EEO

OCD Artesia

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NMOCD ARTESIA

ATS-10-228 RM

Form 3160-3
(February 2005)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.	NM 100554
6. If Indian, Allotee or Tribe Name	
7. If Unit or CA Agreement, Name and No	
8. Lease Name and Well No.	WEST BRUSHY 27 FED 1H
9. API Well No.	30-015 - 37679
10. Field and Pool, or Exploratory	Undesignated: Bone Spring
11. Sec., T. R. M or Blk. and Survey or Area	Section 27, T25S-R29E, N.M.P.M.
12. County or Parish	Eddy
13. State	NM

1a. Type of work: ☑ DRILL ☐ REENTER

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

2. Name of Operator: EOG Resources, Inc.

3a. Address: P.O. Box 2267 Midland, TX 79702

3b. Phone No. (include area code): 432-686-3642

4. Location of Well (Report location clearly and in accordance with any State requirements):
At surface: 270' FNL & 405' FWL (U/L D)
At proposed prod. zone: 330' FSL & 467' FWL (U/L M)

UNORTHODOX Well LOCATION becomes orthodox @ 7175' MD

14. Distance in miles and direction from nearest town or post office*: Approx 11 miles SE from Malaga, NM

15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any)	270'	16. No. of acres in lease: 2,240	17. Spacing Unit dedicated to this well: W/2 W/2
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	10,100	19. Proposed Depth: TVD: 7400' Pit 8,150'TVD;11904'TMD	20. BLM/BIA Bond No. on file: NM2308
21. Elevations (Show whether DF, KDB, RT, GL, etc.): GL 3,018.5		22. Approximate date work will start*: 04/15/2010	23. Estimated duration: 30 days

24. Attachments

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

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

25. Signature: Donny G. Glanton	Name (Printed/Typed): Donny G. Glanton	Date: 01/19/2010

Title: Sr. Lease Operations ROW Representative

Approved by (Signature): /s/ Don Peterson	Name (Printed/Typed):	Date: MAR 8 2010
Title: FIELD MANAGER	Office: CARLSBAD FIELD OFFICE	

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

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

*(Instructions on page 2)

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

CARLSBAD CONTROLLED WATER BASIN

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

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
30-015-37679		Undesignated; Bone Spring

Property Code	Property Name	Well Number
38080	WEST BRUSHY 27 FED.	1H

OGRID No.	Operator Name	Elevation
7377	EOG RESOURCES, INC.	3018.5'

Surface Location

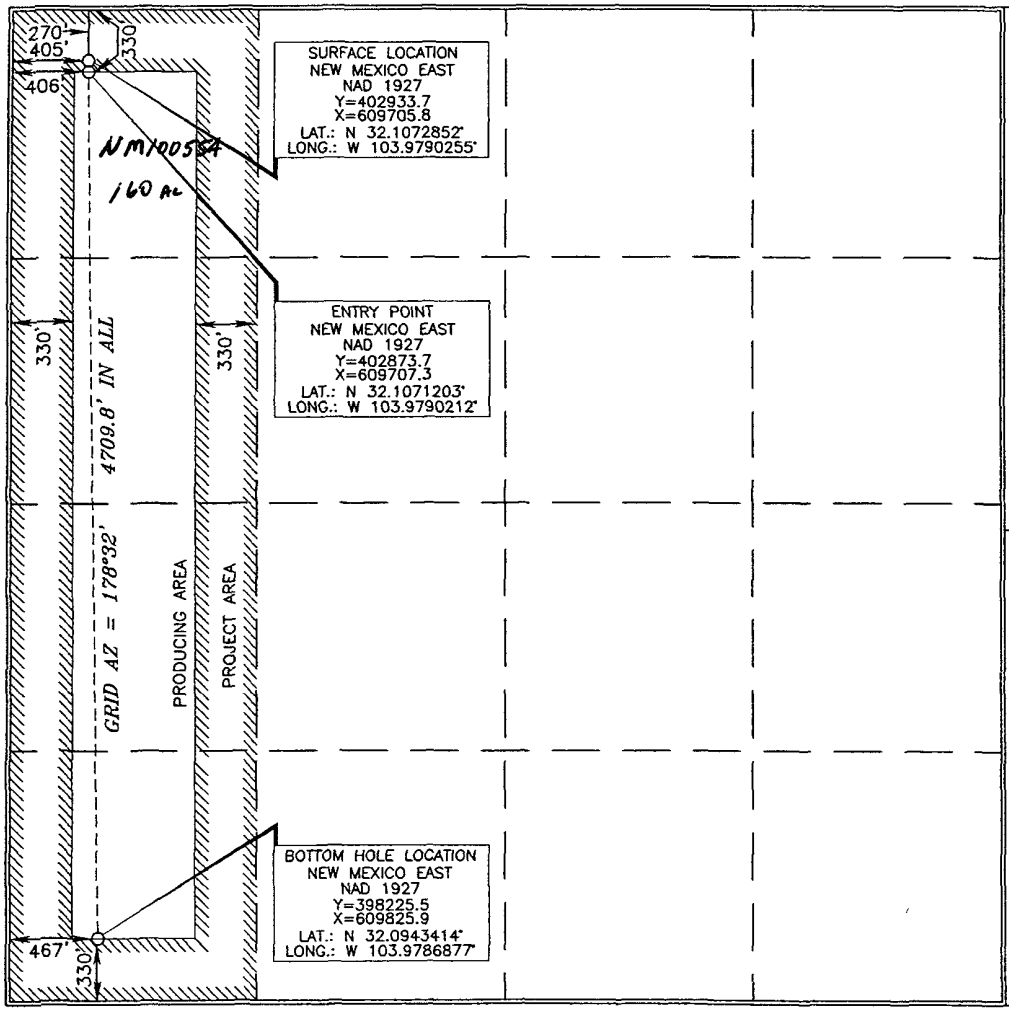
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	27	25 SOUTH	29 EAST, N.M.P.M.		270'	NORTH	405'	WEST	EDDY

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
M	27	25 SOUTH	29 EAST, N.M.P.M.		330'	SOUTH	467'	WEST	EDDY

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.

Donny G. Glanton 1/19/2010
Signature Date

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
JANUARY 12, 2010
Date of Survey

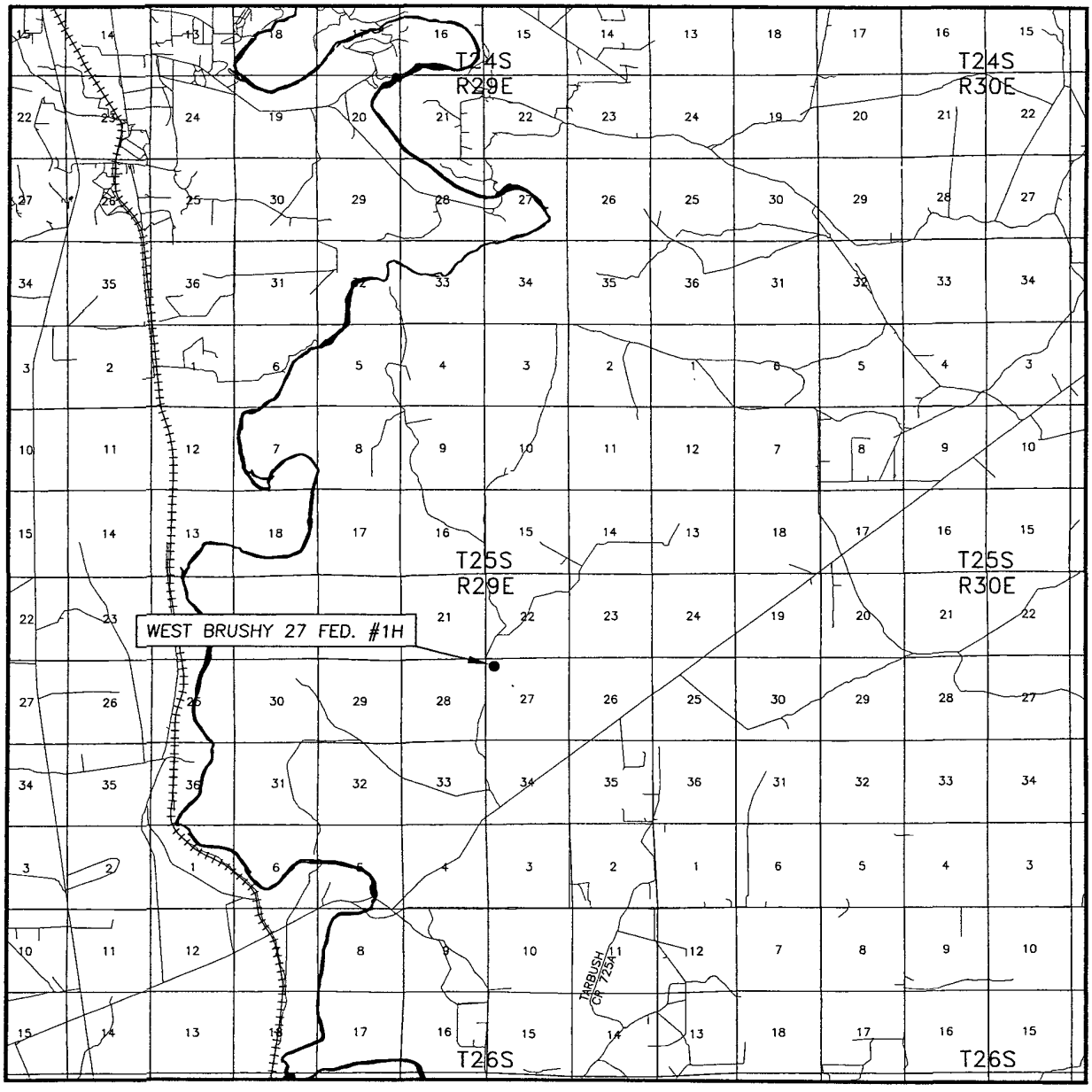
Signature and Seal of Professional Surveyor: NEW MEXICO 15079 REGISTERED PROFESSIONAL LAND SURVEYOR

Terry J. Asel 1/14/2010
Certificate Number 15079

WO# 100112WL (KA)

Exhibit 2

VICINITY MAP



SEC. 27 TWP. 25-S RGE. 29-E
SURVEY N.M.P.M.
COUNTY EDDY
DESCRIPTION 270' FNL & 405' FWL
ELEVATION 3018.5'
OPERATOR EOG RESOURCES, INC.
LEASE WEST BRUSHY 27 FED. #1H

