion control will be necessary on this location as it is generally flat with little to no slope or cut and fill.

Wellpad long term disturbance (acres): 2.76 **Wellpad short term disturbance (acres):** 3.27

Access road long term disturbance (acres): 0.08 **Access road short term disturbance (acres):** 0.08

Pipeline long term disturbance (acres): 0.57024795 **Pipeline short term disturbance (acres):** 0.57024795

Other long term disturbance (acres): 0 **Other short term disturbance (acres):** 0

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Total long term disturbance: 3.410248 **Total short term disturbance:** 3.920248

Reconstruction method: After well is completed, the pad will be downsized by reclaiming the areas not needed for production operations. The portions of the pad that are not needed for production operations will be re-contoured to its original state as much as possible. The caliche that is removed will be reused to either build another pad site or for road repairs within the lease.
Topsoil redistribution: The stockpiled topsoil will be spread out on reclaimed area and reseeded with a BLM approved seed mixture.
Soil treatment: Interim reclamation as identified during on-site.

Existing Vegetation at the well pad: Grassland area with sandy topsoil. Vegetation is moderately sparse with Native Prairie grasses, some mesquite and Shinnery oak.
Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Grassland area with sandy topsoil. Vegetation is moderately sparse with Native Prairie grasses, some mesquite and Shinnery oak.
Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Grassland area with sandy topsoil. Vegetation is moderately sparse with Native Prairie grasses, some mesquite and Shinnery oak.
Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Grassland area with sandy topsoil. Vegetation is moderately sparse with Native Prairie grasses, some mesquite and Shinnery oak.
Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type: **Seed source:**

Seed name:

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre: **Proposed seeding season:**

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Approved EPA and BLM requirements and policies for weed control methods will be followed.
Weed treatment plan attachment:

Monitoring plan description: Evaluation of growth will be made after the completion of one full growing season after seeding. -OR- BLM representative will be contacted prior to commencing reclamation work.
Monitoring plan attachment:

Success standards: 80% coverage by 2nd growing season of Native species with less than 5% invasive species.

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Fee Owner: Olane Caswell **Fee Owner Address:** 1702 Gillham Rd., Brownfield, TX 79316

Phone: (806)637-7004 **Email:**

Surface use plan certification: YES

Surface use plan certification document:

Zeppo_5_Federal_Com_25H_SUPO_Certification_03-14-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: A Surface Use Agreement has been reached with the Surface Owner.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Fee Owner: Olane Caswell **Fee Owner Address:** 1702 Gillham Rd., Brownfield, TX 79316

Phone: (806)637-7004 **Email:**

Surface use plan certification: YES

Surface use plan certification document:

Zeppo_5_Federal_Com_25H_SUPO_Certification_03-14-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: A Surface Use Agreement has been reached with the Surface Owner.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: PIPELINE

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Fee Owner: Olane Caswell **Fee Owner Address:** 1702 Gillham Rd., Brownfield, TX 79316

Phone: (806)637-7004 **Email:**

Surface use plan certification: YES

Surface use plan certification document:

Zeppo_5_Federal_Com_25H_SUPO_Certification_03-14-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: A Surface Use Agreement has been reached with the Surface Owner.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information: 1. It will be necessary to run electric power if this well is productive. Power will be provided by CVE. There will be no necessary electric line construction for this well. CVE operates an existing primary line parallel to the well pad; therefor no poles will be set off the well pad disturbance. There is no permanent or live water in the immediate area. 2. There are no dwellings within 2 miles of this location. 3. If needed, a Cultural Resources Examination is being prepared by Boone Arch Services of New Mexico, LLC. Carlsbad, NM, 88220. 506 E Chapman Rd., phone # 575.887.7667 and the results will be forwarded to your office in the near future. Otherwise, COG will be participating in the Permian Basin MOA Program.

Use a previously conducted onsite? YES

Previous Onsite information: On-site preformed on 10/28/2016 by Nick Franke(BLM), Curtis Griffen(COG), Jason Morgan(RRC)

Other SUPO Attachment

Zeppo_5_Federal_Com_25H_Flowlines_Map_03-14-2017.pdf

VICINITY MAP

NOT TO SCALE

SECTION 5, TWP. 17 SOUTH, RGE. 32 EAST, N. M. P. M., LEA COUNTY, NEW MEXICO

OPERATOR: COG Operating, LLC
LEASE: Zeppo 5 Federal Com
WELL NO.: 25H

LOCATION: 2490' FNL & 2210' FEL
ELEVATION: 4100'

NO.	REVISION	DATE

JOB NO.: LS1608271
DWG. NO.: 1608271VM

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 10-31-2016
SURVEYED BY: JM/CG
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

LOCATION VERIFICATION MAP

SECTION 5, TWP. 17 SOUTH, RGE. 32 EAST,
N. M. P. M., LEA CO., NEW MEXICO

OPERATOR: COG Operating, LLC
LEASE: Zeppo 5 Federal Com
WELL NO.: 25H
ELEVATION: 4100'

LOCATION: 2490' FNL & 2210' FEL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Maljamar, NM (P. E. 1985)

NO.	REVISION	DATE

JOB NO.: LS1608271
DWG. NO.: 1608271VM

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 10-31-2016
SURVEYED BY: JM/CG
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

APD ID: 10400012076 **Submission Date:** 03/31/2017

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	UNKNOWN	4100	0	0	ALLUVIUM	USEABLE WATER	No
2	RUSTLER	3226	874	874	ANHYDRITE	OTHER : Brackish Water	No
3	TOP OF SALT	3037	1063	1063	SALT	OTHER : Salt	No
4	TANSILL	2002	2098	2098	DOLOMITE	NONE	No
5	YATES	1892	2208	2208	SANDSTONE,DOLOMITE	NATURAL GAS,OIL	No
6	QUEEN	939	3161	3161	SANDSTONE	NATURAL GAS,OIL	No
7	GRAYBURG	488	3612	3612	SANDSTONE,DOLOMITE	NATURAL GAS,OIL	No
8	SAN ANDRES	204	3896	3896	DOLOMITE,ANHYDRITE	NATURAL GAS,OIL	No
9	GLORIETA	-1294	5394	5394	SANDSTONE,SILTSTONE	NATURAL GAS,OIL	No
10	PADDOCK	-1354	5454	5454	DOLOMITE	NATURAL GAS,OIL	No
11	BLINEBRY	-1780	5880	5880	DOLOMITE	NATURAL GAS,OIL	Yes
12	TUBB	-2700	6800	6800	SANDSTONE,DOLOMITE	NATURAL GAS,OIL	No

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M **Rating Depth:** 9500

Equipment: All required equipment per Federal and State regulations to be in place prior to drilling out the surface casing.

Requesting Variance? NO

Variance request:

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and

tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Choke Diagram Attachment:

2M_Choke_Schematic_03-14-2017.pdf

BOP Diagram Attachment:

2M_ANNULAR_BOP_03-14-2017.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	920	0	920			920	H-40	48	STC	1.79	3.28	DRY	8.4	DRY	14.1
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2220	0	2220			2220	J-55	40	LTC	1.79	3.28	DRY	6.1	DRY	7.4
3	PRODUCTION	8.75	7.0	NEW	API	N	0	5699	0	5699			5699	L-80	29	LTC	3.1	1.31	DRY	3.69	DRY	4.21
4	PRODUCTION	8.75	5.5	NEW	API	N	5699	6519	5699	6220			820	L-80	17	LTC	2.21	1.24	DRY	4.18	DRY	4.89
5	PRODUCTION	7.875	5.5	NEW	API	N	6519	13944	6220	6200			7425	L-80	17	LTC	2.21	1.24	DRY	4.18	DRY	4.89

Casing Attachments

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Attachement_03-30-2017.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Attachement_03-30-2017.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Attachement_03-30-2017.pdf

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Casing Attachments

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Attachement_03-30-2017.pdf

Casing ID: 5 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Attachement_03-30-2017.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	920	550	1.75	13.5	962.5		Class C	4%Gel+2% CaCl2+0.25pps CF
SURFACE	Tail				200	1.32	14.8	264	92	Class C	2% CaCl2+0.25pps CF
INTERMEDIATE	Lead		0	2220	425	2.45	11.8	1041.25		50:50:10 C:Poz:Gel	5%Salt+5pps LCM+0.25pps CF
INTERMEDIATE	Tail				200	1.32	14.8	264	136	Class C	2% CaCl2
PRODUCTION	Lead		0	13944	600	2.01	12.5	1206		35:65:6 C:Poz:Gel	5%Salt+5pps LCM+0.2%SMS+1%FL-

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
											Ba-58+0.3%FL-52A+0.125pps CF
PRODUCTION	Tail				2400	1.37	14	3288	105	50:50:2 C:Poz:Gel	5%salt+3pps LCM+0.6%SMS+1%FL-25+1%Ba-58+0.125pps
PRODUCTION	Lead		0	13944	600	2.01	12.5	1206		35:65:6 C:Poz:Gel	5%Salt+5pps LCM+0.2%SMS+1%FL-25+1%Ba-58+0.3%FL-52A+0.125pps CF
PRODUCTION	Tail				2400	1.37	14	3288	105	50:50:2 C:Poz:Gel	5%salt+3pps LCM+0.6%SMS+1%FL-25+1%Ba-58+0.125pps
PRODUCTION	Lead		0	13944	600	2.01	12.5	1206		35:65:6 C:Poz:Gel	5%Salt+5pps LCM+0.2%SMS+1%FL-25+1%Ba-58+0.3%FL-52A+0.125pps CF
PRODUCTION	Tail				2400	1.37	14	3288	105	50:50:2 C:Poz:Gel	5%salt+3pps LCM+0.6%SMS+1%FL-25+1%Ba-58+0.125pps

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Describe the mud monitoring system utilized: PTV/PASON/Visual Monitoring

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
6220	13944	WATER-BASED MUD	8.5	9.2							
0	920	WATER-BASED MUD	8.6	8.8							
0	6220	SALT SATURATED	10	10.2							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Interval perforating, Fracture stimulating, Flow back testing.

List of open and cased hole logs run in the well:

CNL,MUDLOG

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 2737 **Anticipated Surface Pressure:** 1368.6

Anticipated Bottom Hole Temperature(F): 117

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

H2S Plan_11-16-2016.pdf

Zeppo_5_Federal_Com_25H_H2S_Schmatic_03-14-2017.pdf

Operator Name: COG OPERATING LLC

Well Name: ZEPPO 5 FEDERAL COM **Well Number:** 25H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Zeppo_5_Federal_Com_25H_Design_1_Rpt_03-14-2017.pdf

Zeppo_5_Federal_Com_25H_Design_1_AC_Rpt_03-14-2017.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Closed Loop Schematic_11-16-2016.pdf

Zeppo_5_Federal_Com_25H_Prod_Cement_Breakdown_03-30-2017.pdf

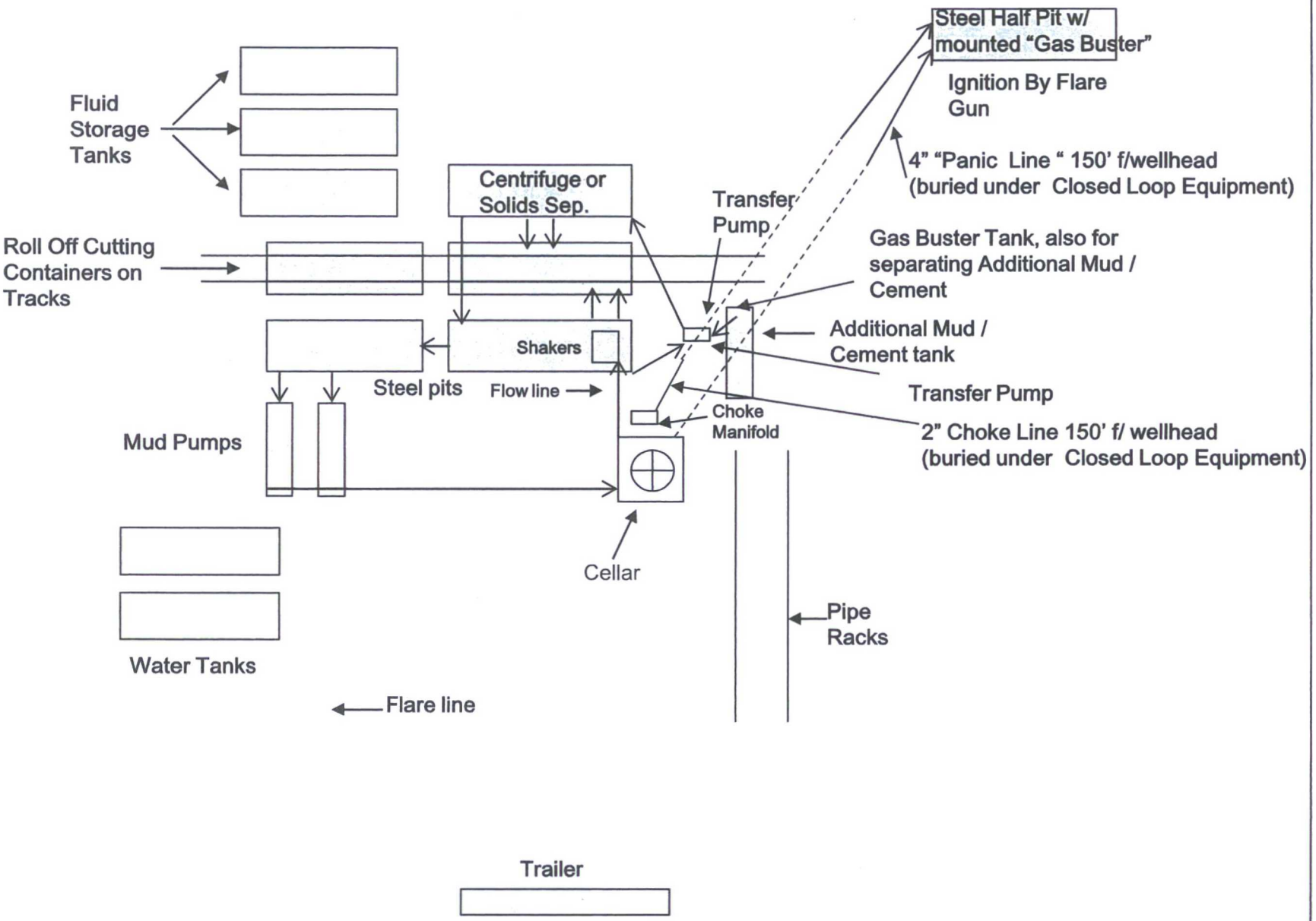
Zeppo_5_Fed_Com_25H_Contingent_Multi_Stage_Cmt_Plan_05-31-2017.pdf

