

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office

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.5. Lease Serial No.
NMNM02953B

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
JAMES RANCH UNIT D11 BS1-3E 213H9. API Well No.
30-015-45397-00-X110. Field and Pool or Exploratory Area
WILDCAT11. County or Parish, State
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
BOPCO LPContact: KELLY KARDOS
E-Mail: kelly_kardos@xtoenergy.com3a. Address
6401 HOLIDAY HILL RD BLDG 5 SUITE 200
MIDLAND, TX 797073b. Phone No. (include area code)
Ph: 432-620-4374

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 21 T22S R30E SENE 1427FNL 1276FEL
32.381023 N Lat, 103.881721 W Lon

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	Change to Original APD
	☐ 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 recomple 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.

BOPCO, LP requests permission to make the following changes to the original APD....

Change SHL from 1427'FNL & 1276'FEL to 1542'FNL & 1776'FEL *moving from pre-cast cellar to pre-cast cellar. No additional surface disturbance will take place.

Change BHL from 1980'FNL & 2440'FWL, Sec. 23, T22S, R30E to 2637'FSL & 50' FWL, Sec. 19, T22S, R30E.

Lease number will change from NMNM0002953A to NMNM0006808.

Drilling program & Directional Drill Plan

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 02 2019

RECEIVED

2-25-2019

original drilling COAs still stand 2/25/19-JAM Surface good JR

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

Electronic Submission #454173 verified by the BLM Well Information System

For BOPCO LP, sent to the Carlsbad

Committed to AFMSS for processing by PRISCILLA PEREZ on 02/12/2019 (19PP1054SE)

Name (Printed/Typed) KELLY KARDOS

Title REGULATORY COORDINATOR

Signature (Electronic Submission)

Date 02/12/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By 	Title AFM - LAM	Date 02/25/2019
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 CFO

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 **

RNP 10-219

Additional data for EC transaction #454173 that would not fit on the form

32. Additional remarks, continued

Attachments:
C102 & Supplement
Drilling Plan
Directional Plan

DRILLING PLAN: BLM COMPLIANCE
(Supplement to BLM 3160-3)

XTO Energy Inc.
James Ranch Unit D11 BS1-3E 213H
Projected TD: 24623' MD / 9511' TVD
SHL: 1542' FNL & 1776' FEL , Section 21, T22S, R30E
BHL: 2637' FSL & 50' FWL , Section 19, T22S, R30E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	151'	Water
Top of Salt	544'	Water
Base of Salt	3303'	Water
Delaware	3527'	Water
Bone Spring	7384'	Water/Oil/Gas
1st Bone Spring Ss	8376'	Water/Oil/Gas
2nd Bone Spring Ss	9441'	Water/Oil/Gas
Target/Land Curve	9511'	Water/Oil/Gas

*** Hydrocarbons @ Brushy Canyon

*** Groundwater depth 40' (per NM State Engineers Office).

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13-3/8 inch casing @ 510' (34' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9-5/8 inch casing at 3560' and circulating cement to surface. An 8-3/4 inch curve and lateral hole will be drilled to MD/TD and 5-1/2 inch casing will be set at TD and cemented back up to the 9-5/8 inch casing shoe.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' – 510'	13-3/8"	48	STC	H-40	New	1.59	3.30	13.15
12-1/4"	0' – 3560'	9-5/8"	36	LTC	J-55	New	1.40	1.83	3.53
8-3/4"	0' – 24623'	5-1/2"	17	BTC	P-110	New	1.12	1.63	2.10

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 9-5/8" Collapse analyzed using 50% evacuation based on regional experience.
- 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35

WELLHEAD:

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

B. Tubing Head: 13-5/8" 5M bottom flange x 7-1/16" 10M top flange

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

4. Cement Program

Surface Casing: 13-3/8", 48 New H-40, STC casing to be set at +/- 510'

Lead: 150 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft³/sx, 10.13 gal/sx water)

Tail: 300 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Intermediate Casing: 9-5/8", 36 New J-55, LTC casing to be set at +/- 3560'

Lead: 1010 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft³/sx, 9.61 gal/sx water)

Tail: 230 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Production Casing: 5-1/2", 17 New P-110, BTC casing to be set at +/- 24623'

Lead: 1000 sxs NeoCem (mixed at 10.5 ppg, 2.69 ft³/sx, 12.26 gal/sx water)

Tail: 3340 sxs VersaCem (mixed at 13.2 ppg, 1.61 ft³/sx, 8.38 gal/sx water)

Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

5. Pressure Control Equipment

The blow out preventer equipment (BOP) for this well consists of a 13-5/8" minimum 3M Hydril and a 13-5/8" minimum 3M Double Ram BOP. MASP should not exceed 2507 psi.

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 13-5/8" 3M bradenhead and flange, the BOP test will be limited to 3000 psi. When nipping up on the 9-5/8", the BOP will be tested to a minimum of 3000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 3M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 510'	17-1/2"	FW/Native	8.4-8.8	35-40	NC
510' to 3560'	12-1/4"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
3560' to 24623'	8-3/4"	FW / Cut Brine / Polymer	9 - 9.3	29-32	NC - 20

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Spud with fresh water/native mud. Drill out from under 13-3/8" surface casing with brine solution. A 9.8ppg-10.2ppg brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

7. Auxiliary Well Control and Monitoring Equipment

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 13-3/8" casing.

8. Logging, Coring and Testing Program

Mud Logger: Mud Logging Unit (2 man) below intermediate casing.

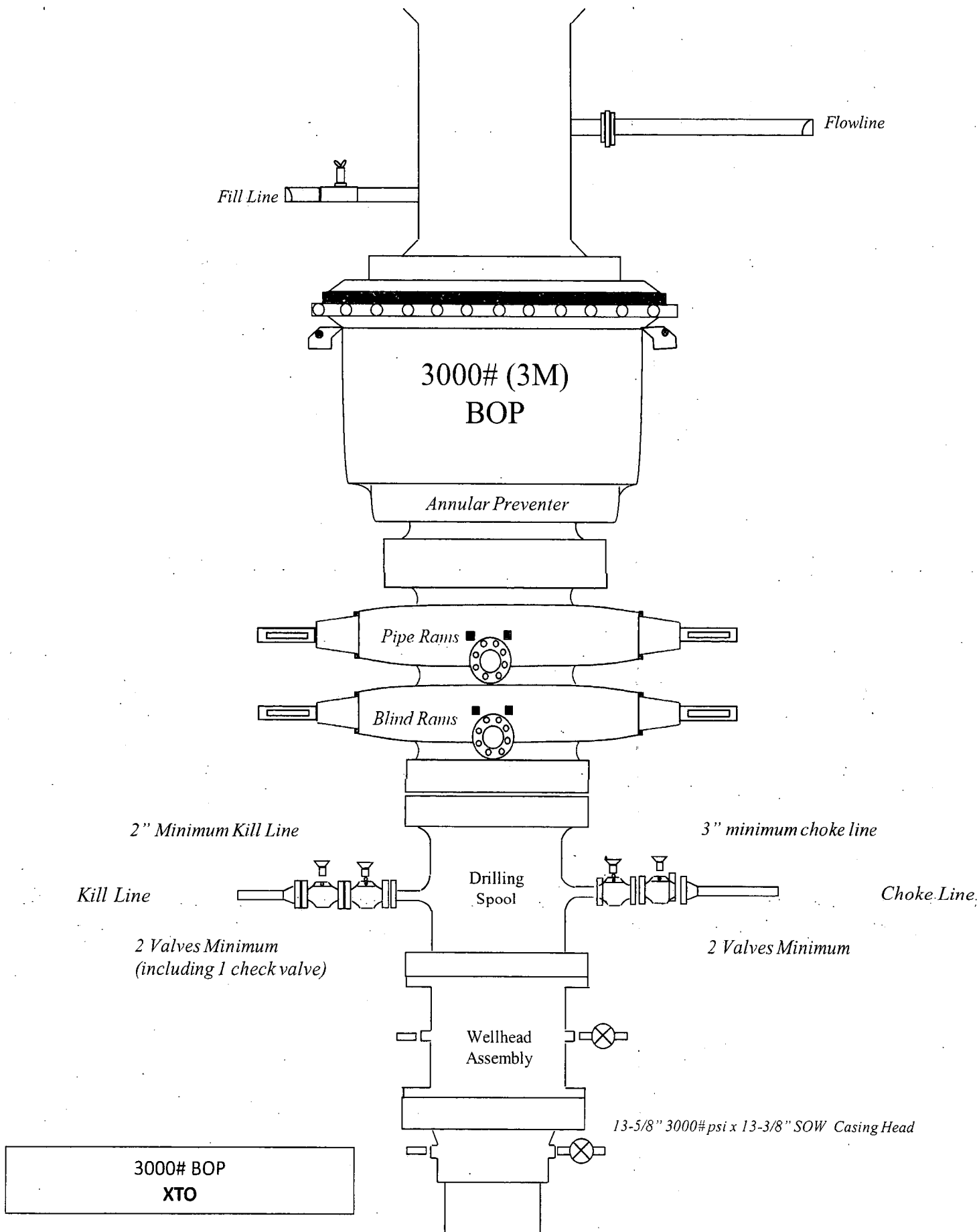
Open hole logging will not be done on this well.

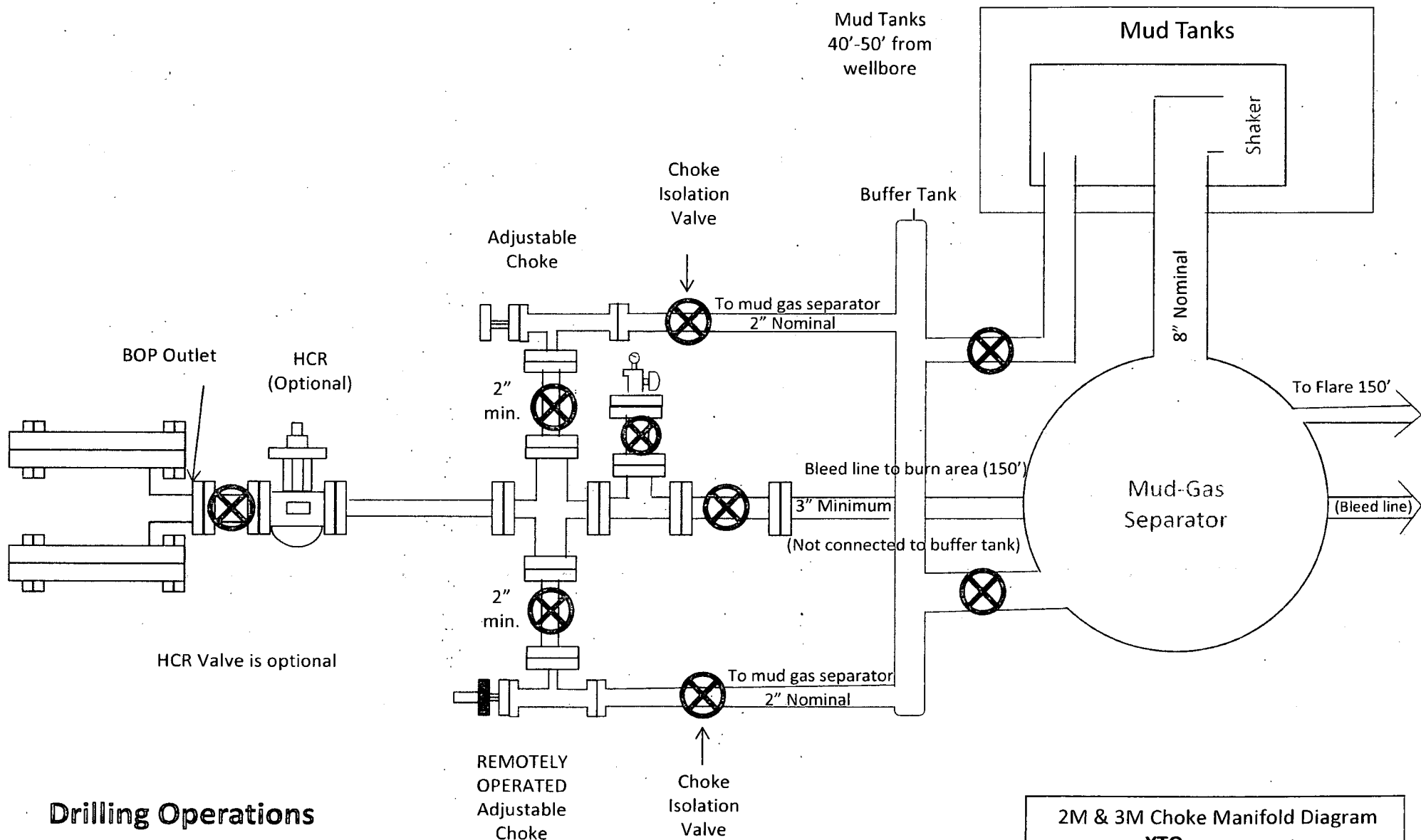
9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 145 to 165 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid. The maximum anticipated bottom hole pressure for this well is 4600 psi.

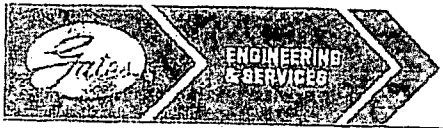
10. Anticipated Starting Date and Duration of Operations

Road and location construction will begin after Santa Fe and BLM have approved the APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 40 days. If production casing is run, an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.





2M & 3M Choke Manifold Diagram
 XTO



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

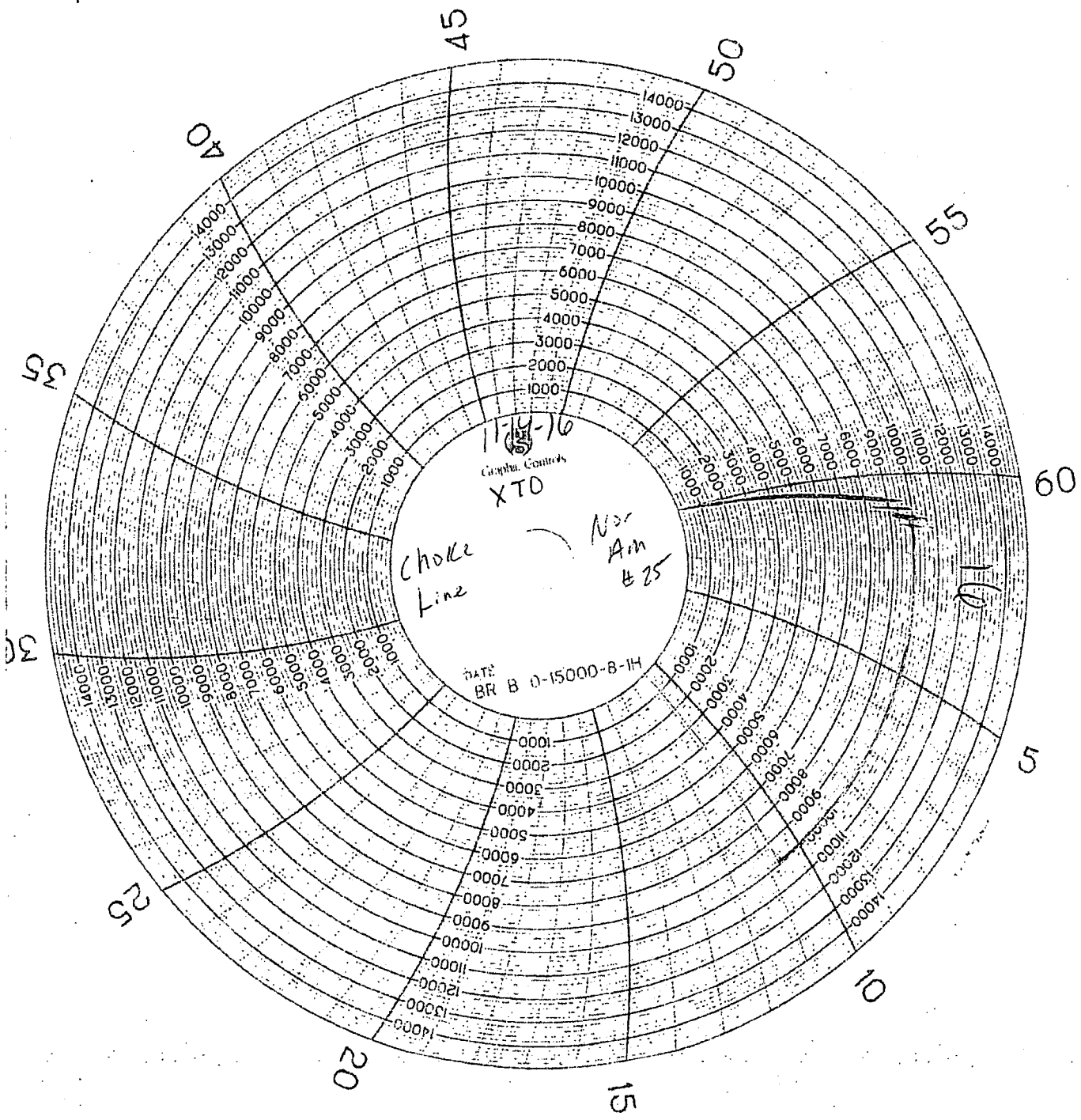
PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe@s@gates.com
WEB: www.gates.com

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:	NORI4A
Product Description:	FD3.0+2.0R41/16.5KFLGE/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

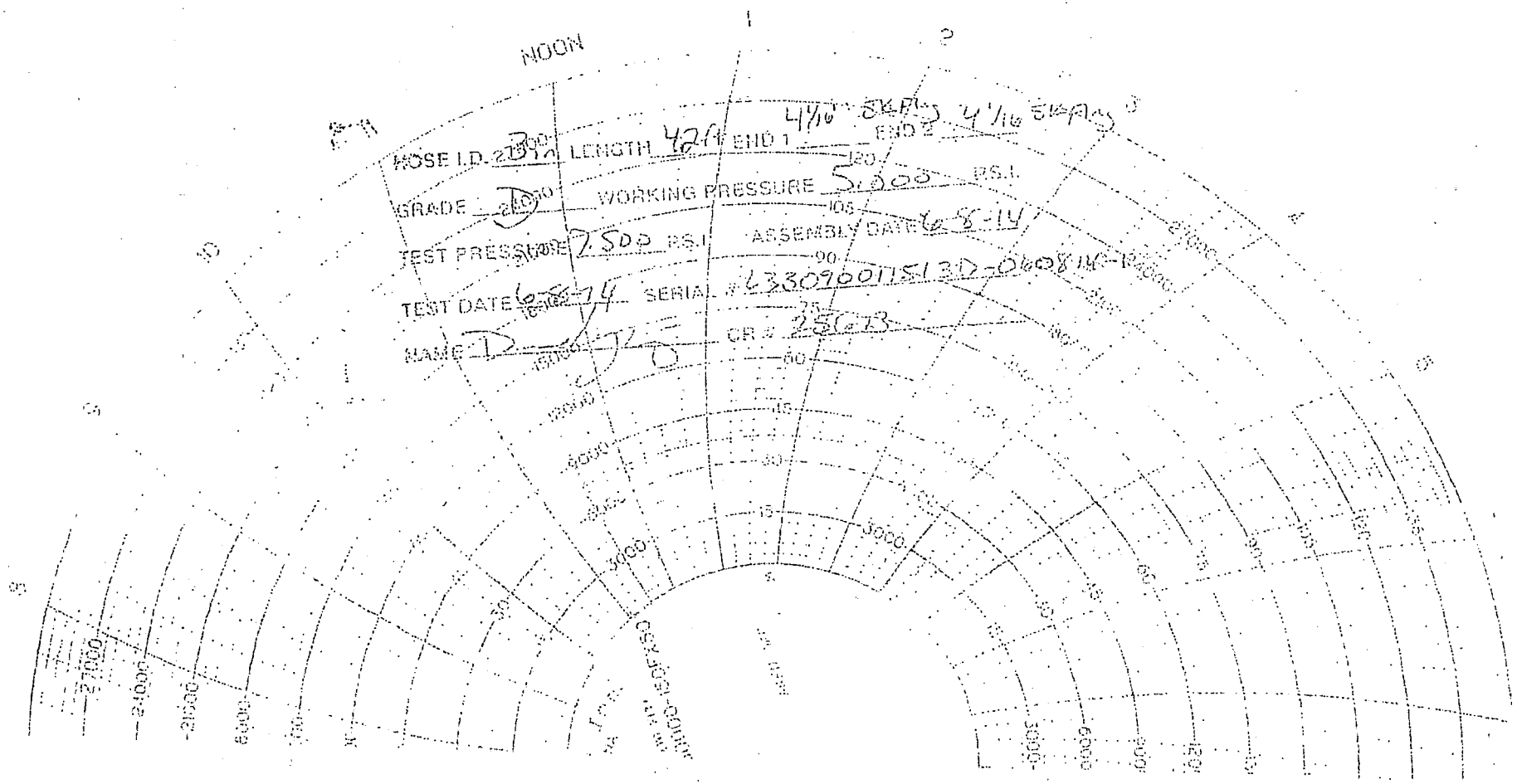
Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance 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 :	



NOON

HOSE I.D. 3/4" LENGTH 42' END 1 4 1/16" SKRTS END 2 4 1/16" SKRTS
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 # 63309001513D-060814-1
NAME D-475 CR # 25013





5D Plan Report

XTO Energy

Field Name: *XTO NAD 27 NME*

Site Name: *James Ranch Unit DI 1 #210H_211H_212H_213H*

Well Name: *James Ranch Unit DI 1 BS1-3E #213H*

Plan: *P1:V1*

8 February 2019





Weatherford



James Ranch Unit DI 1 BS1-3E #213H

Field Names: XTO NAD 27 NME	Map Units: US ft		Company Name: XTO Energy	
	Vertical Reference Datum (VRD): Mean Sea Level			
	Projected Coordinate System: NAD27 / New Mexico East			
	Comment:			
Site: James Ranch Unit DI 1 #210H_211H_2 12H_213H	Units: US ft	North Reference: Grid	Convergence Angle: 0.24	
	Position:	Northing: 502465.80 US ft	Latitude: 32° 22' 50.12"	
		Easting: 639082.80 US ft	Longitude: -103° 52' 58.09"	
	Elevation above MSL: 3166.00 US ft		Comment: Eddy Co, NM	
Slot: James Ranch Unit DI 1 BS1- 3E #213H	Position (Relative to Site Centre)			
	+N/-S: -0.20 US ft	Northing: 502465.60 US ft	Latitude: 32° 22' 50.12"	
	+E/-W: -15.10 US ft	Easting: 639067.70 US ft	Longitude: -103° 52' 58.27"	
	Elevation above MSL: 3166.00 US ft		Comment:	
Well: James Ranch Unit DI 1 BS1- 3E #213H	Type: Main well	UWI:	Plan: P1:V1	
	File Number:	Comment:		
	Closure Distance: 14294.5US ft	Closure Azimuth: 265.49°		
	Vertical Section: Position of Origin (Relative to Slot centre)			
	+N/-S: 0.00 US ft	+E/-W: -0.00 US ft	Az: 269.90°	
	Magnetic Parameters:			
	Model: bggm2018	Field Strength: 47876.9nT	Declination: 6.99°	Dip: 60.08° Date: 25/Feb/2019

Drill floor: Plan P1:V1

Rig Height (Well TVD Reference): Elevation above MSL: 3191.00US ft **Inclination:** 0.00° **Azimuth:** 0.00°
25.00US ft

Target set: James Ranch Unit DI 1 BS1-3E #213H Comments:

Target Name	TVD (US ft)	TVD (MSL) (US ft)	N Offset (US ft)	E Offset (US ft)	Northing (US ft)	Easting (US ft)	C.Pt Distance (US ft)	Comment
FTP	9511.00	6320.00	-1097.80	128.70	501367.80	639196.40	0.00	
LTP	9196.00	6005.00	-1122.81	-14200.30	501342.79	624867.40	1.09	
PBHL 213H	9196.00	6005.00	-1122.90	-14250.30	501342.70	624817.40	0.00	

Well path created using minimum curvature.

