

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: October 31, 2021

**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. **NMNM110835**

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

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

8. Well Name and No. **RUTHLESS 11 FED COM/505H**

9. API Well No. **3002547719**

10. Field and Pool or Exploratory Area  
**WC-025 G-08 S253235G; LWR BONE SPRING**

11. Country or Parish, State  
**LEA/NM**

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

TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon		
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must 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 respectfully requests an amendment to our approved APD for this well to reflect the following changes:

Update casing and cement program to current design.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  
**STAR HARRELL / Ph: (432) 848-9161**

Title **Regulatory Specialist**

Signature \_\_\_\_\_ Date **01/28/2022**

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

Approved by  
**CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved**

Title **Petroleum Engineer** Date **02/09/2022**

Office **CARLSBAD**

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.

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.

(Instructions on page 2)

## GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13*: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

## Additional Information

### Location of Well

0. SHL: NWNE / 520 FNL / 1987 FEL / TWSP: 25S / RANGE: 32E / SECTION: 11 / LAT: 32.1508675 / LONG: -103.643463 ( TVD: 0 feet, MD: 0 feet )

PPP: NENW / 101 FNL / 2613 FWL / TWSP: 25S / RANGE: 32E / SECTION: 11 / LAT: 32.152022 / LONG: -103.6457882 ( TVD: 10656 feet, MD: 10729 feet )

PPP: NESW / 2646 FNL / 2623 FWL / TWSP: 25S / RANGE: 32E / SECTION: 11 / LAT: 32.1450369 / LONG: -103.6458071 ( TVD: 10921 feet, MD: 13372 feet )

BHL: SESW / 111 FSL / 2623 FWL / TWSP: 25S / RANGE: 32E / SECTION: 14 / LAT: 32.1235409 / LONG: -103.6458653 ( TVD: 10921 feet, MD: 21192 feet )

CONFIDENTIAL



### Ruthless 11 Fed Com 505H

#### Revised Permit Information 01/28/2022:

Well Name: Ruthless 11 Fed Com 505H

Location: SHL: 564' FNL & 1978' FEL, Section 11, T-25-S, R-32-E, Lea Co., N.M.

BHL: 100' FSL & 2180' FEL, Section 14, T-25-S, R-32-E, Lea Co., N.M.

#### Casing Design A

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DFmin Collapse	DFmin Burst	DFmin Tension
17.5"	0' - 1,080'	13.375"	54.5#	J-55	STC	1.125	1.25	1.6
8.75"	0' - 10,290'	7.625"	29.7#	P110-EC	Vam Sprint-FJ	1.125	1.25	1.6
6.75"	0' - 9,790'	5.5"	20#	ICYP-110	TXP BTC	1.125	1.25	1.6
6.75"	9,790' - 10,290'	5.5"	20#	P110-EC	Vam Sprint SF	1.125	1.25	1.6
6.75"	10,290' - 21,163'	5.5"	20#	ICYP-110	TXP BTC	1.125	1.25	1.6

Variance is requested to waive the centralizer requirements for the 7-5/8" 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.

Variance is also requested to waive any centralizer requirements for the 5-1/2" 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.

Variance is also requested to waive the annular clearance requirements for the 5-1/2" casing by 7-5/8" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the production open hole section.

#### Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft3/sk	Slurry Description
1,080' 13-3/8"	470	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	150	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 875')
10,290' 7-5/8"	370	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 7,169')
	1910	14.8	1.5	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
21,163' 5-1/2"	970	14.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 9,792')



### Ruthless 11 Fed Com 505H

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Pre-Mag-M	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

EOG requests variance from minimum standards to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (7,369') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. Top will be verified by Echo-meter.

