Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

I & E Hobbs OCD

HOBBS OCD

JUN 27 2011

RECEIVED

FORM APPROVED
OMB NO. 1004-0137
Expires July 31, 2010

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.

SUBMIT IN TRIPLICATE - *Other instructions on page 2*

5. Lease Serial No: NM108503
6. If Indian, Allottee or Tribe Name:
7. If Unit or CA/Agreement, Name and/or No.:

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator: EOG Resources Inc.
3a. Address: P.O. Box 2267 Midland, Texas 79702
3b. Phone No. (*include area code*): 432-686-3689
4. Location of Well (*Footage, Sec., T., R., M., or Survey Description*):
50' FNL & 2200' FEL, U/L B SHL
330' FSL & 2200' FEL, U/L O BHL
Sec 23, T25S, R33E
8. Well Name and No.: Caballo 23 Federal 3H
9. API Well No.: 30-025-40052
10. Field and Pool, or Exploratory Area: Red Hills; Bone Spring
11. County or Parish, State: Lea NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
[X] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
[ ] Subsequent Report	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Final Abandonment Notice	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[ ] Other
	[X] Change Plans	[ ] Plug and Abandon	[ ] Temporarily Abandon	
	[ ] Convert to Injection	[ ] Plug Back	[ ] 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 final site is ready for final inspection.)

EOG Resources, Inc. requests the approved APD location for our Caballo 23 Federal ~~2H~~ 3H be changed to:

50' FNL & 2200' FEL, U/L B, (SHL) and 330' FSL & 2200' FEL, U/L O, (BHL)
Sec 23, T25S, R33E, Lea County, NM.

Amended Surface Use Plan and Drill Plan are attached.

14. I hereby certify that the foregoing is true and correct
Name (*Printed/Typed*): Stan Wagner
Title: Regulatory Analyst
Signature: Stan Wagner
Date: 4/26/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by: /s/ Don Peterson
Title:
Date: JUN 24 2011

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

KG

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes 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

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

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

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JUN 27 2011
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Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease- 4 Copies
Fee Lease- 3 Copies
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-40052	51020	Red Hills; Bone Spring

Property Code	Property Name	Well Number
	CABALLO "23" FEDERAL	3H

OGRID No.	Operator Name	Elevation
7377	EOG RESOURCES, INC.	3348.1'

Surface Location

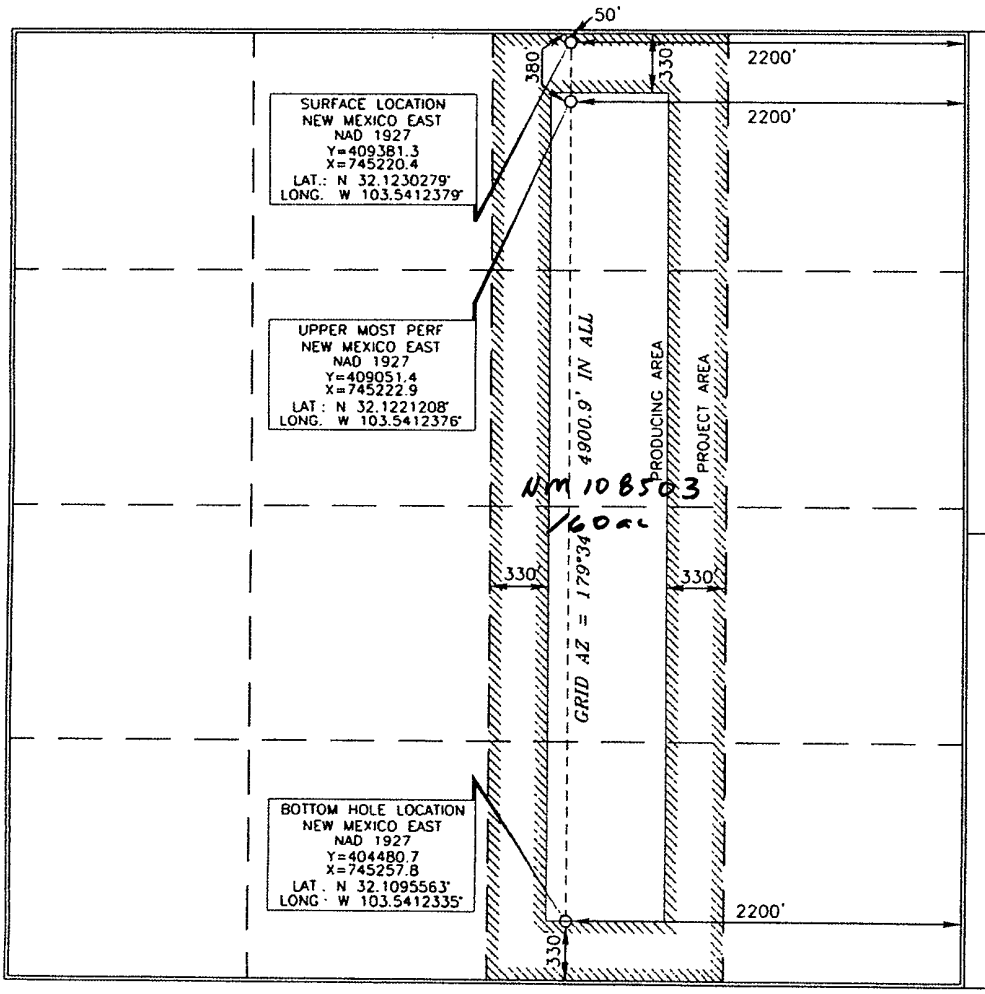
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	23	25 SOUTH	33 EAST, N.M.P.M.		50'	NORTH	2200'	EAST	LEA

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
O	23	25 SOUTH	33 EAST, N.M.P.M.		330'	SOUTH	2200'	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 3/1/11

Donny G. Glanton
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

15079
FEBRUARY 16, 2011
Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number 15079 — 2/24/2011

WO# 101007WL-c (Rev. A) (KA)

HOBBS OCD

JUN 27 2011

RECEIVED

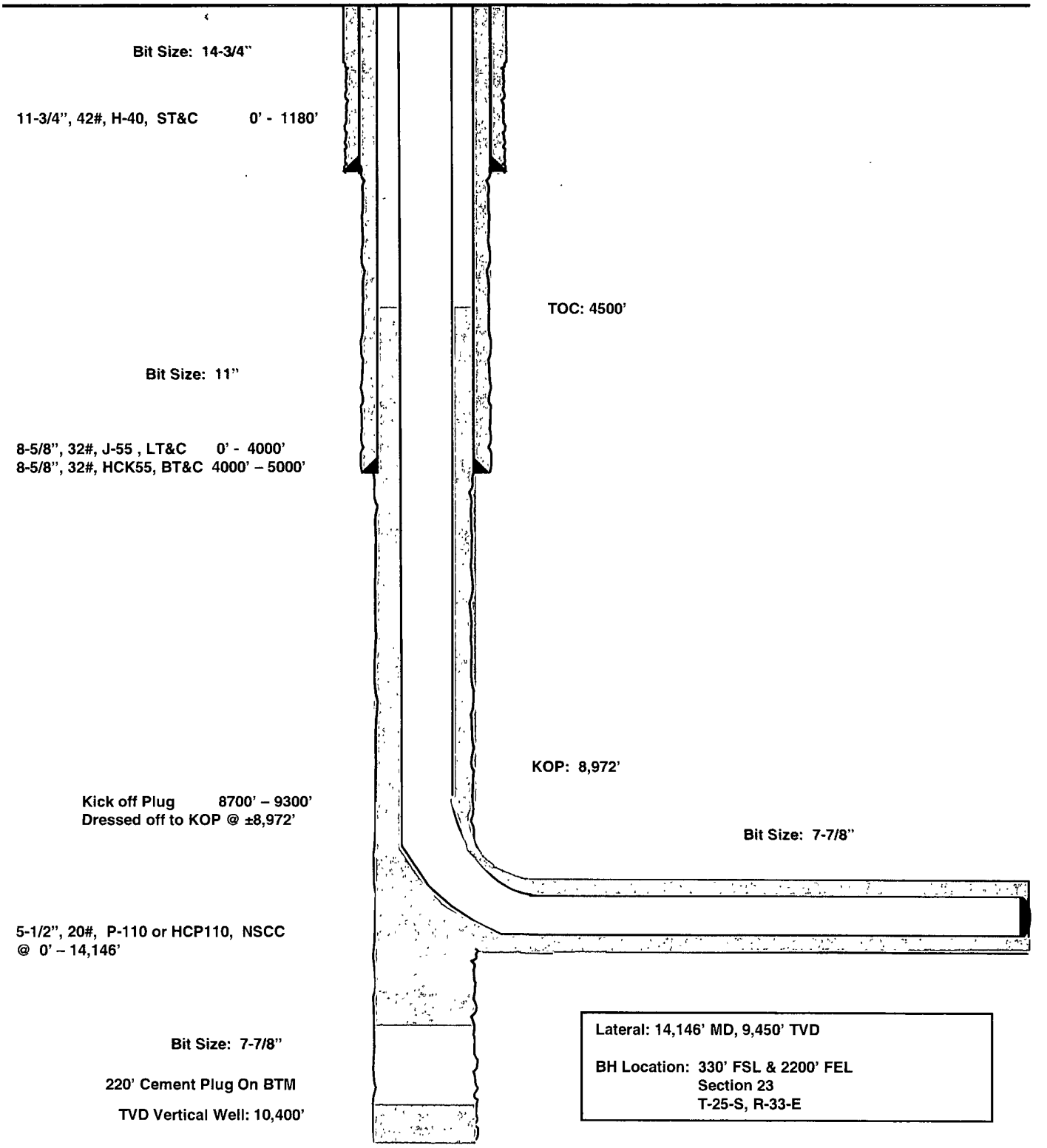
Caballo 23 Federal #3H
Red Hills
Lea County, New Mexico

50' FNL
2200' FEL
Section 23
T-25-S, R-33-E

Proposed Wellbore

API: 30-025-

KB: 3,378.1'
GL: 3,348.1'



EOG RESOURCES, INC.
CABALLO 23 FEDERAL NO. 3H
REVISED 4/20/11 FOR SUNDRY NOTICE

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,080'
Top of Salt	1,530'
Base of Salt	4,860'
Delaware	5,100'
Cherry Canyon	6,150'
Bone Spring Lime	9,240'
1st Bone Spring Sand	10,220'
Pilot hole TD	10,400'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,150'	Oil
Bone Spring Lime	9,240'	Oil
1st Bone Spring Sand	10,220'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 11.75" casing at 1,180' and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
14.75"	0 – 1180'	11.75"	42#	H40	STC	1.125	1.25	1.60
11.00"	0-4000'	8.625"	32#	J55	LTC	1.125	1.25	1.60
11.00"	4000'-5000'	8.625"	32#	HCK55	BTC	1.125	1.25	1.60
7.875"	0'-14,146'	5.5"	20#	P110 or HCP110	NSCC	1.125	1.25	1.60

Cementing Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Slurry Description
1,180'	300	13.5	1.73	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake
	200	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
5,000'	700	12.7	2.22	Lead: Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
10,400'	110	18.0	0.90	220' Btm Hole Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt
8,700' - 9,300'	300	18.0	0.90	600' Sidetrack Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt
14,146'	150	10.8	3.67	Lead: 60:40:0 Class 'C' + 15.00 lb/sk BA-90 + 4.00% MPA-5 + 3.00% SMS + 5.00% A-10 + 1.00% BA-10A + 0.80% ASA-301 + 2.90% R-21 + 8.00 lb/sk LCM-1 + 0.005 lb/sk Static Free
	400	11.8	2.38	Middle: 50:50:10 Class 'H' + 0.80% FL-52 + 0.45% ASA-301 + 0.40% SMS + 2.00% Salt + 3.00 lb/sx LCM-1 + 0.20% R-21 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
	900	14.2	1.28	Tail: 50:50:2 Class 'H' + 0.65% FL-52 + 0.20% CD-32 + 0.15% SMS + 2.00% Salt + 0.10% R-3 + 0.005 lb/sk Static Free

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased hole overlap section.

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

(SEE EXHIBIT #1)

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (10,000 psi WP) preventer and an annular preventer (5000-psi WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOP's and accessory equipment will be tested in accordance with Onshore Oil & Gas order No. 2.

Even though 10,000 psi BOPE will be utilized, 3000 psi BOPE is adequate for this application. Due to the 3000 psi BOPE requirement no FIT test(s) are planned.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 3000/ 250 psig and the annular preventer to 2500/ 250 psig.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000/ 250 psig and the annular preventer to 2500/ 250 psig.

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.

Hydraulically operated choke will not be installed prior to the setting and cementing of the intermediate casing string, but will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

The applicable depths and properties of the drilling fluid systems are as follows:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,180'	Fresh - Gel	8.6-8.8	28-34	N/c
1,180' – 5,000'	Saturated Brine	10.0-10.2	28-34	N/c
5,000'– 10,400' Pilot hole	Cut Brine	9.1-9.5	28-34	N/c
8,972'– 14,146' Lateral	Cut Brine	9.1-9.5	28-34	N/c

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

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) A mud logging unit will be continuously monitoring drill penetration rate and hydrocarbon shows from intermediate casing point to TD.

(D) H_2S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logging is anticipated in the 7-7/8" hole section. The logging suites scheduled for this hole section are listed below:

NGT–CNL–LDT w/ Pe	From TD to previous casing shoe. At casing pull GR – Neutron to surface.
HR Laterolog Array	From TD to previous casing shoe.
FMI	Possible in the production hole

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom hole temperature (BHT) at TD is 163 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4500 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately two months. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

SURFACE USE PLAN OF OPERATION

SHL: 50' FNL & 2200' FEL, Unit B, Section 23, T25S-R33E, N.M.P.M., Lea, NM
BHL: 330' FSL & 2200' FEL, Unit O, Section 23, T25S-R33E, N.M.P.M., Lea, NM

1. EXISTING ROADS:

   a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by Terry Asel, RPL 15079.
   b. All roads into the location are depicted on Exhibits 2, 2a and 5.
   c. Directions to Locations: Beginning in Jal, NM at the intersection of N.M. State Hwy 128 and Hwy 18, go west on Hwy 128 for 14.1 miles to County Road #2 (Battle Ax Road), turn left and go southwest on County Road #2 for 0.3 miles, turn right and go west for 1.6 miles, turn left and go south for 1.0 miles, turn right and go west for 0.5 miles, turn left and go south/southwest for 7.0 miles, turn right off County Road #2 and go northwest on lease road for 3.5 miles, turn Right and go north for 244.2 feet, turn right and go east for 0.3 miles to location.

2. NEW OR RECONSTRUCTED ACCESS ROAD:

The well site layout, Exhibit 2a shows the layout. No new access road is required.

3. LOCATION OF EXISTING WELLS:

Exhibit #3 shows all existing wells within a one-mile radius of this well.

4. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES:

   a. In the event the well is found to be productive, the necessary production equipment will be installed at the Caballo Central Tank Battery as depicted by Exhibit 6 which will serve as a CTB for all Caballo well locations. No production facility on location.
   b. As a proposed oil well, operator shall construct a power line as depicted by Exhibit 5. The proposed power line is entirely on the Federal Lease.
   c. Pipelines will adhere to API standards. Applicant will lay a 2 7/8"surface steel Gas/Oil/SWD Production Pipeline to the CTB; See Exhibit 5. Applicant shall construct a Gas Lift Pipeline as depicted by Exhibit 7 and apply for a Right of Way from the Realty Group as a portion of the pipeline is off lease.
   d. Refer to b above.
   e. If the well is productive, rehabilitation plans are as follows:
      i. The location shall be reduced on all four sides of the location as depicted by the Production Facilities Layout. The interim reclamation will be performed when optimal conditions exist during the growing season as per the interim reclamation guidelines of the BLM.

ii. The original topsoil from the well site will be returned to the location. The location will be contoured as close as possible to match the original topography.

5. LOCATION AND TYPE OF WATER SUPPLY:

This location will be drilled using a combination of water mud systems (outlined in the drilling program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using existing and proposed roads shown in Exhibit 2, 2a and 5. On occasion, water will be obtained from existing water wells. In these cases where a poly pipeline is used to transport water for drilling purposes, proper authorizations will be secured. If poly pipeline is used to transport fresh water to the location, proper authorization will be secured by the contractor.

6. CONSTRUCTION MATERIALS

Obtaining Mineral Material – Caliche utilized for the drilling pad and proposed access road will be obtained either from an existing approved pit, or by benching into a hill which will allow the pad to level with existing caliche from cut, or extracted by "flipping" the location. A caliche permit shall be obtained from the BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for "flipping" the location is as follows:

1. An adequate amount of topsoil for final reclamation will be stripped from the well location surface and stockpiled along the edge of the location as shown in the well site layout.
2. An area will be used within the proposed well site to excavate caliche.
3. The subsoil will then be removed and stockpiled within the footages of the well location.
4. Once caliche/mineral material is found, the material will be excavated and stockpiled within the footages of the well location.
5. The subsoil will then be placed back in the excavated hole.
6. Caliche/mineral material will then be placed over the entire pad and/or road to be compacted.

In the event that caliche is not found on site, a permit will be acquired if caliche is obtained from a BLM approved caliche pit

7. METHODS OF HANDLING WASTE MATERIALS

a. Drill cuttings shall be disposed of in a steel cuttings bin (catch tanks) on the drilling pad (behind the steel mud tanks). The bin and cuttings shall be hauled to an approved cuttings dumpsite.

At the site, the cuttings shall be removed from the bin & the bin shall be returned to the drilling site for reuse.

b. All trash, junk, and other waste material shall be contained in trash cages or trash bins to prevent scattering. When a job is completed, all contents shall be removed and disposed of in an approved landfill.
c. The supplier, including broken sacks, shall pick up salts remaining after completion of well.
d. If necessary, a porto-john shall be provided for the rig crews. This equipment shall be properly maintained during the drilling and completion operations and shall be removed when all operations are complete.
e. Remaining drilling fluids shall be hauled off by transports to a state approved disposal site. Water produced during completion shall be put in storage tanks and disposed of in a state approved disposal. Oil and condensate produced shall be put in a storage tank and sold.
f. Disposal of fluids to be transported by the following companies:
    i. RGB TRUCKING
    ii. LOBO TRUCKING
    iii. I & W TRUCKING
    iv. CRANE HOT OIL & TRANSPORT
    v. JWS
    vi. QUALITY TRUCKING

8. ANCILLARY FACILITIES:

a. No airstrip, campsite, or other facilities will be built.