5D Plan Report

Tie Point:											
MD: 0.00USFt	Inclination: 0.00°	Azimuth: 0.00°	TVD: 0.00USFt	North Offset: 0.00USFt	East Offset: 0.00USFt						

Salient Points: (Relative to Slot centre) (TVD relative to Well TVD Reference)												
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	B.Rate (°/100US ft)	T.Rate (°/100US ft)	T.Face (°)	DLS (°/100US ft)	Comment
0.00	0.00	0.00	0.00	-3191.00	-0.00	0.00	-0.00	0.00	0.00	0.00	0.00	
6682.69	0.00	0.00	6682.69	3491.69	-0.00	0.00	-0.00	0.00	0.00	0.00	0.00	Nudge 2's
8739.64	41.14	135.00	8567.40	5376.40	-499.22	-500.14	500.10	2.00	0.00	135.00	2.00	Hold
9053.15	41.14	135.00	8803.51	5612.51	-644.81	-645.99	645.93	0.00	0.00	0.00	0.00	KOP
10240.50	91.25	269.90	9511.00	6320.00	-126.78	-1097.80	128.70	4.22	11.36	126.13	10.00	LP/FTP
24622.97	91.25	269.90	9196.00	6005.00	14252.24	-1122.90	-14250.30	0.00	0.00	0.00	0.00	PBHL 213H

Interpolated Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
0.00	0.00	0.00	0.00	-3191.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
100.00	0.00	0.00	100.00	-3091.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
200.00	0.00	0.00	200.00	-2991.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
300.00	0.00	0.00	300.00	-2891.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
400.00	0.00	0.00	400.00	-2791.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
500.00	0.00	0.00	500.00	-2691.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
600.00	0.00	0.00	600.00	-2591.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
700.00	0.00	0.00	700.00	-2491.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
800.00	0.00	0.00	800.00	-2391.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
900.00	0.00	0.00	900.00	-2291.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1000.00	0.00	0.00	1000.00	-2191.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1100.00	0.00	0.00	1100.00	-2091.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1200.00	0.00	0.00	1200.00	-1991.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1300.00	0.00	0.00	1300.00	-1891.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1400.00	0.00	0.00	1400.00	-1791.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1500.00	0.00	0.00	1500.00	-1691.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1600.00	0.00	0.00	1600.00	-1591.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1700.00	0.00	0.00	1700.00	-1491.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1800.00	0.00	0.00	1800.00	-1391.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
1900.00	0.00	0.00	1900.00	-1291.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2000.00	0.00	0.00	2000.00	-1191.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2100.00	0.00	0.00	2100.00	-1091.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2200.00	0.00	0.00	2200.00	-991.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2300.00	0.00	0.00	2300.00	-891.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2400.00	0.00	0.00	2400.00	-791.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2500.00	0.00	0.00	2500.00	-691.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2600.00	0.00	0.00	2600.00	-591.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2700.00	0.00	0.00	2700.00	-491.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2800.00	0.00	0.00	2800.00	-391.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
2900.00	0.00	0.00	2900.00	-291.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3000.00	0.00	0.00	3000.00	-191.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3100.00	0.00	0.00	3100.00	-91.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3200.00	0.00	0.00	3200.00	9.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3300.00	0.00	0.00	3300.00	109.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3400.00	0.00	0.00	3400.00	209.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3500.00	0.00	0.00	3500.00	309.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3600.00	0.00	0.00	3600.00	409.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3700.00	0.00	0.00	3700.00	509.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3800.00	0.00	0.00	3800.00	609.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
3900.00	0.00	0.00	3900.00	709.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
4000.00	0.00	0.00	4000.00	809.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
4100.00	0.00	0.00	4100.00	909.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
4200.00	0.00	0.00	4200.00	1009.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
4300.00	0.00	0.00	4300.00	1109.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
4400.00	0.00	0.00	4400.00	1209.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	

5D Plan Report

Interpolated Points: (Relative to Slot centre) (TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
4500.00	0.00	0.00	4500.00	1309.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
4600.00	0.00	0.00	4600.00	1409.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
4700.00	0.00	0.00	4700.00	1509.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
4800.00	0.00	0.00	4800.00	1609.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
4900.00	0.00	0.00	4900.00	1709.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5000.00	0.00	0.00	5000.00	1809.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5100.00	0.00	0.00	5100.00	1909.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5200.00	0.00	0.00	5200.00	2009.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5300.00	0.00	0.00	5300.00	2109.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5400.00	0.00	0.00	5400.00	2209.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5500.00	0.00	0.00	5500.00	2309.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5600.00	0.00	0.00	5600.00	2409.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5700.00	0.00	0.00	5700.00	2509.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5800.00	0.00	0.00	5800.00	2609.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
5900.00	0.00	0.00	5900.00	2709.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
6000.00	0.00	0.00	6000.00	2809.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
6100.00	0.00	0.00	6100.00	2909.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
6200.00	0.00	0.00	6200.00	3009.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
6300.00	0.00	0.00	6300.00	3109.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
6400.00	0.00	0.00	6400.00	3209.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
6500.00	0.00	0.00	6500.00	3309.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
6600.00	0.00	0.00	6600.00	3409.00	-0.00	0.00	-0.00	502465.60	639067.70	0.00	
6682.69	0.00	0.00	6682.69	3491.69	-0.00	0.00	-0.00	502465.60	639067.70	0.00	Nudge 2's
6700.00	0.35	135.00	6700.00	3509.00	-0.04	-0.04	0.04	502465.56	639067.74	2.00	
6800.00	2.35	135.00	6799.97	3608.97	-1.70	-1.70	1.70	502463.90	639069.40	2.00	
6900.00	4.35	135.00	6899.79	3708.79	-5.81	-5.83	5.82	502459.77	639073.52	2.00	
7000.00	6.35	135.00	6999.35	3808.35	-12.39	-12.41	12.41	502453.19	639080.11	2.00	
7100.00	8.35	135.00	7098.53	3907.53	-21.42	-21.46	21.45	502444.14	639089.15	2.00	
7200.00	10.35	135.00	7197.19	4006.19	-32.88	-32.94	32.94	502432.66	639100.64	2.00	
7300.00	12.35	135.00	7295.23	4104.23	-46.76	-46.85	46.85	502418.75	639114.55	2.00	
7400.00	14.35	135.00	7392.53	4201.53	-63.06	-63.17	63.17	502402.43	639130.87	2.00	
7500.00	16.35	135.00	7488.96	4297.96	-81.74	-81.89	81.88	502383.71	639149.58	2.00	
7600.00	18.35	135.00	7584.41	4393.41	-102.78	-102.97	102.96	502362.63	639170.66	2.00	
7700.00	20.35	135.00	7678.75	4487.75	-126.16	-126.39	126.38	502339.21	639194.08	2.00	
7800.00	22.35	135.00	7771.89	4580.89	-151.85	-152.13	152.12	502313.47	639219.82	2.00	
7900.00	24.35	135.00	7863.70	4672.70	-179.82	-180.15	180.14	502285.45	639247.84	2.00	
8000.00	26.35	135.00	7954.07	4763.07	-210.04	-210.42	210.40	502255.18	639278.10	2.00	
8100.00	28.35	135.00	8042.89	4851.89	-242.46	-242.90	242.88	502222.70	639310.58	2.00	
8200.00	30.35	135.00	8130.05	4939.05	-277.05	-277.56	277.53	502188.04	639345.23	2.00	
8300.00	32.35	135.00	8215.45	5024.45	-313.77	-314.34	314.31	502151.26	639382.01	2.00	
8400.00	34.35	135.00	8298.98	5107.98	-352.56	-353.21	353.18	502112.39	639420.88	2.00	
8500.00	36.35	135.00	8380.54	5189.54	-393.40	-394.12	394.08	502071.48	639461.78	2.00	
8600.00	38.35	135.00	8460.04	5269.04	-436.21	-437.01	436.98	502028.59	639504.68	2.00	
8700.00	40.35	135.00	8537.37	5346.37	-480.96	-481.84	481.80	501983.76	639549.50	2.00	
8739.64	41.14	135.00	8567.40	5376.40	-499.22	-500.14	500.10	501965.46	639567.80	2.00	Hold
8800.00	41.14	135.00	8612.86	5421.86	-527.25	-528.22	528.17	501937.38	639595.87	0.00	
8900.00	41.14	135.00	8688.17	5497.17	-573.69	-574.74	574.69	501890.86	639642.39	0.00	
9000.00	41.14	135.00	8763.48	5572.48	-620.12	-621.26	621.21	501844.34	639688.91	0.00	
9053.15	41.14	135.00	8803.51	5612.51	-644.81	-645.99	645.93	501819.61	639713.63	0.00	KOP
9100.00	38.53	141.08	8839.50	5648.50	-664.84	-668.25	666.01	501797.35	639733.71	10.00	
9200.00	34.22	156.35	8920.16	5729.16	-695.68	-718.37	696.93	501747.23	639764.63	10.00	
9300.00	32.19	174.29	9004.03	5813.03	-709.55	-770.77	710.90	501694.83	639778.60	10.00	
9400.00	32.86	192.91	9088.56	5897.56	-706.05	-823.84	707.48	501641.76	639775.18	10.00	
9500.00	36.07	209.69	9171.18	5980.18	-685.26	-875.99	686.79	501589.61	639754.49	10.00	
9600.00	41.24	223.44	9249.39	6058.39	-647.83	-925.63	649.44	501539.97	639717.14	10.00	
9700.00	47.72	234.35	9320.80	6129.80	-594.89	-971.24	596.58	501494.36	639664.28	10.00	
9800.00	55.04	243.10	9383.25	6192.25	-528.05	-1011.45	529.81	501454.15	639597.51	10.00	
9900.00	62.87	250.37	9434.84	6243.84	-449.33	-1045.03	451.16	501420.57	639518.86	10.00	

5D Plan Report

Interpolated Points: (Relative to Slot centre)(TVD Relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
10000.00	71.03	256.66	9473.99	6282.99	-361.15	-1070.96	363.02	501394.64	639430.72	10.00	
10100.00	79.38	262.36	9499.53	6308.53	-266.16	-1088.45	268.06	501377.15	639335.76	10.00	
10200.00	87.82	267.75	9510.67	6319.67	-167.26	-1096.97	169.18	501368.63	639236.88	10.00	
10240.50	91.25	269.90	9511.00	6320.00	-126.78	-1097.80	128.70	501367.80	639196.40	10.00	LP/FTP
10300.00	91.25	269.90	9509.70	6318.70	-67.29	-1097.90	69.21	501367.70	639136.91	0.00	
10400.00	91.25	269.90	9507.51	6316.51	32.68	-1098.08	-30.76	501367.52	639036.94	0.00	
10500.00	91.25	269.90	9505.32	6314.32	132.66	-1098.25	-130.74	501367.35	638936.96	0.00	
10600.00	91.25	269.90	9503.13	6312.13	232.63	-1098.43	-230.72	501367.17	638836.98	0.00	
10700.00	91.25	269.90	9500.94	6309.94	332.61	-1098.60	-330.69	501367.00	638737.01	0.00	
10800.00	91.25	269.90	9498.75	6307.75	432.59	-1098.78	-430.67	501366.82	638637.03	0.00	
10900.00	91.25	269.90	9496.56	6305.56	532.56	-1098.95	-530.64	501366.65	638537.06	0.00	
11000.00	91.25	269.90	9494.37	6303.37	632.54	-1099.13	-630.62	501366.47	638437.08	0.00	
11100.00	91.25	269.90	9492.18	6301.18	732.51	-1099.30	-730.60	501366.30	638337.10	0.00	
11200.00	91.25	269.90	9489.99	6298.99	832.49	-1099.47	-830.57	501366.13	638237.13	0.00	
11300.00	91.25	269.90	9487.80	6296.80	932.47	-1099.65	-930.55	501365.95	638137.15	0.00	
11400.00	91.25	269.90	9485.60	6294.60	1032.44	-1099.82	-1030.52	501365.78	638037.18	0.00	
11500.00	91.25	269.90	9483.41	6292.41	1132.42	-1100.00	-1130.50	501365.60	637937.20	0.00	
11600.00	91.25	269.90	9481.22	6290.22	1232.39	-1100.17	-1230.48	501365.43	637837.22	0.00	
11700.00	91.25	269.90	9479.03	6288.03	1332.37	-1100.35	-1330.45	501365.25	637737.25	0.00	
11800.00	91.25	269.90	9476.84	6285.84	1432.35	-1100.52	-1430.43	501365.08	637637.27	0.00	
11900.00	91.25	269.90	9474.65	6283.65	1532.32	-1100.70	-1530.40	501364.90	637537.30	0.00	
12000.00	91.25	269.90	9472.46	6281.46	1632.30	-1100.87	-1630.38	501364.73	637437.32	0.00	
12100.00	91.25	269.90	9470.27	6279.27	1732.27	-1101.04	-1730.35	501364.56	637337.35	0.00	
12200.00	91.25	269.90	9468.08	6277.08	1832.25	-1101.22	-1830.33	501364.38	637237.37	0.00	
12300.00	91.25	269.90	9465.89	6274.89	1932.23	-1101.39	-1930.31	501364.21	637137.39	0.00	
12400.00	91.25	269.90	9463.70	6272.70	2032.20	-1101.57	-2030.28	501364.03	637037.42	0.00	
12500.00	91.25	269.90	9461.51	6270.51	2132.18	-1101.74	-2130.26	501363.86	636937.44	0.00	
12600.00	91.25	269.90	9459.32	6268.32	2232.15	-1101.92	-2230.23	501363.68	636837.47	0.00	
12700.00	91.25	269.90	9457.13	6266.13	2332.13	-1102.09	-2330.21	501363.51	636737.49	0.00	
12800.00	91.25	269.90	9454.94	6263.94	2432.11	-1102.27	-2430.19	501363.33	636637.51	0.00	
12900.00	91.25	269.90	9452.75	6261.75	2532.08	-1102.44	-2530.16	501363.16	636537.54	0.00	
13000.00	91.25	269.90	9450.56	6259.56	2632.06	-1102.62	-2630.14	501362.98	636437.56	0.00	
13100.00	91.25	269.90	9448.37	6257.37	2732.03	-1102.79	-2730.11	501362.81	636337.59	0.00	
13200.00	91.25	269.90	9446.18	6255.18	2832.01	-1102.96	-2830.09	501362.64	636237.61	0.00	
13300.00	91.25	269.90	9443.99	6252.99	2931.99	-1103.14	-2930.06	501362.46	636137.64	0.00	
13400.00	91.25	269.90	9441.80	6250.80	3031.96	-1103.31	-3030.04	501362.29	636037.66	0.00	
13500.00	91.25	269.90	9439.61	6248.61	3131.94	-1103.49	-3130.02	501362.11	635937.68	0.00	
13600.00	91.25	269.90	9437.42	6246.42	3231.91	-1103.66	-3229.99	501361.94	635837.71	0.00	
13700.00	91.25	269.90	9435.23	6244.23	3331.89	-1103.84	-3329.97	501361.76	635737.73	0.00	
13800.00	91.25	269.90	9433.04	6242.04	3431.87	-1104.01	-3429.94	501361.59	635637.76	0.00	
13900.00	91.25	269.90	9430.85	6239.85	3531.84	-1104.19	-3529.92	501361.41	635537.78	0.00	
14000.00	91.25	269.90	9428.66	6237.66	3631.82	-1104.36	-3629.90	501361.24	635437.80	0.00	
14100.00	91.25	269.90	9426.47	6235.47	3731.79	-1104.54	-3729.87	501361.06	635337.83	0.00	
14200.00	91.25	269.90	9424.28	6233.28	3831.77	-1104.71	-3829.85	501360.89	635237.85	0.00	
14300.00	91.25	269.90	9422.09	6231.09	3931.75	-1104.88	-3929.82	501360.72	635137.88	0.00	
14400.00	91.25	269.90	9419.90	6228.90	4031.72	-1105.06	-4029.80	501360.54	635037.90	0.00	
14500.00	91.25	269.90	9417.71	6226.71	4131.70	-1105.23	-4129.78	501360.37	634937.92	0.00	
14600.00	91.25	269.90	9415.52	6224.52	4231.67	-1105.41	-4229.75	501360.19	634837.95	0.00	
14700.00	91.25	269.90	9413.33	6222.33	4331.65	-1105.58	-4329.73	501360.02	634737.97	0.00	
14800.00	91.25	269.90	9411.14	6220.14	4431.63	-1105.76	-4429.70	501359.84	634638.00	0.00	
14900.00	91.25	269.90	9408.95	6217.95	4531.60	-1105.93	-4529.68	501359.67	634538.02	0.00	
15000.00	91.25	269.90	9406.76	6215.76	4631.58	-1106.11	-4629.65	501359.49	634438.05	0.00	
15100.00	91.25	269.90	9404.57	6213.57	4731.55	-1106.28	-4729.63	501359.32	634338.07	0.00	
15200.00	91.25	269.90	9402.38	6211.38	4831.53	-1106.45	-4829.61	501359.15	634238.09	0.00	
15300.00	91.25	269.90	9400.19	6209.19	4931.51	-1106.63	-4929.58	501358.97	634138.12	0.00	
15400.00	91.25	269.90	9398.00	6207.00	5031.48	-1106.80	-5029.56	501358.80	634038.14	0.00	
15500.00	91.25	269.90	9395.81	6204.81	5131.46	-1106.98	-5129.53	501358.62	633938.17	0.00	
15600.00	91.25	269.90	9393.62	6202.62	5231.43	-1107.15	-5229.51	501358.45	633838.19	0.00	

5D Plan Report

Interpolated Points: (Relative to Slot centre) (TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
15700.00	91.25	269.90	9391.43	6200.43	5331.41	-1107.33	-5329.49	501358.27	633738.21	0.00	
15800.00	91.25	269.90	9389.24	6198.24	5431.39	-1107.50	-5429.46	501358.10	633638.24	0.00	
15900.00	91.25	269.90	9387.05	6196.05	5531.36	-1107.68	-5529.44	501357.92	633538.26	0.00	
16000.00	91.25	269.90	9384.86	6193.86	5631.34	-1107.85	-5629.41	501357.75	633438.29	0.00	
16100.00	91.25	269.90	9382.67	6191.67	5731.31	-1108.03	-5729.39	501357.57	633338.31	0.00	
16200.00	91.25	269.90	9380.48	6189.48	5831.29	-1108.20	-5829.36	501357.40	633238.34	0.00	
16300.00	91.25	269.90	9378.29	6187.29	5931.27	-1108.37	-5929.34	501357.23	633138.36	0.00	
16400.00	91.25	269.90	9376.10	6185.10	6031.24	-1108.55	-6029.32	501357.05	633038.38	0.00	
16500.00	91.25	269.90	9373.91	6182.91	6131.22	-1108.72	-6129.29	501356.88	632938.41	0.00	
16600.00	91.25	269.90	9371.72	6180.72	6231.19	-1108.90	-6229.27	501356.70	632838.43	0.00	
16700.00	91.25	269.90	9369.53	6178.53	6331.17	-1109.07	-6329.24	501356.53	632738.46	0.00	
16800.00	91.25	269.90	9367.34	6176.34	6431.15	-1109.25	-6429.22	501356.35	632638.48	0.00	
16900.00	91.25	269.90	9365.15	6174.15	6531.12	-1109.42	-6529.20	501356.18	632538.50	0.00	
17000.00	91.25	269.90	9362.96	6171.96	6631.10	-1109.60	-6629.17	501356.00	632438.53	0.00	
17100.00	91.25	269.90	9360.77	6169.77	6731.07	-1109.77	-6729.15	501355.83	632338.55	0.00	
17200.00	91.25	269.90	9358.58	6167.58	6831.05	-1109.95	-6829.12	501355.65	632238.58	0.00	
17300.00	91.25	269.90	9356.39	6165.39	6931.03	-1110.12	-6929.10	501355.48	632138.60	0.00	
17400.00	91.25	269.90	9354.19	6163.19	7031.00	-1110.29	-7029.07	501355.31	632038.63	0.00	
17500.00	91.25	269.90	9352.00	6161.00	7130.98	-1110.47	-7129.05	501355.13	631938.65	0.00	
17600.00	91.25	269.90	9349.81	6158.81	7230.95	-1110.64	-7229.03	501354.96	631838.67	0.00	
17700.00	91.25	269.90	9347.62	6156.62	7330.93	-1110.82	-7329.00	501354.78	631738.70	0.00	
17800.00	91.25	269.90	9345.43	6154.43	7430.91	-1110.99	-7428.98	501354.61	631638.72	0.00	
17900.00	91.25	269.90	9343.24	6152.24	7530.88	-1111.17	-7528.95	501354.43	631538.75	0.00	
18000.00	91.25	269.90	9341.05	6150.05	7630.86	-1111.34	-7628.93	501354.26	631438.77	0.00	
18100.00	91.25	269.90	9338.86	6147.86	7730.83	-1111.52	-7728.91	501354.08	631338.79	0.00	
18200.00	91.25	269.90	9336.67	6145.67	7830.81	-1111.69	-7828.88	501353.91	631238.82	0.00	
18300.00	91.25	269.90	9334.48	6143.48	7930.79	-1111.87	-7928.86	501353.73	631138.84	0.00	
18400.00	91.25	269.90	9332.29	6141.29	8030.76	-1112.04	-8028.83	501353.56	631038.87	0.00	
18500.00	91.25	269.90	9330.10	6139.10	8130.74	-1112.21	-8128.81	501353.39	630938.89	0.00	
18600.00	91.25	269.90	9327.91	6136.91	8230.71	-1112.39	-8228.79	501353.21	630838.91	0.00	
18700.00	91.25	269.90	9325.72	6134.72	8330.69	-1112.56	-8328.76	501353.04	630738.94	0.00	
18800.00	91.25	269.90	9323.53	6132.53	8430.67	-1112.74	-8428.74	501352.86	630638.96	0.00	
18900.00	91.25	269.90	9321.34	6130.34	8530.64	-1112.91	-8528.71	501352.69	630538.99	0.00	
19000.00	91.25	269.90	9319.15	6128.15	8630.62	-1113.09	-8628.69	501352.51	630439.01	0.00	
19100.00	91.25	269.90	9316.96	6125.96	8730.59	-1113.26	-8728.66	501352.34	630339.04	0.00	
19200.00	91.25	269.90	9314.77	6123.77	8830.57	-1113.44	-8828.64	501352.16	630239.06	0.00	
19300.00	91.25	269.90	9312.58	6121.58	8930.55	-1113.61	-8928.62	501351.99	630139.08	0.00	
19400.00	91.25	269.90	9310.39	6119.39	9030.52	-1113.78	-9028.59	501351.82	630039.11	0.00	
19500.00	91.25	269.90	9308.20	6117.20	9130.50	-1113.96	-9128.57	501351.64	629939.13	0.00	
19600.00	91.25	269.90	9306.01	6115.01	9230.47	-1114.13	-9228.54	501351.47	629839.16	0.00	
19700.00	91.25	269.90	9303.82	6112.82	9330.45	-1114.31	-9328.52	501351.29	629739.18	0.00	
19800.00	91.25	269.90	9301.63	6110.63	9430.43	-1114.48	-9428.50	501351.12	629639.20	0.00	
19900.00	91.25	269.90	9299.44	6108.44	9530.40	-1114.66	-9528.47	501350.94	629539.23	0.00	
20000.00	91.25	269.90	9297.25	6106.25	9630.38	-1114.83	-9628.45	501350.77	629439.25	0.00	
20100.00	91.25	269.90	9295.06	6104.06	9730.35	-1115.01	-9728.42	501350.59	629339.28	0.00	
20200.00	91.25	269.90	9292.87	6101.87	9830.33	-1115.18	-9828.40	501350.42	629239.30	0.00	
20300.00	91.25	269.90	9290.68	6099.68	9930.31	-1115.36	-9928.37	501350.24	629139.33	0.00	
20400.00	91.25	269.90	9288.49	6097.49	10030.28	-1115.53	-10028.35	501350.07	629039.35	0.00	
20500.00	91.25	269.90	9286.30	6095.30	10130.26	-1115.70	-10128.33	501349.90	628939.37	0.00	
20600.00	91.25	269.90	9284.11	6093.11	10230.23	-1115.88	-10228.30	501349.72	628839.40	0.00	
20700.00	91.25	269.90	9281.92	6090.92	10330.21	-1116.05	-10328.28	501349.55	628739.42	0.00	
20800.00	91.25	269.90	9279.73	6088.73	10430.19	-1116.23	-10428.25	501349.37	628639.45	0.00	
20900.00	91.25	269.90	9277.54	6086.54	10530.16	-1116.40	-10528.23	501349.20	628539.47	0.00	
21000.00	91.25	269.90	9275.35	6084.35	10630.14	-1116.58	-10628.21	501349.02	628439.49	0.00	
21100.00	91.25	269.90	9273.16	6082.16	10730.11	-1116.75	-10728.18	501348.85	628339.52	0.00	
21200.00	91.25	269.90	9270.97	6079.97	10830.09	-1116.93	-10828.16	501348.67	628239.54	0.00	
21300.00	91.25	269.90	9268.78	6077.78	10930.07	-1117.10	-10928.13	501348.50	628139.57	0.00	
21400.00	91.25	269.90	9266.59	6075.59	11030.04	-1117.28	-11028.11	501348.32	628039.59	0.00	

