Form 3160-5
(June 2015)

RECEIVED
NOV 06 2018
DISTRICT II-ARTESIA O.C.D.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

5. Lease Serial No.
NMNM15302

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.
CORRAL CANYON FEDERAL 6H

2. Name of Operator
XTO ENERGY INCORPORATED
Contact: KELLY KARDOS
E-Mail: kelly_kardos@xtoenergy.com

9. API Well No.
30-015-42925-00-X1

3a. Address
6401 HOLIDAY HILL ROAD BLDG 5
MIDLAND, TX 79707

3b. Phone No. (include area code)
Ph: 432-620-4374

10. Field and Pool or Exploratory Area
WILLOW LAKE-BONE SPRING, SE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 9 T25S R29E NENW 175FNL 1980FWL
32.151306 N Lat, 103.991157 W Lon

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 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.

XTO Energy, Inc. requests permission to make the following changes to the approved APD:

1. Change BHL fr/200'FNL & 1980'FWL to 50'FSL & 1850'FWL
2. Drilling Program
3. Directional Program

GC 11-7-18
Accepted for record - NMOCD

Attachments:
C102 & Supplement
Drilling Program
Directional Survey
BOP/CM/FH

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Carlsbad Field Office
OCD Artesia

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #442468 verified by the BLM Well Information System
For XTO ENERGY INCORPORATED, sent to the Carlsbad
Committed to AFMSS for processing by ZOTA STEVENS on 11/05/2018 (19ZS0004SE)

Name *(Printed/Typed)* KELLY KARDOS — Title REGULATORY COORDINATOR

Signature (Electronic Submission) — Date 11/02/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ZOTA STEVENS — Title PETROLEUM ENGINEER — Date 11/05/2018

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 Carlsbad

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 ****

RWP 11-19-18

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 06 2018
RECEIVED

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☑ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-42925	96217	WILLOW LAKE; BONE SPRING, SE

[4] Property Code	[5] Property Name	[6] Well Number
317429	CORRAL CANYON FEDERAL	6H

[7] OGRID No.	[8] Operator Name	[9] Elevation
005380	XTO ENERGY INC.	2,947'

[10] Surface Location

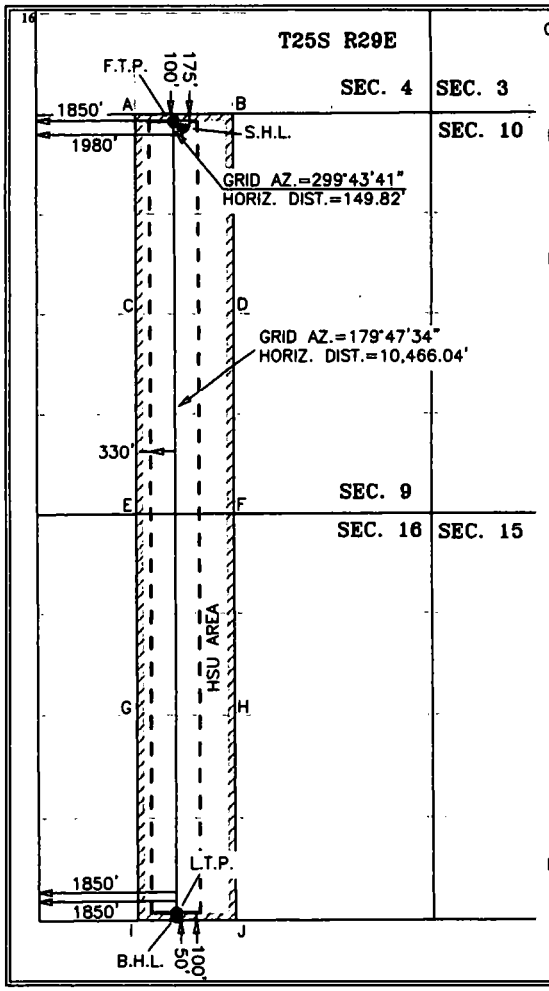
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	9	25 S	29 E		175	NORTH	1,980	WEST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	25 S	29 E		50	SOUTH	1,850	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
~~319.85~~ 320			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 418,934.6
X= 605,899.3
LAT.= 32.151305°N
LONG.= 103.991155°W

GEODETIC COORDINATES
NAD 83 NME
SURFACE LOCATION
Y= 418,993.1
X= 647,083.5
LAT.= 32.151429°N
LONG.= 103.991642°W

FIRST TAKE POINT
NAD 27 NME
Y= 419,008.9
X= 605,769.2
LAT.= 32.151511°N
LONG.= 103.991574°W

FIRST TAKE POINT
NAD 83 NME
Y= 419,067.4
X= 646,953.4
LAT.= 32.151635°N
LONG.= 103.992062°W

CORNER COORDINATES TABLE
NAD 27 NME
A - Y= 419,106.1 N, X= 605,247.1 E
B - Y= 419,113.3 N, X= 606,574.9 E
C - Y= 416,453.5 N, X= 605,250.9 E
D - Y= 416,458.8 N, X= 606,579.0 E
E - Y= 413,801.0 N, X= 605,254.8 E
F - Y= 413,806.7 N, X= 606,583.0 E
G - Y= 411,146.4 N, X= 605,270.2 E
H - Y= 411,152.4 N, X= 606,598.6 E
I - Y= 408,491.1 N, X= 605,285.7 E
J - Y= 408,496.4 N, X= 606,614.2 E

CORNER COORDINATES TABLE
NAD 83 NME
A - Y= 419,164.6 N, X= 646,431.2 E
B - Y= 419,171.8 N, X= 647,759.1 E
C - Y= 416,512.0 N, X= 646,435.1 E
D - Y= 416,517.3 N, X= 647,763.2 E
E - Y= 413,859.4 N, X= 646,439.1 E
F - Y= 413,865.1 N, X= 647,767.3 E
G - Y= 411,204.8 N, X= 646,454.6 E
H - Y= 411,210.7 N, X= 647,783.0 E
I - Y= 408,549.4 N, X= 646,470.1 E
J - Y= 408,554.7 N, X= 647,798.7 E

LAST TAKE POINT
NAD 27 NME
Y= 408,593.2
X= 605,806.6
LAT.= 32.122878°N
LONG.= 103.991560°W

LAST TAKE POINT
NAD 83 NME
Y= 408,651.5
X= 646,991.0
LAT.= 32.123002°N
LONG.= 103.992047°W

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 408,543.2
X= 605,806.9
LAT.= 32.122740°N
LONG.= 103.991560°W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 408,601.5
X= 646,991.3
LAT.= 32.122864°N
LONG.= 103.992047°W

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Kelly Kardos 11-2-18
Signature Date

Kelly Kardos
Printed Name

kelly_kardos@xtoenergy.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

11-1-2018
Date of Survey

Signatue and Seal of Professional Surveyor:

MARK DILLON HARP
NEW MEXICO
23786
PROFESSIONAL SURVEYOR

MARK DILLON HARP 23786
Certificate Number

AI 2017101675

RWP 11-19-18

Intent [X] As Drilled [ ]

