

16-622

Form 3160-3
(March 2012)**HOBBS OCD**

OCD Hobbs

MAY 09 2016

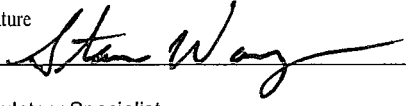
FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**RECEIVED****APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No.	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. Whirling Wind 11 Fed Com 704H	
2. Name of Operator EOG Resources, Inc (7777)		9. API Well No. 30-025- 43224	
3a. Address P.O. Box 2267 Midland, TX 79702		10. Field and Pool, or Exploratory WC-025 G-09 S253336D; Upper WC	
3b. Phone No. (include area code) 432-686-3689		11. Sec., T. R. M. or Blk. and Survey or Area Section 11, T26S, R33E	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 856' FSL & 2422' FEL, SWSE (O), Sec 11, 26S, 33E At proposed prod. zone 2410' FSL & 2310' FEL, NWSE (J), Sec 2		12. County or Parish Lea	
14. Distance in miles and direction from nearest town or post office* Approximately +/- 23 miles Southwest from Jal, New Mexico		13. State NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 230', 330' PP	16. No. of acres in lease 1280	17. Spacing Unit dedicated to this well 240 ac.	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 660' from 703H	19. Proposed Depth 19979' MD, 12495' TVD	20. BLM/BIA Bond No. on file NM 2308	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3344' GL	22. Approximate date work will start* 08/01/2016	23. Estimated duration 25 days	
24. Attachments			

**UNORTHODOX
LOCATION**

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

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

25. Signature 	Name (Printed/Typed) Stan Wagner	Date 3/2/16
Title Regulatory Specialist		
Approved by (Signature) /s/George MacDonell	Name (Printed/Typed)	Date MAY - 4 2016
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)

Carlsbad Controlled Water Basin

See attached NMOCD
Conditions of Approval**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**Approval Subject to General Requirements
& Special Stipulations Attached