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

#### Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,080'	Fresh - Gel	8.6-8.8	28-34	N/c
1,080' – 10,290'	Brine	10.0-10.2	28-34	N/c
10,290' – 10,470'	Oil Base	8.7-9.4	58-68	N/c - 6
10,470' – 21,163'	Oil Base	10.0-14.0	58-68	4 - 6



## Ruthless 11 Fed Com 505H

### Wellhead:

EOG Resources Inc. (EOG) respectfully requests a variance from the minimum standards for well control equipment testing of Onshore Order No. 2 (item III.A.2.i) to allow a testing schedule of the blow out preventer (BOP) and blow out prevention equipment (BOPE) to include the following:

- Full BOPE test at first installation on the pad.
- Full BOPE test every 30 days per Onshore Order No. 2.
- Function test BOP elements per Onshore Order No. 2.
- Break testing BOP and BOPE coupled with batch drilling operations and production sections that do not penetrate the Wolfcamp or deeper formations.
- After the well section is cemented the BOP will be disconnected from the wellhead and walked with the rig to another well on the pad. The cemented well will be secured with a blind flange and a pressure gauge for monitoring.



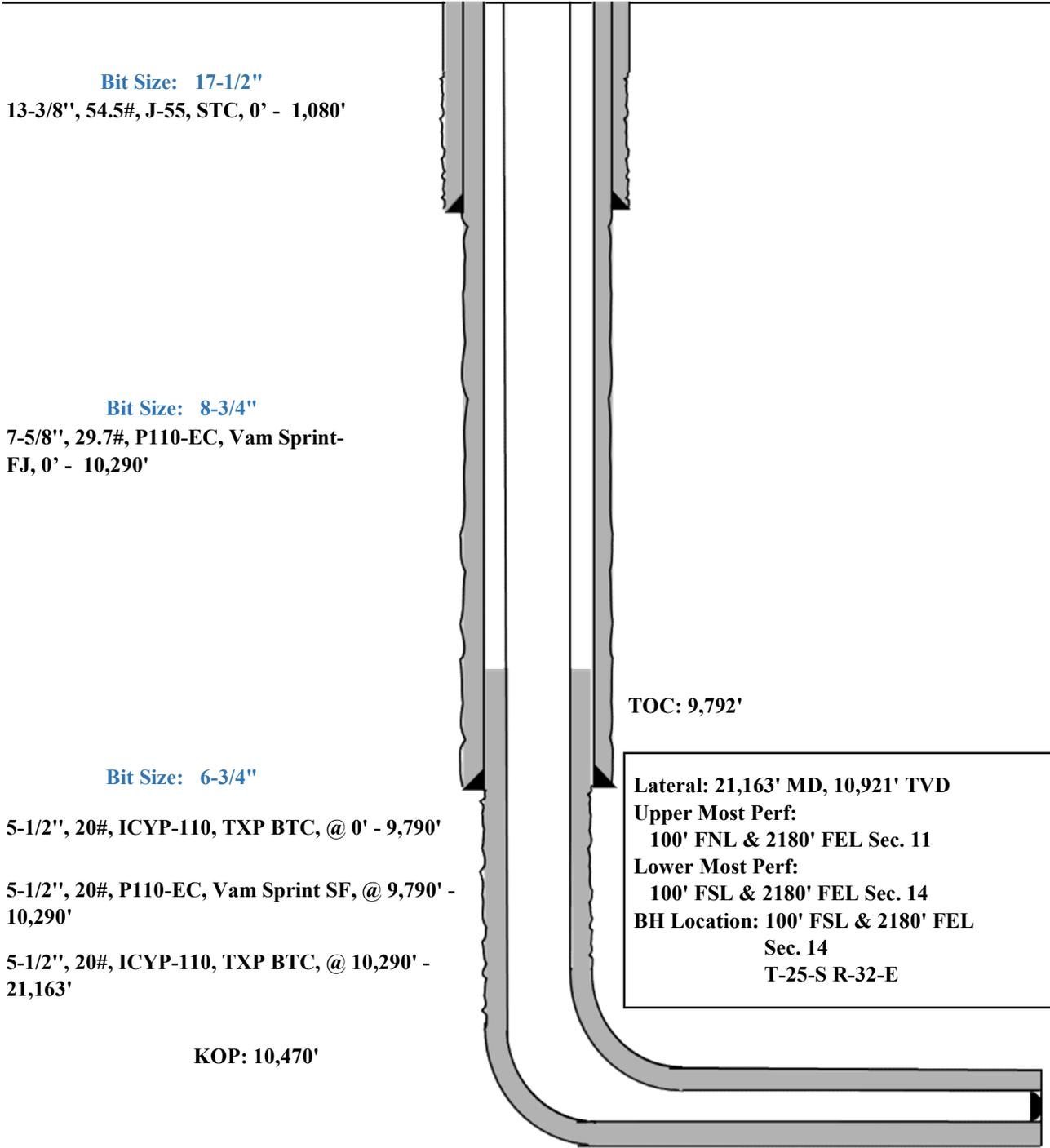
### Ruthless 11 Fed Com 505H

564' FNL  
1978' FEL  
Section 11  
T-25-S, R-32-E

Revised Wellbore

KB: 3537'  
GL: 3512'

API: 30-025-47719



Bit Size: 17-1/2"

13-3/8", 54.5#, J-55, STC, 0' - 1,080'

Bit Size: 8-3/4"

7-5/8", 29.7#, P110-EC, Vam Sprint-FJ, 0' - 10,290'

Bit Size: 6-3/4"

5-1/2", 20#, ICYP-110, TXP BTC, @ 0' - 9,790'

5-1/2", 20#, P110-EC, Vam Sprint SF, @ 9,790' - 10,290'

