(July 1992)	UN	ITED STATE NT OF THE I	S	(Other Instruc reverse sid	tions on de)	OMB NO. 1004-0136 Expires: February 23, 1995
<u> </u>	BUREAU (	DF LAND MANAG	GEMENT	OCD-HOBE	BS	5. LEASE DEBIGNATION AND SERIAL NO.
APP	LICATION FOR	PERMIT TO I	DRILL OR	DEEPEN		6. IF INDIAN, ALLOTTIE OF THE NAME
Ia. TIPE OF WORK						
D. TIPE OF WELL	DRILL X	DEEPEN I				T. UNIT ADREEMENT NAME
WELL XX	WILL OTHER	· · · · · · · · · · · · · · · · · · ·	LEINCLE X	MULTIPL ZONE	•	S. TALM OR LEVE HUME WELL NO. 301057)
2. NAME OF OPERATOR COG OPERATIN	NG, LLC.	(ERICK NELSO	N) (432-68)	3-7443)	27)	PROHIBITION FED. UNIT # 7
	XAS AVENUE SUITE	E 1300 MIDLAN	D, TEXAS 7	9701	131	30.02537825 10. FIELD IND FOOL, OF WILDCAR
211 JULICE	(Report location clearly a 330' FEL SECTION					RED TANK-BONE SPRING
At proposed prod. :	SAME		their	t A		SECTION 14 T22S-R32E
14. DISTANCE IN XILES AND DELECTION FROM NEARIST TOWN OF POST OFFICE*       12. COUNTY OF PARISH 13. STATE         Approximately 40 miles Southwest of Hobbs, New Mexico       12. COUNTY OF PARISH 13. STATE         13. Distance rank professor       NEW MEXICO						
LOCATION TO NEAR PROPERTY OR LEASE (Also to pearest d	IST LINT, FT. rlg. unit line, if any)	330'	16. NO. OF ACE	S IN LEISE		ACRIS ASSIGNED
13. DISTANCE FROM PD TO NEAREST WELL	DRILLING, COMPLETED,		19. PROPOSED DI	PTH	20. ROTAR	TOL CABLE TOOLS
OR APPLIED FOR, ON 1	EIS LEASE, FT.	1320'	8900 <b>'</b>		•	ROTARY
Carlobad Cont	rbeiher DF, RT, GR, etc.)	3741' G	R.	<u> </u>		22. APPROS. DATE WORE WILL START* WHEN APPROVED
23.		PROPOSED CASIN	GAND CEMENT	NING PROGRAM		· · · · · · · · · · · · · · · · · · ·
SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER PO	07 5177	ING DEPTH		QUANTITY OF CEMENT
26"	Conductor	NA		40'	Cement	to surface with Redi-mix
175"	<u>H-40 13 3/8"</u>	48#	9	- <b>F</b> -		. circulate cement
11"	HCK/J-55 8 5/8	" 32#	47(			v circulate cement

8900'

500 Sx. Estimate TOC 6000'±

#### Witness Surface Casing.

N-80 53"

7 7/8"

1. Drill 26" hole to 40'. Set 40' of 20" conductor pipe and cement to surface with Redi-mix.

17#

- 2. Drill 17½" hole to 950'. Run and set 950' of 13 3/8" 48# H-40 ST&C casing. Cement with 700 Sx. of 35/65 POZ Class "C" cement + additives, tail in with 200 Sx. of Class "C" cement + 2% CaCl, + ½# Flocele/Sx., circulate cement to surface.
- 3. Drill 11" hole to 4700'. Run and set 4700' of 8 5/8" 32# J-55/HCK ST&C casing. Cement with 1000 Sx. of Class "C" Light Weight Cement + additives, tail in with 200 Sx. of Class "C" cement + 1% CaCl, circulate cement to-surface.
- 4. Drill 7 7/8" hole to 8900'. Run and set 8900' of 5½" 17# N-80 LT&C casing. Cement with 500 Sx. of Class "H" Premimum Plus cement + additives, estimate top of cement 6000'± from surface.

