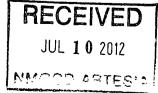
OCD-ARTESIA

Form 3160-3 (April 2004)			OMB No	APPROVED 1004-0137		
UNITED STATE: DEPARTMENT OF THE	Expires March 31, 2007 5 Lease Serial No. NMNM-118109 6 If Indian, Allotee or Tribe Name					
BUREAU OF LAND MAY APPLICATION FOR PERMIT TO						
			N/A			
Ia. Type of work	ER		7 If Unit or CA Agre N/A	ement, Name and	l No	
lb Type of Well	Single Zone Multip	ole Zone	8 Lease Name and V		 762	,)/
2. Name of Operator			9 API Well No.	LACIE	<u>دړد</u> س	10
COG Operating LLC 3a Address 550 W Texas Ave Suite 1300	3b. Phone No. (include area code)	<u> </u>	30-015-	7045	7	2/4/
Milliand TV 70701	433 (07 4304			eta-Yeso 2621	₀ >	•
4. Location of Well (Report location clearly and in accordance with a At surface 245' FSL & 230' FWL, Unit M At proposed prod zone	iny State requirements RTHUU	<i>\</i>	11 Sec , T R M or B	lk. and Survey or	Area	
At surface 245' FSL & 230' FWL, Unit M	CATIO	N	Sec 14 T17S	R28E		
14 Distance in miles and direction from nearest town or post office* 2 miles from Loco Hills, i	• NM		12 County or Parish EDDY	13 S	tate NM	
15 Distance from proposed*	16 No of acres in lease	17 Spaci	ng Unit dedicated to this v	well		
location to nearest property or lease line, ft (Also to nearest drig unit line, if any)	40		40			
18 Distance from proposed location*	19 Proposed Depth	20 BLM	/BIA Bond No. on file			
to nearest well, drilling, completed, applied for, on this lease, ft 489	5200'		NMB000740; NM	B000215		
21 Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will sta	rt*	23. Estimated duration			
3702' GL	01/31/2012		15	days		
	24. Attachments					
The following, completed in accordance with the requirements of Onsh	ore Oil and Gas Order No 1, shall be a	ffached to t	his form			
Well plat certified by a registered surveyor A Drilling Plan	4 Bond to cover to ltem 20 above)	he operation	ons unless covered by an	existing bond or	ı file (see	
3 A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office)	6 Such other site	specific in	formation and/or plans as	s may be require	d by the	
25. Signature	authorized office Name (Printed/Typed)	er		Date		
Signature (O)	Kelly J. Holly	, , ,		11/09/2011		
itle Permitting Tech						
Approved by (Signature)	Name (Printed/Typed)	James	A. Ames	Date JU	L 6	201
itle FIELD WASIAGER	Office CARLSBA	DFIEL	OFFICE			
Application approval does not warrant or certify that the applicant ho	lds legal or equitable title to those righ	its in the su	bjectlease which would e	entitle the applica	unt to	
conduct operations thereon. Conditions of approval, if any, are attached		,	APPROVAL FO	OR TWO	YEAR	S
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a states any false, fictitious or fraudulent statements or representations a	crime for any person knowingly and v	willfully to	make to any department of	or agency of the	United	
*(Instructions on page 2)						
(instructions on page 2)			Liven Control	led Wate	r Basi	n
Cannot produce well			J.,			
Cannot produce well until NSL approval	DEARLY / TEN					
	RECEIVED					

Appreval Subject to General Requirements a special Stipulations Attached



SEE ATTACHED FOR CONDITIONS OF APPROVAL

DISTRICT * 1625 N French Dr., Hobbs, NM 88240 Phone. (575) 393-6161 Fax. (575) 393-0720 DISTRICT II DISTRICT II 811 S. First St., Artes₁₈, NM 88210 Phone (575) 748-1283 Fax (575) 748-9720 DISTRICT III 1000 Rio Brazos Road, Aztec, NM 87410 Phone (505) 334-6178 Fax (505) 334-6170 DISTRICT IV 1220 S St Francis Dr , Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