9. WELL SITE LAYOUT:

a. Exhibit 4 shows the proposed location of reserve and sump pits, living facilities and well site layout with dimensions of the pad layout.
b. Mud pits in the active circulating system shall be steel pits and the catch tanks shall be steel tanks set in shallow sumps behind the steel circulating tanks and sumps.
c. The area where the catch tanks are placed shall be reclaimed and the surface vegetation restored to as or near the same condition that existed prior to operations.

10. PLANS FOR SURFACE RECLAMATION:

a. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche shall be removed from the pad and transported to the original caliche pit or used for other drilling locations and roads. The road shall be reclaimed and the surface vegetation restored to as or near the same condition that existed prior to operations. The catch tank area shall be broken out and leveled after drying to a condition where these are feasible. The original topsoil shall again be returned to the pad and contoured, as close as possible, to the original topography.
b. After the well is plugged and abandoned, the location and road shall be reclaimed and the surface vegetation restored to as or near the same condition that existed prior to operations.
c. If the well is deemed commercially productive, the catch tank area shall be restored as described in 4(e)(i). Caliche from areas of the pad site not required for operations shall be reclaimed. The original topsoil shall be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad shall be contoured, as close as possible, to match the original topography.

11. SURFACE OWNERSHIP

The surface is owned by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.

12. OTHER INFORMATION:

a. The area surrounding the well is mesquite and tar brush. The topsoil is sandy in nature. The vegetation is moderately sparse with native prairie grass, cactus and shinnery oak. No wildlife was observed but it is likely that deer, rabbits, coyotes, birds and rodents transverse the area.
b. There are not dwellings within 2 miles of location.
c. Applicant will participate in the MOA.

13. BOND COVERAGE:

a. Bond Coverage is Nationwide; Bond No. NM 2308

COMPANY REPRESENTATIVES:

Representatives responsible for ensuring compliance of the surface use plan are listed below:

Land and Right of Way

Mr. Donny G. Glanton
Senior Lease Operations ROW Representative
EOG Resources, Inc.
P.O. Box 2267
Midland, TX 79702
(432) 686-3642 Office
(432) 770-0602 Cell

Drilling

Mr. Steve Munsell
Drilling Engineer
EOG Resources, Inc.
P.O. Box 2267
Midland, TX 79702
(432) 686-3609 Office
(432) 894-1256 Cell

Operations

Mr. Howard Kemp
Production Manager
EOG Resources, Inc
P.O. Box 2267
Midland, TX 79702
(432) 686-3704 Office
(432) 634-1001 Cell

Regulatory

Mr. Stan Wagner
Regulatory Analyst
EOG Resources, Inc.
P.O. Box 2267
Midland, TX 79702
(432) 686-3689 Office

ATTACHMENT TO EXHIBIT #1

1. Wear ring to be properly installed in head.

2. Blow out preventer and all fittings must be in good condition, 5000 psi W.P. minimum. Exhibit #1.

3. All fittings to be flanged

4. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 5000 psi W.P. minimum.

5. All choke and fill lines to be securely anchored especially ends of choke lines.

6. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.

7. Kelly cock on kelly.

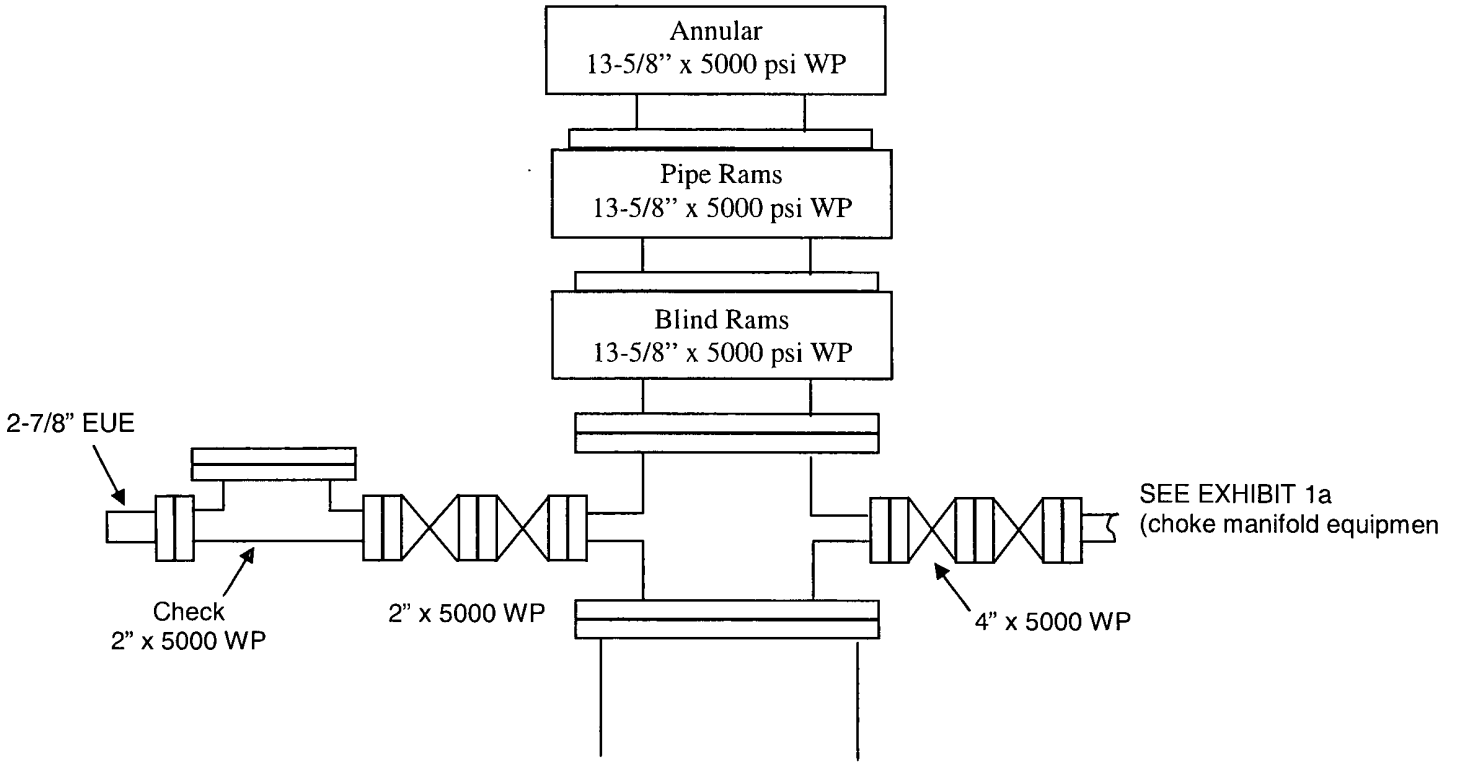
8. Extension wrenches and hand wheels to be properly installed.

9. Blow out preventer control to be located as close to driller's position as feasible.

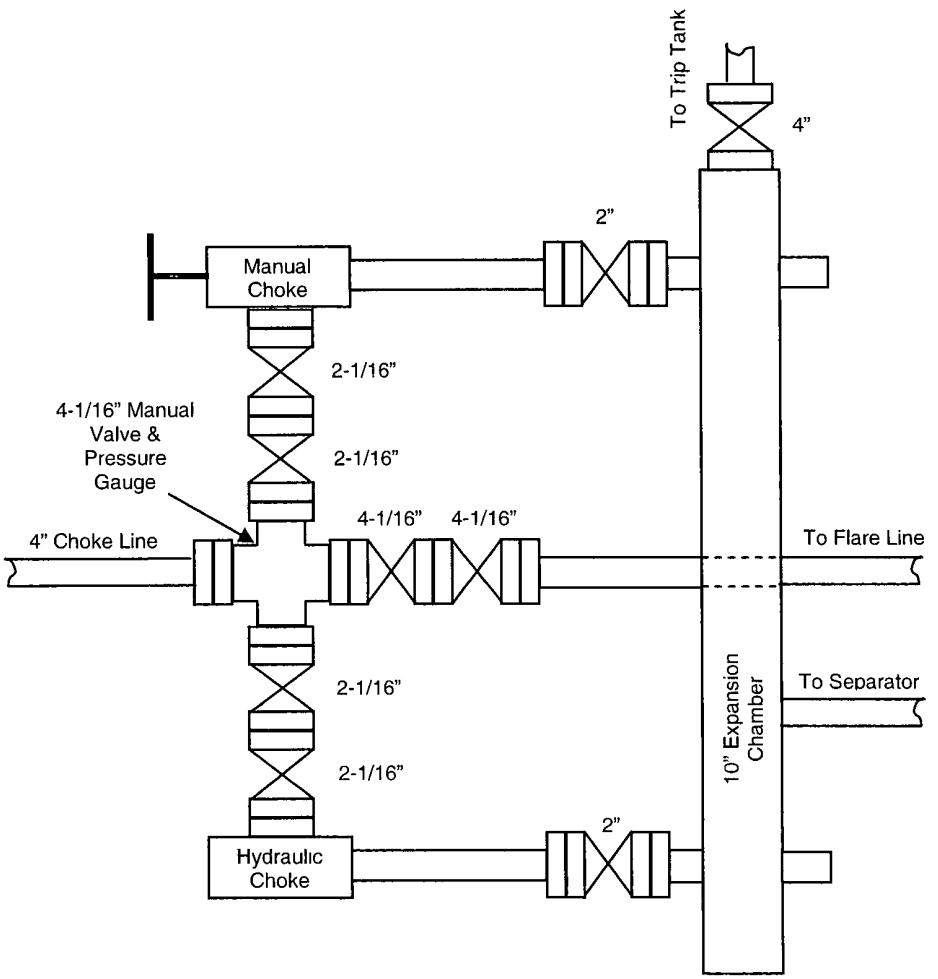
10. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.

EXHIBIT 1

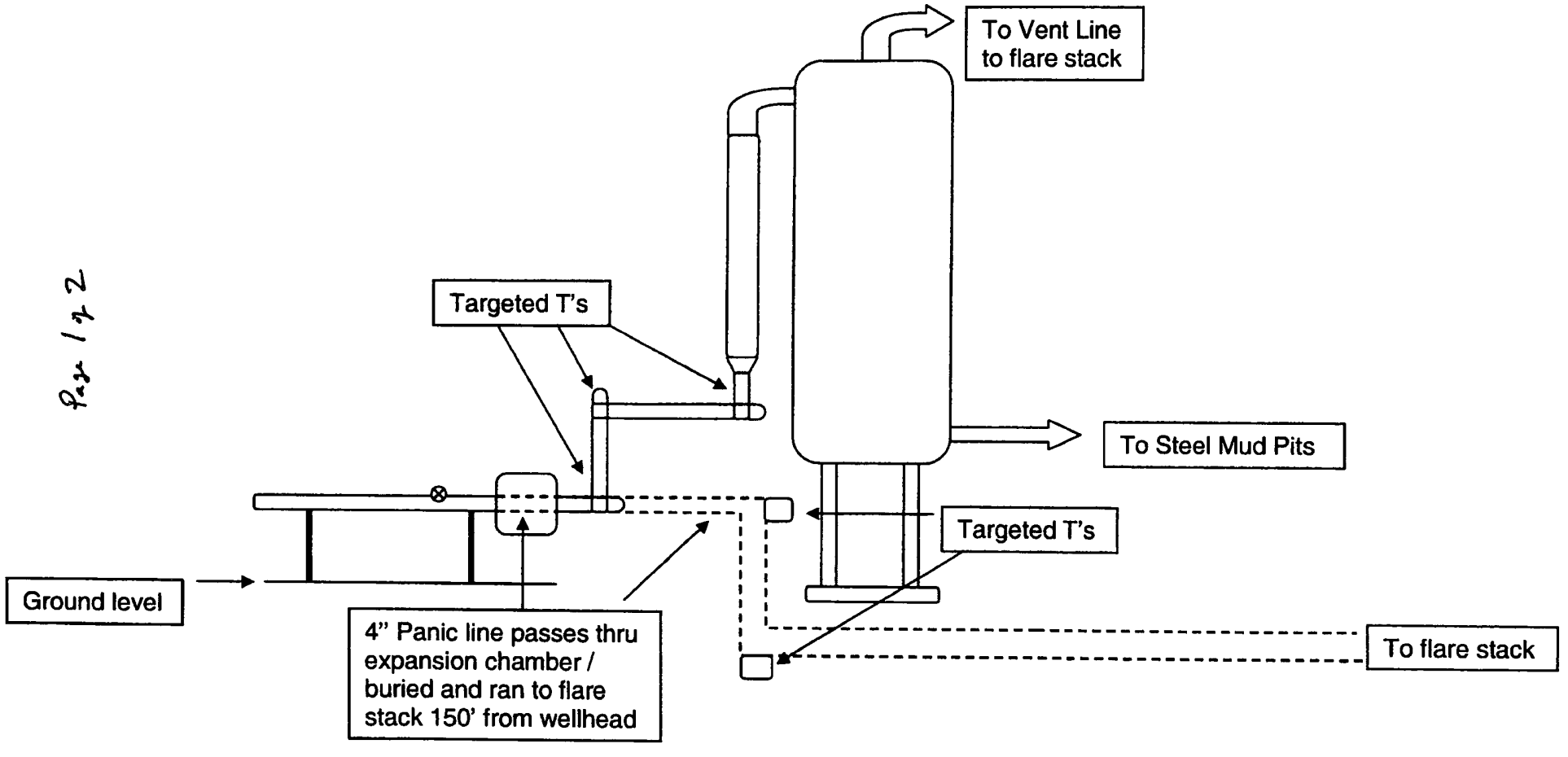
EOG Resources
Caballo 23 Federal No. 3H



EXIBIT 1a
EOG Resources, Inc.
5M Choke Manifold Equipment

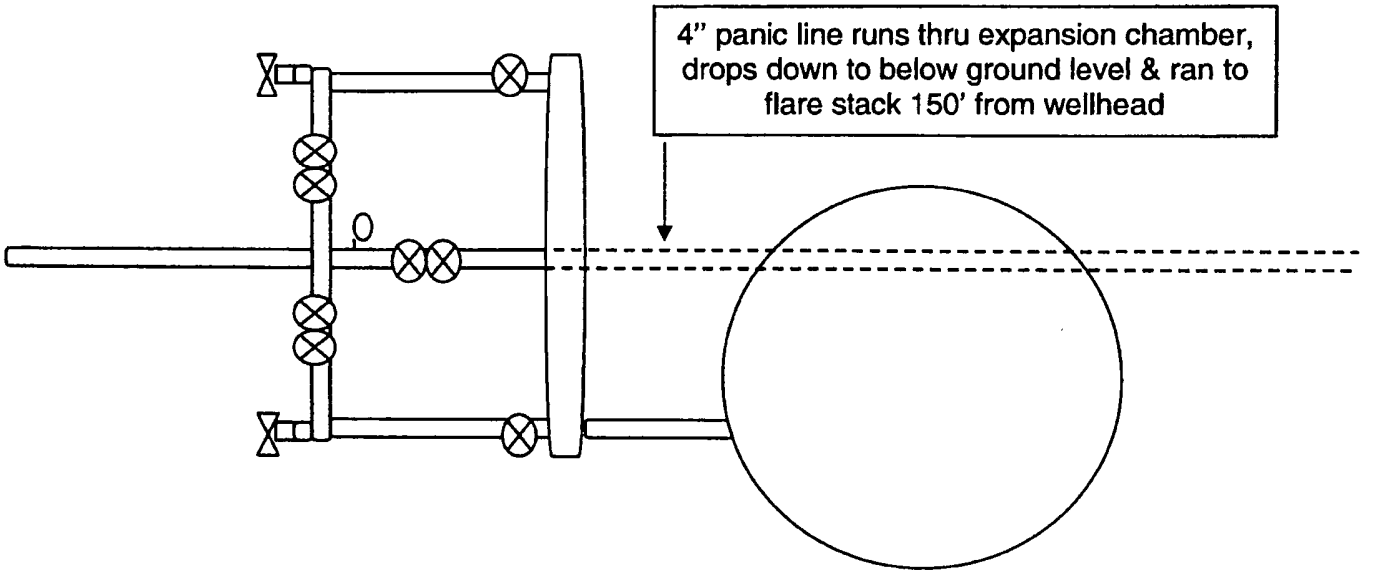


Profile View of Piping from Choke Manifold to the Mud Gas Separator



Pg 1 of 2

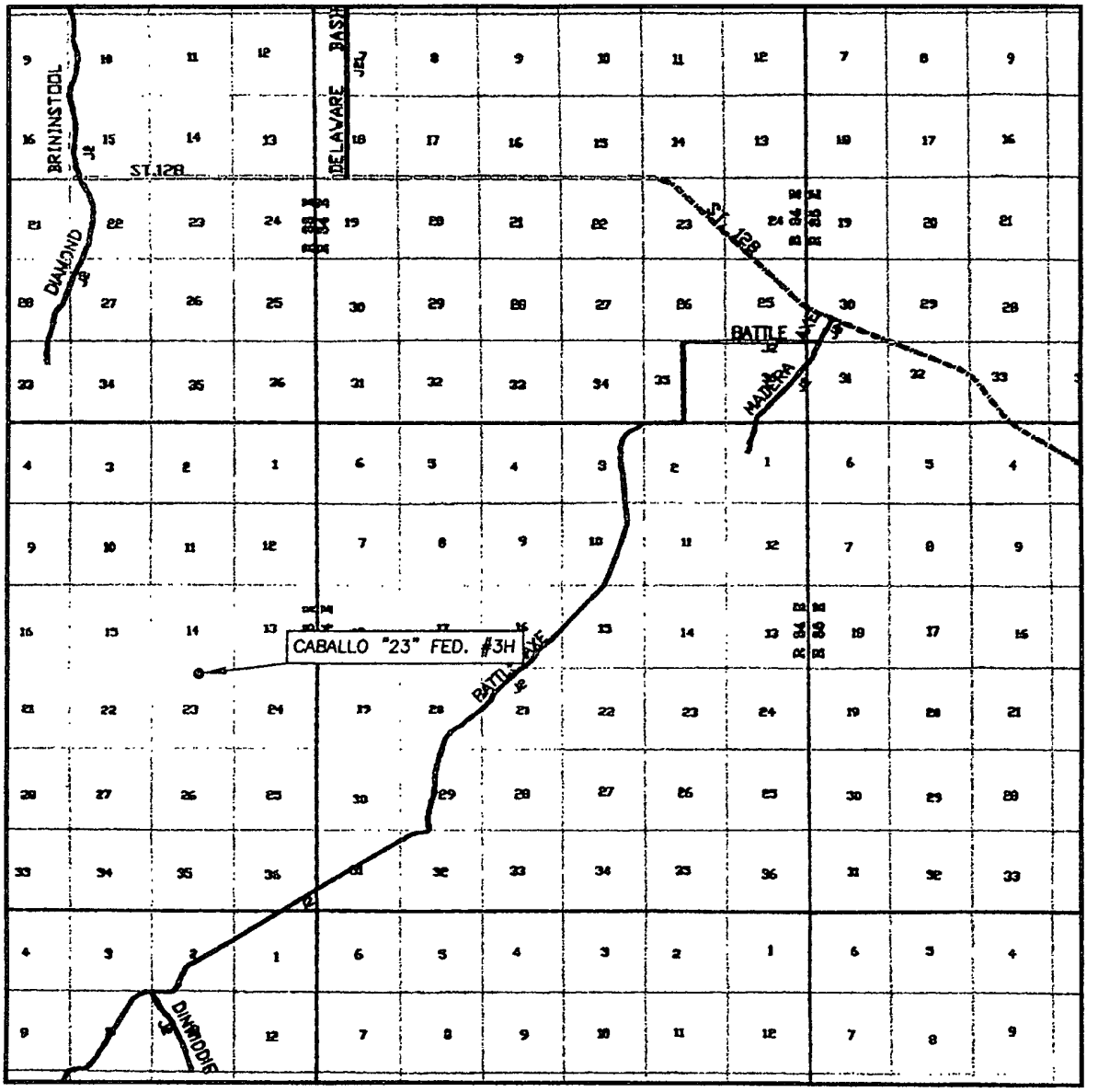
Aerial View of the Piping from the Choke Manifold to the Mud Gas Separator



