

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM02953B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
891000558X

8. Well Name and No.
JAMES RANCH UNIT DI1 BS2A-7E 211H

9. API Well No.
30-015-45399-00-X1

10. Field and Pool or Exploratory Area
WILDCAT

11. County or Parish, State
EDDY COUNTY, NM

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
XTO PERMIAN OPERATING LLC
Contact: STEPHANIE RABADUE
E-Mail: stephanie_Rabadue@xtoenergy.com

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

3b. Phone No. (include area code)
Ph: 432-620-6714

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 21 T22S R30E SENE 1517FNL 1328FEL
32.380775 N Lat, 103.881897 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 recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

XTO Permian Operating, LLC respectfully requests the following on the James Ranch Unit DI 1 BS2A-7E 211H:

1. Change SHL ?Slot? from 1517?FNL & 1328?FEL to 1547?FNL & 1747?FEL. No additional surface disturbance.
2. Use a Permanent Wellhead ? GE RSH Multibowl System.
3. Change well from 1.5 mile lateral to a 3-mile lateral.
4. Update Casing Design.
5. Change take points and bottom hole.
6. Change MD from 18978? to 23304?.

RECEIVED

— OVER — JUN 25 2019

Attachments:
1. C102

6-7-2019 JR
Surface good same COA'S

Eng okay 6/7/19 CRW

DISTRICT II-ARTESIA O.C.D.

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

Electronic Submission #468121 verified by the BLM Well Information System
For XTO PERMIAN OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 06/07/2019 (19PP2343SE)

Name (Printed/Typed) STEPHANIE RABADUE Title REGULATORY COORDINATOR

Signature (Electronic Submission) Date 06/07/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By *[Signature]* Title *[Signature]* Date *[Signature]*

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 *[Signature]*

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

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

Additional data for EC transaction #468121 that would not fit on the form

32. Additional remarks, continued

- 2.Drilling Program
- 3.Direction Plan
- 4.MBS Diagram

4. Cement Program

Surface Casing: 13-3/8", 48 New H-40, STC casing to be set at +/- 470'

Tail: 480 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 +/- 4273'

Lead: 1250 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 +/- 23304'

Lead: 400 sxs NeoCem (mixed at 11.0 ppg, 2.77 ft³/sx, 12.26 gal/sx water)

Tail: 3000 sxs VersaCem (mixed at 13.2 ppg, 1.44 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 2493 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 470'	17-1/2"	FW/Native	8.4-8.8	35-40	NC
470' to 4273'	12-1/4"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
4273' to 23304'	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

