Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office
Operator Copy

FORM 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 ☒ Oil Well ☐ Gas Well ☐ Other	5. Lease Serial No. NMNM132949
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA/Agreement, Name and/or No.
	8. Well Name and No. STOVE PIPE FEDERAL COM 603H
2. Name of Operator COG OPERATING LLC Contact: MAYTE X REYES E-Mail: mreyes1@concho.com	9. API Well No. 30-025-46500-00-X1
3a. Address ONE CONCHO CENTER 600 W ILLINOIS AVENUE MIDLAND, TX 79701-4287 3b. Phone No. (include area code) Ph: 575-748-6945	10. Field and Pool or Exploratory Area MESA VERDE
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)* Sec 31 T24S R35E 270FSL 390FWL 32.167465 N Lat, 103.413834 W Lon	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			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ 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 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.

COG Operating respectfully requests approval for the following changes to the originally approved APD.

Slim hole design attached.

Besides casing size changes, all previous conditions of Approval still apply DR

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

Electronic Submission #493992 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 12/03/2019 (20PP0474SE)

Name *(Printed/Typed)* MAYTE X REYES — Title SENIOR REGULATORY ANALYST

Signature (Electronic Submission) — Date 11/27/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By DYLAN ROSSMANGO — Title PETROLEUM ENGINEER — Date 12/16/2019

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 **** KZ

COG Operating LLC - Stove Pipe Fed Com 603H
API 30-025-46500

COG, Operating, LLC respectfully requests to change to a slim hole casing design on this well with the changes as shown below to the approved drilling plan. Details are as follows:

Surface Interval

Casing String	TOC	% Excess
Surface	Surface	*64%

*Cement calculated with 64% excess for open hole plus 50 extra sacks of lead.

Csg String #	String Type	Hole Size	Casing Size	Condition	Standard	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Length	Weight	Grade	Connection
1	Surface	14.750"	10.750"	New	API	0'	1200'	0'	1200'	1200'	45.5	~~L80~~ J55	BTC

String Type	Lead/Tail	Bottom MD	Quantity (sx)	Yield	Density	Cu Ft	Excess %	Cement Type	Additives
Surf	Lead	740'	455	1.73	13.5	787	64	Class C	4% gel & 1/4# CF
	Tail	1200'	332	1.34	14.8	445	64	Class C	1% $CaCl_2$ & 1/4# CF

Intermediate Interval

Casing String	TOC	% Excess
Intermediate	Surface	*52%

*Cement calculated with 52% excess for open hole plus 50 extra sacks of lead.

Csg String #	String Type	Hole Size	Casing Size	Condition	Standard	Top Set MD	Bot Set MD	Top Set TVD	Bot Set TVD	Length	Weight	Grade	Connection
2	Intermediate	9.875"	7.625"	New	API	0'	7500'	0'	7499'	7500'	29.7	L80 EHC	BTC
2	Intermediate	9.875"	7.625"	New	API	7500'	9000'	0'	8999'	1500'	29.7	P110 HC	FJM
2	Intermediate	8.750"	7.625"	New	API	9000'	11900'	0'	11897'	2900'	29.7	P110 HC	FJM

String Type	Lead/Tail	Bottom MD	Quantity (sx)	Yield	Density	Cu Ft	Excess %	Cement Type	Additives
Int	Lead	10890'	905	3.49	10.3	3158	52	NeoCem H	2# kolseal & 3% HGS 4000
	Tail	11900'	165	1.08	16.4	178	52	NeoCem H	0.3% Halad-9, 0.2% CFR-3, & 0.20% HR-601

COG Operating LLC - Stove Pipe Fed Com 603H
API 30-025-46500

Production Interval

Casing String	TOC	% Excess
Production	Surface	*17%

*Cement calculated with 17% excess for open hole.

Csg String #	String Type	Hole Size	Casing Size	Condition	Standard	Top Set MD	Bot Set MD	Top Set TVD	Bot Set TVD	Length	Weight	Grade	Connection
3	Production	*6.875"	5.500"	New	API	0'	7500'	0'	7499'	7500'	23	P110 CY	BTC
3	Production	*6.875"	5.000"	New	API	7500'	11900'	0'	11897'	4400'	18	P110 HC	SFW
3	Production	6.750"	5.000"	New	API	11900'	23336'	0'	12588'	11436'	18	P110 HC	SFW

*Intermediate casing ID

String Type	Lead/Tail	Bottom MD	Quantity (sx)	Yield	Density	Cu Ft	Excess %	Cement Type	Additives
Int	Lead	11900'	730	1.98	10.3	1442	0	NeoCem H	2# kolseal & 3% HGS 4000
	Tail	23336'	1225	1.22	16.4	1498	17	NeoCem H	0.3% Halad-9, 0.2% CFR-3, & 0.20% HR-601

