

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTArtesia Field Office
OCD ArtesiaFORM APPROVED
OMB NO. 1004-0137
Expires January 31, 20185. Lease Serial No.
NMB 6065705B**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		6. If Indian, Allottee or Tribe Name
2. Name of Operator XTO ENERGY INC		7. If Unit or CA/Agreement, Name and/or No.
Contact: KELLY KARDOS E-Mail: kelly_kardos@xtoenergy.com		8. Well Name and No. MUY WAYNO 18 FEDERAL 102H
3a. Address 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707	3b. Phone No. (include area code) Ph: 432-620-4374	9. API Well No. 30-015-44838
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 18 T25S R30E Mer NMP NWSW 2310FSL 410FWL		10. Field and Pool or Exploratory Area PURPLE SAGE WOLFCAMP
		11. County or Parish, State EDDY 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 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 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.

XTO Energy Inc. requests permission to deviate the wellbore due to fish in hole.

XTO drilled the 12-1/4" intermediate hole and reached TD at 9514' MD on 10/17/18. While TOH to run csg we lost returns and started encountering tight spots in the hole. XTO tried to regain returns with LCM and work the drill string free. Hole conditions deteriorated and fishing operations have been unsuccessful. There are currently two fish in the hole. The top of the second fish is 5790' MD and the top of the first fish within approx. 2' of the bottom of the second fish. The two have a total length of 1127.76'. Returns have been intermittent and trips through the salt section have been difficult due to tight spots.

XTO would like to spot 800' of cement (905 sx of 17.5 ppg, 0.94 cu.ft./ft, cement (30% excess) on top of the fish from 5790' to 4990'MD. This will be spotted as a balanced plug using ~800' 2-7/8"

GC 11-7-18
Accepted for record - NMOCDSEE ATTACHED FOR
CONDITIONS OF APPROVAL
RECEIVED

NOV 06 2018

14. I hereby certify that the foregoing is true and correct. Electronic Submission #440994 verified by the BLM Well Information System For XTO ENERGY INC, sent to the Carlsbad Committed to AFMSS for processing by MUSTAFA HAQUE on 10/24/2018 ()		DISTRICT II-ARTESIA O.C.D.
Name (Printed/Typed) KELLY KARDOS	Title REGULATORY COORDINATOR	
Signature (Electronic Submission)	Date 10/24/2018	

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>MUSTAFA HAQUE</u>	Title <u>Petroleum Engineer</u>	Date <u>10-25-2018</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 <u>Carlsbad Field Office</u>		

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)

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Additional data for EC transaction #440994 that would not fit on the form

32. Additional remarks, continued

tbg/stinger below DP and then pull up above the plug to ~4500', clear the string and then WOC for 6 to 8 hours before going back down and confirming the plugs actual TOC. If there is not at least 400' of cement above the top of the fish an additional plug will be stacked immediately on top of the prior plug and then repeat the pick up, clear, WOC, tag procedure. Once the TOC is high enough, the hole will be circulated and conditioned at the TOC. Then we will trip out and run 9-5/8" casing with ECP and DV Tool as per the APD with the only changes being to the set depth and cement volumes pumped on the first stage. The set depth will be at the top of the cement plug(s) and the first stage cement volume will be adjusted as appropriate. Estimated set depth will be around 4990' and the lead volume will be reduce from 2090sx to 985sx using the 12.2 ppg, 2.12 cu.ft./ft. slurry in the APD.

Once the 9-5/8" string is cemented and all the appropriate wellhead and BOP work is done, XTO will drill an 8-3/4" hole out of the 9-5/8" casing, around the fish and then continue back to the original planned path to 9960' MD. 7", 32#, P-110, BTC string will be ran from 9960' to surface and then cemented with enough cement to bring the TOC up so that it ties back into the 9-5/8" casing string by at least 200'. (Lead: 355 sx of 11.5 ppg, 2.59 cu.ft./ft., 50% excess, Tail: 200 sx 14.2 ppg, 1.29 cu.ft./ft., 50% excess). Then a 6" curve and lateral will be drilled and cased with a 4-1/2" liner. The liner top will be set ~300' up into the 7" string and cemented from TD to the hanger (Tail: 595 sx, 13.0 ppg, 1.65 cu.ft./ft., 30% excess).