IN ABOVE SPACE DE	SCRIBE PROPOSED PROGRAM: If proposi	al is to deepen, give data offenting the series	1501H2EAENDR.000 none.	If proposal is to drill or
deepen directionally ai	we pertinent data on subsurface locations and e	measured and rue vertical SPIE Challoger	HIMMENICASE HARY.	• •
21			SP CALCOURS	

SIGNED TO THE Agent	<u><u><u>patr</u></u><u>02/02/06</u></u>
(This space for Federal or State office use)	t a provident
PSRUIT NO APPROVAL DATE	
Applianden approval does not worrant or certify that the applicant holds legal or equilable title to those rights in the subject CONDITIONS OF APPROVAL IF ANY:	APR 1 7 2006
STROVED BY /s/ Tony J. Herrell FIELD MANAGE	APPROVAL FOR 1 YEAR

DISTRICT I (625 N. FRENCH DR., HOBBS, NM 88240

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DISTRICT II

1301 W. GRAND AVENUR, ARTESIA, NM 88210

DISTRICT III

#### State of New Mexico

Energy, Minerals and Natural Resources Department

### OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

Form C-102 Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

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DISTRICT IV Intexts. France DB, SAMTE PE, WE GROCK       WELL LOCATION AND ACREAGE DEDICATION PLAT       D AMENDED REPORT         AMENDER BR. SAMTE PE, WE GROCK         AMENDER BROKE SPRING         Pool Code       Pool Code       Pool Name         BOT 02 5 - 37825       S1683       RED TANK-BONE SPRING         Property Code       PROHIBITION FEDERAL UNIT 14       7         00RB No.       OPERATING, LLC       BIENTIAL UNIT 14         201052       PROHIBITION FEDERAL UNIT 14       7         OFERATING, LLC       BIENTIAL         Surface Location         UL or lot No.       Section       Tomship       Rage       Lot Idn       Peet from the North/South line       Feet from the East/West line County         A 14       22-S       32-E       NORTH PEET FORM Supface         UL or lot No.       Section       Tomship       Rage       Lot Idn       Peet from the East/West line County         Joint or Infill       Consolidation Code       Order No. <td< th=""></td<>
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3D-025-37825       Pool Name         Property Code       Property Name       RED TANK-BONE SPRING         301052       PROHIBITION FEDERAL UNIT 14       7         OGRD No.       Operator Name       Elevation         229137       COG OPERATING, LLC       3741'         Surface Location         UL or lot No.       Section       Township       Range       Lot Idn       Peet from the       North/South line       Rest/West line       County         A       14       22-S       32-E       960       NORTH       330       EAST       LEA         Bottom Hole Location If Different From Surface         UL or lot No.       Section       Township       Range       Lot Idn       Peet from the       North/South line       Peet from the       East/West line       County         Bottom Hole Location If Different From Surface         UL or lot No.       Section       Township       Range       Lot Idn       Peet from the       North/South line       Peet from the       East/West Line       County         Dedicated Acres       Joint or Infill       Consolidation Code       Order No.       Section       Order No.       Image: Section Social Date: Section Social Date: Section Social Date: Section Sectiff the the inform
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DETAIL Joe T. Janica
3726.9' 3736.1' Printed Name
Agent
O G
3728.1, 3735.7'
SURVEYOR CERTIFICATION
GEODETIC COORDINATES I hereby certify that the well location shown NAD 27 NME on this plat was plotted from field action
actual surveys made by one well and
I=508389.6 N supervison and that the same is true and
X=714770.7 E correct to the best of my belief.
LAT. = 32°23'46.70" N
[ 0, -32, 20, 40, 70, 70, 70, 70, 70, 70, 70, 70, 70, 7
LONG. = 103'38'15.04" W Date Surveyed and the RZB
LONG. = 103'38'15.04" W         Date Surveyed         RZB           Disignature & Seal of Professional Surveyor         Professional Surveyor
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LONG. = 103'38'15.04" W Date Surveyed And A Seal of Protomional Surveyor ADV B IL Own 1/13/05



VICINITY MAP



 SEC. \_\_14 \_\_TWP. 22 - S RGE. \_32 - E

 SURVEY \_\_\_\_\_\_\_

 N.M.P.M.

 COUNTY \_\_\_\_\_\_\_

 LEA

 DESCRIPTION \_960'\_FNL & 330'\_FEL

 ELEVATION \_\_\_\_\_\_\_\_

 3741'

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OPERATOR COG OPERATING, LLC

LEASE PROHIBITION FEDERAL UNIT 14



# LOCATION VERIFICATION MAP



U.S.G.S. TOPOGRAPHIC MAP THE DIVIDE, N.M.