U. S. Steel Tubular Products
Product Information
7 5/8 29.70 lb (0.375) L80 HP BTC

7/10/2018

		Coupling	Pipe Body	
Mechanical Properties				
	Yield Strength			
	Minimum	80	85	ksi
	Maximum	95	95	ksi
	Tensile Strength			
	Minimum	95	95	ksi
Dimensions, Nominal	Outside Diameter		7.625	in.
	Wall		0.375	in.
	Inside Diameter		6.875	in.
	Drift			
	Special		6.750	in.
	Nominal Linear Weight, T&C		29.70	lbs/ft
	Weight, Plain End		29.06	lbs/ft
	Pipe Cross Sectional Area		8.541	sq. in.
	Coupling Diameter			
	BTC		8.500	in.
Performance Ratings, Minimum	Collapse			
	Plain End		6,220	psi
	BTC		6,220	psi
	Internal Yield Pressure			
	Plain End		7,310	psi
	BTC		7,310	psi
	Yield Strength, Pipe Body		726	1,000 lbs
	Joint Strength			
	BTC		733	1,000 lbs

U. S. Steel Tubular Products, Inc. - 460 Wildwood Forest Dr., Suite 300S, Spring, TX 77380
www.uss.com

U. S. Steel Tubular Products

8/22/2019 1:57:07 PM

7.625" 29.70lbs/ft (0.375" Wall) P110 HC USS-LIBERTY FJM®

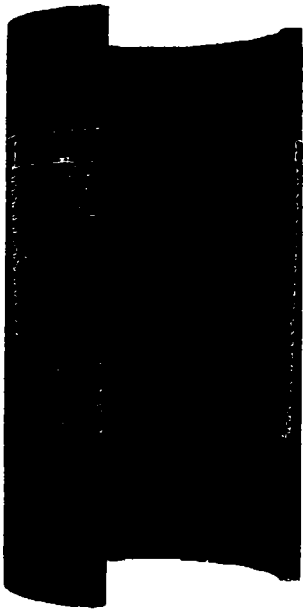
[redacted]

MECHANICAL PROPERTIES	Pipe	USS-LIBERTY FJM®	
Minimum Yield Strength	110,000	--	psi
Maximum Yield Strength	140,000	--	psi
Minimum Tensile Strength	125,000	--	psi
DIMENSIONS	**Pipe**	**USS-LIBERTY FJM®**	
Outside Diameter	7.625	7.625	in.
Wall Thickness	0.375	--	in.
Inside Diameter	6.875	6.789	in.
Standard Drift	6.750	6.750	in.
Alternate Drift	--	--	in.
Nominal Linear Weight, T&C	29.70	--	lbs/ft
Plain End Weight	29.06	--	lbs/ft
SECTION AREA	**Pipe**	**USS-LIBERTY FJM®**	
Critical Area	8.541	5.074	sq. in.
Joint Efficiency	--	59.4	%
PERFORMANCE	**Pipe**	**USS-LIBERTY FJM®**	
Minimum Collapse Pressure	6,700	6,700	psi
Minimum Internal Yield Pressure	9,460	9,460	psi
Minimum Pipe Body Yield Strength	940,000	--	lbs
Joint Strength	--	558,000	lbs
Compression Rating	--	558,000	lbs
Reference Length	--	12,810	ft
Maximum Uniaxial Bend Rating	--	39.3	deg/100 ft
MAKE-UP DATA	**Pipe**	**USS-LIBERTY FJM®**	
Make-Up Loss	--	3.92	in.
Minimum Make-Up Torque	--	10,800	ft-lbs
Maximum Make-Up Torque	--	15,250	ft-lbs

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. Compressive & Tensile Connection Efficiencies are calculated by dividing the connection critical area by the pipe body area.
3. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
4. USS-LIBERTY FJM™ connections are optimized for each combination of OD and wall thickness and cannot be interchanged.
5. 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.).
6. Reference length is calculated by joint strength divided by nominal plain end weight with 1.5 safety factor.
7. Connection external pressure leak resistance has been verified to 100% API pipe body collapse pressure following the guidelines of API 5C5 Cal III.

U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

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



TEC-LOCK FJ

7.625" 29.7 LB/FT (.375" Wall)
P110 HC

Pipe Body Data

Nominal OD:	7.625	in
Nominal Wall:	0.375	in
Nominal Weight:	29.70	lb/ft
Plain End Weight:	29.22	lb/ft
Material Grade:	P110 HC	
Mill/Specification:	BORUSAN MANNESMANN	
Yield Strength:	110,000	psi
Tensile Strength:	125,000	psi
Nominal ID:	6.875	in
API Drift Diameter:	6.750	in
Special Drift Diameter:	NA	in
RBW:	87.5%	
Body Yield:	940,000	lbf
Burst:	9,460	psi
Collapse:	7,050	psi