API #
30-015-42925

Operator Name:	Property Name:	Well Number
XTO ENERGY INC.	CORRAL CANYON FEDERAL	6H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	9	25S	29E		175	North	1980	West	Eddy

Latitude	Longitude	NAD
32.151429	-103.991624	NAD83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	9	25S	29E		100	North	1850	West	Eddy

Latitude	Longitude	NAD
32.151635	-103.992062	NAD83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
N	16	25S	29E		100	South	1850	West	Eddy

Latitude	Longitude	NAD
32.123002	-103.992047	NAD83

Is this well the defining well for the Horizontal Spacing Unit? [Y]

Is this well an infill well? [N]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

Corral Canyon Fed 6H Technical Data Sheet

Mud Properties

Hole Size	Depth	Mud Type	Weight (ppg)	Funnel Viscosity (s/qt)	pH	API FL	LGS (%)	6 rpm	PV (cp)	YP (lb/100 ft^2)
17-1/2"	0 - 550	FW / Native	8.4-8.7	28-32	9.5-10.5	NC	< 5	1	1-4	1-4
12-1/4"	550 - 2875	Cut Brine (or cheapest fluid)	10.0-10.2	28-30	9.5-10.5	NC	< 1	2	1-4	1-4
8-3/4"	2875 - 11048	Cut Brine	8.8-9.4	28-32	9.5-10.5	NC	<1	1	1-4	1-4
8-1/2"	9048 - 18817	OBM	9.4	OWR	ES	HPHT	<9	~8	8-16	WPS
				80/20 - 70/30	350-500	15-22				225,000-280,000

** Refer to Mud Program Attached

Casing Data

Depth	Size (in)	Grade	Weight (ppf)	Thread	ID (in)	Drift (in)	Cap (bbl / ft)	Collapse (psi)		Burst (psi)		Tension (1000 lb)		Comments
								Rated	80%	Rated	80%	Rated	80%	
0 - 550	13-3/8"	J-55	54.5	BTC	12.615	12.459	0.1546	1130	904	2730	2184	514	411	
0 - 700	9-5/8"	HCL-80	40	BTC	8.835	8.750	0.0758	4230	3384	5750	4600	916	733	*Special Drift 8.75"*
700 - 2875	9-5/8"	J-55	40	BTC	8.835	8.750	0.0758	2570	2056	3950	3160	714	571	
0 - 18817	5-1/2"	CYP-110	17	BTC	4.892	4.767	0.0232	7460	5968	10640	8512	546	437	

Cement Program

Casing	Slurry	Volume (sx)	TOC	% OH Excess	Cement	Weight (ppg)	Yield (ft^3/sk)	Water (gal/sk)
13-3/8"	Lead							
	Tail	940	0'	175%		14.8	1.33	6.34
9-5/8"	Lead	960	0'	150%		13.6	1.64	8.56
	Tail	298	2300'	100%		14.8	1.33	6.34
5-1/2"	Lead	707	1800'	50%		10.8	2.94	18.24
	Tail	2342	7600'	30%		13.2	1.54	7.72

Wellhead Information (See Attached Drawing)

Position Wellhead so Top Casing Head is ~14" below GL

Section	Bottom	Top	Packoff/Slips
A - Section (CSGHD) RSH	13-3/8" SOW	13-5/8" 5M Flange	9-5/8" / 5-1/2"
B - Section (TA Flange)	5M TA Flange	N/A	N/A

Logging Program

Depth	Logs	Comments
KOP - TD (2875' - 18817')	Mudlog	1 bag sample 30' KOP - EOC, 90' EOC - TD, 2-man unit
KOP - TD (2875' - 18817')	MWD	GR / NEU