#### APPLICATION TO DRILL

COG OPERATING, LLC. PROHIBITION FEDERAL UNIT # 7 UNIT "A" SECTION 14 T22S-R32E LEA CO. NM

In response to questions asked under Section II of Bulletin NTL-6 the following information on the above well is provided for your consideration.

- 1. Location of well: 990' FNL & 330' FEL SECTION 14 T22S-R32E LEA CO. NM
- 2. Ground Elevation above Sea Level: 3741' GR.
- 3. Geological age of surface formation: Quaternary Deposits:
- 4. Drilling tools and associated equipment: Conventional rotary drilling rig using drilling mud as a circulating medium to remove solids from hole.
- 5. Proposed drilling depth: 8900'
- 6. Estimated tops of geological markers:

Rustler Anhydrite	930'	Delaware	4850'
Salt	1220'	Bone Spring	8700'

7. Possible mineral bearing formations:

Bone Spring 0il

8. Casing Program:

Hole Size	Interval	OD of Casing	Weight	Thread	Collar	Grade
26''	0-407	20"	NA	NA	NA	Conductor
17'2''	0-950'	13 3/8"	48#	8-R	ST&C	н-40
11"	0-4700'	8 5/8".	32#	8-R	ST&C	Ј-55/НСК
7 7/8"	0-8900'	5 <sup>1</sup> <sub>2</sub> ''	17#	8–R.	LT&C	N-80

#### APPLICATION TO DRILL

COG OPERATING, LLC. PROHIBITION FEDERAL UNIT # 7 UNIT "A" SECTION 14 T22S-R32E LEA CO. NM

#### 9. CEMENTING & SETTING DEPTH:

20"	Conductor	Set 40' of 20" conductor pipe and cement to surface Redi-mix.
13 3/8"	Surface	Set 950' of 13 3/8" 48# H-40 ST&C casing. Cement with 700 Sx. of 35/65 Class "C" POZ + additives, tail in with 200 Sx. of Class "C cement + 2% CaCl, circulate cement to surface.
8 5/8"	Intermediate	Set 4700' of 8 5/8" 32# HCK/J-55 ST&C casing. Cement 1000 Sx. of Class "C" Light Cement + additives, tail in with 200 Sx. of Class "C" cement + 1% CaCl, circulate cement to surface.
5 <u>1</u> "	Produxtion	Set 8900' of 5½" 17# N-80 LT&C casing. Cement with 500 Sx. of Class "H" Premium Plus cement + additives estimate top of cement 6000' from surface.

10. <u>PRESSURE CONTROL EQUIPMENT:</u> Exhibit "E" shows a 900 Series 3000 PSI working pressure B.O.P. consisting of an annular bag type preventor, middle blind rams and bottom pipe rams. The B.O.P. will be nippled up on the 8 5/8" casing and tested to API specifications. The B.O.P. will be operated at least once in each on trips. Full opening stabbing valve and upper kelly cock will be utilized. Exhibit "E-1" shows a hydraulically operated closing unit and a 2" 3000 PSI choke manifold with dual adjustable chokes. No abnormal pressures or temperatures are expected.

11. PROPOSED MUD CIRCULATING SYSTEM:

DEPTH	MUD WT.	VISC.	FLUID LOSS	TYPE MUD SYSTEM
40-950'	8.4-9.0	28-35	NC	Fresh water Spud mud add paper to control seepage.
950-4700 <b>'</b>	10.0-10.2	28-35	NC	Brine water mud system add paper for seepage add lime for PH control use high viscosity sweeps to clean hole.
4700-8400'	8.5-8.7	29-38	NC	Fresh water use paper to control seepage and high viscosity sweeps to clean hole.
8400-8900'	8.5-8.7	32-34	25 cc or less	Same as above add starch to reduce water loss,use high viscosity sweeps to clean hole.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks. In order to run DST's , open hole logs, and casing viscosity and/or water loss may have to be adjusted to meet these needs.

