

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 20105. Lease Serial No.  
NMLC031844

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.  
SHINER BOCK 1 FEDERAL COM 7H9. API Well No.  
30-015-42022-00-X110. Field and Pool, or Exploratory  
FREN11. County or Parish, and State  
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator  
COG OPERATING LLCContact: ROBYN ODOM  
E-Mail: rododom@conchoresources.com3a. Address  
ONE CONCHO CENTER 600 W ILLINOIS AVENUE  
MIDLAND, TX 797013b. Phone No. (include area code)  
Ph: 432-685-4385

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 1 T17S R31E SWSW 0990FSL 0150FWL  
32.859032 N Lat, 103.820728 W Lon**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

## TYPE OF SUBMISSION

- ☒
- Notice of Intent
- 
- ☐
- Subsequent Report
- 
- ☐
- Final Abandonment Notice

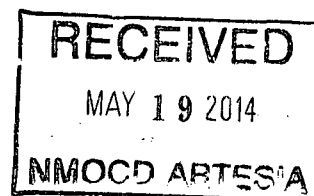
## TYPE OF ACTION

- |   |   |  |   |
|---|---|--|---|
| <input type="checkbox"/> Acidize              | <input type="checkbox"/> Deepen           | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off   |
| <input type="checkbox"/> Alter Casing         | <input type="checkbox"/> Fracture Treat   | <input type="checkbox"/> Reclamation               | <input type="checkbox"/> Well Integrity   |
| <input type="checkbox"/> Casing Repair        | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete                | <input checked="" type="checkbox"/> Other |
| <input type="checkbox"/> Change Plans         | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon       | Change to Original APD                    |
| <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back        | <input type="checkbox"/> Water Disposal            |   |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG Operating LLC respectfully requests permission to change the originally approved location of this well to:  
SHL: 1160' FSL & 170' FWL  
BHL: 990' FSL & 330' FEL

This change was made to better accommodate well on same pad.  
Attached is a revised C102, Directional Plan, and SUPO.

Accepted for record  
NMOCD 105  
540-14

Surface - See COAs TN 5/13/14  
Drilling - original COAs still stand - JAM

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #234469 verified by the BLM Well Information System

For COG OPERATING LLC, sent to the Carlsbad

Committed to AFMSS for processing by CHRISTOPHER WALLS on 04/29/2014 (14CRW0245SE)

Name (Printed/Typed) ROBYN ODOM

Title PERSON RESPONSIBLE

Signature (Electronic Submission)

Date 02/04/2014

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By

For  
Title FIELD MANAGER

Date

5/15/14

Conditions of approval, if any, are attached. Approval of this notice 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.

Office CARLSBAD FIELD OFFICE

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.

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

**Surface Use Plan**  
**COG Operating, LLC**  
**Shiner Bock I Federal Com 7H**  
**SL: 1160' FSL & 170' FWL      UL M**  
**Section 1, T-17-S, R-31-E**  
**BHL: 990' FSL & 330' FEL      UL P**  
**Section 1, T-17-S, R-31-E**  
**Eddy County, New Mexico**

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I hereby certify that I, or persons under my direct supervision, have inspected the drill site and access road proposed herein; that I am familiar with the conditions that presently 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 COG Operating, LLC, 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. Executed this 3rd day of July, 2013.

Signed: \_\_\_\_\_

*Carl Bird*

Printed Name: Carl Bird

Position: Sr. Drilling Engineer

Address: One Concho Center, 600 W. Illinois, Midland, Texas 79701

Telephone: (432) 683-7443

Field Representative (if not above signatory): Same

E-mail: cbird@concho.com

**Section 1**  
1075 N. Broadway, Suite 100, Santa Fe, NM 87505  
Phone: (505) 951-6111; Fax: (505) 993-2727  
**Section 2**  
811 S. First St., Suite 100, Santa Fe, NM 87505  
Phone: (505) 951-1221; Fax: (505) 951-1222  
**Section 3**  
1600 Rio Pecos Road, Suite 100, Santa Fe, NM 87505  
Phone: (505) 331-6178; Fax: (505) 331-6179  
**Section 4**  
1220 S. St. Francis Pl., Santa Fe, NM 87505  
Phone: (505) 476-5600; Fax: (505) 476-5601

**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**

<sup>1</sup> API Number <b>30-015-39704</b>	<sup>2</sup> Pool Code <b>97213</b>	<sup>3</sup> Pool Name <b>FREN; GLORIETA-YESO, EAST</b>
<sup>4</sup> Property Code	<sup>5</sup> Property Name <b>SHINER BOCK 1 FED COM</b>	<sup>6</sup> Well Number <b>7H</b>
<sup>7</sup> OGRIN No. <b>229137</b>	<sup>8</sup> Operator Name <b>COG OPERATING, LLC</b>	<sup>9</sup> Elevation <b>3998'</b>

**Surface Location**

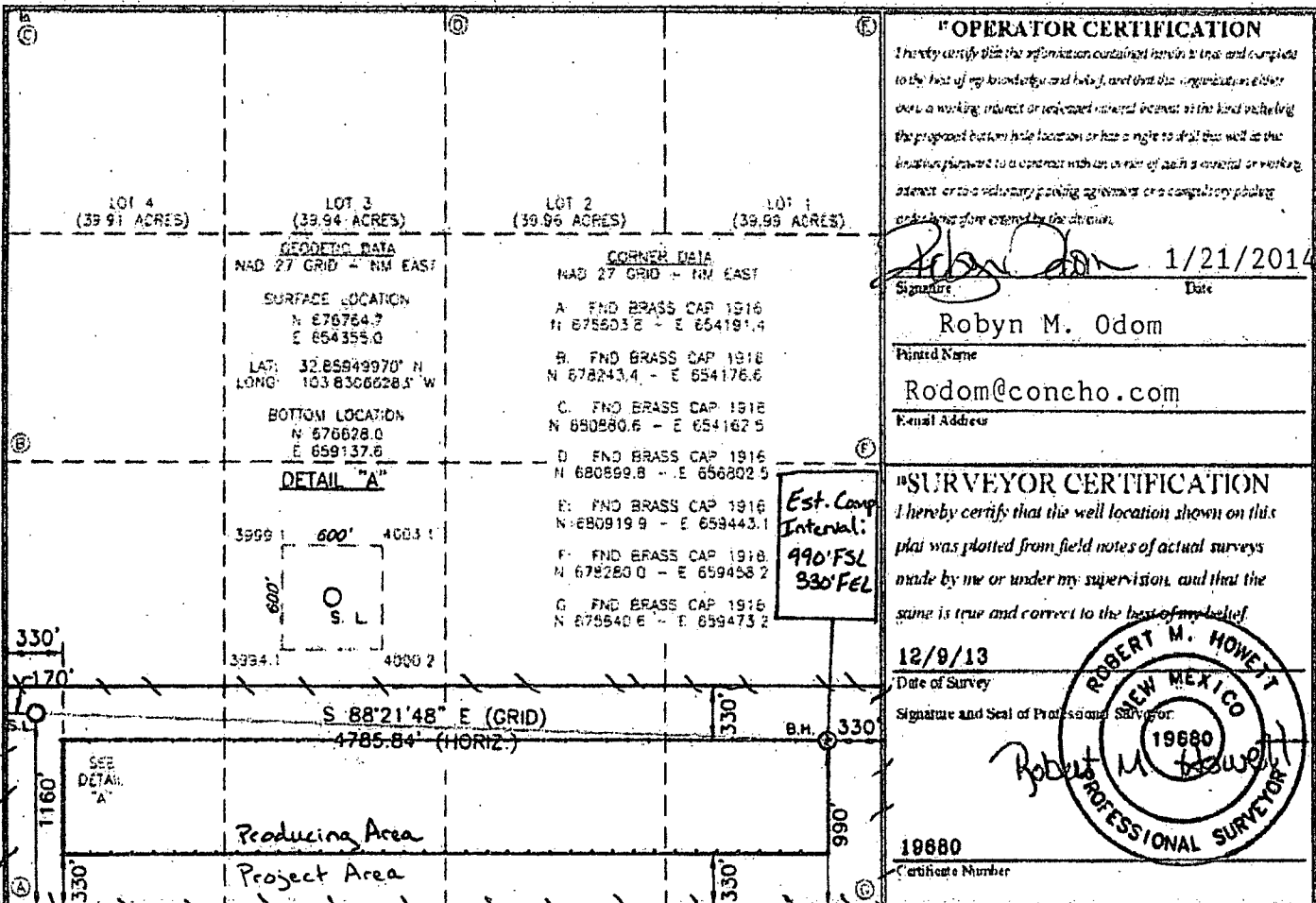
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>M</b>	<b>1</b>	<b>17-S</b>	<b>31-E</b>		<b>1160</b>	<b>SOUTH</b>	<b>170</b>	<b>WEST</b>	<b>EDDY</b>

