

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.  
NMNM129262

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
COX 35 FEDERAL 2H9. API Well No.  
30-025-4152110. Field and Pool, or Exploratory  
TRISTE DRAW;BONE SPRING11. County or Parish, and State  
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

ENERGEN RESOURCES CORPORATION

Contact: TOM CARRENS

Email: THOMAS.CARRENS@ENERGEN.COM

3a. Address

3300 NORTH A STREET BLDG 4 SUITE 100  
MIDLAND, TX 79705

3b. Phone No. (include area code)

Ph: 432-688-3334

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

Sec 35 T23S R32E Mer NMP SWSE 200FSL 2240FEL

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

## 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 A  
PD

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.)

Energen Resources would like to change the production casing from 5.50", 20#, P-110, TCPC to 5.50", 20#, RYS-110, CDC HTQ. Attached are revised drill plans and casing manufacture spec sheets.

Original COAs fill sand

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

Electronic Submission #231721 verified by the BLM Well Information System  
For ENERGEN RESOURCES CORPORATION, sent to the Hobbs  
Committed to AFMSS for processing by JOHNNY DICKERSON on 01/16/2014 ()

Name (Printed/Typed) TOM CARRENS

Title SUPV DRILLING

Signature (Electronic Submission)

Date 01/10/2014

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By

Title

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

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 \*\***

FEB 03 2014

Drilling Plan  
Energen Resources Corporation  
Revised 1/9/2014

**Cox 35 Federal #002H**

Surface Location: 200 FSL & 2240 FEL

Section 35-23S-32E, 32° 15' 15.986"/-130° 38' 38.800"

Bottom Hole Location: 330 FNL & 2240 FEL

Section 35-23S-32E, 32° 16' 03.019"/-130° 38' 38.832"

Lea Co., NM

1. The elevation of the unprepared ground is 3649.5 feet above sea level.
2. The geological name of the surface formation is Quaternary Eolian and Piedmont deposits
3. A rotary rig will be utilized to drill the well to a Proposed Total Depth of 10,971' TVD/14,185' MD.
4. Estimated top of important geological markers:

<u>FORMATION</u>	<u>DEPTH (TVD)(ft)</u>	<u>SUBSEA(ft)</u>
Rustler	1,142	2,529
Top of Evaporite	1,282	2,389
Base of Evaporite	4,712	-1,041
Bell Canyon	5,003	-1,332
Cherry Canyon	5,849	-2,178
Brushy Canyon	7,199	-3,528
Bone Springs	8,702	-5,111
Avalon	8,911	-5,240
1st Bone Spring Carbonate	9,829	-6,158
1st Bone Spring Sand	9,962	-6,291
2nd Bone Spring Carbonate	10,296	-6,625
2nd Bone Spring Sand	10,611	-6,940
3rd Bone Spring Carbonate	11,071	-7,400

5. Estimated depth at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered:

<u>FORMATION</u>	<u>DEPTH (TVD)(ft)</u>	<u>Water/HydroCarbon</u>
Rustler	1,142	Water
Top of Evaporite	1,282	NA
Base of Evaporite	4,712	NA
Bell Canyon	5,003	Oil/Gas
Cherry Canyon	5,849	Oil/Gas
Brushy Canyon	7,199	Oil/Gas
Bone Springs	8,702	NA
Avalon	8,911	Oil/Gas
1st Bone Spring Carbonate	9,829	NA
1st Bone Spring Sand	9,962	Oil/Gas
2nd Bone Spring Carbonate	10,296	NA
2nd Bone Spring Sand	10,611	Oil/Gas
3rd Bone Spring Carbonate	11,071	NA

6. The proposed casing is new and the program is as follows:

Casing	Size	Depth		Grade	Weight	Connection	PSI		x1000/lbs Tension
		MD	ITVD				Collapse	Burst	
Surface	13-3/8"	0-1,200'	0-1,200'	J-55	54.50	BTC	1,130	2,730	909
Intermediate	9-5/8"	0-4,850'	0-4,850'	J-55	40.00	BTC	2,570	3,970	714
Production (Atch C-2)	5-1/2"	0-14,185'	0-10,971'	RYS-110	20.00	CDC HTQ	11,100	12,640	641