Pex 212

Exhibit 2

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 23 TWP. 25-S RGE. 33-E
SURVEY N.M.P.M.
COUNTY LEA
DESCRIPTION 50' FNL & 2200' FEL
ELEVATION 3348.1'
OPERATOR EOG RESOURCES, INC.
LEASE CABALLO "23" FED. #3H

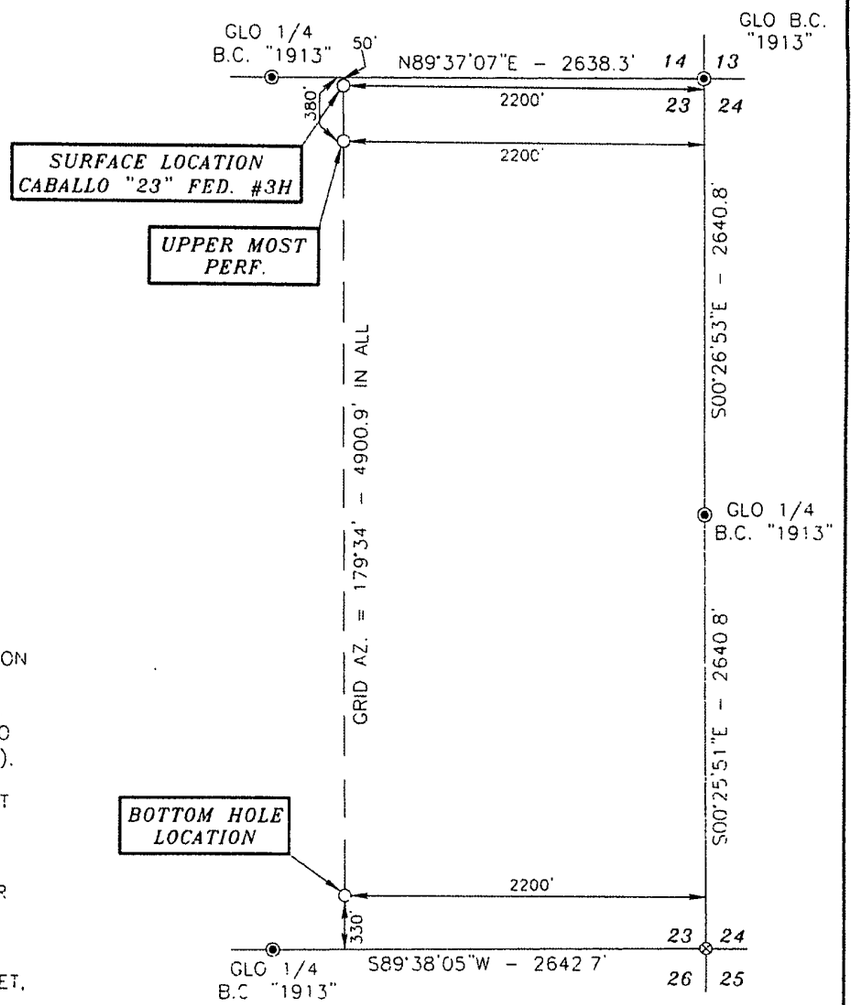
Asel Surveying

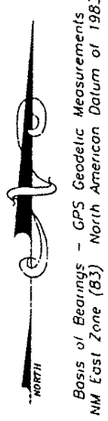
P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146

DIRECTIONS BEGINNING IN JAL AT THE INTERSECTION OF N.M. STATE HWY. #18 AND N.M. STATE HWY. #128, GO WEST ON N.M. STATE HWY. #128 FOR 14.1 MILES TO COUNTY ROAD #2 (BATTLE AXE ROAD), TURN LEFT AND GO SOUTHWEST FOR 0.3 MILES, TURN RIGHT AND GO WEST FOR 1.6 MILES, TURN LEFT AND GO SOUTH FOR 1.0 MILES, TURN RIGHT AND GO WEST FOR 0.5 MILES, TURN LEFT AND GO SOUTH/SOUTHWEST FOR 7.0 MILES, TURN RIGHT OFF COUNTY ROAD #2 AND GO NORTHWEST ON LEASE ROAD FOR 3.5 MILES, TURN RIGHT AND GO NORTH FOR 244.2 FEET, TURN RIGHT AND GO EAST FOR 0.3 MILES TO LOCATION.

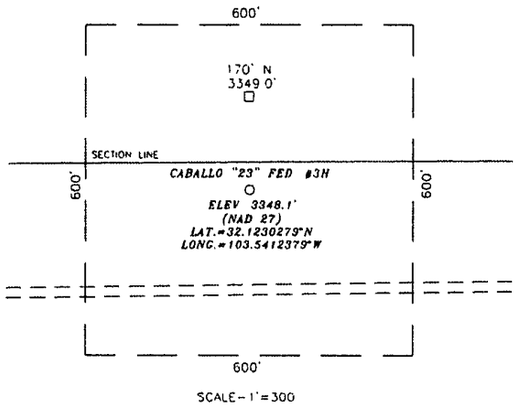
SECTION 23, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY NEW MEXICO

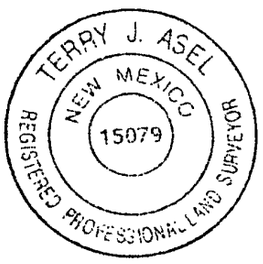
Exhibit 2a





DIRECTIONS
BEGINNING IN JAL AT THE INTERSECTION OF N.M. STATE HWY. #18 AND N.M. STATE HWY #128, GO WEST ON N.M. STATE HWY. #128 FOR 14.1 MILES TO COUNTY ROAD #2 (BATTLE AXE ROAD). TURN LEFT AND GO SOUTHWEST FOR 0.3 MILES, TURN RIGHT AND GO WEST FOR 1.6 MILES, TURN LEFT AND GO SOUTH FOR 1.0 MILES, TURN RIGHT AND GO WEST FOR 0.5 MILES, TURN LEFT AND GO SOUTH/SOUTHWEST FOR 7.0 MILES, TURN RIGHT OFF COUNTY ROAD #2 AND GO NORTHWEST ON LEASE ROAD FOR 3.5 MILES, TURN RIGHT AND GO NORTH FOR 244.2 FEET, TURN RIGHT AND GO EAST FOR 0.3 MILES TO LOCATION





SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 3/3/2011
Terry J. Asel N.M. R.P.S. No. 15079

Asel Surveying
P.O. BOX 393 - 310 W TAYLOR
HOBBS, NEW MEXICO - 575-393-9146

LEGEND

⊙ - DENOTES FOUND MONUMENT AS NOTED
⊗ - DENOTES CALCULATED CORNER

1000' 0 1000' 2000' FEET
SCALE: 1"=1000'

EOG RESOURCES, INC.

CABALLO "23" FED. #3H LOCATED AT 50' FNL & 2200' FEL IN SECTION 23, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO

Survey Date: 02/16/11	Sheet 1 of 1 Sheets	
W.O. Number: 101007WL-c (Rev. B)	Drawn By: KA	Rev B
Date: 03/01/11	101007WL-c	Scale: 1"=1000'

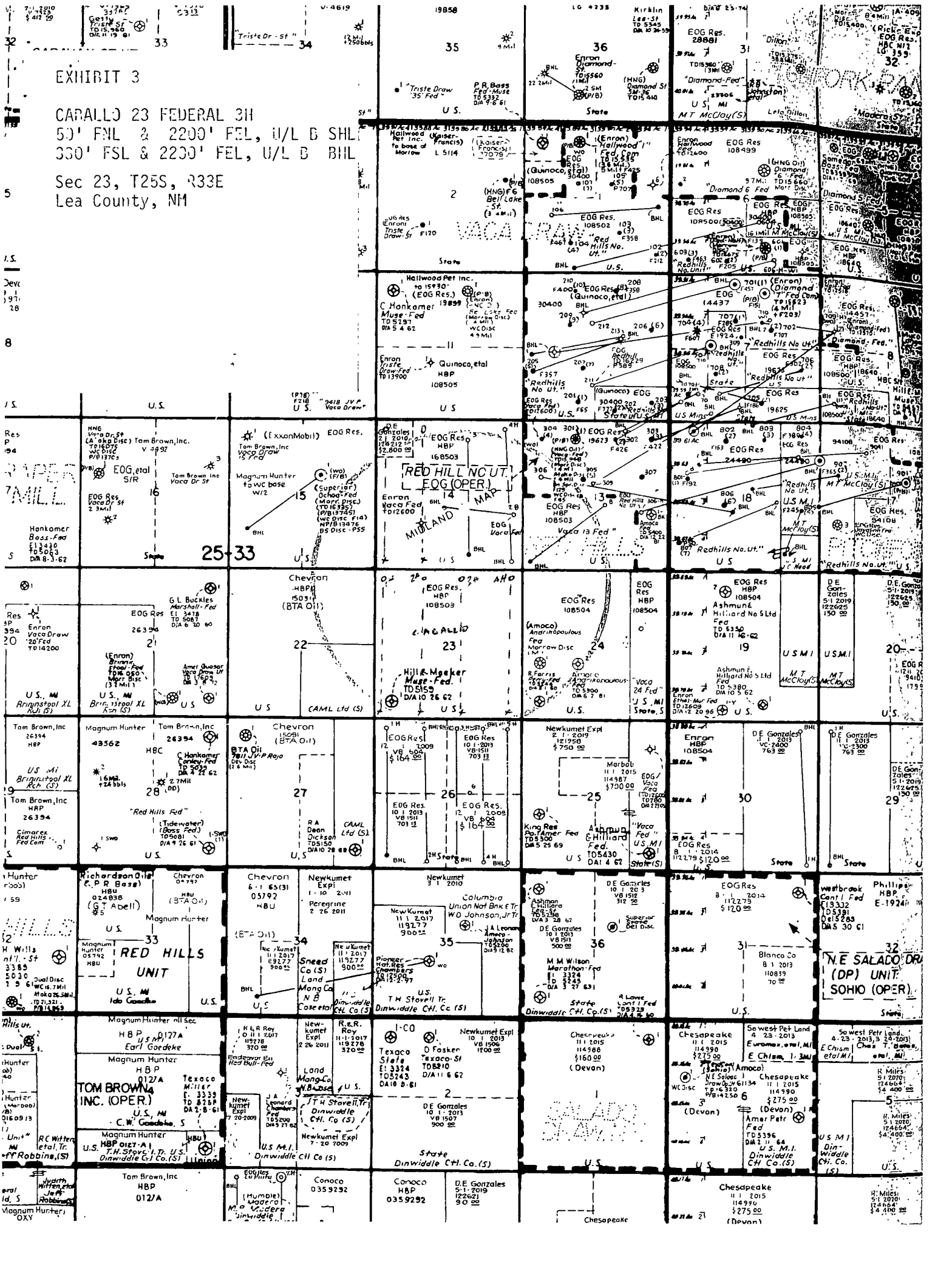
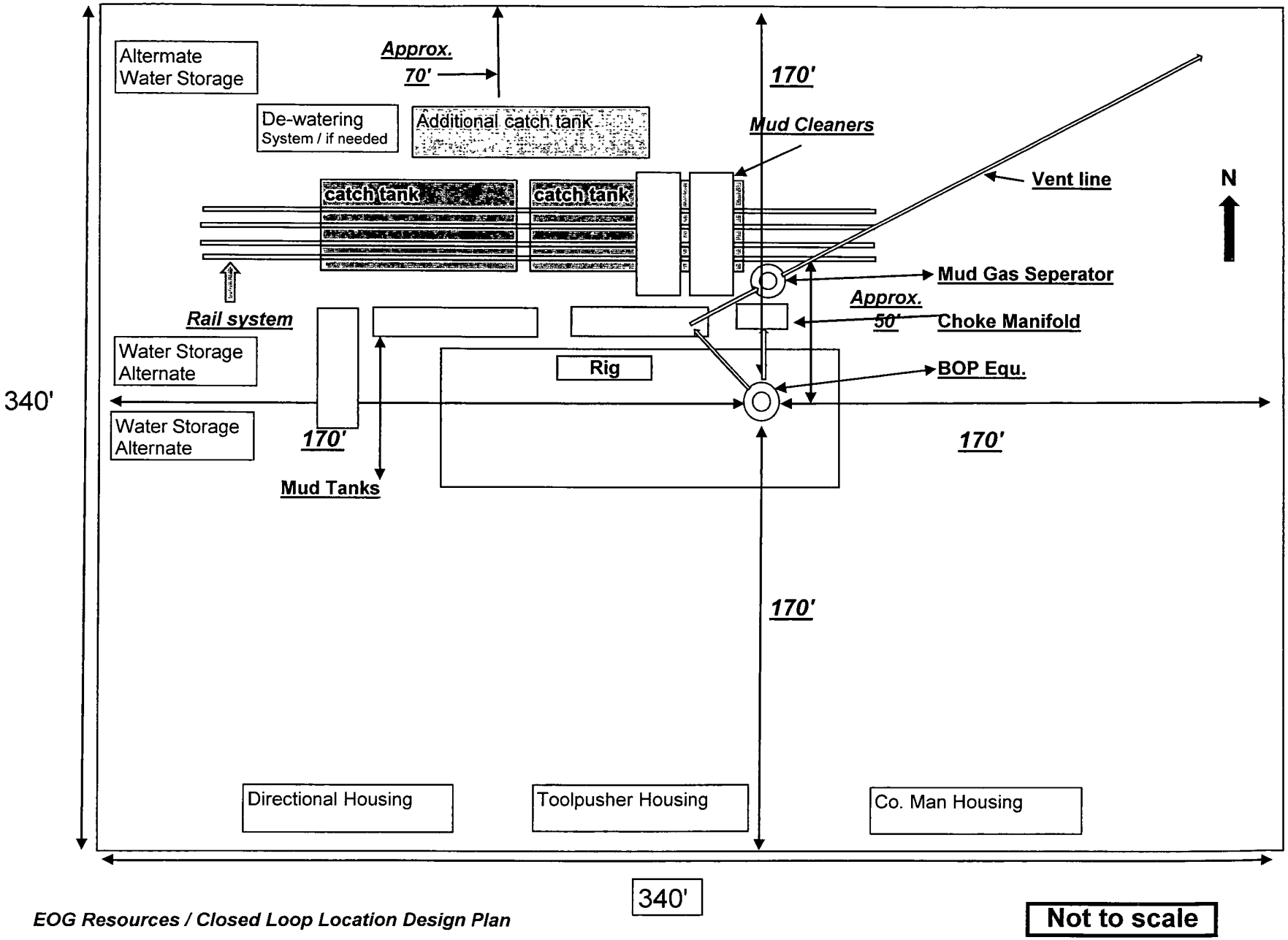


EXHIBIT 3
CARALLO 23 FEDERAL 3H
50' FNL & 2200' FEL, U/L B SHL
330' FSL & 2200' FEL, U/L B BHL
Sec 23, T25S, R33E
Lea County, NM
RED HILL NO UT.
EOG (OPER.)
MIDLAND MAP
RED HILLS UNIT
TOM BROWN INC. (OPER)
N.E SALADO DRAW (DP) UNIT. SOHIO (OPER).