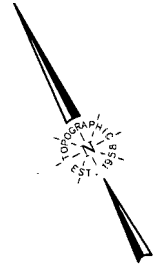
MAY 12 2016

EXHIBIT 6

SECTION 11, TOWNSHIP 26-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

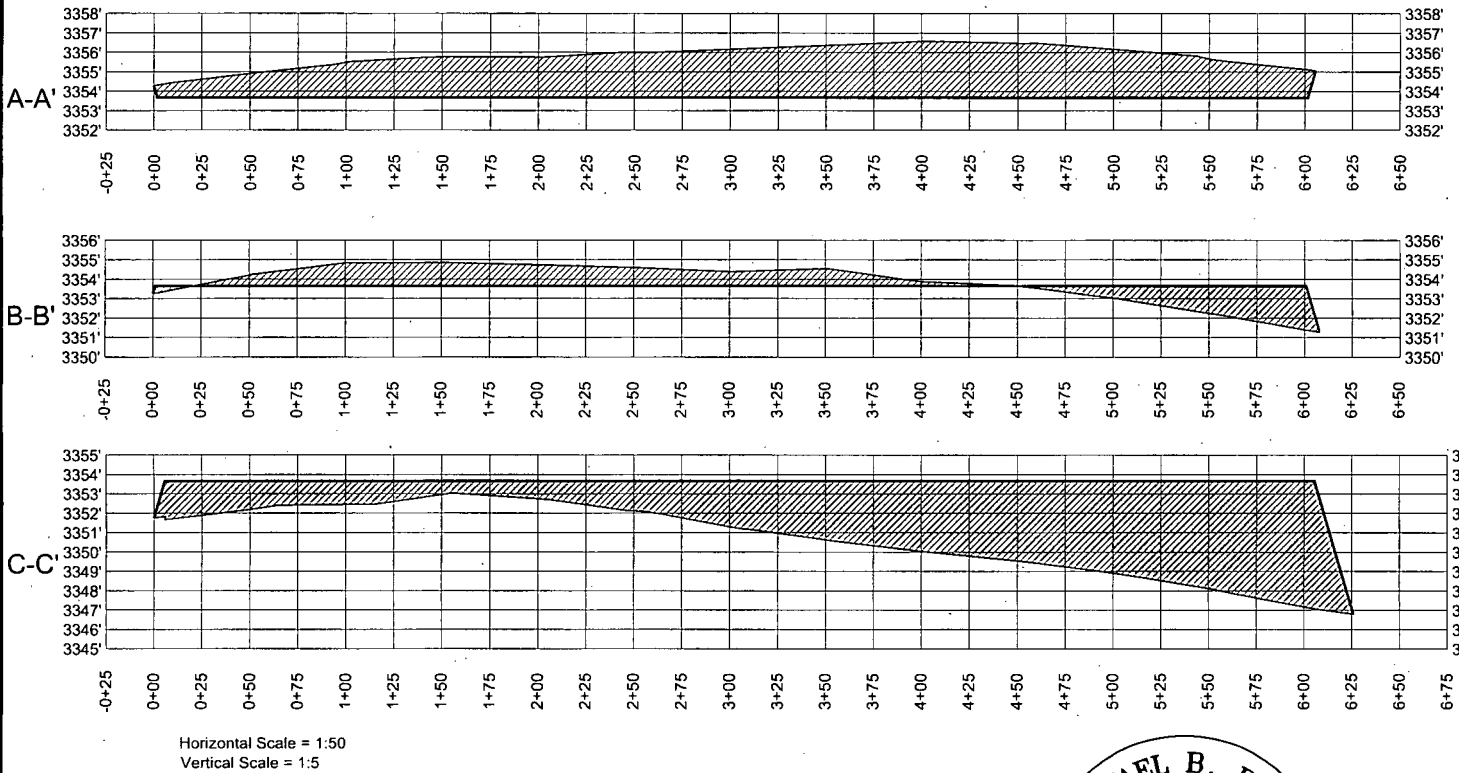
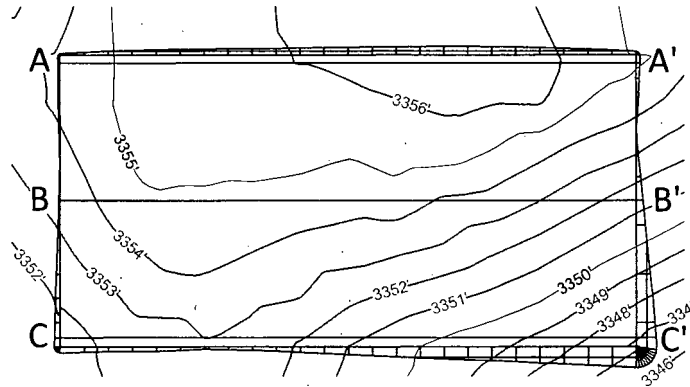
SCALE: 1" = 200'

0' 100' 200'



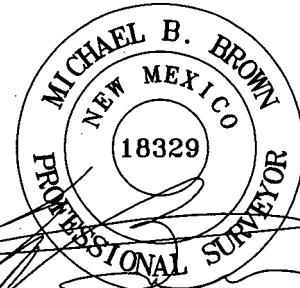
Top of pad elevation: 3353.6571
Cut Slope: 33.33% 3.00:1 18.43°
Fill Slope: 33.33% 3.00:1 18.43°
Balance Tolerance (C.Y.): 0.00
Cut Swell Factor: 1.00
Fill Shrink Factor: 1.00

Pad Earthwork Volumes
Cut: 152,754.3 C.F., 5,657.56 C.Y.
Fill: 152,754.2 C.F., 5,657.56 C.Y.
Balance Export: 0.1 C.F., 0.00 C.Y.
Area: 193313.7 Sq.Ft., 4.438 Acres



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM



Michael Blake Brown, P.S. No. 18329

MARCH 25, 2016

eoog resources, inc.