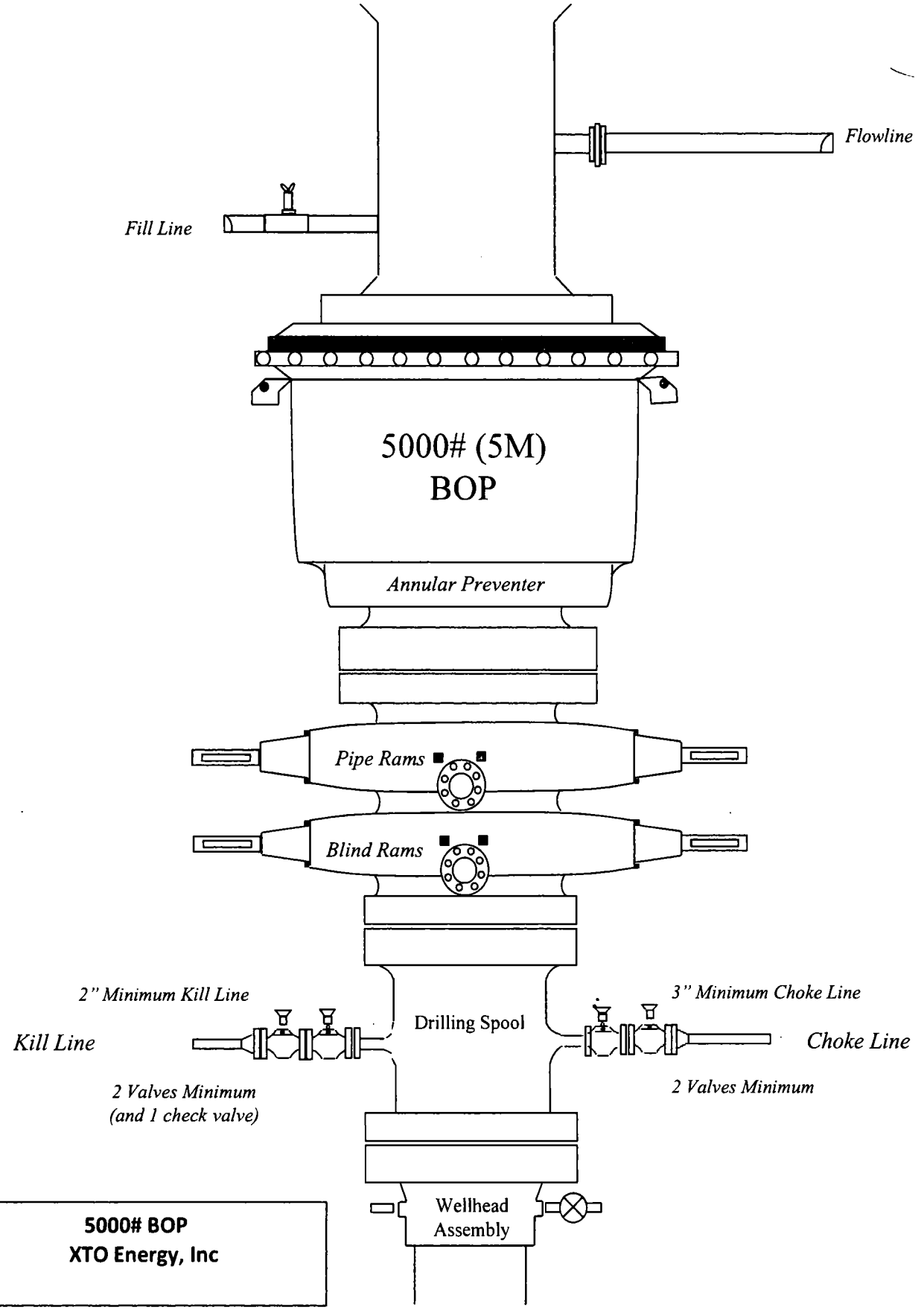
Corral Canyon Fed 6H

2nd Bone Spring, 2 Mile Lateral

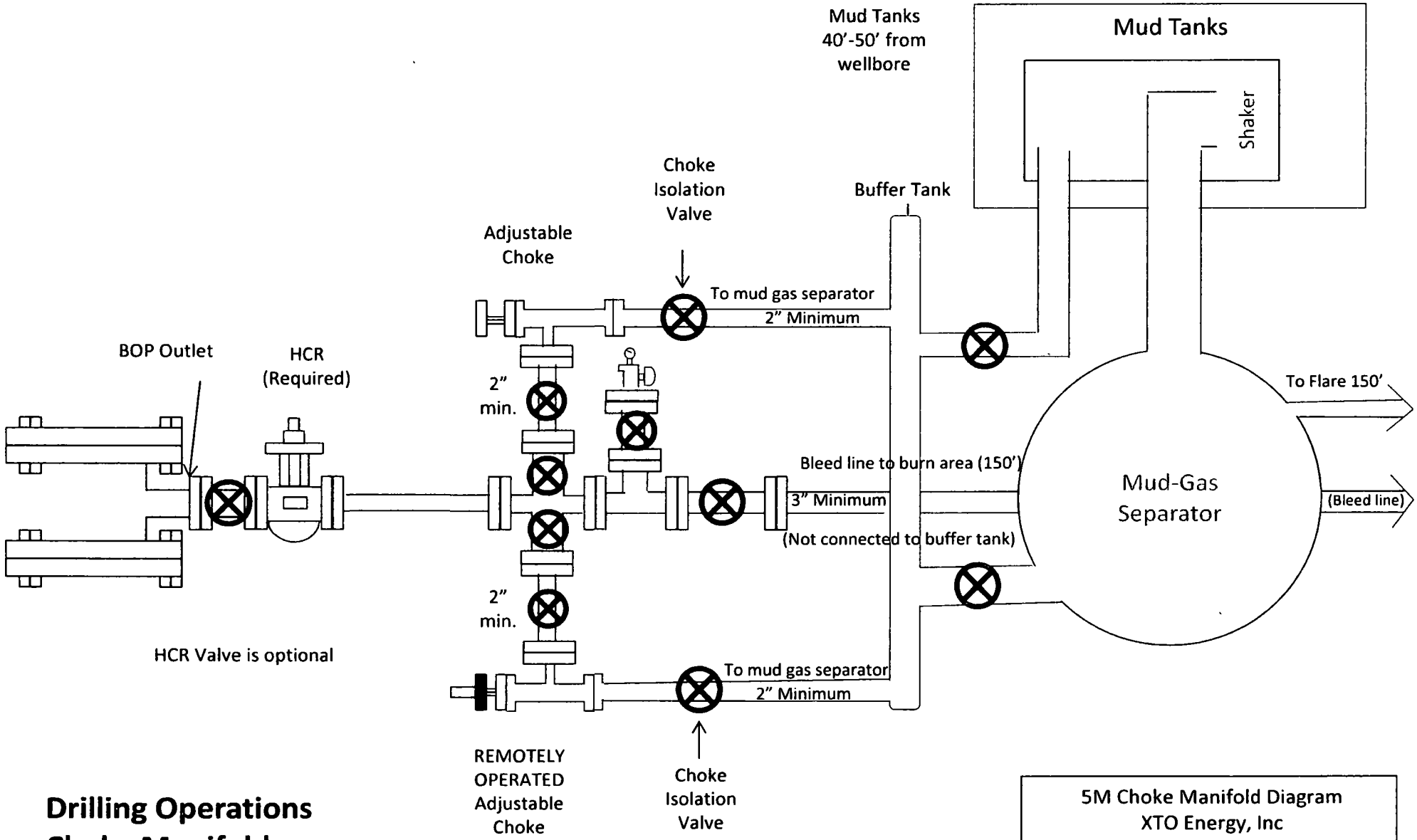
County:	**Eddy**	**AFE #**	**1403778**
SHL:	175' FNL, 1980' FWL Sec 9, T 25S, R 29E	**XTO ID #**	**21754**
		API #	**30-015-42925**
BHL:	50' FSL, 1850' FWL Sec 16, T 25S, R 29E	**Permit**	**BLM**
		Elevation	**GL 2947', KB 2974' (27' AGL)**
Area:	Water Basin	**Rig:**	**Frontier 27**

Additional regulatory paperwork in Well View

TVD	Geology: Formation	Casing & Cement	Wellhead	Hole Size	General Notes
			(Tech Data Sheet)	17-1/2"	**Notify BLM prior to spud, running casing, and cementing** Drill out with 8.4-8.7 ppg FW mud
221'	Rustler	*Tail (175% OH excess)* 940 sx 14.8ppg class C Top of Tail @ 0'			**Inc/Az Survey every stand**
		13-3/8" 54.5# J-55 BTC	**550' MD**		SET ON LONG END OF STRAP
				12-1/4"	**RU H_2S package**
700'	Top of Salt	*Lead (150% OH excess)* 960 sx 13.6ppg class C Top of Lead @ 0'			Drill out with 10.0-10.2 ppg BW **Inc/Az Survey every stand** Ensure well drifts to the South (180 - 250 azm) When to slide:
1,484'	Castille	*Tail (100% OH excess)* 298 sx 14.8ppg class C Top of Tail @ 2300'			Out of Azm window or inc > 3deg Slide lengths between 7-15' NO GREATER w/o approval Stay within drilling window and separation in prog
2,726'	Base Salt	**9-5/8" 40# HCL-80 BTC 0-650'** **9-5/8" 40# J-55 BTC 650'-TD**	**2875' MD**		SET ON LONG END OF STRAP **Send final survey data to Midland/Directional Co.**
2,915'	Top Of Delaware / Bell Canyon			8-3/4"	**FIT to 10.5 EMW** **R/U Mud Loggers & Gamma after Intermediate**
3,808'	Cherry Canyon				Drill Out w/ 8.8-9.4 ppg Cut Brine Use viscous sweeps to aid in hole cleaning in vertical
5,428'	Brushy Canyon				
6,454'	Basal Brushy Canyon				Displace to 9.4 OBM with curve assembly
6,723'	Bone Spring	*Lead (50% OH excess)* 707 sx 10.8ppg Class H (TXI) Top of Lead @ 1800'			
7,615'	1st Bone Spring				**Surveys: 30' curve | 100' vertical & lateral** Lateral Target Window: 50'R/50'L | 10'U/10'D
7,962'	2nd Bone Spring Lm		*KOP* *7973' MD*		**Notify Engineer before trips / Clean-Up Cycles**
7,973'	**KOP (TVD)**			Lateral 8-1/2"	Put Clean-Up Cycle parameters on report
		5-1/2" marker jts @ ~4300', 9000' MD', 12900' MD			When running csg est. returns before loss zone ~3808
8,396'	2nd Bone Spring Ss	*Tail (30% OH excess)* 2342 sx 13.2ppg 50/50 Poz/H Top of Tail @ 7600'	*EOC* *9048' MD*		If trip is made spot ~10-11 HW pill at KOP to keep off gas *Anti-Collision SF < 1.2 for following offsets* *None*
8,624'	**2nd Bone Spring Target (Landing TVD)**	Toe Sleeve @ ~18690'	**18,817' MD** **8,624' TVD @ BHL** **10,392' VS**		**9,769' Lateral** 90.0° inc, 178.79° az
8,624'	**TVD @ BHL**	**5-1/2" 17# CYP-110 BTC**			



5000# BOP
XTO Energy, Inc



Drilling Operations
Choke Manifold
5M Service

5M Choke Manifold Diagram
XTO Energy, Inc

XTO ENERGY, INC.