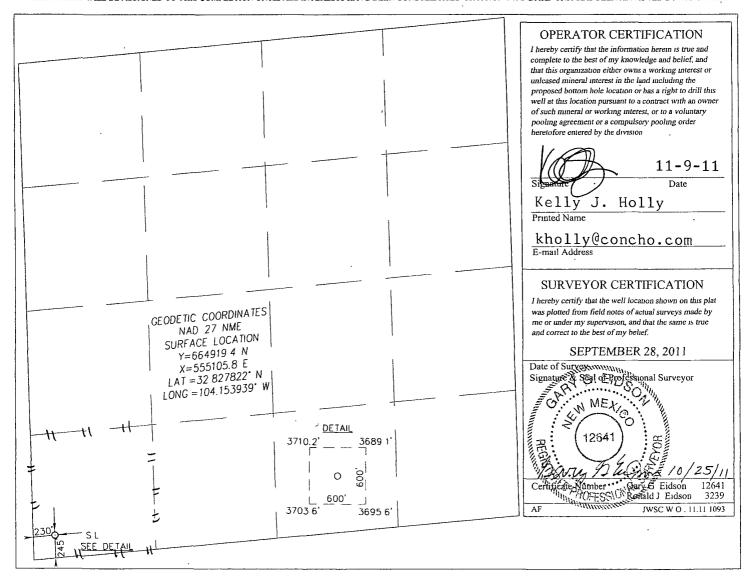
□AMENDED REPORT

5200

WELL LOCATION AND ACREAGE DEDICATION PLAT

A	PI Number	10		Pool Code		Pool Name				
30-015 -	4048	59	9/07/0 Empire; Glorieta-Yeso							
Property C	ode				Property Nam	e		W	Well Number	
- 37882 - 3	9326		TUMAK FEDERAL						3	
OGRID 1	No.				Operator Nam	c			Elevation	
229137			COG OPERATING, LLC 3702'						3702'	
Surface Location										
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
M	14	17-S	28-E		245	SOUTH	230	WEST	EDDY	
	<u> </u>	 	<u> </u>	Bottom Hol	e Location If Diffe	erent From Surface		<u> </u>		
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
Dedicated Acres	Joint or	Infill C	onsolidation C	ode Ord	er No.					

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



MASTER DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Quaternary	Surface
Rustler	220'
Salt	400'
Base of Salt	800'
Yates	740'
Seven Rivers	1001'
Queen	1590'
Grayburg	1980'
San Andres	2280'
Glorieta	3680'
Paddock	3780'
Blinebry	4220'
Tubb	5300'

3. Estimated Depths of Anticipated Fresh Water, Oil and Gas

Water Sand	150'	Fresh Water
Grayburg	1980'	Oil/Gas
San Andres	2280'	Oil/Gas
Glorieta	3680'	Oil/Gas
Paddock	3780'	Oil/Gas
Blinebry	4220	Oil/Gas
Tubb	5300'	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8" casing to 300' and circulating cement back to the surface will protect the surface fresh water sand. The Salt Section will be protected by setting 8 5/8" casing to 850' and circulating cement, in a single or multi-stage job and/or with an ECP, back to the surface. Any shallower zones above TD, which contain commercial quantities of oil and/or gas, will have cement circulated across them. This will be achieved by cementing, with a single or multi-stage job, the 5 1/2" production casing back 200' into the intermediate casing, (but calculated to surface) to be run at TD. If wellbore conditions arise that require immediate action and/or a change to this program, COG Operating LLC personnel will always react to protect the wellbore and/or environment.



CQG Operating LLC

Master Drilling Plan Revised 4-21-11

Empire; Glorieta-Yeso

Use for Sections 6-30, T17S, R28E

Eddy County, NM

4. Casing Program

Se
COA

		OD			Jt.,		
Hole Size	Interval	Casing	Weight	Grade	Condition	Jt.	brst/clps/ten_
17 1/2"	0-300'250	13 3/8"	48#	H-40/J-55 hybrid	ST&C/New	ST&C	9.22/3.943/15.8
11"	0-850'934	8 5/8"	24or32#	J-55	ST&C/New	ST&C	3.03/2.029/7.82
7 7/8"	0-TD	5 1/2"	15.5or17#	J-55orL-80	LT&C/New	LT&C	1.88/1.731/2.42

5.