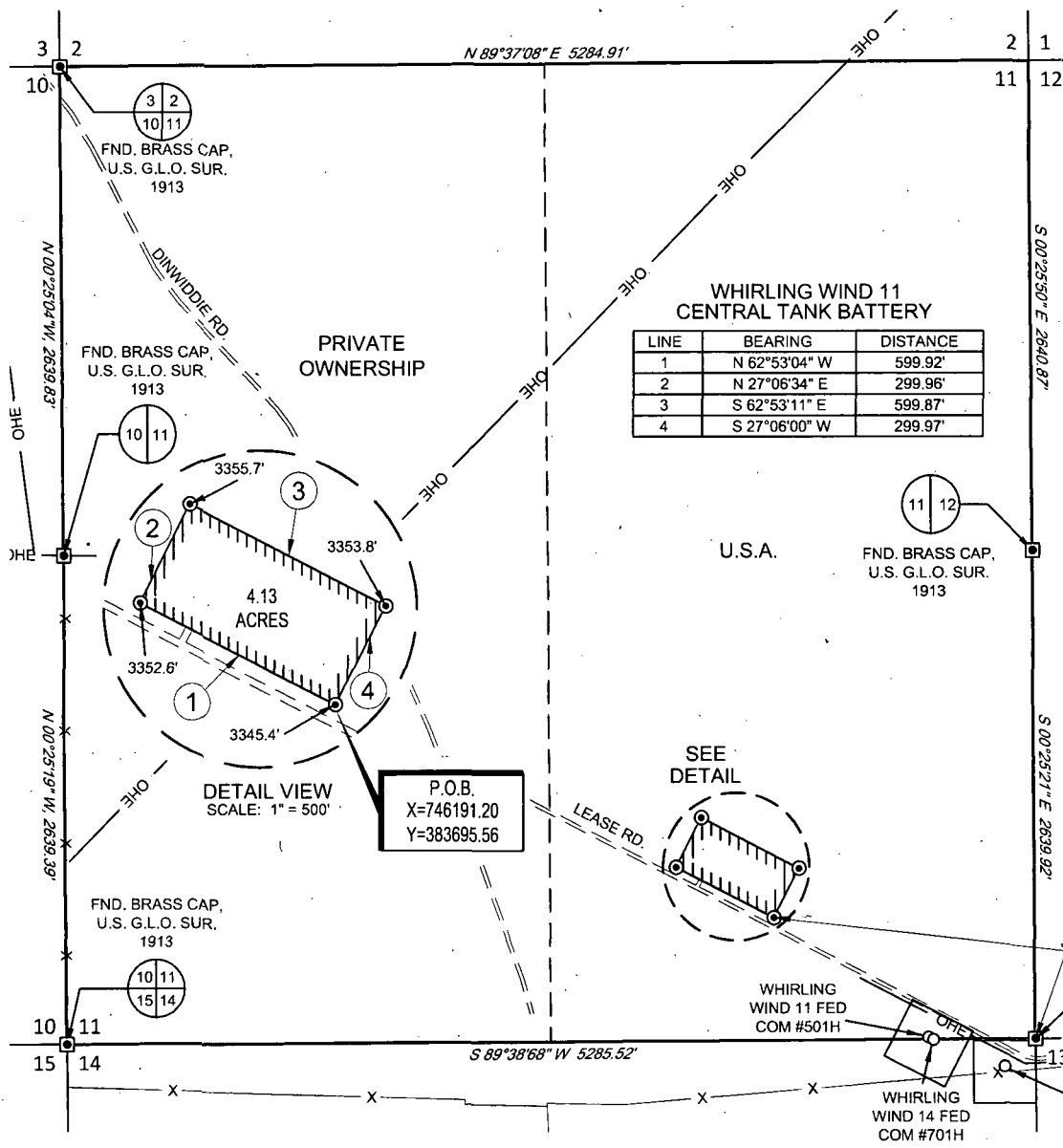
WHIRLING WIND 11 CTB SITE PRO	REVISION:	
	INT	DATE
DATE: 03/25/16		
FILE: CD_WHIRLINGWIND11_CTB_SITE_PRO		
DRAWN BY: GLH		
SHEET: 1 OF 1		

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY EOG RESOURCES, INC. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.

SCALE: 1" = 1000'

SECTION 11, TOWNSHIP 26-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



**WHIRLING WIND 11
CENTRAL TANK BATTERY**

Metes and Bounds Description of a 4.13 acre site located within Section 11, Township 26 South, Range 33 East, N.M.P.M., in Lea County, New Mexico.

BEGINNING at a 1/2" iron rod with cap marked "TOPOGRAPHIC" set for the South corner of this site, from whence a U.S. G.L.O. brass cap found for the Southeast corner of said Section 11, bears: S 65°27'42" E, a distance of 1567.75 feet;

Thence N 62°53'04" W, a distance of 599.92 feet to a 1/2" iron rod with cap marked "TOPOGRAPHIC" set for the West corner of this site;

Thence N 27°06'34" E, a distance of 299.96 feet to a 1/2" iron rod with cap marked "TOPOGRAPHIC" set for the North corner of this site;

Thence S 62°53'11" E, a distance of 599.87 feet to a 1/2" iron rod with cap marked "TOPOGRAPHIC" set for the East corner of this site;

Thence S 27°06'00" W, a distance of 299.97 feet to the Point of Beginning.