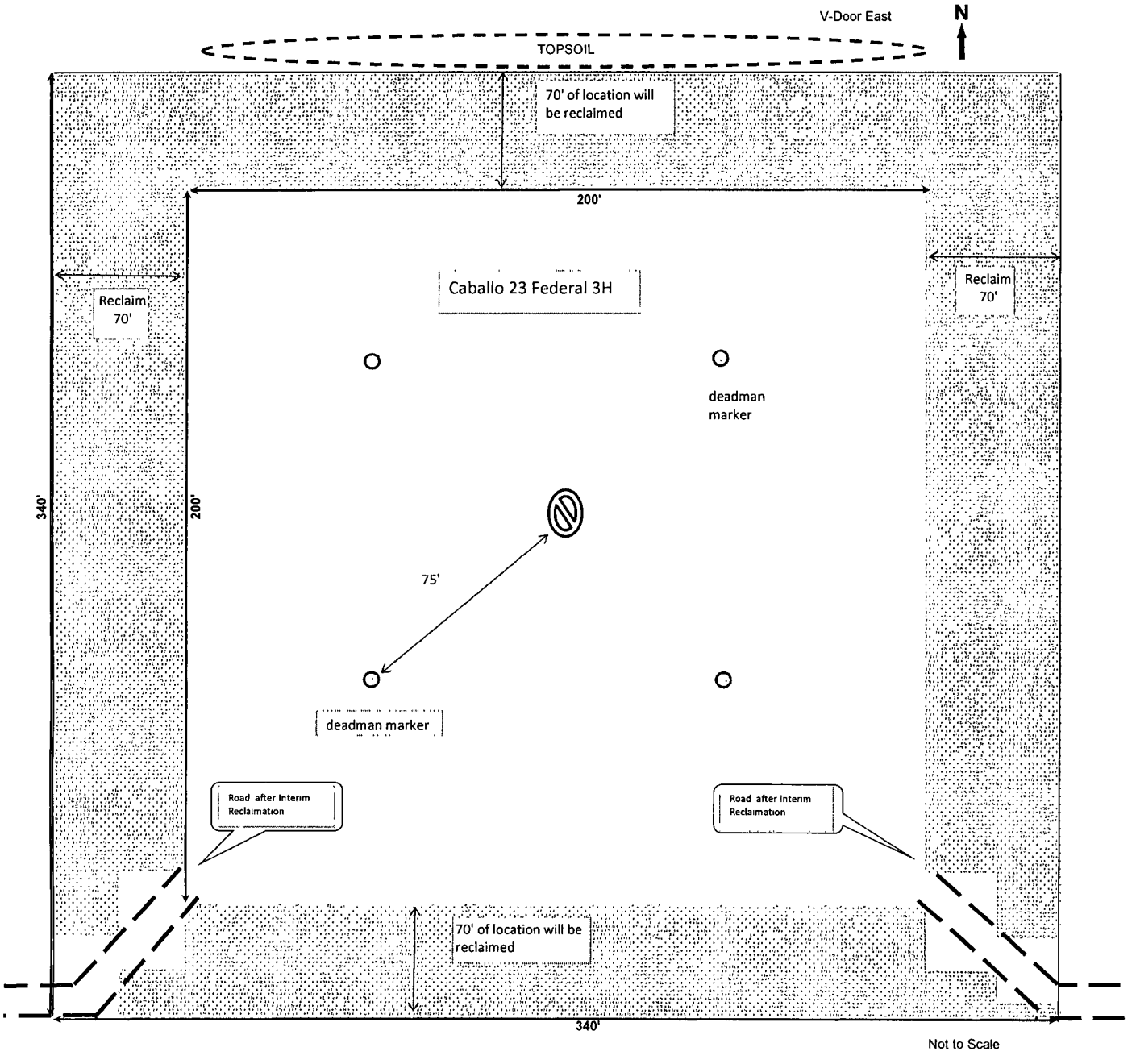
EXHIBIT 4
Caballo 23 Federal 3H



EOG Resources / Closed Loop Location Design Plan

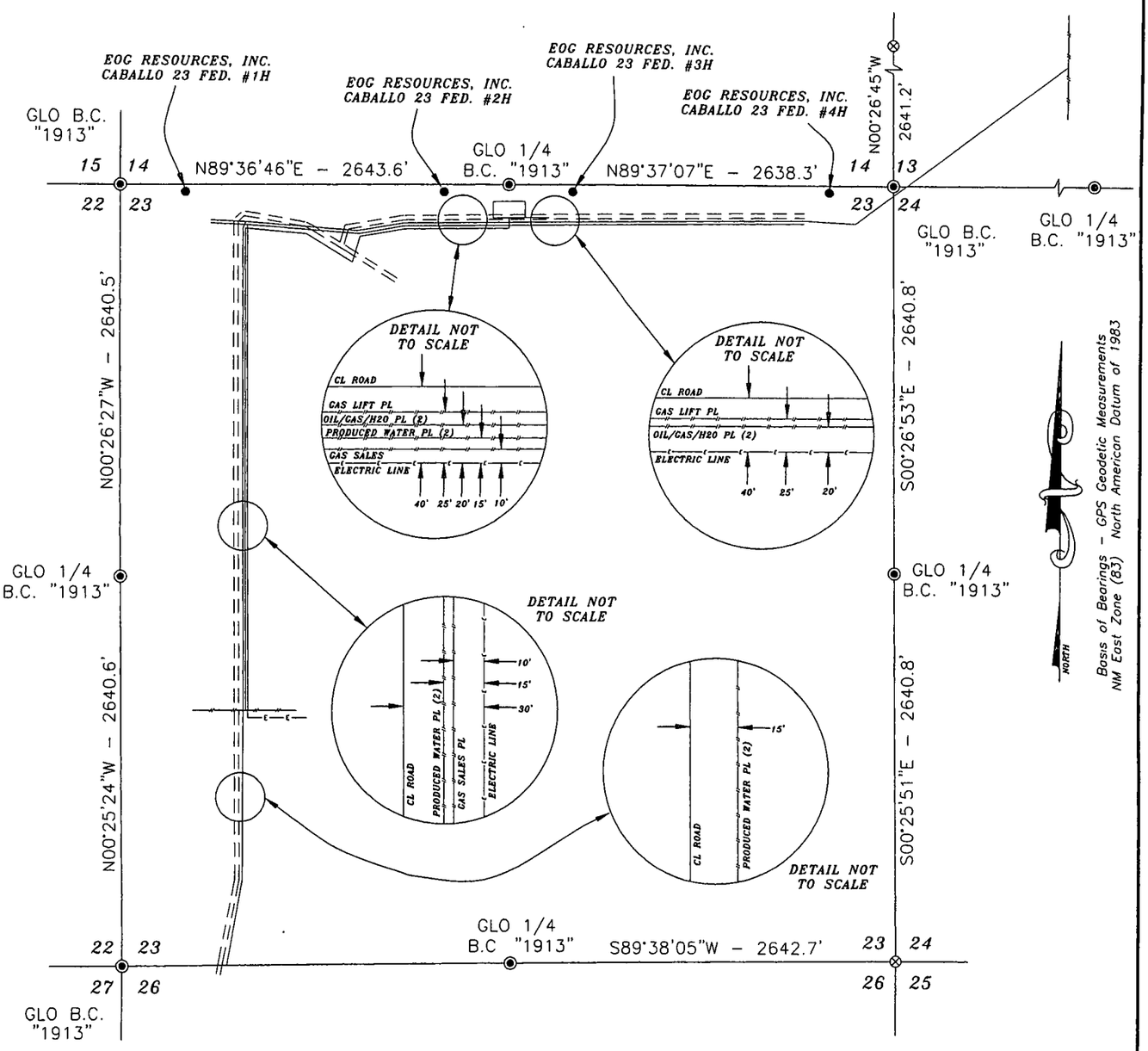
Not to scale

6/30/2008


V-Door East
N
TOPSOIL
70' of location will be reclaimed
200'
Reclaim 70'
Caballo 23 Federal 3H
Reclaim 70'
deadman marker
340'
200'
75'
deadman marker
Road after Interim Reclamation
Road after Interim Reclamation
70' of location will be reclaimed
340'
Not to Scale

SECTION 23, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY NEW MEXICO

Exhibit 5



PRODUCED WATER PIPELINE = 13750'
GAS SALES PIPELINE = 5100'
GAS LIFT PIPELINE = 6224'
OIL SALES PIPELINE = 4310'
OIL/GAS/H20 PIPELINE = 4069'
ELECTRIC LINE = 2742'

TERRY J. ASEL NEW MEXICO 15079 REGISTERED PROFESSIONAL LAND SURVEYOR

LEGEND

⊙ – DENOTES FOUND MONUMENT AS NOTED
⊗ – DENOTES CALCULATED CORNER

1000' 0 1000' 2000' FEET
SCALE: 1"=1000'

SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 3/8/2011

Terry J. Asel N.M. R.P.S. No. 15079

Asel Surveying

P.O BOX 393 – 310 W. TAYLOR
HOBBS, NEW MEXICO – 575-393-9146

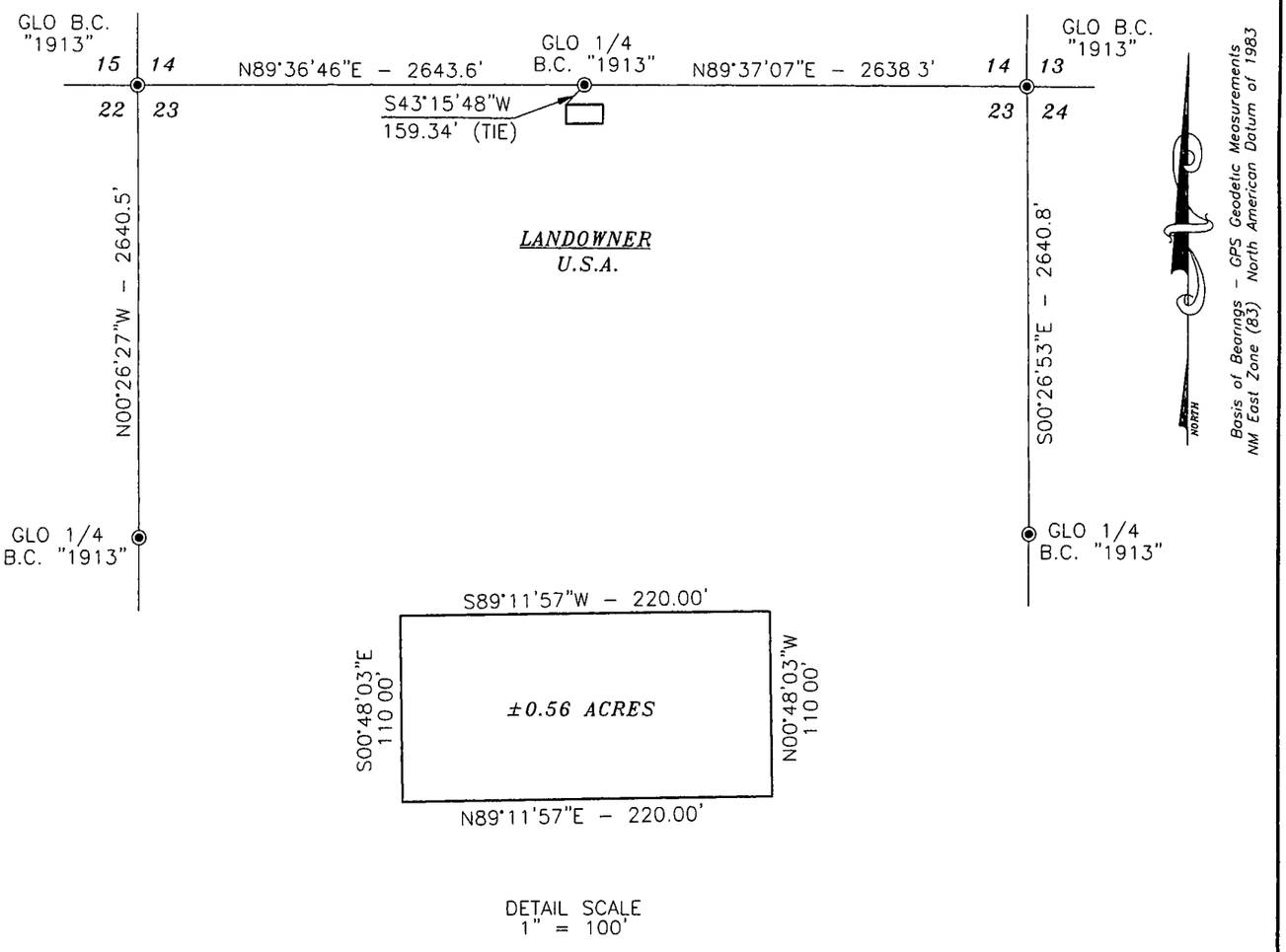
EOG RESOURCES, INC.

PROPOSED GAS LIFT PIPELINE, OIL SALES PIPELINE, & PRODUCED WATER PIPELINE TO THE CABALLO 23 FED. #1H, #2H, #3H & #4H IN SECTIONS 13, 24, & 23, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO

Survey Date: 02/16/11	Sheet 1 of 1 Sheets
W.O. Number: 110216RD	Drawn By: KA
Date: 03/08/11	110216RD.DWG | Scale:1"=1000'

SECTION 23, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY NEW MEXICO

Exhibit 6



DETAIL SCALE
1" = 100'

DESCRIPTION

SURVEY OF A 110.00' X 220.00' SITE (FOR TANK BATTERY) IN SECTION 23, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT BEING THE NORTHWEST CORNER OF SAID SITE WHICH LIES S43°15'48"W – 159.34 FEET FROM THE NORTH QUARTER CORNER OF SAID SECTION 23; THEN S00°48'03"E – 110.00 FEET TO THE SOUTHWEST CORNER OF SAID SITE; THEN N89°11'57"E – 220.00 FEET TO THE SOUTHEAST CORNER OF SAID SITE; THEN N00°48'03"W – 110.00 FEET TO THE NORTHEAST CORNER OF SAID SITE; THEN S89°11'57"W – 220.00 FEET TO THE POINT OF BEGINNING AND CONTAINING 0.56 ACRES OF LAND MORE OR LESS

SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 3/3/2011

Terry J. Asel N.M. R.P.S. No. 15079

Asel Surveying

P O BOX 393 – 310 W. TAYLOR
HOBBS, NEW MEXICO – 575-393-9146

LEGEND

◉ – DENOTES FOUND MONUMENT AS NOTED

1000' 0 1000' 2000' FEET

SCALE. 1"=1000'

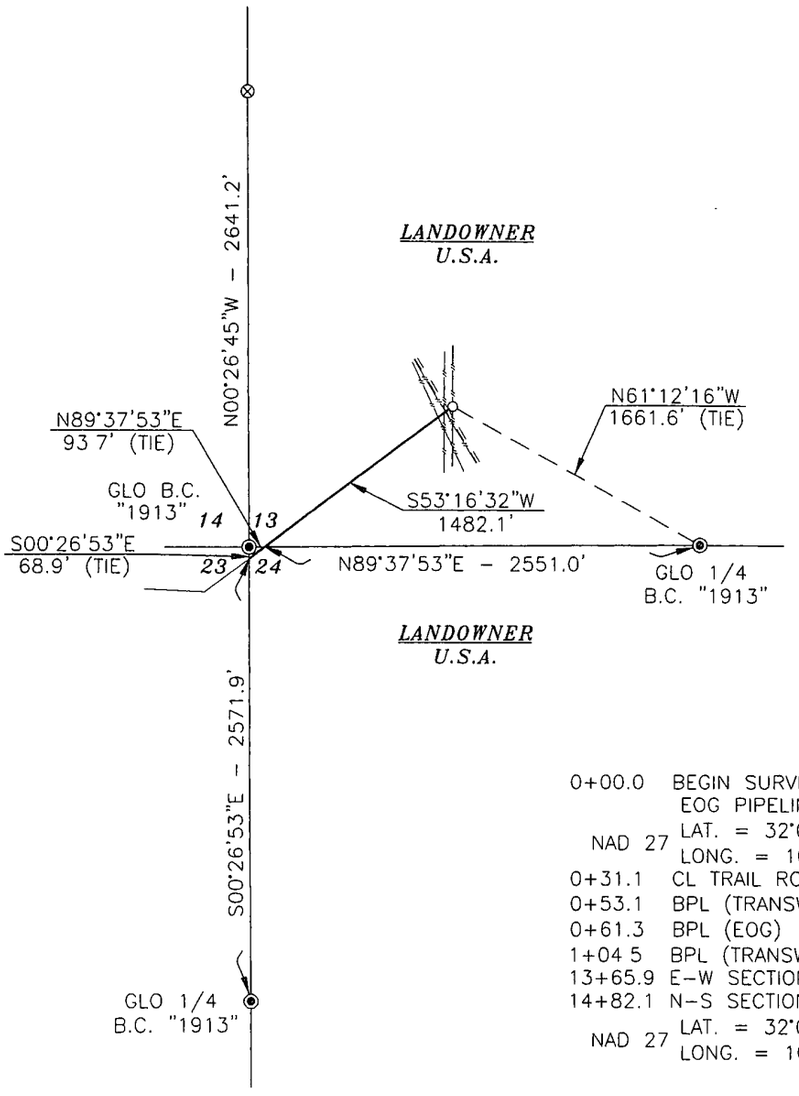
EOG RESOURCES INC.

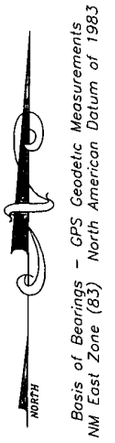
SURVEY OF A 110.00' X 220.00' SITE (FOR TANK BATTERY) IN SECTION 23, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 02/16/11	Sheet 1 of 1 Sheets		
W.O. Number: 110216PS	Drawn By: KA		
Date: 02/28/11	110216PS.DWG	Scale:1"=1000'	

SECTIONS 13 & 24, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY NEW MEXICO

Exhibit 7
page 1 of 2

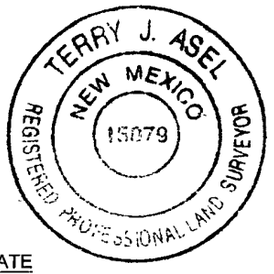




0+00.0 BEGIN SURVEY @
EOG PIPELINE
NAD 27 LAT. = 32°07'31.38"N
LONG. = 103°31'48.99"W
0+31.1 CL TRAIL ROAD
0+53.1 BPL (TRANSWESTERN)
0+61.3 BPL (EOG)
1+04 5 BPL (TRANSWESTERN)
13+65.9 E-W SECTION LINE
14+82.1 N-S SECTION LINE
NAD 27 LAT. = 32°07'22 70"N
LONG. = 103°32'02.88"W

DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 1482 1 FEET OR 0 281 MILES IN LENGTH CROSSING U.S.A. LAND IN SECTIONS 13 & 24, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED SURVEY.