7. Cementing Program:

- 17-1/2" hole x 13-3/8" casing at 1,200' will have cement circulated to surface with 540 sx of Econocem -- HLC with 1 lbm/sk Kol-Seal at 12.8 ppg (1.81 cf/sk) followed by 250 sx HalCem -- C with 1 lbm/sk Kol-Seal at 14.8 ppg (1.33 cf/sk). Note: CEMENT MUST BE CIRCULATED TO SURFACE. STANDARD BOW SPRING CENTRALIZERS SHALL BE PLACED ON THE FIRST 3 (BOTTOM 3) JOINTS OF CASING (1 PER JOINT) AND 1 EVERY 3<sup>RD</sup> JOINT TO SURFACE.
- 12-1/4" hole x 9-5/8" casing at 4,850'. A fluid caliper will be run to determine the exact cement volume required. Cement will be circulated to surface with 890 sx of Econo-Cem -- C with 2lbm/sk Kol-Seal, 0.25 lbm/sk D-AIR 5000 at 11.9 ppg (2.45 cf/sk) followed by 220 sx of HalCem-C with 1 lbm/sk Kol-Seal at 14.8 ppg (1.33 cf/sk). ONE CENTRALIZER PER JOINT FOR THE FIRST 3 JOINTS, THEN EVERY 3<sup>RD</sup> JOINT TO SURFACE. TOP AND BOTTOM PLUGS TO BE USED FOR CEMENTING.
- 8-3/4" hole x 5-1/2" casing at 14,835'. A fluid caliper will be run to determine the exact cement volume required to have TOC at 4,680'. 2880 sx of VersaCem-H with 0.4% Halad(R)-344, 0.3% Super CBL, 0.4% HR-800 at 14.4 ppg (1.25 cf/sk). DV tool will be utilized at 10,000' if losses are encountered. CENTRALIZERS TO BE USED AT DISCRETION IN LATERAL TO ACHIEVE 70% STAND OFF. CENTRALIZERS TO BE USED TO TIE BACK DEPTH OF 4,680' TO ACHIEVE 70% STAND OFF. TOP AND BOTTOM PLUGS TO BE USED FOR CEMENTING.

8. Pressure Control Equipment

- 12-1/4" hole section: The blowout preventer equipment (BOP) will consist of a 5,000 psi system double ram type preventer, a bag type (Hydril) preventer and rotating head. Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and corresponding pipe rams based on hole section being drilled. A 13-5/8" 5M x SOW will be installed on the 13-3/8" surface casing and utilized until the 9-5/8" casing is set. The BOP and associated equipment will be tested to rated pressure, before drilling out the 13-3/8" casing shoe the casing will be tested to 2,000 psi. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 5,000 psi WP rating.
- 8-3/4" hole section: The blowout preventer equipment (BOP) will consist of a 5,000 psi system double ram type preventer, a bag type (Hydril) preventer and rotating head. Both units will be hydraulically operated and the ram type preventer will be equipped with blind rams on top and corresponding pipe rams based on hole section being drilled. A 13-3/8" 5M x 11" 10M wellhead will be installed. The BOP and associated equipment will be tested to rated pressure, before drilling out the 9-5/8" casing shoe the casing will be tested to 2,000 psi. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include an Upper and Lower Kelly cock, floor safety valve, choke lines and

See original  
COA  
Summary required  
for DV tool

choke manifold having 5,000 psi WP rating. All equipment used will meet standards for a Hydrogen Sulfide environment.

- c. Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drilling logs.

