

HOBBS OCD
MAR 12 2012UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTOCD-HOBBS
Split EstateFORM APPROVED
OMB NO. 1004-0137
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No. NM28881 SHL, NM14497-A BHL
1b. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator EOG Resources Inc.		7. Unit or CA Agreement Name and No.
3a. Address P.O. Box 2267 Midland, Texas 79702	3b. Phone No. (include area code) 432-686-3689	8. Lease Name and Well No. <7377> Diamond 31 Fed Com 3H
4. Location of Well (Report location clearly and in accordance with any State requirements)* At surface 370' FNL & 1310' FWL, U/L B, Sec 31 T24S, R34E At proposed prod. zone 2310' FNL & 1310' FWL, U/L B, Sec 6 T25S R34E		9. API Well No. 30-025- 40485
14. Distance in miles and direction from nearest town or post office* Approximately +/- 25 miles Southwest from Jal, NM		10. Field and Pool, 9890 W/C Red Hills, Bone Spring W/PA 5HA
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg. unit line, if any) 330'	16. No. of Acres in lease 1359.84	11. Sec., T., R., M., or Blk. and Survey or Area Sec 31, T24S, R34E
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease; ft. 670 to Diamond 31-1	19. Proposed Depth 16450 MD - 9499 TVD	12. County or Parish Lea
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3494' GL	22. Approximate date work will start* 1/01/2012	13. State NM
20. BLM/BIA Bond No. on file NM 2308		17. Spacing Unit dedicated to this well W/2 31, NW/4 6
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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the BLM |

25. Signature 	Name (Printed/Typed) Stan Wagner	Date 11/4/11
Title Regulatory Analyst		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date MAR 08 2012
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.

(Continued on page 2)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

K2 03/14/12

EE ATTACHED FOR
CONDITIONS OF APPROVALApproval Subject to General Requirements
& Special Stipulations Attached

MAR 19 2012

EOG RESOURCES, INC.
DIAMOND 31 FED COM NO. 3H
REVISED 11/21/11

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,185'
Top of Salt	1,435'
Base of Salt	5,000'
Lamar	5,255'
Bell Canyon	5,285'
Cherry Canyon	6,280'
Brushy Canyon	7,800'
Bone Spring Lime	9,235'
TD	9,499'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,280'	Oil
Brushy Canyon	7,800'	Oil
Bone Spring Lime	9,235'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 11.75" casing at 1,210' and circulating cement back to surface.

4. CASING PROGRAM - NEW

See Log

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
14.75"	0 - 1210'	11.750"	42#	H40	STC	1.125	1.25	1.60
11.00"	0 - 4000'	8.625"	32#	J55	LTC	1.125	1.25	1.60
11.00"	4000' - 5150'	8.625"	32#	HCK55	LTC	1.125	1.25	1.60
7.875"	0' - 16,450'	5.5"	20#	P110 or HCP110	NSCC	1.125	1.25	1.60

EOG RESOURCES, INC.
DIAMOND 31 FED COM NO. 3H

Cementing Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /ft	Slurry Description
1,210'	350	13.5	1.73	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake
	200	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
5,150'	700	12.7	2.22	Lead: Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
16,450'	150	10.8	3.68	Lead: 60:40:0 Class 'C' + 15.00 lb/sk BA-90 + 4.00% MPA-5 + 3.00% SMS + 5.00% A-10 + 1.00% BA-10A + 0.80% ASA-301 + 2.90% R-21 + 8.00 lb/sk LCM-1 + 0.005 lb/sk Static Free
	300	11.8	2.38	Middle: 50:50:10 Class 'H' + 0.80% FL-52 + 0.45% ASA-301 + 0.40% SMS + 2.00% Salt + 3.00 lb/sx LCM-1 + 0.20% R-21 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
	1400	14.2	1.28	Tail: 50:50:2 Class 'H' + 0.65% FL-52 + 0.20% CD-32 + 0.15% SMS + 2.00% Salt + 0.10% R-3 + 0.005 lb/sk Static Free

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

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

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

3000 psi BOPE is adequate for this application. Due to the 3000 psi BOPE requirement no FIT tests are planned.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 3000/ 250 psig and the annular preventer to 2500/ 250 psig. The surface casing will be tested to 1400 psi for 30 minutes.

EOG RESOURCES, INC.
DIAMOND 31 FED COM NO. 3H

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000/ 250 psig and the annular preventer to 2500/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

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.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

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

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,210' / 255	Fresh water + Gel	8.6-8.8	28-34	N/c
1,210' – 5,150'	Saturated Brine	10.0-10.2	28-34	N/c
5,150' – 8,962'	Cut Brine	8.6-9.5	28-34	N/c
8,962' – 16,450'	Cut Brine	8.6-9.5	28-34	N/c
Lateral				

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) H₂S monitoring and detection equipment will be utilized from surface casing point to TD.

EOG RESOURCES, INC.
DIAMOND 31 FED COM NO. 3H

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well. *See COA*

GR-CCL

Will be run in cased hole during completions phase of operations.

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

The estimated bottom hole temperature (BHT) at TD is 161 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 4110 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 90-120 days will be required for completion and testing before a decision is made to install permanent facilities.