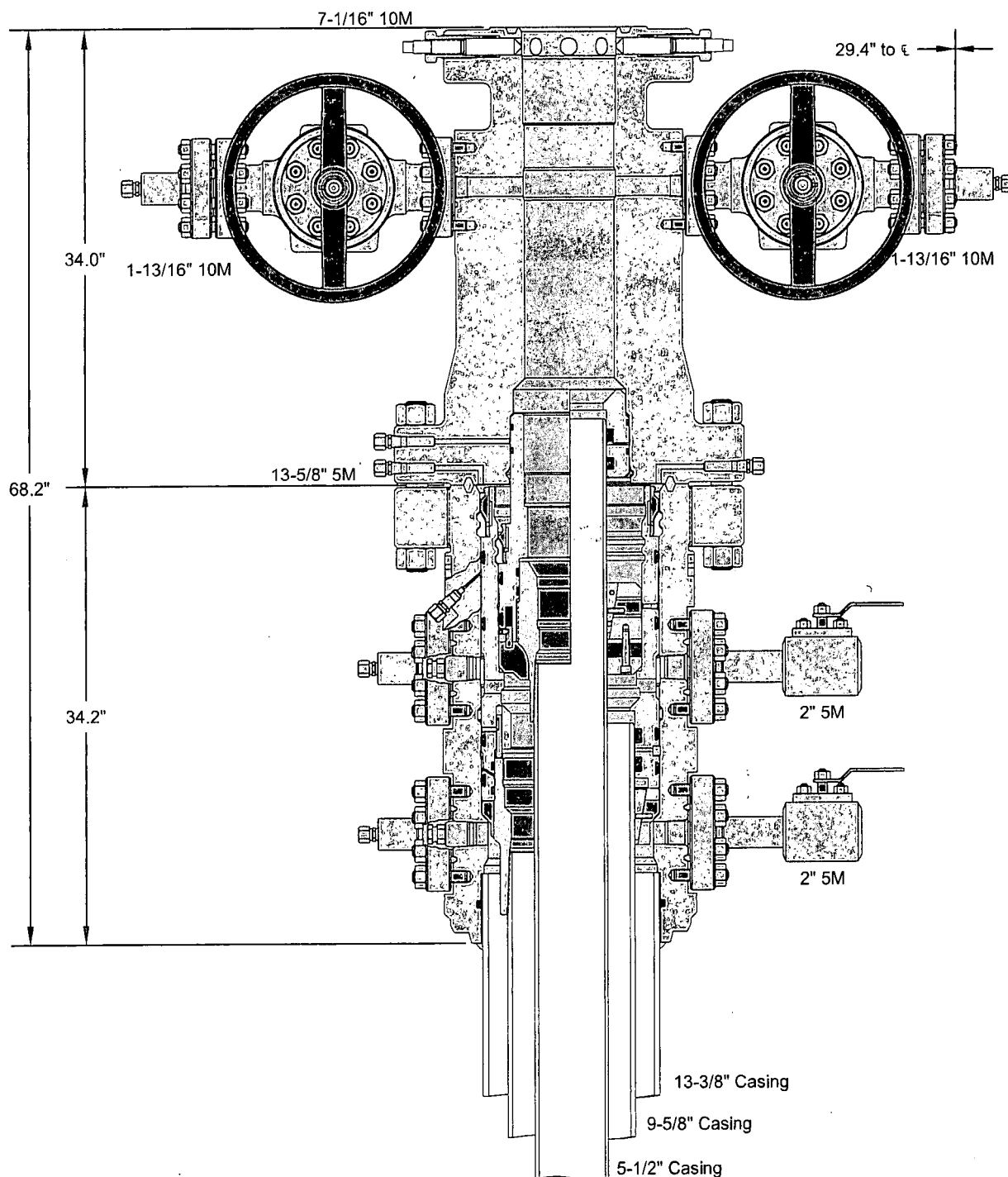
None Anticipated. BHT of 140 to 160 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. 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 4574 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.



GE Oil & Gas



ALL DIMENSIONS ARE APPROXIMATE

This drawing is the property of GE Oil & Gas Pressure Control LP and is considered confidential. Unless otherwise approved in writing, neither it nor its contents may be used, copied, transmitted or reproduced except for the sole purpose of GE Oil & Gas Pressure Control LP.

XTO ENERGY, INC.

13-3/8" x 9-5/8" x 5-1/2" 10M RSH-2 Wellhead
Assembly, With T-EBS-F Tubing Head

DRAWN VJK 16FEB17

APPRV KN 16FEB17

FOR REFERENCE ONLY

DRAWING NO. 10012842



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 BS2A-7E #211H*
File number: *13783654*
Plan: *P1:V6*

5 June 2019




Weatherford®

James Ranch Unit DI 1 BS2A-7E #211H

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 BS2A- 7E #211H	Position (Relative to Site Centre)			
	+N/-S: -0.20 US ft	Northing: 502465.60 US ft	Latitude: 32° 22' 50.12"	
	+E/-W: 13.90 US ft	Easting: 639096.70 US ft	Longitude: -103° 52' 57.93"	
	Elevation above MSL: 3166.00 US ft			
Comment:				
Well: James Ranch Unit DI 1 BS2A- 7E #211H	Type: Main well		UWI:	Plan: P1:V6
	File Number:	Comment:		
	13783654			
	Closure Distance: 14481.5 US ft		Closure Azimuth: 260.31°	
	Vertical Section: Position of Origin (Relative to Slot centre)			
	+N/-S: 0.00 US ft		+E/-W: 0.00 US ft	Az: 269.91°
	Magnetic Parameters:			
	Model: MagVAR IFR	Field Strength: 47923.0 nT	Declination: 7.15°	Dip: 60.11° Date: 06/Jun/2019