**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
<b>P</b>	<b>1</b>	<b>17-S</b>	<b>31-E</b>		<b>990</b>	<b>SOUTH</b>	<b>330</b>	<b>EAST</b>	<b>EDDY</b>

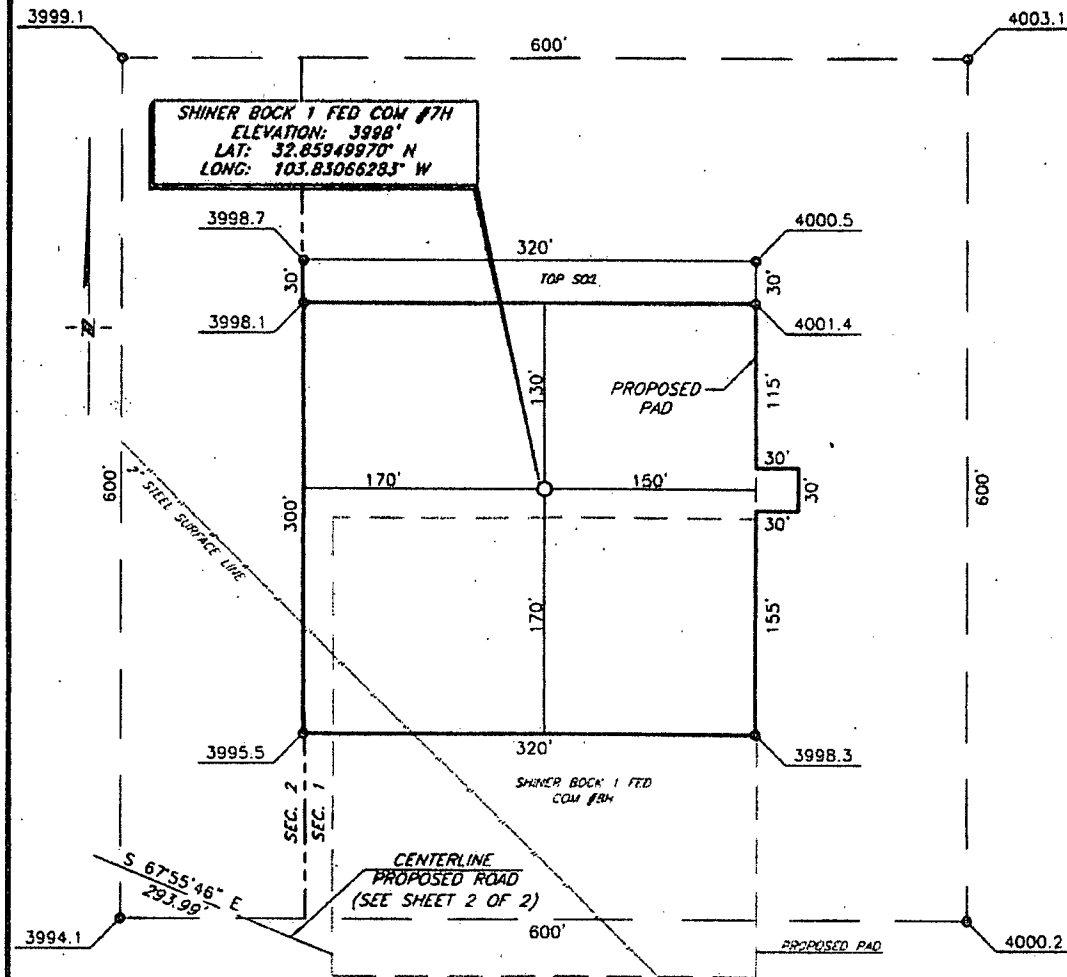
<sup>10</sup> Dedicated Acres <b>160</b>	<sup>11</sup> Joint or Infill	<sup>12</sup> Consolidation Code	<sup>13</sup> Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division



# COG OPERATING, LLC

Shiner Bock 1 Fed Com #7H  
(1160' FSL & 170' FWL)  
Section 1, T-17-S, R-31-E,  
N. M. P. M., Eddy Co., New Mexico



## DIRECTIONS TO LOCATION

From the intersection of U.S. Hwy. #82 and CR-223 (Sweet Gum).

Go Northeast on U.S. Hwy. #82 approx. 1.5 miles.

Turn left on a lease road and go Northwest approx. 0.3 mile.

Turn right and go North approx. 0.2 mile.

Turn right and go Northeast approx. 0.5 mile.

Turn left and go North approx. 2.0 miles.

Turn right and go East approx. 0.4 mile.

Turn right and go South approx. 0.1 mile.

Turn left on a two tract road go Southwest 0.1 mile to the Alamo State BCK #4;

The location is 530' Northeast of the existing Alamo Resources Pumping Unit.

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NO.	REVISION	DATE
JOB NO.:	LS130524	
DWG. NO.:	130524PAD	

PROSPERITY CONSULTANTS, LLC

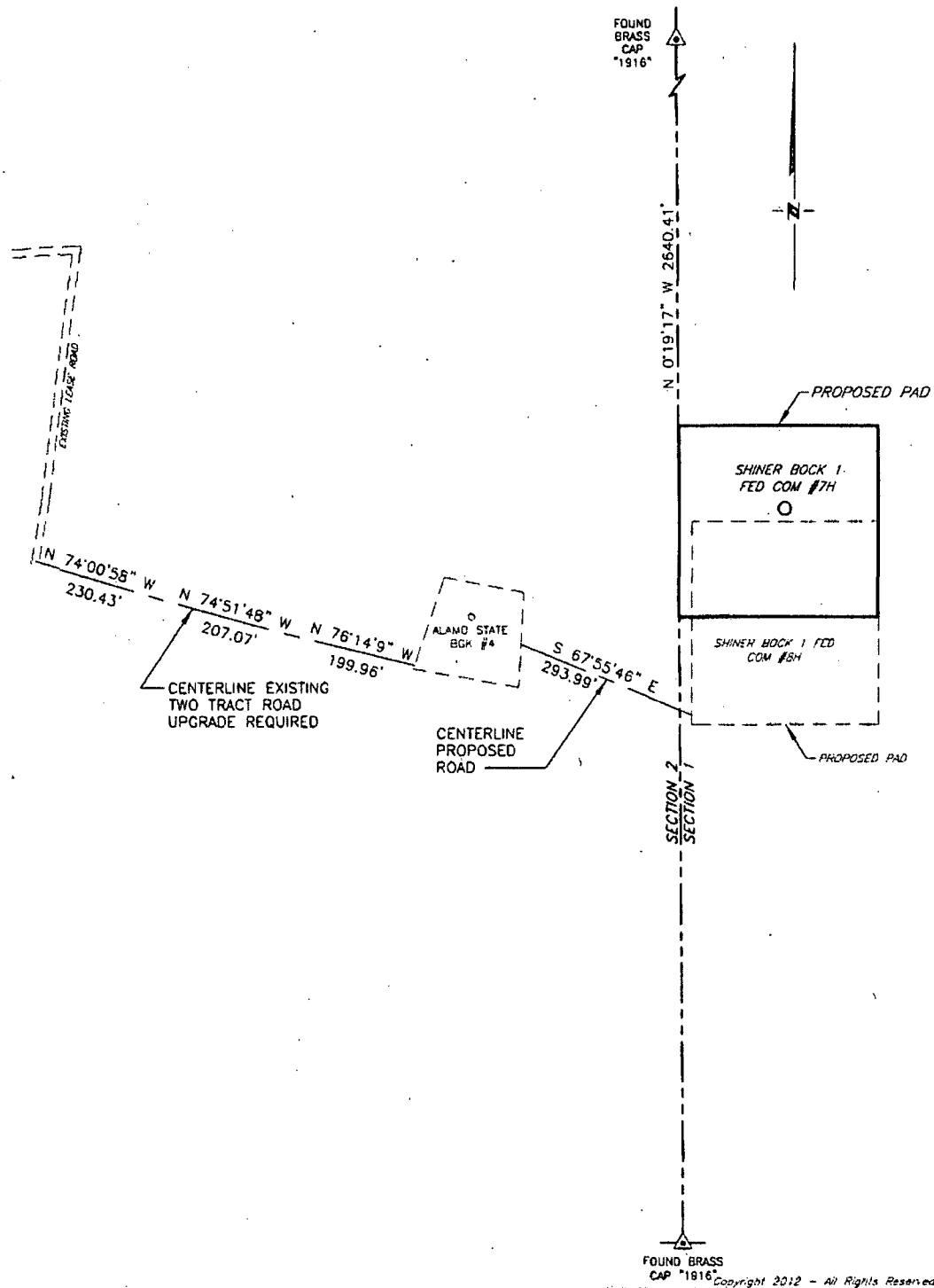


2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664

© (512) 992-2087 f (512) 251-2518

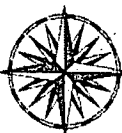
SCALE: 1" = 100'
DATE: 12/9/13
SURVEYED BY: GB/JW
DRAWN BY: JC
APPROVED BY: LWB
SHEET : 1 OF 2