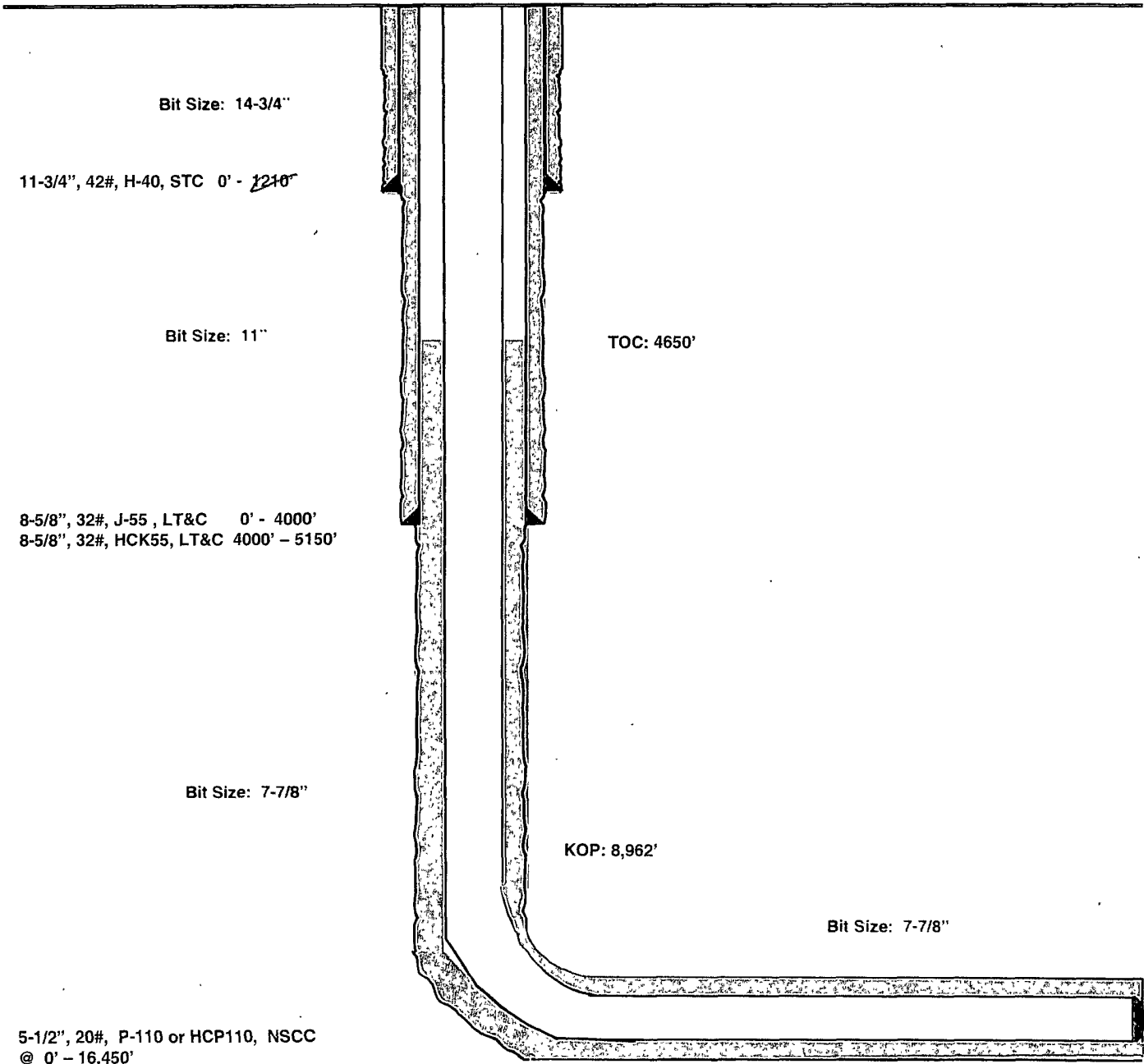
Diamond 31 Fed Com #3H
Pitchfork Ranch
Lea County, New Mexico

370' FNL
1310' FWL
Section 31
T-24-S, R-34-E

Proposed Wellbore

API: 30-025-

KB: 3,524.0'
GL: 3,494.0'



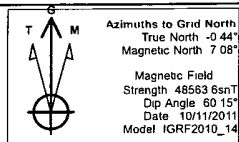
Lateral: 16,450' MD, 9,499' TVD

BH Location: 2310' FNL & 1310' FWL
Section 6
T-25-S, R-34-E

EOG Resources

Project: Lea County, NM (Nad27)
Site: Diamond 31 Fed Com
Well: Diamond 31 Fed Com 3H
Wellbore: Wellbore #1
Plan: Plan #1 101011
Rig: Cactus Rig No. 123

PROJECT DETAILS Lea County, NM (Nad27)
 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
 Location North Grid



WELL DETAILS: Diamond 31 Fed Com 3H

Northings	Ground Level	Latitude	Longitude
430228.80	3484.00	32° 10' 48.556 N	103° 30' 46.073 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northings	Easting	Shape
BHL Diamond 31 Fed Com 3H	9498.83	-7214.60	54.60	423014.20	753921.40	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeal
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8962.55	0.00	0.00	8962.55	0.00	0.00	0.00	0.00	0.00
9708.38	89.50	179.57	9440.00	-473.28	3.58	12.00	179.57	473.30
16450.15	89.50	179.57	9498.83	-7214.60	54.60	0.00	0.00	7214.81