Eddy County, NM
Sec 9, T25S, R29E
Corral Canyon Federal #6H

Wellbore #1

Plan: Design #3

QES Well Planning Report

01 November, 2018

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Corral Canyon Federal #6H
Company:	XTO ENERGY, INC.	**TVD Reference:**	RKB @ 2974.0usft (Frontier #27)
Project:	Eddy County, NM	**MD Reference:**	RKB @ 2974.0usft (Frontier #27)
Site:	Sec 9, T25S, R29E	**North Reference:**	Grid
Well:	Corral Canyon Federal #6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Project	Eddy County, NM		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Sec 9, T25S, R29E

Site Position:		**Northing:**	418,934.60 usft	**Latitude:**	32° 9' 4.699 N
From:	Map	**Easting:**	605,899.30 usft	**Longitude:**	103° 59' 28.157 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.18 °

Well Corral Canyon Federal #6H

Well Position	**+N/-S**	0.0 usft	**Northing:**	418,934.60 usft	**Latitude:**	32° 9' 4.699 N
	+E/-W	0.0 usft	**Easting:**	605,899.30 usft	**Longitude:**	103° 59' 28.157 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	2,947.0 usft

Wellbore Wellbore #1

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	10/30/2018	7.00	59.91	47,713.26401777

Design Design #3

Audit Notes:

Version:	**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.0	0.0	0.0	180.51

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
7,973.4	0.00	0.00	7,973.4	0.0	0.0	0.00	0.00	0.00	0.00	
8,423.4	45.00	227.90	8,378.5	-112.5	-124.5	10.00	10.00	0.00	227.90	
9,047.7	90.00	178.79	8,624.0	-624.2	-299.3	10.00	7.21	-7.87	-58.52	
18,817.1	90.00	178.79	8,624.0	-10,391.4	-92.4	0.00	0.00	0.00	0.00	PBHL - CCF 6H

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Corral Canyon Federal #6H
Company:	XTO ENERGY, INC.	**TVD Reference:**	RKB @ 2974.0usft (Frontier #27)
Project:	Eddy County, NM	**MD Reference:**	RKB @ 2974.0usft (Frontier #27)
Site:	Sec 9, T25S, R29E	**North Reference:**	Grid
Well:	Corral Canyon Federal #6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler									
221.0	0.00	0.00	221.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
Salado (Top of Salt)									
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
Castille									
1,484.0	0.00	0.00	1,484.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
Base of Salt									
2,726.0	0.00	0.00	2,726.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
Delaware (Bell Canyon)									
2,915.0	0.00	0.00	2,915.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
Cherry Canyon									
3,808.0	0.00	0.00	3,808.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Corral Canyon Federal #6H
Company:	XTO ENERGY, INC.	**TVD Reference:**	RKB @ 2974.0usft (Frontier #27)
Project:	Eddy County, NM	**MD Reference:**	RKB @ 2974.0usft (Frontier #27)
Site:	Sec 9, T25S, R29E	**North Reference:**	Grid
Well:	Corral Canyon Federal #6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
Brushy Canyon									
5,428.0	0.00	0.00	5,428.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
Basal Brushy Canyon									
6,454.0	0.00	0.00	6,454.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
Bone Spring Lm									
6,723.0	0.00	0.00	6,723.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
Upper Avalon Sh									
6,848.0	0.00	0.00	6,848.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
Lower Avalon Sh									
7,293.0	0.00	0.00	7,293.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1st Bone Spring Lm									
7,533.0	0.00	0.00	7,533.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1st Bone Spring Ss									
7,615.0	0.00	0.00	7,615.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2nd Bone Spring Lm									