**COG OPERATING, LLC**  
**Access Road**  
**Shiner Bock 1 Fed Com #7H**  
**(1160' FSL & 170' FEL)**  
**Section 1, T-17-S, R-31-E,**  
**N. M. P. M., Eddy Co., New Mexico**



NO.	REVISION	DATE
JOB NO.:	LS130524	
DWG. NO.:	130524RD	

PROSPERITY CONSULTANTS, LLC



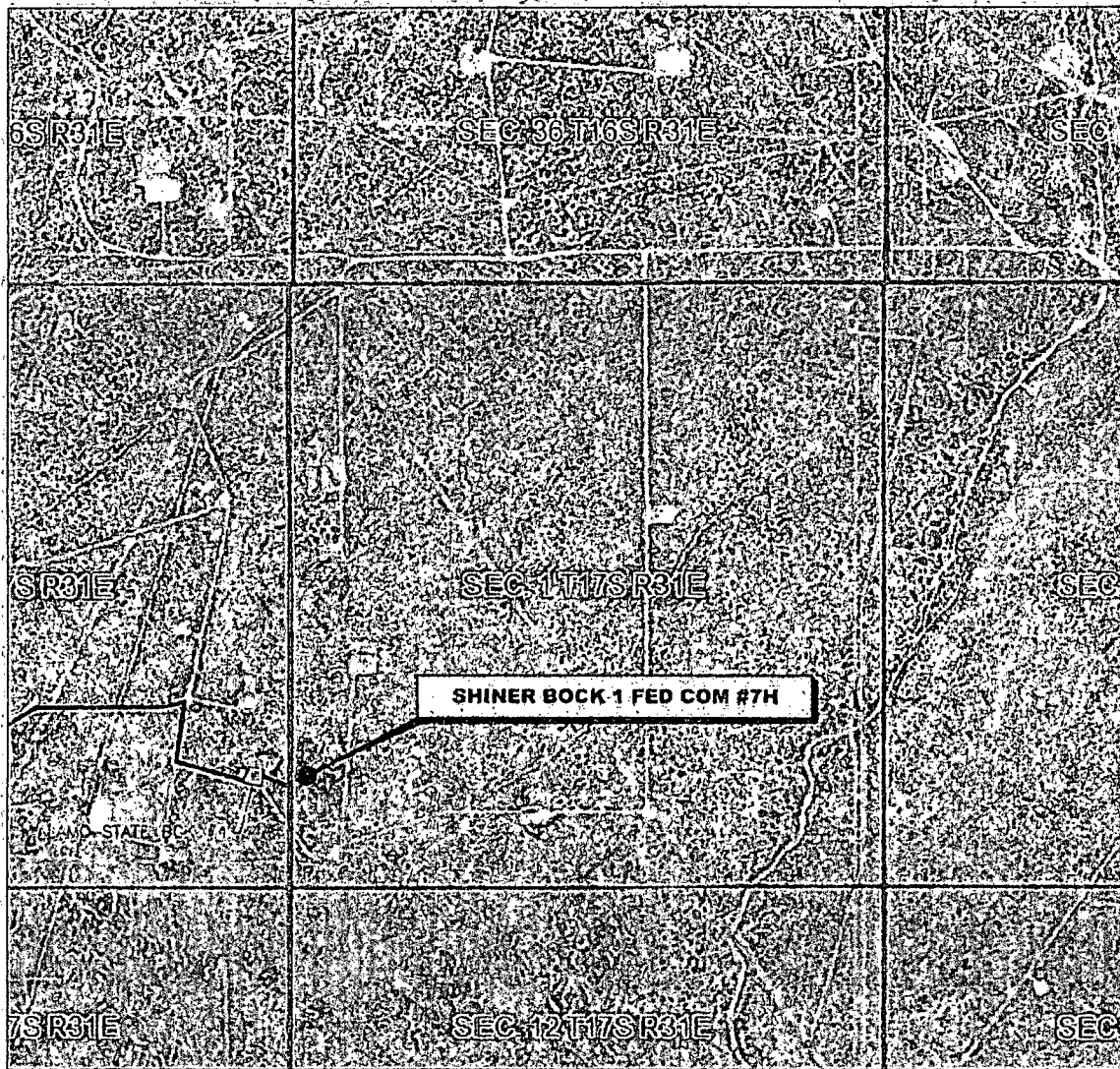
2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664

o (512) 992-2087 f (512) 251-2518

SCALE:	1" = 200'
DATE:	12/9/13
SURVEYED BY:	GB/JW
DRAWN BY:	JC
APPROVED BY:	LWB
SHEET :	2 OF 2

# VICINITY MAP

NOT TO SCALE



SECTION 1, TWP. 17 SOUTH, RGE. 31 EAST,  
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: COG Operating, LLC  
LEASE: Shiner Bock 1 Fed Com  
WELL NO.: 7H

LOCATION: 1160' FSL & 170' FWL  
ELEVATION: 3998'

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NO.	REVISION	DATE
JOB NO.:	LS130524	
DWG. NO.:	130524VM	

PROSPERITY CONSULTANTS, LLC

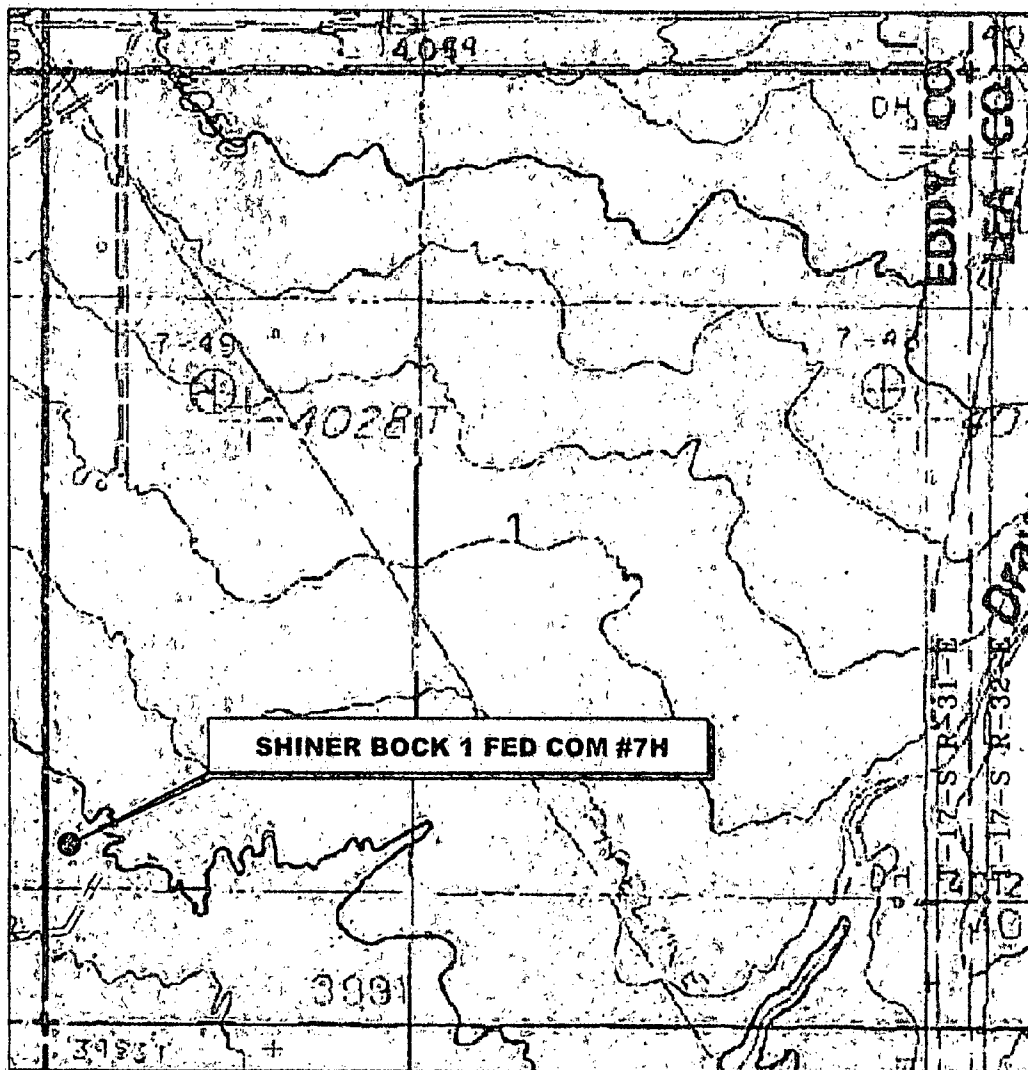


2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664

o (512) 992-2087 / (512) 251-2518

SCALE:	NONE
DATE:	12/9/13
SURVEYED BY:	GB/JW
DRAWN BY:	JC
APPROVED BY:	LWB
SHEET:	1 OF 1

# LOCATION VERIFICATION MAP



**SHINER BOCK 1 FED COM #7H**

*SECTION 1, TWP. 17 SOUTH, RGE. 31 EAST,  
N. M. P. M., EDDY COUNTY, NEW MEXICO*

OPERATOR: COG Operating, LLC  
 LEASE: Shiner Bock 1 Fed Com  
 WELL NO.: 7H  
 ELEVATION: 3998'