5-1/2", 20#, ICYP-110, TXP BTC, @ 10,290' - 21,163'

TOC: 9,792'

Lateral: 21,163' MD, 10,921' TVD
Upper Most Perf: 100' FNL & 2180' FEL Sec. 11
Lower Most Perf: 100' FSL & 2180' FEL Sec. 14
BH Location: 100' FSL & 2180' FEL Sec. 14 T-25-S R-32-E

KOP: 10,470'

For the latest performance data, always visit our website: [www.tenaris.com](http://www.tenaris.com)

March 10 2017



**Connection:** TenarisXP® BTC  
**Casing/Tubing:** CAS  
**Coupling Option:** REGULAR

**Size:** 5.500 in.  
**Wall:** 0.361 in.  
**Weight:** 20.00 lbs/ft  
**Grade:** P110-ICY  
**Min. Wall Thickness:** 87.5 %

PIPE BODY DATA			
GEOMETRY			
Nominal OD	5.500 in.	Nominal Weight	20.00 lbs/ft
Nominal ID	4.778 in.	Wall Thickness	0.361 in.
Plain End Weight	19.83 lbs/ft	Standard Drift Diameter	4.653 in.
		Special Drift Diameter	N/A
PERFORMANCE			
Body Yield Strength	729 x 1000 lbs	Internal Yield	14360 psi
Collapse	12100 psi	SMYS	125000 psi
TENARISXP® BTC CONNECTION DATA			
GEOMETRY			
Connection OD	6.100 in.	Coupling Length	9.450 in.
Critical Section Area	5.828 sq. in.	Threads per in.	5.00
		Connection ID	4.766 in.
		Make-Up Loss	4.204 in.
PERFORMANCE			
Tension Efficiency	100 %	Joint Yield Strength	729 x 1000 lbs
Structural Compression Efficiency	100 %	Structural Compression Strength	729 x 1000 lbs
External Pressure Capacity	12100 psi	Internal Pressure Capacity <sup>(1)</sup>	14360 psi
		Structural Bending <sup>(2)</sup>	104 °/100 ft
ESTIMATED MAKE-UP TORQUES <sup>(3)</sup>			
Minimum	11540 ft-lbs	Optimum	12820 ft-lbs
		Maximum	14100 ft-lbs
OPERATIONAL LIMIT TORQUES			
Operating Torque	22700 ft-lbs	Yield Torque	25250 ft-lbs