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Corral Canyon Federal #6H
Company:	XTO ENERGY, INC.	**TVD Reference:**	RKB @ 2974.0usft (Frontier #27)
Project:	Eddy County, NM	**MD Reference:**	RKB @ 2974.0usft (Frontier #27)
Site:	Sec 9, T25S, R29E	**North Reference:**	Grid
Well:	Corral Canyon Federal #6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,962.0	0.00	0.00	7,962.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP (Build 10° / 100')									
7,973.4	0.00	0.00	7,973.4	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	2.66	227.90	8,000.0	-0.4	-0.5	0.4	10.00	10.00	0.00
8,050.0	7.66	227.90	8,049.8	-3.4	-3.8	3.5	10.00	10.00	0.00
8,100.0	12.66	227.90	8,099.0	-9.3	-10.3	9.4	10.00	10.00	0.00
8,150.0	17.66	227.90	8,147.2	-18.1	-20.0	18.3	10.00	10.00	0.00
8,200.0	22.66	227.90	8,194.1	-29.7	-32.8	29.9	10.00	10.00	0.00
8,250.0	27.66	227.90	8,239.4	-43.9	-48.6	44.3	10.00	10.00	0.00
8,300.0	32.66	227.90	8,282.6	-60.7	-67.2	61.3	10.00	10.00	0.00
8,350.0	37.66	227.90	8,323.5	-80.0	-88.6	80.8	10.00	10.00	0.00
8,400.0	42.66	227.90	8,361.7	-101.6	-112.5	102.6	10.00	10.00	0.00
EOB @ 45.00° Inc. / 227.9° Azm / Build 10° / 100'									
8,423.4	45.00	227.90	8,378.5	-112.5	-124.5	113.6	10.00	10.00	0.00
2nd Bone Spring Ss									
8,448.4	46.34	224.95	8,396.0	-124.8	-137.5	126.0	10.00	5.38	-11.79
8,450.0	46.43	224.77	8,397.1	-125.7	-138.3	126.9	10.00	5.53	-11.50
8,500.0	49.34	219.28	8,430.7	-153.2	-163.1	154.7	10.00	5.81	-10.97
2nd Bone Spring A									
8,525.5	50.91	216.67	8,447.0	-168.6	-175.1	170.2	10.00	6.18	-10.24
8,550.0	52.48	214.27	8,462.2	-184.3	-186.2	185.9	10.00	6.40	-9.80
8,600.0	55.82	209.68	8,491.5	-218.7	-207.7	220.5	10.00	6.68	-9.19
2nd Bone Spring T/B Carb									
8,604.5	56.13	209.28	8,494.0	-221.9	-209.5	223.8	10.00	6.86	-8.78
8,650.0	59.32	205.44	8,518.3	-256.1	-227.2	258.1	10.00	7.01	-8.44
8,700.0	62.94	201.50	8,542.4	-296.2	-244.6	298.4	10.00	7.25	-7.87
2nd Bone Spring B1									
8,705.7	63.36	201.07	8,545.0	-300.9	-246.4	303.1	10.00	7.37	-7.58
8,750.0	66.67	197.82	8,563.7	-338.8	-259.8	341.1	10.00	7.46	-7.34
8,800.0	70.48	194.34	8,582.0	-383.5	-272.6	386.0	10.00	7.62	-6.96
2nd Bone Spring C									
8,849.6	74.32	191.04	8,597.0	-429.7	-283.0	432.2	10.00	7.74	-6.64
8,850.0	74.35	191.02	8,597.1	-430.0	-283.1	432.5	10.00	7.80	-6.51
8,900.0	78.27	187.82	8,608.9	-477.9	-291.0	480.5	10.00	7.84	-6.39
8,950.0	82.22	184.71	8,617.4	-526.9	-296.4	529.5	10.00	7.91	-6.21
9,000.0	86.20	181.67	8,622.5	-576.6	-299.1	579.2	10.00	7.95	-6.10
EOB @ 90.00° Inc. / 178.79° Azm									
9,047.7	90.00	178.79	8,624.0	-624.2	-299.3	626.9	10.00	7.97	-6.04
9,100.0	90.00	178.79	8,624.0	-676.5	-298.2	679.1	0.00	0.00	0.00
9,200.0	90.00	178.79	8,624.0	-776.5	-296.1	779.1	0.00	0.00	0.00
9,300.0	90.00	178.79	8,624.0	-876.5	-294.0	879.0	0.00	0.00	0.00
9,400.0	90.00	178.79	8,624.0	-976.4	-291.9	979.0	0.00	0.00	0.00
9,500.0	90.00	178.79	8,624.0	-1,076.4	-289.7	1,079.0	0.00	0.00	0.00
9,600.0	90.00	178.79	8,624.0	-1,176.4	-287.6	1,178.9	0.00	0.00	0.00
9,700.0	90.00	178.79	8,624.0	-1,276.4	-285.5	1,278.9	0.00	0.00	0.00
9,800.0	90.00	178.79	8,624.0	-1,376.4	-283.4	1,378.8	0.00	0.00	0.00
9,900.0	90.00	178.79	8,624.0	-1,476.3	-281.3	1,478.8	0.00	0.00	0.00
10,000.0	90.00	178.79	8,624.0	-1,576.3	-279.1	1,578.7	0.00	0.00	0.00
10,100.0	90.00	178.79	8,624.0	-1,676.3	-277.0	1,678.7	0.00	0.00	0.00
10,200.0	90.00	178.79	8,624.0	-1,776.3	-274.9	1,778.6	0.00	0.00	0.00
10,300.0	90.00	178.79	8,624.0	-1,876.2	-272.8	1,878.6	0.00	0.00	0.00
10,400.0	90.00	178.79	8,624.0	-1,976.2	-270.7	1,978.6	0.00	0.00	0.00
10,500.0	90.00	178.79	8,624.0	-2,076.2	-268.6	2,078.5	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Corral Canyon Federal #6H
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Project:	Eddy County, NM	**MD Reference:**	RKB @ 2974.0usft (Frontier #27)
Site:	Sec 9, T25S, R29E	**North Reference:**	Grid
Well:	Corral Canyon Federal #6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,600.0	90.00	178.79	8,624.0	-2,176.2	-266.4	2,178.5	0.00	0.00	0.00
10,700.0	90.00	178.79	8,624.0	-2,276.2	-264.3	2,278.4	0.00	0.00	0.00
10,800.0	90.00	178.79	8,624.0	-2,376.1	-262.2	2,378.4	0.00	0.00	0.00
10,900.0	90.00	178.79	8,624.0	-2,476.1	-260.1	2,478.3	0.00	0.00	0.00
11,000.0	90.00	178.79	8,624.0	-2,576.1	-258.0	2,578.3	0.00	0.00	0.00
11,100.0	90.00	178.79	8,624.0	-2,676.1	-255.9	2,678.2	0.00	0.00	0.00
11,200.0	90.00	178.79	8,624.0	-2,776.0	-253.7	2,778.2	0.00	0.00	0.00
11,300.0	90.00	178.79	8,624.0	-2,876.0	-251.6	2,878.1	0.00	0.00	0.00
11,400.0	90.00	178.79	8,624.0	-2,976.0	-249.5	2,978.1	0.00	0.00	0.00
11,500.0	90.00	178.79	8,624.0	-3,076.0	-247.4	3,078.1	0.00	0.00	0.00
11,600.0	90.00	178.79	8,624.0	-3,176.0	-245.3	3,178.0	0.00	0.00	0.00
11,700.0	90.00	178.79	8,624.0	-3,275.9	-243.1	3,278.0	0.00	0.00	0.00
11,800.0	90.00	178.79	8,624.0	-3,375.9	-241.0	3,377.9	0.00	0.00	0.00
11,900.0	90.00	178.79	8,624.0	-3,475.9	-238.9	3,477.9	0.00	0.00	0.00
12,000.0	90.00	178.79	8,624.0	-3,575.9	-236.8	3,577.8	0.00	0.00	0.00
12,100.0	90.00	178.79	8,624.0	-3,675.8	-234.7	3,677.8	0.00	0.00	0.00
12,200.0	90.00	178.79	8,624.0	-3,775.8	-232.6	3,777.7	0.00	0.00	0.00
12,300.0	90.00	178.79	8,624.0	-3,875.8	-230.4	3,877.7	0.00	0.00	0.00
12,400.0	90.00	178.79	8,624.0	-3,975.8	-228.3	3,977.6	0.00	0.00	0.00
12,500.0	90.00	178.79	8,624.0	-4,075.8	-226.2	4,077.6	0.00	0.00	0.00
12,600.0	90.00	178.79	8,624.0	-4,175.7	-224.1	4,177.6	0.00	0.00	0.00
12,700.0	90.00	178.79	8,624.0	-4,275.7	-222.0	4,277.5	0.00	0.00	0.00
12,800.0	90.00	178.79	8,624.0	-4,375.7	-219.8	4,377.5	0.00	0.00	0.00
12,900.0	90.00	178.79	8,624.0	-4,475.7	-217.7	4,477.4	0.00	0.00	0.00
13,000.0	90.00	178.79	8,624.0	-4,575.6	-215.6	4,577.4	0.00	0.00	0.00
13,100.0	90.00	178.79	8,624.0	-4,675.6	-213.5	4,677.3	0.00	0.00	0.00
13,200.0	90.00	178.79	8,624.0	-4,775.6	-211.4	4,777.3	0.00	0.00	0.00
13,300.0	90.00	178.79	8,624.0	-4,875.6	-209.3	4,877.2	0.00	0.00	0.00
13,400.0	90.00	178.79	8,624.0	-4,975.5	-207.1	4,977.2	0.00	0.00	0.00
13,500.0	90.00	178.79	8,624.0	-5,075.5	-205.0	5,077.1	0.00	0.00	0.00
13,600.0	90.00	178.79	8,624.0	-5,175.5	-202.9	5,177.1	0.00	0.00	0.00
13,700.0	90.00	178.79	8,624.0	-5,275.5	-200.8	5,277.1	0.00	0.00	0.00
13,800.0	90.00	178.79	8,624.0	-5,375.5	-198.7	5,377.0	0.00	0.00	0.00
13,900.0	90.00	178.79	8,624.0	-5,475.4	-196.5	5,477.0	0.00	0.00	0.00
14,000.0	90.00	178.79	8,624.0	-5,575.4	-194.4	5,576.9	0.00	0.00	0.00
14,100.0	90.00	178.79	8,624.0	-5,675.4	-192.3	5,676.9	0.00	0.00	0.00
14,200.0	90.00	178.79	8,624.0	-5,775.4	-190.2	5,776.8	0.00	0.00	0.00
14,300.0	90.00	178.79	8,624.0	-5,875.3	-188.1	5,876.8	0.00	0.00	0.00
14,400.0	90.00	178.79	8,624.0	-5,975.3	-186.0	5,976.7	0.00	0.00	0.00
14,500.0	90.00	178.79	8,624.0	-6,075.3	-183.8	6,076.7	0.00	0.00	0.00
14,600.0	90.00	178.79	8,624.0	-6,175.3	-181.7	6,176.7	0.00	0.00	0.00
14,700.0	90.00	178.79	8,624.0	-6,275.3	-179.6	6,276.6	0.00	0.00	0.00
14,800.0	90.00	178.79	8,624.0	-6,375.2	-177.5	6,376.6	0.00	0.00	0.00
14,900.0	90.00	178.79	8,624.0	-6,475.2	-175.4	6,476.5	0.00	0.00	0.00
15,000.0	90.00	178.79	8,624.0	-6,575.2	-173.2	6,576.5	0.00	0.00	0.00
15,100.0	90.00	178.79	8,624.0	-6,675.2	-171.1	6,676.4	0.00	0.00	0.00
15,200.0	90.00	178.79	8,624.0	-6,775.1	-169.0	6,776.4	0.00	0.00	0.00
15,300.0	90.00	178.79	8,624.0	-6,875.1	-166.9	6,876.3	0.00	0.00	0.00
15,400.0	90.00	178.79	8,624.0	-6,975.1	-164.8	6,976.3	0.00	0.00	0.00
15,500.0	90.00	178.79	8,624.0	-7,075.1	-162.7	7,076.2	0.00	0.00	0.00
15,600.0	90.00	178.79	8,624.0	-7,175.1	-160.5	7,176.2	0.00	0.00	0.00
15,700.0	90.00	178.79	8,624.0	-7,275.0	-158.4	7,276.2	0.00	0.00	0.00
15,800.0	90.00	178.79	8,624.0	-7,375.0	-156.3	7,376.1	0.00	0.00	0.00
15,900.0	90.00	178.79	8,624.0	-7,475.0	-154.2	7,476.1	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Corral Canyon Federal #6H
Company:	XTO ENERGY, INC.	**TVD Reference:**	RKB @ 2974.0usft (Frontier #27)
Project:	Eddy County, NM	**MD Reference:**	RKB @ 2974.0usft (Frontier #27)
Site:	Sec 9, T25S, R29E	**North Reference:**	Grid
Well:	Corral Canyon Federal #6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,000.0	90.00	178.79	8,624.0	-7,575.0	-152.1	7,576.0	0.00	0.00	0.00
16,100.0	90.00	178.79	8,624.0	-7,674.9	-149.9	7,676.0	0.00	0.00	0.00
16,200.0	90.00	178.79	8,624.0	-7,774.9	-147.8	7,775.9	0.00	0.00	0.00
16,300.0	90.00	178.79	8,624.0	-7,874.9	-145.7	7,875.9	0.00	0.00	0.00
16,400.0	90.00	178.79	8,624.0	-7,974.9	-143.6	7,975.8	0.00	0.00	0.00
16,500.0	90.00	178.79	8,624.0	-8,074.9	-141.5	8,075.8	0.00	0.00	0.00
16,600.0	90.00	178.79	8,624.0	-8,174.8	-139.4	8,175.7	0.00	0.00	0.00
16,700.0	90.00	178.79	8,624.0	-8,274.8	-137.2	8,275.7	0.00	0.00	0.00
16,800.0	90.00	178.79	8,624.0	-8,374.8	-135.1	8,375.7	0.00	0.00	0.00
16,900.0	90.00	178.79	8,624.0	-8,474.8	-133.0	8,475.6	0.00	0.00	0.00
17,000.0	90.00	178.79	8,624.0	-8,574.7	-130.9	8,575.6	0.00	0.00	0.00
17,100.0	90.00	178.79	8,624.0	-8,674.7	-128.8	8,675.5	0.00	0.00	0.00
17,200.0	90.00	178.79	8,624.0	-8,774.7	-126.7	8,775.5	0.00	0.00	0.00
17,300.0	90.00	178.79	8,624.0	-8,874.7	-124.5	8,875.4	0.00	0.00	0.00
17,400.0	90.00	178.79	8,624.0	-8,974.7	-122.4	8,975.4	0.00	0.00	0.00
17,500.0	90.00	178.79	8,624.0	-9,074.6	-120.3	9,075.3	0.00	0.00	0.00
17,600.0	90.00	178.79	8,624.0	-9,174.6	-118.2	9,175.3	0.00	0.00	0.00
17,700.0	90.00	178.79	8,624.0	-9,274.6	-116.1	9,275.2	0.00	0.00	0.00
17,800.0	90.00	178.79	8,624.0	-9,374.6	-113.9	9,375.2	0.00	0.00	0.00
17,900.0	90.00	178.79	8,624.0	-9,474.5	-111.8	9,475.2	0.00	0.00	0.00
18,000.0	90.00	178.79	8,624.0	-9,574.5	-109.7	9,575.1	0.00	0.00	0.00
18,100.0	90.00	178.79	8,624.0	-9,674.5	-107.6	9,675.1	0.00	0.00	0.00
18,200.0	90.00	178.79	8,624.0	-9,774.5	-105.5	9,775.0	0.00	0.00	0.00
18,300.0	90.00	178.79	8,624.0	-9,874.4	-103.4	9,875.0	0.00	0.00	0.00
18,400.0	90.00	178.79	8,624.0	-9,974.4	-101.2	9,974.9	0.00	0.00	0.00
18,500.0	90.00	178.79	8,624.0	-10,074.4	-99.1	10,074.9	0.00	0.00	0.00
18,600.0	90.00	178.79	8,624.0	-10,174.4	-97.0	10,174.8	0.00	0.00	0.00
18,700.0	90.00	178.79	8,624.0	-10,274.4	-94.9	10,274.8	0.00	0.00	0.00
18,800.0	90.00	178.79	8,624.0	-10,374.3	-92.8	10,374.8	0.00	0.00	0.00
TD @ 18817.1' MD / 8624.0' TVD									
18,817.1	90.00	178.79	8,624.0	-10,391.4	-92.4	10,391.8	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP - CCF 6H	0.00	0.00	8,624.0	-10,341.4	-92.7	408,593.20	605,806.60	32° 7' 22.360 N	103° 59' 29.617 W
- plan misses target center by 0.8usft at 18767.1usft MD (8624.0 TVD, -10341.4 N, -93.5 E)									
- Point									
FTP - CCF 6H	0.00	0.00	8,624.0	74.3	-130.1	419,008.90	605,769.20	32° 9' 5.439 N	103° 59' 29.667 W
- plan misses target center by 299.8usft at 8488.0usft MD (8422.8 TVD, -146.2 N, -157.2 E)									
- Point									
PBHL - CCF 6H	0.00	0.00	8,624.0	-10,391.4	-92.4	408,543.20	605,806.90	32° 7' 21.865 N	103° 59' 29.615 W
- plan hits target center									
- Point									