LOCATION: 1160' FSL & 170' FWL  
 CONTOUR INTERVAL: 10'  
 USGS TOPO. SOURCE MAP:  
Maljamar, NM (Prov. Ed. 1985)

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NO.	REVISION	DATE
JOB NO.: LS130524		
DWG. NO.: 130524LVM		

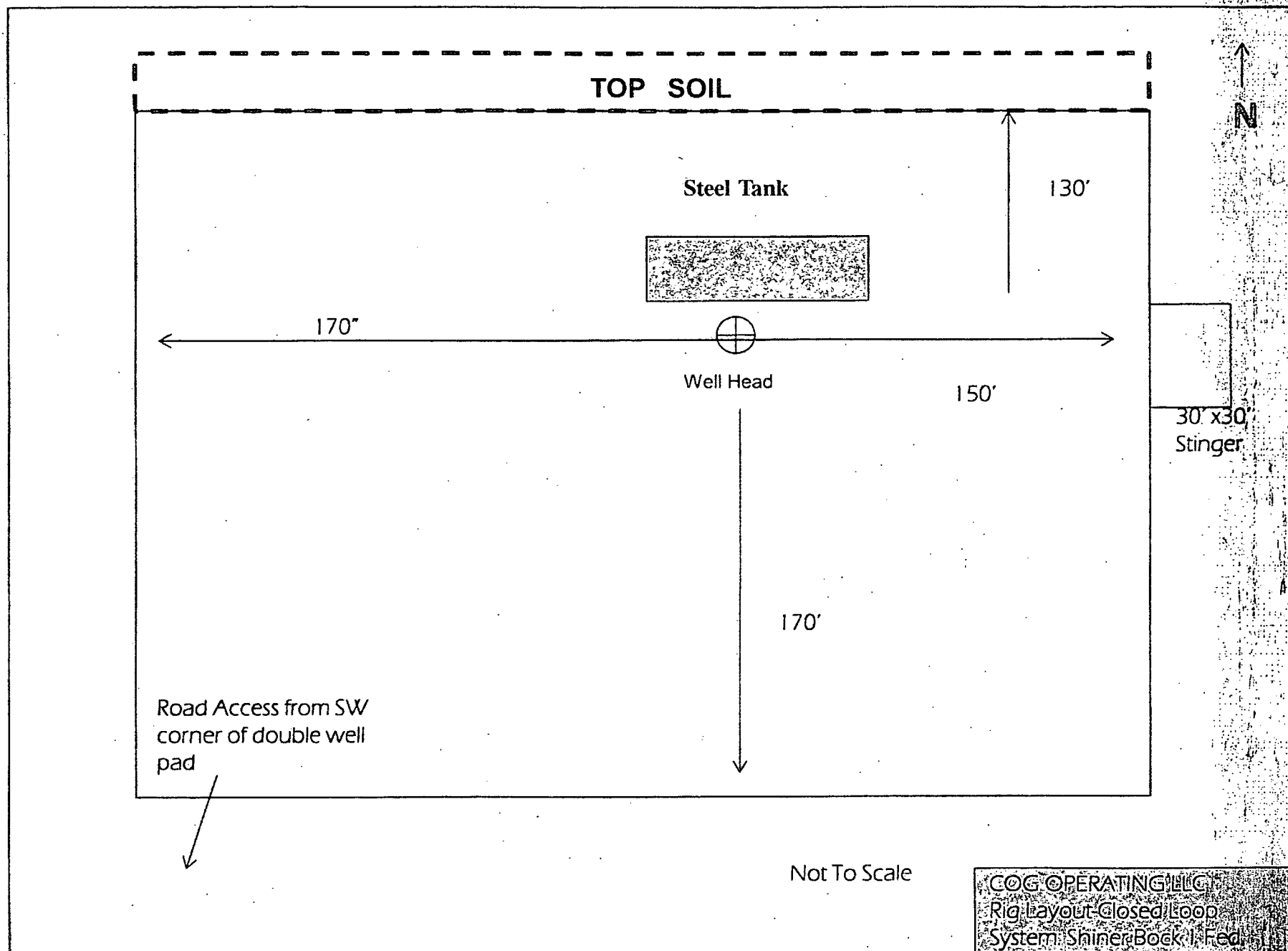
PROSPERITY CONSULTANTS, LLC



2251 Double Creek Drive, Suite 602, Round Rock, Texas 78664

(512) 992-2087 / (512) 251-2518

SCALE: 1" = 1000'  
 DATE: 12/9/13  
 SURVEYED BY: GB/JW  
 DRAWN BY: JC  
 APPROVED BY: LWB  
 SHEET : 1 OF 1





COG Operating LLC

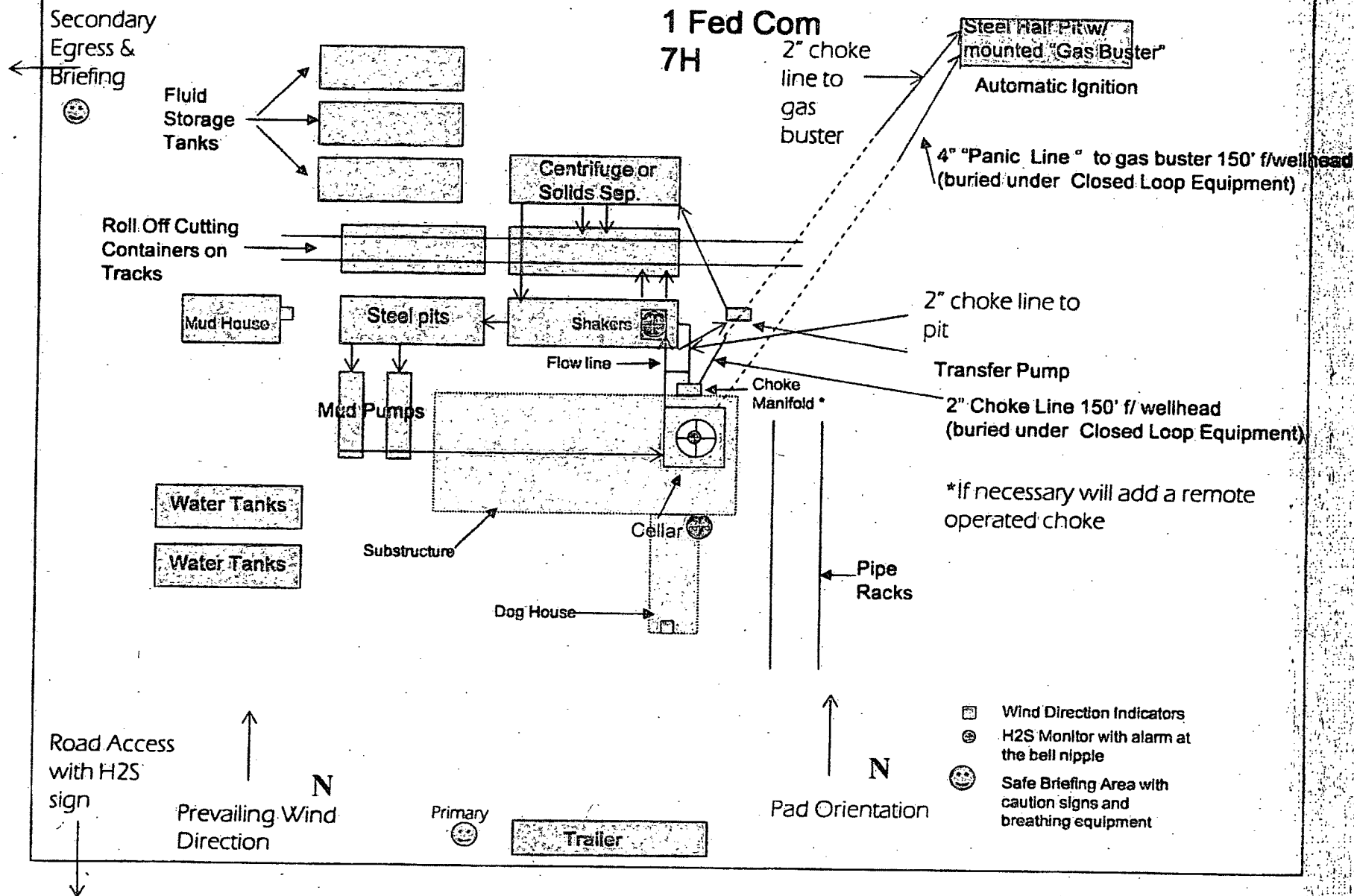
Drilling Location - H2S Safety Equipment Diagram