Interpolated Points: (Relative to Slot centre) (TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
21500.00	91.25	269.90	9264.40	6073.40	11130.02	-1117.45	-11128.09	501348.15	627939.61	0.00	
21600.00	91.25	269.90	9262.21	6071.21	11229.99	-1117.62	-11228.06	501347.98	627839.64	0.00	
21700.00	91.25	269.90	9260.02	6069.02	11329.97	-1117.80	-11328.04	501347.80	627739.66	0.00	
21800.00	91.25	269.90	9257.83	6066.83	11429.95	-1117.97	-11428.01	501347.63	627639.69	0.00	
21900.00	91.25	269.90	9255.64	6064.64	11529.92	-1118.15	-11527.99	501347.45	627539.71	0.00	
22000.00	91.25	269.90	9253.45	6062.45	11629.90	-1118.32	-11627.96	501347.28	627439.74	0.00	
22100.00	91.25	269.90	9251.26	6060.26	11729.87	-1118.50	-11727.94	501347.10	627339.76	0.00	
22200.00	91.25	269.90	9249.07	6058.07	11829.85	-1118.67	-11827.92	501346.93	627239.78	0.00	
22300.00	91.25	269.90	9246.88	6055.88	11929.83	-1118.85	-11927.89	501346.75	627139.81	0.00	
22400.00	91.25	269.90	9244.69	6053.69	12029.80	-1119.02	-12027.87	501346.58	627039.83	0.00	
22500.00	91.25	269.90	9242.50	6051.50	12129.78	-1119.19	-12127.84	501346.41	626939.86	0.00	
22600.00	91.25	269.90	9240.31	6049.31	12229.75	-1119.37	-12227.82	501346.23	626839.88	0.00	
22700.00	91.25	269.90	9238.12	6047.12	12329.73	-1119.54	-12327.80	501346.06	626739.90	0.00	
22800.00	91.25	269.90	9235.93	6044.93	12429.71	-1119.72	-12427.77	501345.88	626639.93	0.00	
22900.00	91.25	269.90	9233.74	6042.74	12529.68	-1119.89	-12527.75	501345.71	626539.95	0.00	
23000.00	91.25	269.90	9231.55	6040.55	12629.66	-1120.07	-12627.72	501345.53	626439.98	0.00	
23100.00	91.25	269.90	9229.36	6038.36	12729.63	-1120.24	-12727.70	501345.36	626340.00	0.00	
23200.00	91.25	269.90	9227.17	6036.17	12829.61	-1120.42	-12827.67	501345.18	626240.03	0.00	
23300.00	91.25	269.90	9224.98	6033.98	12929.59	-1120.59	-12927.65	501345.01	626140.05	0.00	
23400.00	91.25	269.90	9222.78	6031.78	13029.56	-1120.77	-13027.63	501344.83	626040.07	0.00	
23500.00	91.25	269.90	9220.59	6029.59	13129.54	-1120.94	-13127.60	501344.66	625940.10	0.00	
23600.00	91.25	269.90	9218.40	6027.40	13229.51	-1121.11	-13227.58	501344.49	625840.12	0.00	
23700.00	91.25	269.90	9216.21	6025.21	13329.49	-1121.29	-13327.55	501344.31	625740.15	0.00	
23800.00	91.25	269.90	9214.02	6023.02	13429.47	-1121.46	-13427.53	501344.14	625640.17	0.00	
23900.00	91.25	269.90	9211.83	6020.83	13529.44	-1121.64	-13527.51	501343.96	625540.19	0.00	
24000.00	91.25	269.90	9209.64	6018.64	13629.42	-1121.81	-13627.48	501343.79	625440.22	0.00	
24100.00	91.25	269.90	9207.45	6016.45	13729.39	-1121.99	-13727.46	501343.61	625340.24	0.00	
24200.00	91.25	269.90	9205.26	6014.26	13829.37	-1122.16	-13827.43	501343.44	625240.27	0.00	
24300.00	91.25	269.90	9203.07	6012.07	13929.35	-1122.34	-13927.41	501343.26	625140.29	0.00	
24400.00	91.25	269.90	9200.88	6009.88	14029.32	-1122.51	-14027.39	501343.09	625040.31	0.00	
24500.00	91.25	269.90	9198.69	6007.69	14129.30	-1122.69	-14127.36	501342.91	624940.34	0.00	
24600.00	91.25	269.90	9196.50	6005.50	14229.28	-1122.86	-14227.34	501342.74	624840.36	0.00	
24622.97	91.25	269.90	9196.00	6005.00	14252.24	-1122.90	-14250.30	501342.70	624817.40	0.00	PBHL 213H

Formation Points: (Relative to Slot centre) (TVD relative to Well TVD Reference)											
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)		Comment
Third Bone Spring Carb.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Rustler	151.00	0.00	0.00	151.00	-3040.00	0.00	-0.00	502465.60	639067.70		
Salado	544.00	0.00	0.00	544.00	-2647.00	0.00	-0.00	502465.60	639067.70		
Avalon Ss.	3191.00	0.00	0.00	3191.00	0.00	0.00	-0.00	502465.60	639067.70		
Base Salt	3303.00	0.00	0.00	3303.00	112.00	0.00	-0.00	502465.60	639067.70		
Delaware/Lamar	3527.00	0.00	0.00	3527.00	336.00	0.00	-0.00	502465.60	639067.70		
Bell Canyon	3574.00	0.00	0.00	3574.00	383.00	0.00	-0.00	502465.60	639067.70		
Cherry Canyon	4461.00	0.00	0.00	4461.00	1270.00	0.00	-0.00	502465.60	639067.70		
Manzanita Marker	4658.00	0.00	0.00	4658.00	1467.00	0.00	-0.00	502465.60	639067.70		
Brushy Canyon Ss.	5780.00	0.00	0.00	5780.00	2589.00	0.00	-0.00	502465.60	639067.70		
Basal Brushy Canyon Ss.	7097.45	8.30	135.00	7096.00	3905.00	-21.19	21.19	502444.41	639088.89		
Bone Spring Lm.	7391.20	14.17	135.00	7384.00	4193.00	-61.64	61.63	502403.96	639129.33		
Upper Avalon Carb.	7657.72	19.50	135.00	7639.00	4448.00	-116.20	116.19	502349.40	639183.89		
Upper Avalon Sh.	7740.90	21.16	135.00	7717.00	4526.00	-136.64	136.63	502328.96	639204.33		
Lw. Avalon Carb.	7835.89	23.06	135.00	7805.00	4614.00	-161.93	161.91	502303.67	639229.61		

5D Plan Report

Formation Points: (Relative to Slot centre) (TVD relative to Well TVD Reference)										
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Comment
Lw. Avalon Sh.	8013.33	26.61	135.00	7966.00	4775.00	-214.63	214.61	502250.97	639282.31	
Bone Spring Carb.	8225.50	30.86	135.00	8152.00	4961.00	-286.74	286.71	502178.86	639354.41	
First Bone Spring Ss.	8494.36	36.23	135.00	8376.00	5185.00	-391.76	391.72	502073.84	639459.42	
Second Bone Spring Carb.	9114.63	37.78	143.12	8851.00	5660.00	-675.38	671.56	501790.22	639739.26	
Second Bone Spring A Ss.	9505.97	36.34	210.60	9176.00	5985.00	-879.04	685.02	501586.56	639752.72	
Second Bone Spring A/B Carb.	9730.67	49.89	237.22	9341.00	6150.00	-984.21	577.50	501481.39	639645.20	
Second Bone Spring B Ss.	9913.78	63.98	251.28	9441.00	6250.00	-1049.08	439.52	501416.52	639507.22	

**5D Anti-Collision Report****XTO Energy****Field Name:** *XTO NAD 27 NME***Site Name:** *James Ranch Unit DI 1 #210H_211H_212H_213H***Well Name:** *James Ranch Unit DI 1 BS1-3E #213H*

8 February 2019

**Weatherford®**



Weatherford

James Ranch Unit DI 1 BS1-3E #213H

Field Name: XTO NAD 27 NME	Map Units: US ft		Company Name: XTO Energy	
	Vertical Reference Datum (VRD): Mean Sea Level			
	Projected Coordinate System: NAD27 / New Mexico East			
	Comment:			
Site: James Ranch Unit DI 1 #210H_211H_2 12H_213H	Units: US ft	North Reference: Grid	Convergence Angle: 0.24	
	Position:	Northing: 502465.80 US ft	Latitude: 32° 22' 50.12"	
		Easting: 639082.80 US ft	Longitude: -103° 52' 58.09"	
	Elevation above MSL: 3166.00 US ft		Comment: Eddy Co, NM	
Slot: James Ranch Unit DI 1 BS1- 3E #213H	Position (Relative to Site Centre)			
	+N/-S: -0.20 US ft	Northing: 502465.60 US ft	Latitude: 32° 22' 50.12"	
	+E/-W: -15.10 US ft	Easting: 639067.70 US ft	Longitude: -103° 52' 58.27"	
	Elevation above MSL: 3166.00 US ft		Comment:	
Well: James Ranch Unit DI 1 BS1- 3E #213H	Type: Main well	UWI:	Plan: P1:V1	
	File Number:	Comment:		
	Closure Distance: 14294.5US ft	Closure Azimuth: 265.49°		
	Vertical Section: Position of Origin (Relative to Slot centre)			
	+N/-S: 0.00 US ft	+E/-W: -0.00 US ft	Az: 269.90°	
	Magnetic Parameters:			
	Model: bggm2018	Field Strength: 47876.9nT	Declination: 6.99°	Dip: 60.08°
			Date: 25/Feb/2019	

Drill floor: Plan P1:V1

Rig Height (Well TVD Reference): Elevation above MSL: 3191.00US ft **Inclination:** 0.00° **Azimuth:** 0.00°
25.00US ft

Collision / Uncertainty Analysis

Primary Well	Start MD (USFt)	End MD (USFt)	Collision Risk Interval	No. of Std. Deviations in Error Computation
James Ranch Unit DI 1 BS1-3E #213H (p)	0.00	24622.97	100.00	2

Secondary Well Names:

James Ranch Unit DI 1A #204H (p)
James Ranch Unit DI 1A #204H (s)
James Ranch Unit DI 1A #206H (p)
James Ranch Unit DI 1 126H (s)
James Ranch Unit DI #169H (s)
James Ranch Unit 12-1H (s)
James Ranch Unit 21 1 SWD (s)
James Ranch Unit DI 1 #157H (s)
James Ranch Unit DI 1 #161H (s)

Secondary Well Names:

James Ranch Unit DI 1 #127H (s)
 James Ranch Unit DI 1 #162H (s)
 James Ranch Unit DI 1 #163H (s)
 James Ranch Unit DI 1 #164H (s)
 James Ranch Unit DI1 135H (s)
 James Ranch Unit DI 1 BS2A-SW #210H (p)
 James Ranch Unit DI 1 BS2A-7E #211H (p)
 James Ranch Unit DI 1 BS2A-7W #212H (p)

Anti-Collision Report Terminology:

S.Minor, S.Major: Radii of the ellipse of uncertainty at the current location as seen in the along hole direction.

PHI: Angle between high-side vector and semi-minor axis

TVD Spread: Total TVD range of the ellipsoid of uncertainty at the current location.

ES: Distance between the primary and secondary uncertainty ellipsoids in the direction Cr-Cr.

T.Face to Sec: Angle between the Hi-Side vector of the primary well at the current location and line of closest approach between the two wells.

AC Filter Info: Applied filter(s): Separation Factor:**Default Survey Tool: MWD**

Separation factors calculated using Vector Separation (Independent Uncertainty) Surface Uncertainty (S.U.) Not Applied. Wellpath created using minimum curvature.

5D Anti-Collision Report

Anti-Collision Summary (TVD relative to Well TVD Reference)								
Secondary Well Name	Pri MD (US ft)	Pri TVD (US ft)	TVD (MSL) (US ft)	Sec MD (US ft)	ES (US ft)	CC (US ft)	SF	Risk
James Ranch Unit DI 1 BS2A-5W #210H (p)	3289.84	3289.84	98.84	3289.78	0.06	15.16	1.00	SF(Hi); CC (Med)
James Ranch Unit DI 1 #157H (s)	24487.50	9198.97	6007.97	23309.83	327.97	735.43	1.80	SF(Lo)
James Ranch Unit DI 1 BS2A-7E #211H (p)	24622.97	9196.00	6005.00	24121.94	663.62	1331.28	1.99	SF(Lo)
James Ranch Unit DI 1 BS2A-7W #212H (p)	4198.44	4198.44	1007.44	4198.07	24.86	44.01	2.30	
James Ranch Unit DI 1 #163H (s)	9451.76	9131.72	5940.72	9359.16	77.93	128.77	2.53	
James Ranch Unit DI 1 126H (s)	24167.38	9205.98	6014.98	22388.86	1259.50	1984.87	2.74	
James Ranch Unit 12-1H (s)	3350.00	3350.00	159.00	3348.47	43.65	63.37	3.21	
James Ranch Unit DI 1A #206H (p)	11441.60	9484.69	6293.69	9591.51	182.04	253.05	3.56	
James Ranch Unit 21 1 SWD (s)	6758.79	6758.78	3567.78	6733.17	105.18	133.78	4.68	
James Ranch Unit DI 1 #162H (s)	7758.79	7733.66	4542.66	7735.50	283.09	317.07	9.33	
James Ranch Unit DI 1 #164H (s)	3952.34	3952.34	761.34	3947.78	215.57	238.64	10.35	
James Ranch Unit DI 1 135H (s)	8917.97	8701.70	5510.70	8666.32	507.90	558.28	11.08	
James Ranch Unit DI 1 #127H (s)	8350.00	8257.45	5066.45	8277.88	509.66	547.77	14.37	
James Ranch Unit DI 1 #161H (s)	3388.87	3388.87	197.87	3373.25	256.46	271.44	18.13	
James Ranch Unit DI 1A #204H (p)	11398.05	9485.65	6294.65	9516.07	1292.21	1357.52	20.79	
James Ranch Unit DI 1A #204H (s)	11398.05	9485.65	6294.65	9516.07	1292.21	1357.52	20.79	
James Ranch Unit DI #169H (s)	1788.48	1788.48	-1402.52	1771.48	183.64	191.82	23.47	

5D Anti-Collision Report

Secondary Well Name	Pri MD (US ft)	Pri TVD (US ft)	TVD (MSL) (US ft)	Sec MD (US ft)	ES (US ft)	CC (US ft)	SF	Risk
James Ranch Unit DI 1 BS2A-5W #210H (p)	0.00	0.00	-3191.00	0.00	14.56	15.10	27.88	CC (Med)
James Ranch Unit DI 1 BS2A-7E #211H (p)	0.00	0.00	-3191.00	0.00	28.46	29.00	53.54	CC (Lo)
James Ranch Unit DI 1 BS2A-7W #212H (p)	0.00	0.00	-3191.00	0.00	43.06	43.60	80.49	
James Ranch Unit 12-1H (s)	3135.94	3135.94	-55.06	3134.86	42.50	60.97	3.30	
James Ranch Unit DI 1 #157H (s)	8142.77	8080.38	4889.38	8086.04	51.96	88.53	2.42	
James Ranch Unit DI1 126H (s)	1958.01	1958.01	-1232.99	1957.10	96.41	104.74	12.56	
James Ranch Unit DI 1 #163H (s)	9399.41	9088.07	5897.07	9315.82	78.18	122.85	2.75	
James Ranch Unit 21 1 SWD (s)	6143.55	6143.55	2952.55	6117.83	106.80	132.78	5.11	
James Ranch Unit DI #169H (s)	0.00	0.00	-3191.00	0.00	138.76	139.31	257.18	
James Ranch Unit DI 1 #164H (s)	3446.68	3446.68	255.68	3446.28	207.12	227.21	11.31	
James Ranch Unit DI 1A #206H (p)	11456.45	9484.37	6293.37	9591.35	182.03	252.61	3.58	
James Ranch Unit DI 1 #161H (s)	3233.20	3233.20	42.20	3233.19	252.70	267.07	18.59	
James Ranch Unit DI 1 #162H (s)	7644.92	7626.93	4435.93	7628.25	281.09	314.49	9.42	
James Ranch Unit DI 1 #127H (s)	259.77	259.77	-2931.23	259.78	369.90	371.35	255.06	
James Ranch Unit DI1 135H (s)	12.50	12.50	-3178.50	7.50	481.61	482.18	843.07	
James Ranch Unit DI 1A #204H (p)	6715.04	6715.04	3524.04	6718.66	897.91	927.65	31.19	
James Ranch Unit DI 1A #204H (s)	6715.04	6715.04	3524.04	6718.66	897.91	927.65	31.19	

Range Summary

Secondary Well Name: James Ranch Unit DI 1 #157H

(s)

SF

Start MD (US ft)	End MD (US ft)	Risk
22600.00	24500.00	SF (Lo)

Secondary Well Name: James Ranch Unit DI 1 BS2A-5W #210H (p)

SF

CC

Start MD (US ft)	End MD (US ft)	Risk	Start MD (US ft)	End MD (US ft)	Risk
1700.00	2100.00	SF (Lo)	0.00	3400.00	CC (Med)
2200.00	3200.00	SF (Med)	3500.00	3600.00	CC (Lo)
3300.00	3300.00	SF (Hi)			
3400.00	3500.00	SF (Med)			
3600.00	3600.00	SF (Lo)			
19800.00	22800.00	SF (Lo)			
22900.00	24622.97	SF (Med)			

Secondary Well Name: James Ranch Unit DI 1 BS2A-7E #211H (p)

SF

CC

Start MD (US ft)	End MD (US ft)	Risk	Start MD (US ft)	End MD (US ft)	Risk
24600.00	24622.97	SF (Lo)	0.00	3100.00	CC (Lo)

SD Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-5W #210H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US.ft)	CC (US ft)	SF	Nearest Well	Risk
600.00	0.00	0.00	600.00	-2591.00	1.24	1.24	89.24	12.08	15.10	5.00	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
700.00	0.00	0.00	700.00	-2491.00	1.46	1.46	89.24	11.63	15.10	4.36	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
800.00	0.00	0.00	800.00	-2391.00	1.69	1.69	89.24	11.18	15.10	3.86	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
900.00	0.00	0.00	900.00	-2291.00	1.91	1.91	89.24	10.73	15.10	3.46	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
1000.00	0.00	0.00	1000.00	-2191.00	2.14	2.14	89.24	10.29	15.10	3.14	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
1100.00	0.00	0.00	1100.00	-2091.00	2.36	2.36	89.24	9.84	15.10	2.87	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
1200.00	0.00	0.00	1200.00	-1991.00	2.59	2.59	89.24	9.39	15.10	2.64	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
1300.00	0.00	0.00	1300.00	-1891.00	2.81	2.81	89.24	8.94	15.10	2.45	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
1400.00	0.00	0.00	1400.00	-1791.00	3.04	3.04	89.24	8.49	15.10	2.28	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
1500.00	0.00	0.00	1500.00	-1691.00	3.26	3.26	89.24	8.04	15.10	2.14	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
1600.00	0.00	0.00	1600.00	-1591.00	3.49	3.49	89.24	7.59	15.10	2.01	James Ranch Unit DI 1 BS2A- 5W #210H (p)	CC (Med)
1700.00	0.00	0.00	1700.00	-1491.00	3.71	3.71	89.24	7.14	15.10	1.90	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo); CC (Med)
1800.00	0.00	0.00	1800.00	-1391.00	3.94	3.94	89.24	6.69	15.10	1.80	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo); CC (Med)
1900.00	0.00	0.00	1900.00	-1291.00	4.16	4.16	89.24	6.24	15.10	1.70	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo); CC (Med)
2000.00	0.00	0.00	2000.00	-1191.00	4.39	4.39	89.24	5.79	15.10	1.62	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo); CC (Med)
2100.00	0.00	0.00	2100.00	-1091.00	4.61	4.61	89.24	5.34	15.10	1.55	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo); CC (Med)
2200.00	0.00	0.00	2200.00	-991.00	4.83	4.83	89.24	4.89	15.10	1.48	James Ranch Unit	SF(Med); CC (Med)

5D Anti-Collision Report

Primary Well James Ranch Unit DI 1 BS2A-SW #210H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
2300.00	0.00	0.00	2300.00	-891.00	5.06	5.06	89.24	4.44	15.10	1.42	DI 1 BS2A-SW #210H (p) James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
2400.00	0.00	0.00	2400.00	-791.00	5.28	5.28	89.24	3.99	15.10	1.36	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
2500.00	0.00	0.00	2500.00	-691.00	5.51	5.51	89.24	3.54	15.10	1.31	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
2600.00	0.00	0.00	2600.00	-591.00	5.73	5.73	89.24	3.09	15.10	1.26	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
2700.00	0.00	0.00	2700.00	-491.00	5.96	5.96	89.24	2.64	15.10	1.21	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
2800.00	0.00	0.00	2800.00	-391.00	6.18	6.18	89.24	2.19	15.10	1.17	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
2900.00	0.00	0.00	2900.00	-291.00	6.41	6.41	89.24	1.74	15.10	1.13	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
3000.00	0.00	0.00	3000.00	-191.00	6.63	6.63	89.24	1.29	15.10	1.09	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
3100.00	0.00	0.00	3100.00	-91.00	6.86	6.86	89.24	0.84	15.10	1.06	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
3200.00	0.00	0.00	3200.00	9.00	7.08	7.08	89.24	0.39	15.10	1.03	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
3289.84	0.00	0.00	3289.84	98.84	7.28	7.28	89.78	0.06	15.16	1.00	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Hi); CC (Med)
3300.00	0.00	0.00	3300.00	109.00	7.31	7.31	90.20	0.07	15.21	1.00	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Hi); CC (Med)
3400.00	0.00	0.00	3400.00	209.00	7.53	7.53	99.99	1.21	16.75	1.08	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Med)
3500.00	0.00	0.00	3500.00	309.00	7.76	7.76	114.90	5.28	21.16	1.33	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Med); CC (Lo)
3600.00	0.00	0.00	3600.00	409.00	7.98	7.98	127.74	13.32	29.50	1.82	James Ranch Unit DI 1 BS2A-SW #210H (p)	SF(Lo); CC (Lo)
3700.00	0.00	0.00	3700.00	509.00	8.21	8.21	136.39	25.44	41.86	2.55	James Ranch Unit DI 1 BS2A-	