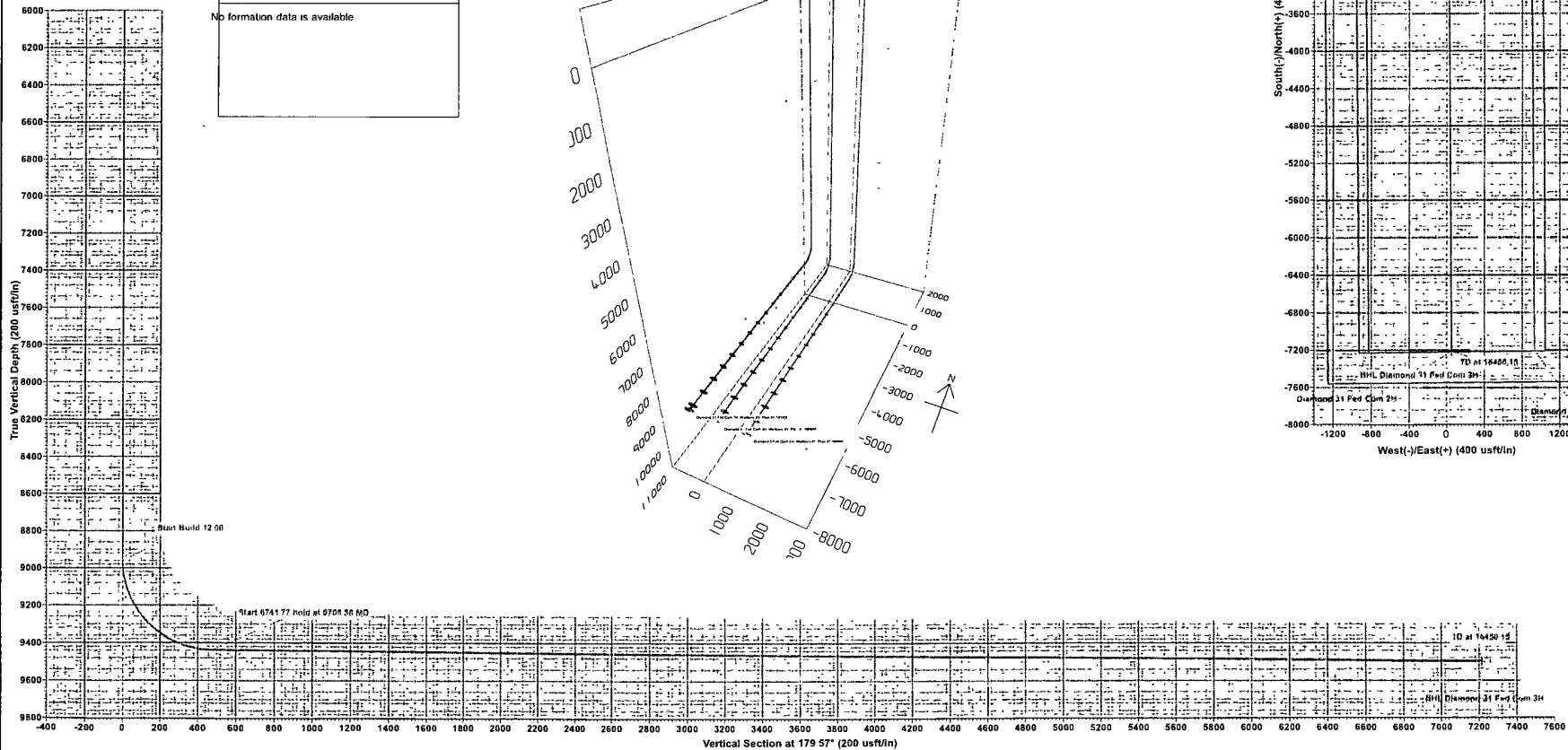
BHL Diamond 31 Fed Com 3H

ANNOTATIONS

TVD	MD	Annotation
8962.55	8962.55	Start Build 12.00
9440.00	9708.38	Start 6741.77 hold at 9708.38 MD
9498.82	16449.00	TD at 16450.15

FORMATION TOP DETAILS

No formation data is available



EOG Resources

Lea County, NM (Nad27)
Diamond 31 Fed Com
Diamond 31 Fed Com 3H
Wellbore #1

Plan: Plan #1 101011

EOG Resources

11 October, 2011



Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Diamond 31 Fed Com 3H
Project:	Lea County, NM (Nad27)	TVD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Well:	Diamond 31 Fed Com 3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1 101011	Database:	GCR DB v5000

Project	Lea County, NM (Nad27)		
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	Diamond 31 Fed Com		
Site Position:		Northing:	430,543.30 usft
From:	Map	Easting:	752,984.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 51.735 N
		Longitude:	103° 30' 56.311 W
		Grid Convergence:	0.44 °

Well	Diamond 31 Fed Com 3H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft		Wellhead Elevation:
			usft
			Latitude:
			32° 10' 48.556 N
			Longitude:
			103° 30' 46.073 W
			Ground Level:
			3,494.00 usft

Wellbore	Wellbore #1		
Magnetics	Model/Name	Sample Date	Declination
	IGRF2010_14	10/11/2011	(°)
			7.52
			Dip Angle
			(°)
			60.15
			Field Strength
			(nT)
			48,564

Design:	Plan #1 101011		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			179.57

Survey Tool Program	Date 10/11/2011		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
0.00	16,449.32	Plan #1 101011 (Wellbore #1)	MWD
			Description
			MWD - Standard

Phoenix Technology Services
EOG Resources



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Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Well:	Diamond 31 Fed Com 3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1 101011	Database:	GCR DB v5000

Planned Survey											
MD (usft)	Incl (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	-3,524.00	0.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
100.00	0.00	0.00	-3,424.00	100.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
200.00	0.00	0.00	-3,324.00	200.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
300.00	0.00	0.00	-3,224.00	300.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
400.00	0.00	0.00	-3,124.00	400.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
500.00	0.00	0.00	-3,024.00	500.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
600.00	0.00	0.00	-2,924.00	600.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
700.00	0.00	0.00	-2,824.00	700.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
800.00	0.00	0.00	-2,724.00	800.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
900.00	0.00	0.00	-2,624.00	900.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,000.00	0.00	0.00	-2,524.00	1,000.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,100.00	0.00	0.00	-2,424.00	1,100.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,200.00	0.00	0.00	-2,324.00	1,200.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,300.00	0.00	0.00	-2,224.00	1,300.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,400.00	0.00	0.00	-2,124.00	1,400.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,500.00	0.00	0.00	-2,024.00	1,500.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,600.00	0.00	0.00	-1,924.00	1,600.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,700.00	0.00	0.00	-1,824.00	1,700.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,800.00	0.00	0.00	-1,724.00	1,800.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
1,900.00	0.00	0.00	-1,624.00	1,900.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
2,000.00	0.00	0.00	-1,524.00	2,000.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
2,100.00	0.00	0.00	-1,424.00	2,100.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
2,200.00	0.00	0.00	-1,324.00	2,200.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
2,300.00	0.00	0.00	-1,224.00	2,300.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
2,400.00	0.00	0.00	-1,124.00	2,400.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
2,500.00	0.00	0.00	-1,024.00	2,500.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
2,600.00	0.00	0.00	-924.00	2,600.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	

Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Diamond 31 Fed Com 3H
Project:	Lea County, NM (Nad27)	TVD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3524 00usft (Original Well Elev + 301 KB)
Well:	Diamond 31 Fed Com 3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1 101011	Database:	GCR DB v5000

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
2,700.00	0.00	0 00	-824.00	2,700.00	0.00	0.00	0 00	0.00	430,228.80	753,866.80	
2,800.00	0.00	0 00	-724.00	2,800.00	0.00	0.00	0 00	0.00	430,228.80	753,866.80	
2,900.00	0.00	0.00	-624.00	2,900.00	0.00	0.00	0 00	0.00	430,228.80	753,866.80	
3,000.00	0.00	0.00	-524.00	3,000.00	0.00	0 00	0 00	0.00	430,228.80	753,866.80	
3,100.00	0.00	0.00	-424.00	3,100.00	0.00	0 00	0.00	0.00	430,228.80	753,866.80	
3,200.00	0.00	0.00	-324.00	3,200.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
3,300.00	0.00	0.00	-224.00	3,300.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
3,400.00	0.00	0.00	-124.00	3,400.00	0.00	0 00	0.00	0.00	430,228.80	753,866.80	
3,500.00	0.00	0 00	-24.00	3,500.00	0.00	0 00	0.00	0.00	430,228.80	753,866.80	
3,600.00	0.00	0.00	76.00	3,600.00	0.00	0 00	0.00	0.00	430,228.80	753,866.80	
3,700.00	0.00	0.00	176.00	3,700.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
3,800.00	0.00	0.00	276.00	3,800.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
3,900.00	0.00	0.00	376.00	3,900.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,000.00	0.00	0.00	476.00	4,000.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,100.00	0.00	0 00	576.00	4,100.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,200.00	0.00	0.00	676.00	4,200.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,300.00	0.00	0.00	776.00	4,300.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,400.00	0.00	0.00	876.00	4,400.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,500.00	0.00	0.00	976.00	4,500.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,600.00	0.00	0.00	1,076.00	4,600.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,700.00	0.00	0.00	1,176.00	4,700.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,800.00	0.00	0.00	1,276.00	4,800.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
4,900.00	0.00	0.00	1,376.00	4,900.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
5,000.00	0.00	0.00	1,476.00	5,000.00	0.00	0 00	0.00	0.00	430,228.80	753,866.80	
5,100.00	0.00	0.00	1,576.00	5,100.00	0.00	0 00	0.00	0.00	430,228.80	753,866.80	
5,200.00	0.00	0.00	1,676.00	5,200.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
5,300.00	0.00	0.00	1,776.00	5,300.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	

Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Diamond 31 Fed Com 3H
Project:	Lea County, NM (Nad27)	TVD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Well:	Diamond 31 Fed Com 3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1 101011	Database:	GCR DB v5000

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
5,400.00	0.00	0.00	1,876.00	5,400.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
5,500.00	0.00	0.00	1,976.00	5,500.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
5,600.00	0.00	0.00	2,076.00	5,600.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
5,700.00	0.00	0.00	2,176.00	5,700.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
5,800.00	0.00	0.00	2,276.00	5,800.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
5,900.00	0.00	0.00	2,376.00	5,900.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,000.00	0.00	0.00	2,476.00	6,000.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,100.00	0.00	0.00	2,576.00	6,100.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,200.00	0.00	0.00	2,676.00	6,200.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,300.00	0.00	0.00	2,776.00	6,300.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,400.00	0.00	0.00	2,876.00	6,400.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,500.00	0.00	0.00	2,976.00	6,500.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,600.00	0.00	0.00	3,076.00	6,600.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,700.00	0.00	0.00	3,176.00	6,700.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,800.00	0.00	0.00	3,276.00	6,800.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
6,900.00	0.00	0.00	3,376.00	6,900.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,000.00	0.00	0.00	3,476.00	7,000.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,100.00	0.00	0.00	3,576.00	7,100.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,200.00	0.00	0.00	3,676.00	7,200.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,300.00	0.00	0.00	3,776.00	7,300.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,400.00	0.00	0.00	3,876.00	7,400.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,500.00	0.00	0.00	3,976.00	7,500.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,600.00	0.00	0.00	4,076.00	7,600.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,700.00	0.00	0.00	4,176.00	7,700.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,800.00	0.00	0.00	4,276.00	7,800.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
7,900.00	0.00	0.00	4,376.00	7,900.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,000.00	0.00	0.00	4,476.00	8,000.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	

Phoenix Technology Services
EOG Resources



Company: EOG Resources		Local Co-ordinate Reference: Well Diamond 31 Fed Com 3H									
Project: Lea County, NM (Nad27)		TVD Reference: WELL @ 3524.00usft (Original Well Elev + 301 KB)									
Site: Diamond 31 Fed Com		MD Reference: WELL @ 3524.00usft (Original Well Elev + 301 KB)									
Well: Diamond 31 Fed Com 3H		North Reference: Grid									
Wellbore: Wellbore #1		Survey Calculation Method: Minimum Curvature									
Design: Plan #1 101011		Database: GCR DB v5000									
Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
8,100.00	0.00	0.00	4,576.00	8,100.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,200.00	0.00	0.00	4,676.00	8,200.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,300.00	0.00	0.00	4,776.00	8,300.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,400.00	0.00	0.00	4,876.00	8,400.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,500.00	0.00	0.00	4,976.00	8,500.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,600.00	0.00	0.00	5,076.00	8,600.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,700.00	0.00	0.00	5,176.00	8,700.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,800.00	0.00	0.00	5,276.00	8,800.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,900.00	0.00	0.00	5,376.00	8,900.00	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
8,962.55	0.00	0.00	5,438.55	8,962.55	0.00	0.00	0.00	0.00	430,228.80	753,866.80	
Start Build 12.00											
9,000.00	4.49	179.57	5,475.96	8,999.96	-1.47	0.01	1.47	12.00	430,227.33	753,866.81	
9,100.00	16.49	179.57	5,574.11	9,098.11	-19.65	0.15	19.65	12.00	430,209.15	753,866.95	
9,200.00	28.49	179.57	5,666.33	9,190.33	-57.83	0.44	57.84	12.00	430,170.97	753,867.24	
9,300.00	40.49	179.57	5,748.60	9,272.60	-114.36	0.87	114.36	12.00	430,114.44	753,867.67	
9,400.00	52.49	179.57	5,817.32	9,341.32	-186.76	1.41	186.76	12.00	430,042.04	753,868.21	
9,500.00	64.49	179.57	5,869.48	9,393.48	-271.86	2.06	271.86	12.00	429,956.94	753,868.86	
9,600.00	76.49	179.57	5,902.81	9,426.81	-365.94	2.77	365.95	12.00	429,862.86	753,869.57	
9,700.00	88.49	179.57	5,915.85	9,439.85	-464.90	3.52	464.92	12.00	429,763.90	753,870.32	
9,708.38	89.50	179.57	5,916.00	9,440.00	-473.28	3.58	473.30	12.00	429,755.52	753,870.38	
Start 6741.77 hold at 9708.38 MD											
9,800.00	89.50	179.57	5,916.80	9,440.80	-564.89	4.28	564.91	0.00	429,663.91	753,871.08	
9,900.00	89.50	179.57	5,917.67	9,441.67	-664.89	5.03	664.91	0.00	429,563.91	753,871.83	
10,000.00	89.50	179.57	5,918.54	9,442.54	-764.88	5.79	764.90	0.00	429,463.92	753,872.59	
10,100.00	89.50	179.57	5,919.42	9,443.42	-864.87	6.55	864.90	0.00	429,363.93	753,873.35	
10,200.00	89.50	179.57	5,920.29	9,444.29	-964.87	7.30	964.90	0.00	429,263.93	753,874.10	
10,300.00	89.50	179.57	5,921.16	9,445.16	-1,064.86	8.06	1,064.89	0.00	429,163.94	753,874.86	

Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Diamond 31 Fed Com 3H
Project:	Lea County, NM (Nad27)	TVD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Well:	Diamond 31 Fed Com 3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1 101011	Database:	GCR DB v5000