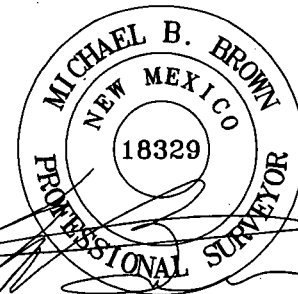
LEGEND

- SURVEY/SECTION LINE
- SITE BOUNDARY TRACT BORDER
- ROAD WAY
- FENCE LINE
- OVERHEAD ELECTRIC
- MONUMENT
- POINT OF INTERSECTION
- IRON ROD SET



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

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2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
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WWW.TOPOGRAPHIC.COM



Michael Blake Brown, P.S. No. 18329

MARCH 17, 2016

Geog resources, Inc.

WHIRLING WIND 11 CENTRAL TANK BATTERY	REVISION:	
	GJU	02/25/16
DATE: 01/08/16	GLH	03/17/16
FILE: BO_WHIRLINGWIND11_CTB_REV2		
DRAWN BY: GJU		
SHEET: 1 OF 1		

NOTES:

- ORIGINAL DOCUMENT SIZE: 8.5" X 11"
- ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
- CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY EOG RESOURCES, INC. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
- P.O.B. = POINT OF BEGINNING

ENTERED COPY

EOG RESOURCES, INC.
WHIRLING WIND 11 FED COM NO. 704H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,100'
Top of Salt	1,440'
Base of Salt / Top Anhydrite	4,880'
Base Anhydrite	5,120'
Lamar	5,120'
Bell Canyon	5,160'
Cherry Canyon	6,190'
Brushy Canyon	7,780'
Bone Spring Lime	9,250'
1 st Bone Spring Sand	10,220'
2 nd Bone Spring Shale	10,420'
2 nd Bone Spring Sand	10,755'
3 rd Bone Spring Carb	11,255'
3 rd Bone Spring Sand	11,820'
Wolfcamp	12,325'
TD	12,495'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,190'	Oil
Brushy Canyon	7,780'	Oil
1 st Bone Spring Sand	10,220'	Oil
2 nd Bone Spring Shale	10,420'	Oil
2 nd Bone Spring Sand	11,755'	Oil
3 rd Bone Spring Carb	11,255'	Oil
3 rd Bone Spring Sand	11,820'	Oil
Wolfcamp	12,325'	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 10.75" casing at 1,125' and circulating cement back to surface.

EOG RESOURCES, INC.
WHIRLING WIND 11 FED COM NO. 704H

4. CASING PROGRAM - NEW

SEE COA

1025

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
14.75"	0 - 1,125	10.75"	40.5#	J55	STC	1.125	1.25	1.60
9.875"	0-8,000'	7.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
8.75"	8,000' - 10,900'	7.625"	29.7#	HCP-110	Ultra FJ	1.125	1.25	1.60
6.75"	0'-19,979'	5.5"	23#	HCP-110	ULT SFII	1.125	1.25	1.60

Variance is requested to wave the centralizer requirements for the 7-5/8" FI casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation. Centralizers will be placed in the 9-7/8" hole interval at least one every third joint.

Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Cementing Program:

SEE COA

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Mix Water Gal/sk	Slurry Description
10-3/4" 1,125	325	13.5	1.73	9.13	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
1025	200	14.8	1.34	6.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
7-5/8" 10,900'	750	9.0	2.50	9.06	Class C + 0.6% ASM-3 + 0.15% CDF-4P + 0.6% LTR + 0.5% SCA-6 + 0.13 pps LCL-11 + 0.13 pps LDP-c-0215
	500	12.5	1.71	9.06	Class C + 0.6% LTR + 0.5% SCA-6 + 0.6% ASM-3 + 0.15% CDF-4P + 0.13% LCL-11 + 0.13% LCF-7
	250	15.6	1.19	5.20	Class H + 0.2% ASM-3 + 0.3% SCA-6 + 0.65% LTR + 0.3% SPC-2
5-1/2" 19,979'	725	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17

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.