SD Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS1-3E #213H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
3800.00	0.00	0.00	3800.00	609.00	8.43	8.43	89.74	26.20	43.60	2.51	5W #210H (p) James Ranch Unit DI 1 BS2A- 7W #212H (p)	
3900.00	0.00	0.00	3900.00	709.00	8.66	8.66	89.74	25.75	43.60	2.44	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4000.00	0.00	0.00	4000.00	809.00	8.88	8.88	89.74	25.30	43.60	2.38	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4100.00	0.00	0.00	4100.00	909.00	9.11	9.11	89.74	24.85	43.60	2.33	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4200.00	0.00	0.00	4200.00	1009.00	9.33	9.33	91.93	24.87	44.02	2.30	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4300.00	0.00	0.00	4300.00	1109.00	9.56	9.56	98.22	26.13	45.66	2.34	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4400.00	0.00	0.00	4400.00	1209.00	9.78	9.78	107.51	29.61	49.49	2.49	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4500.00	0.00	0.00	4500.00	1309.00	10.00	10.00	117.93	36.48	56.64	2.81	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4600.00	0.00	0.00	4600.00	1409.00	10.23	10.23	127.63	47.50	67.86	3.33	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4700.00	0.00	0.00	4700.00	1509.00	10.45	10.45	135.63	62.86	83.34	4.07	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4800.00	0.00	0.00	4800.00	1609.00	10.68	10.68	93.04	98.06	126.08	4.50	James Ranch Unit 12-1H (s)	
4800.00	0.00	0.00	4800.00	1609.00	10.68	10.68	141.81	82.36	102.93	5.00	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
4900.00	0.00	0.00	4900.00	1709.00	10.90	10.90	93.99	102.63	131.23	4.59	James Ranch Unit 12-1H (s)	
5000.00	0.00	0.00	5000.00	1809.00	11.13	11.13	94.85	107.16	136.34	4.67	James Ranch Unit 12-1H (s)	
5100.00	0.00	0.00	5100.00	1909.00	11.35	11.35	95.57	111.43	141.19	4.74	James Ranch Unit 12-1H (s)	
5200.00	0.00	0.00	5200.00	2009.00	11.58	11.58	96.21	115.39	145.73	4.80	James Ranch Unit 12-1H (s)	
5300.00	0.00	0.00	5300.00	2109.00	11.80	11.80	96.81	119.10	150.03	4.85	James Ranch Unit 12-1H (s)	
5400.00	0.00	0.00	5400.00	2209.00	12.03	12.03	97.35	122.63	154.13	4.89	James Ranch Unit 12-1H (s)	
5500.00	0.00	0.00	5500.00	2309.00	12.25	12.25	97.79	125.77	157.86	4.92		

SD Anti-Collision Report

Primary Well: James Ranch Unit D1 1 BS1 3E #213H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
5600.00	0.00	0.00	5600.00	2409.00	12.48	12.48	98.12	128.49	161.15	4.93	James Ranch Unit 12-1H (s)	
5700.00	0.00	0.00	5700.00	2509.00	12.70	12.70	98.37	131.08	164.32	4.94	James Ranch Unit 12-1H (s)	
5800.00	0.00	0.00	5800.00	2609.00	12.93	12.93	98.61	133.64	167.46	4.95	James Ranch Unit 12-1H (s)	
5900.00	0.00	0.00	5900.00	2709.00	13.15	13.15	98.90	136.19	170.58	4.96	James Ranch Unit 12-1H (s)	
6000.00	0.00	0.00	6000.00	2809.00	13.38	13.38	99.16	138.57	173.54	4.96	James Ranch Unit 12-1H (s)	
6100.00	0.00	0.00	6100.00	2909.00	13.60	13.60	99.37	140.66	176.20	4.96	James Ranch Unit 12-1H (s)	
6200.00	0.00	0.00	6200.00	3009.00	13.83	13.83	99.60	142.39	178.50	4.94	James Ranch Unit 12-1H (s)	
6300.00	0.00	0.00	6300.00	3109.00	14.05	14.05	99.79	143.95	180.64	4.92	James Ranch Unit 12-1H (s)	
6300.00	0.00	0.00	6300.00	3109.00	14.05	14.05	270.12	106.18	132.83	4.98	James Ranch Unit 21 1 SWD (s)	
6400.00	0.00	0.00	6400.00	3209.00	14.28	14.28	99.97	145.52	182.78	4.91	James Ranch Unit 12-1H (s)	
6400.00	0.00	0.00	6400.00	3209.00	14.28	14.28	269.83	105.82	132.90	4.91	James Ranch Unit 21 1 SWD (s)	
6500.00	0.00	0.00	6500.00	3309.00	14.50	14.50	269.56	105.49	133.00	4.83	James Ranch Unit 21 1 SWD (s)	
6600.00	0.00	0.00	6600.00	3409.00	14.73	14.73	269.33	105.16	133.11	4.76	James Ranch Unit 21 1 SWD (s)	
6700.00	0.35	135.00	6700.00	3509.00	14.94	14.94	134.05	104.79	133.16	4.69	James Ranch Unit 21 1 SWD (s)	
6800.00	2.35	135.00	6799.97	3608.97	15.12	15.11	134.37	105.99	134.74	4.69	James Ranch Unit 21 1 SWD (s)	
6900.00	4.35	135.00	6899.79	3708.79	15.30	15.27	324.65	141.64	181.63	4.54	James Ranch Unit 12-1H (s)	
6900.00	4.35	135.00	6899.79	3708.79	15.30	15.27	135.61	109.86	138.99	4.77	James Ranch Unit 21 1 SWD (s)	
7000.00	6.35	135.00	6999.35	3808.35	15.48	15.41	323.07	134.70	175.24	4.32	James Ranch Unit 12-1H (s)	
7000.00	6.35	135.00	6999.35	3808.35	15.48	15.41	137.60	116.58	146.09	4.95	James Ranch Unit 21 1 SWD (s)	
7100.00	8.35	135.00	7098.53	3907.53	15.66	15.54	320.69	125.52	166.59	4.06	James Ranch Unit 12-1H (s)	
7200.00	10.35	135.00	7197.19	4006.19	15.85	15.66	317.98	115.91	157.24	3.80	James Ranch Unit 12-1H (s)	
7300.00	12.35	135.00	7295.23	4104.23	16.06	15.77	315.22	114.36	154.70	3.83	James Ranch Unit 12-1H (s)	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS1-3E #213H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
7400.00	14.35	135.00	7392.53	4201.53	16.27	15.87	310.56	112.96	153.84	3.76	James Ranch Unit 12-1H (s)	
7500.00	16.35	135.00	7488.96	4297.96	16.51	15.96	303.52	108.64	150.16	3.62	James Ranch Unit 12-1H (s)	
7600.00	18.35	135.00	7584.41	4393.41	16.77	16.04	294.51	103.55	145.63	3.46	James Ranch Unit 12-1H (s)	
7700.00	20.35	135.00	7678.75	4487.75	17.06	16.12	284.25	98.48	141.17	3.31	James Ranch Unit 12-1H (s)	
7800.00	22.35	135.00	7771.89	4580.89	17.38	16.18	273.80	96.82	139.90	3.25	James Ranch Unit 12-1H (s)	
7900.00	24.35	135.00	7863.70	4672.70	17.75	16.24	264.35	102.37	145.79	3.36	James Ranch Unit 12-1H (s)	
7900.00	24.35	135.00	7863.70	4672.70	17.75	16.24	36.55	98.32	132.72	3.86	James Ranch Unit DI 1 #157H (s)	
8000.00	26.35	135.00	7954.07	4763.07	18.16	16.30	50.14	71.33	106.31	3.04	James Ranch Unit DI 1 #157H (s)	
8100.00	28.35	135.00	8042.89	4851.89	18.63	16.35	71.26	54.31	90.30	2.51	James Ranch Unit DI 1 #157H (s)	
8200.00	30.35	135.00	8130.05	4939.05	19.15	16.40	97.47	54.84	92.06	2.47	James Ranch Unit DI 1 #157H (s)	
8300.00	32.35	135.00	8215.45	5024.45	19.74	16.45	119.15	77.38	115.06	3.05	James Ranch Unit DI 1 #157H (s)	
8400.00	34.35	135.00	8298.98	5107.98	20.40	16.50	133.77	114.83	152.65	4.04	James Ranch Unit DI 1 #157H (s)	
8800.00	41.14	135.00	8612.86	5421.86	23.80	16.87	274.26	170.01	213.92	4.87	James Ranch Unit DI 1 #163H (s)	
8900.00	41.14	135.00	8688.17	5497.17	24.81	17.16	263.46	152.53	196.81	4.44	James Ranch Unit DI 1 #163H (s)	
9000.00	41.14	135.00	8763.48	5572.48	25.86	17.45	252.19	139.15	182.31	4.22	James Ranch Unit DI 1 #163H (s)	
9100.00	38.53	141.08	8839.50	5648.50	26.79	18.03	236.93	129.97	170.47	4.21	James Ranch Unit DI 1 #163H (s)	
9200.00	34.22	156.35	8920.16	5729.16	27.23	18.83	221.75	118.83	156.56	4.15	James Ranch Unit DI 1 #163H (s)	
9300.00	32.19	174.29	9004.03	5813.03	27.13	19.53	218.29	98.64	136.45	3.61	James Ranch Unit DI 1 #163H (s)	
9400.00	32.86	192.91	9088.56	5897.56	26.49	20.14	225.85	78.11	122.85	2.75	James Ranch Unit DI 1 #163H (s)	
9500.00	36.07	209.69	9171.18	5980.18	25.39	20.63	235.18	92.43	145.12	2.75	James Ranch Unit DI 1 #163H (s)	
9600.00	41.24	223.44	9249.39	6058.39	24.00	20.97	240.13	157.22	205.43	4.26	James Ranch Unit DI 1 #163H (s)	

SD Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS1-3E #213H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Incl (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
11300.00	91.25	269.90	9487.80	6296.80	47.14	21.22	99.56	233.43	297.17	4.66	James Ranch Unit DI 1A #206H (p)	
11400.00	91.25	269.90	9485.60	6294.60	49.50	21.79	99.32	188.53	258.85	3.68	James Ranch Unit DI 1A #206H (p)	
11500.00	91.25	269.90	9483.41	6292.41	51.90	22.36	99.07	188.66	256.32	3.79	James Ranch Unit DI 1A #206H (p)	
11600.00	91.25	269.90	9481.22	6290.22	54.33	22.95	98.83	230.85	290.50	4.87	James Ranch Unit DI 1A #206H (p)	
13500.00	91.25	269.90	9439.61	6248.61	103.71	35.12	291.53	562.70	703.37	5.00	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
13600.00	91.25	269.90	9437.42	6246.42	106.38	35.80	291.51	559.53	703.24	4.89	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
13700.00	91.25	269.90	9435.23	6244.23	109.07	36.48	291.48	556.35	703.10	4.79	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
13800.00	91.25	269.90	9433.04	6242.04	111.75	37.16	291.45	553.17	702.96	4.69	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
13900.00	91.25	269.90	9430.85	6239.85	114.44	37.84	291.42	549.97	702.82	4.60	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
14000.00	91.25	269.90	9428.66	6237.66	117.14	38.52	291.39	546.77	702.68	4.51	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
14000.00	91.25	269.90	9428.66	6237.66	117.14	38.52	67.20	559.28	698.95	5.00	James Ranch Unit DI 1 #157H (s)	
14100.00	91.25	269.90	9426.47	6235.47	119.83	39.21	291.37	543.55	702.54	4.42	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
14100.00	91.25	269.90	9426.47	6235.47	119.83	39.21	66.94	555.92	698.43	4.90	James Ranch Unit DI 1 #157H (s)	
14200.00	91.25	269.90	9424.28	6233.28	122.53	39.90	291.34	540.33	702.41	4.33	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
14200.00	91.25	269.90	9424.28	6233.28	122.53	39.90	66.71	551.20	696.25	4.80	James Ranch Unit DI 1 #157H (s)	
14300.00	91.25	269.90	9422.09	6231.09	125.23	40.59	291.31	537.10	702.27	4.25	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
14300.00	91.25	269.90	9422.09	6231.09	125.23	40.59	66.58	545.69	693.34	4.70	James Ranch Unit DI 1 #157H (s)	
14400.00	91.25	269.90	9419.90	6228.90	127.94	41.28	291.28	533.86	702.13	4.17	James Ranch Unit DI 1 BS2A-	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS1-3E #219H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
14400.00	91.25	269.90	9419.90	6228.90	127.94	41.28	66.54	539.99	690.44	4.59	SW #210H (p) James Ranch Unit DI 1 #157H (s)	
14500.00	91.25	269.90	9417.71	6226.71	130.64	41.97	291.25	530.62	701.99	4.10	James Ranch Unit DI 1 BS2A- SW #210H (p)	
14500.00	91.25	269.90	9417.71	6226.71	130.64	41.97	66.52	534.79	687.90	4.49	James Ranch Unit DI 1 #157H (s)	
14600.00	91.25	269.90	9415.52	6224.52	133.35	42.66	291.23	527.36	701.86	4.02	James Ranch Unit DI 1 BS2A- SW #210H (p)	
14600.00	91.25	269.90	9415.52	6224.52	133.35	42.66	66.55	532.21	687.49	4.43	James Ranch Unit DI 1 #157H (s)	
14700.00	91.25	269.90	9413.33	6222.33	136.06	43.36	291.20	524.09	701.72	3.95	James Ranch Unit DI 1 BS2A- SW #210H (p)	
14700.00	91.25	269.90	9413.33	6222.33	136.06	43.36	66.73	530.12	688.35	4.35	James Ranch Unit DI 1 #157H (s)	
14800.00	91.25	269.90	9411.14	6220.14	138.77	44.05	291.17	520.82	701.58	3.88	James Ranch Unit DI 1 BS2A- SW #210H (p)	
14800.00	91.25	269.90	9411.14	6220.14	138.77	44.05	66.91	530.70	690.85	4.31	James Ranch Unit DI 1 #157H (s)	
14900.00	91.25	269.90	9408.95	6217.95	141.49	44.75	291.14	517.54	701.45	3.81	James Ranch Unit DI 1 BS2A- SW #210H (p)	
14900.00	91.25	269.90	9408.95	6217.95	141.49	44.75	67.07	532.26	694.72	4.28	James Ranch Unit DI 1 #157H (s)	
15000.00	91.25	269.90	9406.76	6215.76	144.20	45.45	291.11	514.25	701.31	3.75	James Ranch Unit DI 1 BS2A- SW #210H (p)	
15000.00	91.25	269.90	9406.76	6215.76	144.20	45.45	67.21	536.11	699.92	4.27	James Ranch Unit DI 1 #157H (s)	
15100.00	91.25	269.90	9404.57	6213.57	146.92	46.15	291.09	510.95	701.17	3.69	James Ranch Unit DI 1 BS2A- SW #210H (p)	
15200.00	91.25	269.90	9402.38	6211.38	149.64	46.85	291.06	507.65	701.04	3.62	James Ranch Unit DI 1 BS2A- SW #210H (p)	
15300.00	91.25	269.90	9400.19	6209.19	152.36	47.55	291.03	504.33	700.90	3.57	James Ranch Unit DI 1 BS2A- SW #210H (p)	
15400.00	91.25	269.90	9398.00	6207.00	155.08	48.25	291.00	501.01	700.77	3.51	James Ranch Unit DI 1 BS2A- SW #210H (p)	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-5W #210H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
15500.00	91.25	269.90	9395.81	6204.81	157.80	48.96	290.97	497.68	700.63	3.45	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
15600.00	91.25	269.90	9393.62	6202.62	160.52	49.66	290.94	494.34	700.50	3.40	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
15700.00	91.25	269.90	9391.43	6200.43	163.25	50.37	290.92	491.00	700.36	3.35	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
15800.00	91.25	269.90	9389.24	6198.24	165.98	51.07	290.89	487.64	700.23	3.29	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
15900.00	91.25	269.90	9387.05	6196.05	168.70	51.78	290.86	484.28	700.09	3.24	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16000.00	91.25	269.90	9384.86	6193.86	171.43	52.48	290.83	480.91	699.96	3.20	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16100.00	91.25	269.90	9382.67	6191.67	174.16	53.19	290.80	477.53	699.82	3.15	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16200.00	91.25	269.90	9380.48	6189.48	176.89	53.90	290.78	474.14	699.69	3.10	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16300.00	91.25	269.90	9378.29	6187.29	179.62	54.61	290.75	470.75	699.55	3.06	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16400.00	91.25	269.90	9376.10	6185.10	182.35	55.32	290.72	467.35	699.42	3.01	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16500.00	91.25	269.90	9373.91	6182.91	185.08	56.03	290.69	463.94	699.29	2.97	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16600.00	91.25	269.90	9371.72	6180.72	187.82	56.74	290.66	460.52	699.15	2.93	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16700.00	91.25	269.90	9369.53	6178.53	190.55	57.45	290.63	457.10	699.02	2.89	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16800.00	91.25	269.90	9367.34	6176.34	193.28	58.17	290.61	453.67	698.88	2.85	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
16900.00	91.25	269.90	9365.15	6174.15	196.02	58.88	290.58	450.22	698.75	2.81	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
17000.00	91.25	269.90	9362.96	6171.96	198.76	59.59	290.55	446.78	698.62	2.77	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
17100.00	91.25	269.90	9360.77	6169.77	201.49	60.30	290.52	443.32	698.49	2.74	James Ranch Unit	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS1-3E #213H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
17200.00	91.25	269.90	9358.58	6167.58	204.23	61.02	290.49	439.86	698.35	2.70	DI 1 BS2A- 5W #210H (p) James Ranch Unit DI 1 BS2A- 5W #210H (p)	
17300.00	91.25	269.90	9356.39	6165.39	206.97	61.73	290.46	436.39	698.22	2.67	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
17400.00	91.25	269.90	9354.19	6163.19	209.70	62.45	290.44	432.91	698.09	2.63	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
17500.00	91.25	269.90	9352.00	6161.00	212.44	63.16	290.41	429.42	697.96	2.60	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
17600.00	91.25	269.90	9349.81	6158.81	215.18	63.88	290.38	425.93	697.82	2.57	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
17700.00	91.25	269.90	9347.62	6156.62	217.92	64.60	290.35	422.42	697.69	2.53	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
17800.00	91.25	269.90	9345.43	6154.43	220.66	65.31	290.32	418.91	697.56	2.50	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
17900.00	91.25	269.90	9343.24	6152.24	223.40	66.03	290.29	415.40	697.43	2.47	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
18000.00	91.25	269.90	9341.05	6150.05	226.14	66.75	290.26	411.87	697.30	2.44	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
18100.00	91.25	269.90	9338.86	6147.86	228.88	67.46	290.24	408.34	697.17	2.41	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
18200.00	91.25	269.90	9336.67	6145.67	231.62	68.18	290.21	404.80	697.04	2.39	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
18300.00	91.25	269.90	9334.48	6143.48	234.37	68.90	290.18	401.25	696.91	2.36	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
18400.00	91.25	269.90	9332.29	6141.29	237.11	69.62	290.15	397.69	696.77	2.33	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
18500.00	91.25	269.90	9330.10	6139.10	239.85	70.34	290.12	394.13	696.64	2.30	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
18600.00	91.25	269.90	9327.91	6136.91	242.59	71.06	290.09	390.56	696.51	2.28	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
18700.00	91.25	269.90	9325.72	6134.72	245.34	71.78	290.07	386.98	696.38	2.25	James Ranch Unit DI 1 BS2A-	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-5W #210H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
18800.00	91.25	269.90	9323.53	6132.53	248.08	72.50	290.04	383.39	696.25	2.23	SW #210H (p) James Ranch Unit DI 1 BS2A- 5W #210H (p)	
18900.00	91.25	269.90	9321.34	6130.34	250.82	73.22	290.01	379.80	696.12	2.20	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
19000.00	91.25	269.90	9319.15	6128.15	253.57	73.94	289.98	376.20	695.99	2.18	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
19100.00	91.25	269.90	9316.96	6125.96	256.31	74.66	289.95	372.59	695.87	2.15	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
19200.00	91.25	269.90	9314.77	6123.77	259.06	75.38	289.92	368.97	695.74	2.13	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
19300.00	91.25	269.90	9312.58	6121.58	261.80	76.10	289.89	365.35	695.61	2.11	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
19400.00	91.25	269.90	9310.39	6119.39	264.55	76.82	289.87	361.71	695.48	2.08	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
19500.00	91.25	269.90	9308.20	6117.20	267.29	77.54	289.84	358.07	695.35	2.06	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
19600.00	91.25	269.90	9306.01	6115.01	270.04	78.26	289.81	354.42	695.22	2.04	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
19700.00	91.25	269.90	9303.82	6112.82	272.79	78.98	289.78	350.77	695.09	2.02	James Ranch Unit DI 1 BS2A- 5W #210H (p)	
19800.00	91.25	269.90	9301.63	6110.63	275.53	79.71	289.75	347.11	694.96	2.00	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
19900.00	91.25	269.90	9299.44	6108.44	278.28	80.43	289.72	343.43	694.84	1.98	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
20000.00	91.25	269.90	9297.25	6106.25	281.03	81.15	289.69	339.75	694.71	1.96	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
20100.00	91.25	269.90	9295.06	6104.06	283.77	81.87	289.66	336.07	694.58	1.94	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
20200.00	91.25	269.90	9292.87	6101.87	286.52	82.60	289.64	332.37	694.45	1.92	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
20300.00	91.25	269.90	9290.68	6099.68	289.27	83.32	289.61	328.67	694.33	1.90	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-5W #210H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
20400.00	91.25	269.90	9288.49	6097.49	292.01	84.04	289.58	324.96	694.20	1.88	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
20500.00	91.25	269.90	9286.30	6095.30	294.76	84.77	289.55	321.24	694.07	1.86	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
20600.00	91.25	269.90	9284.11	6093.11	297.51	85.49	289.52	317.52	693.95	1.84	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
20700.00	91.25	269.90	9281.92	6090.92	300.26	86.21	289.49	313.78	693.82	1.83	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
20800.00	91.25	269.90	9279.73	6088.73	303.01	86.94	289.46	310.04	693.69	1.81	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
20900.00	91.25	269.90	9277.54	6086.54	305.76	87.66	289.43	306.29	693.57	1.79	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21000.00	91.25	269.90	9275.35	6084.35	308.50	88.39	289.41	302.54	693.44	1.77	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21100.00	91.25	269.90	9273.16	6082.16	311.25	89.11	289.38	298.77	693.31	1.76	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21200.00	91.25	269.90	9270.97	6079.97	314.00	89.84	289.35	295.00	693.19	1.74	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21300.00	91.25	269.90	9268.78	6077.78	316.75	90.56	289.32	291.22	693.06	1.72	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21400.00	91.25	269.90	9266.59	6075.59	319.50	91.28	289.29	287.43	692.94	1.71	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21500.00	91.25	269.90	9264.40	6073.40	322.25	92.01	289.26	283.64	692.81	1.69	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21600.00	91.25	269.90	9262.21	6071.21	325.00	92.73	289.23	279.83	692.69	1.68	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21700.00	91.25	269.90	9260.02	6069.02	327.75	93.46	289.20	276.02	692.56	1.66	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21800.00	91.25	269.90	9257.83	6066.83	330.50	94.18	289.18	272.20	692.44	1.65	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
21900.00	91.25	269.90	9255.64	6064.64	333.25	94.91	289.15	268.38	692.31	1.63	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Lo)
22000.00	91.25	269.90	9253.45	6062.45	336.00	95.64	289.12	264.54	692.19	1.62	James Ranch Unit	SF(Lo)

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-5W #210H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)												
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk
22100.00	91.25	269.90	9251.26	6060.26	338.75	96.36	289.09	260.70	692.06	1.60	DI 1 BS2A-5W #210H (p)	SF(Lo)
22200.00	91.25	269.90	9249.07	6058.07	341.50	97.09	289.06	256.85	691.94	1.59	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Lo)
22300.00	91.25	269.90	9246.88	6055.88	344.25	97.81	289.03	252.99	691.82	1.58	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Lo)
22400.00	91.25	269.90	9244.69	6053.69	347.00	98.54	289.00	249.12	691.69	1.56	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Lo)
22500.00	91.25	269.90	9242.50	6051.50	349.75	99.27	288.97	245.25	691.57	1.55	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Lo)
22600.00	91.25	269.90	9240.31	6049.31	352.50	99.99	288.94	241.37	691.45	1.54	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Lo)
22624.80	91.25	269.90	9239.76	6048.76	353.18	100.17	62.93	367.19	734.76	2.00	James Ranch Unit DI 1 #157H (s)	SF(Lo)
22700.00	91.25	269.90	9238.12	6047.12	355.25	100.72	288.92	237.48	691.32	1.52	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Lo)
22800.00	91.25	269.90	9235.93	6044.93	358.00	101.44	288.89	233.58	691.20	1.51	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Lo)
22900.00	91.25	269.90	9233.74	6042.74	360.75	102.17	288.86	229.68	691.08	1.50	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Med)
23000.00	91.25	269.90	9231.55	6040.55	363.51	102.90	288.83	225.76	690.96	1.49	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Med)
23100.00	91.25	269.90	9229.36	6038.36	366.26	103.62	288.80	221.84	690.83	1.47	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Med)
23200.00	91.25	269.90	9227.17	6036.17	369.01	104.35	288.77	217.91	690.71	1.46	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Med)
23300.00	91.25	269.90	9224.98	6033.98	371.76	105.08	288.74	213.97	690.59	1.45	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Med)
23400.00	91.25	269.90	9222.78	6031.78	374.51	105.80	288.71	210.03	690.47	1.44	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Med)
23500.00	91.25	269.90	9220.59	6029.59	377.26	106.53	288.68	206.07	690.35	1.43	James Ranch Unit DI 1 BS2A-5W #210H (p)	SF(Med)