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Corral Canyon Federal #6H
Company:	XTO ENERGY, INC.	**TVD Reference:**	RKB @ 2974.0usft (Frontier #27)
Project:	Eddy County, NM	**MD Reference:**	RKB @ 2974.0usft (Frontier #27)
Site:	Sec 9, T25S, R29E	**North Reference:**	Grid
Well:	Corral Canyon Federal #6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
221.0	221.0	Rustler			
700.0	700.0	Salado (Top of Salt)			
1,484.0	1,484.0	Castille			
2,726.0	2,726.0	Base of Salt			
2,915.0	2,915.0	Delaware (Bell Canyon)			
3,808.0	3,808.0	Cherry Canyon			
5,428.0	5,428.0	Brushy Canyon			
6,454.0	6,454.0	Basal Brushy Canyon			
6,723.0	6,723.0	Bone Spring Lm			
6,848.0	6,848.0	Upper Avalon Sh			
7,293.0	7,293.0	Lower Avalon Sh			
7,533.0	7,533.0	1st Bone Spring Lm			
7,615.0	7,615.0	1st Bone Spring Ss			
7,962.0	7,962.0	2nd Bone Spring Lm			
8,448.4	8,396.0	2nd Bone Spring Ss			
8,525.5	8,447.0	2nd Bone Spring A			
8,604.5	8,494.0	2nd Bone Spring T/B Carb			
8,705.7	8,545.0	2nd Bone Spring B1			
8,849.6	8,597.0	2nd Bone Spring C			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
7,973.4	7,973.4	0.0	0.0	KOP (Build 10° / 100')
8,423.4	8,378.5	-112.5	-124.5	EOB @ 45.00° Inc. / 227.9° Azm / Build 10° / 100'
9,047.7	8,624.0	-624.2	-299.3	EOB @ 90.00° Inc. / 178.79° Azm
18,817.1	8,624.0	-10,391.4	-92.4	TD @ 18817.1' MD / 8624.0' TVD