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Terry J. Asel 3/8/2011

Terry J. Asel N.M. R.P.S. No. 15079

Asel Surveying

P.O. BOX 393 - 310 W TAYLOR
HOBBS, NEW MEXICO - 575-393-9146

LEGEND

◉ - DENOTES FOUND MONUMENT AS NOTED
⊗ - DENOTES CALCULATED CORNER

1000' 0 1000' 2000' FEET
SCALE. 1"=1000'

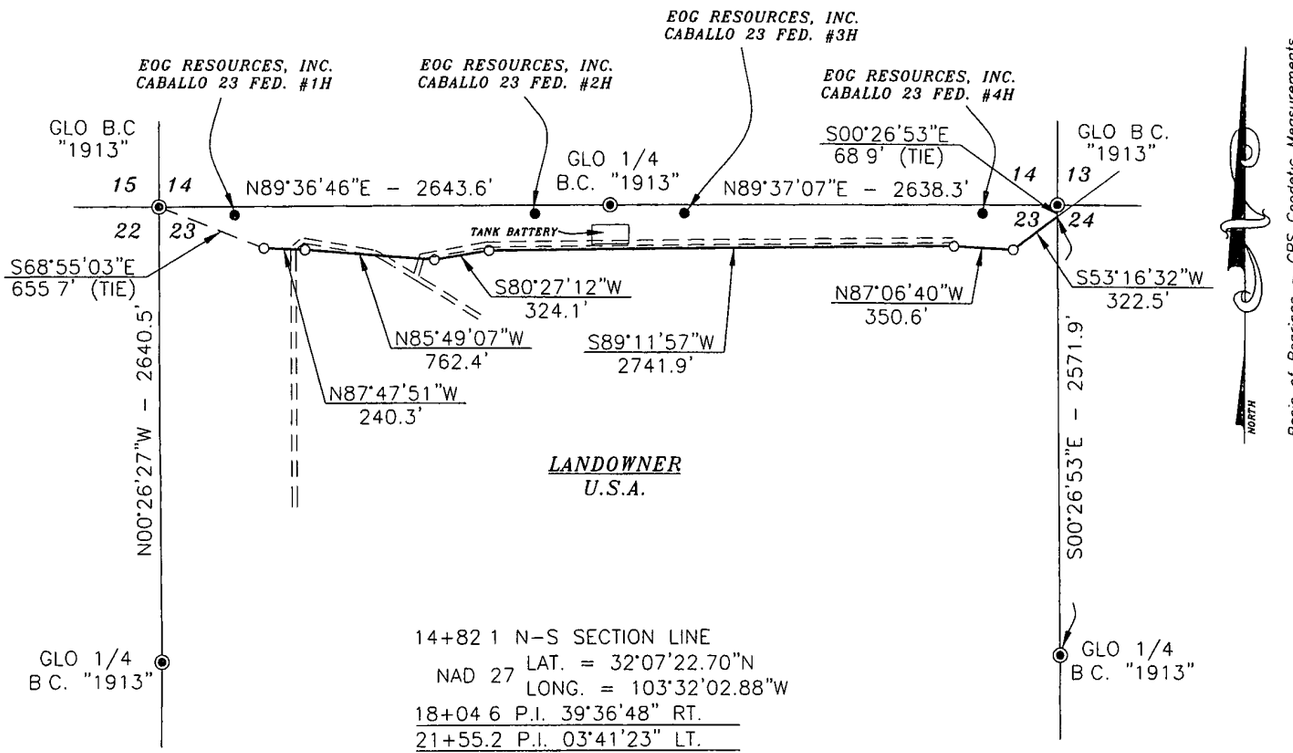
EOG RESOURCES, INC.

SURVEY FOR A PIPELINE EASEMENT (GAS LIFT)
CROSSING U.S.A. LAND IN SECTIONS 13 & 24,
TOWNSHIP 25 SOUTH, RANGE 33 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO

Survey Date: 11/09/10		Sheet 1 of 2 Sheets	
W.O. Number: 110216PL-a		Drawn By: KA	
Date: 03/05/11		110216PL-a DWG	Scale:1"=1000'

SECTION 23, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY NEW MEXICO

Exhibit 7
Pag 2 of 2



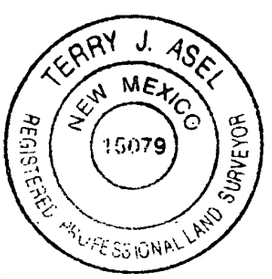
14+82 1 N-S SECTION LINE
NAD 27 LAT. = 32°07'22.70"N
LONG. = 103°32'02.88"W

18+04 6 P.I. 39°36'48" RT.
21+55.2 P.I. 03°41'23" LT.
48+97.1 P.I. 08°44'45" LT.
52+21.2 P.I. 13°43'41" RT.
59+83.6 P.I. 01°58'44" LT.

60+35.7 CL CALICHE LEASE ROAD 20'W
62+23.9 END SURVEY @
EOG RESOURCES, INC.
CABALLO "23" FED. #1H
NAD 27 LAT = 32°07'21.03"N
LONG. = 103°32'57.20"W

DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 4741.8 FEET OR 0 898 MILES IN LENGTH CROSSING U.S A. LAND IN SECTION 23, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED SURVEY.



LEGEND

⊙ - DENOTES FOUND MONUMENT AS NOTED
⊗ - DENOTES CALCULATED CORNER

1000' 0 1000' 2000' FEET
SCALE: 1"=1000'

SURVEYORS CERTIFICATE

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Terry J. Asel 3/8/2011
Terry J. Asel N.M. R.P.S. No. 15079

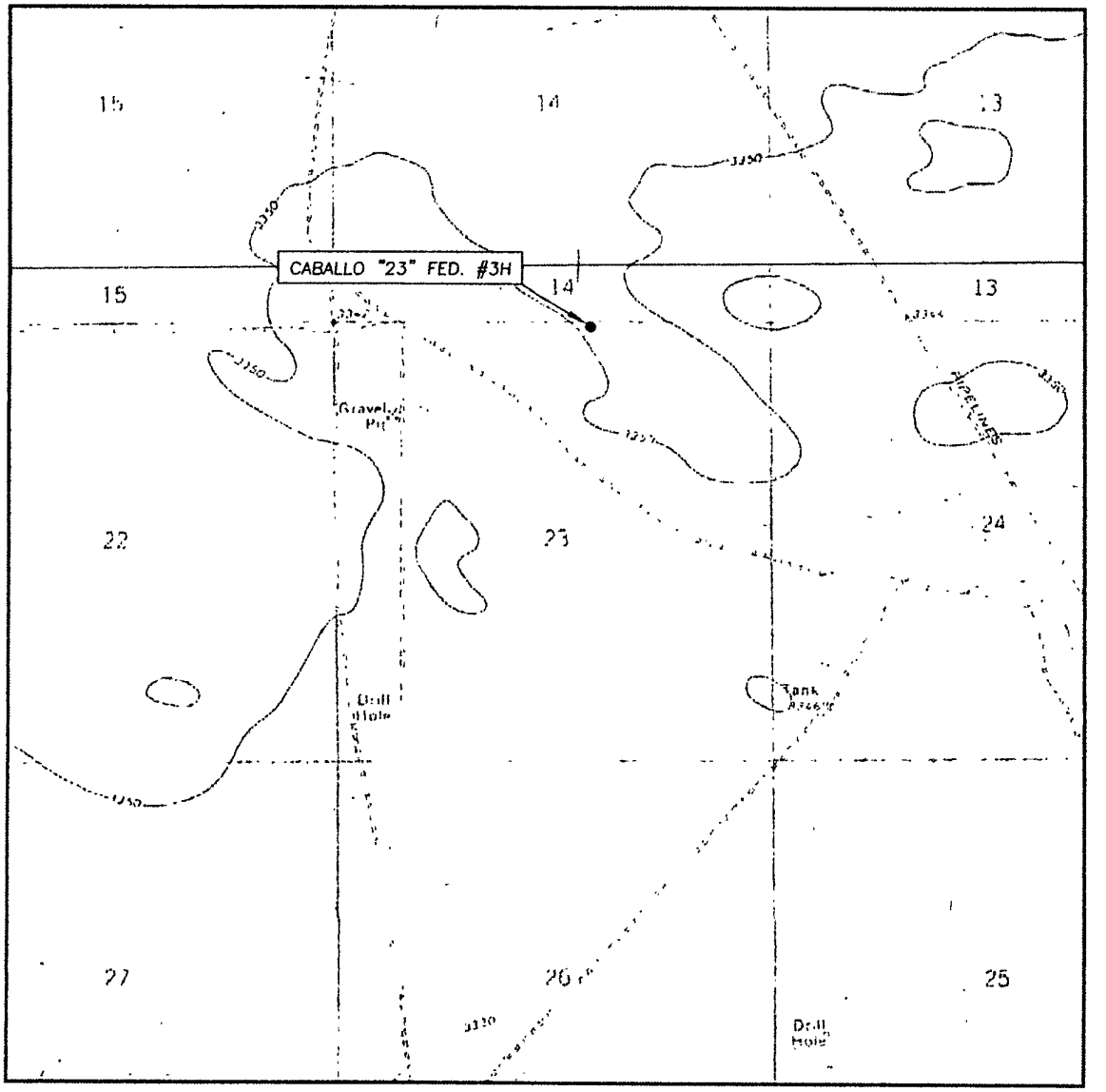
Asel Surveying
P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146

EOG RESOURCES, INC.

SURVEY FOR A PIPELINE EASEMENT (GAS LIFT)
CROSSING U.S.A. LAND IN SECTION 23,
TOWNSHIP 25 SOUTH, RANGE 33 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO

Survey Date: 11/09/10		Sheet 2 of 2 Sheets	
W.O. Number: 110216PL-a		Drawn By: KA	
Date: 03/05/11	110216PL-a DWG	Scale:1"=1000'	

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 23 TWP. 25-S RGE 33-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 50' FNL & 2200' FEL

ELEVATION 3348.1'

OPERATOR EOG RESOURCES, INC.

LEASE CABALLO "23" FED. #3H

U.S.G.S. TOPOGRAPHIC MAP
PADUCA BREAKS EAST, N.M.

Asel Surveying

P.O BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146

PATHFINDER
A Schlumberger Company

EOG Resources, Inc.

Lea County
Caballo 23 Federal
#3H
OH

Plan: Design #2

Pathfinder X & Y Planning Report

20 April, 2011

PATHFINDER
A Schlumberger Company

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #3H
Project:	Lea County	**TVD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Site:	Caballo 23 Federal	**MD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #2	**Database:**	EDM 5000.1 Single User Db

Project Lea County

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

Site Caballo 23 Federal

Site Position:		**Northing:**	409,363.500 usft	**Latitude:**	32° 7' 22.915 N
From:	Map	**Easting:**	742,578 600 usft	**Longitude:**	103° 32' 59.175 W
Position Uncertainty:	0 00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.42 °

Well #3H

Well Position	**+N/-S**	0.00 usft	**Northing:**	409,381.300 usft	**Latitude:**	32° 7' 22.900 N
	+E/-W	0 00 usft	**Easting:**	745,220.400 usft	**Longitude:**	103° 32' 28.456 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,348.10 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/27/10	7.63	60.13	48,657

Design Design #2

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.56

Survey Tool Program **Date** 04/20/11

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0 00	14,145.82	Design #2 (OH)	MWD	MWD - Standard

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #3H
Project:	Lea County	**TVD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Site:	Caballo 23 Federal	**MD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #2	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	3,378.10	0.00	0.00	0.00	0.00	409,381.30	745,220 40
100.00	0 00	0.00	100.00	3,278.10	0.00	0.00	0 00	0.00	409,381.30	745,220.40
200.00	0.00	0.00	200.00	3,178.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
300 00	0.00	0.00	300 00	3,078.10	0.00	0.00	0.00	0 00	409,381.30	745,220.40
400.00	0.00	0.00	400.00	2,978.10	0.00	0.00	0.00	0 00	409,381.30	745,220.40
500.00	0.00	0.00	500.00	2,878 10	0.00	0.00	0.00	0 00	409,381.30	745,220.40
600.00	0.00	0.00	600.00	2,778 10	0.00	0.00	0.00	0 00	409,381.30	745,220.40
700.00	0 00	0.00	700.00	2,678.10	0.00	0.00	0.00	0 00	409,381.30	745,220.40
800.00	0.00	0.00	800.00	2,578.10	0.00	0.00	0.00	0 00	409,381.30	745,220.40
900.00	0.00	0.00	900.00	2,478.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
1,000.00	0.00	0.00	1,000.00	2,378 10	0.00	0.00	0.00	0 00	409,381.30	745,220 40
1,100.00	0.00	0.00	1,100 00	2,278 10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
1,200.00	0.00	0.00	1,200 00	2,178.10	0.00	0.00	0.00	0 00	409,381.30	745,220.40
1,300.00	0.00	0 00	1,300.00	2,078.10	0 00	0.00	0 00	0.00	409,381.30	745,220 40
1,400.00	0.00	0 00	1,400.00	1,978.10	0.00	0.00	0 00	0.00	409,381.30	745,220.40
1,500.00	0.00	0.00	1,500 00	1,878 10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
1,600.00	0 00	0.00	1,600 00	1,778.10	0.00	0.00	0.00	0.00	409,381 30	745,220 40
1,700.00	0.00	0.00	1,700 00	1,678.10	0 00	0.00	0.00	0.00	409,381.30	745,220.40
1,800.00	0 00	0.00	1,800.00	1,578 10	0.00	0.00	0.00	0.00	409,381 30	745,220.40
1,900 00	0 00	0.00	1,900.00	1,478.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
2,000 00	0.00	0.00	2,000.00	1,378.10	0.00	0.00	0.00	0.00	409,381 30	745,220 40
2,100.00	0 00	0 00	2,100.00	1,278.10	0 00	0.00	0.00	0.00	409,381.30	745,220.40
2,200.00	0.00	0.00	2,200.00	1,178 10	0.00	0.00	0 00	0.00	409,381.30	745,220.40
2,300.00	0.00	0.00	2,300.00	1,078 10	0.00	0.00	0.00	0.00	409,381.30	745,220 40
2,400.00	0.00	0.00	2,400.00	978.10	0.00	0.00	0.00	0 00	409,381.30	745,220.40
2,500.00	0 00	0.00	2,500.00	878.10	0 00	0.00	0.00	0.00	409,381.30	745,220.40
2,600.00	0.00	0.00	2,600.00	778.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #3H
Project:	Lea County	**TVD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Site:	Caballo 23 Federal	**MD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #2	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
2,700.00	0.00	0.00	2,700.00	678.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
2,800.00	0.00	0.00	2,800.00	578.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
2,900.00	0.00	0.00	2,900.00	478.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,000.00	0.00	0.00	3,000.00	378.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,100.00	0.00	0.00	3,100.00	278.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,200.00	0.00	0.00	3,200.00	178.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,300.00	0.00	0.00	3,300.00	78.10	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,400.00	0.00	0.00	3,400.00	-21.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,500.00	0.00	0.00	3,500.00	-121.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,600.00	0.00	0.00	3,600.00	-221.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,700.00	0.00	0.00	3,700.00	-321.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,800.00	0.00	0.00	3,800.00	-421.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
3,900.00	0.00	0.00	3,900.00	-521.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,000.00	0.00	0.00	4,000.00	-621.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,100.00	0.00	0.00	4,100.00	-721.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,200.00	0.00	0.00	4,200.00	-821.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,300.00	0.00	0.00	4,300.00	-921.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,400.00	0.00	0.00	4,400.00	-1,021.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,500.00	0.00	0.00	4,500.00	-1,121.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,600.00	0.00	0.00	4,600.00	-1,221.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,700.00	0.00	0.00	4,700.00	-1,321.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,800.00	0.00	0.00	4,800.00	-1,421.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
4,900.00	0.00	0.00	4,900.00	-1,521.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
5,000.00	0.00	0.00	5,000.00	-1,621.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
5,100.00	0.00	0.00	5,100.00	-1,721.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
5,200.00	0.00	0.00	5,200.00	-1,821.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
5,300.00	0.00	0.00	5,300.00	-1,921.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #3H
Project:	Lea County	**TVD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Site:	Caballo 23 Federal	**MD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #2	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
5,400.00	0.00	0.00	5,400.00	-2,021.90	0.00	0.00	0 00	0.00	409,381.30	745,220.40
5,500.00	0.00	0.00	5,500.00	-2,121.90	0.00	0 00	0.00	0.00	409,381.30	745,220 40
5,600 00	0.00	0.00	5,600.00	-2,221.90	0.00	0.00	0.00	0.00	409,381.30	745,220 40
5,700 00	0 00	0 00	5,700.00	-2,321.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
5,800.00	0.00	0.00	5,800.00	-2,421.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
5,900.00	0.00	0.00	5,900.00	-2,521 90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
6,000 00	0.00	0.00	6,000.00	-2,621.90	0.00	0 00	0.00	0.00	409,381.30	745,220.40
6,100.00	0.00	0.00	6,100.00	-2,721.90	0.00	0.00	0 00	0.00	409,381.30	745,220 40
6,200 00	0.00	0.00	6,200.00	-2,821.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
6,300.00	0.00	0.00	6,300.00	-2,921.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
6,400 00	0.00	0.00	6,400.00	-3,021.90	0.00	0.00	0.00	0.00	409,381.30	745,220 40
6,500.00	0.00	0 00	6,500.00	-3,121 90	0.00	0.00	0.00	0.00	409,381 30	745,220.40
6,600.00	0.00	0.00	6,600.00	-3,221.90	0 00	0.00	0 00	0.00	409,381.30	745,220.40
6,700.00	0.00	0.00	6,700.00	-3,321.90	0 00	0.00	0.00	0.00	409,381.30	745,220.40
6,800.00	0.00	0.00	6,800.00	-3,421.90	0 00	0.00	0.00	0 00	409,381.30	745,220.40
6,900 00	0.00	0.00	6,900.00	-3,521.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
7,000.00	0.00	0.00	7,000.00	-3,621.90	0.00	0.00	0.00	0 00	409,381.30	745,220.40
7,100.00	0.00	0.00	7,100.00	-3,721.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
7,200.00	0.00	0.00	7,200.00	-3,821.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
7,300 00	0.00	0.00	7,300.00	-3,921.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
7,400.00	0.00	0.00	7,400.00	-4,021.90	0.00	0 00	0.00	0.00	409,381.30	745,220.40
7,500.00	0.00	0.00	7,500.00	-4,121 90	0.00	0.00	0.00	0.00	409,381.30	745,220 40
7,600 00	0.00	0.00	7,600.00	-4,221.90	0.00	0.00	0.00	0 00	409,381 30	745,220.40
7,700.00	0.00	0.00	7,700.00	-4,321.90	0 00	0 00	0 00	0.00	409,381.30	745,220.40
7,800 00	0.00	0 00	7,800 00	-4,421.90	0.00	0 00	0.00	0.00	409,381.30	745,220.40
7,900.00	0 00	0.00	7,900.00	-4,521.90	0.00	0.00	0.00	0.00	409,381 30	745,220.40
8,000 00	0.00	0.00	8,000.00	-4,621.90	0 00	0.00	0.00	0 00	409,381.30	745,220 40