Muy Wayno 18 Federal #102H

Wolfcamp Y, 1.5 Mile Lateral

County: Eddy
SHL: 410' FWL, 2310' FSL
Sec 18, T25S, R30E

BHL: 726' FWL, 200' FNL
Sec 7, T25S, R30E



API # 30-015-44838
Elevation GL 3160', KB 3192' (32' AGL)
Rig: Patterson 793 (32' RKB)

Geology	Casing & Cement	Wellhead 10k (15k Tbg Head)	Hole Size	General Notes
TVD Formation			17-1/2"	
713' Rustler	13-3/8" 54.5# J-55 BTC	900' MD	12-1/4"	
1,026' Salado (Top of Salt)	DV Tool & ECP @ 1000'			
3,274' Base of Salt				
3,467' Delaware				TOC at least 200' up inside the 9-5/8" casing into
4,359' Cherry Canyon	HCP-NO 9-5/8" 40# BTC 0-1000' 9-5/8" 40# HCL-80 BTC 1000'-TD			4990' 4990' (Top of Cement Plug)
5,935' Brushy Canyon				
7,223' Bone Spring LM				5790' (Btm of Cement Plug) Top of DP Fish
8,223' 1st Bone Spring Sand				6168' Split Between Fish
7,223' Bone Spring LM				6919' (Btm of DP & BHA Fish)
9,030' 2nd Bone Spring Sand				
9,286' 3rd Bone Spring Lime				
9,909' Lwr 3rd Bone Spring LM	7" 32# CYP110 BTC	9960' MD	9514' MD Liner top at 9660' MD	
10,110' 3rd Bone Spring Sand		KOP 10060' MD	8-3/4" Vertical	
10,046' KOP			6" Curve	
10,511' Wolfcamp			6" Lateral	
10,537' Wolfcamp X				
10,597' Wolfcamp Y		EOC 10960' MD		
10,619' Landing TVD				18,380' MD
10,619' TVD @ BHL	4-1/2" 13.5# HCP-110 GBCD 0 - TD			10,619' TVD @ BHL
10,639' Wolfcamp A				
10,990' Wolfcamp B				
11,176' Wolfcamp C				

Muy Wayno 18 Federal #102H

Wolfcamp Y, 1.5 Mile Lateral

County: Eddy
SHL: 410' FWL, 2310' FSL
Sec 18, T25S, R30E

BHL: 726' FWL, 200' FNL
Sec 7, T25S, R30E



API # 30-015-44838
Elevation GL 3160', KB 3192' (32' AGL)
Rig: Patterson 793 (32' RKB)

Geology Casing & Cement Wellhead Hole Size General Notes

10k (15k Tbg Head)

TVD Formation

17-1/2"

713' Rustler

13-3/8" 54.5# J-55 BTC

900' MD

12-1/4"

1,026' Salado (Top of Salt)

3,274' Base of Salt

3,467' Delaware

4,359' Cherry Canyon

5,935' Brushy Canyon

7,223' Bone Spring LM

8,223' 1st Bone Spring Sand

7,223' Bone Spring LM

9,030' 2nd Bone Spring Sand

9,286' 3rd Bone Spring Lime

5790' MD

DP Fish

6168' MD

DP & BHA
Fish

6919' MD

9514' MD

9,909' Lwr 3rd Bone Spring LM

10,110' 3rd Bone Spring Sand

10,046' KOP

10,511' Wolfcamp

10,537' Wolfcamp X

10,597' Wolfcamp Y

10,619' Landing TVD

10,619' TVD @ BHL

10,639' Wolfcamp A

10,990' Wolfcamp B

11,176' Wolfcamp C



Haque, Mustafa <mhaque@blm.gov>

RE: [EXTERNAL] RE: Muy Wayno 18 Federal 102H *CSG SPECS*

2 messages

West, Terry <Terry_West@xtoenergy.com>

Wed, Oct 24, 2018 at 2:29 PM

To: "Kardos, Kelly" <Kelly_Kardos@xtoenergy.com>, "mhaque@blm.gov" <mhaque@blm.gov>

Casing Data

Size (in)	Grade	Weight (ppf)	Thread	ID (in)	Drift (in)	Cap (bbl / ft)	Collapse (psi)		Burst (psi)		Tension (1000 lb)	
							Rated	80%	Rated	80%	Rated	80%
9-5/8"	HCP-110	40	BTC	8.835	8.750	0.0758	4230	3384	7910	6328	1260	1008
9-5/8"	HCL-80	40	BTC	8.835	8.750	0.0758	4230	3384	5750	4600	1009	807

Our pipe guys says he is actually sending out HCP-110 as opposed to P-110 Both are higher strength than the L-80 that is approved in the APD.