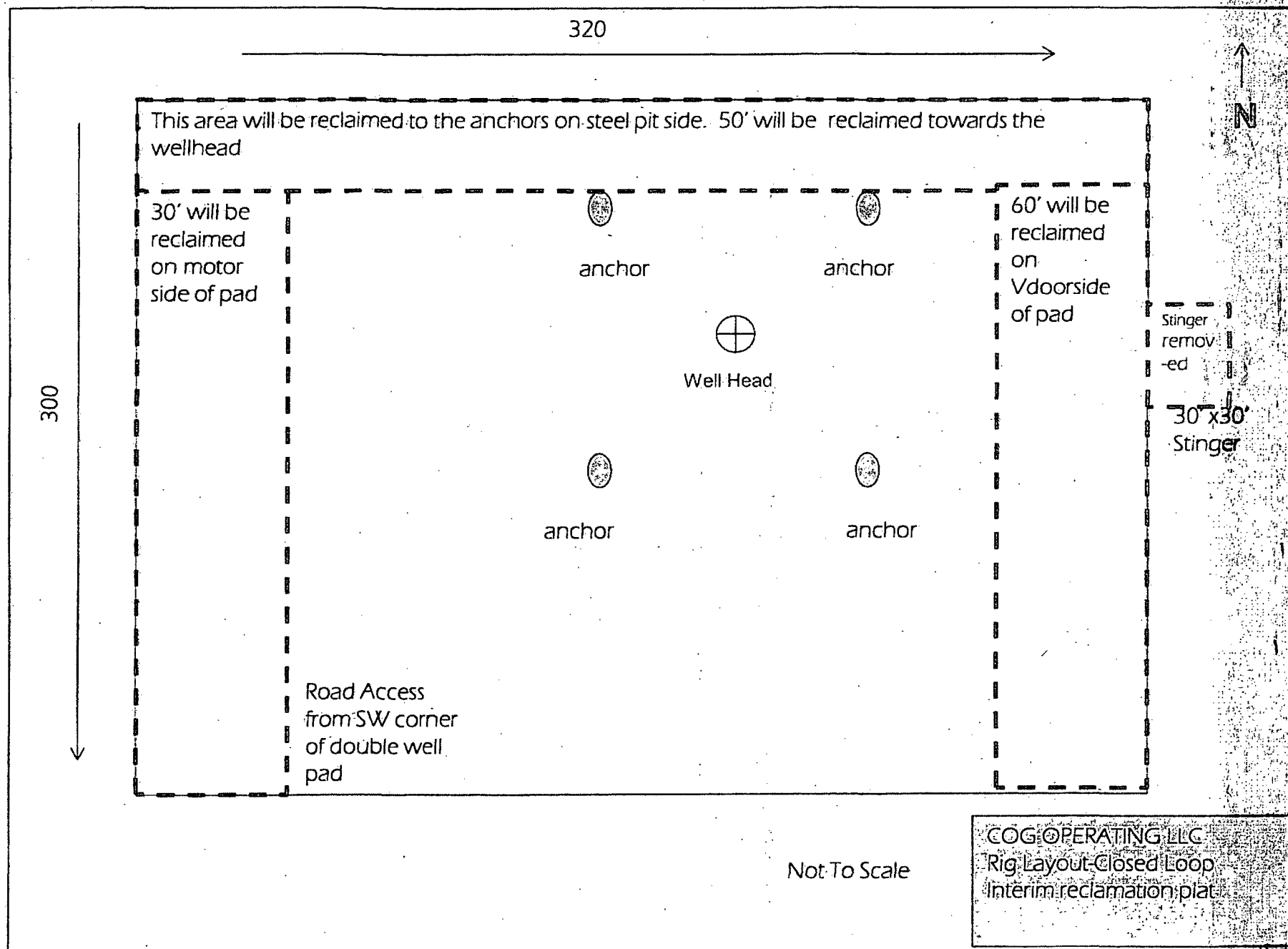
EXHIBIT 8-

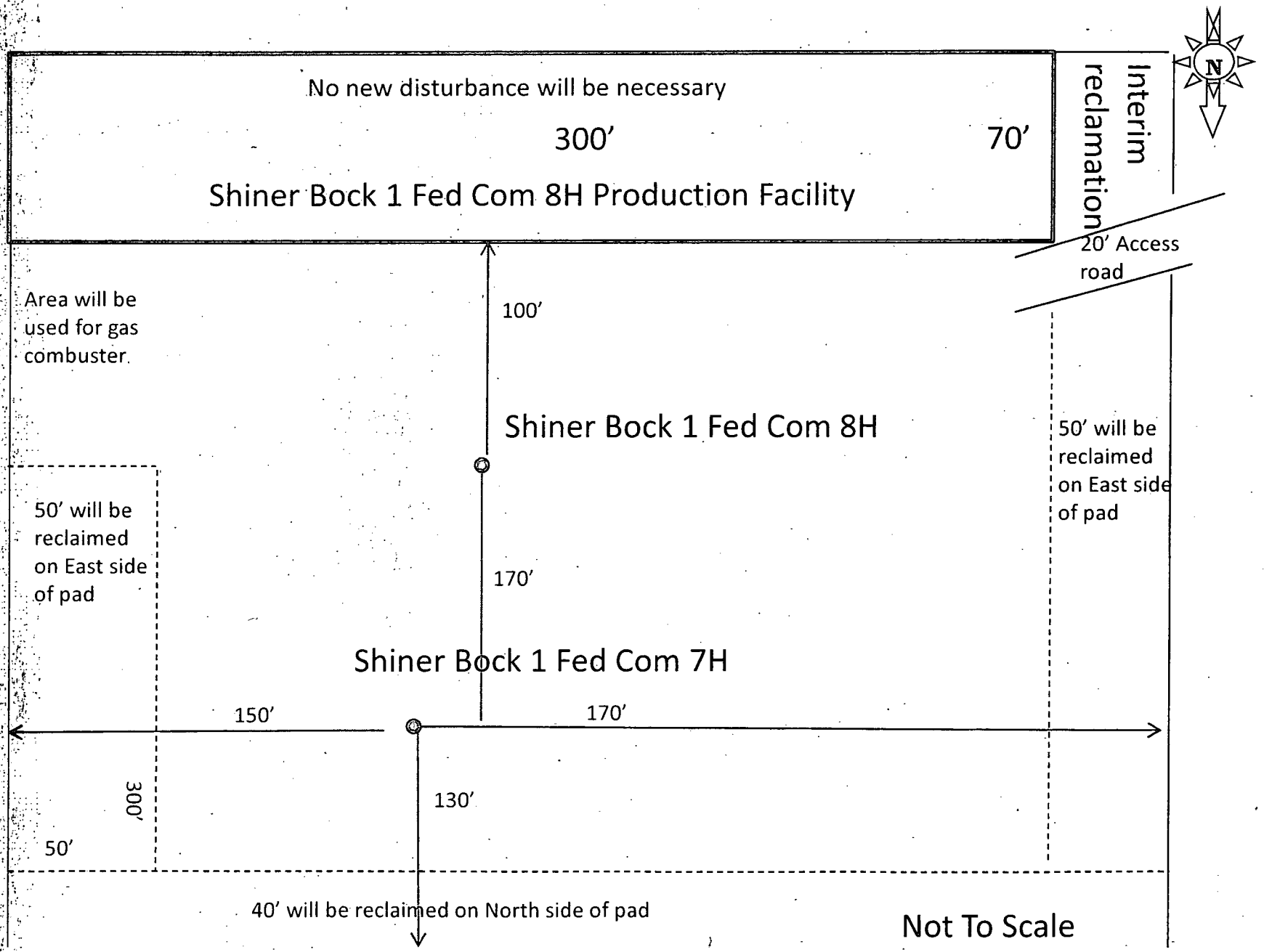
Shiner Bock

1 Fed Com

7H







# Surface Use & Operating Plan

## Shiner Bock 1 Federal Com 7H

- Surface Tenant: Olane Caswell, 1702 Gillham, Brownfield, TX 79316.
- New Road: approx. 293.99' & 637.46' of road upgrade (to double pad)
- Flow Line: approx. 300'
- Facilities: Shiner Bock 1 Federal Com 8H Tank Battery

### Well Site Information

V Door: East

Topsoil: North

Interim Reclamation: North/East/West of double well pad

### Notes

-shares location with Shiner Bock 1 Fed Com #8H

Onsite: 2/28/2013

Tanner (BLM), Caden Jameson (COG), Gary Box (P.C.)

## **SURFACE USE AND OPERATING PLAN**

### **1. Existing & Proposed Access Roads**

- A. The well site survey and elevation plat for the proposed well is attached with this application. It was staked by Prosperity Consultants, LLC, Midland, TX.
- B. All roads to the location are shown in the Vicinity Map. The existing lease roads are illustrated and are adequate for travel during drilling and production operations. Upgrading existing roads prior to drilling the well will be done where necessary. The road route to the well site is depicted in Vicinity Map. The road highlighted in the Vicinity Map will be used to access the well.
- C. Directions to location: See Vicinity Map.
- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease. Roads will be maintained according to specifications in section 2A of this Surface Use and Operating Plan.

