Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

Carlsbad Field Office
OCD Hobbs

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.

HOBBS OCD
JUN 19 2017
RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM19858

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
HAWK 26 FED 707H

2. Name of Operator
EOG RESOURCES, INC.
Contact: STAN WAGNER
E-Mail: stan_wagner@eogresources.com

9. API Well No.
30-025-42400

3a. Address
P.O. BOX 2267
MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-686-3689

10. Field and Pool, or Exploratory
WC-025 G-09 S243336I

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 26 T24S R33E SWSE 500FSL 1790FEL

11. County or Parish, and State
LEA COUNTY, NM

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

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

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 recomplete 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 recompletion 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 and amendment to our approved APD for this well to reflect a change in casing design and our intention to use a multi-bowl wellhead system in the drilling of the well.

Detailed information regarding the changes is attached.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #338368 verified by the BLM Well Information System
For EOG RESOURCES, INC., sent to the Hobbs

Name *(Printed/Typed)* STAN WAGNER — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 05/04/2016

APPROVED
JUN 12 2017
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Mustafa Haque — Title PETROLEUM ENGINEER — Date 6/12/2017

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 CFO

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 **

EOG RESOURCES, INC.
HAWK 26 FED NO. 707H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,218'
Top of Salt	1,710'
Base of Salt / Top Anhydrite	5,000'
Base Anhydrite	5,248'
Lamar	5,248'
Bell Canyon	5,279'
Cherry Canyon	6,273'
Brushy Canyon	7,725'
Bone Spring Lime	9,250'
1st Bone Spring Sand	10,220'
2nd Bone Spring Lime	10,670'
2nd Bone Spring Sand	10,940'
3rd Bone Spring Lime	11,360'
3rd Bone Spring Sand	11,960'
Wolfcamp	12,300'
TD	12,500'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,273'	Oil
Brushy Canyon	7,725'	Oil
Bone Spring Lime	9,250'	Oil
1st Bone Spring Sand	10,220'	Oil
2nd Bone Spring Lime	10,670'	Oil
2nd Bone Spring Sand	10,940'	Oil
3rd Bone Spring Lime	11,360'	Oil
3rd Bone Spring Sand	11,960'	Oil
Wolfcamp	12,300'	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 1,300' 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
14.75"	0 – 1,300'	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' – 11,400'	7.625"	29.7#	HCP-110	Ultra FJ	1.125	1.25	1.60
6.75"	0'-17,815'	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: → SEE COA

Depth	No. Sacks	Wt. ppg	Yld Ft^3/ft	Mix Water Gal/sk	Slurry Description
10-3/4" 1,300	700	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)
	300	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" 11,400'	780	9.0	2.86	11.14	D195 LiteFill (Beads) + 0.50% Retarder + D046 Antifoam
	525	13.5	1.55	7.47	50:50 Class H:Poz + 0.10% D065 + 0.20% D112 + 10% D154 + 2.0% D174 + 0.40% D800
5-1/2" 17,815'	575	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17

low cement - SEE COA

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 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 – 1,300'	Fresh - Gel	8.6-8.8	28-34	N/c
1,300' – 11,400'	Brine	8.8-10.0	28-34	N/c
11,400' – 17,815' 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.

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_2S 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 170 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 7475 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 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

11. WELLHEAD: -DSEE 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

EOG RESOURCES, INC.
HAWK 26 FED NO. 707H

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

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.

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.