The coupling OD for 4-1/2" casing is 5"

The coupling OD for 7" casing is 7.875"

From: Kardos, Kelly**Sent:** Wednesday, October 24, 2018 2:29 PM**To:** West, Terry <Terry_West@xtoenergy.com>**Subject:** FW: [EXTERNAL] RE: Muy Wayno 18 Federal 102H *CSG SPECS***Importance:** High

Haque has a couple more questions below....

Kelly K. Kardos

Regulatory Coordinator

Phone: 432-620-4374

XTO ENERGY a subsidiary of ExxonMobil

6401 Holiday Hill Road, Midland TX 79701

From: Haque, Mustafa [mailto:mhaque@blm.gov]**Sent:** Wednesday, October 24, 2018 2:25 PM**To:** Kardos, Kelly <Kelly_Kardos@xtoenergy.com>**Cc:** Christopher Walls <Cwalls@blm.gov>; Zota Stevens <zstevens@blm.gov>; James Amos <jamos@blm.gov>; Rabadue, Stephanie <Stephanie_Rabadue@xtoenergy.com>**Subject:** Re: [EXTERNAL] RE: Muy Wayno 18 Federal 102H Deviate Wellbore Sundry *CSG SPECS*



Haque, Mustafa <mhaque@blm.gov>

[EXTERNAL] Muy Wayno 18 Federal 102H Deviate Wellbore Sundry *URGENT*

West, Terry <Terry_West@xtoenergy.com>

Wed, Oct 24, 2018 at 12:09 PM

To: "Kardos, Kelly" <Kelly_Kardos@xtoenergy.com>, "mhaque@blm.gov" <mhaque@blm.gov>

Casing Data

Size (in)	Grade	Weight (ppf)	Thread	ID (in)	Drift (in)	Cap (bbl / ft)	Collapse (psi)		Burst (psi)		Tension (1000 lb)	
							Rated	80%	Rated	80%	Rated	80%
7	CYP-110	32	BTC	6.094	6.000	0.0360	10,320	8624	12,160	9968	1053	842
4-1/2	HCP-110	13.5	GBCD	3.92	3.795	0.0149	10,590	8552	12,100	9928	422	338

FYI...

Terry

From: Kardos, Kelly**Sent:** Wednesday, October 24, 2018 11:49 AM**To:** West, Terry <Terry_West@xtoenergy.com>**Subject:** FW: [EXTERNAL] FW: Muy Wayno 18 Federal 102H Deviate Wellbore Sundry *URGENT***Importance:** High

Can you send me the casing specs per the below email from BLM? Haque's number is below if you need to contact him.

(575)-234-5971

Kelly K. Kardos

Regulatory Coordinator

Phone: 432-620-4374

XTO ENERGY a subsidiary of ExxonMobil

6401 Holiday Hill Road, Midland TX 79701

From: Haque, Mustafa [mailto:mhaque@blm.gov]**Sent:** Wednesday, October 24, 2018 11:46 AM**To:** Kardos, Kelly <Kelly_Kardos@xtoenergy.com>**Cc:** Christopher Walls <Cwalls@blm.gov>; Zota Stevens <zstevens@blm.gov>; James Amos <jamos@blm.gov>; Rabadue,

Plug calculations

4th plug	INPUT CELLS				
Top of plug	ft			Length of pilot hole	
Bottom of plug	ft			Length of plug	
No. of sacks	sks			Percent excess	
Yield					
Hole Size	in	vol hole (cft/ft)	0.0000	Distance between plugs	0 ft
3rd plug					
Top of plug	ft			Length of pilot hole	
Bottom of plug	ft			Length of plug	
No. of sacks	sks			Percent excess	
Yield					
Hole Size	in	vol hole (cft/ft)	0.0000	Distance between plugs	0 ft
2nd plug					
Top of plug	ft			Length of pilot hole	
Bottom of plug	ft			Length of plug	
No. of sacks	sks			Percent excess	
Yield					
Hole Size	in	vol hole (cft/ft)	0.0000	Distance between plugs	4990 ft
1st plug					
Top of plug	4990 ft			Length of pilot hole	
Bottom of plug	5790 ft			Length of plug	
No. of sacks	905 sks			Percent excess	
Yield	0.94				
Hole Size	12.25 in	vol hole (cft/ft)	0.8185		