Planned Survey										
MD (usft)	Inc (°)	Azi.(azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
10,400.00	89.50	179.57	5,922.03	9,446.03	-1,164.85	8.82	1,164.89	0.00	429,063.95	753,875.62
10,500.00	89.50	179.57	5,922.91	9,446.91	-1,264.85	9.57	1,264.88	0.00	428,963.95	753,876.37
10,600.00	89.50	179.57	5,923.78	9,447.78	-1,364.84	10.33	1,364.88	0.00	428,863.96	753,877.13
10,700.00	89.50	179.57	5,924.65	9,448.65	-1,464.83	11.09	1,464.88	0.00	428,763.97	753,877.89
10,800.00	89.50	179.57	5,925.52	9,449.52	-1,564.83	11.84	1,564.87	0.00	428,663.97	753,878.64
10,900.00	89.50	179.57	5,926.40	9,450.40	-1,664.82	12.60	1,664.87	0.00	428,563.98	753,879.40
11,000.00	89.50	179.57	5,927.27	9,451.27	-1,764.81	13.36	1,764.86	0.00	428,463.99	753,880.16
11,100.00	89.50	179.57	5,928.14	9,452.14	-1,864.81	14.11	1,864.86	0.00	428,363.99	753,880.91
11,200.00	89.50	179.57	5,929.01	9,453.01	-1,964.80	14.87	1,964.86	0.00	428,264.00	753,881.67
11,300.00	89.50	179.57	5,929.89	9,453.89	-2,064.79	15.63	2,064.85	0.00	428,164.01	753,882.43
11,400.00	89.50	179.57	5,930.76	9,454.76	-2,164.79	16.38	2,164.85	0.00	428,064.01	753,883.18
11,500.00	89.50	179.57	5,931.63	9,455.63	-2,264.78	17.14	2,264.85	0.00	427,964.02	753,883.94
11,600.00	89.50	179.57	5,932.50	9,456.50	-2,364.77	17.90	2,364.84	0.00	427,864.03	753,884.70
11,700.00	89.50	179.57	5,933.38	9,457.38	-2,464.77	18.65	2,464.84	0.00	427,764.03	753,885.45
11,800.00	89.50	179.57	5,934.25	9,458.25	-2,564.76	19.41	2,564.83	0.00	427,664.04	753,886.21
11,900.00	89.50	179.57	5,935.12	9,459.12	-2,664.75	20.17	2,664.83	0.00	427,564.05	753,886.97
12,000.00	89.50	179.57	5,936.00	9,460.00	-2,764.75	20.92	2,764.83	0.00	427,464.05	753,887.72
12,100.00	89.50	179.57	5,936.87	9,460.87	-2,864.74	21.68	2,864.82	0.00	427,364.06	753,888.48
12,200.00	89.50	179.57	5,937.74	9,461.74	-2,964.73	22.44	2,964.82	0.00	427,264.07	753,889.24
12,300.00	89.50	179.57	5,938.61	9,462.61	-3,064.73	23.19	3,064.82	0.00	427,164.07	753,889.99
12,400.00	89.50	179.57	5,939.49	9,463.49	-3,164.72	23.95	3,164.81	0.00	427,064.08	753,890.75
12,500.00	89.50	179.57	5,940.36	9,464.36	-3,264.71	24.71	3,264.81	0.00	426,964.09	753,891.51
12,600.00	89.50	179.57	5,941.23	9,465.23	-3,364.71	25.46	3,364.80	0.00	426,864.09	753,892.26
12,700.00	89.50	179.57	5,942.10	9,466.10	-3,464.70	26.22	3,464.80	0.00	426,764.10	753,893.02
12,800.00	89.50	179.57	5,942.98	9,466.98	-3,564.69	26.98	3,564.80	0.00	426,664.11	753,893.78
12,900.00	89.50	179.57	5,943.85	9,467.85	-3,664.69	27.73	3,664.79	0.00	426,564.11	753,894.53
13,000.00	89.50	179.57	5,944.72	9,468.72	-3,764.68	28.49	3,764.79	0.00	426,464.12	753,895.29

Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Diamond 31 Fed Com 3H
Project:	Lea County, NM (Nad27)	TVD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Well:	Diamond 31 Fed Com 3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1 101011	Database:	GCR DB v5000

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
13,100.00	89.50	179.57	5,945.59	9,469.59	-3,864.67	29.25	3,864.78	0.00	426,364.13	753,896.05	
13,200.00	89.50	179.57	5,946.47	9,470.47	-3,964.67	30.00	3,964.78	0.00	426,264.13	753,896.80	
13,300.00	89.50	179.57	5,947.34	9,471.34	-4,064.66	30.76	4,064.78	0.00	426,164.14	753,897.56	
13,400.00	89.50	179.57	5,948.21	9,472.21	-4,164.65	31.52	4,164.77	0.00	426,064.15	753,898.32	
13,500.00	89.50	179.57	5,949.09	9,473.09	-4,264.65	32.27	4,264.77	0.00	425,964.15	753,899.07	
13,600.00	89.50	179.57	5,949.96	9,473.96	-4,364.64	33.03	4,364.77	0.00	425,864.16	753,899.83	
13,700.00	89.50	179.57	5,950.83	9,474.83	-4,464.63	33.79	4,464.76	0.00	425,764.17	753,900.59	
13,800.00	89.50	179.57	5,951.70	9,475.70	-4,564.63	34.55	4,564.76	0.00	425,664.17	753,901.35	
13,900.00	89.50	179.57	5,952.58	9,476.58	-4,664.62	35.30	4,664.75	0.00	425,564.18	753,902.10	
14,000.00	89.50	179.57	5,953.45	9,477.45	-4,764.61	36.06	4,764.75	0.00	425,464.19	753,902.86	
14,100.00	89.50	179.57	5,954.32	9,478.32	-4,864.61	36.82	4,864.75	0.00	425,364.19	753,903.62	
14,200.00	89.50	179.57	5,955.19	9,479.19	-4,964.60	37.57	4,964.74	0.00	425,264.20	753,904.37	
14,300.00	89.50	179.57	5,956.07	9,480.07	-5,064.59	38.33	5,064.74	0.00	425,164.21	753,905.13	
14,400.00	89.50	179.57	5,956.94	9,480.94	-5,164.59	39.09	5,164.74	0.00	425,064.21	753,905.89	
14,500.00	89.50	179.57	5,957.81	9,481.81	-5,264.58	39.84	5,264.73	0.00	424,964.22	753,906.64	
14,600.00	89.50	179.57	5,958.68	9,482.68	-5,364.57	40.60	5,364.73	0.00	424,864.23	753,907.40	
14,700.00	89.50	179.57	5,959.56	9,483.56	-5,464.57	41.36	5,464.72	0.00	424,764.23	753,908.16	
14,800.00	89.50	179.57	5,960.43	9,484.43	-5,564.56	42.11	5,564.72	0.00	424,664.24	753,908.91	
14,900.00	89.50	179.57	5,961.30	9,485.30	-5,664.55	42.87	5,664.72	0.00	424,564.25	753,909.67	
15,000.00	89.50	179.57	5,962.18	9,486.18	-5,764.55	43.63	5,764.71	0.00	424,464.25	753,910.43	
15,100.00	89.50	179.57	5,963.05	9,487.05	-5,864.54	44.38	5,864.71	0.00	424,364.26	753,911.18	
15,200.00	89.50	179.57	5,963.92	9,487.92	-5,964.53	45.14	5,964.70	0.00	424,264.27	753,911.94	
15,300.00	89.50	179.57	5,964.79	9,488.79	-6,064.53	45.90	6,064.70	0.00	424,164.27	753,912.70	
15,400.00	89.50	179.57	5,965.67	9,489.67	-6,164.52	46.65	6,164.70	0.00	424,064.28	753,913.45	
15,500.00	89.50	179.57	5,966.54	9,490.54	-6,264.51	47.41	6,264.69	0.00	423,964.29	753,914.21	
15,600.00	89.50	179.57	5,967.41	9,491.41	-6,364.51	48.17	6,364.69	0.00	423,864.29	753,914.97	
15,700.00	89.50	179.57	5,968.28	9,492.28	-6,464.50	48.92	6,464.69	0.00	423,764.30	753,915.72	