Cement Program See Corp

13 3/8" Surface Casing:

Class C w/ 2% Cacl2 + 0.25 pps CF, 400 sx, yield 1.32, back to surface. 154% excess

8 5/8" Intermediate Casing:

11" Hole:

Single Stage: 50:50:10 C:Poz:Gel w/ 5% Salt +0.25% CF, 300 sx lead, yield-2.45 + Class C w/2% CaCl2, 200 sx tail, yield-1.32, back to surface. 363% excess

Multi-Stage: Stage 1: Class C w/2% CaCl2, 200 sx, yield - 1.32; 108% excess Stage 2: 50:50:10 C:Poz:Gel w/ 5% Salt +0.25% CF, 300 sx, yield - 2.45, back to surface, 726% excess; assumption for tool is lost circulation. Multi stage tool to be set at approximately, depending on hole conditions, 350' (50' below the surface casing). Cement volumes will be adjusted proportionately for depth changes of multi stage tool.

5 1/2" Production Casing:

Single Stage: LEAD 500 sx 35:65:6 C:Poz:Gel w/ 5% Salt + 5 pps LCM + 0.2%SMS + 0.3% FL-52A + 0.125 pps CF, yield-2.05; + TAIL 400 sx 50:50:2 C:Poz:Gel w/ 5% Salt + 3 pps LCM + 0.6% SMS + 1% FL-25 + 1% BA-58 + 0.3% FL-52A + 0.125 pps CF, yield-1.37, to 200' minimum tie back to intermediate casing. 76.8% open hole excess, cement calculated back to surface.

Multi-Stage: Stage 1: (Assumed TD of 5450') 500 sx 50:50:2 C:Poz:Gel w/ 5% Salt + 3 pps LCM + 0.6% SMS + 1% FL-25 + 1% BA-58 + 0.3% FL-52A + 0.125 pps CF,

COG Operating LLC
Master Drilling Plan Revised 4-21-11
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yield - 1.37, 34% excess; Stage 2: LEAD 450 sx 50:50:2 C:Poz:Gel w/ 5% Salt + 3 pps LCM + 0.6% SMS + 1% FL-25 + 1% BA-58 + 0.3% FL-52A + 0.125 pps CFyield - 1.37, + TAIL 250 sx Class C w/ 0.3% R-3 + 1.5% CD-32, yield -1.02 148% open hole excess, cement calculated back to Multi stage tool to be set at surface. approximately, depending on conditions, 2500'. Cement volumes will be adjusted proportionately for depth changes of multi stage tool, assumption for tool is water flow.

6. Minimum Specifications for Pressure Control

The blowout preventer equipment (BOP) shown in Exhibit #9 will consist of a double ram-type (2000 psi WP) preventer, and in some cases possibly a 2000 psi Hydril type annular preventer as provided for in Onshore Order #2. This unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top of 4 1/2" drill pipe rams on the bottom. A 13-5/8" or 11" BOP will be used, depending on the rig selected, during the drilling of the well. The BOP will be nippled up on the 13 3/8" surface casing with BOP equipment and tested to 2000 psi. When 11" BOP is used the special drilling flange will be utilized on the 13-3/8" head to allow testing the BOP with a retrievable test plug. After setting 8-5/8" the BOP will then be nippled up on the 8 5/8" intermediate casing and tested by a third party to 2000 psi and used continuously until total depth is reached. 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 (Exhibit #10) will include a Kelly cock and floor safety valve, choke lines and a choke manifold (Exhibit #11) with a 2000 psi WP rating.

The majority of the rigs currently in use have a 13-5/8" BOP, so no special provision is needed for most wells in the area for conventionally testing the BOP with a test plug. However, due to the vagaries of rig scheduling, it might be that one of the few rigs with 11" BOP's might be called upon to drill any specific well in the area. Note that intermediate hole size is always 11". Therefore, COG Operating LLC respectfully requests a variance to the requirement of 13-5/8" BOP on 13-3/8" casing. When that circumstance is encountered the special flange will be utilized to allow testing the entire BOP with a test plug, without subjecting the casing to test pressure. The special flange also allows the return to full-open capability if desired.