Connection Data

Standard OD:	7.625	in
Pin Bored ID:	6.875	in
Critical Section Area:	6.299	in^2
Tensile Efficiency:	70.0%	
Compressive Efficiency:	61.9%	
Longitudinal Yield Strength:	658,000	lbf
Compressive Limit:	581,860	lbf
Internal Pressure Rating:	7,570	psi
External Pressure Rating:	7,050	psi
Maximum Bend:	26	°/100ft

Operational Data

Minimum Makeup Torque:	3,600	ft*lbf
Optimum Makeup Torque:	6,500	ft*lbf
Maximum Makeup Torque:	9,400	ft*lbf
Minimum Yield:	14,500	ft*lbf
Makeup Loss:	5.97	in

Notes

Preliminary DataSheet

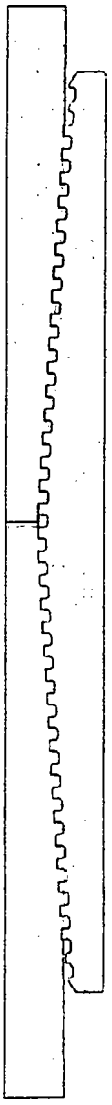
The Connection ratings are structural

HUNTING

Generated on Sep 05, 2019

U. S. Steel Tubular Products

5 1/2 23.00 lb (0.415) P110RY CC** USS-CDC HTQ™



	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	**5.500**	6.300	*in.*
Wall Thickness	0.415		*in.*
Inside Diameter	4.670	4.670	*in.*
Drift - API	4.545	4.545	*in.*
Nominal Linear Weight, T&C	**23.00**		*lbs/ft*
Plain End Weight	22.56		*lbs/ft*
SECTION AREA			
Cross Sectional Area | Critical Area	6.630	6.630	*sq. in.*
Joint Efficiency		100.0	%
PERFORMANCE			
Minimum Collapse Pressure	15,310	15,310	*psi*
External Pressure Leak Resistance		12,250	*psi*
Minimum Internal Yield Pressure	14,520	14,520	*psi*
Minimum Pipe Body Yield Strength	729,000		*lbs*
Joint Strength		759,000	*lbs*
Compression Rating		455,000	*lbs*
Reference Length		22,000	*ft*
Maximum Uniaxial Bend Rating		57.2	*deg/100 ft*
MAKE-UP DATA			
Make-Up Loss		4.63	*in.*
Minimum Make-Up Torque		15,000	*ft-lbs*
Maximum Make-Up Torque		21,000	*ft-lbs*
Connection Yield Torque		27,800	*ft-lbs*
* Verification of connection shoulder required. Typical shoulder range		5,000 - 7,500	*ft-lbs*

Notes:

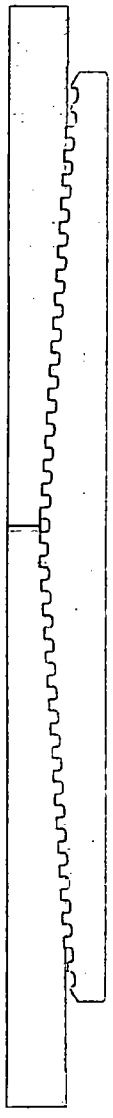
1) Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness, and Specified Minimum Yield Strength (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
5) Connection external pressure resistance has been verified to 80% API pipe body collapse pressure (API 5C5 Cal III testing protocol)

USS Product Data Sheet 2017 rev26 (Sept)

U. S. Steel Tubular Products
460 Wildwood Forest Dr., Suite 300S
Spring, TX 77380
1-877-893-9461
connections@uss.com
www.usstubular.com

U. S. Steel Tubular Products

5 18.00 lb (0.362) P110 RY — USS-CDC HTQ™



	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	**5.000**	5.775	*in.*
Wall Thickness	0.362		*in.*
Inside Diameter	4.276	4.276	*in.*
Drift - API	4.151	4.151	*in.*
Nominal Linear Weight, T&C	**18.00**		*lbs/ft*
Plain End Weight	17.95		*lbs/ft*
SECTION AREA			
Cross Sectional Area | Critical Area	5.275	5.275	*sq. in.*
Joint Efficiency		100.0	%
PERFORMANCE			
Minimum Collapse Pressure	13,470	13,470	*psi*
External Pressure Leak Resistance		10,780	*psi*
Minimum Internal Yield Pressure	13,950	13,950	*psi*
Minimum Pipe Body Yield Strength	580,000		*lbs*
Joint Strength		606,000	*lbs*
Compression Rating		364,000	*lbs*
Reference Length		22,444	*ft*
Maximum Uniaxial Bend Rating		63.3	*deg/100 ft*
MAKE-UP DATA			
Make-Up Loss		4.56	*in.*
Minimum Make-Up Torque		11,500	*ft-lbs*
Maximum Make-Up Torque		16,000	*ft-lbs*
Connection Yield Torque		19,600	*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 5C5 Cal III testing protocol).

USS Product Data Sheet 2018 rev27 (Feb)

U. S. Steel Tubular Products
460 Wildwood Forest Dr., Suite 300S
Spring, TX 77380

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