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #3H
Project:	Lea County	**TVD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Site:	Caballo 23 Federal	**MD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #2	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
8,100.00	0.00	0.00	8,100.00	-4,721.90	0 00	0.00	0.00	0.00	409,381.30	745,220.40
8,200.00	0 00	0.00	8,200.00	-4,821.90	0 00	0.00	0.00	0.00	409,381.30	745,220.40
8,300.00	0.00	0.00	8,300.00	-4,921.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
8,400 00	0 00	0.00	8,400.00	-5,021.90	0.00	0.00	0.00	0.00	409,381.30	745,220.40
8,500.00	0.00	0.00	8,500 00	-5,121 90	0.00	0.00	0.00	0 00	409,381.30	745,220.40
8,600.00	0.00	0.00	8,600.00	-5,221 90	0.00	0.00	0.00	0.00	409,381 30	745,220.40
8,700.00	0.00	0.00	8,700.00	-5,321.90	0 00	0.00	0 00	0.00	409,381.30	745,220.40
8,800.00	0.00	0.00	8,800 00	-5,421.90	0 00	0 00	0.00	0 00	409,381.30	745,220.40
8,900.00	0.00	0.00	8,900.00	-5,521.90	0 00	0 00	0 00	0.00	409,381.30	745,220.40
8,972.54	0.00	0.00	8,972.54	-5,594 44	0.00	0.00	0 00	0.00	409,381.30	745,220.40
8,975.00	0.30	179 56	8,975.00	-5,596.90	-0.01	0.00	0.01	12.00	409,381.29	745,220.40
9,000.00	3.30	179 56	8,999.98	-5,621 88	-0 79	0 01	0.79	12.00	409,380.51	745,220.41
9,025.00	6.30	179.56	9,024.89	-5,646.79	-2.88	0.02	2.88	12.00	409,378.42	745,220.42
9,050.00	9.30	179.56	9,049.66	-5,671.56	-6.27	0.05	6.27	12 00	409,375 03	745,220.45
9,075.00	12.30	179.56	9,074.22	-5,696.12	-10.95	0.08	10 95	12.00	409,370.35	745,220 48
9,100 00	15.30	179 56	9,098.49	-5,720 39	-16.91	0.13	16.91	12 00	409,364.39	745,220.53
9,125 00	18.30	179 56	9,122.42	-5,744.32	-24 13	0.18	24 13	12.00	409,357 17	745,220.58
9,150.00	21.30	179.56	9,145 94	-5,767.84	-32.60	0.25	32.60	12.00	409,348.70	745,220.65
9,175.00	24 30	179.56	9,168.99	-5,790 89	-42.28	0.32	42 29	12.00	409,339.02	745,220.72
9,200.00	27.30	179.56	9,191.49	-5,813.39	-53.16	0.41	53.16	12.00	409,328.14	745,220 81
9,225.00	30.30	179 56	9,213.40	-5,835.30	-65.20	0.50	65.20	12.00	409,316.10	745,220.90
9,250.00	33.30	179.56	9,234.65	-5,856.55	-78.37	0.60	78.37	12.00	409,302.93	745,221 00
9,275 00	36.30	179.56	9,255.17	-5,877.07	-92.64	0 71	92.64	12.00	409,288.66	745,221.11
9,300.00	39.30	179 56	9,274.93	-5,896 83	-107 95	0.82	107.96	12 00	409,273 35	745,221.22
9,325.00	42 30	179 56	9,293.85	-5,915.75	-124.29	0 95	124 29	12.00	409,257 01	745,221.35
9,350.00	45.30	179.56	9,311.89	-5,933.79	-141.59	1.08	141.59	12.00	409,239.71	745,221.48
9,375 00	48.30	179 56	9,329.01	-5,950.91	-159 81	1.22	159.81	12.00	409,221.49	745,221 62

Company:	EOG Resources, Inc.	Local Co-ordinate Reference:	Well #3H
Project:	Lea County	TVD Reference:	KB=30' @ 3378.10usft (Cactus 123)
Site:	Caballo 23 Federal	MD Reference:	KB=30' @ 3378.10usft (Cactus 123)
Well:	#3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Design #2	Database:	EDM 5000 1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
9,400.00	51.30	179.56	9,345.14	-5,967 04	-178 90	1.37	178 90	12.00	409,202 40	745,221.77
9,425.00	54.30	179.56	9,360.26	-5,982 16	-198.81	1 52	198.81	12 00	409,182.49	745,221.92
9,450.00	57.30	179.56	9,374.31	-5,996.21	-219.48	1.68	219.49	12.00	409,161.82	745,222.08
9,475.00	60.30	179 56	9,387.26	-6,009.16	-240.86	1.84	240.87	12.00	409,140.44	745,222.24
9,500 00	63.30	179.56	9,399.08	-6,020.98	-262 89	2.01	262 90	12 00	409,118.41	745,222.41
9,525.00	66.30	179.56	9,409.72	-6,031.62	-285.50	2.18	285.51	12.00	409,095.80	745,222.58
9,550.00	69.30	179 56	9,419.17	-6,041 07	-308.65	2.36	308.66	12.00	409,072.65	745,222.76
9,575.00	72.30	179.56	9,427.39	-6,049.29	-332 25	2.54	332.26	12.00	409,049.05	745,222.94
9,600.00	75.30	179 56	9,434.37	-6,056 27	-356.26	2.72	356.27	12.00	409,025 04	745,223.12
9,625 00	78.30	179.56	9,440 08	-6,061 98	-380.59	2 90	380.60	12.00	409,000 71	745,223.30
9,650.00	81.30	179.56	9,444.51	-6,066.41	-405.19	3.09	405.20	12.00	408,976.11	745,223.49
9,675.00	84.30	179.56	9,447 64	-6,069 54	-429.99	3.28	430.00	12.00	408,951.31	745,223.68
9,700.00	87.30	179.56	9,449.47	-6,071.37	-454 92	3.47	454.93	12.00	408,926.38	745,223 87
9,722.54	90.00	179.56	9,450.00	-6,071.90	-477.45	3 64	477.47	12.00	408,903.85	745,224 04
9,800.00	90.00	179.56	9,450.00	-6,071.90	-554.91	4.23	554.92	0.00	408,826.39	745,224.63
9,900 00	90.00	179 56	9,450.00	-6,071.90	-654.91	5.00	654.92	0.00	408,726 39	745,225.40
10,000.00	90.00	179.56	9,450.00	-6,071.90	-754.90	5 76	754.92	0.00	408,626.40	745,226 16
10,100.00	90.00	179.56	9,450.00	-6,071.90	-854.90	6.52	854.92	0.00	408,526.40	745,226.92
10,200.00	90.00	179.56	9,450.00	-6,071.90	-954.90	7.29	954.92	0.00	408,426.40	745,227.69
10,300.00	90.00	179.56	9,450.00	-6,071.90	-1,054 89	8.05	1,054.92	0.00	408,326.41	745,228.45
10,400 00	90.00	179.56	9,450 00	-6,071.90	-1,154.89	8.81	1,154.92	0.00	408,226.41	745,229 21
10,500.00	90.00	179.56	9,450.00	-6,071.90	-1,254.89	9.58	1,254.92	0.00	408,126.41	745,229.98
10,600.00	90.00	179.56	9,450 00	-6,071 90	-1,354.89	10.34	1,354.92	0.00	408,026.41	745,230.74
10,700 00	90.00	179 56	9,450.00	-6,071.90	-1,454.88	11 10	1,454 92	0.00	407,926.42	745,231.50
10,800.00	90.00	179.56	9,450.00	-6,071.90	-1,554.88	11 87	1,554.92	0.00	407,826.42	745,232.27
10,900.00	90.00	179.56	9,450.00	-6,071.90	-1,654.88	12.63	1,654.92	0.00	407,726.42	745,233.03
11,000.00	90.00	179 56	9,450.00	-6,071.90	-1,754.87	13.39	1,754.92	0.00	407,626.43	745,233.79

Company:	EOG Resources, Inc	Local Co-ordinate Reference:	Well #3H
Project:	Lea County	TVD Reference:	KB=30' @ 3378 10usft (Cactus 123)
Site:	Caballo 23 Federal	MD Reference:	KB=30' @ 3378 10usft (Cactus 123)
Well:	#3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Design #2	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
11,100.00	90.00	179.56	9,450.00	-6,071.90	-1,854.87	14.16	1,854.92	0.00	407,526.43	745,234.56
11,200.00	90.00	179.56	9,450.00	-6,071.90	-1,954.87	14.92	1,954.92	0.00	407,426.43	745,235.32
11,300.00	90.00	179.56	9,450.00	-6,071.90	-2,054.86	15.68	2,054.92	0.00	407,326.44	745,236.08
11,400.00	90.00	179.56	9,450.00	-6,071.90	-2,154.86	16.45	2,154.92	0.00	407,226.44	745,236.85
11,500.00	90.00	179.56	9,450.00	-6,071.90	-2,254.86	17.21	2,254.92	0.00	407,126.44	745,237.61
11,600.00	90.00	179.56	9,450.00	-6,071.90	-2,354.86	17.97	2,354.92	0.00	407,026.44	745,238.37
11,700.00	90.00	179.56	9,450.00	-6,071.90	-2,454.85	18.73	2,454.92	0.00	406,926.45	745,239.13
11,800.00	90.00	179.56	9,450.00	-6,071.90	-2,554.85	19.50	2,554.92	0.00	406,826.45	745,239.90
11,900.00	90.00	179.56	9,450.00	-6,071.90	-2,654.85	20.26	2,654.92	0.00	406,726.45	745,240.66
12,000.00	90.00	179.56	9,450.00	-6,071.90	-2,754.84	21.02	2,754.92	0.00	406,626.46	745,241.42
12,100.00	90.00	179.56	9,450.00	-6,071.90	-2,854.84	21.79	2,854.92	0.00	406,526.46	745,242.19
12,200.00	90.00	179.56	9,450.00	-6,071.90	-2,954.84	22.55	2,954.92	0.00	406,426.46	745,242.95
12,300.00	90.00	179.56	9,450.00	-6,071.90	-3,054.84	23.31	3,054.92	0.00	406,326.46	745,243.71
12,400.00	90.00	179.56	9,450.00	-6,071.90	-3,154.83	24.08	3,154.92	0.00	406,226.47	745,244.48
12,500.00	90.00	179.56	9,450.00	-6,071.90	-3,254.83	24.84	3,254.92	0.00	406,126.47	745,245.24
12,600.00	90.00	179.56	9,450.00	-6,071.90	-3,354.83	25.60	3,354.92	0.00	406,026.47	745,246.00
12,700.00	90.00	179.56	9,450.00	-6,071.90	-3,454.82	26.37	3,454.92	0.00	405,926.48	745,246.77
12,800.00	90.00	179.56	9,450.00	-6,071.90	-3,554.82	27.13	3,554.92	0.00	405,826.48	745,247.53
12,900.00	90.00	179.56	9,450.00	-6,071.90	-3,654.82	27.89	3,654.92	0.00	405,726.48	745,248.29
13,000.00	90.00	179.56	9,450.00	-6,071.90	-3,754.82	28.66	3,754.92	0.00	405,626.48	745,249.06
13,100.00	90.00	179.56	9,450.00	-6,071.90	-3,854.81	29.42	3,854.92	0.00	405,526.49	745,249.82
13,200.00	90.00	179.56	9,450.00	-6,071.90	-3,954.81	30.18	3,954.92	0.00	405,426.49	745,250.58
13,300.00	90.00	179.56	9,450.00	-6,071.90	-4,054.81	30.95	4,054.92	0.00	405,326.49	745,251.35
13,400.00	90.00	179.56	9,450.00	-6,071.90	-4,154.80	31.71	4,154.92	0.00	405,226.50	745,252.11
13,500.00	90.00	179.56	9,450.00	-6,071.90	-4,254.80	32.47	4,254.92	0.00	405,126.50	745,252.87
13,600.00	90.00	179.56	9,450.00	-6,071.90	-4,354.80	33.23	4,354.92	0.00	405,026.50	745,253.63
13,700.00	90.00	179.56	9,450.00	-6,071.90	-4,454.80	34.00	4,454.92	0.00	404,926.50	745,254.40

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #3H
Project:	Lea County	**TVD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Site:	Caballo 23 Federal	**MD Reference:**	KB=30' @ 3378.10usft (Cactus 123)
Well:	#3H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Design #2	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
13,800.00	90.00	179.56	9,450.00	-6,071.90	-4,554.79	34.76	4,554.92	0.00	404,826.51	745,255 16
13,900.00	90.00	179.56	9,450.00	-6,071 90	-4,654.79	35.52	4,654.92	0.00	404,726.51	745,255.92
14,000.00	90.00	179.56	9,450 00	-6,071.90	-4,754.79	36.29	4,754.92	0.00	404,626.51	745,256 69
14,100 00	90.00	179.56	9,450.00	-6,071.90	-4,854 78	37.05	4,854.92	0.00	404,526.52	745,257.45
14,145.82	90.00	179.56	9,450.00	-6,071.90	-4,900 60	37.40	4,900 74	0 00	404,480.70	745,257.80

Checked By: _____ Approved By: _____ Date: _____

eog resources

Project: Lea County
Site: Caballo 23 Feder
Well: #3H
Wellbore: OH
Plan: Design #2 (#3H/OH)

PROJECT DETAILS: Lea County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

T G M

Azimuths to Grid North
True North: -0.42°
Magnetic North: 7.21°

Magnetic Field
Strength: 48656.6snT
Dip Angle: 60.13°
Date: 10/27/2010
Model: IGRF200510

PATHFINDER
A Schlumberger Company

WELL DETAILS #3H

Ground Elevation 3348 10
RKB Elevation KB=30' @ 3378 10usft (Cactus 123)
Rig Name Cactus 123

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 00	0 00	409381 300	745220.400	32° 7' 22 900 N	103° 32' 28 456 W	

SECTION DETAILS

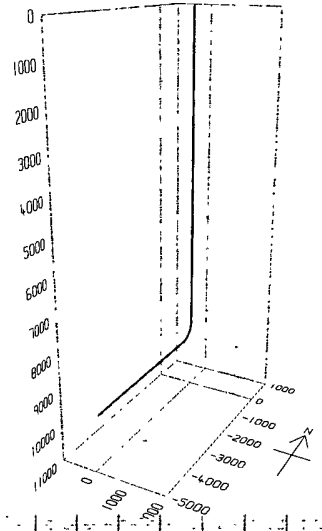
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0 00	0 00	0.00	0.00	0 00	0 00	0 00	0.00	0.00	
2	8972.54	0.00	0 00	8972 54	0 00	0.00	0.00	0 00	0.00	
3	9722.54	90.00	179 56	9450 00	-477.45	3.64	12.00	179 56	477 47	
4	14145 82	90 00	179.56	9450.00	-4900.60	37.40	0.00	0.00	4900 74	PBHL(Caballo#3)

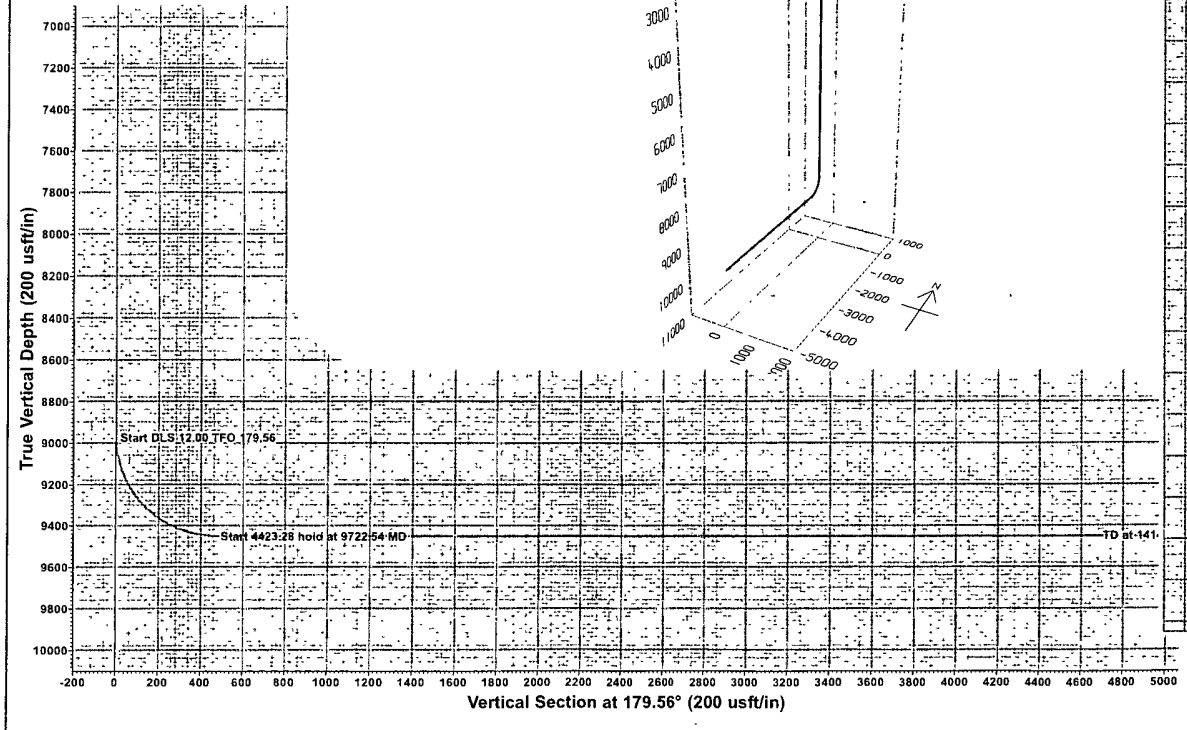
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