## BLANKING DIMENSIONS

Blanking Dimensions

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per

Issued on: 08 Jul. 2020 by Wesley Ott

# VAM® SPRINT-SF

## Connection Data Sheet

<b>OD</b> 5 1/2 in.	<b>Weight</b> 20.00 lb/ft	<b>Wall Th.</b> 0.361 in.	<b>Grade</b> P110EC	<b>API Drift:</b> 4.653 in.	<b>Connection</b> VAM® SPRINT-SF
------------------------	------------------------------	------------------------------	------------------------	--------------------------------	-------------------------------------

PIPE PROPERTIES	
Nominal OD	5.500 in.
Nominal ID	4.778 in.
Nominal Cross Section Area	5.828 sqin.
Grade Type	High Yield
Min. Yield Strength	125 ksi
Max. Yield Strength	140 ksi
Min. Ultimate Tensile Strength	135 ksi

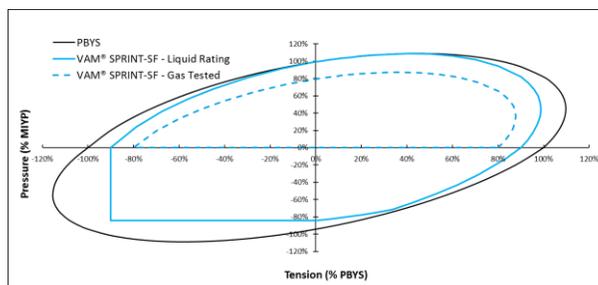
CONNECTION PROPERTIES	
Connection Type	Semi-Premium Integral Semi-Flush
Connection OD (nom):	5.783 in.
Connection ID (nom):	4.717 in.
Make-Up Loss	5.965 in.
Critical Cross Section	5.244 sqin.
Tension Efficiency	90.0 % of pipe
Compression Efficiency	90.0 % of pipe
Internal Pressure Efficiency	100 % of pipe
External Pressure Efficiency	100 % of pipe

CONNECTION PERFORMANCES	
Tensile Yield Strength	656 klb
Compression Resistance	656 klb
Internal Yield Pressure	14,360 psi
Collapse Resistance	12,080 psi
Max. Structural Bending	89 °/100ft
Max. Bending with ISO/API Sealability	30 °/100ft

TORQUE VALUES	
Min. Make-up torque	20,000 ft.lb
Opt. Make-up torque	22,500 ft.lb
Max. Make-up torque	25,000 ft.lb
Max. Torque with Sealability (MTS)	40,000 ft.lb

\* 87.5% RBW

**VAM® SPRINT-SF** is a semi-flush connection innovatively designed for extreme shale applications. Its high tension rating and ultra high torque capacity make it ideal to run a fill string length as production casing in shale wells with extended horizontal sections and tight clearance requirements.



Do you need help on this product? - Remember no one knows VAM® like VAM®

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brazil@vamfieldservice.com

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USC  Metric

6/8/2015 10:04:37 AM

Mechanical Properties	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
Dimenstons	Pipe	BTC	LTC	STC	
Outside Diameter	13.375	14.375	--	14.375	in.
Wall Thickness	0.380	--	--	--	in.
Inside Diameter	12.615	12.615	--	12.615	in.
Standard Drift	12.459	12.459	--	12.459	in.
Alternate Drift	--	--	--	--	in.
Nominal Linear Weight, T&C	54.50	--	--	--	lbs/ft
Plain End Weight	52.79	--	--	--	lbs/ft
Performance	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	1,130	1,130	--	1,130	psi
Minimum Internal Yield Pressure	2,740	2,740	--	2,740	psi
Minimum Pipe Body Yield Strength	853.00	--	--	--	1000 lbs
Joint Strength	--	909	--	514	1000 lbs
Reference Length	--	11,125	--	6,290	ft
Make-Up Data	Pipe	BTC	LTC	STC	
Make-Up Loss	--	4.81	--	3.50	in.
Minimum Make-Up Torque	--	--	--	3,860	ft-lbs
Maximum Make-Up Torque	--	--	--	6,430	ft-lbs

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
 Action 80024

**CONDITIONS**

Operator: EOG RESOURCES INC P.O. Box 2267 Midland, TX 79702	OGRID: 7377
	Action Number: 80024
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
pkautz	None	2/10/2022