9. Mud Program:

*all original*  
*COF 1200'*

0' - 1,200'	Bentonite/Lime mud. Paper for losses and seepage. 8.5 to 9.0 ppg, 32 to 34 vis, PV 3 to 5, YP 5 to 7, WL NC
1,200' - 4,850'	Brine. As needed LCM for losses and seepage. 10.0 to 10.2 ppg, pH 10, 28 to 29 vis, PV 1, YP 1, WL NC
4,850' - 14,835'	Cut Brine. As needed LCM for losses and seepage. 9.0 to 9.5 ppg, pH 10, 28 to 36 vis, PV 4-6, YP 4-6, WL 12-15

**\*\*During drilling operations, all necessary products will be sufficiently stored on location for abnormal situations. The characteristics, use, testing of drilling mud and the implementation of related drilling procedures shall be designed to prevent the loss of well control. Sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring well control.**

**\*\*A pH of 10 or above in the fresh water base mud system shall be maintained to control the effects H<sub>2</sub>S has on metallurgy of equipment used.**

Operating and Maintenance

Energren Resources Corporation will be using all above ground steel pits for fluid and cuttings while drilling. If any tank develops a leak we will have immediate visual discovery, we would then transfer the fluid to another tank then remove any contaminated soil and dispose of it in the cuttings bins for transportation. All leaks should be kept to less than 5 barrels. Rig crews will monitor the tanks at all times. A trip/surge tank will be used to monitor returns for circulation losses/gains.

Equipment:

2-Mongoose Shale Shakers

2-3400 High Speed Centrifuges with stands and pumps

3-Roll off bins with Tracks

2-500 bbl Open top Frac tanks

1-Mud/Gas Separator and Degasser

1-Trip/Surge Tank to monitor returns

Electronic or Visual monitoring system to indicate lost returns

10. Testing, Logging and Coring Program:

- Testing Program: No drillstem tests are anticipated
- Electric Logging Program: No Electric Logs
- LWD Program: MWD and Mud Logs
- Coring Program: None

11. Pressure gradient expected to be 5,420psit.

12. Bottom Hole Temperature expected to be 160 deg F

U. S. Steel Tubular Products<sup>®</sup>

5 1/2 20.00 lb (0.361) USS RYS110

USS-CDC HTQ™

	PIPE	CONNECTION	
<b>MECHANICAL PROPERTIES</b>			
Minimum Yield Strength	110,000		psi
Maximum Yield Strength	125,000		psi
Minimum Tensile Strength	120,000		psi
<b>DIMENSIONS</b>			
Outside Diameter	5.500	6.300	in.
Wall Thickness	0.361		in.
Inside Diameter	4.778	4.778	in.
Drift - API	4.653	4.653	in.
Nominal Linear Weight, T&C	20.00		lbs/ft
Plain End Weight	19.83		lbs/ft
<b>SECTION AREA</b>			
Cross Sectional Area   Critical Area	5.828	5.828	sq. in.
Joint Efficiency		100.0	%
<b>PERFORMANCE</b>			
Minimum Collapse Pressure	11,100	11,100	psi
Minimum Internal Yield Pressure	12,640	12,640	psi
Minimum Pipe Body Yield Strength	641,000		lbs
Joint Strength		646,000	lbs
Compression Rating		388,000	lbs
Reference Length		21,533	ft
Maximum Uniaxial Bend Rating		55.5	deg/100 ft
<b>MAKE-UP DATA</b>			
Make-Up Loss		4.63	in.
Minimum Make-Up Torque		13,000	ft-lbs
Maximum Make-Up Torque		18,500	ft-lbs
Connection Yield Torque		22,900	ft-lbs
* Verification of connection shoulder required. Typical shoulder range		5,000 - 7,500	ft-lbs

**Notes:**

- 1) Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (SMYS).
- 2) Uniaxial bending rating shown is structural only, and equal to compression efficiency.
- 3) Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
- 4) Reference length is calculated by joint strength divided by nominal T&C weight with 1.5 safety factor.

Legal Notice: USS-CDC HTQ™ (High Torque Casing Drilling Connection) is a trademark of U. S. Steel Corporation. This product is a modified API Buttress threaded and coupled connection designed for drilling with casing applications. All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability, and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.

USS Product Data Sheet 2013 rev13a (May)

U. S. Steel Tubular Products  
10343 Sam Houston Park Dr., #120  
Houston, TX 77064

1-877-893-9461  
connections@uss.com  
www.usstubular.com