### **2. Proposed Access Road:**

The Elevation Plat shows that 293.99' of new access road will be required for this location. If any road is required it will be constructed as follows:

- A. The maximum width of the running surface will be 14'. The road will be crowned, ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.
- B. The average grade will be less than 1%.
- C. No turnouts are planned.
- D. No culverts, cattleguard, gates, low water crossings or fence cuts are necessary.
- E. Surfacing material will consist of native caliche. Caliche will be obtained from the actual well site if available. If not available onsite, caliche will be hauled from the nearest BLM approved caliche pit.

**Surface Use Plan**  
**COG Operating, LLC**  
**Shiner Bock 1 Federal Com 7H**  
**SL: 1160' FSL & 170' FWL**      **UL M**  
**Section 1, T-17-S, R-31-E**  
**BHL: 990' FSL & 330' FEL**      **UL P**  
**Section 1, T-17-S, R-31-E**  
**Eddy County, New Mexico**

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### **3. Location of Existing Well:**

The 1-mile Map shows all existing wells within a one-mile radius of this well.

As shown on this plat there are numerous wells producing from the San Andres and Yeso formations.

### **4. Location of Existing and/or Proposed Facilities:**

- A. COG Operating LLC does operate a production facility on this lease.
- B. If the well is productive, contemplated facilities will be as follows:
  - 1) Production will be sent to Shiner Bock 1 Federal Com #8 Tank Battery located in Section 1 at approx. 990' FSL & 150' FWL in T17S R31E. The facility location is shown in Exhibit #1.
  - 2) The tank battery and facilities including all flow lines and piping will be installed according to API specifications.
  - 3) Any additional caliche will be obtained from the actual well site. If caliche does not exist or is not plentiful from the well site, the caliche will be hauled from a BLM approved caliche pit. Any additional construction materials will be purchased from contractors.
  - 4) Proposed flow lines, will follow an archaeologically approved route to the Shiner Bock 1 Federal Com #8 Tank Battery located in Section 1 at approx. 990' FSL & 150' FWL in T17S R31E. The flowline will be SDR 7 3" poly line laid on the surface and will be approximately 300' in length. See Exhibit 1.
  - 5) It will be necessary to run electric power if this well is productive. Power will be provided by CVE and they will submit a separate plan and ROW for service to the well location.
  - 6) If the well is productive, rehabilitation plans will include the following:
    - The original topsoil from the well site will be returned to the location, and the site will be re-contoured as close as possible to the original site.

**Surface Use Plan**

**COG Operating, LLC**

**Shiner Bock 1 Federal Com 7H**

**SL: 1160' FSL & 170' FWL      UL M**

**Section 1, T-17-S, R-31-E**

**BHL: 990' FSL & 330' FEL      UL P**

**Section 1, T-17-S, R-31-E**

**Eddy County, New Mexico**

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**5. Location and Type of Water Supply:**

The well will be drilled with combination brine and fresh water mud system as outlined in the drilling program. The 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. If a commercial fresh water source is nearby, fast line may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

**6. Source of Construction Materials and Location "Turn-Over" Procedure:**

Obtaining caliche: The primary way of obtaining caliche to build locations and roads will be by "turning over" the location. This means, caliche will be obtained from the actual well sight. A caliche permit will be obtained from BLM prior to pushing up any caliche. 2400 cu. Yards is max amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel:

- A. The top 6 inches of topsoil is pushed off and stockpiled along the side of the location.
- B. An approximate 120' X 120' area is used within the proposed well site to remove caliche.
- C. Subsoil is removed and piled alongside the 120' by 120' area within the pad site.
- D. When caliche is found, material will be stock piled within the pad site to build the location and road.
- E. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road.
- F. Once well is drilled, the stock piled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced. Neither caliche nor subsoil will be stock piled outside of the well pad. Topsoil will be stockpiled along the edge of the pad as depicted in attached plat.
  - In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit.

## 7. Methods of Handling Water Disposal:

- A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to an NMOCD approved disposal site.
- B. Drilling fluids will be contained in steel mud pits.
- C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD approved commercial disposal facility.
- D. Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved landfill. No toxic waste or hazardous chemicals will be produced by this operation.
- E. Human waste and grey water will need to be properly contained and disposed of. Proper disposal and elimination of waste and grey water may include but are not limited to portable septic systems and/or portable waste gathering systems (i.e. portable toilets).
- F. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. In the event of a dry hole only a dry hole marker will remain.

## 8. Ancillary Facilities:

No airstrip, campsite or other facilities will be built as a result of the operation on this well.

## 9. Well Site Layout:

- A. The drill pad layout, with elevations staked by Prosperity Consultants, LLC, is shown in the Elevation Plat. Dimensions of the pad and pits are shown on the Rig Layout. V door direction is North. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level no major cuts will be required.
- B. The Rig Layout Closed-Loop exhibit shows the proposed orientation of closed loop system and access road. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.



**Surface Use Plan**

**COG Operating, LLC**

**Shiner Bock 1 Federal Com 7H**

**SL: 1160' FSL & 170' FWL UL M**

**Section 1, T-17-S, R-31-E**

**BHL: 990' FSL & 330' FEL UL P**

**Section 1, T-17-S, R-31-E**

**Eddy County, New Mexico**

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**10. Plans for Restoration of the Surface:**

- A. Interim Reclamation will take place after the well has been 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. The stockpiled topsoil will then be spread out reclaimed area and reseeded with a BLM approved seed mixture. In the event that the well must be worked over or maintained, it may be necessary to drive, park, and/or operate machinery on reclaimed land. This area will be repaired or reclaimed after work is complete.
- B. Final Reclamation: Upon plugging and abandoning the well all caliche for well pad and lease road will be removed and surface will be recontoured to reflect its surroundings as much as possible. Caliche will be recycled for road repair or reused for another well pad within the lease. If any topsoil remains, it will be spread out and the area will be reseeded with a BLM approved mixture and re-vegetated as per BLM orders.

**11. Surface Ownership:**

- A. The surface is owned by the U.S. Government and is administered by the Bureau of Land Management. The surface is multiple uses with the primary uses of the region for grazing of livestock and the production of oil and gas.
- B. The surface tenant for this site is Olane Caswell, 1702 Gillham, Brownfield, TX 79316.
- C. The proposed road routes and surface location will be restored as directed by the BLM

**Surface Use Plan**

**COG Operating, LLC**

**Shiner Bock 1 Federal Com 7B**

**SL: 1160' FSL & 170' FWL      UL M**

**Section 1, T-17-S, R-31-E**

**BHL: 990' FSL & 330' FEL      UL P**

**Section 1, T-17-S, R-31-E**

**Eddy County, New Mexico**

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**12. Other Information:**

- A. The area around the well site is grassland and the topsoil is sandy. The vegetation is moderately sparse with native prairie grasses, some mesquite and shinnery oak. No wildlife was observed but it is likely that mule deer, rabbits, coyotes and rodents traverse the area.
- B. There is no permanent or live water in the immediate area.
- C. There are no dwellings within 2 miles of this location.
- D. 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.**

**13. Bond Coverage:**

Bond Coverage is Nationwide Bond # 000215

**14. Lessee's and Operator's Representative:**

The COG Operating LLC representative responsible for assuring compliance with the surface use plan is as follows:

Jim Evans

Ray Peterson

Drilling Superintendent

Drilling Manager

COG Operating LLC

COG Operating LLC

One Concho Center

One Concho Center

600 W. Illinois

600 W. Illinois

Midland, TX 79701

Midland, TX 79701

Phone (432) 685-4304 (office)

Phone (432) 685-4304 (office)

(432) 221-0346 (business)

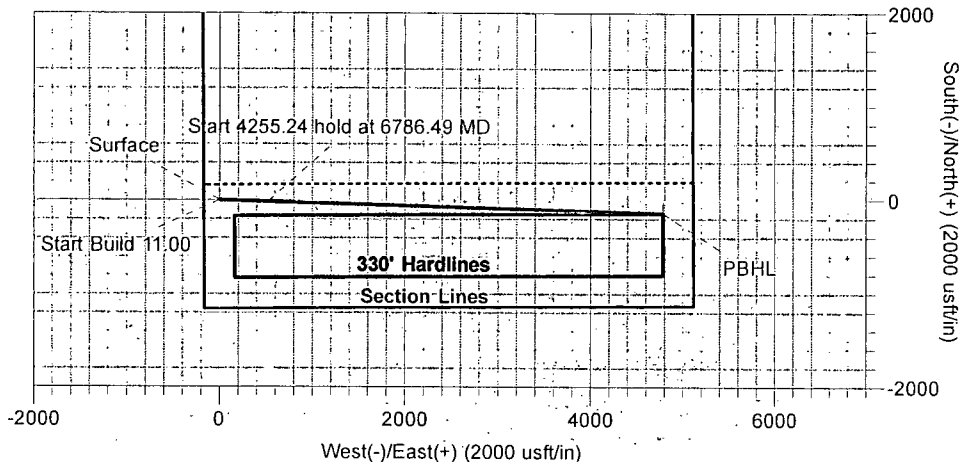
(432) 818-2254 (business)