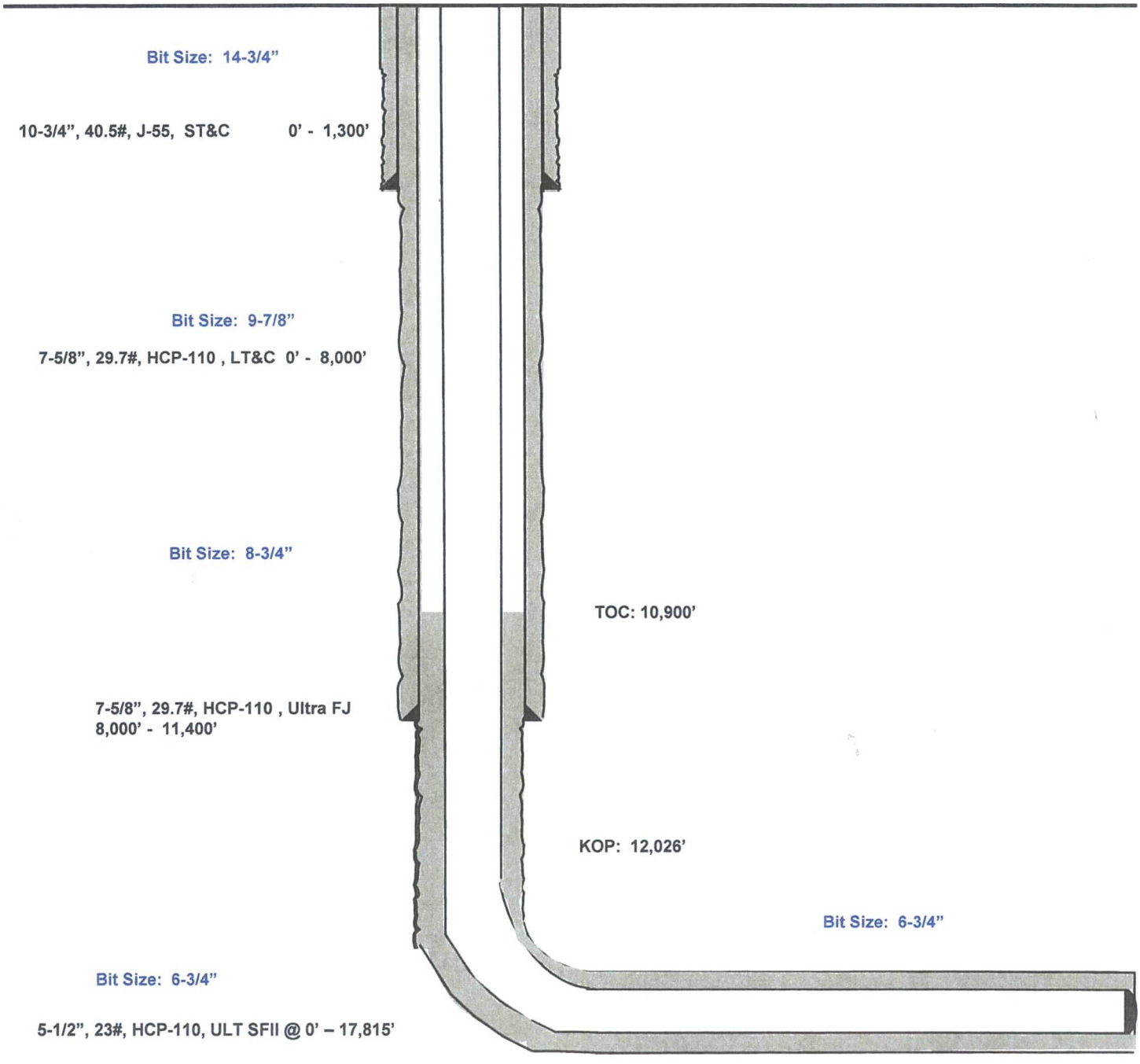
Wellhead drawing Attached.