Empire; Glorieta-Yeso

Use for Sections 6-30, T17S, R28E

Eddy County, NM

7. Types and Characteristics of the Proposed Mud System

The well will be drilled to TD with a combination of brine, cut brine and polymer mud system. The applicable depths and properties of this system are as follows:

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-300' 250	Fresh Water	8.5	28	N.C.
3,00-850' 930	Brine	10	30	N.C.
850°-TD'	Cut Brine	8.7-9.2	30	N.C.

Sufficient mud materials will be kept at the well site to maintain mud properties and meet minimum lost circulation and weight increase requirements at all times.

8. Auxiliary Well Control and Monitoring Equipment

- A. Kelly cock will be kept in the drill string at all times.
- B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

9. Logging, Testing and Coring Program San Con

- A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log and will be run from TD to Surface.
- B. Drill Stem test is not anticipated.
- C. No conventional coring is anticipated.
- D. Further testing procedures will be determined after the 5 ½" production casing has been cemented at TD, based on drill shows and log evaluation.

10. Abnormal Conditions, Pressure, Temperatures and Potential Hazards

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 110 degrees and the estimated maximum bottom hole pressure is 2300 psig. Measurable gas volumes or Hydrogen Sulfide levels have not been encountered during drilling operations in this area, although a Hydrogen Sulfide Drilling Operation Plan is attached to this program. No major loss of circulation zones has been reported in offsetting wells.

COG Operating LLC
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Empire; Glorieta-Yeso
Use for Sections 6-30, T17S, R28E
Eddy County, NM

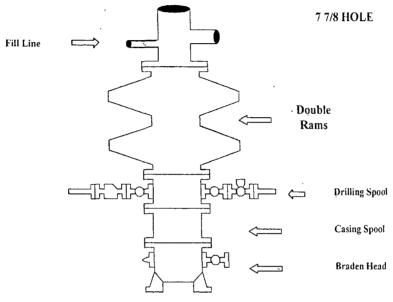
11. Anticipated Starting Date and Duration of Operations

Road and location work will not begin until approval has been received from the BLM. As this is a Master Drilling plan, please refer to the Form 3160-3 for the anticipated start date. Once commenced, drilling operations should be finished in approximately 10 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

13 5/8" 2K ANNULAR FILL LINE 135/8",2000 psi ANNULAR 4-1/16",2K VALVES 13 5/8" 3K "A" SECTION

COG Operating LLC

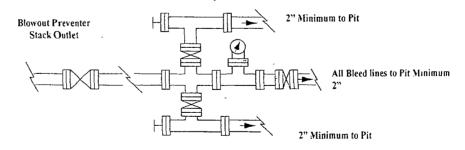
Exhibit #9 BOPE and Choke Schematic



Minimum 4" Nominal choke and kill lines

Choke Manifold Requirement (2000 psi WP) No Annular Required

Adiustable Choke

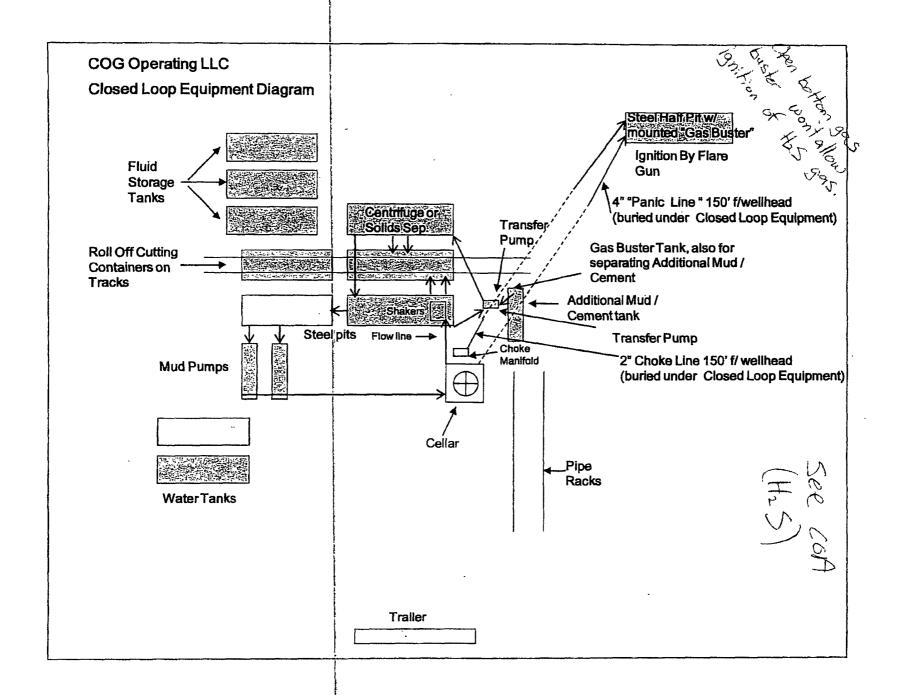


Adjustable Choke (or Positive)