SD Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS1-3E #213H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Inc (°)	Az (°)	Pri TVD (US ft)	TVD (MSL) (US ft)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Nearest Well	Risk	
23600.00	91.25	269.90	9218.40	6027.40	380.01	107.26	288.65	202.11	690.22	1.41	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
23700.00	91.25	269.90	9216.21	6025.21	382.77	107.99	288.62	198.14	690.10	1.40	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
23800.00	91.25	269.90	9214.02	6023.02	385.52	108.71	288.60	194.17	689.98	1.39	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
23900.00	91.25	269.90	9211.83	6020.83	388.27	109.44	288.57	190.18	689.86	1.38	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
24000.00	91.25	269.90	9209.64	6018.64	391.02	110.17	288.54	186.19	689.74	1.37	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
24100.00	91.25	269.90	9207.45	6016.45	393.77	110.90	288.51	182.19	689.62	1.36	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
24200.00	91.25	269.90	9205.26	6014.26	396.53	111.62	288.48	178.18	689.50	1.35	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
24300.00	91.25	269.90	9203.07	6012.07	399.28	112.35	288.45	174.16	689.38	1.34	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
24400.00	91.25	269.90	9200.88	6009.88	402.03	113.08	288.42	170.14	689.26	1.33	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
24487.50	91.25	269.90	9198.97	6007.97	404.44	113.72	61.45	327.97	735.43	1.80	James Ranch Unit DI 1 #157H (s)	SF(Lo)	
24500.00	91.25	269.90	9198.69	6007.69	404.78	113.81	288.39	166.11	689.14	1.32	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
24600.00	91.25	269.90	9196.50	6005.50	407.54	114.53	288.36	162.06	689.02	1.31	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	
24622.97	91.25	269.90	9196.00	6005.00	408.17	114.70	288.36	161.14	688.99	1.31	James Ranch Unit DI 1 BS2A- 5W #210H (p)	SF(Med)	

Secondary Well: James Ranch Unit DI 1A #206H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
11300.00	9593.02	9487.80	9526.30	6335.30	9.20	183.84	26.51	21.11	99.56	233.43	297.17	4.66	
11400.00	9591.95	9485.60	9525.25	6334.25	9.20	183.84	26.50	21.11	99.32	188.53	258.85	3.68	
11500.00	9590.89	9483.41	9524.19	6333.19	9.20	183.84	26.50	21.11	99.07	188.66	256.32	3.79	
11600.00	9589.82	9481.22	9523.14	6332.14	9.20	183.84	26.50	21.11	98.83	230.85	290.50	4.87	

Secondary Well: James Ranch Unit DI 1 126H (s) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
18400.00	16563.13	9332.29	9181.15	5990.15	90.27	272.16	212.03	57.11	85.56	1566.54	1973.45	4.85	

SD Anti-Collision Report

Secondary Well James Rancy Unit D11-126H (s) (TVD relative to Well TVD Reference) (All Azimuth relative to GRID NORTH)															
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk		
18500.00	16670.38	9330.10	9179.35	5988.35	91.34	271.87	214.95	57.81	85.58	1563.36	1976.86	4.78			
18600.00	16773.72	9327.91	9176.59	5985.59	91.65	271.75	217.78	58.53	85.57	1561.27	1980.28	4.73			
18700.00	16885.65	9325.72	9172.54	5981.54	92.64	271.32	220.81	59.25	85.53	1557.41	1983.27	4.66			
18800.00	17012.48	9323.53	9165.98	5974.98	92.92	270.52	224.17	60.13	85.43	1552.81	1985.41	4.59			
18900.00	17146.55	9321.34	9160.91	5969.91	91.31	269.66	227.67	61.21	85.37	1550.68	1985.55	4.57			
19000.00	17301.27	9319.15	9160.64	5969.64	89.23	268.25	231.50	62.42	85.45	1559.95	1983.84	4.68			
19100.00	17448.67	9316.96	9162.55	5971.55	89.21	266.87	235.01	63.48	85.59	1575.68	1979.84	4.90			
19700.00	18099.09	9303.82	9164.00	5973.00	89.70	265.31	251.97	68.13	85.94	1540.35	1933.48	4.92			
19800.00	18174.17	9301.63	9164.54	5973.54	89.32	266.07	254.40	68.69	85.99	1508.15	1925.80	4.61			
19900.00	18240.12	9299.44	9165.63	5974.63	88.90	267.11	256.66	69.17	86.06	1470.39	1919.74	4.27			
20000.00	18301.28	9297.25	9166.80	5975.80	88.90	268.26	258.74	69.61	86.13	1434.88	1915.60	3.98			
20100.00	18356.67	9295.06	9167.82	5976.82	89.02	269.59	260.60	70.01	86.20	1408.67	1913.59	3.79			
20200.00	18409.72	9292.87	9168.65	5977.65	89.19	270.99	262.27	70.39	86.26	1401.97	1914.03	3.74			
20300.00	18475.20	9290.68	9169.43	5978.43	89.46	272.00	264.12	70.85	86.33	1411.51	1916.61	3.79			
20400.00	18554.92	9288.49	9170.03	5979.03	89.60	272.60	266.31	71.42	86.40	1422.97	1920.78	3.86			
20500.00	18637.07	9286.30	9170.52	5979.52	89.90	273.11	268.55	72.00	86.48	1436.61	1925.60	3.94			
20600.00	18709.50	9284.11	9170.21	5979.21	90.56	273.88	270.46	72.49	86.52	1463.46	1931.82	4.12			
20700.00	18818.43	9281.92	9168.52	5977.52	91.10	273.58	273.50	73.25	86.56	1456.94	1938.50	4.03			
20800.00	18937.81	9279.73	9166.23	5975.23	91.10	273.00	276.84	74.11	86.58	1440.59	1944.35	3.86			
20900.00	19054.20	9277.54	9163.99	5972.99	91.10	272.51	280.06	74.95	86.60	1427.76	1949.31	3.74			
21000.00	19187.95	9275.35	9161.95	5970.95	90.54	271.55	283.73	75.94	86.63	1406.83	1953.03	3.58			
21100.00	19302.52	9273.16	9161.38	5970.38	90.30	271.13	286.85	76.78	86.70	1398.91	1955.40	3.51			
21200.00	19410.14	9270.97	9160.14	5969.14	91.11	270.86	289.78	77.51	86.73	1393.82	1957.28	3.47			
21300.00	19511.76	9268.78	9157.25	5966.25	92.23	270.75	292.56	78.16	86.71	1390.01	1958.80	3.44			
21400.00	19602.64	9266.59	9153.40	5962.40	91.90	271.04	295.09	78.84	86.66	1389.02	1960.58	3.43			
21500.00	19692.84	9264.40	9151.56	5960.56	90.86	271.38	297.60	79.57	86.67	1389.68	1962.91	3.42			
21600.00	19778.91	9262.21	9150.33	5959.33	90.80	271.79	299.99	80.20	86.69	1394.25	1965.70	3.44			
21700.00	19855.37	9260.02	9149.26	5958.26	90.79	272.48	302.09	80.75	86.72	1409.82	1969.57	3.52			
21800.00	19937.57	9257.83	9148.19	5957.19	90.70	273.00	304.33	81.35	86.74	1426.29	1974.46	3.60			
21900.00	20145.38	9255.64	9146.34	5955.34	90.10	269.90	309.84	82.88	86.83	1380.10	1978.69	3.31			
22000.00	20242.46	9253.45	9146.16	5955.16	90.14	269.98	312.52	83.58	86.89	1373.87	1978.59	3.27			
22100.00	20330.20	9251.26	9145.80	5954.80	90.35	270.33	315.00	84.21	86.94	1367.35	1978.96	3.24			
22200.00	20423.52	9249.07	9144.91	5953.91	90.71	270.50	317.60	84.87	86.97	1362.85	1979.80	3.21			
22300.00	20522.92	9246.88	9143.60	5952.60	90.74	270.52	320.33	85.58	87.00	1358.56	1980.80	3.18			
22400.00	20622.02	9244.69	9142.68	5951.68	90.38	270.56	323.06	86.32	87.04	1354.34	1981.89	3.16			
22500.00	20721.96	9242.50	9142.15	5951.15	90.07	270.58	325.81	87.06	87.08	1349.86	1982.82	3.13			
22600.00	20806.02	9240.31	9142.62	5951.62	89.35	271.07	328.19	87.69	87.15	1348.99	1984.37	3.12			
22700.00	20910.07	9238.12	9144.19	5953.19	89.00	270.97	331.04	88.46	87.27	1344.02	1986.06	3.09			
22800.00	21004.33	9235.93	9145.83	5954.83	89.00	271.13	333.65	89.14	87.38	1342.13	1987.97	3.08			
22900.00	21135.58	9233.74	9148.09	5957.09	89.06	270.23	337.13	90.09	87.53	1334.36	1989.47	3.04			
23000.00	21305.38	9231.55	9150.67	5959.67	89.38	268.20	341.20	91.32	87.71	1367.38	1987.83	3.20			
23100.00	21407.93	9229.36	9151.14	5960.14	90.04	268.10	343.97	92.04	87.78	1361.31	1984.45	3.18			
23200.00	21486.02	9227.17	9150.82	5959.82	90.36	268.72	346.35	92.59	87.82	1332.56	1981.65	3.05			
23300.00	21553.31	9224.98	9150.31	5959.31	90.50	269.66	348.47	93.07	87.84	1306.00	1980.35	2.94			
23400.00	21616.33	9222.78	9149.80	5958.80	90.43	270.73	350.40	93.53	87.87	1298.11	1980.80	2.90			
23500.00	21715.85	9220.59	9149.15	5958.15	90.32	270.75	353.14	94.26	87.92	1294.70	1982.61	2.88			
23600.00	21808.26	9218.40	9148.70	5957.70	90.23	270.97	355.70	94.94	87.96	1293.12	1984.06	2.87			
23700.00	21903.78	9216.21	9148.41	5957.41	90.12	271.10	358.34	95.64	88.02	1291.68	1986.05	2.86			
23800.00	21998.39	9214.02	9148.15	5957.15	90.25	271.25	360.96	96.32	88.07	1291.29	1988.18	2.85			
23900.00	22212.91	9211.83	9147.70	5956.70	90.10	267.95	366.02	97.88	88.19	1331.88	1987.54	3.03			
24000.00	22274.36	9209.64	9147.59	5956.59	90.10	269.06	368.12	98.33	88.23	1284.96	1985.05	2.84			
24100.00	22340.88	9207.45	9147.49	5956.49	90.06	270.03	370.20	98.81	88.27	1262.89	1984.43	2.75			
24200.00	22413.76	9205.26	9147.46	5956.46	89.98	270.82	372.33	99.35	88.31	1260.11	1985.31	2.74			
24300.00	22493.48	9203.07	9147.54	5956.54	89.90	271.40	374.57	99.93	88.37	1267.40	1987.36	2.76			
24400.00	22589.93	9200.88	9147.56	5956.56	90.00	271.50	377.23	100.63	88.43	1267.65	1990.07	2.75			
24500.00	22593.00	9198.69	9147.56	5956.56	90.00	271.50	377.31	100.65	88.43	1406.79	1995.15	3.39			
24600.00	22593.00	9196.50	9147.56	5956.56	90.00	271.50	377.31	100.65	88.43	1568.67	2005.22	4.59			
24622.97	22593.00	9196.00	9147.56	5956.56	90.00	271.50	377.31	100.65	88.43	1599.11	2008.22	4.91			

5D Anti-Collision Report

Secondary Well: James Ranch Unit 12-1H (s) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
2500.00	2497.96	2500.00	2500.48	-690.52	1.03	108.46	8.73	8.71	356.70	56.79	71.55	4.85	
2600.00	2598.28	2600.00	2600.77	-590.23	1.72	109.85	9.08	9.06	358.50	55.33	70.67	4.61	
2700.00	2699.06	2700.00	2701.47	-489.53	2.91	116.24	9.43	9.42	1.54	53.13	69.04	4.34	
2800.00	2799.87	2800.00	2802.07	-388.93	4.37	120.57	9.78	9.77	6.45	49.90	66.37	4.03	
2900.00	2899.52	2900.00	2901.41	-289.59	4.64	118.74	10.14	10.12	12.94	46.61	63.68	3.73	
3000.00	2999.26	3000.00	3000.81	-190.19	4.82	119.17	10.50	10.47	20.27	44.25	61.91	3.50	
3100.00	3099.06	3100.00	3100.26	-90.74	4.77	120.94	10.86	10.83	28.01	42.79	61.05	3.34	
3200.00	3198.67	3200.00	3199.52	8.52	4.86	120.56	11.22	11.18	35.85	42.38	61.22	3.25	
3300.00	3298.44	3300.00	3298.94	107.94	4.68	121.55	11.58	11.53	43.46	43.05	62.47	3.22	
3400.00	3398.53	3400.00	3398.73	207.73	4.25	124.87	11.94	11.89	50.30	44.33	64.34	3.22	
3500.00	3498.35	3500.00	3498.29	307.29	4.11	125.37	12.30	12.24	56.35	46.04	66.62	3.24	
3600.00	3598.19	3600.00	3597.88	406.88	3.88	125.05	12.65	12.59	61.72	48.29	69.44	3.28	
3700.00	3698.02	3700.00	3697.49	506.49	3.78	124.90	13.01	12.95	66.42	50.98	72.70	3.35	
3800.00	3798.02	3800.00	3797.27	606.27	3.84	128.51	13.36	13.30	70.77	53.92	76.22	3.42	
3900.00	3897.61	3900.00	3896.64	705.64	3.62	123.00	13.71	13.65	74.57	57.25	80.11	3.50	
4000.00	3997.49	4000.00	3996.34	805.34	3.45	121.62	14.07	14.00	77.67	60.95	84.39	3.60	
4100.00	4096.75	4100.00	4095.39	904.39	3.92	121.45	14.42	14.35	80.51	65.15	89.13	3.72	
4200.00	4196.40	4200.00	4194.80	1003.80	3.95	120.25	14.77	14.70	83.21	69.93	94.48	3.85	
4300.00	4296.56	4300.00	4294.74	1103.74	3.66	119.98	15.12	15.06	85.50	74.74	99.88	3.97	
4400.00	4396.39	4400.00	4394.37	1203.37	3.59	118.84	15.48	15.41	87.42	79.47	105.19	4.09	
4500.00	4496.44	4500.00	4494.24	1303.24	3.43	118.41	15.83	15.77	89.07	84.18	110.47	4.20	
4600.00	4596.14	4600.00	4593.75	1402.75	3.52	118.98	16.18	16.12	90.55	88.91	115.77	4.31	
4700.00	4696.44	4700.00	4693.88	1502.88	3.28	119.81	16.53	16.47	91.91	93.56	121.01	4.41	
4800.00	4796.28	4800.00	4793.56	1602.56	3.18	116.24	16.88	16.82	93.04	98.06	126.08	4.50	
4900.00	4896.08	4900.00	4893.20	1702.20	3.21	116.27	17.23	17.18	93.99	102.63	131.23	4.59	
5000.00	4996.16	5000.00	4993.13	1802.13	3.08	114.98	17.59	17.53	94.85	107.16	136.34	4.67	
5100.00	5096.59	5100.00	5093.43	1902.43	2.83	115.11	17.94	17.88	95.57	111.43	141.19	4.74	
5200.00	5196.80	5200.00	5193.53	2002.53	2.69	115.28	18.29	18.24	96.21	115.39	145.73	4.80	
5300.00	5297.17	5300.00	5293.79	2102.79	2.53	117.51	18.64	18.59	96.81	119.10	150.03	4.85	
5400.00	5397.20	5400.00	5393.72	2202.72	2.45	115.17	18.99	18.94	97.35	122.63	154.13	4.89	
5500.00	5498.23	5500.00	5494.68	2303.68	2.02	114.71	19.34	19.30	97.79	125.77	157.86	4.92	
5600.00	5598.42	5600.00	5594.81	2403.81	1.90	112.14	19.69	19.65	98.12	128.49	161.15	4.93	
5700.00	5698.54	5700.00	5694.88	2503.88	1.82	109.76	20.04	20.00	98.37	131.08	164.32	4.94	
5800.00	5798.41	5800.00	5794.69	2603.69	1.87	112.37	20.38	20.35	98.61	133.64	167.46	4.95	
5900.00	5898.53	5900.00	5894.76	2703.76	1.84	115.86	20.73	20.70	98.90	136.19	170.58	4.96	
6000.00	5998.88	6000.00	5995.07	2804.07	1.66	110.65	21.08	21.05	99.16	138.57	173.54	4.96	
6100.00	6099.49	6100.00	6095.64	2904.64	1.48	116.23	21.43	21.41	99.37	140.66	176.20	4.96	
6200.00	6200.08	6200.00	6196.20	3005.20	1.27	115.90	21.78	21.76	99.60	142.39	178.50	4.94	
6300.00	6300.01	6300.00	6296.11	3105.11	1.28	115.10	22.13	22.11	99.79	143.95	180.64	4.92	
6400.00	6400.02	6400.00	6396.09	3205.09	1.27	114.90	22.48	22.46	99.97	145.52	182.78	4.91	
6500.00	6500.69	6500.00	6496.74	3305.74	1.08	120.25	22.83	22.81	100.16	146.91	184.74	4.88	
6600.00	6602.44	6600.00	6598.48	3407.48	0.67	145.97	23.18	23.16	100.40	147.64	186.02	4.85	
6700.00	6702.77	6700.00	6698.80	3507.80	0.63	155.11	23.52	23.51	325.65	147.76	186.70	4.79	
6800.00	6802.20	6799.97	6798.22	3607.22	0.75	144.91	23.87	23.86	325.51	146.08	185.56	4.70	
6900.00	6902.31	6899.79	6898.32	3707.32	0.55	132.58	24.22	24.21	324.65	141.64	181.63	4.54	
7000.00	7000.77	6999.35	6996.77	3805.77	1.01	131.67	24.56	24.55	323.07	134.70	175.24	4.32	
7100.00	7100.19	7098.53	7096.18	3905.18	1.08	137.61	24.91	24.90	320.69	125.52	166.59	4.06	
7200.00	7189.95	7197.19	7185.86	3994.86	4.75	122.63	25.15	25.13	317.98	115.91	157.24	3.80	
7300.00	7276.24	7295.23	7271.41	4080.41	9.32	107.80	25.19	25.03	315.22	114.36	154.70	3.83	
7400.00	7377.41	7392.53	7371.33	4180.33	8.31	102.63	25.20	25.08	310.56	112.96	153.84	3.76	
7500.00	7479.03	7488.96	7472.11	4281.11	6.55	88.36	25.21	25.14	303.52	108.64	150.16	3.62	
7600.00	7579.08	7584.41	7571.58	4380.58	5.68	96.52	25.22	25.18	294.51	103.55	145.63	3.46	
7700.00	7679.52	7678.75	7671.59	4480.59	5.34	116.18	25.23	25.20	284.25	98.48	141.17	3.31	
7800.00	7774.50	7771.89	7766.03	4575.03	7.10	118.47	25.25	25.16	273.80	96.82	139.90	3.25	
7900.00	7866.11	7863.70	7856.56	4665.56	10.25	111.82	25.27	25.04	264.35	102.37	145.79	3.36	
8000.00	7957.71	7954.07	7946.44	4755.44	11.68	104.82	25.30	24.96	256.06	115.62	159.42	3.64	
8100.00	8052.78	8042.89	8039.92	4848.92	9.25	103.61	25.34	25.12	247.61	134.62	178.93	4.04	
8200.00	8150.59	8130.05	8136.77	4945.77	7.32	115.74	25.38	25.22	238.68	157.71	202.31	4.54	

5D Anti-Collision Report

Secondary Well James Ranch Unit 211 SWD (S) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
6300.00	6274.20	6300.00	6299.92	3108.92	0.36	185.27	12.06	12.05	270.12	106.18	132.83	4.98	
6400.00	6374.16	6400.00	6399.89	3208.89	0.38	186.95	12.27	12.25	269.83	105.82	132.90	4.91	
6500.00	6474.13	6500.00	6499.86	3308.86	0.33	190.34	12.47	12.46	269.56	105.49	133.00	4.83	
6600.00	6574.18	6600.00	6599.90	3408.90	0.34	186.37	12.68	12.67	269.33	105.16	133.11	4.76	
6700.00	6674.34	6700.00	6700.06	3509.06	0.45	175.64	12.89	12.87	134.05	104.79	133.16	4.69	
6800.00	6774.23	6799.97	6799.95	3608.95	0.54	180.38	13.09	13.08	134.37	105.99	134.74	4.69	
6900.00	6873.76	6899.79	6899.47	3708.47	0.65	192.34	13.30	13.28	135.61	109.86	138.99	4.77	
7000.00	6973.10	6999.35	6998.80	3807.80	0.73	199.98	13.50	13.49	137.60	116.58	146.09	4.95	