EOG RESOURCES, INC.
WHIRLING WIND 11 FED COM NO. 704H

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).

SEE
COA

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram; mud cross and 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.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 5000/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

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 5000/ 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:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

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

1025

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 1,125'	Fresh - Gel	8.6-8.8	28-34	N/c
1,125' - 10,900'	Brine	8.8-10.0	28-34	N/c
10,900' - 19,979' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

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.

EOG RESOURCES, INC.
WHIRLING WIND 11 FED COM NO. 704H

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.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

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

SEE
COA

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

SEE
COA

The estimated bottom-hole temperature (BHT) at TD is 182 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 7472 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. Severe loss circulation is expected from 7,300' to Intermediate casing point.

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 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

11. WELLHEAD:

SEE
COA

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 5000 psi.

EOG RESOURCES, INC.
WHIRLING WIND 11 FED COM NO. 704H

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi. Prior to running the intermediate casing, the rams will be changed out to accommodate the 7-5/8" casing. The bonnet seals will be tested to 1500 psi. After installing the intermediate casing the casing rams will be removed and replaced with variable bore rams. The remaining BOPE will not be retested after installing the intermediate casing.

SEE
CDA

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

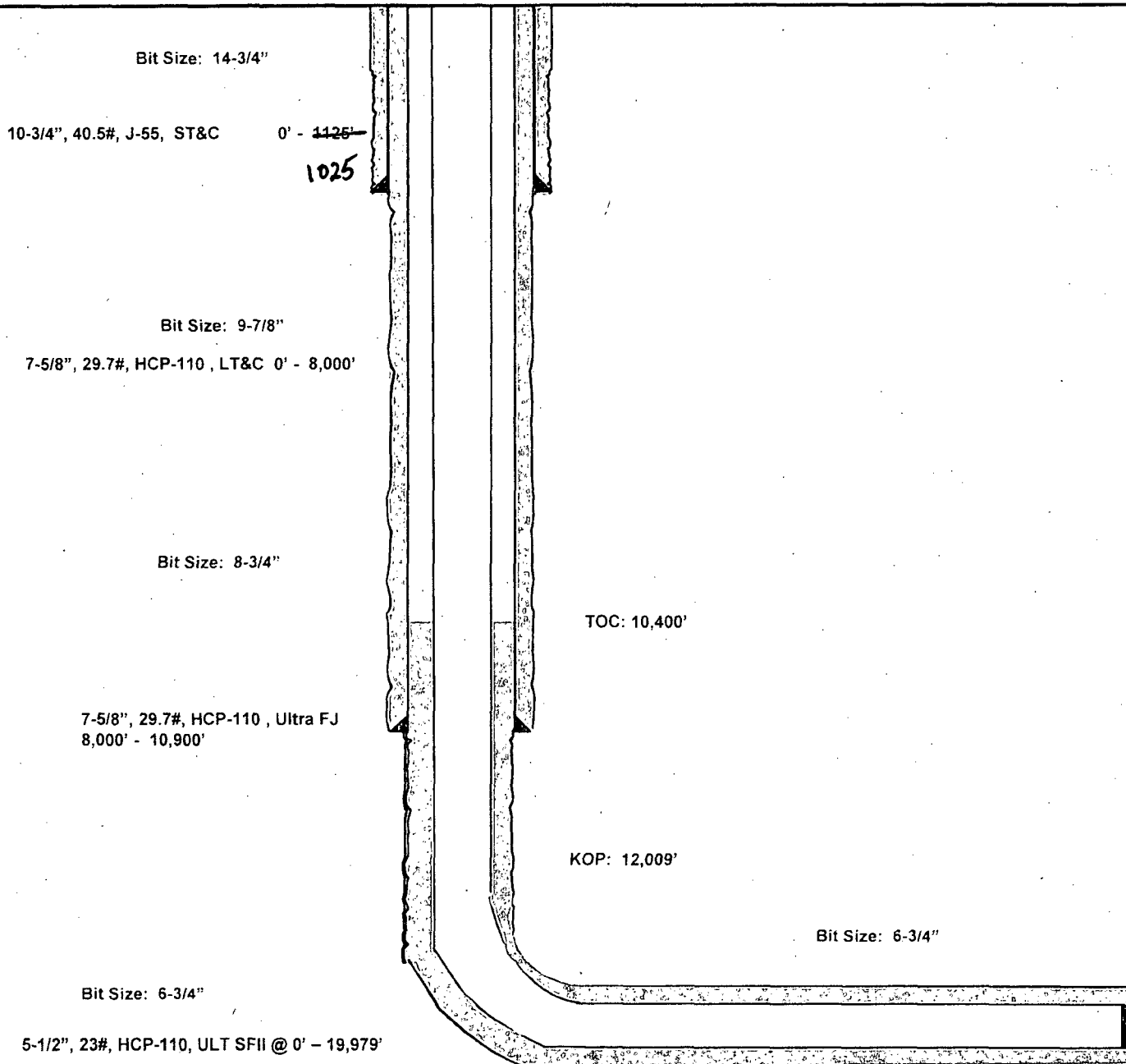
Wellhead drawing Attached.