NOTES REGARDING THE BLOWOUT PREVENTERS Master Drilling Plan Eddy County, New Mexico

- 1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum LD, equal to preventer bore.
- 2. Wear ring to be properly installed in head
- 3 Blow out preventer and all fittings must be in good condition, 2000 psi WP minimum.
- 4. All fittings to be flanged.
- 5. Safety valve must be available on rig floor at all times with proper connections, valve to be full 2000 psi WP minimum.
- 6. All choke and fill lines to be securely anchored especially ends of choke lines
- Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
- 8. Kelly cock on Kelly.
- 9 Extension wrenches and hands wheels to be properly installed
- 10 Blow out preventer control to be located as close to driller's position as feasible.
- 11 Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation all API specifications

Blowout Preventers Page 2



Gioseu Loop Operation & Maintenance Procedure

All drilling fluid circulated over shaker(s) with cuttings discharged into roll off container.

Fluid and fines below shaker(s) are circulated with transfer pump through centrifuge(s) or solids separator with cuttings and fines discharged into roll off container.

Fluid is continuously re-circulated through equipment with polymer added to aid separation of cutting fines.

Roll off containers are lined and de-watered with fluids re-circulated into system.

Additional tank is used to capture unused drilling fluid or cement returns from casing jobs.

This equipment will be maintained 24 hrs./day by solids control personnel and or rig crews that stay on location.

Cuttings will be hauled to either:

CRI (permit number R9166) or GMI (permit number 711-019-001)

dependent upon which rig is available to drill this well.

COG Operating LLC

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- 1. The hazards an characteristics of hydrogen sulfide (H2S)
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H2S detectors alarms warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- 1. The effects of H2S on metal components. If high tensile tubular are to be used, personnel well be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. The concentrations of H2S of wells in this area from surface to TD are low enough that a contingency plan is not required.

II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

1. Well Control Equipment:

- A. Flare line.
- B. Choke manifold.
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
- D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

2. Protective equipment for essential personnel:

A. Mark II Survive air 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. H2S detection and monitoring equipment:

A. 1 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

4. Visual warning systems:

- A. Wind direction indicators as shown on well site diagram (Exhibit #8).
- B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. Mud program:

A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.



6. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- B. All elastomers used for packing and seals shall be H2S trim.

7. Communication:

- A. Radio communications in company vehicles including cellular telephone and 2-way radio.
- B. Land line (telephone) communication at Office.

8. Well testing:

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H2S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