GATES E & S NORTH AMERICA, INC
DU-TEX
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe&s@gates.com
WEB: www.gates.com

GRADE D PRESSURE TEST CERTIFICATE

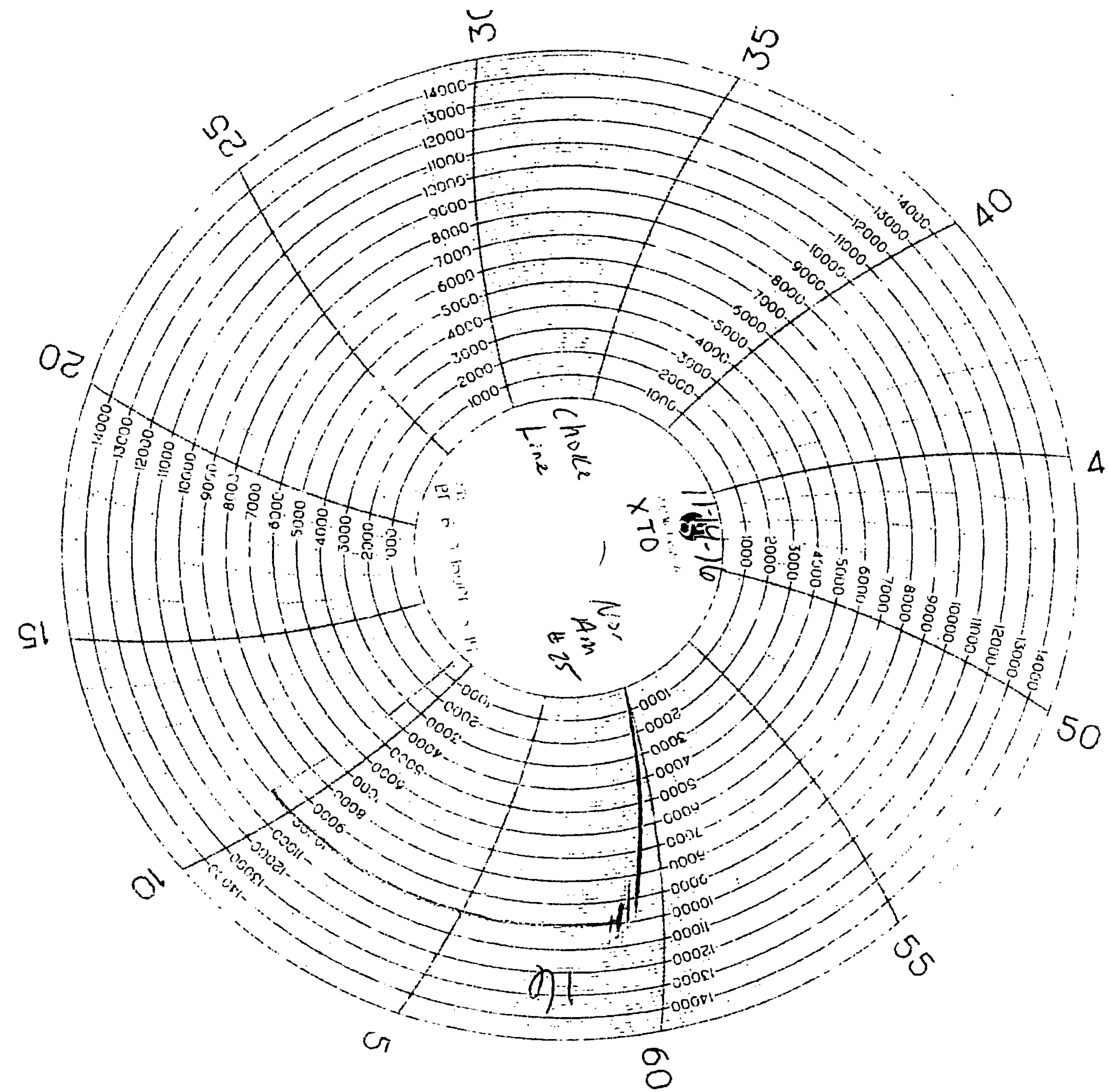
Customer :	AUSTIN DISTRIBUTING	Test Date:	6/8/2014
Customer Ref. :	PENDING	Hose Serial No..	D-060814-1
Invoice No. :	201709	Created By:	NORMA