Whirling Wind 11 Fed Com #704H

856' FSL
2422' FEL
Section 11
T-26-S, R-33-E

Lea County, New Mexico
Proposed Wellbore
Revised 4/7/16
API: 30-025-*****

KB: 3,374'
GL: 3,344'



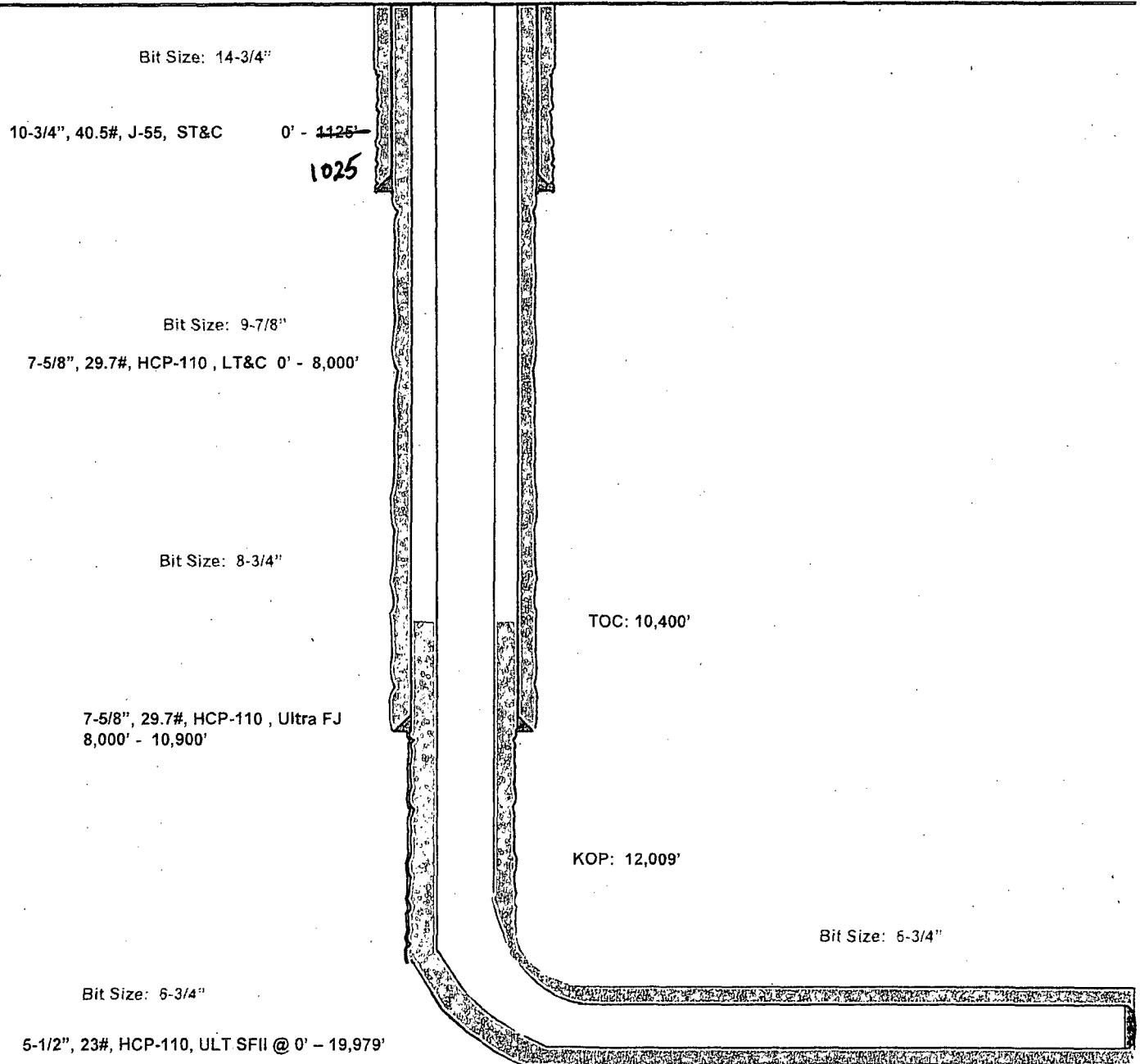
Lateral: 19,979' MD, 12,495' TVD
Upper Most Perf:
330' FSL & 2310' FEL Sec. 11
Lower Most Perf:
2310' FSL & 2310' FWL Sec. 2
BH Location: 2410' FSL & 2310' FEL
Section 2
T-26-S, R-33-E