EXHIBIT #7

WARNING YOU ARE ENTERING AN H2S

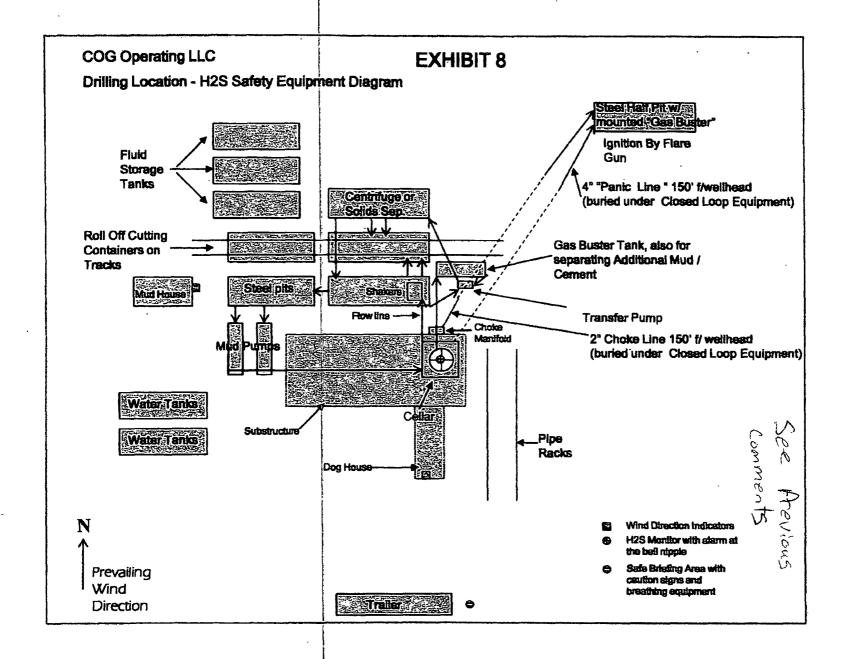
AUTHORIZED PERSONNEL ONLY

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED
- 2. HARD HATS REQUIRED
- 3. SMOKING IN DESIGNATED AREAS ONLY
- 4. BE WIND CONSCIOUS AT ALL TIMES
- 5. CHECK WITH COG OPERATING FOREMAN AT

COG OPERATING LLC 1-432-683-7443 1-575-746-2010

EDDY COUNTY EMERGENCY NUMBERS
ARTESIA FIRE DEPT. 575-746-5050
ARTESIA POLICE DEPT. 575-746-5000
EDDY CO. SHERIFF DEPT. 575-746-9888

LEA COUNTY EMERGENCY NUMBERS
HOBBS FIRE DEPT. 575-397-9308
HOBBS POLICE DEPT. 575-397-9285
LEA CO. SHERIFF DEPT. 575-396-1196