Secondary Well James Ranch Unit 011 #157H (S) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
7800.00	7775.12	7771.89	7764.49	4573.49	2.63	167.82	17.12	16.31	28.14	128.28	162.23	4.78	
7900.00	7867.13	7863.70	7856.38	4665.38	3.16	172.96	17.33	16.50	36.55	98.32	132.72	3.86	
8000.00	7957.32	7954.07	7946.40	4755.40	4.14	181.03	17.54	16.69	50.14	71.33	106.31	3.04	
8100.00	8046.77	8042.89	8035.53	4844.53	4.89	189.11	17.75	16.87	71.26	54.31	90.30	2.51	
8200.00	8137.48	8130.05	8126.01	4935.01	3.77	187.02	17.97	17.08	97.47	54.84	92.06	2.47	
8300.00	8224.65	8215.45	8212.97	5021.97	4.08	186.66	18.17	17.26	119.15	77.38	115.06	3.05	
8400.00	8311.37	8298.98	8299.47	5108.47	3.90	181.44	18.38	17.45	133.77	114.83	152.65	4.04	
14000.00	12812.68	9428.66	9157.97	5966.97	92.12	269.73	104.87	30.33	67.20	559.28	698.95	5.00	
14100.00	12924.64	9426.47	9152.78	5961.78	93.02	268.28	108.00	31.06	66.94	555.92	698.43	4.90	
14200.00	13034.05	9424.28	9148.70	5957.70	91.52	268.07	110.97	31.80	66.71	551.20	696.25	4.80	
14300.00	13135.59	9422.09	9146.30	5955.30	91.14	268.10	113.71	32.47	66.58	545.69	693.34	4.70	
14400.00	13234.51	9419.90	9144.73	5953.73	90.80	268.34	116.38	33.14	66.54	539.99	690.44	4.59	
14500.00	13326.58	9417.71	9143.43	5952.43	90.87	269.02	118.83	33.76	66.52	534.79	687.90	4.49	
14600.00	13411.84	9415.52	9142.07	5951.07	90.72	270.43	121.00	34.33	66.55	532.21	687.49	4.43	
14700.00	13504.80	9413.33	9141.68	5950.68	90.11	271.33	123.40	34.96	66.73	530.12	688.35	4.35	
14800.00	13591.91	9411.14	9140.90	5949.90	90.84	272.17	125.62	35.56	66.91	530.70	690.85	4.31	
14900.00	13684.48	9408.95	9139.30	5948.30	91.16	272.70	128.05	36.19	67.07	532.26	694.72	4.28	
15000.00	13774.04	9406.76	9137.11	5946.11	91.73	273.38	130.34	36.80	67.21	536.11	699.92	4.27	
15100.00	13869.88	9404.57	9132.78	5941.78	93.37	273.04	133.04	37.43	67.22	540.33	706.16	4.26	
15200.00	13975.80	9402.38	9125.89	5934.89	93.82	272.32	136.08	38.15	67.04	542.83	712.33	4.20	
15300.00	14093.96	9400.19	9118.99	5927.99	92.96	271.08	139.51	38.97	66.84	541.42	716.78	4.09	
15400.00	14200.95	9398.00	9113.21	5922.21	93.96	270.04	142.56	39.69	66.62	540.35	718.93	4.03	
15500.00	14299.66	9395.81	9105.26	5914.26	94.74	269.80	145.26	40.35	66.20	541.64	721.19	4.02	
15600.00	14399.88	9393.62	9096.54	5905.54	95.56	269.39	148.02	41.01	65.71	543.02	723.48	4.01	
15700.00	14494.34	9391.43	9086.53	5895.53	96.57	269.38	150.58	41.62	65.11	546.18	726.11	4.04	
15800.00	14599.47	9389.24	9074.92	5883.92	95.88	269.22	153.44	42.37	64.41	548.36	728.99	4.04	
15900.00	14721.65	9387.05	9065.92	5874.92	92.58	268.88	156.78	43.30	63.90	546.48	729.94	3.98	
16000.00	14834.83	9384.86	9063.03	5872.03	90.51	268.74	159.87	44.08	63.79	542.15	728.22	3.91	
16100.00	14934.37	9382.67	9063.15	5872.15	89.68	269.18	162.57	44.77	63.90	536.31	725.69	3.83	
16200.00	15033.47	9380.48	9063.79	5872.79	89.50	269.35	165.26	45.46	64.06	530.60	723.62	3.75	
16300.00	15138.80	9378.29	9065.00	5874.00	89.24	269.00	168.17	46.19	64.27	524.32	721.04	3.67	
16400.00	15239.81	9376.10	9066.34	5875.34	89.33	268.86	170.93	46.91	64.46	517.43	717.92	3.58	
16500.00	15339.59	9373.91	9067.51	5876.51	89.22	268.93	173.66	47.61	64.64	510.59	714.87	3.50	
16600.00	15428.50	9371.72	9068.70	5877.70	89.37	269.83	176.02	48.24	64.84	504.06	712.38	3.42	
16700.00	15513.85	9369.53	9069.08	5878.08	90.36	270.67	178.26	48.86	65.02	500.79	711.92	3.37	
16800.00	15605.39	9367.34	9067.63	5876.63	91.12	271.07	180.71	49.52	65.12	500.04	713.27	3.35	
16900.00	15704.25	9365.15	9065.58	5874.58	91.26	271.10	183.41	50.22	65.20	498.79	715.15	3.31	
17000.00	15804.08	9362.96	9063.27	5872.27	91.37	271.06	186.16	50.92	65.26	497.47	717.05	3.27	
17100.00	15905.38	9360.77	9060.81	5869.81	91.40	270.93	188.96	51.64	65.31	495.87	718.92	3.22	
17200.00	16005.78	9358.58	9058.33	5867.33	91.43	270.88	191.72	52.35	65.34	494.30	720.60	3.18	
17300.00	16103.93	9356.39	9055.86	5864.86	91.46	271.03	194.39	53.05	65.38	493.33	722.39	3.15	
17400.00	16203.29	9354.19	9052.93	5861.93	92.01	270.83	197.15	53.75	65.38	492.48	724.39	3.12	
17500.00	16320.44	9352.00	9048.76	5857.76	91.94	269.37	200.52	54.58	65.28	488.17	725.26	3.06	
17600.00	16425.20	9349.81	9045.77	5854.77	91.42	269.19	203.40	55.33	65.19	484.69	724.55	3.02	
17700.00	16525.26	9347.62	9043.34	5852.34	91.38	269.20	206.14	56.04	65.13	481.01	723.48	2.98	
17800.00	16622.19	9345.43	9040.95	5849.95	91.44	269.45	208.78	56.73	65.08	477.73	722.70	2.95	

5D Anti-Collision Report

Secondary Well: James Ranch Unit Dr 1 #157H (S) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
17900.00	16722.62	9343.24	9038.38	5847.38	91.46	269.40	211.54	57.45	65.03	474.56	722.22	2.92	
18000.00	16826.62	9341.05	9035.78	5844.78	91.38	269.08	214.41	58.19	64.97	470.83	721.23	2.88	
18100.00	16929.27	9338.86	9033.44	5842.44	91.21	268.93	217.23	58.92	64.91	466.88	719.88	2.85	
18200.00	17029.75	9336.67	9031.29	5840.29	91.39	268.80	219.99	59.64	64.85	462.63	718.20	2.81	
18300.00	17127.80	9334.48	9028.69	5837.69	91.56	268.89	222.67	60.34	64.75	458.77	716.69	2.78	
18400.00	17220.95	9332.29	9026.21	5835.21	91.45	269.55	225.19	61.01	64.68	455.65	715.71	2.75	
18500.00	17310.30	9330.10	9023.97	5832.97	91.47	270.49	227.53	61.65	64.66	454.73	716.01	2.74	
18600.00	17405.58	9327.91	9021.54	5830.54	91.40	270.94	230.08	62.33	64.69	454.41	717.61	2.73	
18700.00	17506.63	9325.72	9019.14	5828.14	91.38	270.85	232.87	63.06	64.74	452.57	719.31	2.70	
18800.00	17604.55	9323.53	9016.72	5825.72	91.46	270.99	235.54	63.76	64.78	451.66	720.97	2.68	
18900.00	17704.29	9321.34	9014.12	5823.12	91.52	270.99	238.28	64.47	64.81	450.52	722.92	2.65	
19000.00	17804.83	9319.15	9011.49	5820.49	91.45	270.97	241.05	65.20	64.85	449.07	724.79	2.63	
19100.00	17900.28	9316.96	9008.72	5817.72	91.96	271.13	243.65	65.88	64.86	449.70	726.90	2.62	
19200.00	18000.68	9314.77	9005.18	5814.18	92.01	271.07	246.42	66.60	64.84	449.25	729.38	2.60	
19300.00	18102.74	9312.58	9001.76	5810.76	91.83	270.97	249.24	67.33	64.82	447.95	731.64	2.58	
19400.00	18202.94	9310.39	8998.40	5807.40	91.98	270.88	252.01	68.05	64.80	447.19	733.74	2.56	
19500.00	18303.47	9308.20	8995.05	5804.05	91.85	270.89	254.77	68.78	64.77	446.27	735.78	2.54	
19600.00	18403.08	9306.01	8991.90	5800.90	91.79	270.95	257.50	69.49	64.76	445.58	737.83	2.52	
19700.00	18501.64	9303.82	8988.77	5797.77	91.92	271.01	260.20	70.20	64.75	445.29	739.86	2.51	
19800.00	18596.43	9301.63	8985.25	5794.25	92.20	271.32	262.75	70.88	64.73	447.54	742.64	2.52	
19900.00	18704.94	9299.44	8981.32	5790.32	92.08	270.65	265.85	71.66	64.69	443.88	745.11	2.47	
20000.00	18815.91	9297.25	8977.14	5786.14	92.09	269.71	269.01	72.46	64.58	439.91	746.11	2.44	
20100.00	18917.60	9295.06	8973.48	5782.48	92.16	269.54	271.81	73.19	64.46	437.66	746.15	2.42	
20200.00	19017.77	9292.87	8969.69	5778.69	92.06	269.57	274.56	73.92	64.33	435.86	746.31	2.40	
20300.00	19120.53	9290.68	8966.30	5775.30	91.71	269.50	277.38	74.66	64.23	433.32	746.23	2.38	
20400.00	19225.31	9288.49	8963.36	5772.36	91.54	269.17	280.28	75.42	64.15	430.23	745.65	2.36	
20500.00	19324.53	9286.30	8960.64	5769.64	91.61	269.20	283.00	76.13	64.07	427.03	744.74	2.34	
20600.00	19426.29	9284.11	8958.04	5767.04	91.29	269.21	285.79	76.87	64.01	423.75	743.82	2.32	
20700.00	19524.37	9281.92	8955.70	5764.70	91.44	269.30	288.49	77.58	63.96	420.30	742.89	2.30	
20800.00	19623.67	9279.73	8953.12	5762.12	91.52	269.32	291.21	78.29	63.89	417.16	742.14	2.28	
20900.00	19721.43	9277.54	8950.62	5759.62	91.45	269.55	293.89	79.00	63.84	414.23	741.61	2.27	
21000.00	19820.85	9275.35	8947.85	5756.85	91.79	269.43	296.62	79.72	63.78	411.49	741.18	2.25	
21100.00	19913.41	9273.16	8944.47	5753.47	92.37	269.79	299.14	80.38	63.66	410.79	741.31	2.24	
21200.00	20002.61	9270.97	8940.55	5749.55	92.56	270.62	301.49	81.02	63.54	414.00	742.81	2.26	
21300.00	20107.61	9268.78	8936.95	5745.95	91.46	270.74	304.36	81.79	63.50	411.19	744.49	2.23	
21400.00	20203.19	9266.59	8934.83	5743.83	91.17	271.26	306.89	82.48	63.57	411.40	746.33	2.23	
21500.00	20304.61	9264.40	8932.57	5741.57	91.33	271.06	309.73	83.21	63.64	409.24	748.21	2.21	
21600.00	20400.67	9262.21	8930.40	5739.40	91.33	271.39	312.30	83.91	63.71	409.76	750.33	2.20	
21700.00	20503.26	9260.02	8927.79	5736.79	91.51	271.08	315.19	84.65	63.77	407.65	752.90	2.18	
21800.00	20615.03	9257.83	8924.87	5733.87	91.57	270.05	318.43	85.46	63.77	401.65	753.77	2.14	
21900.00	20733.18	9255.64	8921.26	5730.26	91.97	268.32	321.71	86.32	63.67	399.54	753.60	2.13	
22000.00	20851.09	9253.45	8917.68	5726.68	91.33	267.10	324.79	87.17	63.44	403.02	750.30	2.16	
22100.00	20950.72	9251.26	8915.33	5724.33	91.35	267.11	327.52	87.89	63.26	397.29	746.01	2.14	
22200.00	21048.79	9249.07	8913.29	5722.29	91.03	267.43	330.26	88.60	63.11	390.48	741.78	2.11	
22300.00	21136.83	9246.88	8911.94	5720.94	90.74	268.61	332.78	89.24	63.05	379.59	738.59	2.06	
22400.00	21232.95	9244.69	8910.74	5719.74	90.76	268.94	335.43	89.93	63.05	373.59	736.43	2.03	
22500.00	21327.23	9242.50	8908.46	5717.46	91.91	268.85	338.01	90.62	62.97	369.01	734.91	2.01	
22600.00	21415.50	9240.31	8906.07	5715.07	91.19	270.25	340.35	91.26	62.92	367.19	734.60	2.00	SF(Lo)
22624.80	21437.99	9239.76	8905.59	5714.59	91.28	270.40	340.95	91.43	62.93	367.19	734.76	2.00	SF(Lo)
22700.00	21506.32	9238.12	8903.88	5712.88	91.59	270.84	342.75	91.92	62.94	368.50	735.71	2.00	SF(Lo)
22800.00	21608.17	9235.93	8901.22	5710.22	91.36	270.80	345.57	92.66	62.97	366.24	737.37	1.99	SF(Lo)
22900.00	21710.77	9233.74	8898.98	5707.98	91.17	270.67	348.42	93.41	63.03	363.19	738.68	1.97	SF(Lo)
23000.00	21813.97	9231.55	8896.73	5705.73	91.27	270.34	351.31	94.16	63.07	359.86	739.58	1.95	SF(Lo)
23100.00	21914.01	9229.36	8894.69	5703.69	91.22	270.36	354.06	94.88	63.10	357.24	740.15	1.93	SF(Lo)
23200.00	22009.27	9227.17	8892.29	5701.29	91.57	270.60	356.65	95.58	63.12	357.05	741.27	1.93	SF(Lo)
23300.00	22108.08	9224.98	8889.57	5698.57	91.62	270.67	359.35	96.29	63.12	356.01	742.57	1.92	SF(Lo)
23400.00	22211.19	9222.78	8886.55	5695.55	91.64	270.39	362.24	97.04	63.12	353.54	744.27	1.90	SF(Lo)
23500.00	22326.05	9220.59	8883.47	5692.47	91.49	269.18	365.50	97.88	63.06	348.78	744.10	1.88	SF(Lo)

5D Anti-Collision Report

Secondary Well: James Ranch Unit DI 1 #157H (S) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
23600.00	22431.48	9218.40	8880.79	5689.79	91.40	268.76	368.39	98.64	62.98	346.32	742.75	1.87	SF(Lo)
23700.00	22529.61	9216.21	8878.14	5687.14	91.85	268.69	371.08	99.35	62.87	342.50	741.12	1.86	SF(Lo)
23800.00	22626.38	9214.02	8874.62	5683.62	92.27	268.75	373.74	100.05	62.70	339.66	739.94	1.85	SF(Lo)
23900.00	22722.03	9211.83	8870.76	5679.76	92.28	269.12	376.37	100.75	62.52	337.80	739.25	1.84	SF(Lo)
24000.00	22823.19	9209.64	8866.70	5675.70	92.35	268.99	379.15	101.48	62.35	336.31	738.88	1.84	SF(Lo)
24100.00	22927.31	9207.45	8862.54	5671.54	92.20	268.70	382.01	102.24	62.15	334.90	738.09	1.83	SF(Lo)
24200.00	23024.60	9205.26	8858.70	5667.70	92.34	268.86	384.68	102.94	61.96	332.79	737.17	1.82	SF(Lo)
24300.00	23123.04	9203.07	8854.74	5663.74	92.27	269.03	387.39	103.66	61.78	331.16	736.58	1.82	SF(Lo)
24400.00	23225.22	9200.88	8850.67	5659.67	92.26	268.84	390.19	104.40	61.58	329.63	735.88	1.81	SF(Lo)
24487.50	23309.83	9198.97	8847.54	5656.54	92.05	269.21	392.52	105.02	61.45	327.97	735.43	1.80	SF(Lo)
24500.00	23310.00	9198.69	8847.54	5656.54	92.05	269.21	392.52	105.02	61.45	330.48	735.48	1.82	SF(Lo)
24600.00	23310.00	9196.50	8847.54	5656.54	92.05	269.21	392.52	105.02	61.45	454.44	743.52	2.57	
24622.97	23310.00	9196.00	8847.54	5656.54	92.05	269.21	392.52	105.02	61.45	485.13	747.25	2.85	
Secondary Well: James Ranch Unit DI 1 #163H (S) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
8800.00	8669.36	8612.86	8634.43	5443.43	18.63	163.20	20.41	17.47	274.26	170.01	213.92	4.87	
8900.00	8767.01	8688.17	8725.99	5534.99	21.83	165.35	20.84	17.60	263.46	152.53	196.81	4.44	
9000.00	8867.92	8763.48	8817.77	5626.77	26.80	164.55	21.37	17.60	252.19	139.15	182.31	4.22	
9100.00	8976.19	8839.50	8912.18	5721.18	32.93	164.77	22.03	17.49	236.93	129.97	170.47	4.21	
9200.00	9097.55	8920.16	9007.48	5816.48	44.01	162.61	22.99	16.87	221.75	118.83	156.56	4.15	
9300.00	9215.60	9004.03	9084.14	5893.14	54.47	163.92	24.10	16.16	218.29	98.64	136.45	3.61	
9400.00	9316.34	9088.56	9134.71	5943.71	65.04	164.52	25.23	15.32	225.85	78.11	122.85	2.75	
9500.00	9395.16	9171.18	9163.57	5972.57	71.16	166.29	26.15	14.92	235.18	92.43	145.12	2.75	
9600.00	9453.17	9249.39	9180.89	5989.89	74.05	165.99	26.94	14.80	240.13	157.22	205.43	4.26	
Secondary Well: James Ranch Unit DI 1 BS2A-SW #210H (P) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
600.00	600.00	600.00	600.00	-2591.00	0.00	0.00	1.24	1.24	89.24	12.08	15.10	5.00	CC (Med)
700.00	700.00	700.00	700.00	-2491.00	0.00	0.00	1.46	1.46	89.24	11.63	15.10	4.36	CC (Med)
800.00	800.00	800.00	800.00	-2391.00	0.00	0.00	1.69	1.69	89.24	11.18	15.10	3.86	CC (Med)
900.00	900.00	900.00	900.00	-2291.00	0.00	0.00	1.91	1.91	89.24	10.73	15.10	3.46	CC (Med)
1000.00	1000.00	1000.00	1000.00	-2191.00	0.00	0.00	2.14	2.14	89.24	10.29	15.10	3.14	CC (Med)
1100.00	1100.00	1100.00	1100.00	-2091.00	0.00	0.00	2.36	2.36	89.24	9.84	15.10	2.87	CC (Med)
1200.00	1200.00	1200.00	1200.00	-1991.00	0.00	0.00	2.59	2.59	89.24	9.39	15.10	2.64	CC (Med)
1300.00	1300.00	1300.00	1300.00	-1891.00	0.00	0.00	2.81	2.81	89.24	8.94	15.10	2.45	CC (Med)
1400.00	1400.00	1400.00	1400.00	-1791.00	0.00	0.00	3.04	3.04	89.24	8.49	15.10	2.28	CC (Med)
1500.00	1500.00	1500.00	1500.00	-1691.00	0.00	0.00	3.26	3.26	89.24	8.04	15.10	2.14	CC (Med)
1600.00	1600.00	1600.00	1600.00	-1591.00	0.00	0.00	3.49	3.49	89.24	7.59	15.10	2.01	CC (Med)
1700.00	1700.00	1700.00	1700.00	-1491.00	0.00	0.00	3.71	3.71	89.24	7.14	15.10	1.90	SF(Lo); CC (Med)
1800.00	1800.00	1800.00	1800.00	-1391.00	0.00	0.00	3.94	3.94	89.24	6.69	15.10	1.80	SF(Lo); CC (Med)
1900.00	1900.00	1900.00	1900.00	-1291.00	0.00	0.00	4.16	4.16	89.24	6.24	15.10	1.70	SF(Lo); CC (Med)
2000.00	2000.00	2000.00	2000.00	-1191.00	0.00	0.00	4.39	4.39	89.24	5.79	15.10	1.62	SF(Lo); CC (Med)
2100.00	2100.00	2100.00	2100.00	-1091.00	0.00	0.00	4.61	4.61	89.24	5.34	15.10	1.55	SF(Lo); CC (Med)
2200.00	2200.00	2200.00	2200.00	-991.00	0.00	0.00	4.83	4.83	89.24	4.89	15.10	1.48	SF(Med); CC (Med)
2300.00	2300.00	2300.00	2300.00	-891.00	0.00	0.00	5.06	5.06	89.24	4.44	15.10	1.42	SF(Med); CC (Med)
2400.00	2400.00	2400.00	2400.00	-791.00	0.00	0.00	5.28	5.28	89.24	3.99	15.10	1.36	SF(Med); CC (Med)
2500.00	2500.00	2500.00	2500.00	-691.00	0.00	0.00	5.51	5.51	89.24	3.54	15.10	1.31	SF(Med); CC (Med)
2600.00	2600.00	2600.00	2600.00	-591.00	0.00	0.00	5.73	5.73	89.24	3.09	15.10	1.26	SF(Med); CC (Med)

SD Anti-Collision Report

Secondary Well: James Ranch Unit Drilling BS2A-SW #210H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US-ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
2700.00	2700.00	2700.00	2700.00	-491.00	0.00	0.00	5.96	5.96	89.24	2.64	15.10	1.21	SF(Med); CC (Med)
2800.00	2800.00	2800.00	2800.00	-391.00	0.00	0.00	6.18	6.18	89.24	2.19	15.10	1.17	SF(Med); CC (Med)
2900.00	2900.00	2900.00	2900.00	-291.00	0.00	0.00	6.41	6.41	89.24	1.74	15.10	1.13	SF(Med); CC (Med)
3000.00	3000.00	3000.00	3000.00	-191.00	0.00	0.00	6.63	6.63	89.24	1.29	15.10	1.09	SF(Med); CC (Med)
3100.00	3100.00	3100.00	3100.00	-91.00	0.00	0.00	6.86	6.86	89.24	0.84	15.10	1.06	SF(Med); CC (Med)
3200.00	3200.00	3200.00	3200.00	9.00	0.00	0.00	7.08	7.08	89.24	0.39	15.10	1.03	SF(Med); CC (Med)
3289.84	3289.78	3289.84	3289.78	98.78	0.60	155.95	7.28	7.28	89.78	0.06	15.16	1.00	SF(Hi); CC (Med)
3300.00	3299.91	3300.00	3299.91	108.91	0.80	155.95	7.30	7.30	90.20	0.07	15.21	1.00	SF(Hi); CC (Med)
3400.00	3399.60	3400.00	3399.54	208.54	2.79	155.95	7.48	7.47	99.99	1.21	16.75	1.08	SF(Med); CC (Med)
3500.00	3498.95	3500.00	3498.67	307.67	4.78	155.95	7.65	7.63	114.90	5.28	21.16	1.33	SF(Med); CC (Lo)
3600.00	3597.72	3600.00	3596.94	405.94	6.75	155.95	7.83	7.78	127.74	13.32	29.50	1.82	SF(Lo); CC (Lo)
3700.00	3695.69	3700.00	3694.02	503.02	8.71	155.95	8.01	7.93	136.39	25.44	41.86	2.55	
3800.00	3792.65	3800.00	3789.59	598.59	10.65	155.95	8.21	8.08	141.88	41.37	58.00	3.49	
3900.00	3888.39	3900.00	3883.37	692.37	12.57	155.95	8.42	8.22	145.42	60.88	77.69	4.62	
13500.00	13096.45	9439.61	9181.47	5990.47	91.04	269.90	98.66	33.81	291.53	562.70	703.37	5.00	
13600.00	13196.45	9437.42	9179.65	5988.65	91.04	269.90	101.34	34.49	291.51	559.53	703.24	4.89	
13700.00	13296.45	9435.23	9177.83	5986.83	91.04	269.90	104.02	35.17	291.48	556.35	703.10	4.79	
13800.00	13396.45	9433.04	9176.01	5985.01	91.04	269.90	106.70	35.86	291.45	553.17	702.96	4.69	
13900.00	13496.45	9430.85	9174.19	5983.19	91.04	269.90	109.39	36.54	291.42	549.97	702.82	4.60	
14000.00	13596.45	9428.66	9172.37	5981.37	91.04	269.90	112.08	37.23	291.39	546.77	702.68	4.51	
14100.00	13696.45	9426.47	9170.55	5979.55	91.04	269.90	114.77	37.92	291.37	543.55	702.54	4.42	
14200.00	13796.45	9424.28	9168.73	5977.73	91.04	269.90	117.47	38.61	291.34	540.33	702.41	4.33	
14300.00	13896.45	9422.09	9166.91	5975.91	91.04	269.90	120.17	39.30	291.31	537.10	702.27	4.25	
14400.00	13996.45	9419.90	9165.09	5974.09	91.04	269.90	122.87	40.00	291.28	533.86	702.13	4.17	
14500.00	14096.45	9417.71	9163.27	5972.27	91.04	269.90	125.58	40.69	291.25	530.62	701.99	4.10	
14600.00	14196.45	9415.52	9161.45	5970.45	91.04	269.90	128.28	41.39	291.23	527.36	701.86	4.02	
14700.00	14296.45	9413.33	9159.63	5968.63	91.04	269.90	130.99	42.09	291.20	524.09	701.72	3.95	
14800.00	14396.44	9411.14	9157.81	5966.81	91.04	269.90	133.70	42.78	291.17	520.82	701.58	3.88	
14900.00	14496.44	9408.95	9155.99	5964.99	91.04	269.90	136.42	43.48	291.14	517.54	701.45	3.81	
15000.00	14596.44	9406.76	9154.17	5963.17	91.04	269.90	139.13	44.18	291.11	514.25	701.31	3.75	
15100.00	14696.44	9404.57	9152.35	5961.35	91.04	269.90	141.85	44.89	291.09	510.95	701.17	3.69	
15200.00	14796.44	9402.38	9150.53	5959.53	91.04	269.90	144.57	45.59	291.06	507.65	701.04	3.62	
15300.00	14896.44	9400.19	9148.71	5957.71	91.04	269.90	147.28	46.29	291.03	504.33	700.90	3.57	
15400.00	14996.44	9398.00	9146.89	5955.89	91.04	269.90	150.01	47.00	291.00	501.01	700.77	3.51	
15500.00	15096.44	9395.81	9145.07	5954.07	91.04	269.90	152.73	47.70	290.97	497.68	700.63	3.45	
15600.00	15196.44	9393.62	9143.25	5952.25	91.04	269.90	155.45	48.41	290.94	494.34	700.50	3.40	
15700.00	15296.44	9391.43	9141.43	5950.43	91.04	269.90	158.18	49.12	290.92	491.00	700.36	3.35	
15800.00	15396.44	9389.24	9139.61	5948.61	91.04	269.90	160.90	49.82	290.89	487.64	700.23	3.29	
15900.00	15496.44	9387.05	9137.79	5946.79	91.04	269.90	163.63	50.53	290.86	484.28	700.09	3.24	
16000.00	15596.44	9384.86	9135.98	5944.98	91.04	269.90	166.36	51.24	290.83	480.91	699.96	3.20	
16100.00	15696.44	9382.67	9134.16	5943.16	91.04	269.90	169.09	51.95	290.80	477.53	699.82	3.15	
16200.00	15796.43	9380.48	9132.34	5941.34	91.04	269.90	171.82	52.66	290.78	474.14	699.69	3.10	
16300.00	15896.43	9378.29	9130.52	5939.52	91.04	269.90	174.55	53.37	290.75	470.75	699.55	3.06	
16400.00	15996.43	9376.10	9128.70	5937.70	91.04	269.90	177.28	54.08	290.72	467.35	699.42	3.01	
16500.00	16096.43	9373.91	9126.88	5935.88	91.04	269.90	180.01	54.80	290.69	463.94	699.29	2.97	
16600.00	16196.43	9371.72	9125.06	5934.06	91.04	269.90	182.75	55.51	290.66	460.52	699.15	2.93	
16700.00	16296.43	9369.53	9123.24	5932.24	91.04	269.90	185.48	56.22	290.63	457.10	699.02	2.89	
16800.00	16396.43	9367.34	9121.42	5930.42	91.04	269.90	188.21	56.94	290.61	453.67	698.88	2.85	
16900.00	16496.43	9365.15	9119.60	5928.60	91.04	269.90	190.95	57.65	290.58	450.22	698.75	2.81	
17000.00	16596.43	9362.96	9117.78	5926.78	91.04	269.90	193.69	58.36	290.55	446.78	698.62	2.77	
17100.00	16696.43	9360.77	9115.96	5924.96	91.04	269.90	196.42	59.08	290.52	443.32	698.49	2.74	