Whirling Wind 11 Fed Com #704H

856' FSL
2422' FEL
Section 11
T-26-S, R-33-E

Lea County, New Mexico
Proposed Wellbore
Revised 4/7/16
API: 30-025-*****

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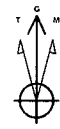
Lateral: 19,979' MD, 12,495' TVD
Upper Most Perf:
330' FSL & 2310' FEL Sec. 11
Lower Most Perf:
2310' FSL & 2310' FWL Sec. 2
BH Location: 2410' FSL & 2310' FEL
Section 2
T-26-S, R-33-E



Lea County, NM (NAD 27 NME)
Whirling Wind 11 Fed Com #704H
H&P 415
Plan #0.1

PROJECT DETAILS: Lea County, NM (NAD 27 NME)

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



Azimuths to Grid North
True North: -0.42°
Magnetic North: 6.60°

Magnetic Field
Strength: 47924.9nT
Dip Angle: 59.92°
Date: 8/19/2016
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.60°
To convert a Magnetic Direction to a True Direction, Add 7.02° East
To convert a True Direction to a Grid Direction, Subtract 0.42°

WELL DETAILS: #704H

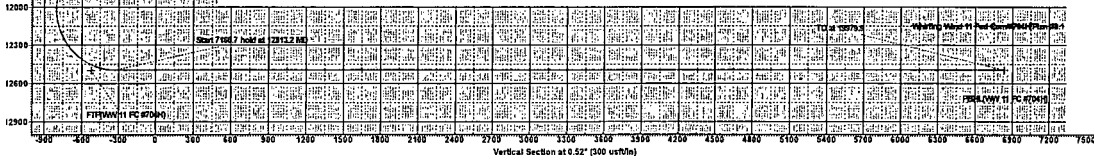
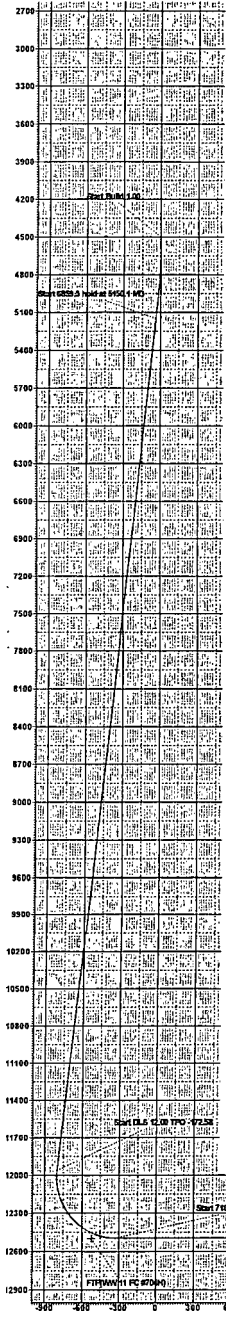
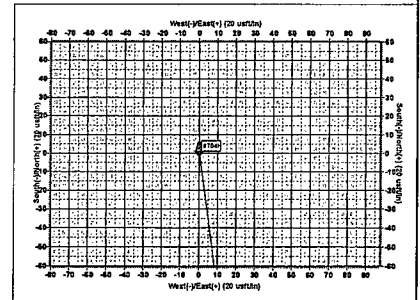
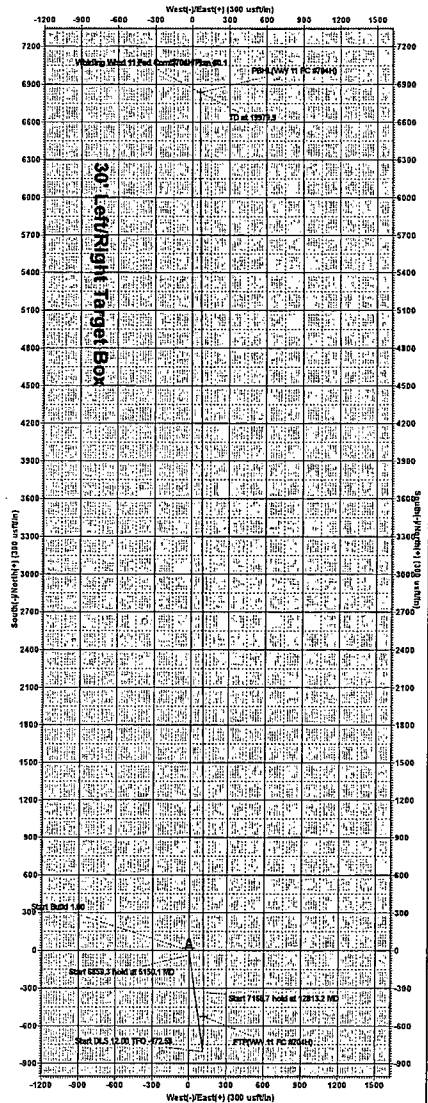
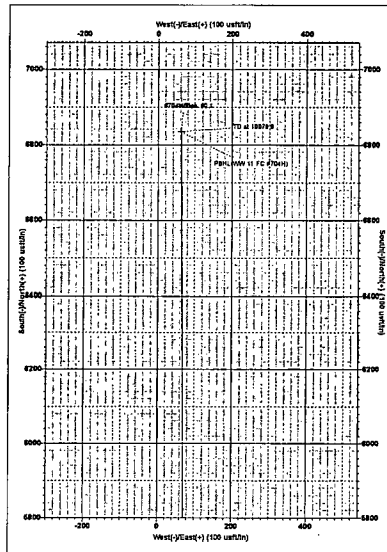
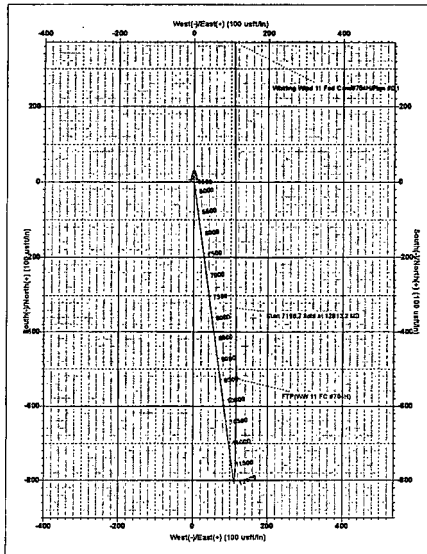
Ground Level: 3344.0
KB = 25 @ 3365.0m (H&P 415)
+N-S +E-W Northing Easting Longitude Slot
0.0 0.0 38385.00 745188.00 32° 3' 10.600 N 103° 32' 30.897 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4500.0	0.00	0.00	4500.0	0.0	0.0	0.00	0.00	0.0	
3	5150.1	6.50	172.21	5148.7	-36.5	5.0	1.00	172.21	-36.5	
4	12009.5	6.50	172.21	11964.0	-806.0	110.3	0.00	0.00	-805.0	
5	12813.2	90.00	359.58	12495.0	-331.5	114.6	12.00	-172.58	-330.5	
6	19979.9	90.00	359.58	12495.0	6835.0	62.0	0.00	0.00	6835.3	PBHL(WW 11 FC #704H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
FTW(WW 11 FC #704H)	12495.0	-425.0	116.0	38385.00	745335.00	Point
PBHL(WW 11 FC #704H)	12495.0	6835.0	62.0	390720.00	745251.00	Point



Lea County, NM (NAD 27 NME)
H&P 415
Plan #0.1
8/19/2016