# COG OPERATING, LLC

Field: Eddy County, NM  
 Site: Shiner Bock 1 FED.COM 7H  
 Well: 7H  
 Wellbore: Lateral  
 Plan: Plan #1

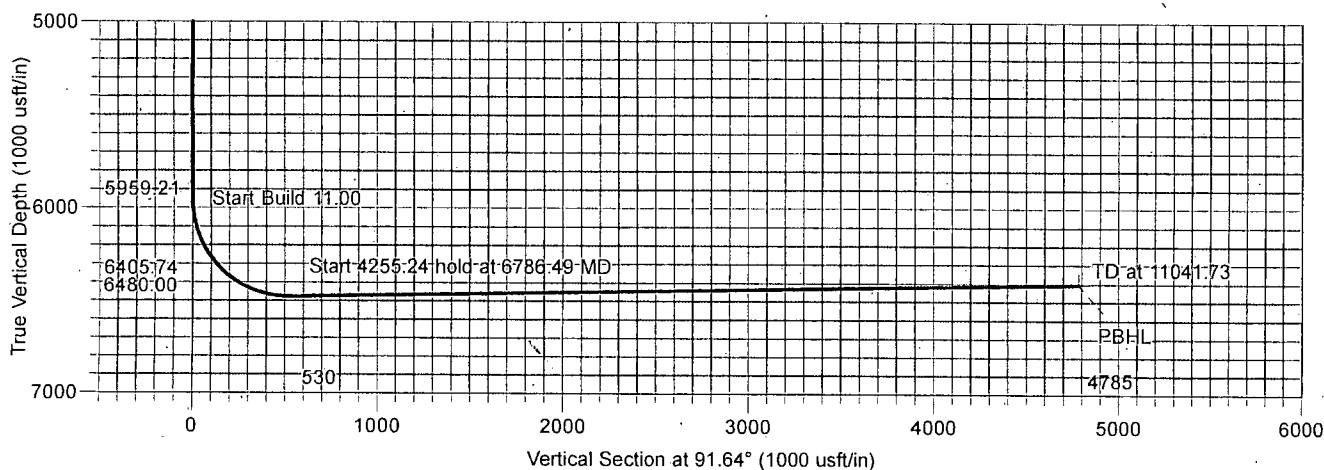


Azimuths to Grid North  
 True North: -0.27°  
 Magnetic North: 7.16°  
 Magnetic Field  
 Strength: 48734.5snT  
 Dip Angle: 60.66°  
 Date: 1/23/2014  
 Model: IGRF2010



## Section Distances

Sec1,T17S,R31E  
 SHL - Unit M  
 1159.8'FSL, 170.1'FWL  
 PBHL - Unit P  
 989.7'FSL, 330.0'FEL



## TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Shiner 7H Surface	0.00	0.00	0.00	676764.70	654355.00	32° 51' 34.20 N	103° 49' 50.39 W	Point
Shiner 7H PBHL	6405.74	-136.70	4782.60	676628.00	659137.60	32° 51' 32.62 N	103° 48' 54.33 W	Point

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5959.21	0.00	0.00	5959.21	0.00	0.00	0.00	0.00	0.00	
3	6786.49	91.00	91.64	6480.00	-15.14	529.74	11.00	91.64	529.96	
4	11041.73	91.00	91.64	6405.74	-136.70	4782.60	0.00	0.00	4784.55	Shiner 7H PBHL



ARCHER DIRECTIONAL DRILLING SERVICES  
 12101 Cutten Rd. Houston, Texas 77066  
 Phone: 281-301-2600 Fax: 281-301-2795

Design: Plan #1 (7H/Lateral)  
 Created By: Ivonne Gonzalez  
 Date: 10:43, January 23 2014

# **COG OPERATING, LLC**

**Eddy County, NM**

**Shiner Bock 1 FED COM 7H**

**7H**

**Lateral**

**Plan: Plan #1**

## **Standard Planning Report**

**23 January, 2014**

### **Section Distances**

**Sec1,T17S,R31E**

**SHL - Unit M**

**1159.8'FSL, 170.1'FWL**

**PBHL - Unit P**

**989.7'FSL, 330.0'FEL**

# Archer Planning Report

Database:	EDM R5000.1 MULTI	Local Co-ordinate Reference:	Well: 7H
Company:	COG OPERATING LLC	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Project:	Eddy County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Shiner Bock 1 FED COM 7H	North Reference:	Grid
Well:	7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project: Eddy County, NM	
Map System:	US State Plane 1927 (Exact solution)
Geo Datum:	NAD 1927 (NADCON CONUS)
Map Zone:	New Mexico East 3001
System Datum:	Mean Sea Level

Site	Shiner Bock 1 FED COM 7H				
Site Position:		Northing:	676,764.70 usft	Latitude:	32° 51' 34.20 N
From:	Map	Easting:	654,355.00 usft	Longitude:	103° 49' 50.39 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.27 °

Well	7H					
Well Position	+N/-S	0.00 usft	Northing:	676,764.70 usft	Latitude:	32° 51' 34.20 N
	+E/-W	0.00 usft	Easting:	654,355.00 usft	Longitude:	103° 49' 50.39 W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	0.00 usft

Wellbore		Lateral			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/23/2014	7.43	60.66	48,735

Design: Plan #1				
Audit Notes:				
Version:		Phase:	PROTOTYPE	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	91.64

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,959.21	0.00	0.00	5,959.21	0.00	0.00	0.00	0.00	0.00	0.00	
6,786.49	91.00	91.64	6,480.00	-15.14	529.74	11.00	11.00	0.00	91.64	
11,041.73	91.00	91.64	6,405.74	-136.70	4,782.60	0.00	0.00	0.00	0.00	Shiner 7H PBHL

# Archer Planning Report

Database:	EDM R5000-1 MULTI	Local Co-ordinate Reference:	Well 7H
Company:	COG OPERATING, LLC	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Project:	Eddy County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Shiner Bock 1 FED COM 7H	North Reference:	Grid
Well:	7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