Phoenix Technology Services
EOG Resources



Company:	EOG Resources	Local Co-ordinate Reference:	Well Diamond 31 Fed Com 3H
Project:	Lea County, NM (Nad27)	TVD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Site:	Diamond 31 Fed Com	MD Reference:	WELL @ 3524.00usft (Original Well Elev + 301 KB)
Well:	Diamond 31 Fed Com 3H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1 101011	Database:	GCR DB v5000

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
15,800.00	89.50	179.57	5,969.16	9,493.16	-6,564.49	49.68	6,564.68	0.00	423,664.31	753,916.48
15,900.00	89.50	179.57	5,970.03	9,494.03	-6,664.49	50.44	6,664.68	0.00	423,564.31	753,917.24
16,000.00	89.50	179.57	5,970.90	9,494.90	-6,764.48	51.19	6,764.67	0.00	423,464.32	753,917.99
16,100.00	89.50	179.57	5,971.77	9,495.77	-6,864.47	51.95	6,864.67	0.00	423,364.33	753,918.75
16,200.00	89.50	179.57	5,972.65	9,496.65	-6,964.47	52.71	6,964.67	0.00	423,264.33	753,919.51
16,300.00	89.50	179.57	5,973.52	9,497.52	-7,064.46	53.46	7,064.66	0.00	423,164.34	753,920.26
16,400.00	89.50	179.57	5,974.39	9,498.39	-7,164.45	54.22	7,164.66	0.00	423,064.35	753,921.02
16,450.15	89.50	179.57	5,974.83	9,498.83	-7,214.60	54.60	7,214.81	0.00	423,014.20	753,921.40
TD at 16450.15										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
8,962.55	8,962.55	0.00	0.00	Start Build 12.00	
9,708.38	9,440.00	-473.28	3.58	Start 6741.77 hold at 9708.38 MD	
16,450.15	9,498.83	-7,214.60	54.60	TD at 16450.15	

Checked By: _____	Approved By: _____	Date: _____
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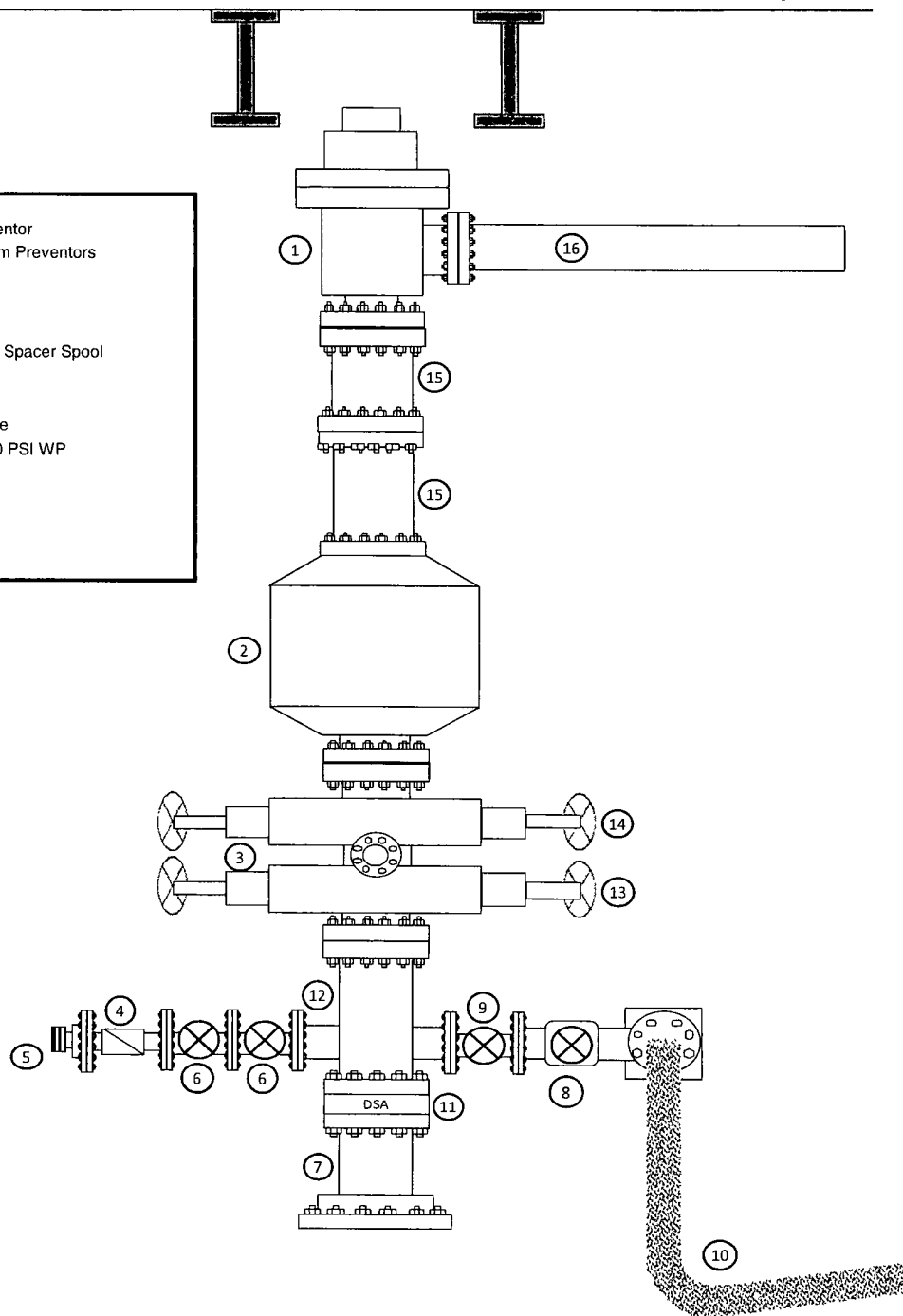
EOG Resources