SD Anti-Collision Report

Secondary Well: James Ranch Unit D-1 (S20-SW 3210H (S) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH))														
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec- (°)	ES (US ft)	CC (US ft)	SF	Risk	
17200.00	16796.43	9358.58	9114.14	5923.14	91.04	269.90	199.16	59.79	290.49	439.86	698.35	2.70		
17300.00	16896.43	9356.39	9112.32	5921.32	91.04	269.90	201.90	60.51	290.46	436.39	698.22	2.67		
17400.00	16996.43	9354.19	9110.50	5919.50	91.04	269.90	204.64	61.23	290.44	432.91	698.09	2.63		
17500.00	17096.43	9352.00	9108.68	5917.68	91.04	269.90	207.37	61.94	290.41	429.42	697.96	2.60		
17600.00	17196.43	9349.81	9106.86	5915.86	91.04	269.90	210.11	62.66	290.38	425.93	697.82	2.57		
17700.00	17296.42	9347.62	9105.04	5914.04	91.04	269.90	212.85	63.38	290.35	422.42	697.69	2.53		
17800.00	17396.42	9345.43	9103.22	5912.22	91.04	269.90	215.59	64.10	290.32	418.91	697.56	2.50		
17900.00	17496.42	9343.24	9101.40	5910.40	91.04	269.90	218.34	64.81	290.29	415.40	697.43	2.47		
18000.00	17596.42	9341.05	9099.58	5908.58	91.04	269.90	221.08	65.53	290.26	411.87	697.30	2.44		
18100.00	17696.42	9338.86	9097.76	5906.76	91.04	269.90	223.82	66.25	290.24	408.34	697.17	2.41		
18200.00	17796.42	9336.67	9095.94	5904.94	91.04	269.90	226.56	66.97	290.21	404.80	697.04	2.39		
18300.00	17896.42	9334.48	9094.12	5903.12	91.04	269.90	229.30	67.69	290.18	401.25	696.91	2.36		
18400.00	17996.42	9332.29	9092.30	5901.30	91.04	269.90	232.05	68.41	290.15	397.69	696.77	2.33		
18500.00	18096.42	9330.10	9090.48	5899.48	91.04	269.90	234.79	69.13	290.12	394.13	696.64	2.30		
18600.00	18196.42	9327.91	9088.66	5897.66	91.04	269.90	237.53	69.85	290.09	390.56	696.51	2.28		
18700.00	18296.42	9325.72	9086.84	5895.84	91.04	269.90	240.28	70.57	290.07	386.98	696.38	2.25		
18800.00	18396.42	9323.53	9085.02	5894.02	91.04	269.90	243.02	71.29	290.04	383.39	696.25	2.23		
18900.00	18496.42	9321.34	9083.20	5892.20	91.04	269.90	245.76	72.01	290.01	379.80	696.12	2.20		
19000.00	18596.42	9319.15	9081.38	5890.38	91.04	269.90	248.51	72.73	289.98	376.20	695.99	2.18		
19100.00	18696.41	9316.96	9079.56	5888.56	91.04	269.90	251.25	73.45	289.95	372.59	695.87	2.15		
19200.00	18796.41	9314.77	9077.74	5886.74	91.04	269.90	254.00	74.18	289.92	368.97	695.74	2.13		
19300.00	18896.41	9312.58	9075.92	5884.92	91.04	269.90	256.75	74.90	289.89	365.35	695.61	2.11		
19400.00	18996.41	9310.39	9074.10	5883.10	91.04	269.90	259.49	75.62	289.87	361.71	695.48	2.08		
19500.00	19096.41	9308.20	9072.28	5881.28	91.04	269.90	262.24	76.34	289.84	358.07	695.35	2.06		
19600.00	19196.41	9306.01	9070.46	5879.46	91.04	269.90	264.98	77.06	289.81	354.42	695.22	2.04		
19700.00	19296.41	9303.82	9068.64	5877.64	91.04	269.90	267.73	77.79	289.78	350.77	695.09	2.02		
19800.00	19396.41	9301.63	9066.82	5875.82	91.04	269.90	270.48	78.51	289.75	347.11	694.96	2.00	SF(Lo)	
19900.00	19496.41	9299.44	9065.00	5874.00	91.04	269.90	273.23	79.23	289.72	343.43	694.84	1.98	SF(Lo)	
20000.00	19596.41	9297.25	9063.18	5872.18	91.04	269.90	275.97	79.96	289.69	339.75	694.71	1.96	SF(Lo)	
20100.00	19696.41	9295.06	9061.36	5870.36	91.04	269.90	278.72	80.68	289.66	336.07	694.58	1.94	SF(Lo)	
20200.00	19796.41	9292.87	9059.54	5868.54	91.04	269.90	281.47	81.40	289.64	332.37	694.45	1.92	SF(Lo)	
20300.00	19896.41	9290.68	9057.72	5866.72	91.04	269.90	284.22	82.13	289.61	328.67	694.33	1.90	SF(Lo)	
20400.00	19996.41	9288.49	9055.90	5864.90	91.04	269.90	286.96	82.85	289.58	324.96	694.20	1.88	SF(Lo)	
20500.00	20096.41	9286.30	9054.08	5863.08	91.04	269.90	289.71	83.58	289.55	321.24	694.07	1.86	SF(Lo)	
20600.00	20196.40	9284.11	9052.26	5861.26	91.04	269.90	292.46	84.30	289.52	317.52	693.95	1.84	SF(Lo)	
20700.00	20296.40	9281.92	9050.44	5859.44	91.04	269.90	295.21	85.02	289.49	313.78	693.82	1.83	SF(Lo)	
20800.00	20396.40	9279.73	9048.62	5857.62	91.04	269.90	297.96	85.75	289.46	310.04	693.69	1.81	SF(Lo)	
20900.00	20496.40	9277.54	9046.80	5855.80	91.04	269.90	300.71	86.47	289.43	306.29	693.57	1.79	SF(Lo)	
21000.00	20596.40	9275.35	9044.98	5853.98	91.04	269.90	303.46	87.20	289.41	302.54	693.44	1.77	SF(Lo)	
21100.00	20696.40	9273.16	9043.16	5852.16	91.04	269.90	306.21	87.92	289.38	298.77	693.31	1.76	SF(Lo)	
21200.00	20796.40	9270.97	9041.35	5850.35	91.04	269.90	308.96	88.65	289.35	295.00	693.19	1.74	SF(Lo)	
21300.00	20896.40	9268.78	9039.53	5848.53	91.04	269.90	311.71	89.37	289.32	291.22	693.06	1.72	SF(Lo)	
21400.00	20996.40	9266.59	9037.71	5846.71	91.04	269.90	314.45	90.10	289.29	287.43	692.94	1.71	SF(Lo)	
21500.00	21096.40	9264.40	9035.89	5844.89	91.04	269.90	317.20	90.82	289.26	283.64	692.81	1.69	SF(Lo)	
21600.00	21196.40	9262.21	9034.07	5843.07	91.04	269.90	319.96	91.55	289.23	279.83	692.69	1.68	SF(Lo)	
21700.00	21296.40	9260.02	9032.25	5841.25	91.04	269.90	322.71	92.28	289.20	276.02	692.56	1.66	SF(Lo)	
21800.00	21396.40	9257.83	9030.43	5839.43	91.04	269.90	325.46	93.00	289.18	272.20	692.44	1.65	SF(Lo)	
21900.00	21496.40	9255.64	9028.61	5837.61	91.04	269.90	328.21	93.73	289.15	268.38	692.31	1.63	SF(Lo)	
22000.00	21596.39	9253.45	9026.79	5835.79	91.04	269.90	330.96	94.45	289.12	264.54	692.19	1.62	SF(Lo)	
22100.00	21696.39	9251.26	9024.97	5833.97	91.04	269.90	333.71	95.18	289.09	260.70	692.06	1.60	SF(Lo)	
22200.00	21796.39	9249.07	9023.15	5832.15	91.04	269.90	336.46	95.91	289.06	256.85	691.94	1.59	SF(Lo)	
22300.00	21896.39	9246.88	9021.33	5830.33	91.04	269.90	339.21	96.63	289.03	252.99	691.82	1.58	SF(Lo)	
22400.00	21996.39	9244.69	9019.51	5828.51	91.04	269.90	341.96	97.36	289.00	249.12	691.69	1.56	SF(Lo)	
22500.00	22096.39	9242.50	9017.69	5826.69	91.04	269.90	344.71	98.09	288.97	245.25	691.57	1.55	SF(Lo)	
22600.00	22196.39	9240.31	9015.87	5824.87	91.04	269.90	347.46	98.81	288.94	241.37	691.45	1.54	SF(Lo)	
22700.00	22296.39	9238.12	9014.05	5823.05	91.04	269.90	350.21	99.54	288.92	237.48	691.32	1.52	SF(Lo)	
22800.00	22396.39	9235.93	9012.23	5821.23	91.04	269.90	352.97	100.27	288.89	233.58	691.20	1.51	SF(Lo)	
22900.00	22496.39	9233.74	9010.41	5819.41	91.04	269.90	355.72	100.99	288.86	229.68	691.08	1.50	SF(Med)	

SD Anti-Collision Report

Secondary Well: James Ranch Unit D14 BS2A-SW #210H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S. Major (US ft)	S. Minor (US ft)	T. Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
23000.00	22596.39	9231.55	9008.59	5817.59	91.04	269.90	358.47	101.72	288.83	225.76	690.96	1.49	SF(Med)
23100.00	22696.39	9229.36	9006.77	5815.77	91.04	269.90	361.22	102.45	288.80	221.84	690.83	1.47	SF(Med)
23200.00	22796.39	9227.17	9004.95	5813.95	91.04	269.90	363.97	103.18	288.77	217.91	690.71	1.46	SF(Med)
23300.00	22896.39	9224.98	9003.13	5812.13	91.04	269.90	366.73	103.90	288.74	213.97	690.59	1.45	SF(Med)
23400.00	22996.39	9222.78	9001.31	5810.31	91.04	269.90	369.48	104.63	288.71	210.03	690.47	1.44	SF(Med)
23500.00	23096.38	9220.59	8999.49	5808.49	91.04	269.90	372.23	105.36	288.68	206.07	690.35	1.43	SF(Med)
23600.00	23196.38	9218.40	8997.67	5806.67	91.04	269.90	374.98	106.09	288.65	202.11	690.22	1.41	SF(Med)
23700.00	23296.38	9216.21	8995.85	5804.85	91.04	269.90	377.73	106.81	288.62	198.14	690.10	1.40	SF(Med)
23800.00	23396.38	9214.02	8994.03	5803.03	91.04	269.90	380.49	107.54	288.60	194.17	689.98	1.39	SF(Med)
23900.00	23496.38	9211.83	8992.21	5801.21	91.04	269.90	383.24	108.27	288.57	190.18	689.86	1.38	SF(Med)
24000.00	23596.38	9209.64	8990.39	5799.39	91.04	269.90	385.99	109.00	288.54	186.19	689.74	1.37	SF(Med)
24100.00	23696.38	9207.45	8988.57	5797.57	91.04	269.90	388.74	109.72	288.51	182.19	689.62	1.36	SF(Med)
24200.00	23796.38	9205.26	8986.75	5795.75	91.04	269.90	391.50	110.45	288.48	178.18	689.50	1.35	SF(Med)
24300.00	23896.38	9203.07	8984.93	5793.93	91.04	269.90	394.25	111.18	288.45	174.16	689.38	1.34	SF(Med)
24400.00	23996.38	9200.88	8983.11	5792.11	91.04	269.90	397.00	111.91	288.42	170.14	689.26	1.33	SF(Med)
24500.00	24096.38	9198.69	8981.29	5790.29	91.04	269.90	399.76	112.64	288.39	166.11	689.14	1.32	SF(Med)
24600.00	24196.38	9196.50	8979.47	5788.47	91.04	269.90	402.51	113.37	288.36	162.06	689.02	1.31	SF(Med)
24622.97	24219.35	9196.00	8979.05	5788.05	91.04	269.90	403.14	113.53	288.36	161.14	688.99	1.31	SF(Med)

Secondary Well: James Ranch Unit D14 BS2A-SW #210H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S. Major (US ft)	S. Minor (US ft)	T. Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
1300.00	1300.00	1300.00	1300.00	-1891.00	0.00	0.00	2.81	2.81	90.00	22.84	29.00	4.70	CC (Lo)
1400.00	1400.00	1400.00	1400.00	-1791.00	0.00	0.00	3.04	3.04	90.00	22.39	29.00	4.38	CC (Lo)
1500.00	1500.00	1500.00	1500.00	-1691.00	0.00	0.00	3.26	3.26	90.00	21.94	29.00	4.11	CC (Lo)
1600.00	1600.00	1600.00	1600.00	-1591.00	0.00	0.00	3.49	3.49	90.00	21.49	29.00	3.86	CC (Lo)
1700.00	1700.00	1700.00	1700.00	-1491.00	0.00	0.00	3.71	3.71	90.00	21.04	29.00	3.64	CC (Lo)
1800.00	1800.00	1800.00	1800.00	-1391.00	0.00	0.00	3.94	3.94	90.00	20.59	29.00	3.45	CC (Lo)
1900.00	1900.00	1900.00	1900.00	-1291.00	0.00	0.00	4.16	4.16	90.00	20.14	29.00	3.27	CC (Lo)
2000.00	2000.00	2000.00	2000.00	-1191.00	0.00	0.00	4.39	4.39	90.00	19.69	29.00	3.11	CC (Lo)
2100.00	2100.00	2100.00	2100.00	-1091.00	0.00	0.00	4.61	4.61	90.00	19.24	29.00	2.97	CC (Lo)
2200.00	2200.00	2200.00	2200.00	-991.00	0.00	0.00	4.83	4.83	90.00	18.79	29.00	2.84	CC (Lo)
2300.00	2300.00	2300.00	2300.00	-891.00	0.00	0.00	5.06	5.06	90.00	18.34	29.00	2.72	CC (Lo)
2400.00	2400.00	2400.00	2400.00	-791.00	0.00	0.00	5.28	5.28	90.00	17.89	29.00	2.61	CC (Lo)
2500.00	2500.00	2500.00	2500.00	-691.00	0.00	0.00	5.51	5.51	90.00	17.44	29.00	2.51	CC (Lo)
2600.00	2600.00	2600.00	2600.00	-591.00	0.00	0.00	5.73	5.73	90.00	16.99	29.00	2.41	CC (Lo)
2700.00	2700.00	2700.00	2700.00	-491.00	0.00	0.00	5.96	5.96	90.00	16.54	29.00	2.33	CC (Lo)
2800.00	2800.00	2800.00	2800.00	-391.00	0.00	0.00	6.18	6.18	90.00	16.09	29.00	2.25	CC (Lo)
2900.00	2900.00	2900.00	2900.00	-291.00	0.00	0.00	6.41	6.41	90.00	15.64	29.00	2.17	CC (Lo)
3000.00	3000.00	3000.00	3000.00	-191.00	0.00	0.00	6.63	6.63	90.00	15.19	29.00	2.10	CC (Lo)
3100.00	3099.80	3100.00	3099.78	-91.22	2.00	170.74	6.81	6.81	93.35	15.12	29.33	2.06	CC (Lo)
3200.00	3199.35	3200.00	3199.19	8.19	3.99	170.74	6.98	6.97	102.80	16.30	30.89	2.12	
3300.00	3298.43	3300.00	3297.89	106.89	5.97	170.74	7.15	7.13	115.95	20.14	35.09	2.35	
3400.00	3396.79	3400.00	3395.53	204.53	7.94	170.74	7.33	7.28	129.02	27.99	43.24	2.83	
3500.00	3494.22	3500.00	3491.78	300.78	9.88	170.74	7.52	7.43	139.50	40.31	55.80	3.60	
3600.00	3590.52	3600.00	3586.34	395.34	11.81	170.74	7.73	7.57	147.08	56.90	72.60	4.62	
15800.00	15299.00	9389.24	9148.87	5957.87	91.09	269.91	156.80	50.14	280.36	1066.58	1337.14	4.94	
15900.00	15399.00	9387.05	9146.97	5955.97	91.09	269.91	159.52	50.85	280.35	1062.23	1337.07	4.86	
16000.00	15499.00	9384.86	9145.07	5954.07	91.09	269.91	162.24	51.56	280.33	1057.88	1337.00	4.79	
16100.00	15599.00	9382.67	9143.17	5952.17	91.09	269.91	164.96	52.28	280.32	1053.53	1336.93	4.72	
16200.00	15699.00	9380.48	9141.26	5950.26	91.09	269.91	167.69	52.99	280.31	1049.17	1336.86	4.65	
16300.00	15799.00	9378.29	9139.36	5948.36	91.09	269.91	170.41	53.70	280.30	1044.80	1336.79	4.58	
16400.00	15899.00	9376.10	9137.46	5946.46	91.09	269.91	173.14	54.41	280.29	1040.43	1336.72	4.51	
16500.00	15999.00	9373.91	9135.56	5944.56	91.09	269.91	175.86	55.13	280.27	1036.06	1336.66	4.45	
16600.00	16099.00	9371.72	9133.66	5942.66	91.09	269.91	178.59	55.84	280.26	1031.68	1336.59	4.38	
16700.00	16199.00	9369.53	9131.75	5940.75	91.09	269.91	181.32	56.56	280.25	1027.29	1336.52	4.32	
16800.00	16299.00	9367.34	9129.85	5938.85	91.09	269.91	184.05	57.27	280.24	1022.90	1336.45	4.26	
16900.00	16399.00	9365.15	9127.95	5936.95	91.09	269.91	186.78	57.99	280.23	1018.51	1336.38	4.20	