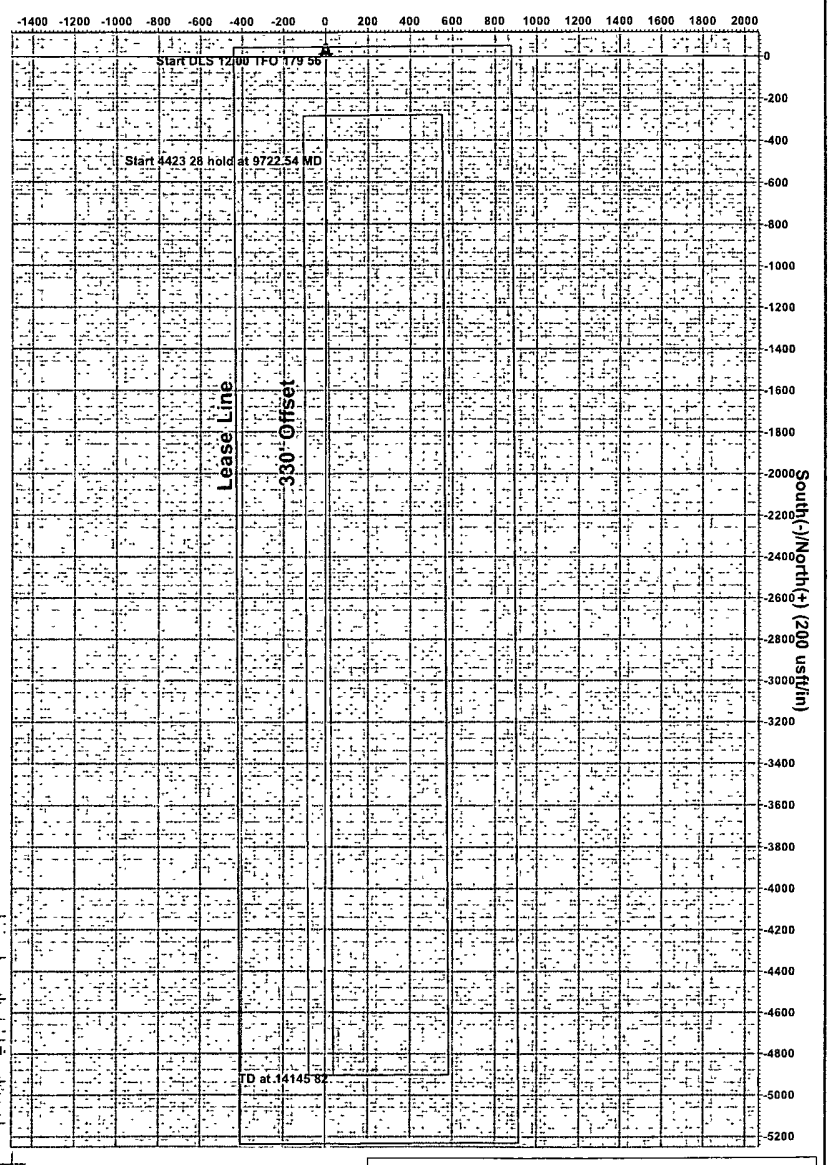
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(Caballo#3)	9450 00	-4900 60	37 40	404480 700	745257 800	Point

LEGEND

Design #2







Plan Design #2 (#3H/OH)

Created By Nate Bingham Date 11 58, April 20 2011

Checked _____ Date _____

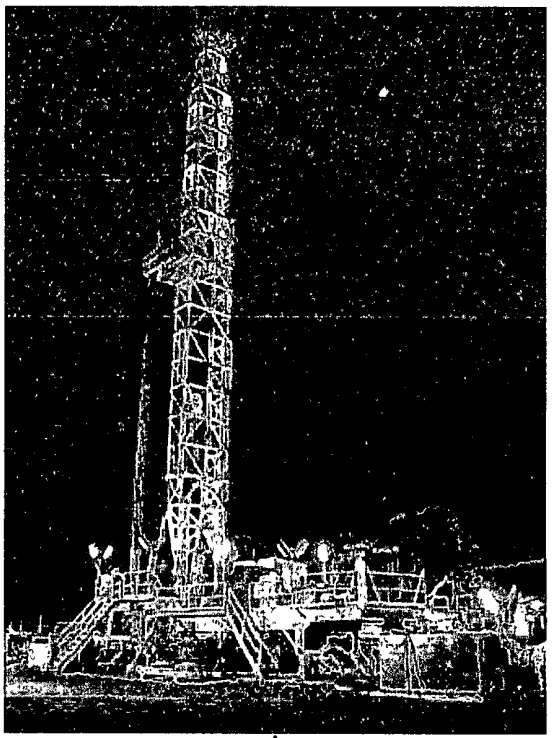
EOG Resources, Inc.

Legal's:
Caballo Federal No. 3H
Lea Co. New Mexico

50' FNL & 2200' FEL Surface Location
Section 23
T-25-S, R-33-E
Lat: N 32.1230279
Long: W 103.5412379

330' FSL & 2200' FEL Bottom Hole Location
Section 23
T-25-S, R-33-E
Lat: N 32.1095563
Long: W 103.5412335

H_2S
"Contingency Plan"



SAFETY SOLUTIONS, LLC.

Safety Solutions, LLC **(432) 686-8555**
3222 Commercial Dr. **Midland, TX 79701**

Table of Contents

H_2S CONTINGENCY PLAN SECTION

Scope:

This contingency plan provides an organized plan of action for alerting and protecting the public within an area of exposure prior to an intentional release, or following the accidental release of a potentially hazardous volume of hydrogen sulfide. The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H_2S).

Objective:

Prevent any and all accidents, and prevent the uncontrolled release of H_2S into the atmosphere.

Provide proper evacuation procedures to cope with emergencies.

Provide immediate and adequate medical attention should an injury occur.

Discussion of Plan:

Suspected Problem Zones:

Implementation: This plan, with all details, is to be fully implemented 1000' before drilling into the first sour zone.

Emergency Response Procedure: This section outlines the conditions and denotes steps to be taken in the event of an emergency.

Emergency Equipment and Procedure: This section outlines the safety and emergency equipment that will be required for the drilling of this well.

Training Provisions: This section outlines the training provisions that must be adhered to 1000' before drilling into the first sour zone.

Emergency call list: Included are the telephone numbers of all persons that would need to be contacted, should an H_2S emergency occur.

Briefing: This section deals with the briefing of all persons involved with the drilling of this well.

Public Safety: Public Safety Personnel will be made aware of the drilling of this well.

Check Lists: Status check lists and procedural check lists have been included to ensure adherence to the plan.

General Information: A general information section has been included to supply support information.

EMERGENCY PROCEDURES SECTION

I. In the event of any evidence of H_2S level above 10ppm, take the following steps immediately:

   a. Secure breathing apparatus.

   b. Order non-essential personnel out of the danger zone.

   c. Take steps to determine if the H_2S level can be corrected or suppressed, and if so, proceed with normal operations.

II. If uncontrollable conditions occur, proceed with the following:

   a. Take steps to protect and/or remove any public downwind of the rig, including partial evacuation or isolation. Notify necessary public safety personnel and the New Mexico Oil Conservation Division of the situation.

   b. Remove all personnel to the Safe Briefing Area.

   c. Notify public safety personnel for help with maintaining roadblocks and implementing evacuation.

   d. Determine and proceed with the best possible plan to regain control of the well. Maintain tight security and safety measures.

III. Responsibility:

   a. The Company Approved Supervisor shall be responsible for the total implementation of the plan.

   b. The Company Approved Supervisor shall be in complete command during any emergency.

   c. The Company Approved Supervisor shall designate a back up Supervisor in the event that he/she is not available.

EMERGENCY PROCEDURE IMPLEMENTATION

I. Drilling or Tripping

a. *All Personnel*

- **i.** When alarm sounds, don escape unit and report to upwind Safe Briefing Area.
- **ii.** Check status of other personnel (buddy system).
- **iii.** Secure breathing apparatus.
- **iv.** Wait for orders from supervisor.

b. *Drilling Foreman*

- **i.** Report to the upwind Safe Briefing Area.
- **ii.** Don Breathing Apparatus and return to the point of release with the Tool Pusher or Driller (buddy system).
- **iii.** Determine the concentration of H_2S.
- **iv.** Assess the situation and take appropriate control measures.

c. *Tool Pusher*

- **i.** Report to the upwind Safe Briefing Area.
- **ii.** Don Breathing Apparatus and return to the point of release with the Drilling Foreman or the Driller (buddy system).
- **iii.** Determine the concentration of H_2S.
- **iv.** Assess the situation and take appropriate control measures.

d. *Driller*

- **i.** Check the status of other personnel (in a rescue attempt, always use the buddy system).
- **ii.** Assign the least essential person to notify the Drilling Foreman and Tool Pusher, in the event of their absence.
- **iii.** Assume the responsiblility of the Drilling Foreman and the Tool Pusher until they arrive, in the event of their absence.

e. *Derrick Man and Floor Hands*

i. Remain in the upwind Safe Briefing Area until otherwise instructed by a supervisor.

f. *Mud Engineer*

i. Report to the upwind Safe Briefing Area.

ii. When instructed, begin check of mud for pH level and H_2S level.

g. *Safety Personnel*

i. Don Breathing Apparatus.

ii. Check status of personnel.

iii. Wait for instructions from Drilling Foreman or Tool Pusher.

II. Taking a Kick

a. All Personnel report to the upwind Safe Briefing Area.

b. Follow standard BOP procedures.

III. Open Hole Logging

a. All unnecessary personnel should leave the rig floor.

b. Drilling Foreman and Safety Personnel should monitor the conditions and make necessary safety equipment recommendations.

IV. Running Casing or Plugging

a. Follow "Drilling or Tripping" procedures.

b. Assure that all personnel have access to protective equipment.

SIMULATED BLOWOUT CONTROL DRILLS

All drills will be initiated by activating alarm devices (air horn). One long blast, on the air horn, for ACTUAL and SIMULATED Blowout Control Drills. This operation will be performed by the Drilling Foreman or Tool Pusher at least one time per week for each of the following conditions, with each crew:

Drill #1 Bottom Drilling

Drill #2 Tripping Drill Pipe

In each of these drills, the initial reaction time to shutting in the well shall be timed as well as the total time for the crew to complete its entire pit drill assignment. The times must be recorded on the IADC Driller's Log as "Blowout Control Drill".

Drill No.:
Reaction Time to Shut-In: minutes, seconds.
Total Time to Complete Assignment: minutes, seconds.

I. Drill Overviews

a. Drill No. 1 – Bottom Drilling

i. Sound the alarm immediately.

ii. Stop the rotary and hoist Kelly joint above the rotary table.

iii. Stop the circulatory pump.

iv. Close the drill pipe rams.

v. Record casing and drill pipe shut-in pressures and pit volume increases.

b. Drill No. 2 – Tripping Drill Pipe

i. Sound the alarm immediately.

ii. Position the upper tool joint just above the rotary table and set the slips.

iii. Install a full opening valve or inside blowout preventer tool in order to close the drill pipe.

iv. Close the drill pipe rams.

v. Record the shut-in annular pressure.

II. Crew Assignments

a. Drill No. 1 – Bottom Drilling

i. Driller

1. Stop the rotary and hoist Kelly joint above the rotary table.
2. Stop the circulatory pump.
3. Check Flow.
4. If flowing, sound the alarm immediately
5. Record the shit-in drill pipe pressure
6. Determine the mud weight increase needed or other courses of action.

ii. Derrickman

1. Open choke line valve at BOP.
2. Signal Floor Man #1 at accumulator that choke line is open.
3. Close choke and upstream valve after pipe tam have been closed.
4. Read the shut-in annular pressure and report readings to Driller.

iii. Floor Man #1

1. Close the pipe rams after receiving the signal from the Derrickman.
2. Report to Driller for further instructions.

iv. Floor Man #2

1. Notify the Tool Pusher and Operator representative of the H_2S alarms.
2. Check for open fires and, if safe to do so, extinguish them.
3. Stop all welding operations.
4. Turn-off all non-explosions proof lights and instruments.
5. Report to Driller for further instructions.

v. Tool Pusher

1. Report to the rig floor.
2. Have a meeting with all crews.

3. Compile and summarize all information.

4. Calculate the proper kill weight.

5. Ensure that proper well procedures are put into action.

vi. Operator Representative

1. Notify the Drilling Superintendent.

2. Determine if an emergency exists and if so, activate the contingency plan.

b. Drill No. 2 – Tripping Pipe

i. Driller

1. Sound the alarm immediately when mud volume increase has been detected.

2. Position the upper tool joint just above the rotary table and set slips.

3. Install a full opening valve or inside blowout preventer tool to close the drill pipe.

4. Check flow.

5. Record all data reported by the crew.

6. Determine the course of action.

ii. Derrickman

1. Come down out of derrick.

2. Notify Tool Pusher and Operator Representative.

3. Check for open fires and, if safe to do so , extinguish them.

4. Stop all welding operations.

5. Report to Driller for further instructions.

iii. Floor Man #1

1. Pick up full opening valve or inside blowout preventer tool and stab into tool joint above rotary table (with Floor Man #2).

2. Tighten valve with back-up tongs.

3. Close pipe rams after signal from Floor Man #2.

4. Read accumulator pressure and check for possible high pressure fluid leaks in valves or piping.

5. Report to Driller for further instructions.

iv. Floor Man #2

1. Pick-up full opening valve or inside blowout preventer tool and stab into tool joint above rotary table (with Floor Man #1).

2. Position back-up tongs on drill pipe.

3. Open choke line valve at BOP.

4. Signal Floor Man #1 at accumulator that choke line is open.

5. Close choke and upstream valve after pipe rams have been closed.

6. Check for leaks on BOP stack and choke manifold.

7. Read annular pressure.

8. Report readings to the Driller.

v. Tool Pusher

1. Report to the rig floor.

2. Have a meeting with all of the crews.

3. Compile and summarize all information.

4. See that proper well kill procedures are put into action.

vi. Operator Representative

1. Notify Drilling Superintendent

2. Determine if an emergency exists, and if so, activate the contingency plan.

IGNITION PROCEDURES

Responsibility:

The decision to ignite the well is the responsibility of the DRILLING FOREMAN in concurrence with the STATE POLICE. In the event the Drilling Foreman is incapacitated, it becomes the responsibility of the RIG TOOL PUSHER. This decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.

2. There is no hope of controlling the blowout under the prevailing conditions.

If time permits, notify the main office, but do not delay if human life is in danger. Initiate the first phase of the evacuation plan.

Instructions for Igniting the Well:

1. Two people are required for the actual igniting operation. Both men must wear self-contained breathing apparatus and must use a full body harness and attach a retrievable safety line to the D-Ring in the back. One man must monitor the atmosphere for explosive gases with the LEL monitor, while the Drilling Foreman is responsible for igniting the well.

2. The primary method to ignite is a 25mm flare gun with a range of approximately 500 feet.

3. Ignite from upwind and do not approach any closer than is warranted.

4. Select the ignition site best suited for protection and which offers an easy escape route.

5. Before igniting, check for the presence of combustible gases.

6. After igniting, continue emergency actions and procedures as before.

7. All unassigned personnel will limit their actions to those directed by the Drilling Foreman.

Note: After the well is ignited, burning Hydrogen Sulfide will convert to Sulfur Dioxide, which is also highly toxic. Do not assume the area is safe after the well is ignited.

TRAINING PROGRAM

When working in an area where Hydrogen Sulfide (H_2S) might be encountered, definite training requirements must be carried out. The Company Supervisor will ensure that all personnel, at the well site, have had adequate training in the following:

1. Hazards and characteristics of Hydrogen Sulfide.
2. Physicals effects of Hydrogen Sulfide on the human body.
3. Toxicity of Hydrogen Sulfide and Sulfur Dioxide.
4. H_2S detection, Emergency alarm and sensor location.
5. Emergency rescue.
6. Resuscitators.
7. First aid and artificial resuscitation.
8. The effects of Hydrogen Sulfide on metals.
9. Location safety.

Service company personnel and visiting personnel must be notified if the zone contains H_2S, and each service company must provide adequate training and equipment for their employees before they arrive at the well site.

EMERGENCY EQUIPMENT REQUIREMENTS

Lease Entrance Sign:

Should be located at the lease entrance with the following information:

CAUTION – POTENTIAL POISON GAS
HYDROGEN SULFIDE
NO ADMITTANCE WITHOUT AUTHORIZATION

Respiratory Equipment:

- Fresh air breathing equipment should be placed at the safe briefing areas and should include the following:
- Two SCBA's at each briefing area.
- Enough air line units to operate safely, anytime the H_2S concentration reaches the IDLH level (100 ppm).
- Cascade system with enough breathing air hose and manifolds to reach the rig floor, the derrickman and the other operation areas.

Windsocks or Wind Streamers:

- A minimum of two 10" windsocks located at strategic locations so that they may be seen from any point on location.
- Wind streamers (if preferred) should be placed at various locations on the well site to ensure wind consciousness at all times. (Corners of location).