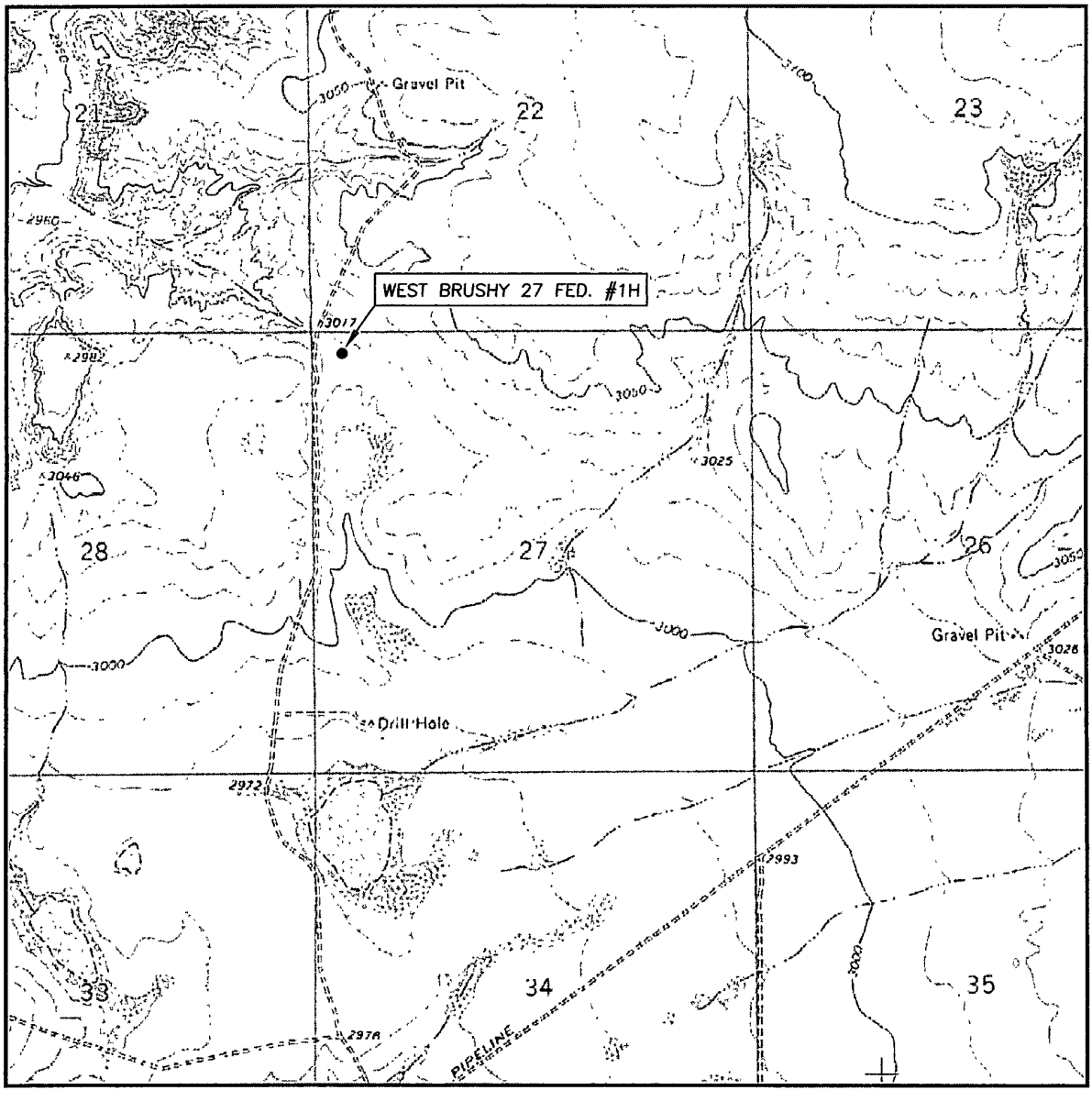
SCALE: 1" = 2 MILES

Asel Surveying

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

DIRECTIONS FROM THE INTERSECTION OF U.S. HWY. #285 AND BLACK RIVER VILLAGE ROAD IN MALAGA, GO SOUTH ON U.S. HWY. #285 FOR 12.6 MILES, TURN LEFT ON COUNTY ROAD #725 (WHITETHORN ROAD) AND GO EAST NORTHEAST FOR 4.0 MILES, TURN LEFT ON LEASE ROAD AND GO NORTHEAST ALONG PIPELINE FOR 2.0 MILES, TURN LEFT AND GO NORTH ON CALICHE ROAD FOR 1.8 MILES TO PROPOSED NEW ROAD, GO EAST (ON PROPOSED NEW ROAD) FOR 192 FEET TO LOCATION.

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 27 TWP. 25-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 270' FNL & 405' FWL

ELEVATION 3018.5'

OPERATOR EOG RESOURCES, INC.

LEASE WEST BRUSHY 27 FED. #1H

U.S.G.S. TOPOGRAPHIC MAP
ROSS RANCH, N.M.

Asel Surveying

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

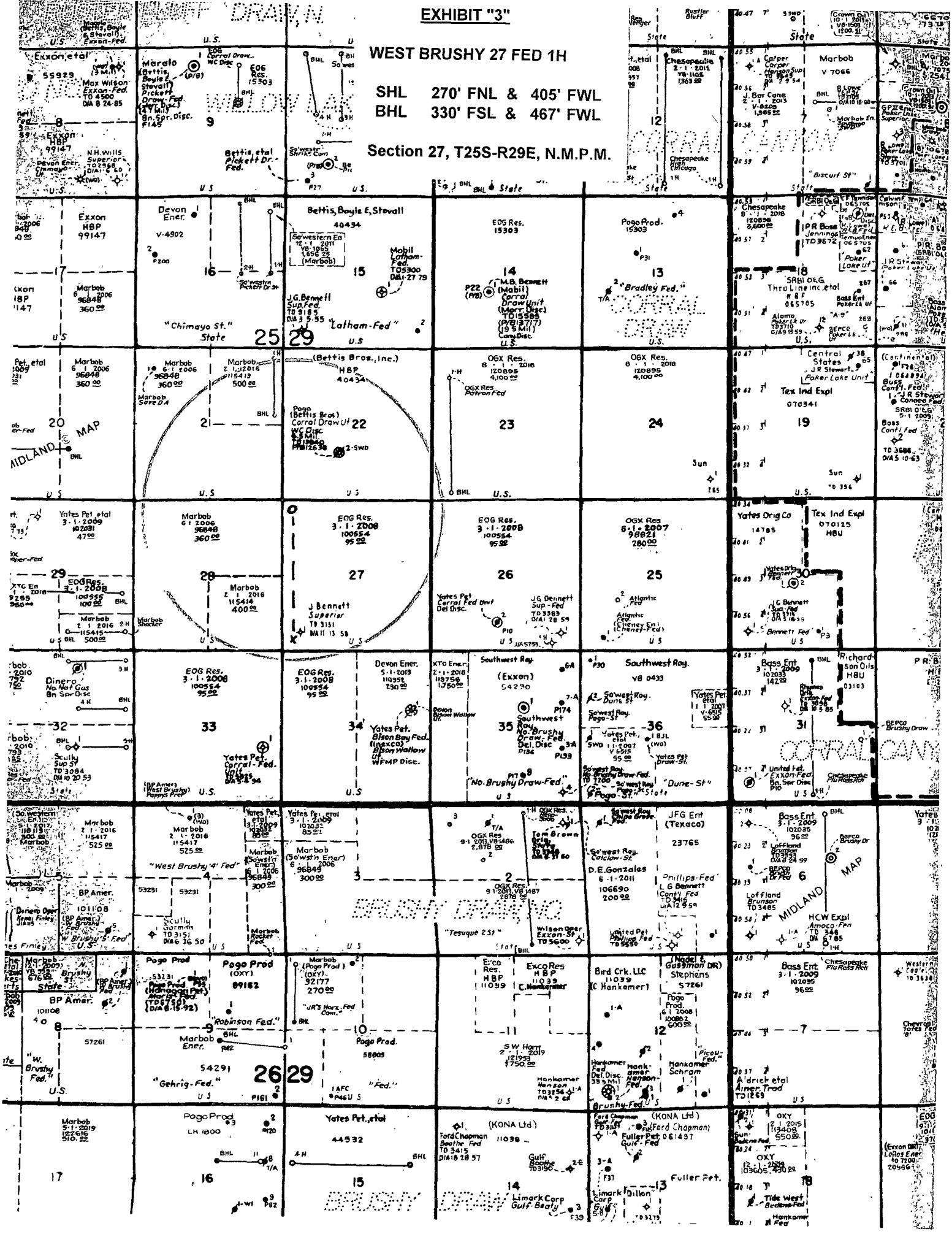
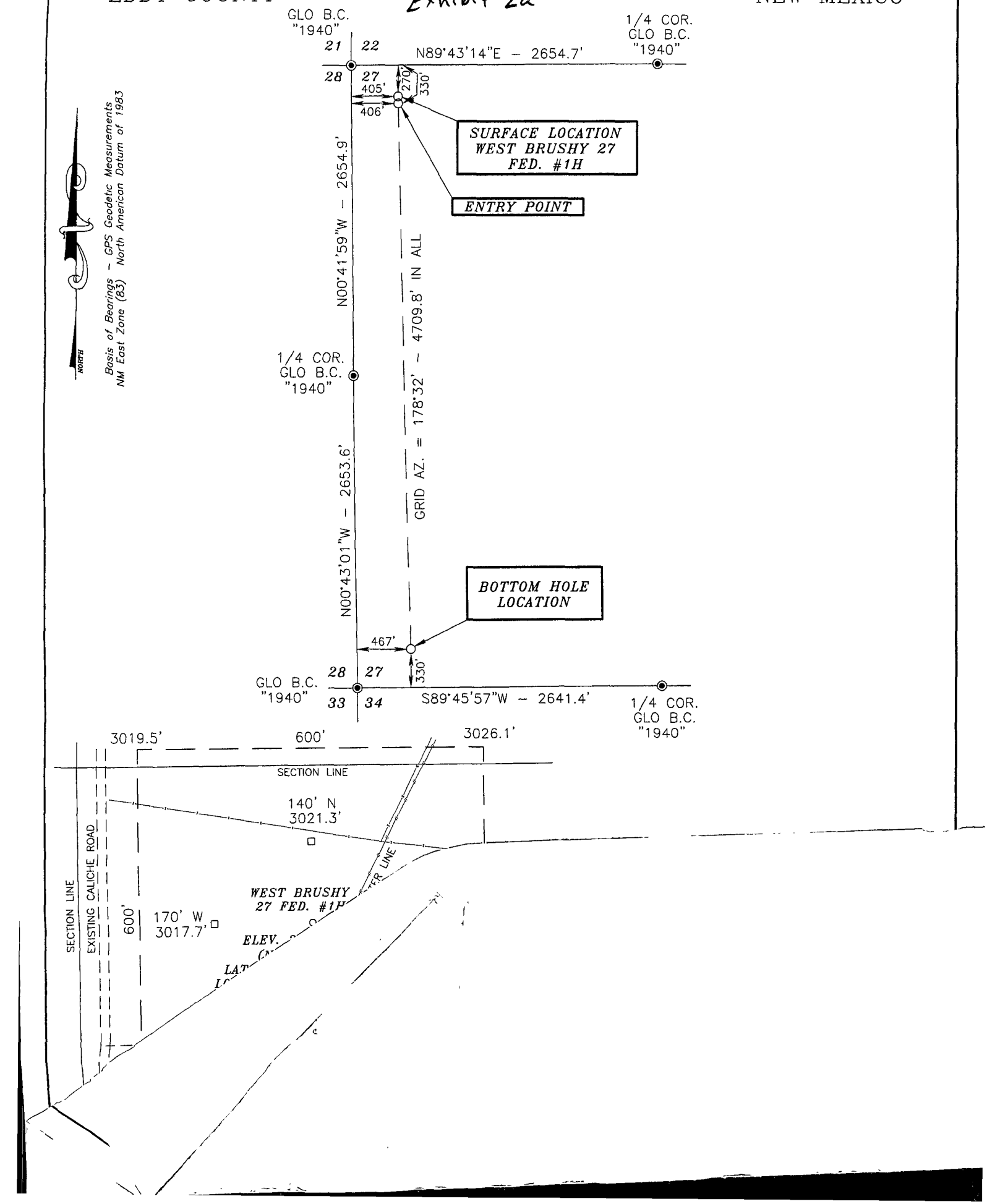


EXHIBIT "3"
WEST BRUSHY 27 FED 1H
SHL 270' FNL & 405' FWL
BHL 330' FSL & 467' FWL
Section 27, T25S-R29E, N.M.P.M.
MIDLAND MAP
CORRAL DRAW
BRUSHY DRAW
WILDCAT
Exxon, etal
Max Wilson
Exxon Fed.
Marata
Devon Ener.
Bettis, Boyle & Stovall
Bettis, etal Pickett Dr. Fed.
Bettis, Boyle E, Stovall
Latham-Fed
Mobil Latham-Fed.
J.G. Bennett Sup. Fed.
EOG Res.
M.B. Bennett (Mobil) Corral Draw Unit
Pogo Prod.
"Bradley Fed."
Chesapeake
Marbob
Tex Ind Expl
Yates Pet. etal
EOG Res. 3-1-2008
Marbob 6-1-2006 96848 360 00
OGX Res. 8-1-2018 120895 4,100 00
OGX Res. 6-1-2007 98821 280 00
Yates Drlg Co
Dinero
Scully Sup-Sf
Southwest Roy.
Exxon
Bass Ent
Richardson Oils HBU
BP Amer.
Pogo Prod
Pogo Prod (OXY)
Robinson Fed.
Marbob Ener.
Gehrig-Fed.
Exco Res. HBP 11039
Bird Crk, LLC
Stephens
Aldrich etal
Yates Pet., etal
Limark Corp Gulf Beaty
Fuller Pet.
OXY
Tide West
Hankamer
Sun
Central States
Poker Lake Unit
Biscuit St
Chimayo St.
Latham-Fed
Bradley Fed.
Dune St
Tesuque 25 Fed
West Brushy 4 Fed
West Brushy 5 Fed
Gehrig-Fed
Robinson Fed.
Fed.
U.S.
State
BHL
SHL

SECTION 27, TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY NEW MEXICO

Exhibit 2a



Permit Information:

Well Name: West Brushy Fed 27 No. 1H

Location:

SL: 270' FNL & 405' FWL, Section 27, T-25-S, R-29-E, Eddy Co., N.M.
BHL: 330' FSL & 467' FWL, Section 27, T-25-S, R-29-E, Eddy Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5"	0 – 625'	13.375"	48#	H40	STC	1.10	1.25	1.60
12.25"	0-3000'	8.625"	32#	J55	LTC	1.10	1.25	1.60
7.875"	0'-11,904'	5.5"	17#	N80	LTC	1.10	1.25	1.60

50' of

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/ft	Slurry Description
625'	500	14.8	1.32	Class C + 0.005 pps Static Free + 2% $CaCl_2$ + 0.25 pps CelloFlake + 0.005 gps FP-6L (TOC @ surface)
3,000'	900	12.7	2.01	Class C + 2% SMS + 0.8% R-3 + 0.25 pps CelloFlake + 0.005 pps Static Free (TOC @ surface)
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
BH Plug 8150'-7950'	75	18.0	0.90	Class H + 0.005 lbs/sx Static Free + 5% Salt + 1.2% CD31 + 0.005 gps FP-6L
KO Plug	250	18.0	0.90	Class H + 0.005 lbs/sx Static Free + 5% Salt + 1.2% CD31 + 0.005 gps FP-6L
11,904'	1050	14.2	1.30	1st Stage Cmt: 50:50:2 Class 'H' + 0.30% FL-52A + 0.20% CD-32 + 0.35% SMS + 5.00% Salt (2.454 lb/sk) + 0.45% R-3 + 0.005 lb/sk Static Free (Stage tool @ 5000')
	575	11.8	2.31	2nd Stage Lead: 50:50:10 Poz:C:Gel+ 0.005 pps Static Free + 0.25 pps CelloFlake + 0.90% FL-52A + 0.30% ASA-301 + 0.15% SMS (TOC @ 2500')
	100	14.2	1.30	2nd Stage Tail: 50:50:2 Class 'H' + 0.30% FL-52A + 0.20% CD-32 + 0.35% SMS + 5.00% Salt (2.454 lb/sk) + 0.45% R-3 + 0.005 lb/sk Static Free .

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 625'	Fresh - Gel	8.6-8.8	28-34	N/c
625' – 3,000'	Brine	10.0-10.2	28-34	N/c
3,000' – 8,150' Pilot hole	Cut Brine	8.4-9.0	28-34	N/c
KOP – 11,904' Lateral	Cut Brine - XCD	9.0-9.5	40-42	8-10

West Brushy 27 Fed #1H

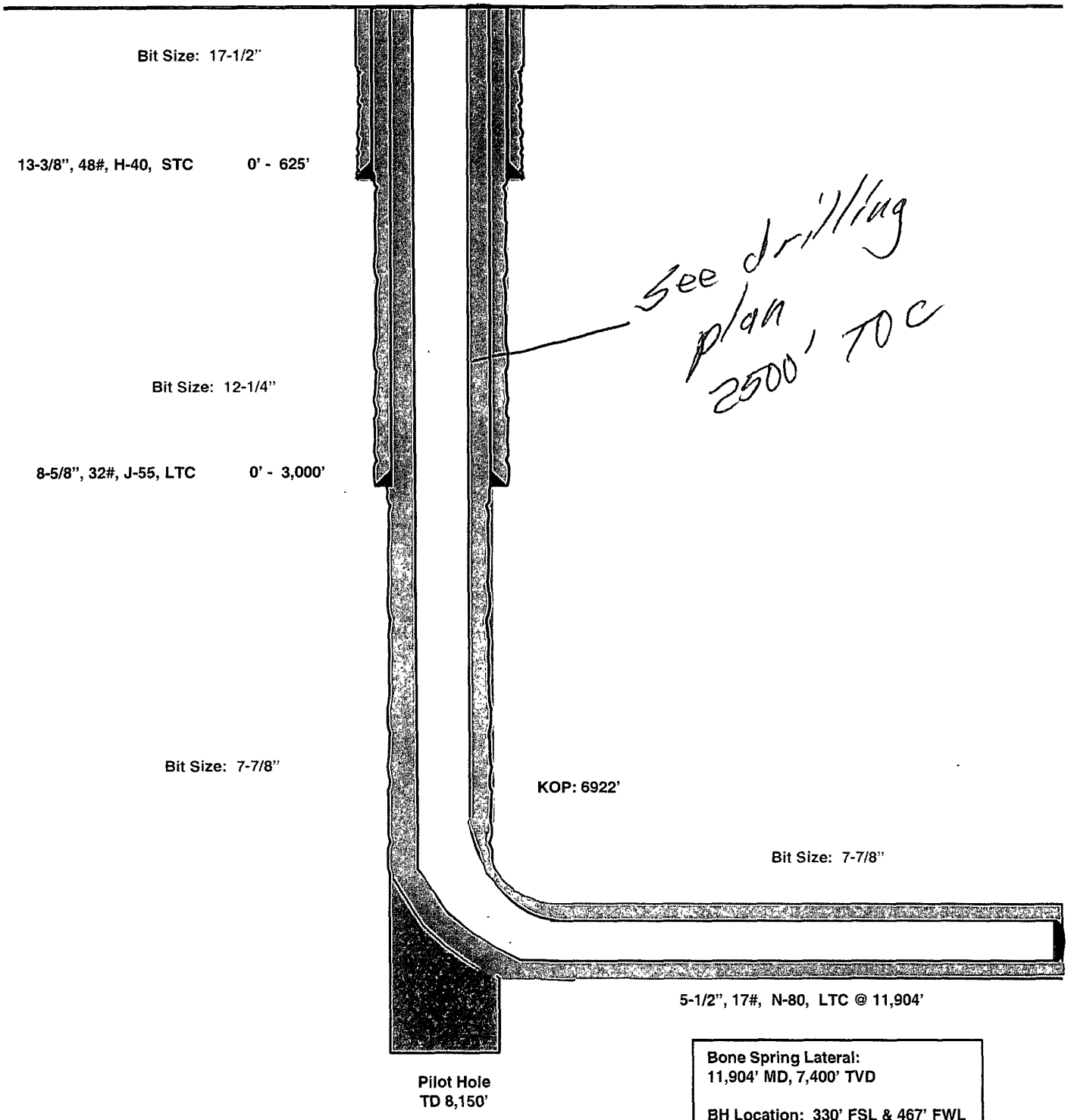
Eddy County, New Mexico

270' FNL
405' FWL
Section 27
T-25-S, R-29-E

Proposed Wellbore

API: 30-015-******

KB: 3,048.5'
GL: 3,018.5'



Bone Spring Lateral:
11,904' MD, 7,400' TVD

BH Location: 330' FSL & 467' FWL
Section 27
T-25-S, R-29-E

EOG RESOURCES, INC.
WEST BRUSHY FED 27 NO. 1H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	575'
Top of Salt	680'
Base of Salt	2,725'
Lamar	3,070'
Bell Canyon	3,115'
Cherry Canyon	3,960'
Lower Cherry Canyon	5,030'
Brushy Canyon	5,245'
Lower Brushy Canyon	6,595'
Bone Spring Lime	6,840'
1st Bone Spring Sand	7,725'
2nd Bone Spring Carb	8,050'
Pilot Hole TD	8,150'

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

Upper Permian Sands	0- 200'	Fresh Water
Bell Canyon	3,115'	Oil
Cherry Canyon	3,960'	Oil
Brushy Canyon	5,245'	Oil
1st Bone Spring Sand	7,725'	Oil
2nd Bone Spring Carbonate	8,050'	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 13.375" casing at 600' 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
17.5"	0 – 625'	13.375"	48#	H40	STC	1.10	1.25	1.60
12.25"	0-3000'	8.625"	32#	J55	LTC	1.10	1.25	1.60
7.875"	0'-11,904'	5.5"	17#	N80	LTC	1.10	1.25	1.60

See COA

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/ft	Slurry Description
625'	500	14.8	1.32	Class C + 0.005 pps Static Free + 2% $CaCl_2$ + 0.25 pps CelloFlake + 0.005 gps FP-6L (TOC @ surface)
3,000'	900	12.7	2.01	Class C + 2% SMS + 0.8% R-3 + 0.25 pps CelloFlake + 0.005 pps Static Free (TOC @ surface)
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
BH Plug 8150'-7950'	75	18.0	0.90	Class H + 0.005 lbs/sx Static Free + 5% Salt + 1.2% CD31 + 0.005 gps FP-6L
KO Plug	250	18.0	0.90	Class H + 0.005 lbs/sx Static Free + 5% Salt + 1.2% CD31 + 0.005 gps FP-6L
11,904'	1050	14.2	1.30	1st Stage Cmt: 50:50:2 Class 'H' + 0.30% FL-52A + 0.20% CD-32 + 0.35% SMS + 5.00% Salt (2.454 lb/sk) + 0.45% R-3 + 0.005 lb/sk Static Free (Stage tool @ 5000')
	575	11.8	2.31	2nd Stage Lead: 50:50:10 Poz:C:Gel+ 0.005 pps Static Free + 0.25 pps CelloFlake + 0.90% FL-52A + 0.30% ASA-301 + 0.15% SMS (TOC @ 2500')
	100	14.2	1.30	2nd Stage Tail: 50:50:2 Class 'H' + 0.30% FL-52A + 0.20% CD-32 + 0.35% SMS + 5.00% Salt (2.454 lb/sk) + 0.45% R-3 + 0.005 lb/sk Static Free

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 (5000 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. EOG Resources request authorization to use a 2M system, providing for an annular preventer to be used prior to drilling out of the surface casing shoe and while drilling the intermediate section. Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 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 well will be drilled to TD with a combination of brine, cut brine, and polymer mud system. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 625'	Fresh - Gel	8.6-8.8	28-34	N/c
625' – 3,000'	Brine	10.0-10.2	28-34	N/c
3,000' – 8,150' Pilot hole	Cut Brine	8.4-9.0	28-34	N/c
KOP – 11,904' Lateral	Cut Brine - XCD	9.0-9.5	40-42	8-10

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 625' to TD.

(D) H_2S monitoring and detection equipment will be utilized from 625' to TD.

8. LOGGING, TESTING AND CORING PROGRAM: See COA

Open-hole logging is anticipated in the 8-3/4" hole section. The logging suites 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 pilot hole

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

The estimated bottom hole temperature (BHT) at TD is 160 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 3600 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 one month. If the well is productive, an additional 30-60 days will be required for completion and testing before a decision is made to install permanent facilities.

eog resources

EOG Resources, Inc.

Eddy County
West Brushy 27 Fed
#1H
OH

Plan: Plan #1

Pathfinder X & Y Planning Report

19 January, 2010

PATHFINDER

eog resources

Project: Eddy County
Site: West Brushy 27 Fed
Well: #1H
Wellbore: OH
Plan: Plan #1 (#1H/OH)

T G M

Azimuths to Grid North
True North: -0.19°
Magnetic North: 7.74°

Magnetic Field
Strength: 48641.5snT
Dip Angle: 60.04°
Date: 01/19/2010
Model: IGRF2010

PATHFINDER

WELL DETAILS: #1H

Ground Elevation 3018 50
RKB Elevation: WELL @ 3037 50ft (19' KB Correction)
Rig Name: 19' KB Correction

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0 00	0.00	402933 700	609705 800	32° 6' 26 227 N	103° 58' 44.491 W	

PROJECT DETAILS: Eddy 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

SECTION DETAILS

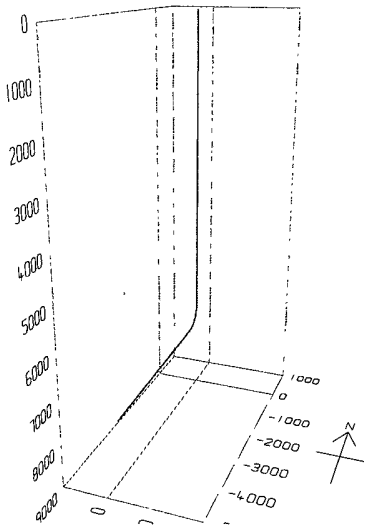
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0 00	0.00	0.00	0.00	0 00	0.00	0.00	
2	6922.50	0.00	0 00	6922 50	0 00	0 00	0 00	0 00	0 00	
3	7672 56	90.00	178.54	7400 00	-477 34	12 17	12 00	178 54	477 50	
4	11904.79	90 00	178 54	7400.00	-4708.20	120.00	0.00	0.00	4709.73	PBHL(WB27)

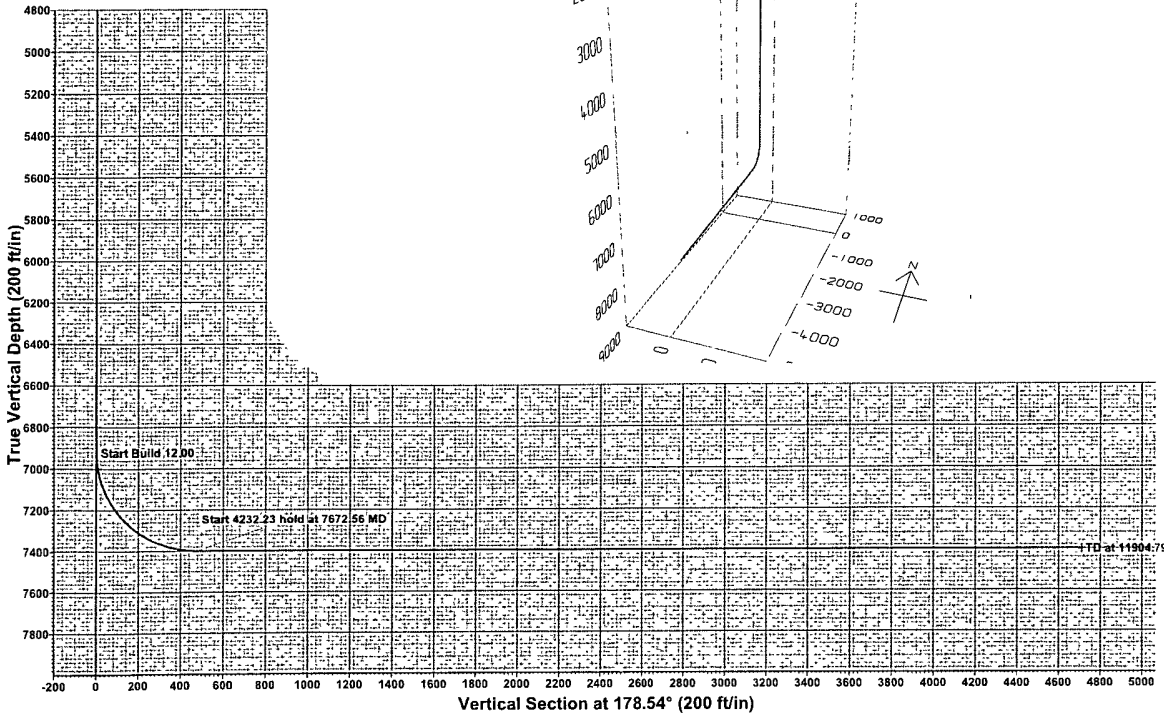
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

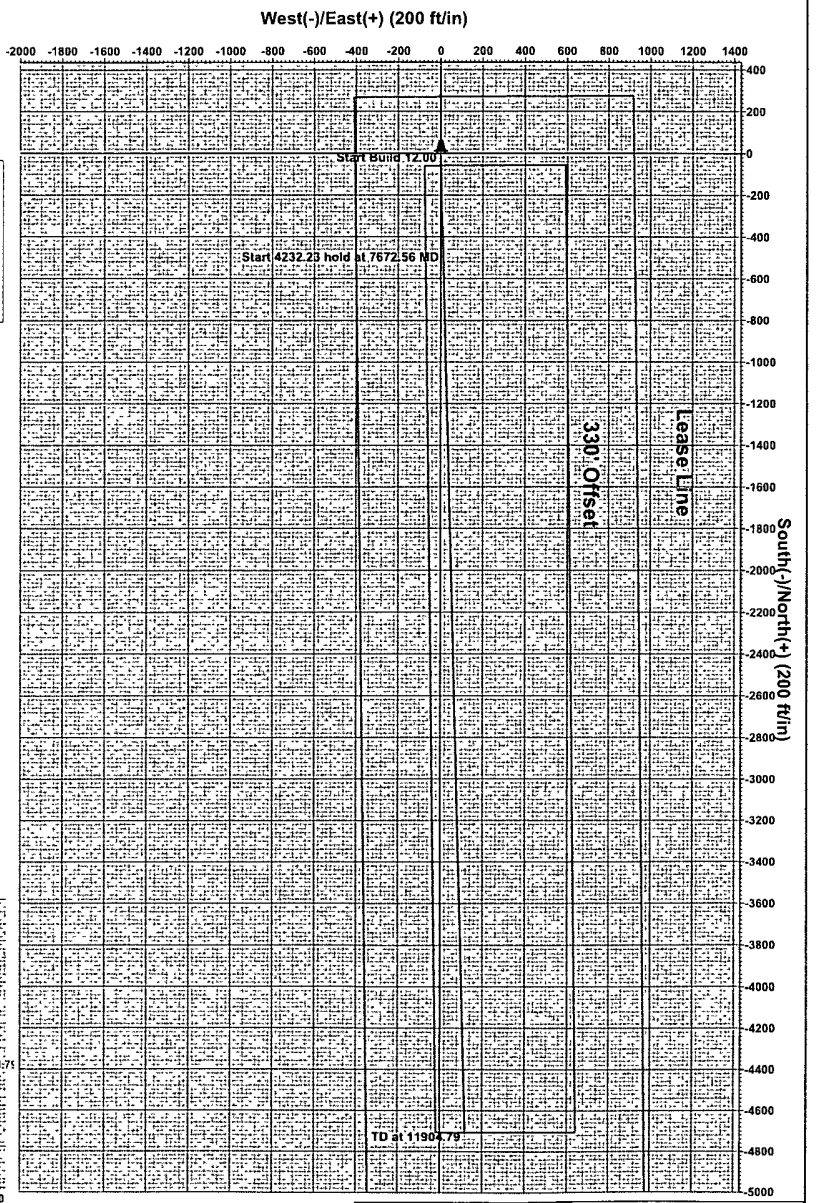
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(WB27)	7400 00	-4708 20	120 10	398225 500	609825 900	Point

LEGEND

+ Plan #1







Plan Plan #1 (#1H/OH)
Created By Nate Bingham Date 9 42, January 19 2010

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	WELL @ 3037.50ft (19' KB Correction)
Site:	West Brushy 27 Fed	**MD Reference:**	WELL @ 3037.50ft (19' KB Correction)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Project Eddy 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 West Brushy 27 Fed

Site Position:		**Northing:**	402,933 700 ft	**Latitude:**	32° 6' 26.227 N
From:	Map	**Easting:**	609,705.800 ft	**Longitude:**	103° 58' 44.491 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0.19 °

Well #1H

Well Position	**+N/-S**	0.00 ft	**Northing:**	402,933.700 ft	**Latitude:**	32° 6' 26.227 N
	+E/-W	0 00 ft	**Easting:**	609,705.800 ft	**Longitude:**	103° 58' 44.491 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,018.50 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	01/19/2010	7.93	60.04	48,642

Design Plan #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 00	0.00	0.00	178.54

Survey Tool Program **Date** 01/19/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	11,904.79	Plan #1 (OH)	MWD	MWD - Standard

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	WELL @ 3037.50ft (19' KB Correction)
Site:	West Brushy 27 Fed	**MD Reference:**	WELL @ 3037.50ft (19' KB Correction)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0 00	0.00	0.00	0.00	-3,037.50	0.00	0 00	0 00	0.00	402,933.70	609,705 80
100 00	0.00	0 00	100.00	-2,937.50	0 00	0 00	0.00	0.00	402,933.70	609,705 80
200.00	0.00	0.00	200.00	-2,837.50	0.00	0.00	0 00	0.00	402,933.70	609,705.80
300.00	0 00	0 00	300 00	-2,737.50	0 00	0.00	0.00	0.00	402,933.70	609,705.80
400.00	0.00	0.00	400.00	-2,637.50	0 00	0.00	0.00	0 00	402,933 70	609,705 80
500.00	0.00	0.00	500 00	-2,537.50	0 00	0.00	0 00	0.00	402,933.70	609,705 80
600.00	0.00	0 00	600 00	-2,437.50	0 00	0.00	0.00	0 00	402,933.70	609,705 80
700.00	0.00	0.00	700.00	-2,337.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
800 00	0 00	0.00	800.00	-2,237 50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
900.00	0 00	0.00	900.00	-2,137.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
1,000 00	0.00	0 00	1,000.00	-2,037.50	0.00	0 00	0.00	0.00	402,933.70	609,705.80
1,100.00	0.00	0.00	1,100.00	-1,937.50	0.00	0 00	0.00	0.00	402,933.70	609,705 80
1,200.00	0 00	0 00	1,200.00	-1,837.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
1,300.00	0.00	0.00	1,300.00	-1,737 50	0.00	0 00	0 00	0.00	402,933.70	609,705.80
1,400 00	0.00	0 00	1,400 00	-1,637 50	0.00	0.00	0.00	0.00	402,933 70	609,705.80
1,500.00	0.00	0.00	1,500.00	-1,537.50	0 00	0 00	0 00	0.00	402,933.70	609,705 80
1,600.00	0.00	0.00	1,600.00	-1,437.50	0 00	0.00	0.00	0.00	402,933.70	609,705.80
1,700.00	0.00	0 00	1,700.00	-1,337.50	0.00	0.00	0.00	0.00	402,933.70	609,705 80
1,800.00	0 00	0 00	1,800.00	-1,237.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
1,900.00	0 00	0.00	1,900.00	-1,137.50	0 00	0 00	0.00	0 00	402,933.70	609,705.80
2,000.00	0 00	0 00	2,000 00	-1,037.50	0.00	0.00	0.00	0.00	402,933.70	609,705 80
2,100.00	0.00	0.00	2,100 00	-937 50	0.00	0.00	0.00	0.00	402,933 70	609,705.80
2,200.00	0.00	0.00	2,200 00	-837.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
2,300 00	0 00	0 00	2,300.00	-737.50	0 00	0.00	0.00	0 00	402,933.70	609,705.80
2,400.00	0.00	0.00	2,400.00	-637.50	0 00	0.00	0.00	0 00	402,933.70	609,705.80
2,500.00	0.00	0.00	2,500.00	-537 50	0.00	0 00	0.00	0.00	402,933.70	609,705 80
2,600 00	0.00	0 00	2,600.00	-437 50	0.00	0 00	0.00	0.00	402,933.70	609,705.80

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	WELL @ 3037.50ft (19' KB Correction)
Site:	West Brushy 27 Fed	**MD Reference:**	WELL @ 3037.50ft (19' KB Correction)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
2,700.00	0.00	0.00	2,700.00	-337 50	0.00	0.00	0.00	0.00	402,933.70	609,705 80
2,800 00	0.00	0.00	2,800.00	-237.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
2,900 00	0.00	0 00	2,900.00	-137 50	0.00	0.00	0.00	0 00	402,933.70	609,705 80
3,000.00	0.00	0.00	3,000.00	-37.50	0.00	0 00	0.00	0.00	402,933.70	609,705.80
3,100.00	0.00	0.00	3,100 00	62.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
3,200.00	0.00	0.00	3,200.00	162 50	0.00	0 00	0.00	0.00	402,933.70	609,705.80
3,300.00	0 00	0 00	3,300 00	262 50	0.00	0.00	0.00	0 00	402,933.70	609,705.80
3,400.00	0 00	0.00	3,400.00	362.50	0.00	0.00	0.00	0.00	402,933 70	609,705.80
3,500 00	0.00	0 00	3,500.00	462.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
3,600.00	0.00	0.00	3,600.00	562.50	0 00	0.00	0.00	0.00	402,933.70	609,705.80
3,700 00	0 00	0.00	3,700.00	662.50	0.00	0.00	0.00	0.00	402,933 70	609,705.80
3,800.00	0.00	0.00	3,800.00	762.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
3,900 00	0.00	0.00	3,900.00	862.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
4,000.00	0.00	0.00	4,000 00	962 50	0 00	0.00	0.00	0.00	402,933.70	609,705.80
4,100.00	0.00	0 00	4,100.00	1,062.50	0 00	0.00	0.00	0 00	402,933.70	609,705 80
4,200 00	0 00	0.00	4,200 00	1,162 50	0 00	0.00	0.00	0 00	402,933.70	609,705.80
4,300 00	0 00	0.00	4,300 00	1,262 50	0.00	0.00	0 00	0 00	402,933.70	609,705.80
4,400.00	0 00	0 00	4,400 00	1,362 50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
4,500.00	0.00	0.00	4,500.00	1,462 50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
4,600 00	0.00	0.00	4,600.00	1,562.50	0.00	0 00	0.00	0 00	402,933 70	609,705.80
4,700 00	0.00	0 00	4,700.00	1,662.50	0.00	0 00	0.00	0.00	402,933.70	609,705.80
4,800.00	0.00	0.00	4,800.00	1,762.50	0.00	0 00	0.00	0.00	402,933.70	609,705.80
4,900 00	0.00	0.00	4,900.00	1,862.50	0 00	0.00	0.00	0.00	402,933 70	609,705.80
5,000.00	0.00	0.00	5,000.00	1,962 50	0.00	0.00	0 00	0 00	402,933.70	609,705.80
5,100 00	0.00	0.00	5,100.00	2,062.50	0.00	0.00	0 00	0 00	402,933.70	609,705.80
5,200.00	0.00	0.00	5,200.00	2,162 50	0.00	0.00	0 00	0.00	402,933.70	609,705 80
5,300.00	0.00	0.00	5,300.00	2,262.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80

Company:	EOG Resources, Inc	**Local Co-ordinate Reference:**	Well #1H
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Site:	West Brushy 27 Fed	**MD Reference:**	WELL @ 3037.50ft (19' KB Correction)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
5,400 00	0.00	0.00	5,400.00	2,362.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
5,500 00	0.00	0.00	5,500.00	2,462.50	0.00	0.00	0 00	0.00	402,933.70	609,705.80
5,600.00	0 00	0.00	5,600 00	2,562 50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
5,700 00	0.00	0.00	5,700.00	2,662 50	0.00	0.00	0.00	0.00	402,933.70	609,705 80
5,800 00	0.00	0.00	5,800.00	2,762 50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
5,900 00	0.00	0 00	5,900.00	2,862.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
6,000.00	0.00	0.00	6,000.00	2,962.50	0.00	0 00	0 00	0.00	402,933.70	609,705.80
6,100 00	0.00	0.00	6,100.00	3,062 50	0 00	0 00	0 00	0.00	402,933.70	609,705.80
6,200.00	0 00	0.00	6,200.00	3,162.50	0 00	0.00	0 00	0.00	402,933 70	609,705.80
6,300.00	0 00	0.00	6,300.00	3,262.50	0.00	0.00	0 00	0.00	402,933.70	609,705.80
6,400.00	0.00	0 00	6,400 00	3,362 50	0.00	0.00	0.00	0 00	402,933.70	609,705.80
6,500.00	0.00	0 00	6,500.00	3,462.50	0.00	0.00	0.00	0 00	402,933.70	609,705 80
6,600 00	0.00	0 00	6,600.00	3,562.50	0 00	0.00	0.00	0.00	402,933 70	609,705.80
6,700.00	0 00	0.00	6,700.00	3,662.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
6,800.00	0.00	0.00	6,800.00	3,762.50	0.00	0.00	0.00	0.00	402,933.70	609,705.80
6,900.00	0.00	0 00	6,900.00	3,862.50	0.00	0.00	0.00	0.00	402,933.70	609,705 80
6,922.50	0.00	0 00	6,922 50	3,885.00	0.00	0 00	0.00	0.00	402,933.70	609,705.80
6,925.00	0.30	178.54	6,925 00	3,887 50	-0.01	0.00	0.01	12.00	402,933.69	609,705.80
6,950.00	3.30	178 54	6,949.98	3,912.48	-0.79	0 02	0.79	12 00	402,932.91	609,705 82
6,975.00	6.30	178.54	6,974.89	3,937.39	-2.88	0 07	2.88	12.00	402,930.82	609,705 87
7,000.00	9 30	178.54	6,999.66	3,962.16	-6 27	0.16	6 28	12.00	402,927.43	609,705.96
7,025.00	12.30	178.54	7,024.21	3,986.71	-10 96	0.28	10.96	12 00	402,922.74	609,706.08
7,050.00	15.30	178.54	7,048.49	4,010.99	-16.92	0 43	16.92	12.00	402,916.78	609,706 23
7,075.00	18 30	178 54	7,072.42	4,034.92	-24.14	0.62	24 15	12.00	402,909 56	609,706.42
7,100 00	21 30	178.54	7,095 94	4,058.44	-32.60	0.83	32.61	12.00	402,901 10	609,706.63
7,125.00	24.30	178.54	7,118 98	4,081 48	-42.29	1 08	42 30	12 00	402,891.41	609,706.88
7,150.00	27.30	178.54	7,141 49	4,103 99	-53.16	1 35	53.18	12.00	402,880.54	609,707.15

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #1H
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Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
7,175.00	30.30	178 54	7,163.40	4,125 90	-65.20	1.66	65.22	12.00	402,868.50	609,707.46
7,200.00	33.30	178 54	7,184 64	4,147.14	-78 37	2.00	78 39	12.00	402,855.33	609,707.80
7,225 00	36.30	178.54	7,205 17	4,167.67	-92 63	2.36	92 66	12 00	402,841.07	609,708.16
7,250 00	39.30	178 54	7,224 92	4,187 42	-107.94	2.75	107.98	12.00	402,825.76	609,708 55
7,275.00	42.30	178.54	7,243 84	4,206.34	-124.27	3 17	124.31	12.00	402,809.43	609,708.97
7,300.00	45.30	178.54	7,261.89	4,224 39	-141.56	3 61	141.61	12.00	402,792 14	609,709.41
7,325.00	48.30	178.54	7,279 00	4,241 50	-159 78	4 07	159.83	12.00	402,773.92	609,709.87
7,350.00	51 30	178 54	7,295.14	4,257 64	-178.86	4 56	178.92	12.00	402,754.84	609,710.36
7,375 00	54.30	178.54	7,310.25	4,272.75	-198.77	5.07	198.83	12.00	402,734.93	609,710 87
7,400.00	57.30	178.54	7,324.30	4,286.80	-219.43	5.59	219.51	12.00	402,714.27	609,711 39
7,425 00	60 30	178.54	7,337.25	4,299 75	-240.81	6.14	240.89	12 00	402,692 89	609,711 94
7,450 00	63.30	178.54	7,349 07	4,311.57	-262.83	6.70	262.92	12.00	402,670.87	609,712.50
7,475.00	66.30	178 54	7,359.71	4,322.21	-285.44	7.28	285 53	12 00	402,648 26	609,713.08
7,500.00	69.29	178 54	7,369.16	4,331.66	-308.58	7.86	308 68	12 00	402,625 12	609,713.66
7,525.00	72 29	178 54	7,377.38	4,339.88	-332 17	8.47	332 28	12.00	402,601.53	609,714.27
7,550.00	75.29	178.54	7,384.36	4,346 86	-356.17	9.08	356.29	12.00	402,577.53	609,714.88
7,575.00	78.29	178.54	7,390 07	4,352 57	-380 50	9.70	380.62	12.00	402,553.20	609,715.50
7,600.00	81 29	178 54	7,394.50	4,357.00	-405.09	10 32	405.22	12.00	402,528.61	609,716.12
7,625 00	84.29	178 54	7,397.63	4,360.13	-429 88	10.96	430.02	12.00	402,503.82	609,716.76
7,650.00	87.29	178.54	7,399 47	4,361 97	-454 81	11.59	454.95	12 00	402,478.89	609,717.39
7,672.56	90.00	178.54	7,400.00	4,362.50	-477.34	12 17	477.50	12.00	402,456.36	609,717.97
7,700 00	90.00	178.54	7,400 00	4,362 50	-504 78	12 87	504.94	0 00	402,428.92	609,718 67
7,800.00	90.00	178.54	7,400.00	4,362.50	-604.75	15.41	604.94	0.00	402,328.95	609,721.21
7,900 00	90.00	178 54	7,400.00	4,362.50	-704 72	17.96	704.94	0.00	402,228 98	609,723.76
8,000.00	90.00	178.54	7,400.00	4,362.50	-804.68	20.51	804.94	0.00	402,129.02	609,726.31
8,100.00	90.00	178 54	7,400.00	4,362 50	-904.65	23.06	904 94	0.00	402,029.05	609,728.86
8,200.00	90.00	178.54	7,400 00	4,362 50	-1,004.62	25.61	1,004 94	0.00	401,929.08	609,731.41

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	WELL @ 3037.50ft (19' KB Correction)
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Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
8,300.00	90.00	178.54	7,400 00	4,362.50	-1,104.59	28.15	1,104.94	0 00	401,829.11	609,733.95
8,400.00	90.00	178.54	7,400.00	4,362.50	-1,204.55	30.70	1,204.94	0.00	401,729.15	609,736.50
8,500.00	90.00	178.54	7,400.00	4,362.50	-1,304.52	33.25	1,304.94	0 00	401,629.18	609,739.05
8,600 00	90 00	178.54	7,400.00	4,362 50	-1,404.49	35.80	1,404.94	0.00	401,529.21	609,741.60
8,700.00	90.00	178.54	7,400 00	4,362.50	-1,504.46	38 34	1,504.94	0.00	401,429.24	609,744 14
8,800.00	90.00	178.54	7,400.00	4,362.50	-1,604.42	40 89	1,604.94	0.00	401,329.28	609,746.69
8,900.00	90.00	178.54	7,400.00	4,362.50	-1,704.39	43.44	1,704 94	0.00	401,229.31	609,749.24
9,000.00	90.00	178 54	7,400.00	4,362.50	-1,804.36	45.99	1,804.94	0.00	401,129.34	609,751.79
9,100.00	90 00	178 54	7,400.00	4,362.50	-1,904.33	48.54	1,904.94	0 00	401,029.37	609,754.34
9,200.00	90.00	178 54	7,400.00	4,362 50	-2,004.29	51.08	2,004.94	0 00	400,929.41	609,756.88
9,300.00	90.00	178 54	7,400.00	4,362 50	-2,104.26	53.63	2,104.94	0 00	400,829.44	609,759.43
9,400.00	90.00	178 54	7,400.00	4,362 50	-2,204 23	56.18	2,204 94	0.00	400,729.47	609,761.98
9,500 00	90 00	178.54	7,400.00	4,362 50	-2,304.20	58.73	2,304 94	0.00	400,629.50	609,764.53
9,600.00	90.00	178 54	7,400 00	4,362.50	-2,404 16	61 28	2,404.94	0.00	400,529.54	609,767.08
9,700 00	90.00	178.54	7,400.00	4,362 50	-2,504.13	63.82	2,504.94	0 00	400,429.57	609,769 62
9,800 00	90.00	178 54	7,400 00	4,362.50	-2,604 10	66 37	2,604 94	0.00	400,329.60	609,772 17
9,900.00	90.00	178 54	7,400 00	4,362.50	-2,704.07	68 92	2,704 94	0.00	400,229.63	609,774.72
10,000.00	90.00	178.54	7,400.00	4,362.50	-2,804.03	71 47	2,804 94	0.00	400,129.67	609,777.27
10,100.00	90.00	178.54	7,400.00	4,362 50	-2,904 00	74 02	2,904 94	0.00	400,029 70	609,779 82
10,200.00	90.00	178 54	7,400.00	4,362 50	-3,003 97	76.56	3,004.94	0.00	399,929.73	609,782.36
10,300.00	90 00	178.54	7,400.00	4,362 50	-3,103.94	79 11	3,104 94	0.00	399,829.76	609,784.91
10,400 00	90.00	178.54	7,400.00	4,362 50	-3,203.90	81.66	3,204.94	0.00	399,729.80	609,787.46
10,500 00	90.00	178.54	7,400 00	4,362.50	-3,303.87	84 21	3,304 94	0.00	399,629.83	609,790 01
10,600.00	90 00	178.54	7,400.00	4,362 50	-3,403.84	86.75	3,404.94	0.00	399,529.86	609,792.55
10,700.00	90 00	178.54	7,400 00	4,362 50	-3,503 81	89.30	3,504.94	0.00	399,429.89	609,795.10
10,800.00	90.00	178.54	7,400.00	4,362.50	-3,603.77	91.85	3,604.94	0.00	399,329.93	609,797.65
10,900.00	90 00	178.54	7,400.00	4,362.50	-3,703.74	94.40	3,704.94	0.00	399,229.96	609,800 20

Company:	EOG Resources, Inc.	**Local Co-ordinate Reference:**	Well #1H
Project:	Eddy County	**TVD Reference:**	WELL @ 3037.50ft (19' KB Correction)
Site:	West Brushy 27 Fed	**MD Reference:**	WELL @ 3037.50ft (19' KB Correction)
Well:	#1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #1	**Database:**	Midland Database

Planned Survey

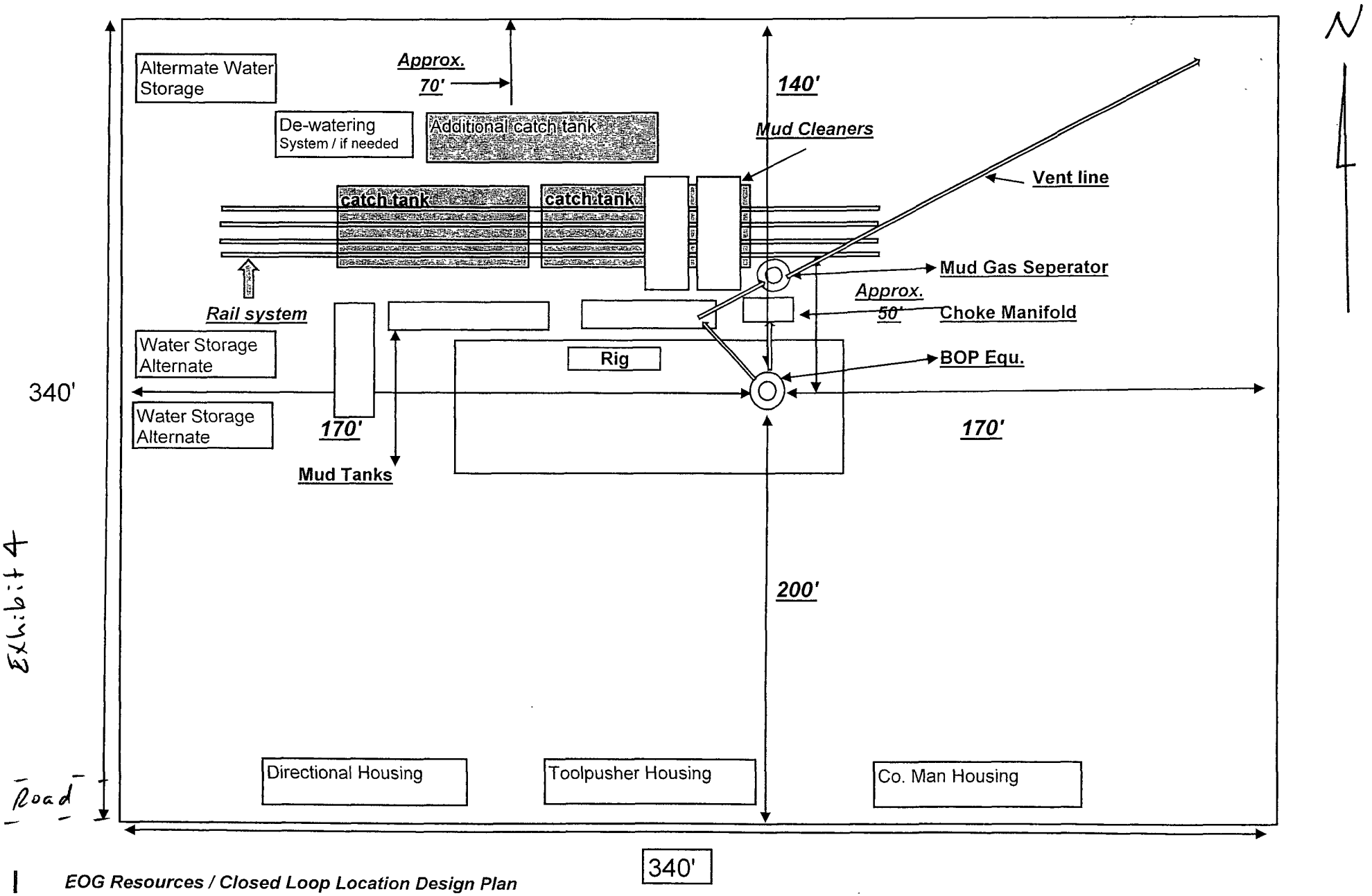
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
11,000 00	90.00	178 54	7,400.00	4,362.50	-3,803.71	96.95	3,804.94	0 00	399,129.99	609,802.75
11,100.00	90.00	178 54	7,400 00	4,362.50	-3,903.68	99.49	3,904.94	0.00	399,030 02	609,805.29
11,200.00	90.00	178.54	7,400.00	4,362.50	-4,003 64	102 04	4,004.94	0 00	398,930 06	609,807.84
11,300 00	90 00	178.54	7,400.00	4,362.50	-4,103.61	104 59	4,104.94	0 00	398,830.09	609,810.39
11,400.00	90 00	178 54	7,400.00	4,362.50	-4,203.58	107 14	4,204.94	0.00	398,730.12	609,812.94
11,500.00	90.00	178 54	7,400.00	4,362.50	-4,303.55	109.69	4,304.94	0.00	398,630.15	609,815.49
11,600 00	90.00	178 54	7,400.00	4,362.50	-4,403 51	112 23	4,404 94	0.00	398,530 19	609,818.03
11,700 00	90.00	178.54	7,400.00	4,362.50	-4,503 48	114 78	4,504 94	0 00	398,430 22	609,820.58
11,800.00	90.00	178.54	7,400.00	4,362 50	-4,603.45	117.33	4,604.94	0.00	398,330 25	609,823.13
11,904.79	90.00	178.54	7,400.00	4,362.50	-4,708 20	120.00	4,709 73	0.00	398,225.50	609,825.80
PBHL(WB27)										

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL(WB27) - plan hits target center - Point	0.00	0.00	7,400.00	-4,708.20	120.10	398,225.500	609,825.900	32° 5' 39.629 N	103° 58' 43 275 W

Checked By: _____ Approved By: _____ Date: _____

West Brushy 27 Fed 1H



EOG Resources / Closed Loop Location Design Plan

Not to scale

6/30/2008

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.

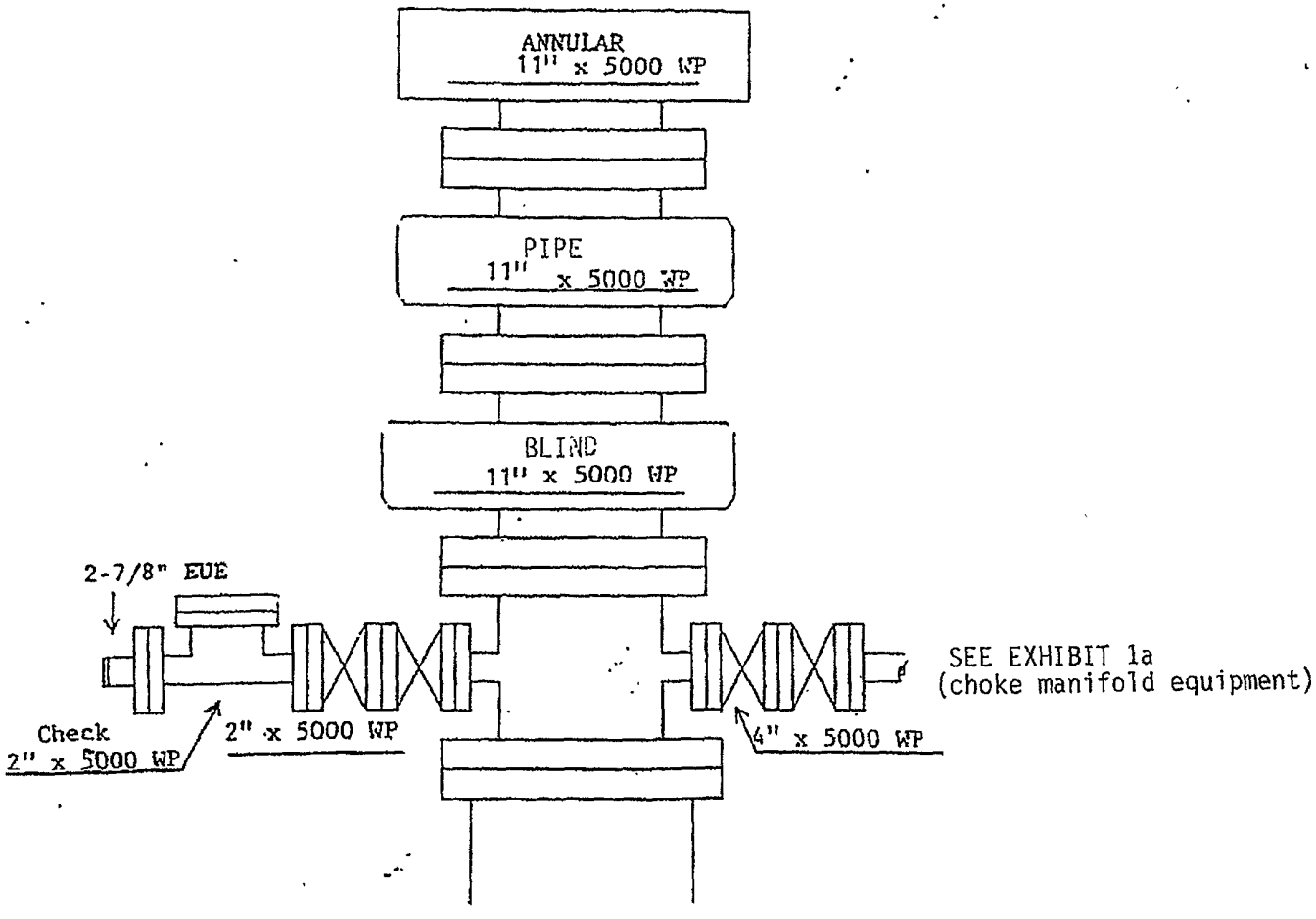
9. Blow out preventer control to be located as close to driller's position as feasible.

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

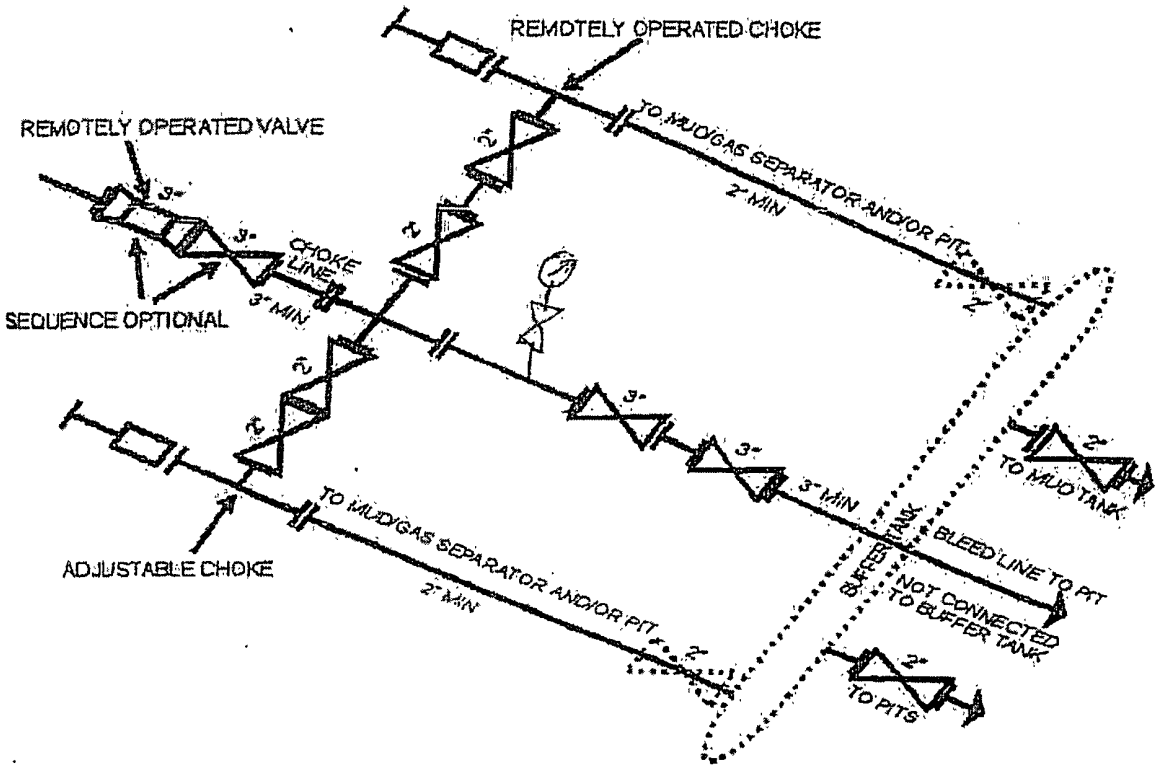
EOG Resources, Inc.

West Brushy 27 Fed 1H



WELL NAME: West Brush 27 Fed 1H

Exhibit 1a

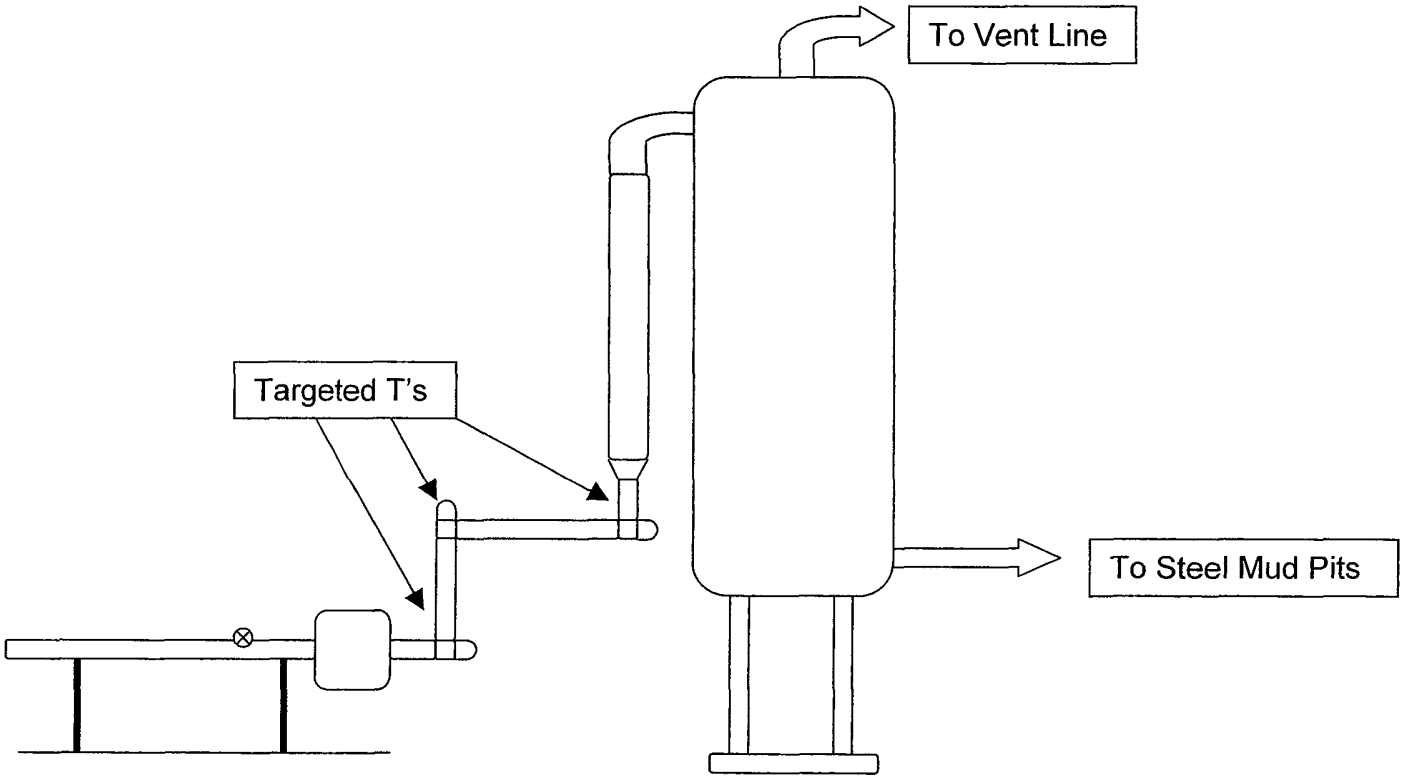


5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

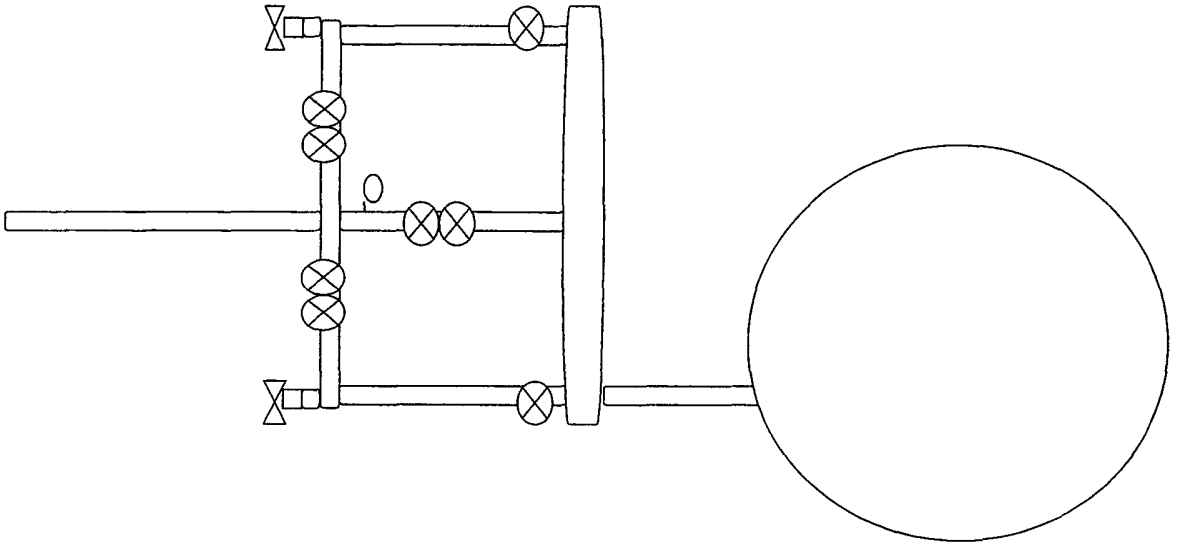
Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Sept. 27, 1989]

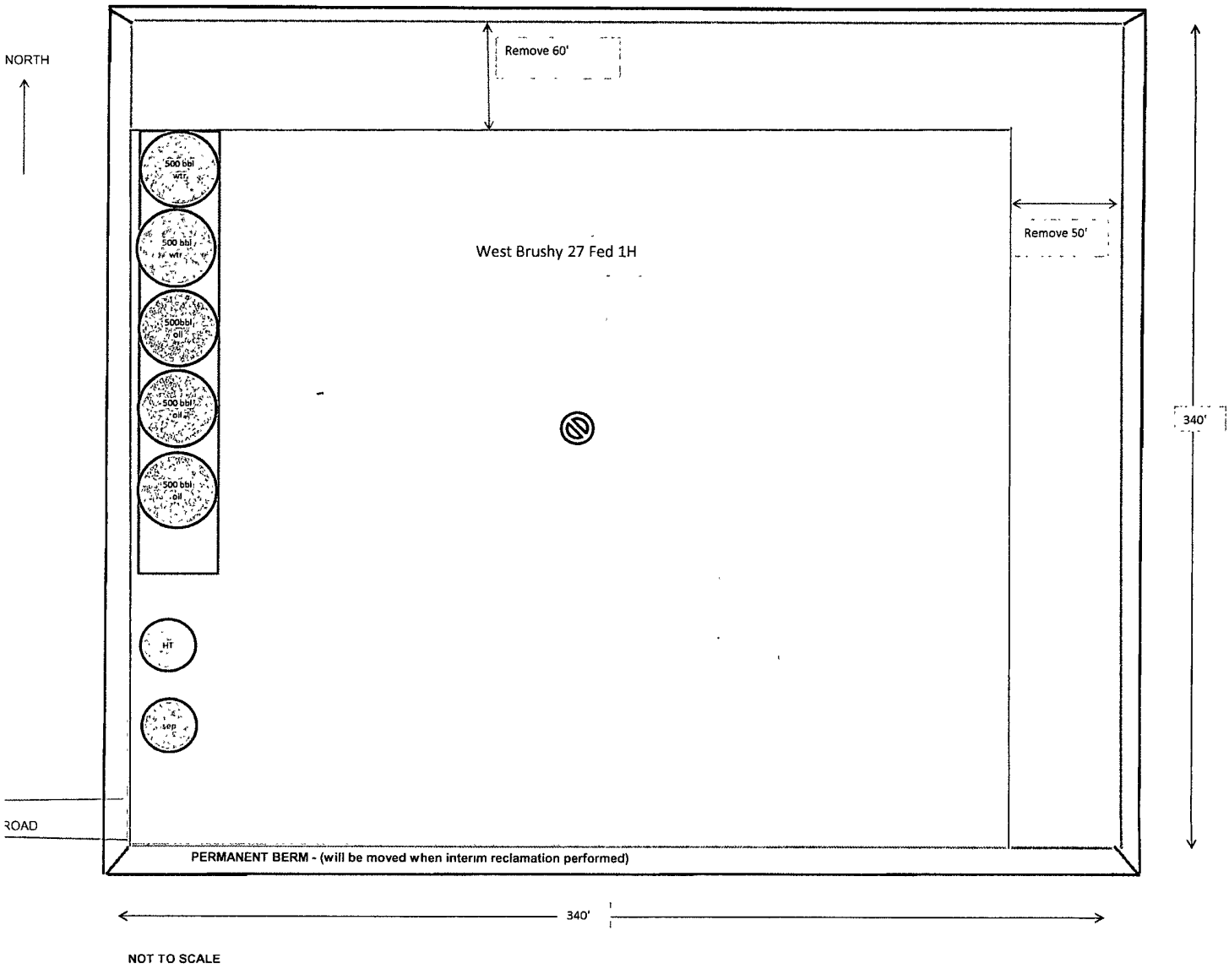
Profile View of Piping from Choke Manifold to the Mud Gas Separator



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



Production Facility Layout



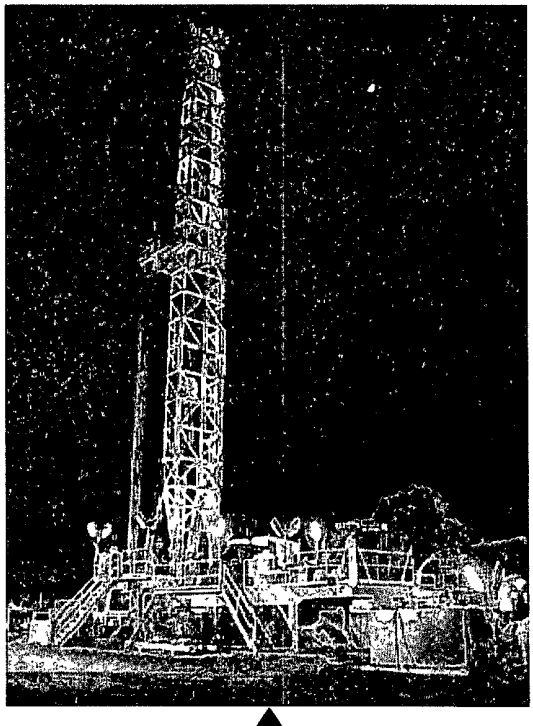
NOT TO SCALE

EOG Resources, Inc.

Legals:
West Brushy 27 Fed. 1H
Eddy Co. New Mexico

270' FNL & 405' FWL Surface Location	**330' FSL & 467' FWL Bottom Hole Location**
Section 27	**Section 27**
T-25-S, R-29-E	**T-25-S, R-29-E**
Lat: N 32.1072852	**Lat: N 32.0943414**
Long: W 103.9790255	**Long: W 103.9786877**

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**
Eddy County Sheriff's Department		(575) 887-7551
Kent Waller		
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	Cell	(281) 833-2749
Drilling Engineer		
Steve Munsell	Office	(432) 686-3609
	Cell	(432) 894-1256
Operations Manager		
Joel Pettit	Office	(432) 686-3705
	Cell	(432)894-1226
Drilling Superintendent		
Barney Thompson	Office	(432) 686-3678
	Cell	(432) 254-9056
Field Drilling Superintendent		
Ron Welch	Cell	(432) 386-0592
McVay Drilling		
McVay Drilling / Hobbs	Office	(575) 397-3311
McVay Drilling Rig #4	Rig	(575) 370-5598
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.

EOG RESOURCES, INC.
WEST BRUSHY 27 FED 1H

SURFACE USE PLAN OF OPERATION

SHL: 270' FNL & 405' FWL, Unit D, Section 27, T25S-R29E, N.M.P.M., Eddy, NM
BHL: 330' FSL & 467' FWL, Unit M, Section 27, T25S-R29E, N.M.P.M., Eddy, 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 Exhibit 2, & 2a.
c. Directions to Locations: From the intersection of US 285 and Black River Village Road in Malaga, go south on U.S. Hwy 285 for 12.6 miles, turn left on County Road #725 (Whitehorn Road) and go ENE for 4.0 miles, turn left on lease road and go NE along pipeline for 2.0 miles, turn left and go north for 1.8 miles to proposed new road, go east (on proposed new road) for 192 feet to SW corner of the location

2. NEW OR RECONSTRUCTED ACCESS ROAD:

a. The well site layout, Exhibit 2a shows the layout. A new access road will be constructed of compact caliche - a distance of 192 feet.
b. The maximum width of the road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent soil erosion.
c. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.
d. No cattleguards, gates or fence cuts will be required. No turnouts are planned.

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 well site. See Production Facilities Layout diagram.
b. As a proposed oil well, operator will contact the Electric Coop for this region to secure electrical power. If electrical power is unavailable, applicant will utilize generators on location.
c. All flow lines will adhere to API standards.
d. Refer to b above.
e. If the well is productive, rehabilitation plans are as follows:

i. The location shall be reduced on the north and east side 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. 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

All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. All roads will be constructed of rolled and compacted caliche.Will use BLM recommended use of extra caliche from other locations close by roads, if available.

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. The rancher has an above ground steel tank located +/- 600 feet SSW of the well bore.
d. Applicant will participate in the Permian Basin 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:

Permitting & Land

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

OPERATOR CERTIFICATION

I certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal Laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true, and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 19th day of January, 2010.

Name: Donny G. Glanton
Position: Sr. Lease Operations ROW Representative
Address: P.O. Box 2267 Midland, TX 79705
Telephone: 432-686-3642
Email: donny_glanton@eogresources.com

Signed: Donny G. Glanton

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG Resources Inc
LEASE NO.:	NM100554
WELL NAME & NO.:	1H West Brushy 27 Fed
SURFACE HOLE FOOTAGE:	270' FNL & 405' FWL
BOTTOM HOLE FOOTAGE	330' FSL & 467' FWL
LOCATION:	Section 27, T. 25 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

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)

Berming The north, east, and south sides of the well pad shall be bermed. The berming of the north and east sides may be delayed until after interim reclamation. Top soil shall not be used for construction of permanent berms.

Rancher's water line: The rancher's water line shall be rerouted in order to accommodate the southeast corner of the well pad. The allottee shall be contacted prior to construction of the well pad: Wayland Perry (325-622-4565).

CAVE/KARST

Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:
The pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the pad. All sides will be bermed.

Tank Battery Liners and Berms:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 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. V-DOOR DIRECTION: East

C. TOPSOIL

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

D. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

E. 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.

F. 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.

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

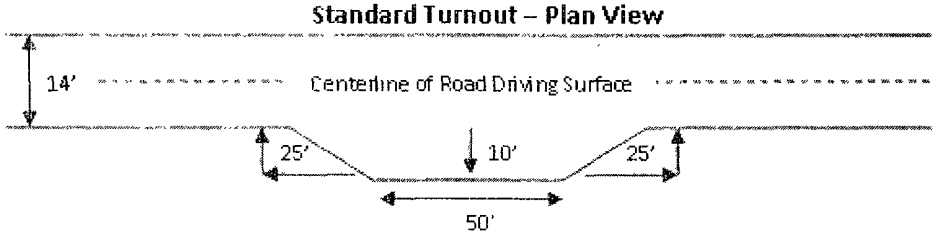
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

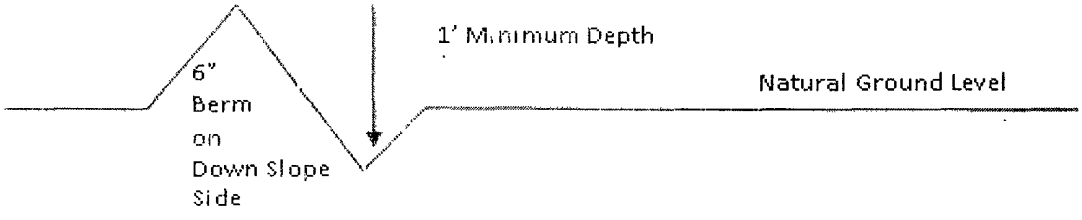
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

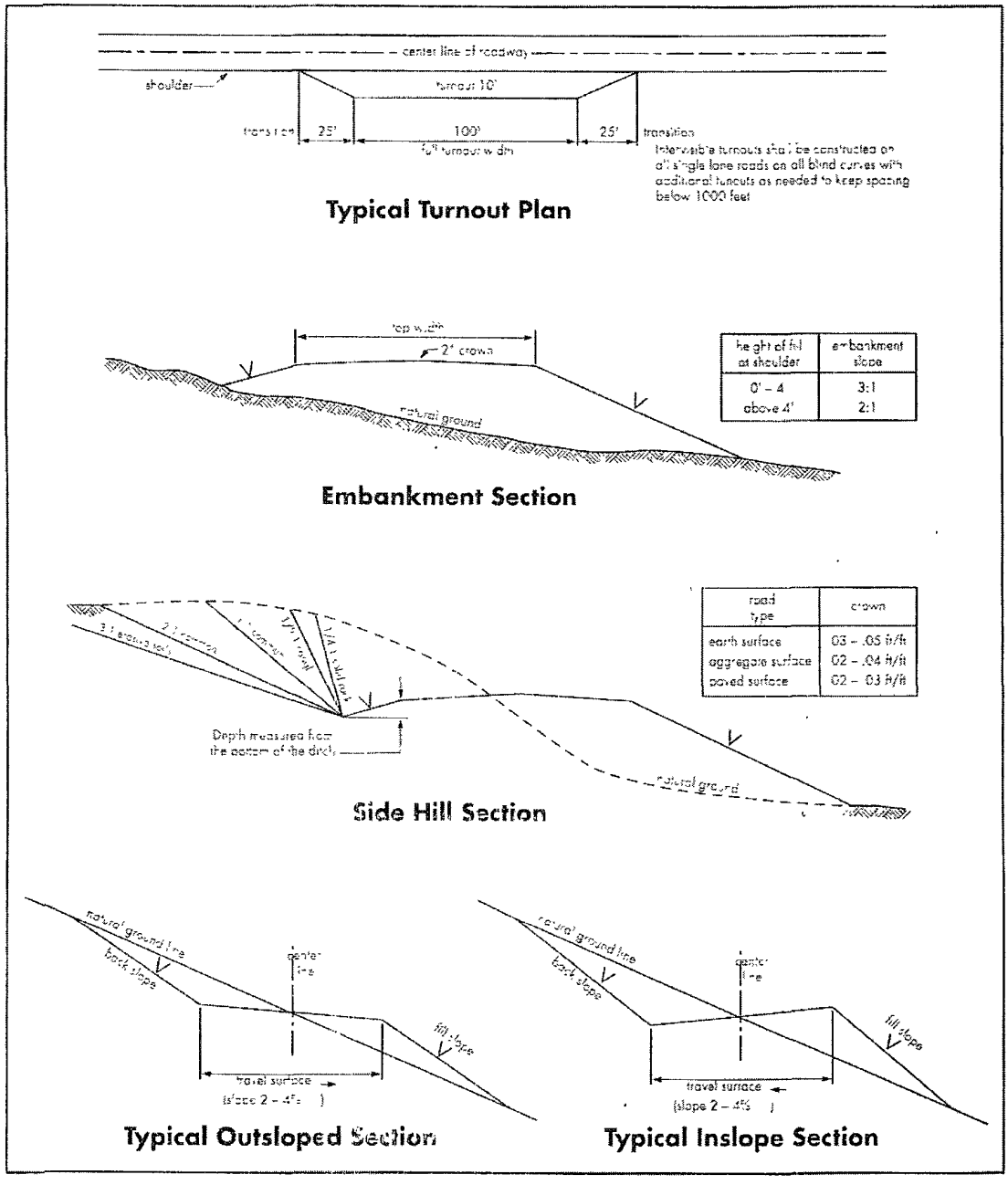
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



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

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. 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.

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 CAL/GR/N well log run from TD to surface 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 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. 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.

HIGH CAVE/KARST –IF LOST CIRCULATION OCCURS WHILE DRILLING THE 12-1/4" OR 7-7/8" HOLE, THE CEMENT PROGRAM FOR THE 8-5/8" OR 5-1/2" CASING WILL NEED TO BE MODIFIED AND THE BLM IS TO BE CONTACTED PRIOR TO RUNNING THE CASING. A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH THEREFORE, ONE INCH OPERATIONS WILL NOT BE PERMITTED. A DV TOOL WILL BE REQUIRED.

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

1. The 13-3/8 inch surface casing shall be set at **approximately 625 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **Additional Cement may be required. Calculated excess is only 37%.**

    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 a 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.

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

   ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Casing is to be set in the Lamar Limestone. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

Formation below the 8-5/8" 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.

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:

   a. First stage to DV tool, cement shall:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job.

   b. Second stage above DV tool, cement shall:

   ☒ 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 **2000 (2M)** psi.

    a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8-5/8 inch** intermediate 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.**

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

    a. Casing cut-off and BOP installation will not be initiated until the cement has had 4-6 hours of setup time in a water basin and 12 hours in the potash areas. This time will start after the cement plug is bumped. Testing the BOP/BOPE against a plug can commence after meeting the above conditions plus the BOP installation time.

    b. The tests shall be done by an independent service company utilizing a test plug.

    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.

DHW 021110

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

Not applied for in APD

C. ELECTRIC LINES

Not applied for in APD

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).

Seed Mixture 1, for Loamy 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 regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/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 lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:

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