Cactus #123

Exhibit #1

Rig Floor

1. 13 5/8" Rotating Head
2. Hydril 13 5/8" 5,000 PSI WP GK Annular Preventor
3. 13 5/8" Cameron Type "U" 10,000 PSI WP Ram Preventors
4. 2 1/16" - 10,000 PSI WP Check Valve
5. 10,000 PSI WP - 1502 Union to kill line
6. 2 1/16" - 10,000 PSI WP Manual Valves
7. 13 5/8" 3,000 PSI WP x 13 5/8" 5,000 PSI WP Spacer Spool
8. 4 1/16" 10,000 PSI WP HCR Valve
9. 4 1/16" 10,000 PSI WP Manual Valve
10. 8" OD x 4" ID 10,000 PSI WP Flex Choke Line
11. DSA - 13 5/8" 10,000 PSI WP x 13 5/8" 5,000 PSI WP
12. Mud Cross - 13 5/8" 10,000 PSI WP
13. Blind Rams
14. Pipe Rams
15. 13 5/8" 5,000 PSI WP Spacer Spools
16. Flow Line



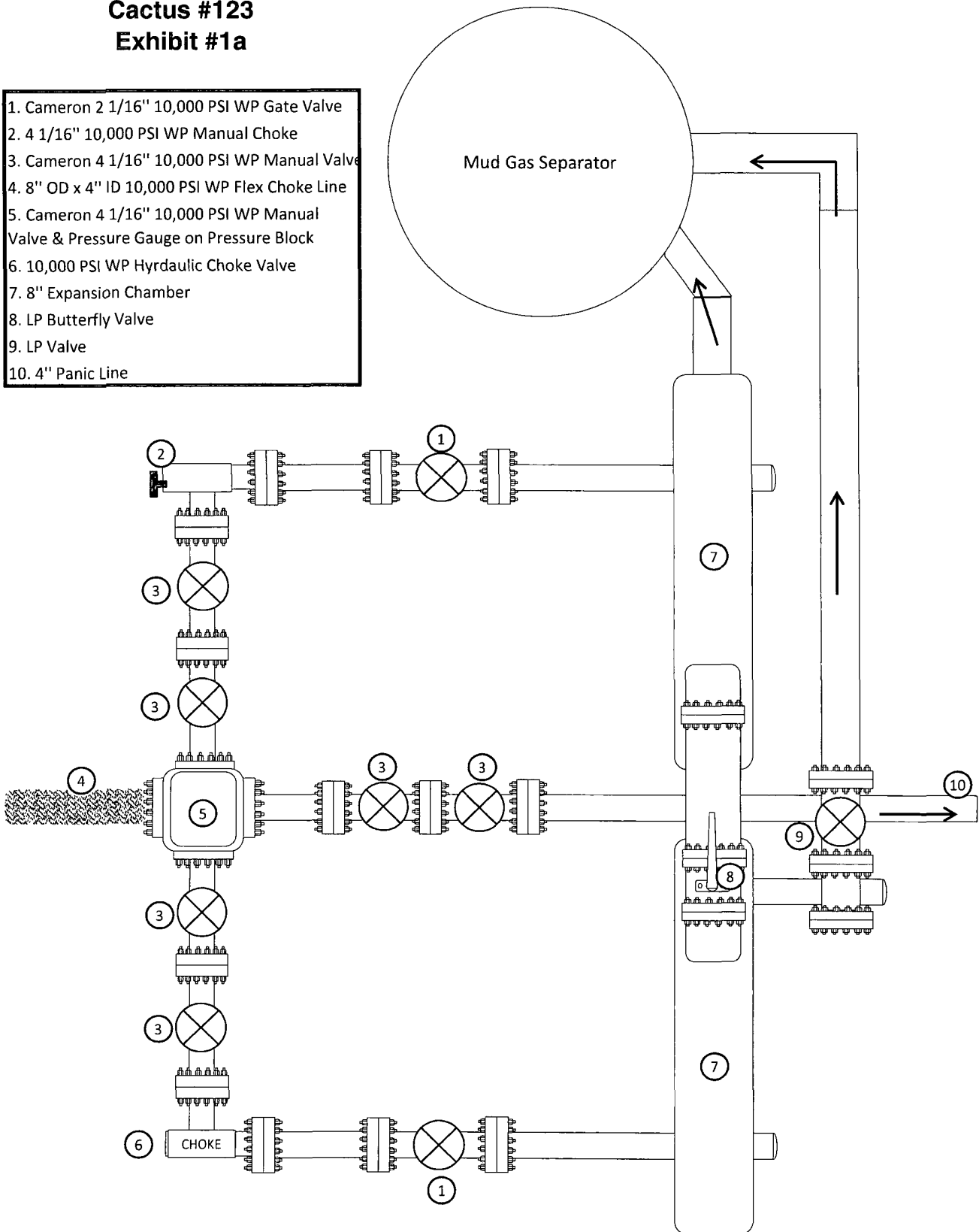
EOG RESOURCES, INC.
DIAMOND 31 FED COM #3H