Hydrogen Sulfide Detector and Alarms:

- 1 - Four channel H_2S monitor with alarms.
- Four (4) sensors located as follows: #1 – Rig Floor, #2 – Bell Nipple, #3 – Shale Shaker, #4 – Mud Pits.
- Gastec or Draeger pump with tubes.
- Sensor test gas.

Well Condition Sign and Flags:

The Well Condition Sign w/flags should be placed a minimum of 150' before you enter the location. It should have three (3) color coded flags (green, yellow and red) that will be used to denote the following location conditions:

GREEN – Normal Operating Conditions
YELLOW – Potential Danger
RED – Danger, H_2S Gas Present

Auxiliary Rescue Equipment:

- Stretcher
- 2 – 100' Rescue lines.
- First Aid Kit properly stocked.

Mud Inspection Equipment:

Garret Gas Train or Hach Tester for inspection of Hydrogen Sulfide in the drilling mud system.

Fire Extinguishers:

Adequate fire extinguishers shall be located at strategic locations.

Blowout Preventer:

- The well shall have hydraulic BOP equipment for the anticipated BHP.
- The BOP should be tested upon installation.
- BOP, Choke Line and Kill Line will be tested as specified by Operator.

Confined Space Monitor:

There should be a portable multi-gas monitor with at least 3 sensors (O_2, LEL H_2S). This instrument should be used to test the atmosphere of any confined space before entering. It should also be used for atmospheric testing for LEL gas before beginning any type of Hot Work. Proper calibration documentation will need to be provided.

Communication Equipment:

- Proper communication equipment such as cell phones or 2-way radios should be available at the rig.
- Radio communication shall be available for communication between the company man's trailer, rig floor and the tool pusher's trailer.

- Communication equipment shall be available on the vehicles.

Special Control Equipment:

- Hydraulic BOP equipment with remote control on the ground.
- Rotating head at the surface casing point.

Evacuation Plan:

- Evacuation routes should be established prior to spudding the well.
- Should be discussed with all rig personnel.

Designated Areas:

Parking and Visitor area:

- All vehicles are to be parked at a pre-determined safe distance from the wellhead.
- Designated smoking area.

Safe Briefing Areas:

- Two Safe Briefing Areas shall be designated on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds or they are at a 180 degree angle if wind directions tend to shift in the area.
- Personal protective equipment should be stored at both briefing areas or if a moveable cascade trailer is used, it should be kept upwind of existing winds. When wind is from the prevailing direction, both briefing areas should be accessible.

Note:

- Additional equipment will be available at the Safety Solutions, LLC office.
- Additional personal H_2S monitors are available for all employees on location.
- Automatic Flare Igniters are recommended for installation on the rig.

CHECK LISTS

Status Check List

Note: Date each item as they are implemented.

1. Sign at location entrance. _____
2. Two (2) wind socks (in required locations). _____
3. Wind Streamers (if required). _____
4. SCBA's on location for all rig personnel and mud loggers. _____
5. Air packs, inspected and ready for use. _____
6. Spare bottles for each air pack (if required). _____
7. Cascade system for refilling air bottles. _____
8. Cascade system and hose line hook up. _____
9. Choke manifold hooked-up and tested. (before drilling out surface casing.) _____
10. Remote Hydraulic BOP control (hooked-up and tested before drilling out surface casing). _____
11. BOP tested (before drilling out surface casing). _____
12. Mud engineer on location with equipment to test mud for H_2S. _____
13. Safe Briefing Areas set-up _____
14. Well Condition sign and flags on location and ready. _____
15. Hydrogen Sulfide detection system hooked -up & tested. _____
16. Hydrogen Sulfide alarm system hooked-up & tested. _____
17. Stretcher on location at Safe Briefing Area. _____
18. 2 – 100' Life Lines on location. _____
19. 1 – 20# Fire Extinguisher in safety trailer. _____
20. Confined Space Monitor on location and tested. _____
21. All rig crews and supervisor trained (as required). _____

22. Access restricted for unauthorized personnel. _____

23. Drills on H_2S and well control procedures. _____

24. All outside service contractors advised of potential H_2S on the well. _____

25. NO SMOKNG sign posted. _____

26. H_2S Detector Pump w/tubes on location. _____

27. 25mm Flare Gun on location w/flares. _____

28. Automatic Flare Igniter installed on rig. _____

Procedural Check List

Perform the following on each tour:

1. Check fire extinguishers to see that they have the proper charge.
2. Check breathing equipment to insure that they have not been tampered with.
3. Check pressure on the supply air bottles to make sure they are capable of recharging.
4. Make sure all of the Hydrogen Sulfide detection systems are operative.

Perform the following each week:

1. Check each piece of breathing equipment to make sure that they are fully charged and operational. This requires that the air cylinder be opened and the mask assembly be put on and tested to make sure that the regulators and masks are properly working. Negative and Positive pressure should be conducted on all masks.
2. BOP skills.
3. Check supply pressure on BOP accumulator stand-by source.
4. Check all breathing air mask assemblies to see that straps are loosened and turned back, ready for use.
5. Check pressure on cascade air cylinders to make sure they are fully charged and ready to use for refill purposes if necessary.
6. Check all cascade system regulators to make sure they work properly.
7. Perform breathing drills with on-site personnel.
8. Check the following supplies for availability:
    - Stretcher
    - Safety Belts and Ropes
    - Spare air Bottles
    - Spare Oxygen Bottles (if resuscitator required)
    - Gas Detector Pump and Tubes
    - Emergency telephone lists
9. Test the Confined Space Monitor to verify the batteries are good

BRIEFING PROCEDURES

The following scheduled briefings will be held to ensure the effective drilling and operation of this project:

Pre-Spud Meeting

Date: Prior to spudding the well.
Attendance: Drilling Supervisor
Drilling Engineer
Drilling Foreman
Rig Tool Pushers
Rig Drillers
Mud Engineer
All Safety Personnel
Key Service Company Personnel

Purpose: Review and discuss the well program, step-by-step, to insure complete understanding of assignments and responsibilities.

EVACUATION PLAN

General Plan

The direct lines of action prepared by SAFETY SOLUTIONS, LLC to protect the public from hazardous gas situations are as follows:

1. When the company approved supervisor (Drilling Foreman, Tool Pusher or Driller) determine that Hydrogen Sulfide gas cannot be limited to the well location, and the public will be involved, he will activate the evacuation plan. Escape routes are noted on the area map.

2. Company safety personnel or designee will notify the appropriate local government agency that a hazardous condition exists and evacuation needs to be implemented.

3. Company approved safety personnel that have been trained in the use of the proper emergency equipment will be utilized.

4. Law enforcement personnel (State Police, Local Police Department, Fire Department, and the Sheriff's Department) will be called to aid in setting up and maintaining road blocks. Also, they will aid in evacuation of the public if necessary.

NOTE: Law enforcement personnel will not be asked to come into a contaminated area. Their assistance will be limited to uncontaminated areas. Constant radio contact will be maintained with them.

5. After the discharge of gas has been controlled, "Company" safety personnel will determine when the area is safe for re-entry.

See Emergency Action Plan

Emergency Assistance Telephone List

PUBLIC SAFETY:		**911 or**
Lea County Sheriff's Department		(575) 396-3611
	Rod Coffman	
Fire Department:		
	Carlsbad	(575) 885-3125
	Artesia	(575) 746-5050
Hospitals:		
	Carlsbad	(575) 887-4121
	Artesia	(575) 748-3333
	Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad		(575) 748-9718
Highway Department		(575) 885-3281
New Mexico Oil Conservation		(575) 476-3440
U.S. Dept. of Labor		(575) 887-1174

EOG Resources, Inc.

EOG / Midland	Office	(432) 686-3600
Company Drilling Consultants:		
Danny Kiser Will Henderson	Cell	(432) 894-3417
Larry King John Grubbs		
Drilling Engineer		
Steve Munsell	Office	(432) 686-3609
	Cell	(432) 894-1256
Operations Manager		
Travis Lain	Office	(432) 686-3740
	Cell	(432) 254-3521
Drilling Superintendent		
Barney Thompson	Office	(432) 686-3678
	Cell	(432) 254-9056
Field Drilling Superintendent		
Ron Welch	Cell	(432) 386-0592

Cactus Drilling		
Cactus Drilling	Office	(580) 799-2752
Cactus 123 Drilling Rig	Rig	(432) 894-3417
Tool Pusher:		
Terry Johnson	Cell	(575) 370-5620
Safety Consultants		
Safety Solutions, LLC	Office	(432) 686-8555
Cliff Strasner	Cell	(432) 894-9789
Craig Strasner	Cell	(432) 894-0341

MAPS AND PLATS
(Maps & Plats Attached)

Affected Notification List

(within a 65' radius of exposure @100ppm)

The geologic zones that will be encountered during drilling are known to contain hazardous quantities of H_2S. The accompanying map illustrates the affected areas of the community. The residents within this radius will be notified via a hand delivered written notice describing the activities, potential hazards, conditions of evacuation, evacuation drill siren alarms and other precautionary measures.

Evacuee Description:
Residents: **THERE ARE NO RESIDENTS WITHIN 3000' ROE.**

Notification Process:

A continuous siren audible to all residence will be activated, signaling evacuation of previously notified and informed residents.

Evacuation Plan:
All evacuees will migrate lateral to the wind direction.

The Oil Company will identify all home bound or highly susceptible individuals and make special evacuation preparations, interfacing with the local and emergency medical service as necessary.

GENERAL INFORMATION

Toxic Effects of H_2S Poisoning

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity – 1.192) and is colorless and transparent. Hydrogen Sulfide is almost as toxic as Hydrogen Cyanide and is 5-6 times more toxic than Carbon Monoxide. Occupational exposure limits for Hydrogen Sulfide and other gases are compared below in Table 1. Toxicity table for H_2S and physical effects are shown in Table 2.

Table 1
Permissible Exposure Limits of Various Gases

Common Name	Symbol	Sp. Gravity	TLV	STEL	IDLH
Hydrogen Cyanide	HCN	.94	4.7 ppm	C	
Hydrogen Sulfide	H_2S	1.192	10 ppm	15 ppm	100 ppm
Sulfide Dioxide	SO_2	2.21	2 ppm	5 ppm	
Chlorine	CL	2.45	.5 ppm	1 ppm	
Carbon Monoxide	CO	.97	25 ppm	200 ppm	
Carbon Dioxide	CO_2	1.52	5000 ppm	30,000 ppm	
Methane	CH_4	.55	4.7% LEL	14% UEL	

Definitions

A. TLV – Threshold Limit Value is the concentration employees may be exposed based on a TWA (time weighted average) for eight (8) hours in one day for 40 hours in one (1) week. This is set by ACGIH (American Conference of Governmental Hygienists) and regulated by OSHA.

B. STEL – Short Term Exposure Limit is the 15 minute average concentration an employee may be exposed to providing that the highest exposure never exceeds the OEL (Occupational Exposure Limit). The OEL for H_2S is 19 PPM.

C. IDLH – Immediately Dangerous to Life and Health is the concentration that has been determined by the ACGIH to cause serious health problems or death if exposed to this level. The IDLH for H_2S is 100 PPM.

D. TWA – Time Weighted Average is the average concentration of any chemical or gas for an eight (8) hour period. This is the concentration that any employee may be exposed based on an TWA.

TABLE 2

Toxicity Table of H_2S

Percent %	PPM	Physical Effects
.0001	1	Can smell less than 1 ppm.
.001	10	TLV for 8 hours of exposure.
.0015	15	STEL for 15 minutes of exposure.
.01	100	Immediately Dangerous to Life & Health. Kills sense of smell in 3 to 5 minutes.
.02	200	Kills sense of smell quickly, may burn eyes and throat.
.05	500	Dizziness, cessation of breathing begins **in a few minutes.**
.07	700	Unconscious quickly, death will result if not rescued promptly.
.10	1000	Death will result unless rescued promptly. Artificial resuscitation may be necessary.

PHYSICAL PROPERTIES OF H_2S

The properties of all gases are usually described in the context of seven major categories:

COLOR
ODOR
VAPOR DENSITY
EXPLOSIVE LIMITS
FLAMMABILITY
SOLUBILITY (IN WATER)
BOILING POINT

Hydrogen Sulfide is no exception. Information from these categories should be considered in order to provide a fairly complete picture of the properties of the gas.

COLOR – TRANSPARENT

Hydrogen Sulfide is colorless so it is invisible. This fact simply means that you can't rely on your eyes to detect its presence. In fact that makes this gas extremely dangerous to be around.

ODOR – ROTTEN EGGS

Hydrogen Sulfide has a distinctive offensive smell, similar to "rotten eggs". For this reason it earned its common name "sour gas". However, H_2S, even in low concentrations, is so toxic that it attacks and quickly impairs a victim's sense of smell, so it could be fatal to rely on your nose as a detection device.

VAPOR DENSITY – SPECIFIC GRAVITY OF 1.192

Hydrogen Sulfide is heavier than air so it tends to settle in low-lying areas like pits, cellars or tanks. If you find yourself in a location where H_2S is known to exist, protect yourself. Whenever possible, work in an area upwind and keep to higher ground.

EXPLOSIVE LIMITS – 4.3% TO 46%

Mixed with the right proportion of air or oxygen, H_2S will ignite and burn or explode, producing another alarming element of danger besides poisoning.

FLAMMABILITY

Hydrogen Sulfide will burn readily with a distinctive clear blue flame, producing Sulfur Dioxide (SO_2), another hazardous gas that irritates the eyes and lungs.

SOLUBILITY – 4 TO 1 RATIO WITH WATER

Hydrogen Sulfide can be dissolved in liquids, which means that it can be present in any container or vessel used to carry or hold well fluids including oil, water, emulsion and sludge. The solubility of H_2S is dependent on temperature and pressure, but if conditions are right, simply agitating a fluid containing H_2S may release the gas into the air.

BOILING POINT – (-76 degrees Fahrenheit)

Liquefied Hydrogen Sulfide boils at a very low temperature, so it is usually found as a gas.

RESPIRATOR USE

The Occupational Safety and Health Administration (OSHA) regulate the use of respiratory protection to protect the health of employees. OSHA's requirements are written in the Code of Federal Regulations, Title 29, Part 1910, Section 134, Respiratory Protection. This regulation requires that all employees who might be required to wear respirators, shall complete a OSHA mandated medical evaluation questionnaire. The employee then should be fit tested prior to wearing any respirator while being exposed to hazardous gases.

Written procedures shall be prepared covering safe use of respirators in dangerous atmospheric situations, which might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available respirators.

Respirators shall be inspected prior to and after each use to make sure that the respirator has been properly cleaned, disinfected and that the respirator works properly. The unit should be fully charged prior to being used.

Anyone who may use respirators shall be properly trained in how to properly seal the face piece. They shall wear respirators in normal air and then in a test atmosphere. (Note: Such items as facial hair (beard or sideburns) and eyeglass temple pieces will not allow a proper seal.) Anyone that may be expected to wear respirators should have these items removed before entering a toxic atmosphere. A special mask must be obtained for anyone who must wear eyeglasses. Contact lenses should not be allowed.

Respirators shall be worn during the following conditions:

A. Any employee who works near the top or on the top of any tank unless tests reveal less than 20 ppm of H_2S.

B. When breaking out any line where H_2S can reasonably be expected.

C. When sampling air in areas where H_2S may be present.

D. When working in areas where the concentration of H_2S exceeds the Threshold Limit Value for H_2S (10 ppm).

E. At any time where there is a doubt as to the H_2S level in the area to be entered.

EMERGENCY RESCUE PROCEDURES

DO NOT PANIC!!!

Remain Calm – Think

1. Before attempting any rescue you must first get out of the hazardous area yourself. Go to a safe briefing area.

2. Sound alarm and activate the 911 system.

3. Put on breathing apparatus. At least two persons should do this, when available use the buddy system.

4. Rescue the victim and return them to a safe briefing area.

5. Perform an initial assessment and begin proper First Aid/CPR procedures.

6. Keep victim lying down with a blanket or coat, etc.., under the shoulders to keep airway open. Conserve body heat and do not leave unattended.

7. If the eyes are affected by H_2S, wash them thoroughly with potable water. For slight irritation, cold compresses are helpful.

8. In case a person has only minor exposure and does not lose consciousness totally, it's best if he doesn't return to work until the following day.

9. Any personnel overcome by H_2S should always be examined by medical personnel. They should always be transported to a hospital or doctor.

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG RESOURCES, INC
LEASE NO.:	NM108503
WELL NAME & NO.:	3H-CABALLO 23 FEDERAL
SURFACE HOLE FOOTAGE:	050' FNL & 2200' FEL
BOTTOM HOLE FOOTAGE	0330' FSL & 2200' FEL
LOCATION:	Section 23, T. 25 S., R. 33 E., NMPM
COUNTY:	Lea 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.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. 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.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (575) 393-3612 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call theCarlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a possible hazard. It has been reported in the section to the northeast and the section to the southwest. If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on

which the draw works are located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible water and brine flows in the Salado, Castile and Delaware Mountain groups.
Possible lost circulation in the Castile and Delaware Mountain groups.

1. The **13-3/8** inch surface casing shall be set at approximately **1130 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Fresh water mud to be used to setting depth. If salt is encountered, set casing shoe 25 feet above the top of salt.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Casing to be set within the base of the Castile or the Lamar limestone.**

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Pilot Hole: Bottom hole plug requires WOC and tag. Tag a minimum of 220' above TD. KOP approved as proposed.

Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips or where the float does not hold, the minimum wait time before cut-off is eight hours after bumping the plug or when the cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. BOP/BOPE testing can begin after the above conditions are satisfied.

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

    c. The results of the test shall be reported to the appropriate BLM office.

    d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

    e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

DHW 012811

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

b. Activities of other parties including, but not limited to:

(1) Land clearing.
(2) Earth-disturbing and earth-moving work.
(3) Blasting.
(4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **25** feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement

shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

(March 1989)

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.)

Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines, " Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "raptor safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180

days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

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.

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre

Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

**Four-winged Saltbush 5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed