

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.  
NMNM148727 **122621**

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**1. Type of Well ☒☒ Oil Well ☐ Gas Well ☐ Other8. Well Name and No.  
WHIRLING WIND 11 FED COM 702H ☒2. Name of Operator  
EOG RESOURCES, INC. ☒Contact: STAN WAGNER  
E-Mail: stan\_wagner@eogresources.com9. API Well No.  
30-025-42934 ☒3a. Address  
P.O. BOX 2267  
MIDLAND, TX 797023b. Phone No. (include area code)  
Ph: 432-686-368910. Field and Pool, or Exploratory  
WC-025 G-09 S253336D

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 11 T26S R33E SESE 9FSL 583FEL ☒**HOBBS OCD****MAY 05 2016**

11. County or Parish, and State

LEA COUNTY, NM

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

## TYPE OF SUBMISSION

## TYPE OF ACTION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Fracture Treat☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☒ Other  
Change to Original APD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

EOG Resources requests an amendment to our approved APD for this well to reflect a change in casing design. **9 in BHL.**

New casing design details attached.

**Change BHL from 2410' FSL & 660' FEL to: 2409' FSL & 991' FEL, 2-26S-33E**

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #336082 verified by the BLM Well Information System  
For EOG RESOURCES, INC., sent to the Hobbs  
Committed to AFMSS for processing by KENNETH RENNICK on 04/14/2016 ( )

Name (Printed/Typed) STAN WAGNER

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 04/08/2016

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**Approved By Kenneth RennickTitle Petroleum EngineerDate 5/1/2016

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

Office Carlsbad Field Office

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.

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*****MAY 10 2016**



Rennick, Kenneth <krennick@blm.gov>

Relevant for Whirling Wind 11 Fed Com 702H

Sundry NOI - Casing Change - Thor 21 Fed Com 703H & 704H

Steve Munsell <Steve\_Munsell@eogresources.com>

Wed, Mar 30, 2016 at 9:27 AM

To: "Rennick, Kenneth" <krennick@blm.gov>, Stan Wagner <Stan\_Wagner@eogresources.com>

Cc: Bruce Coit <Bruce\_Coit@eogresources.com>

Kenneth,

We will resubmit and change the anticipated mud weight range to 10.0 to 11.5 ppg. Normally we drill these laterals with mud weights ranging from 9.5 to 11.5 ppg. Almost always we get it done with 10.5 ppg or less.

So the 11.5 ppg maximum anticipated MW keeps us below the 5000 psi shut in surface pressure scenario.

I'm very comfortable with this. All of our rigs are equipped with 10,000 psi BOPs and chokes. The only piece of equipment that is not rated for 10,000 psi is the annular BOP.

Also we have all rigs equipped with two sets of pipe rams and one set of blinds (single BOP, mud cross, dual BOP, annular).

Thanks for your help.

>>>Munsell

**From:** Rennick, Kenneth [mailto:krennick@blm.gov]

**Sent:** Wednesday, March 30, 2016 9:59 AM

**To:** Stan Wagner <Stan\_Wagner@eogresources.com>

**Cc:** Bruce Coit <Bruce\_Coit@eogresources.com>; Steve Munsell <Steve\_Munsell@eogresources.com>

**Subject:** Re: Sundry NOI - Casing Change - Thor 21 Fed Com 703H & 704H

\*\* External email. Use caution.\*\*

Hello Gentlemen,

[Quoted text hidden]

[Quoted text hidden]



**EOG RESOURCES, INC.**  
**WHIRLING WIND 11 FED COM NO. 702H**

**1. GEOLOGIC NAME OF SURFACE FORMATION:**

Permian

**2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:**

Rustler	900'
Top of Salt	1,255'
Base of Salt / Top Anhydrite	4,920'
Base Anhydrite	5,160'
Lamar	5,160'
Bell Canyon	5,187'
Cherry Canyon	6,250'
Brushy Canyon	7,898'
Bone Spring Lime	9,360'
1 <sup>st</sup> Bone Spring Sand	10,275'
2 <sup>nd</sup> Bone Spring Lime	10,470'
2 <sup>nd</sup> Bone Spring Sand	10,805'
3 <sup>rd</sup> Bone Spring Carb	11,155'
3 <sup>rd</sup> Bone Spring Sand	11,905'
Wolfcamp	12,330'
TD	12,540'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,250'	Oil
Brushy Canyon	7,898'	Oil
1 <sup>st</sup> Bone Spring Sand	10,275'	Oil
2 <sup>nd</sup> Bone Spring Lime	10,470'	Oil
2 <sup>nd</sup> Bone Spring Sand	11,805'	Oil
3 <sup>rd</sup> Bone Spring Carb	11,155'	Oil
3 <sup>rd</sup> Bone Spring Sand	11,905'	Oil
Wolfcamp	12,330'	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 990' and circulating cement back to surface.

**EOG RESOURCES, INC.**  
**WHIRLING WIND 11 FED COM NO. 702H**

**4. CASING PROGRAM - NEW**

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF <sub>min</sub> Collapse	DF <sub>min</sub> Burst	DF <sub>min</sub> Tension
14.75"	0 – 990'	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'-19,934'	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" FJ 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:**

Depth	No. Sacks	Wt. ppg	Yld Ft <sup>3</sup> /ft	Mix Water Gal/sk	Slurry Description
10-3/4" 990	325	13.5	1.73	9.13	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	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" 19,934'	<u>725</u>	14.1	<u>1.26</u>	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. 702H**

**5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

SEE COA  
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 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.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 990'	Fresh - Gel	8.6-8.8	28-34	N/c
925' - 10,900'	Brine	8.8-10.0	28-34	N/c
10,900' - 19,934' 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. 702H**

**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) H<sub>2</sub>S 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.

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

The estimated bottom-hole temperature (BHT) at TD is 182 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 7498 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:**

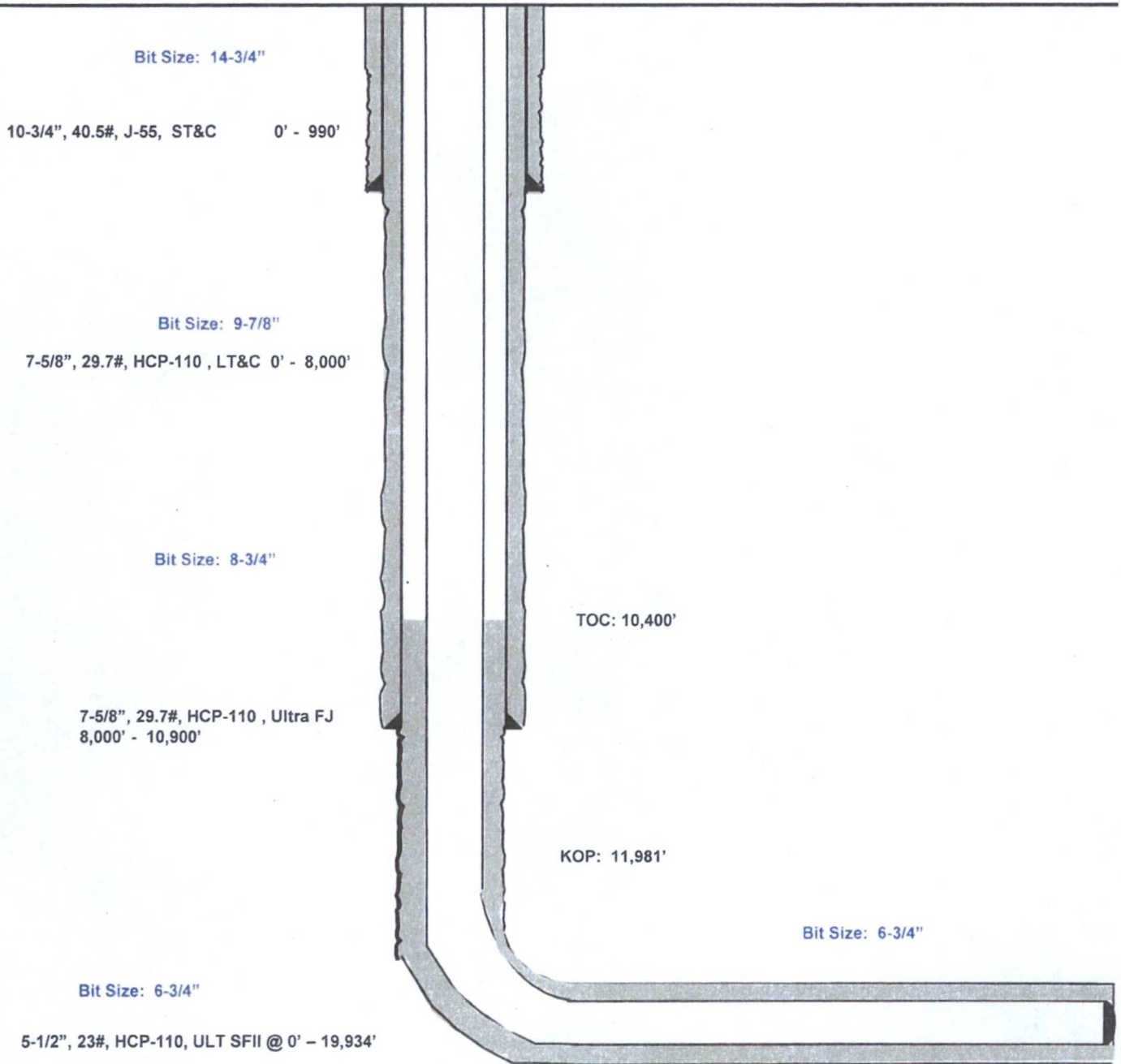
The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

# Whirling Wind 11 Fed Com #702H

9' FSL  
583' FEL  
Section 11  
T-26-S, R-33-E

Lea County, New Mexico  
Proposed Wellbore  
Revised 4/7/16  
API: 30-025-42934

KB: 3,370'  
GL: 3,340'



Lateral: 19,934' MD, 12,540' TVD  
Upper Most Perf:  
330' FSL & 991' FEL Sec. 11  
Lower Most Perf:  
2309' FSL & 991' FEL Sec 2  
BH Location: 2409' FSL & 991' FEL  
Section 2  
T-26-S, R-33-E



## PERFORMANCE DATA

TMK UP ULTRA™ FJ  
Technical Data Sheet

7.625 in

29.70 lbs/ft

P110 HC - EVRAZ

### Tubular Parameters

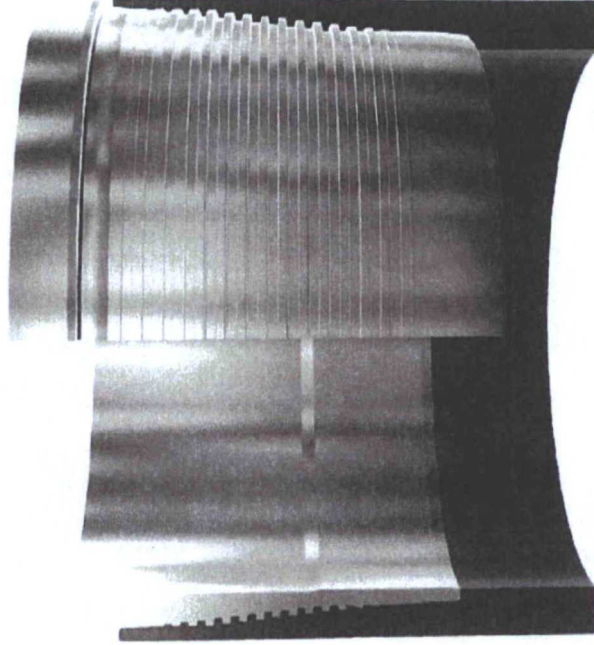
Size	7.625	in	Minimum Yield	110,000	psi
Nominal Weight	29.70	lbs/ft	Minimum Tensile	125,000	psi
Grade	10 HC - EVRAZ				
PE Weight	29.04	lbs/ft	Yield Load	939,000	lbs
Wall Thickness	0.375	in	Tensile Load	1,067,000	lbs
Nominal ID	6.875	in	Min. Internal Yield Pressure	9,420	psi
Drift Diameter	6.750	in	Collapse Pressure	7,610	psi
Nom Pipe Body Area	8.541	in <sup>2</sup>			