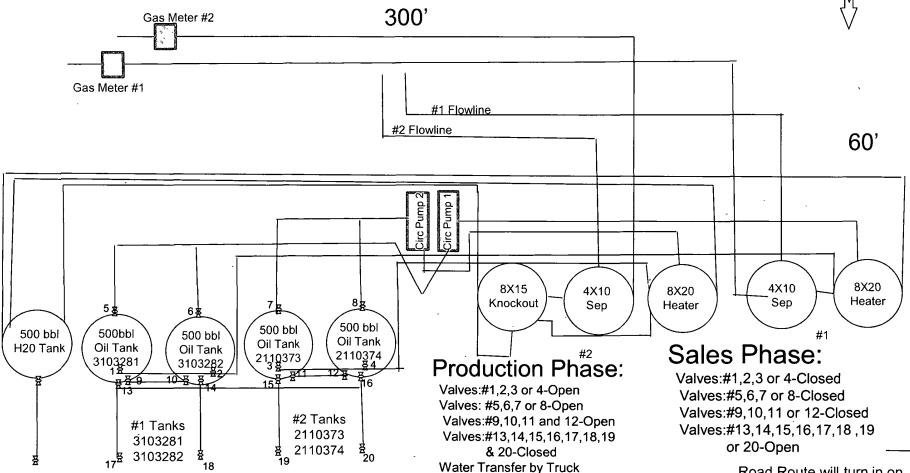
COG OPERATING LLC

550 W. Texas Ave Ste 100 Midland, Texas 79701 (432)-683-7443

Tumak Federal #3 Tank Battery

Approx. 245' FSL, 230' FWL Sec 14-T17S-R28E * Unit M Eddy CO, NM

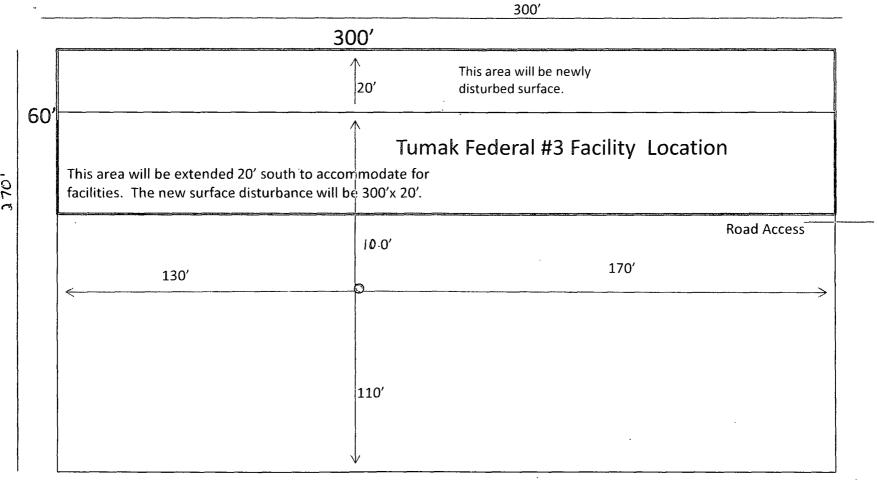


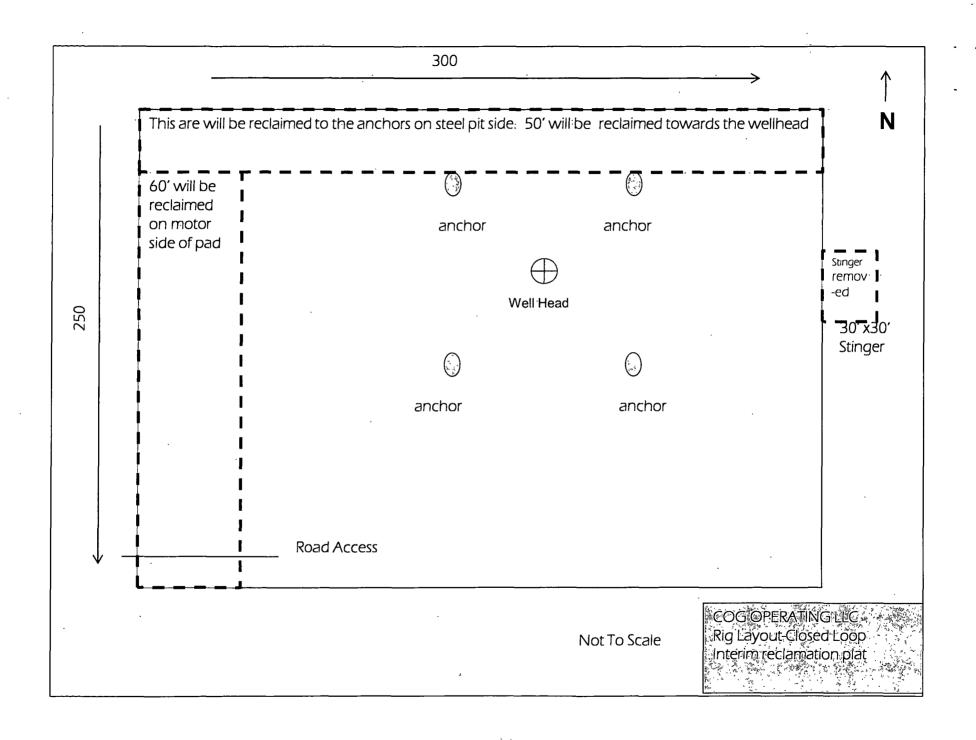


- •This battery site will be located directly south of the Tumak Federal #3 well location
- Battery pad will be approx. 60'
 x 300' on South side of the
 Tumak Federal #3 well location
- •No interim reclamation on battery pad until production or foreseeable production ceases. Reclamation standards will follow Section 10 B from the Surface Use Plan from the Tumak Federal #3 well.

Road Route will turn in on the Southwest corner of the Tumak Federal #3 well location.







PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME: COG Operating
LEASE NO.: NM118109
WELL NAME & NO.: 3 Tumak Federal
SURFACE HOLE FOOTAGE: 245' FSL & 230' FWL
BOTTOM HOLE FOOTAGE
LOCATION: Section 14, T.17 S., R.28 E., NMPM
COUNTY: Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

General Provisions
Permit Expiration
Archaeology, Paleontology, and Historical Sites
Noxious Weeds
Special Requirements
• •
Construction
Notification
Topsoil
Closed Loop System
Federal Mineral Material Pits
Well Pads
Roads
Road Section Diagram
⊠ Drilling
H2S requirement
Logging requirement
Waste Material and Fluids
Production (Post Drilling)
Well Structures & Facilities
Pipelines
Electric Lines
Interim Reclamation
Final Ahandonment & Reclamation