# Archer Planning Report

Database:	EDM R5000 1 MULTI	Local Co-ordinate Reference:	Well 7H
Company:	COG OPERATING, LLC	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Project:	Eddy County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Shiner Bock 1 FED COM 7H	North Reference:	Grid
Well:	7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,959.21	0.00	0.00	5,959.21	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 11.00										
6,000.00	4.49	91.64	5,999.96	-0.05	1.60	1.60	11.00	11.00	0.00	
6,050.00	9.99	91.64	6,049.54	-0.23	7.89	7.89	11.00	11.00	0.00	
6,100.00	15.49	91.64	6,098.29	-0.54	18.90	18.91	11.00	11.00	0.00	
6,150.00	20.99	91.64	6,145.76	-0.99	34.54	34.55	11.00	11.00	0.00	
6,200.00	26.49	91.64	6,191.52	-1.56	54.65	54.67	11.00	11.00	0.00	
6,250.00	31.99	91.64	6,235.13	-2.26	79.05	79.08	11.00	11.00	0.00	
6,300.00	37.49	91.64	6,276.20	-3.07	107.52	107.56	11.00	11.00	0.00	
6,350.00	42.99	91.64	6,314.36	-4.00	139.79	139.85	11.00	11.00	0.00	
6,400.00	48.49	91.64	6,349.24	-5.02	175.57	175.64	11.00	11.00	0.00	
6,450.00	53.99	91.64	6,380.53	-6.13	214.52	214.61	11.00	11.00	0.00	
6,500.00	59.49	91.64	6,407.95	-7.33	256.30	256.40	11.00	11.00	0.00	
6,550.00	64.99	91.64	6,431.23	-8.59	300.51	300.63	11.00	11.00	0.00	
6,600.00	70.49	91.64	6,450.17	-9.91	346.74	346.89	11.00	11.00	0.00	
6,650.00	75.99	91.64	6,464.58	-11.28	394.58	394.74	11.00	11.00	0.00	
6,700.00	81.49	91.64	6,474.34	-12.68	443.58	443.76	11.00	11.00	0.00	
6,750.00	86.99	91.64	6,479.36	-14.10	493.29	493.49	11.00	11.00	0.00	
6,786.49	91.00	91.64	6,480.00	-15.14	529.74	529.96	11.00	11.00	0.00	
Start 4255.24 hold at 6786.49 MD										
6,800.00	91.00	91.64	6,479.77	-15.53	543.25	543.47	0.00	0.00	0.00	
6,900.00	91.00	91.64	6,478.02	-18.38	643.20	643.46	0.00	0.00	0.00	
7,000.00	91.00	91.64	6,476.28	-21.24	743.14	743.44	0.00	0.00	0.00	
7,100.00	91.00	91.64	6,474.53	-24.10	843.08	843.43	0.00	0.00	0.00	
7,200.00	91.00	91.64	6,472.79	-26.95	943.03	943.41	0.00	0.00	0.00	
7,300.00	91.00	91.64	6,471.04	-29.81	1,042.97	1,043.40	0.00	0.00	0.00	
7,400.00	91.00	91.64	6,469.30	-32.67	1,142.92	1,143.38	0.00	0.00	0.00	
7,500.00	91.00	91.64	6,467.55	-35.52	1,242.86	1,243.37	0.00	0.00	0.00	
7,600.00	91.00	91.64	6,465.81	-38.38	1,342.80	1,343.35	0.00	0.00	0.00	
7,700.00	91.00	91.64	6,464.06	-41.24	1,442.75	1,443.34	0.00	0.00	0.00	
7,800.00	91.00	91.64	6,462.32	-44.09	1,542.69	1,543.32	0.00	0.00	0.00	
7,900.00	91.00	91.64	6,460.57	-46.95	1,642.64	1,643.31	0.00	0.00	0.00	
8,000.00	91.00	91.64	6,458.83	-49.81	1,742.58	1,743.29	0.00	0.00	0.00	
8,100.00	91.00	91.64	6,457.08	-52.66	1,842.52	1,843.28	0.00	0.00	0.00	
8,200.00	91.00	91.64	6,455.34	-55.52	1,942.47	1,943.26	0.00	0.00	0.00	
8,300.00	91.00	91.64	6,453.59	-58.38	2,042.41	2,043.25	0.00	0.00	0.00	
8,400.00	91.00	91.64	6,451.84	-61.23	2,142.36	2,143.23	0.00	0.00	0.00	
8,500.00	91.00	91.64	6,450.10	-64.09	2,242.30	2,243.21	0.00	0.00	0.00	
8,600.00	91.00	91.64	6,448.35	-66.95	2,342.24	2,343.20	0.00	0.00	0.00	
8,700.00	91.00	91.64	6,446.61	-69.80	2,442.19	2,443.18	0.00	0.00	0.00	
8,800.00	91.00	91.64	6,444.86	-72.66	2,542.13	2,543.17	0.00	0.00	0.00	
8,900.00	91.00	91.64	6,443.12	-75.52	2,642.07	2,643.15	0.00	0.00	0.00	
9,000.00	91.00	91.64	6,441.37	-78.37	2,742.02	2,743.14	0.00	0.00	0.00	
9,100.00	91.00	91.64	6,439.63	-81.23	2,841.96	2,843.12	0.00	0.00	0.00	
9,200.00	91.00	91.64	6,437.88	-84.09	2,941.91	2,943.11	0.00	0.00	0.00	
9,300.00	91.00	91.64	6,436.14	-86.94	3,041.85	3,043.09	0.00	0.00	0.00	
9,400.00	91.00	91.64	6,434.39	-89.80	3,141.79	3,143.08	0.00	0.00	0.00	

## Archer Planning Report

Database:	EDMR5000.1 MULTI	Local Co-ordinate Reference:	Well 7H
Company:	COG OPERATING, LLC	TVD Reference:	WELL @ 0.00usft (Original Well Elev)
Project:	Eddy County, NM	MD Reference:	WELL @ 0.00usft (Original Well Elev)
Site:	Shiner Bock 1 FED COM 7H	North Reference:	Grid
Well:	7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,500.00	91.00	91.64	6,432.65	-92.66	3,241.74	3,243.06	0.00	0.00	0.00	
9,600.00	91.00	91.64	6,430.90	-95.51	3,341.68	3,343.05	0.00	0.00	0.00	
9,700.00	91.00	91.64	6,429.16	-98.37	3,441.63	3,443.03	0.00	0.00	0.00	
9,800.00	91.00	91.64	6,427.41	-101.23	3,541.57	3,543.02	0.00	0.00	0.00	
9,900.00	91.00	91.64	6,425.67	-104.08	3,641.51	3,643.00	0.00	0.00	0.00	
10,000.00	91.00	91.64	6,423.92	-106.94	3,741.46	3,742.99	0.00	0.00	0.00	
10,100.00	91.00	91.64	6,422.18	-109.80	3,841.40	3,842.97	0.00	0.00	0.00	
10,200.00	91.00	91.64	6,420.43	-112.65	3,941.35	3,942.96	0.00	0.00	0.00	
10,300.00	91.00	91.64	6,418.69	-115.51	4,041.29	4,042.94	0.00	0.00	0.00	
10,400.00	91.00	91.64	6,416.94	-118.37	4,141.23	4,142.93	0.00	0.00	0.00	
10,500.00	91.00	91.64	6,415.19	-121.22	4,241.18	4,242.91	0.00	0.00	0.00	
10,600.00	91.00	91.64	6,413.45	-124.08	4,341.12	4,342.89	0.00	0.00	0.00	
10,700.00	91.00	91.64	6,411.70	-126.94	4,441.07	4,442.88	0.00	0.00	0.00	
10,800.00	91.00	91.64	6,409.96	-129.79	4,541.01	4,542.86	0.00	0.00	0.00	
10,900.00	91.00	91.64	6,408.21	-132.65	4,640.95	4,642.85	0.00	0.00	0.00	
11,000.00	91.00	91.64	6,406.47	-135.51	4,740.90	4,742.83	0.00	0.00	0.00	
11,041.73	91.00	91.64	6,405.74	-136.70	4,782.60	4,784.55	0.00	0.00	0.00	
TD at 11041.73										

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Shiner 7H Surface		0.00	0.00	0.00	0.00	0.00	676,764.70	654,355.00	32° 51' 34.20 N	103° 49' 50.39 W
- plan hits target center										
- Point										
Shiner 7H PBHL		0.00	0.00	6,405.74	-136.70	4,782.60	676,628.00	659,137.60	32° 51' 32.62 N	103° 48' 54.33 W
- plan hits target center										
- Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
5,959.21	5,959.21	0.00	0.00	Start Build 11.00	
6,786.49	6,480.00	-15.14	529.74	Start 4255.24 hold at 6786.49 MD	
11,041.73	6,405.74	-136.70	4,782.60	TD at 11041.73	



*APD Extension*  
**CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	COG Operating, LLC
LEASE NO.:	NMLC31844
WELL NAME & NO.:	Shiner Bock 1 Federal Com #7H
SURFACE HOLE FOOTAGE:	1160' FSL & 170' FWL
BOTTOM HOLE FOOTAGE:	990' FSL & 330' FEL
LOCATION:	Section 1, T. 17 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

**The Pecos District Conditions of Approval (COA) that were approved with the APD on 01/27/2014 apply to this sundry notice to relocate the well location received on 04/29/2014. The following conditions amend and apply to the sundry notice as well.**

☒ **Special Requirements**

Lesser Prairie-Chicken Timing Stipulations  
Ground-level Abandoned Well Marker

## **I. SPECIAL REQUIREMENT(S)**

### **Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:**

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period.

Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted.

Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

**Ground-level Abandoned Well Marker to avoid raptor perching:** Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

The following Conservation Measures are to be accomplished in addition to those described in the CCA and Pecos District Special Status Species Resource Management Plan Amendment (RMPA):

1. To the extent determined by the BLM representative at the Plan of Development stage, all infrastructures supporting the development of a well (including roads, power lines, and pipelines) will be constructed within the same corridor.
2. On enrolled parcels that contain inactive wells, roads and/or facilities that are not reclaimed to current standards, the Participating Cooperator shall remediate and reclaim their facilities within three years of executing this CP, unless the Cooperator can demonstrate they will put the facilities back to beneficial use for the enrolled parcel(s). If an extension is requested by the Cooperator, they shall submit a detailed plan (including dates) and receive BLM approval prior to the three year deadline. All remediation and reclamation shall be performed in accordance with BLM requirements and be approved in advance by the Authorized Officer.
3. Utilize alternative techniques to minimize new surface disturbance when required and as determined by the BLM representative at the Plan of Development stage.

4. Install fence markings along fences owned, controlled, or constructed by the Participating Cooperator that cross through occupied habitat within two miles of an active LPC lek.
5. Bury new powerlines that are within two (2) miles of LPC lek sites active at least once within the past five years (measured from the lek). The avoidance distance is subject to change based on new information received from peer reviewed science.
6. Bury new powerlines that are within one (1) mile of historic LPC lek sites where at least one LPC has been observed within the past three years (measured from the historic lek). The avoidance distance is subject to change based on new information received from peer reviewed science.
7. Management recommendations may be developed based on new information received from peer reviewed science to mitigate impacts from H<sub>2</sub>S and/or the accumulation of sulfates in the soil related to production of gas containing H<sub>2</sub>S on the LPC. Such management recommendations will be applied by the Participating Cooperator as Conservation Measures under this CI/CP in suitable and occupied SDL/LPC habitat where peer-reviewed science has shown that H<sub>2</sub>S levels threaten the LPC.