Zeppo_5_Federal_Com_25H_GCP_05-31-2017.pdf

Other Variance attachment:

COG Operating LLC

Closed Loop Equipment Diagram



Production Cement Breakdown

Well: Zeppo 5 Fed Com #25H

Hole Volumes						
Hole	**Hole Section (Length)**	**Casing**	**Capacity (ft3/Lin.ft)**	**Cu.Ft**	**Total Cu.Ft**	**% Excess**
Prod	0-2220 (2220)	7"	0.1585	351.9	351.9	0
Prod	2220-5699 (3479)	7"	0.1503	522.9	2016.8	105
Prod	5699-6519 (820)	5.5"	0.2526	207.1		105
Prod	6519-13944 (7425)	5.5"	0.1733	1286.8		105

Cement Volumes					
Blend	**Cement Sacks**	**Yield**	**Weight**	**Volume**	**Total Volume**
35:65:6	600	2.01	12.5	1206	4494
50:50:02	2400	1.37	14	3288	

% Excess Calculation			
Total Volume	4494		4142.1
Cu.Ft	-351.9		/2016.8
	4142.1		**105% Excess**

Contingent Multi-Stage Cement Discussion:

COG does not anticipate losing circulation or encountering water flows while drilling this well. If these situations arise, COG requests approval in this APD to set DV tools where necessary immediately without having to shut down the rig and wait for sundry approval.

Lost Circulation or Water flow Contingent DV Tool Cement Plans are as follows:

1. If lost circulation occurs while drilling the 12 ¼" intermediate hole, it may become necessary to set a DV tool in the 9 5/8" casing. The DV tool depth will be based on hole conditions and cement volumes will be adjusted proportionally. If the DV Tool is needed, it will be set a minimum of 50 feet below the previous casing and a minimum of 200 feet above the current shoe.

2. If water flows in the San Andres are encountered, it may become necessary to set a DV tool in the 7" casing. These water flows normally occur in areas where produced water disposal is happening. This dense cement is used to combat water flows. This cement recipe also has a right angle set time and is mixed a little under saturated so the water flow will be absorbed by cement. The DV tool depth will be based on hole conditions and cement volumes will be adjusted proportionally. If the DV tool is needed, it will be set a minimum of 50 feet below the previous casing and a minimum of 200 feet above the current shoe.

Casing	Bottom MD of Segment	Lead or Tail	Cement Type	Additives	Quantity (Sks)	Yield (cu.ft./sk)	Density (lbs./gal)
Inter. Multi-Stage	+/- 1060'	1st Lead	50:50:10 C:Poz:Gel	5% Salt + 5 pps LCM + 0.25 pps CF	150	2.45	11.8
		1st Tail	Class C	2% Cacl2	200	1.32	14.8
		2nd Lead	50:50:10 C:Poz:Gel	5% Salt + 5 pps LCM + 0.25 pps CF	200	2.45	11.8
Prod. Multi-Stage	+/- 4000'	1st Lead	35:65:6 C:PozGel	5% salt + 5 pp LCM + 0.2% SMS + 1% FL-25+ 1% BA-58 + 0.3% FL-52A + 0.125 pps CF	200	2.01	12.5
		1st Tail	50:50:2 C:PozGel	5% salt + 3 pps LCM + 0.6% SMS + 1% FL-25 + 1% BA-58 + 0.125 pps CF	1950	1.37	14
		2nd Lead	35:65:6 C:Poz Gel	5% salt+5 pps LCM+0.2% SMS + 1% FL-25+1% BA-58+0.3% FL-52A+ 0.125 pps CF	650	2.01	12.5
		2nd Tail	Class C	0.3% R-3 + 1.5% CD-32	150	0.99	16.8