SD Anti-Collision Report

Secondary Well: James Ranch Unit Dr 1 BS2A-7E #211H (P)(TVD Relative to Well TVD Reference)(All Azimuth Relative to GRID NORTH)														Risk	
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S. Major (US ft)	S. Minor (US ft)	T. Face to Sec (°)	ES (US ft)	CC (US ft)	SF			
17000.00	16499.00	9362.96	9126.05	5935.05	91.09	269.91	189.51	58.70	280.21	1014.11	1336.31	4.15			
17100.00	16599.00	9360.77	9124.14	5933.14	91.09	269.91	192.25	59.42	280.20	1009.70	1336.25	4.09			
17200.00	16699.00	9358.58	9122.24	5931.24	91.09	269.91	194.98	60.14	280.19	1005.29	1336.18	4.04			
17300.00	16799.00	9356.39	9120.34	5929.34	91.09	269.91	197.71	60.85	280.18	1000.88	1336.11	3.99			
17400.00	16899.00	9354.19	9118.44	5927.44	91.09	269.91	200.45	61.57	280.17	996.46	1336.04	3.93			
17500.00	16999.00	9352.00	9116.53	5925.53	91.09	269.91	203.18	62.29	280.15	992.03	1335.97	3.88			
17600.00	17099.00	9349.81	9114.63	5923.63	91.09	269.91	205.92	63.01	280.14	987.60	1335.90	3.84			
17700.00	17199.00	9347.62	9112.73	5921.73	91.09	269.91	208.65	63.73	280.13	983.17	1335.84	3.79			
17800.00	17298.99	9345.43	9110.83	5919.83	91.09	269.91	211.39	64.45	280.12	978.73	1335.77	3.74			
17900.00	17398.99	9343.24	9108.93	5917.93	91.09	269.91	214.13	65.16	280.11	974.28	1335.70	3.70			
18000.00	17498.99	9341.05	9107.02	5916.02	91.09	269.91	216.86	65.88	280.09	969.83	1335.63	3.65			
18100.00	17598.99	9338.86	9105.12	5914.12	91.09	269.91	219.60	66.60	280.08	965.38	1335.57	3.61			
18200.00	17698.99	9336.67	9103.22	5912.22	91.09	269.91	222.34	67.32	280.07	960.91	1335.50	3.57			
18300.00	17798.99	9334.48	9101.32	5910.32	91.09	269.91	225.08	68.04	280.06	956.45	1335.43	3.52			
18400.00	17898.99	9332.29	9099.41	5908.41	91.09	269.91	227.82	68.76	280.04	951.98	1335.36	3.48			
18500.00	17998.99	9330.10	9097.51	5906.51	91.09	269.91	230.56	69.48	280.03	947.50	1335.30	3.44			
18600.00	18098.99	9327.91	9095.61	5904.61	91.09	269.91	233.30	70.21	280.02	943.02	1335.23	3.40			
18700.00	18198.99	9325.72	9093.71	5902.71	91.09	269.91	236.04	70.93	280.01	938.53	1335.16	3.37			
18800.00	18298.99	9323.53	9091.80	5900.80	91.09	269.91	238.78	71.65	280.00	934.04	1335.09	3.33			
18900.00	18398.99	9321.34	9089.90	5898.90	91.09	269.91	241.53	72.37	279.98	929.54	1335.03	3.29			
19000.00	18498.99	9319.15	9088.00	5897.00	91.09	269.91	244.27	73.09	279.97	925.04	1334.96	3.26			
19100.00	18598.99	9316.96	9086.10	5895.10	91.09	269.91	247.01	73.81	279.96	920.53	1334.89	3.22			
19200.00	18698.99	9314.77	9084.20	5893.20	91.09	269.91	249.75	74.54	279.95	916.02	1334.83	3.19			
19300.00	18798.99	9312.58	9082.29	5891.29	91.09	269.91	252.50	75.26	279.94	911.50	1334.76	3.15			
19400.00	18898.99	9310.39	9080.39	5889.39	91.09	269.91	255.24	75.98	279.92	906.98	1334.69	3.12			
19500.00	18998.99	9308.20	9078.49	5887.49	91.09	269.91	257.98	76.70	279.91	902.45	1334.63	3.09			
19600.00	19098.99	9306.01	9076.59	5885.59	91.09	269.91	260.73	77.43	279.90	897.92	1334.56	3.06			
19700.00	19198.99	9303.82	9074.68	5883.68	91.09	269.91	263.47	78.15	279.89	893.38	1334.49	3.03			
19800.00	19298.99	9301.63	9072.78	5881.78	91.09	269.91	266.22	78.87	279.88	888.84	1334.43	2.99			
19900.00	19398.99	9299.44	9070.88	5879.88	91.09	269.91	268.96	79.60	279.86	884.29	1334.36	2.96			
20000.00	19498.99	9297.25	9068.98	5877.98	91.09	269.91	271.71	80.32	279.85	879.73	1334.29	2.94			
20100.00	19598.99	9295.06	9067.08	5876.08	91.09	269.91	274.45	81.05	279.84	875.17	1334.23	2.91			
20200.00	19698.99	9292.87	9065.17	5874.17	91.09	269.91	277.20	81.77	279.83	870.61	1334.16	2.88			
20300.00	19798.98	9290.68	9063.27	5872.27	91.09	269.91	279.95	82.49	279.82	866.04	1334.09	2.85			
20400.00	19898.98	9288.49	9061.37	5870.37	91.09	269.91	282.69	83.22	279.80	861.46	1334.03	2.82			
20500.00	19998.98	9286.30	9059.47	5868.47	91.09	269.91	285.44	83.94	279.79	856.88	1333.96	2.80			
20600.00	20098.98	9284.11	9057.56	5866.56	91.09	269.91	288.19	84.67	279.78	852.30	1333.89	2.77			
20700.00	20198.98	9281.92	9055.66	5864.66	91.09	269.91	290.93	85.39	279.77	847.71	1333.83	2.74			
20800.00	20298.98	9279.73	9053.76	5862.76	91.09	269.91	293.68	86.12	279.76	843.11	1333.76	2.72			
20900.00	20398.98	9277.54	9051.86	5860.86	91.09	269.91	296.43	86.84	279.74	838.51	1333.70	2.69			
21000.00	20498.98	9275.35	9049.95	5858.95	91.09	269.91	299.17	87.57	279.73	833.91	1333.63	2.67			
21100.00	20598.98	9273.16	9048.05	5857.05	91.09	269.91	301.92	88.29	279.72	829.30	1333.56	2.64			
21200.00	20698.98	9270.97	9046.15	5855.15	91.09	269.91	304.67	89.02	279.71	824.68	1333.50	2.62			
21300.00	20798.98	9268.78	9044.25	5853.25	91.09	269.91	307.42	89.74	279.70	820.06	1333.43	2.60			
21400.00	20898.98	9266.59	9042.35	5851.35	91.09	269.91	310.17	90.47	279.68	815.43	1333.37	2.57			
21500.00	20998.98	9264.40	9040.44	5849.44	91.09	269.91	312.91	91.20	279.67	810.80	1333.30	2.55			
21600.00	21098.98	9262.21	9038.54	5847.54	91.09	269.91	315.66	91.92	279.66	806.17	1333.24	2.53			
21700.00	21198.98	9260.02	9036.64	5845.64	91.09	269.91	318.41	92.65	279.65	801.52	1333.17	2.51			
21800.00	21298.98	9257.83	9034.74	5843.74	91.09	269.91	321.16	93.37	279.64	796.88	1333.10	2.49			
21900.00	21398.98	9255.64	9032.83	5841.83	91.09	269.91	323.91	94.10	279.62	792.22	1333.04	2.46			
22000.00	21498.98	9253.45	9030.93	5839.93	91.09	269.91	326.66	94.83	279.61	787.57	1332.97	2.44			
22100.00	21598.98	9251.26	9029.03	5838.03	91.09	269.91	329.41	95.55	279.60	782.91	1332.91	2.42			
22200.00	21698.98	9249.07	9027.13	5836.13	91.09	269.91	332.16	96.28	279.59	778.24	1332.84	2.40			
22300.00	21798.98	9246.88	9025.22	5834.22	91.09	269.91	334.91	97.01	279.57	773.57	1332.78	2.38			
22400.00	21898.98	9244.69	9023.32	5832.32	91.09	269.91	337.66	97.73	279.56	768.89	1332.71	2.36			
22500.00	21998.98	9242.50	9021.42	5830.42	91.09	269.91	340.41	98.46	279.55	764.21	1332.65	2.34			
22600.00	22098.98	9240.31	9019.52	5828.52	91.09	269.91	343.16	99.19	279.54	759.52	1332.58	2.33			
22700.00	22198.97	9238.12	9017.62	5826.62	91.09	269.91	345.91	99.91	279.53	754.83	1332.52	2.31			

SD Anti-Collision Report

Secondary Well: James Ranch Unit D1-B52A-7E #211H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
22800.00	22298.97	9235.93	9015.71	5824.71	91.09	269.91	348.66	100.64	279.51	750.13	1332.45	2.29	
22900.00	22398.97	9233.74	9013.81	5822.81	91.09	269.91	351.41	101.37	279.50	745.43	1332.39	2.27	
23000.00	22498.97	9231.55	9011.91	5820.91	91.09	269.91	354.16	102.10	279.49	740.72	1332.32	2.25	
23100.00	22598.97	9229.36	9010.01	5819.01	91.09	269.91	356.91	102.82	279.48	736.01	1332.26	2.23	
23200.00	22698.97	9227.17	9008.10	5817.10	91.09	269.91	359.66	103.55	279.47	731.29	1332.19	2.22	
23300.00	22798.97	9224.98	9006.20	5815.20	91.09	269.91	362.41	104.28	279.45	726.56	1332.13	2.20	
23400.00	22898.97	9222.78	9004.30	5813.30	91.09	269.91	365.16	105.01	279.44	721.84	1332.07	2.18	
23500.00	22998.97	9220.59	9002.40	5811.40	91.09	269.91	367.91	105.73	279.43	717.10	1332.00	2.17	
23600.00	23098.97	9218.40	9000.50	5809.50	91.09	269.91	370.67	106.46	279.42	712.37	1331.94	2.15	
23700.00	23198.97	9216.21	8998.59	5807.59	91.09	269.91	373.42	107.19	279.41	707.62	1331.87	2.13	
23800.00	23298.97	9214.02	8996.69	5805.69	91.09	269.91	376.17	107.92	279.39	702.88	1331.81	2.12	
23900.00	23398.97	9211.83	8994.79	5803.79	91.09	269.91	378.92	108.64	279.38	698.12	1331.74	2.10	
24000.00	23498.97	9209.64	8992.89	5801.89	91.09	269.91	381.67	109.37	279.37	693.37	1331.68	2.09	
24100.00	23598.97	9207.45	8990.98	5799.98	91.09	269.91	384.42	110.10	279.36	688.60	1331.62	2.07	
24200.00	23698.97	9205.26	8989.08	5798.08	91.09	269.91	387.18	110.83	279.34	683.84	1331.55	2.06	
24300.00	23798.97	9203.07	8987.18	5796.18	91.09	269.91	389.93	111.56	279.33	679.06	1331.49	2.04	
24400.00	23898.97	9200.88	8985.28	5794.28	91.09	269.91	392.68	112.29	279.32	674.29	1331.42	2.03	
24500.00	23998.97	9198.69	8983.37	5792.37	91.09	269.91	395.43	113.01	279.31	669.50	1331.36	2.01	
24600.00	24098.97	9196.50	8981.47	5790.47	91.09	269.91	398.18	113.74	279.30	664.72	1331.30	2.00	SF(Lo)
24622.97	24121.94	9196.00	8981.04	5790.04	91.09	269.91	398.82	113.91	279.29	663.62	1331.28	1.99	SF(Lo)

Secondary Well: James Ranch Unit D1-B52A-7W #212H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
1900.00	1900.00	1900.00	1900.00	-1291.00	0.00	0.00	4.16	4.16	89.74	34.74	43.60	4.92	
2000.00	2000.00	2000.00	2000.00	-1191.00	0.00	0.00	4.39	4.39	89.74	34.29	43.60	4.68	
2100.00	2100.00	2100.00	2100.00	-1091.00	0.00	0.00	4.61	4.61	89.74	33.84	43.60	4.47	
2200.00	2200.00	2200.00	2200.00	-991.00	0.00	0.00	4.83	4.83	89.74	33.39	43.60	4.27	
2300.00	2300.00	2300.00	2300.00	-891.00	0.00	0.00	5.06	5.06	89.74	32.94	43.60	4.09	
2400.00	2400.00	2400.00	2400.00	-791.00	0.00	0.00	5.28	5.28	89.74	32.49	43.60	3.92	
2500.00	2500.00	2500.00	2500.00	-691.00	0.00	0.00	5.51	5.51	89.74	32.04	43.60	3.77	
2600.00	2600.00	2600.00	2600.00	-591.00	0.00	0.00	5.73	5.73	89.74	31.59	43.60	3.63	
2700.00	2700.00	2700.00	2700.00	-491.00	0.00	0.00	5.96	5.96	89.74	31.14	43.60	3.50	
2800.00	2800.00	2800.00	2800.00	-391.00	0.00	0.00	6.18	6.18	89.74	30.69	43.60	3.38	
2900.00	2900.00	2900.00	2900.00	-291.00	0.00	0.00	6.41	6.41	89.74	30.24	43.60	3.26	
3000.00	3000.00	3000.00	3000.00	-191.00	0.00	0.00	6.63	6.63	89.74	29.79	43.60	3.16	
3100.00	3100.00	3100.00	3100.00	-91.00	0.00	0.00	6.86	6.86	89.74	29.34	43.60	3.06	
3200.00	3200.00	3200.00	3200.00	9.00	0.00	0.00	7.08	7.08	89.74	28.89	43.60	2.96	
3300.00	3300.00	3300.00	3300.00	109.00	0.00	0.00	7.31	7.31	89.74	28.44	43.60	2.88	
3400.00	3400.00	3400.00	3400.00	209.00	0.00	0.00	7.53	7.53	89.74	27.99	43.60	2.79	
3500.00	3500.00	3500.00	3500.00	309.00	0.00	0.00	7.76	7.76	89.74	27.55	43.60	2.72	
3600.00	3600.00	3600.00	3600.00	409.00	0.00	0.00	7.98	7.98	89.74	27.10	43.60	2.64	
3700.00	3700.00	3700.00	3700.00	509.00	0.00	0.00	8.21	8.21	89.74	26.65	43.60	2.57	
3800.00	3800.00	3800.00	3800.00	609.00	0.00	0.00	8.43	8.43	89.74	26.20	43.60	2.51	
3900.00	3900.00	3900.00	3900.00	709.00	0.00	0.00	8.66	8.66	89.74	25.75	43.60	2.44	
4000.00	4000.00	4000.00	4000.00	809.00	0.00	0.00	8.88	8.88	89.74	25.30	43.60	2.38	
4100.00	4100.00	4100.00	4100.00	909.00	0.00	0.00	9.11	9.11	89.74	24.85	43.60	2.33	
4200.00	4199.62	4200.00	4199.60	1008.60	1.99	166.83	9.28	9.28	91.93	24.87	44.02	2.30	
4300.00	4299.00	4300.00	4298.84	1107.84	3.98	166.83	9.45	9.43	98.22	26.13	45.66	2.34	
4400.00	4397.90	4400.00	4397.37	1206.37	5.96	166.83	9.62	9.58	107.51	29.61	49.49	2.49	
4500.00	4496.10	4500.00	4494.84	1303.84	7.92	166.83	9.79	9.73	117.93	36.48	56.64	2.81	
4600.00	4593.37	4600.00	4590.93	1399.93	9.87	166.83	9.97	9.86	127.63	47.50	67.86	3.33	
4700.00	4689.50	4700.00	4685.35	1494.35	11.79	166.83	10.17	9.99	135.63	62.86	83.34	4.07	
4800.00	4784.31	4800.00	4777.82	1586.82	13.69	166.83	10.37	10.11	141.81	82.36	102.93	5.00	
18000.00	18297.66	9341.05	9109.67	5918.67	91.07	269.94	223.58	73.89	276.67	1590.33	1991.95	4.96	
18100.00	18397.66	9338.86	9107.80	5916.80	91.07	269.94	226.32	74.62	276.66	1585.46	1991.84	4.90	
18200.00	18497.66	9336.67	9105.93	5914.93	91.07	269.94	229.05	75.34	276.65	1580.59	1991.74	4.84	
18300.00	18597.66	9334.48	9104.06	5913.06	91.07	269.94	231.79	76.07	276.64	1575.72	1991.63	4.79	

5D Anti-Collision Report

Secondary Wells James Ranch Unit D1.1 SS2A-7W #21.2H (P) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S. Major (US ft)	S. Minor (US ft)	T. Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
18400.00	18697.66	9332.29	9102.20	5911.20	91.07	269.94	234.53	76.79	276.63	1570.84	1991.52	4.73	
18500.00	18797.66	9330.10	9100.33	5909.33	91.07	269.94	237.27	77.51	276.63	1565.96	1991.42	4.68	
18600.00	18897.66	9327.91	9098.46	5907.46	91.07	269.94	240.00	78.24	276.62	1561.07	1991.31	4.63	
18700.00	18997.66	9325.72	9096.59	5905.59	91.07	269.94	242.74	78.96	276.61	1556.19	1991.20	4.58	
18800.00	19097.66	9323.53	9094.73	5903.73	91.07	269.94	245.48	79.69	276.60	1551.29	1991.10	4.53	
18900.00	19197.66	9321.34	9092.86	5901.86	91.07	269.94	248.22	80.41	276.59	1546.40	1990.99	4.48	
19000.00	19297.66	9319.15	9090.99	5899.99	91.07	269.94	250.96	81.14	276.58	1541.50	1990.88	4.43	
19100.00	19397.66	9316.96	9089.13	5898.13	91.07	269.94	253.70	81.86	276.57	1536.59	1990.78	4.38	
19200.00	19497.65	9314.77	9087.26	5896.26	91.07	269.94	256.44	82.59	276.56	1531.69	1990.67	4.34	
19300.00	19597.65	9312.58	9085.39	5894.39	91.07	269.94	259.18	83.32	276.55	1526.78	1990.56	4.29	
19400.00	19697.65	9310.39	9083.52	5892.52	91.07	269.94	261.92	84.04	276.54	1521.86	1990.46	4.25	
19500.00	19797.65	9308.20	9081.66	5890.66	91.07	269.94	264.67	84.77	276.54	1516.95	1990.35	4.20	
19600.00	19897.65	9306.01	9079.79	5888.79	91.07	269.94	267.41	85.49	276.53	1512.02	1990.25	4.16	
19700.00	19997.65	9303.82	9077.92	5886.92	91.07	269.94	270.15	86.22	276.52	1507.10	1990.14	4.12	
19800.00	20097.65	9301.63	9076.05	5885.05	91.07	269.94	272.89	86.94	276.51	1502.17	1990.03	4.08	
19900.00	20197.65	9299.44	9074.19	5883.19	91.07	269.94	275.64	87.67	276.50	1497.24	1989.93	4.04	
20000.00	20297.65	9297.25	9072.32	5881.32	91.07	269.94	278.38	88.40	276.49	1492.30	1989.82	4.00	
20100.00	20397.65	9295.06	9070.45	5879.45	91.07	269.94	281.12	89.12	276.48	1487.36	1989.72	3.96	
20200.00	20497.65	9292.87	9068.58	5877.58	91.07	269.94	283.87	89.85	276.47	1482.41	1989.61	3.92	
20300.00	20597.65	9290.68	9066.72	5875.72	91.07	269.94	286.61	90.58	276.46	1477.47	1989.50	3.89	
20400.00	20697.65	9288.49	9064.85	5873.85	91.07	269.94	289.36	91.30	276.45	1472.52	1989.40	3.85	
20500.00	20797.65	9286.30	9062.98	5871.98	91.07	269.94	292.10	92.03	276.45	1467.56	1989.29	3.81	
20600.00	20897.65	9284.11	9061.11	5870.11	91.07	269.94	294.85	92.76	276.44	1462.60	1989.19	3.78	
20700.00	20997.65	9281.92	9059.25	5868.25	91.07	269.94	297.59	93.48	276.43	1457.64	1989.08	3.74	
20800.00	21097.65	9279.73	9057.38	5866.38	91.07	269.94	300.34	94.21	276.42	1452.67	1988.98	3.71	
20900.00	21197.65	9277.54	9055.51	5864.51	91.07	269.94	303.08	94.94	276.41	1447.70	1988.87	3.68	
21000.00	21297.64	9275.35	9053.64	5862.64	91.07	269.94	305.83	95.66	276.40	1442.73	1988.77	3.64	
21100.00	21397.64	9273.16	9051.78	5860.78	91.07	269.94	308.58	96.39	276.39	1437.75	1988.66	3.61	
21200.00	21497.64	9270.97	9049.91	5858.91	91.07	269.94	311.32	97.12	276.38	1432.77	1988.56	3.58	
21300.00	21597.64	9268.78	9048.04	5857.04	91.07	269.94	314.07	97.85	276.37	1427.78	1988.45	3.55	
21400.00	21697.64	9266.59	9046.18	5855.18	91.07	269.94	316.82	98.57	276.36	1422.79	1988.34	3.52	
21500.00	21797.64	9264.40	9044.31	5853.31	91.07	269.94	319.56	99.30	276.36	1417.80	1988.24	3.49	
21600.00	21897.64	9262.21	9042.44	5851.44	91.07	269.94	322.31	100.03	276.35	1412.80	1988.13	3.46	
21700.00	21997.64	9260.02	9040.57	5849.57	91.07	269.94	325.06	100.76	276.34	1407.80	1988.03	3.43	
21800.00	22097.64	9257.83	9038.71	5847.71	91.07	269.94	327.80	101.48	276.33	1402.80	1987.92	3.40	
21900.00	22197.64	9255.64	9036.84	5845.84	91.07	269.94	330.55	102.21	276.32	1397.79	1987.82	3.37	
22000.00	22297.64	9253.45	9034.97	5843.97	91.07	269.94	333.30	102.94	276.31	1392.78	1987.71	3.34	
22100.00	22397.64	9251.26	9033.10	5842.10	91.07	269.94	336.05	103.67	276.30	1387.77	1987.61	3.31	
22200.00	22497.64	9249.07	9031.24	5840.24	91.07	269.94	338.80	104.40	276.29	1382.75	1987.50	3.29	
22300.00	22597.64	9246.88	9029.37	5838.37	91.07	269.94	341.55	105.12	276.28	1377.73	1987.40	3.26	
22400.00	22697.64	9244.69	9027.50	5836.50	91.07	269.94	344.29	105.85	276.27	1372.70	1987.30	3.23	
22500.00	22797.64	9242.50	9025.63	5834.63	91.07	269.94	347.04	106.58	276.27	1367.67	1987.19	3.21	
22600.00	22897.64	9240.31	9023.77	5832.77	91.07	269.94	349.79	107.31	276.26	1362.64	1987.09	3.18	
22700.00	22997.64	9238.12	9021.90	5830.90	91.07	269.94	352.54	108.04	276.25	1357.60	1986.98	3.16	
22800.00	23097.64	9235.93	9020.03	5829.03	91.07	269.94	355.29	108.77	276.24	1352.56	1986.88	3.13	
22900.00	23197.63	9233.74	9018.16	5827.16	91.07	269.94	358.04	109.49	276.23	1347.52	1986.77	3.11	
23000.00	23297.63	9231.55	9016.30	5825.30	91.07	269.94	360.79	110.22	276.22	1342.47	1986.67	3.08	
23100.00	23397.63	9229.36	9014.43	5823.43	91.07	269.94	363.54	110.95	276.21	1337.42	1986.56	3.06	
23200.00	23497.63	9227.17	9012.56	5821.56	91.07	269.94	366.29	111.68	276.20	1332.36	1986.46	3.04	
23300.00	23597.63	9224.98	9010.70	5819.70	91.07	269.94	369.04	112.41	276.19	1327.30	1986.36	3.01	
23400.00	23697.63	9222.78	9008.83	5817.83	91.07	269.94	371.79	113.14	276.18	1322.24	1986.25	2.99	
23500.00	23797.63	9220.59	9006.96	5815.96	91.07	269.94	374.54	113.87	276.17	1317.17	1986.15	2.97	
23600.00	23897.63	9218.40	9005.09	5814.09	91.07	269.94	377.29	114.60	276.17	1312.10	1986.04	2.95	
23700.00	23997.63	9216.21	9003.23	5812.23	91.07	269.94	380.04	115.32	276.16	1307.03	1985.94	2.93	
23800.00	24097.63	9214.02	9001.36	5810.36	91.07	269.94	382.79	116.05	276.15	1301.95	1985.83	2.90	
23900.00	24197.63	9211.83	8999.49	5808.49	91.07	269.94	385.54	116.78	276.14	1296.87	1985.73	2.88	
24000.00	24297.63	9209.64	8997.62	5806.62	91.07	269.94	388.29	117.51	276.13	1291.79	1985.63	2.86	
24100.00	24397.63	9207.45	8995.76	5804.76	91.07	269.94	391.04	118.24	276.12	1286.70	1985.52	2.84	

SD Anti-Collision Report

Secondary Well: James Ranch Unit DB 4 BS2A-7W #212H (p) (TVD relative to Well TVD Reference) (All Azimuth Relative to GRID NORTH)													
Pri MD (US ft)	Sec MD (US ft)	Pri TVD (US ft)	Sec TVD (US ft)	TVD (MSL) (US ft)	Inc (°)	Az (°)	S.Major (US ft)	S.Minor (US ft)	T.Face to Sec (°)	ES (US ft)	CC (US ft)	SF	Risk
24200.00	24497.63	9205.26	8993.89	5802.89	91.07	269.94	393.79	118.97	276.11	1281.61	1985.42	2.82	
24300.00	24597.63	9203.07	8992.02	5801.02	91.07	269.94	396.54	119.70	276.10	1276.52	1985.32	2.80	
24400.00	24697.63	9200.88	8990.15	5799.15	91.07	269.94	399.30	120.43	276.09	1271.42	1985.21	2.78	
24500.00	24797.63	9198.69	8988.29	5797.29	91.07	269.94	402.05	121.16	276.08	1266.32	1985.11	2.76	
24600.00	24897.63	9196.50	8986.42	5795.42	91.07	269.94	404.80	121.89	276.08	1261.21	1985.00	2.74	
24622.97	24920.08	9196.00	8986.00	5795.00	91.07	269.94	405.42	122.05	276.07	1259.51	1984.98	2.74	

**Weatherford**

Weatherford Drilling Services

GeoDec4 v2.9.1.0

Report Date: February 07, 2019
Job Number: _____
Customer: XTO Energy Inc.
Well Name: James Ranch Unit DI 1 BSI-3E #213H
API Number: _____
Rig Name: _____
Location: Eddy Co, NM (Nad 27 NME)
Block: _____
Engineer: RWJ

NAD27 / New Mexico East	NAD27
Projected Coordinate System	Geodetic Coordinate System
Datum: North American Datum 1927	Datum: North American Datum 1927
Ellipsoid: Clarke 1866	Ellipsoid: Clarke 1866
EPSG: 32012	EPSG: 4267
North: 502465.60 US Survey Foot	Latitude: 32.380588 Degree
East: 639067.70 US Survey Foot	Longitude: -103.882852 Degree
Convergence: 0.24°	
Declination: 6.99°	
Total Correction: 6.75°	
Datum Transformation: none	

Geodetic Location WGS84

MSL Elevation = 3166 usft
Latitude = 32° 22' 50.12" N
Longitude = 103° 52' 58.27" W

Magnetic Declination = 6.99 deg	[True North Offset]
Local Gravity = .9988 g	Checksum = 6672
Local Field Strength = 47877 nT	Magnetic Vector X = 23701 nT
Magnetic Dip = 60.08 deg	Magnetic Vector Y = 2906 nT
Magnetic Model = bggm2018.bgs	Magnetic Vector Z = 41497 nT
Run Date = February 25, 2019	Magnetic Vector H = 23878 nT

Signed: _____ Date: _____

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