Hawk 26 Fed #707H

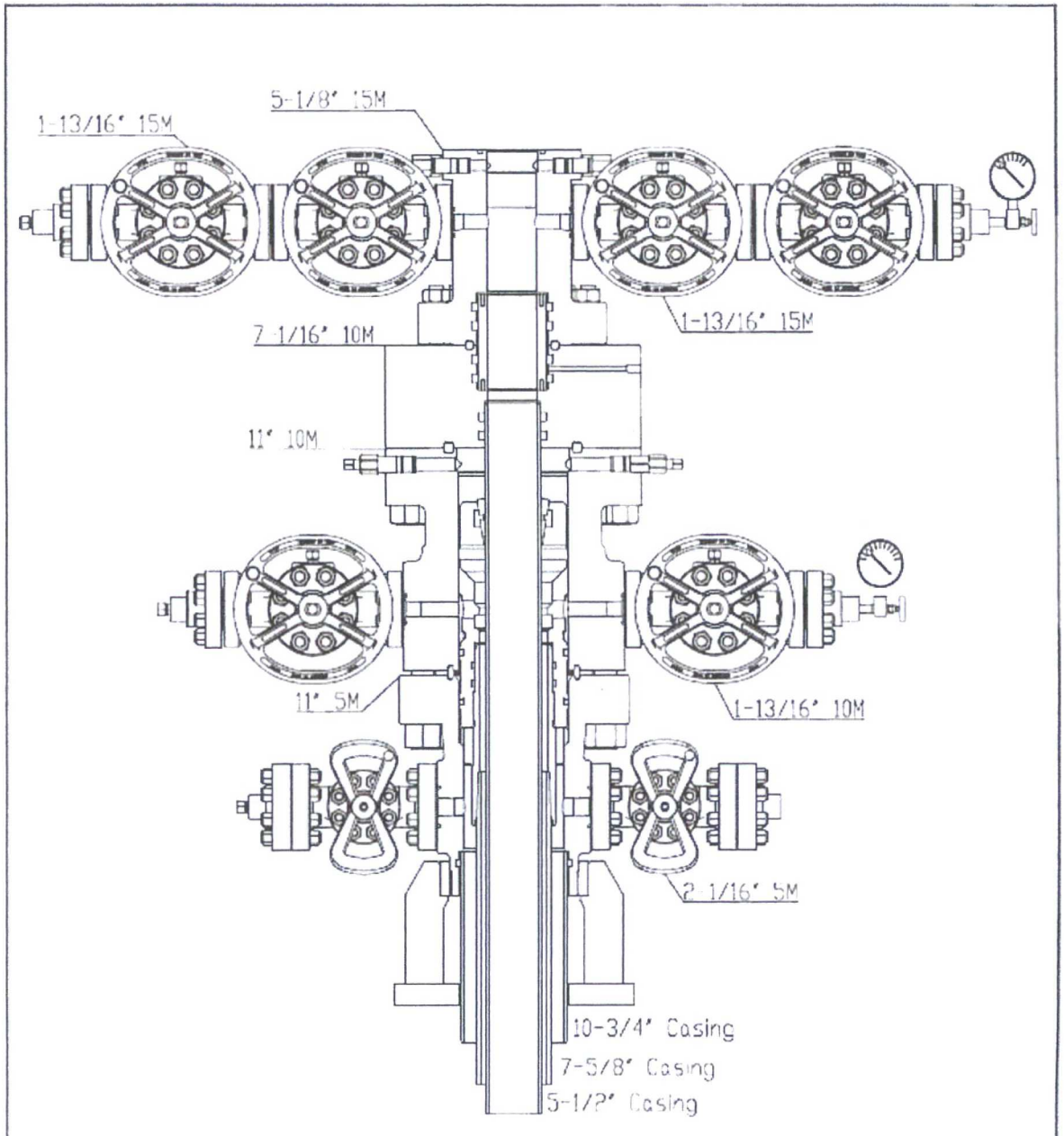
500' FSL
1709' FEL
Section 26
T-24-S, R-33-E

Lea County, New Mexico
Proposed Wellbore
Revised 5/4/16
API: 30-025-42400

KB: 3,558'
GL: 3,528'



Lateral:
17,815' MD, 12,500' TVD
Upper Most Perf:
10' FNL & 1889' FEL
Lower Most Perf:
330' FSL & 1897' FEL
BH Location: 230' FSL & 1897' FEL
Section 35
T-24-S, R-33-E



*CONCEPT QUOTE DRAWING

EOG RESOURCES 10-3/4" X 7-5/8" X 5-1/2" FBD-100 WELLHEAD SYSTEM QUOTE # - 93482	DWN	BAY	1/28/16	Stream Flo Worldwide Expertise - Global Strength	DRAWING NO WH-15848
	CHK				
	APP				
		BY	DATE		

PREMIUM CONNECTIONS PERFORMANCE DATA

Size 5.500 **NomWt** 23.0 **Grade** P-110 HC

TMK UP ULTRA™ SFII

5.500in 23.0lbs/ft P-110 HC

Technical Data Sheet

Tubular Parameters

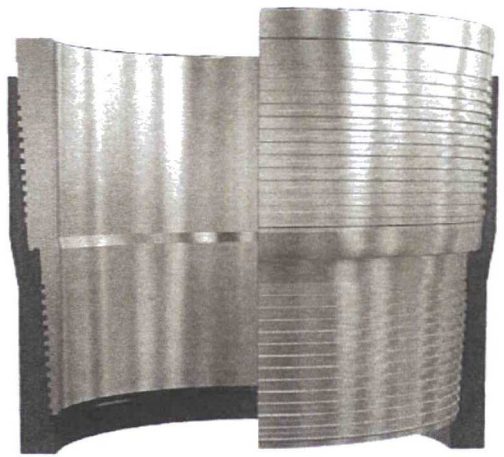
Size	5.500	in	Minimum Yield	110,000	psi
Nominal Weight	23.0	lbs/ft	Minimum Tensile	125,000	psi
Grade	P-110 HC		Yield Load	729,000	lbs
PE Weight	22.54	lbs/ft	Tensile Load	828,000	lbs
Wall Thickness	0.415	in	Min. Internal Yield Pressure	14,500	psi
Nominal ID	4.670	in	Collapse Pressure	15,110	psi
Drift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