### Connection Parameters

Connection OD	7.625	in
Connection ID	6.881	in
Make-Up Loss	4.022	in
Critical Section Area	5.316	in <sup>2</sup>
Tension Efficiency	62.2	%
Compression Efficiency	62.2	%
Yield Load In Tension	584,000	lbs
Min Internal Yield Pressure	9,470	psi
Collapse Pressure	7,610	psi
Uniaxial Bending	41	°/100 ft

### Make-Up Torques

Min Make-Up Torque	17,700	ft-lbs
Opt Make-Up Torque	19,700	ft-lbs
Max Make-Up Torque	21,700	ft-lbs
Yield Torque	31,500	ft-lbs





# PREMIUM CONNECTIONS PERFORMANCE DATA

Size  NomWt  Grade

TMK UP ULTRA™  
SFII

5.500in 23.0lbs/ft P-110 HC

Technical Data Sheet

## Tubular Parameters

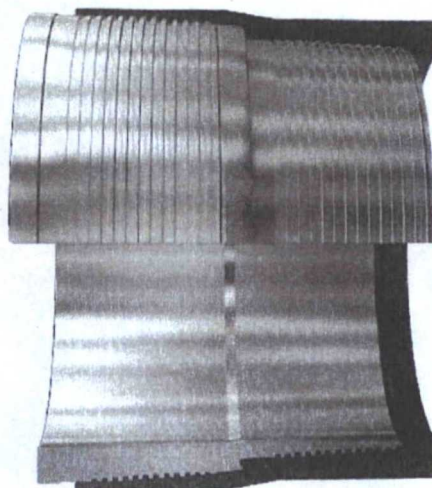
Size	5.500	in	Minimum Yield	110,000	psi
Nominal Weight	23.0	lbs/ft	Minimum Tensile	125,000	psi
Grade	P-110 HC		Yield Load	729,000	lbs
PE Weight	22.54	lbs/ft	Tensile Load	828,000	lbs
Wall Thickness	0.415	in	Min. Internal Yield Pressure	14,500	psi
Nominal ID	4.670	in	Collapse Pressure	15,110	psi
Drift Diameter	4.545	in			
Nom. Pipe Body Area	6.630	in²			

## Connection Parameters

Connection OD	5.726	in
Connection ID	4.626	in
Make - Up Loss	5.653	in
Critical Section Area	5.817	in²
Efficiency - Tension	85%	%
Efficiency - Compression	73%	%
Yield Load in Tension	621,000	lbs
Min. Internal Yield Pressure	14,500	psi
Collapse Pressure	15,110	psi
Uniaxial Bending	78	°/ 100 ft

## Make-Up Torques

Min. Make-Up Torque	15,500	ft-lbs
Optimum Make-Up Torque	16,300	ft-lbs
Max. Make-Up Torque	18,700	ft-lbs
Yield Torque	24,800	ft-lbs





Lea County, NM (NAD 27 NME)

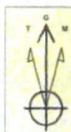
Whirling Wind 11 Fed Com 702H

H&P 260

Plan #2

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



Azimuth to Grid North  
True North: -0.42°  
Magnetic North: 6.62°  
Magnetic Field  
Strength: 47947.5 nT  
Dip Angle: 59.92°  
Date: 5/28/2016  
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.62°  
To convert a True Direction to a Grid Direction, Subtract 0.42°