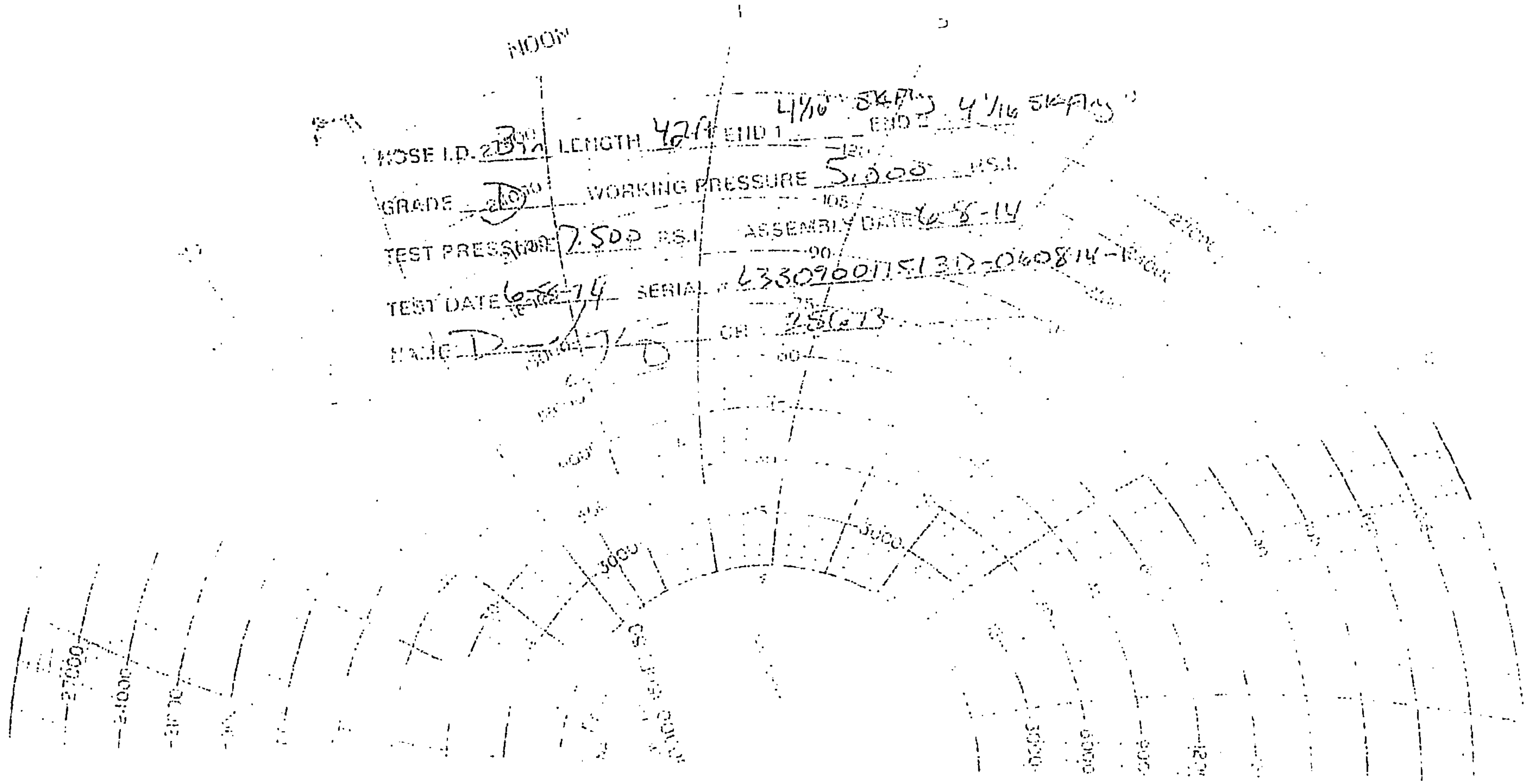
Product Description:	FD3.042.0R41/16.5KFLGE/E LE

End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality:	QUALITY	Technical Supervisor :	PRODUCTION
Date :	6/8/2014	Date :	6/8/2014
Signature :		Signature :	


Choke Line
XTO


NOON
HOSE I.D. 3" LENGTH 42ft END 1 4 1/16" 5K Flg END 2 4 1/16 5K Flg
GRADE D WORKING PRESSURE 5,000 P.S.I.
TEST PRESSURE 7,500 P.S.I. ASSEMBLY DATE 6-8-14
TEST DATE 6-8-14 SERIAL # 6330960017513D-060814-1
CR 28673
3000
5000
6000
3000
27000

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**BOPCO, LP**
LEASE NO.:	**NMNM120898**
WELL NAME & NO.:	**CORRAL CANYON FEDERAL 6H**
SURFACE HOLE FOOTAGE:	**175' FNL & 1980' FWL**
BOTTOM HOLE FOOTAGE	**50' FSL & 1850' FWL**
LOCATION:	**Section 9, T. 25 S., R 29 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

COA

All previous COAs still apply expect the following:

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

A. Hydrogen Sulfide

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately feet (a minimum of 25 feet into the Rustler Anhydrite and 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 will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

    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.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
   - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. 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.

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log (one log per well pad is acceptable) run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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.

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 RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher 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.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. 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.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. 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.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

    c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.

    d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE.

If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

ZS 110518

Medium

13 3/8	surface csg in a		17 1/2	inch hole.		Design Factors		SURFACE	
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	Weight
"A"	54.50	J 55		ST&C	17.15	4.55	1.79	550	29,975
"B"								0	0
w/8.4#/g mud, 30min Sfc Csg Test psig:	1,500			Tail Cmt	does not	circ to sfc.		Totals: 550	29,975

Comparison of Proposed to Minimum Required Cement Volumes

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
17 1/2	0.6946	940	1250	436	187	8.70	891	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	HCL 80		BUTT	7.97	11.4	1.37	700	28,000
"B"	40.00	J 55		BUTT	7.24	1.69	0.94	2,175	87,000
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	2,875	115,000
The cement volume(s) are intended to achieve a top of					0	ft from surface or a		550	overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	1258	1971	946	108	10.20	2314	3M	0.81

Burst Frac Gradient(s) for Segment(s): A, B, C, D = a, 1.37, c, d
All > 0.70, OK.

5 1/2	casing inside the		9 5/8			Design Factors		PRODUCTION	
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	Weight
"A"	17.00	P 110		BUTT	3.72	1.92	2.53	7,973	135,541
"B"	17.00	P 110		BUTT	9.04	1.62	2.53	10,844	184,348
w/8.4#/g mud, 30min Sfc Csg Test psig:	1,754						Totals:	18,817	319,889
B would be:					49.32	1.78	if it were a vertical wellbore.		

No Pilot Hole Planned	MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC
	18817	8624	8624	7973	90	8	9048

The cement volume(s) are intended to achieve a top of	2675	ft from surface or a	200	overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 3/4	0.2526	3049	5685	4085	39	9.40			1.35

Class 'H' tail cmt yld > 1.20