#### APPLICATION TO DRILL

COG OPERATING, LLC. PROHIBITION FEDERAL UNIT # 7 UNIT "A" SECTION 14 T22S-R32E LEA CO. NM

### 12. LOGGING, CORING, AND TESTING PROGRAM:

- A. Open hole logs: Dual Induction, SNP, LDT, MSFL, Gamma Ray, and Caliper from TD back to 4700'.(8 5/8" casing shoe), run Gamma Ray, Neutron from 8 5/8" casing shoe back to surface.
- B. No DST's or cores are planned at this time.
- C. Mud logger may be rigged up on hole at 4700' and remain on hole to TD.

### 13. POTENTIAL HAZARDS:

No abnormal pressures or temperatures are expected. There is no known presence of  $H^2S$  in this area. If  $H^2S$  is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP <u>4250</u> PSI, and Estimated BHT <u>175°</u>.

### 14. ANTICIPATED STARTING DATE AND DURATION OF OPERATION:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operation and drilling is expected to take <u>28</u> days. If production casing is run then an additional <u>30</u> days will be needed to complete well and construct surface facilities and/or lay flowlines in order to place well on production.

#### 15. OTHER FACETS OF OPERATIONS:

After running casing, cased hole Gamma Ray, Neutron Collar logs will be run from TD back to all possible productive zones. The <u>Bone Spring</u> formation will be perforated and stimulated in order to establish production. The well will be swab tested and potentialed as an oil well.

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

- 1. All Company and Contract personnel admitted on location must be trained by a qualified  $H_2S$  safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazzards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H2S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
- 2. H<sub>2</sub>S Detection and Alarm Systems
  - A.  $H_2S$  detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.
- 3. Windsock and/or wind streamers
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
  - C. There should be a windsock at entrance to location.
- 4. Condition Flags and Signs
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency personnel admitted to location.
- 5. Well control equipment
  - A. See exhibit "E"
- 6. Communication

  - A. While working under masks chalkboards will be used for communication. B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephoned will be available at most drilling foreman's trailer or living quarters.
- 7. Drillstem Testing
  - A. Exhausts will be watered.
  - 3. Flare line will be equipped with an electric ignitor or a propane pilot light in case gas reaches the surface.
  - C. If location is near any dwelling a closed D.S.T. will be performed.

1<sup>·</sup>3–A

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- 8. Drilling contractor supervisor will be required to be familiar with the effects  $H_2S$  has on tubular goods and other mechanical equipment.
- 9. If  $H_2S$  is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas seperator will be brought into service along with  $H_2S$  scavengers if necessary.

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COG OPERATING, LLC. PROHIBIRION FEDERAL UNIT # 7 UNIT "A" SECTION 14 T22S-R32E LEA CO. NM

- EXISTING ROADS & PROPOSED ROADS: Area maps; Exhibit "B" is a reproduction of a County General Hi-way Map. Exhibit "C" is a reproduction of a USGS Topographic Map, showing existing and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. Any new roads will be constructed to BLM specifications.
  - A. Exhibit "A" shows the proposed well site as staked.
  - B. From Hobbs New Mexico take U.S. Hi-way 62-180 toward Carlsbad New Mexico go approximately 38 miles to mile post 67, turn South on Co Road C-29 go 14 miles to Mills Ranch Road, turn Left (East) follow lease road East & Northeast for approximately 7 miles, turn North on lease road go .4 miles, turn Right (East) go .3 miles to well # 6, turn Left (Northeast) go 1200' to location.
  - C. Exhibit "C" shows proposed roads, powerlines and flowlines that will be required to produce these wells.

2. PLANNED ACCESS ROADS: Approximately 1200' of new road will be constructed.

- A. The access roads will be crowned and ditched to a 12' wide travel surface with a 40' Right-of-Way.
- B, Gradient of all roads will be less than 5.00%.
- C. If turn-outs are necessary they will be constructed.
- D. If needed roads will be surfaced with a mimimum of 4" of caliche. This material will be obtained from a local source.
- E. Center-line for new roads will be flagged. Earth-work will be will be done as field conditions require.
- F. Culverts will be placed in the access road if they are necessary. The roads will be constructed to utilaze low water crossings for drainage as required by topography.
- 3. LOCATIONS OF EXISTING WELLS IN A ONE MILE RADIUS. EXHIBIT "A-1"
  - A. Water wells One approximately .25 miles Southwest of location
  - 5. Disposal wells One approximately .9 miles North of location.
  - C. Drilling wells None known
  - D. Producing wells As shown on Exhibit "A-1"
  - E. Abandoned wells As shown on Exhibit "A-1"





