

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**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.***SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM12280
2. Name of Operator ROSEHILL OPERATING COMPANY LLC		6. If Indian, Allottee or Tribe Name
3a. Address 16200 PARK ROW SUITE 300 HOUSTON, TX 77084		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 281-675-3420		Well Name and No. TATANKA FEDERAL 001H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 11 T26S R35E SWSW 230FSL 790FWL 32.051159 N Lat, 103.344292 W Lon		9. API Well No. 30-025-44569-00-X1
		10. Field and Pool or Exploratory Area WOLFCAMP
		11. County or Parish, State LEA COUNTY, 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	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	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 must 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 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.

Rosehill Operating Company, LLC respectfully requests permission to alter the Casing.

This sundry is to propose changing of casing connections for both intermediate casing strings. The change is based purely on market availability. For the first intermediate casing, we propose to use 10 5/8" 45.5# NT-80HLE BTC with special clearance 11.25" couplings. This pipe is from GB tubulars. This pipe has greater performance specifications in tension, burst, and collapse than the previously permitted 10 5/8" casing.

Second intermediate casing, we propose the use of a product by US Steel 7 5/8" 29.7# P110RYCC. This pipe has equal performance specs to the previously permitted product in terms of tension and burst rating. The collapse rating of this product is 6910 psi, compared to the previously permitted

Previous cost still apply. 25.

14. I hereby certify that the foregoing is true and correct. Electronic Submission #410027 verified by the BLM Well Information System For ROSEHILL OPERATING COMPANY LLC, sent to the Hobbs Committed to AFMSS for processing by ZOTA STEVENS on 04/02/2018 (18ZS0057SE)	
Name (Printed/Typed) ALVA FRANCO	Title REGULATORY ADVISOR
Signature (Electronic Submission)	Date 04/02/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>ZOTA STEVENS</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>04/04/2018</u>
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 Hobbs

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)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #410027 that would not fit on the form

32. Additional remarks, continued

rating of 7150 psi. Both of these are well above the minimum design criteria.

As stated, these changes are made solely to accommodate current market availability. Spec sheets for the newly proposed casing types are included.

Sundry for Alteration of Casing

This sundry is to propose changing of casing connections for both intermediate casing strings. The change is based purely on market availability. For the first intermediate casing, we propose to use 10 3/4" 45.5# NT-80HLE BTC with special clearance 11.25" couplings. This pipe is from GB tubulars. This pipe has greater performance specifications in tension, burst, and collapse than the previously permitted 10 3/4" casing.

For the second intermediate casing, we propose the use of a product by US Steel – 7 5/8" 29.7# P110RYCC. This pipe has equal performance specs to the previously permitted product in terms of tension and burst rating. The collapse rating of this product is 6910 psi, compared to the previously permitted rating of 7150 psi. Both of these are well above the minimum design criteria.

As stated, these changes are made solely to accommodate current market availability. Spec sheets for the newly proposed casing types are included.

Casing: 10.75 OD, 45.5 ppf
Casing Grade**: NT-80LHE

Connection: API BC 11.250
Coupling Grade: API N-80

PIPE BODY GEOMETRY

Nominal OD (in.)	10 3/4	Wall Thickness (in.)	0.400	Drift Diameter (in.)	9.794
Nominal Weight (ppf)	45.50	Nominal ID (in.)	9.950	API Alternate Drift Dia. (in.)	9.875
Plain End Weight (ppf)	44.26	Plain End Area (in. ²)	13.006		

PIPE BODY PERFORMANCE

Material Specification	NT-80LHE	Min. Yield Str. (psi)	80,000	Min. Ultimate Str. (psi)	100,000
Collapse		Tension		Pressure	
API (psi)	2,470	Pl. End Yield Str. (kips)	1,040	Min. Int. Yield Press. (psi)**	5,510
High Collapse (psi)**	3,390	Torque		Bending	
		Yield Torque (ft-lbs)	N/A	Build Rate to Yield (°/100 ft)	N/A

API BC 11.250 COUPLING GEOMETRY

Coupling OD (in.)	11.250	Makeup Loss (in.)	4.8125
Coupling Length (in.)	10.625	Critical Cross-Sect. (in. ²)	N/A

API BC 11.250 CONNECTION PERFORMANCE RATINGS/EFFICIENCIES

Material Specification	API N-80	Min. Yield Str. (psi)	80,000	Min. Ultimate Str. (psi)	100,000
Tension		Efficiency		Bending	
Thread Str. (kips)	1,097	Internal Pressure (psi)*	4,790	Build Rate to Yield (°/100 ft)	N/A
Min. Tension Yield (kips)	877	External Pressure (%)	N/A	Yield Torque	
Min. Tension Ult. (kips)	N/A	Tension (kips)	877	Yield Torque (ft-lbs)	N/A
Joint Str. (kips)***	1,096	Compression (%)	N/A		

MAKEUP TORQUE

Min. MU Tq. (ft-lbs)	Per API RP	Max. MU Tq. (ft-lbs)	Per API RP	Running Tq. (ft-lbs)	N/A
				Max. Operating Tq. (ft-lbs)*	N/A

Units: US Customary (lbm, in., °F, lbf)

1 kip = 1,000 lbs

* Based on API pressure performance of the coupling per API TR 5C3

** Casing performance property based on published Nippon Pipe information

*** Based on API Joint Strength per API TR 5C3



U. S. Steel Tubular Products

7 5/8 29.70 lb (0.375) P110 RY CC**

USS-CDC™

PIPE

CONNECTION

MECHANICAL PROPERTIES

Minimum Yield Strength	110,000	psi
Maximum Yield Strength	125,000	psi
Minimum Tensile Strength	125,000	psi

DIMENSIONS

Outside Diameter	7.625	8.500	in.
Wall Thickness	0.375		in.
Inside Diameter	6.875	6.875	in.
Drift - API	6.750	6.750	in.
Nominal Linear Weight, T&C	29.70		lbs/ft
Plain End Weight	29.06		lbs/ft

SECTION AREA

Cross Sectional Area Critical Area	8.541	8.541	sq. in.
Joint Efficiency		100.0	%

PERFORMANCE

Minimum Collapse Pressure	6,910	6,910	psi
External Pressure Leak Resistance		5,530	psi
Minimum Internal Yield Pressure	9,460	9,460	psi
Minimum Pipe Body Yield Strength	940,000		lbs
Joint Strength		960,000	lbs
Compression Rating		576,000	lbs
Reference Length		21.549	ft
Maximum Uniaxial Bend Rating		40.5	deg/100 ft

MAKE-UP DATA

Make-Up Loss	5.19	in.
Minimum Make-Up Torque	17,000	ft-lbs
Maximum Make-Up Torque	21,000	ft-lbs
Connection Yield Torque	26,400	ft-lbs

* Verification of connection shoulder required. Typical shoulder range 6,000 - 8,500 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.
- 5) Connection external pressure resistance has been verified to 80% API pipe body collapse pressure (API 5C3 Cal III testing protocol).

Legal Notice: USS-CDC™ (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 2017 rev26 (Sept)