PERFORMANCE DATA

TMK UP ULTRA™ FJ 7.625 in 29.70 lbs/ft P110 HC - EVRAZ
Technical Data Sheet

Tubular Parameters

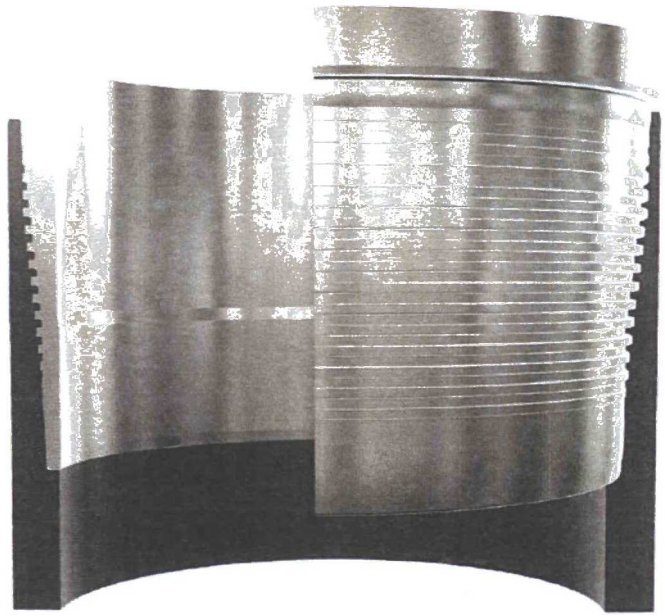
Size	7.625	in	Minimum Yield	110,000	psi
Nominal Weight	29.70	lbs/ft	Minimum Tensile	125,000	psi
Grade	10 HC EVRAZ		Yield Load	939,000	lbs
PE Weight	29.04	lbs/ft	Tensile Load	1,067,000	lbs
Wall Thickness	0.375	in	Min. Internal Yield Pressure	9,420	psi
Nominal ID	6.875	in	Collapse Pressure	7,610	psi
Drift Diameter	6.750	in			
Nom. Pipe Body Area	8.541	in²			

Connection Parameters

Connection OD	7.625	in
Connection ID	6.881	in
Make-Up Loss	4.022	in
Critical Section Area	5.316	in²
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



PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG Resources, Inc.
LEASE NO.:	NMNM-19858
WELL NAME & NO.:	Hawk 26 Fed 7H
SURFACE HOLE FOOTAGE:	0500' FSL & 1709' FEL
BOTTOM HOLE FOOTAGE	0230' FSL & 1897' FEL Sec. 35, T. 24 S., R 33 E.
LOCATION:	Section 26, T. 24 S., R 33 E., NMPM
COUNTY:	Lea County, New Mexico

A. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Risks:
Possibility of water flows in the Castile and Salado
Possibility of lost circulation in the Rustler, Red Beds and Delaware
Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstones and the Wolfcamp Formation.

1. The **10 3/4** inch surface casing shall be set at approximately **1300** feet **(in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt)** and cemented to the surface.

    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 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.

    Formation below the 10 3/4 inch 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.

2. The minimum required fill of cement behind the **7 5/8** inch intermediate is:

    ☒ Cement to surface. If cement does not circulate see A.1.a, c-d above. **Excess calculates to 23% - additional cement might be required.**

    Formation below the 7 5/8 inch 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.

3. The minimum required fill of cement behind the **5 1/2** inch production casing is:

    ☒ Cement should tie-back at least **200** feet in to previous casing. Operator shall provide method of verification. **Excess calculates to 23% - additional cement might be required.**

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.

B. 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 53.

2. Operator has proposed a **multi-bowl wellhead assembly**. This assembly (BOPE/BOPE) will be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface 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. (Installation of 10,000 WP Double Ram and 5000 WP Annular, only will test to a 5M system.)**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.
    c. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    d. Manufacturer representative shall install the test plug for the initial and all BOP testing.
    e. **Prior to running the intermediated casing, the rams will be changed out to accommodate the 7-5/8" casing. After installing the intermediate casing the casing rams will be removed and replaced with variable bore rams.**

3. Operator has broken a seal on the BOP stack therefore per Onshore Oil and Gas Order No. 2 **the entire BOP stack shall be tested prior to drilling out the intermediated casing**.

    a. A solid steel body pack-off will be utilized after running & cementing the intermediate casing. After installation of the pack-off and lower flange will be pressure tested to 5000 psi.
    b. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

MHH 06122017