#### WELL DETAILS 702H

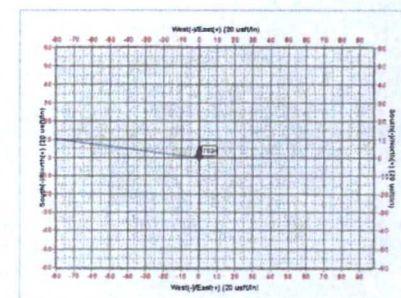
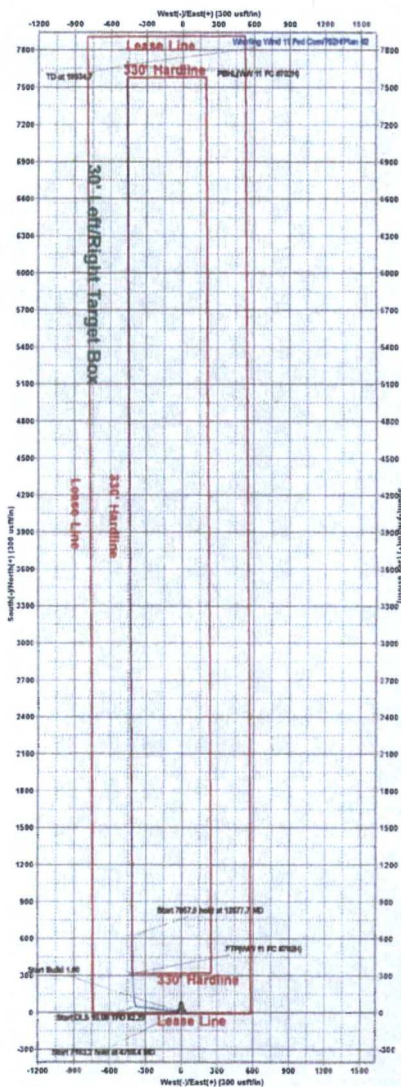
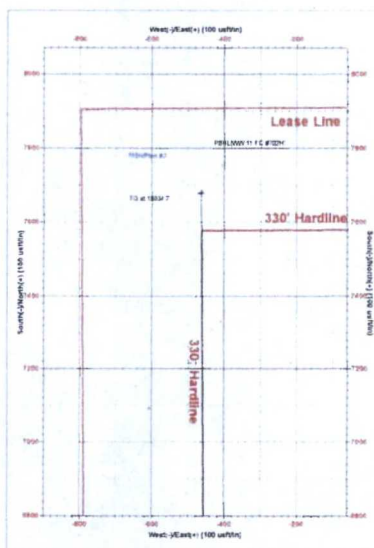
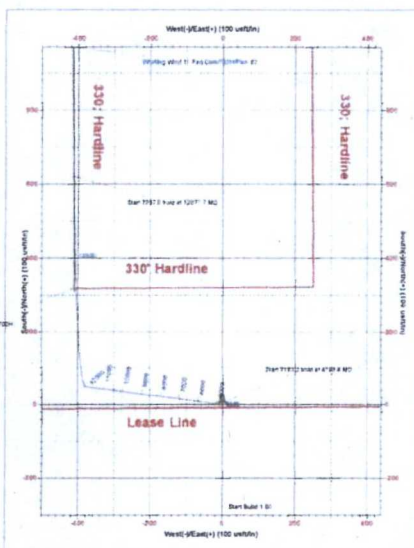
Ground Level: 3340.0  
KB = 25 @ 3305 Oush (H&P 260)  
+N-S +E-W Northing Easting Longitude  
0.0 0.0 363550.00 747034.00 32° 2' 2.333 N 103° 32' 9.632 W

#### 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	4786.4	2.98	277.30	4798.3	1.0	-7.7	1.00	277.30	1.4	
4	11981.7	2.98	277.30	11971.8	48.5	-378.7	0.00	0.00	71.2	
5	12877.7	90.00	359.58	12540.0	621.2	-412.2	10.00	82.29	644.9	
6	19934.7	90.00	359.58	12540.0	7678.0	-464.0	0.00	0.00	7692.0	PBHL(WW 11 FC #702H)

#### WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
FTPI(WW 11 FC #702H)	12540.0	318.0	-410.0	383368.00	748824.00	Point
PBHL(WW 11 FC #702H)	12540.0	7678.0	-464.0	390728.00	748975.00	Point



Vertical Section at 354.54° (300 units)