13 3/8 Segment	surface csg in a #/ft Grade	17 1/2	inch hole. Coupling	Body	<u>Design Factors</u>		<u>SURFACE</u>	
"A"	54.50	J 55	BUTT	17.59	Collapse	Burst	Length	Weight
"B"					2.78	1.18	890	48,505
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500				Tail Cmt	does not	circ to sfc.	Totals:	890 48,505

Comparison of Proposed to Minimum Required Cement Volumes

Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd	Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg
17 1/2	0.6946	770	1214	672	81	8.80	1209	2M	1.56

9 5/8	casing inside the		13 3/8					Design Factors		INTERMEDIATE	
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	Weight		
"A"	40.00	HCP 110		BUTT	6.31	9.15	1.64	1,000	40,000		
"B"	40.00	HCL 80		BUTT	5.74	1.83	1.19	3,990	159,600		
w/8.4#/g mud, 30min Sfc Csg Test psig:								Totals:		4,990	199,600
The cement volume(s) are intended to achieve a top of					0	ft from surface or a			890	overlap.	
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd	Min Dist		
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg		
12 1/4	0.3132	look ↘	0	1626		8.90	2621	3M	0.81		

Tail cmt					<u>Design Factors</u>			<u>INTERMEDIATE</u>	
7	casing inside the	9 5/8							
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	Weight	
"A"	32.00	P 110	BUTT	3.22	2.24	2.43	9,960	318,720	
"B"							0	0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,191						Totals:	9,960	318,720	
The cement volume(s) are intended to achieve a top of				9285	ft from surface or a		-4295	overlap.	
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd	Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg
8 3/4	0.1503	1770	2974	110	2595	9.30	2794	3M	0.44

Class 'H' tail cmt yld > 1.20

4 1/2 Segment	casing inside the	7				Design Factors		PRODUCTION	
	#/ft	Grade	Coupling	Joint		Collapse	Burst	Length	Weight
"A"	13.50	HCP 110	BUTT	2.94		2.22	2.42	9,984	134,784
"B"	13.50	HCP 110	BUTT	9.00		1.98	2.42	8,396	113,346
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,196							Totals:	18,380	248,130
Begment Design Factors would be:					49.22	2.19	if it were a vertical wellbore.		
No Pilot Hole Planned			MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC
			18380	10619	10619	9984	90	10	10884
The cement volume(s) are intended to achieve a top of					0	ft from surface or a		9960	overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd	Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg
6	0.0859		0	1644		9.30			0.50

Capitan Reef est top XXXX.

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Energy Inc
LEASE NO.:	NMLC065705B
WELL NAME & NO.:	Muy Wayno 18 Fed 102H
SURFACE HOLE FOOTAGE:	2310'/S & 410'/W
BOTTOM HOLE FOOTAGE:	200'/N & 726'/W
LOCATION:	Section 18, T. 25 S., R. 30 E., NMPM
COUNTY:	Eddy County, New Mexico

Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☒ Low	☐ Medium	☐ High
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☒ Conventional	☐ Multibowl	
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

All previous COAs still apply except for the following:

The plug from 5790' – 4990' is approved as proposed. Plug needs to be tagged to verify TOC.

A. CASING

1. The minimum required fill of cement behind the **9 5/8** inch intermediate casing is:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

2. The minimum required fill of cement behind the **7** inch production casing is:

- ☒ Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification.

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

- ☒ Cement should tie-back at least **100** feet into previous casing string. Operator shall provide method of verification.

MHH 10252018

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.

During office hours call (575) 627-0272.

After office hours call (575)

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)

393-3612

A. CASING

1. 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.
2. Wait on cement (WOC) for Potash Areas: 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 for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
3. 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.

4. 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.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. 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.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.