#### ARRANGEMENT SRRA

SERIES 900 3000 PSI WP

#### EXHIBIT "E" SKETCH OF B.O.P. TO BE USED ON

COG OPERATINT, LLC. PROHIBITION FEDERAL UNIT # 7 UNIT "A" SECTION 14 T22S-R32E LEA CO. NM



Typical choke manifold assembly for 3M WP system



1

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

State of New Mexico Energy Minerals and Natural Resources

> Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office. For downstream facilities, submit to Santa Fe office

Form C-144 March 12, 2004

Is pit or below-grade tan	de Tank Registration or C k covered by a "general plan"? Yes [ r below-grade tank 🕱 Closure of a pit or be	Nov	]	
Operator: <u>COG OPERATING, LLC.</u> Address: <u>550 WEST TEXAS AVENUE SUITE 1300</u> Facility or well namPROHIBITION FED. UNITAPI # <b>30-025</b> County: <u>Lea</u> Latitude <u>32°23'46.7</u> <sup>4</sup> Congitud <u>103°</u> WELL # 7	. 37825 U/L or Qtr/Qtr_AScc_14	<u>4_т_22</u> ;	<u>Sr32E</u>	Private Indian
Pit         Type:       Drilling I Production Disposal         Workover       Emergency         Lined I Unlined       Disposal         Liner type:       Synthetic         Thickness       12         mil       Clay         Volume         15M_bbl	Below-grade tank Volume:bbl Type of fluid: Construction material: Double-walled, with leak detection? Yes [			-
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) 100+	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	AN AN AN	(20 points) (10 points) ( 0 points)	0
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	1	(20 points) (*0 points)	0
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more		(20 points) (10 points) ( 0 points)	0
	Ranking Score (Total Points)	0		0
If this is a pit closure:       (1) attach a diagram of the facility showing the pit's onsite         onsite       offsite       If offsite, name of facility         date.       (4) Groundwater encountered:       No       Yes       If yes, show depth belo diagram of sample locations and excavations.         I hereby certify that the information above is true and complete to the best of		dial action h sample re	taken including re esults. (5) Attach s	soil sample results and a
been/will be constructed or closed according to NMOCD guidelines [3], a Date: <u>03/06/06</u> Printed Name: Title_JOE_T. Janica/ Agent	general permit to an (attached) alterna	ative OCD	-approved plan L	.ل
Your certification and NMOCD approval of this application/closure does not otherwise endanger public health or the environment. Nor does it relieve the regulations.	relieve the proptor of lightlity should the con	ntents of the with any oth	e pit or tank contan her federal, state, o	ninate ground water or r local laws and or
Approval:				

Signaturo

Date: \_\_\_\_\_ Printed Name: Title\_

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PETROLEUM ENGINEER

🕑 The send	The sender of this message has requested a read receipt. Click here to send a receipt.				
Mull, Don	ina, EMNRD				
From:	Phillips, Dorothy, EMNRD	Sent: Thu 4/20/2006 8:25 AM			
То:	Mull, Donna, EMNRD				
Cc:					
Subject:	RE: Financial Assurance Requirement				
Attachme	nts:				

All have blanket and none appear on Jane's list.

From: Mull, Donna, EMNRD
Sent: Thursday, April 20, 2006 8:15 AM
To: Phillips, Dorothy, EMNRD
Cc: Macquesten, Gail, EMNRD; Sanchez, Daniel J., EMNRD
Subject: Financial Assurance Requirement

Dorothy,

Is the Financial Assurance Requirement for these Operators OK?

Petrohawk Operating Co (194849) Pride Energy Co (151323) COG Operating LLC (229137) OXY USA WTP Limited Partnership (192463) Chevron USA Inc (4323) John H Hendrix Corp (12024) Latigo Petroleum Inc (227001)

Please let me know. Thanks and have a nice day. Donna

https://webmail.state.nm.us/exchange/dmull/Inbox/RE:%20Financial%20Assurance%20Requirement-2.E... 4/20/2006