ATTACHMENT TO EXHIBIT #1

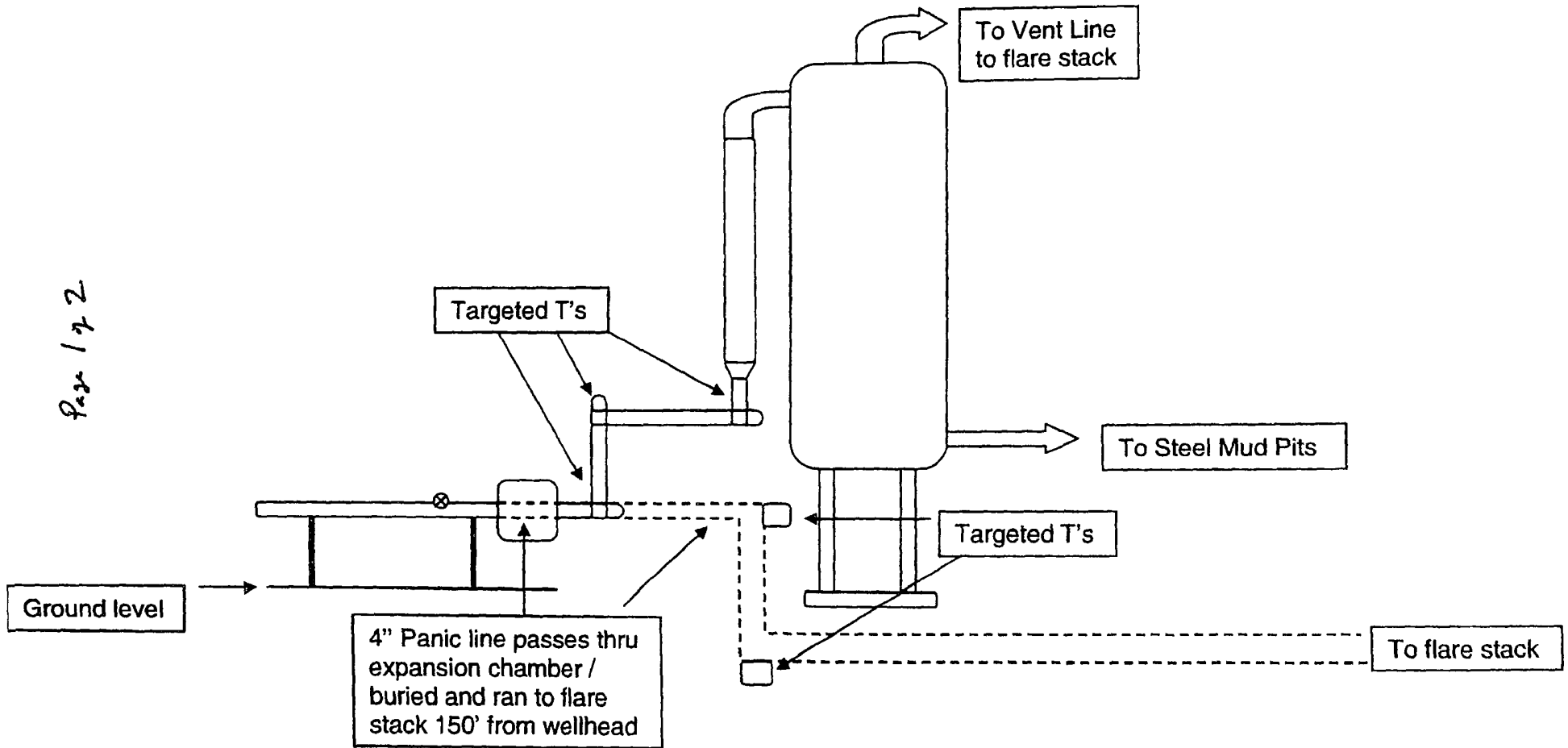
1. Wear ring to be properly installed in head.
2. Blow out preventer and all fittings must be in good condition, 5000 psi W.P. minimum.
Exhibit #1.
3. All fittings to be flanged
4. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 5000 psi W.P. minimum.
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.

EOG Resources
Cactus #123
Exhibit #1a

1. Cameron 2 1/16" 10,000 PSI WP Gate Valve
2. 4 1/16" 10,000 PSI WP Manual Choke
3. Cameron 4 1/16" 10,000 PSI WP Manual Valve
4. 8" OD x 4" ID 10,000 PSI WP Flex Choke Line
5. Cameron 4 1/16" 10,000 PSI WP Manual Valve & Pressure Gauge on Pressure Block
6. 10,000 PSI WP Hydraulic Choke Valve
7. 8" Expansion Chamber
8. LP Butterfly Valve
9. LP Valve
10. 4" Panic Line

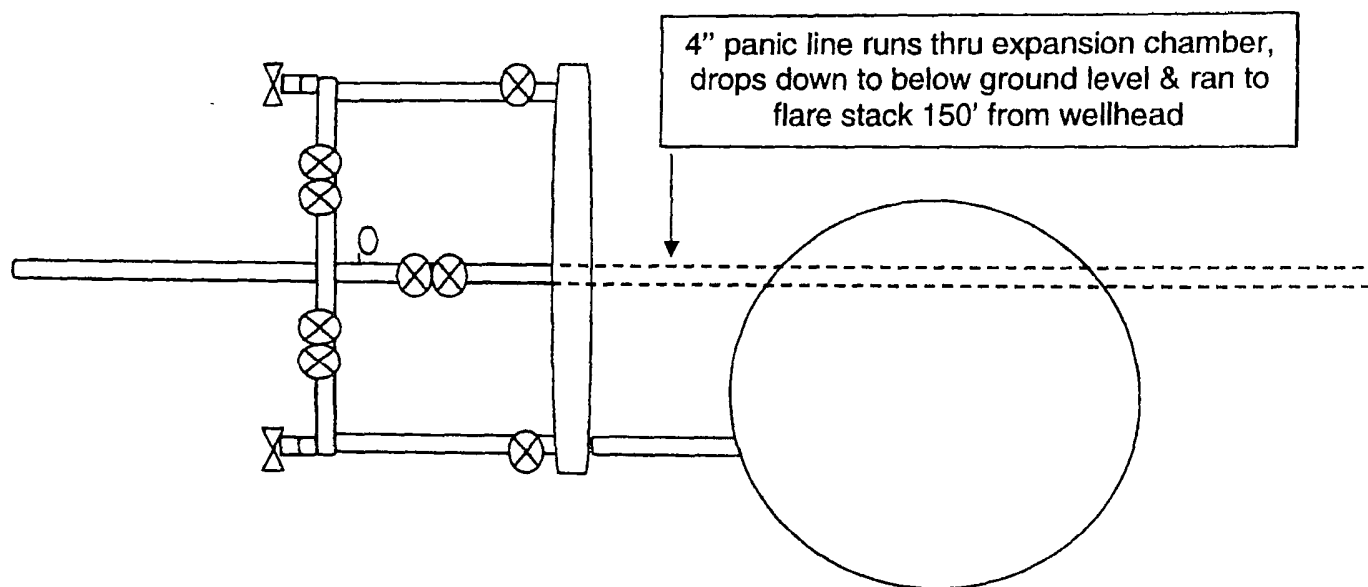


Profile View of Piping from Choke Manifold
to the Mud Gas Separator



Page 2 of 2

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



Manufacturer: Midwest Hose & Specialty

Serial Number: SN#90067

Length: 35'

Size: OD = 8" ID = 4"

Ends: Flanges Size: 4-1/16"

WP Rating: 10,000 psi Anchors required by manufacturer: No

M I D W E S T

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: CACTUS		P.O. Number: RIG #123 Asset # M10761
HOSE SPECIFICATIONS		
Type: CHOKE LINE	Length: 35'	
I.D. 4" INCHES	O.D. 8" INCHES	
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000 PSI	BURST PRESSURE PSI
COUPLINGS		
Type of End Fitting 4 1/16 10K FLANGE		
Type of Coupling: SWEDGED	MANUFACTURED BY MIDWEST HOSE & SPECIALTY	
PROCEDURE		
<i>Hose assembly pressure tested with water at ambient temperature.</i>		
TIME HELD AT TEST PRESSURE 1 MIN.	ACTUAL BURST PRESSURE: 0 PSI	
COMMENTS: SN#90087 M10761 Hose is covered with stainless steel armour cover and wrapped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes		
Date: 6/6/2011	Tested By: BOBBY FINK	Approved: MENDI JACKSON