Drill floor Plan: P1:V6
Rig Height (Well TVD Reference): Elevation above MSL: 3191.00 US ft **Inclination:** 0.00° **Azimuth:** 0.00°
25.00 US ft

Target set: James Ranch Unit DI 1 BS2A-7E #211H Comment:							
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)
FTP	9490.00	6299.00	-2415.10	104.40	500050.50	639201.10	924.71
5278VS	9371.00	6180.00	-2422.56	-5274.20	500043.04	633822.50	0.00
11989VS	9147.00	5956.00	-2432.96	-11894.19	500032.64	627202.51	0.00
LTP	9103.92	5912.92	-2438.31	-14225.00	500027.29	624871.70	1.69
PBHL 211H	9103.00	5912.00	-2436.70	-14275.00	500028.90	624821.70	0.00

5D Plan Report

Wellpath created using minimum curvature.

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	
600.00	0.00	0.00	600.00	-2591.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	Nudge
800.00	3.00	185.01	799.91	-2391.09	0.47	-5.21	-0.46	1.50	0.00	185.01	1.50	Hold
1000.00	3.00	185.00	999.63	-2191.37	1.39	-15.64	-1.37	-0.00	-0.00	270.00	0.00	Drop
1300.00	0.00	0.00	1299.50	-1891.50	2.09	-23.46	-2.05	-1.00	0.00	180.00	1.00	Hold
3000.50	0.00	0.00	3000.00	-191.00	2.09	-23.46	-2.05	0.00	0.00	0.00	0.00	Nudge
4594.61	23.91	197.62	4548.24	1357.24	101.81	-335.93	-101.29	1.50	0.00	197.62	1.50	Hold
9461.14	23.91	197.62	8997.08	5806.08	701.82	-2215.93	-698.34	0.00	0.00	0.00	0.00	KOP
10301.83	91.25	269.91	9458.00	6267.00	1281.90	-2416.28	-1278.11	8.01	8.60	73.24	10.00	LP
14298.88	91.25	269.91	9371.00	6180.00	5278.00	-2422.56	-5274.20	-0.00	0.00	179.55	0.00	5278'VS
14345.35	91.94	269.91	9369.71	6178.71	5324.46	-2422.63	-5320.66	1.50	-0.00	360.00	1.50	Hold
20863.63	91.94	269.91	9148.55	5957.55	11838.98	-2432.87	-11835.17	0.00	0.00	0.00	0.00	Drop
20922.67	91.06	269.91	9147.00	5956.00	11898.00	-2432.96	-11894.19	-1.50	0.00	180.00	1.50	11989'VS
23253.86	91.06	269.91	9103.92	5912.92	14228.79	-2436.62	-14224.98	0.00	0.00	0.00	0.00	LTP
23303.89	91.06	269.91	9103.00	5912.00	14278.81	-2436.70	-14275.00	0.00	0.00	0.00	0.00	PBHL 211H

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	639096.70	0.00	
100.00	0.00	0.00	100.00	-3091.00	-0.00	0.00	0.00	502465.60	639096.70	0.00	
200.00	0.00	0.00	200.00	-2991.00	-0.00	0.00	0.00	502465.60	639096.70	0.00	
300.00	0.00	0.00	300.00	-2891.00	-0.00	0.00	0.00	502465.60	639096.70	0.00	
400.00	0.00	0.00	400.00	-2791.00	-0.00	0.00	0.00	502465.60	639096.70	0.00	
500.00	0.00	0.00	500.00	-2691.00	-0.00	0.00	0.00	502465.60	639096.70	0.00	
600.00	0.00	0.00	600.00	-2591.00	-0.00	0.00	0.00	502465.60	639096.70	0.00	Nudge
700.00	1.50	185.01	699.99	-2491.01	0.12	-1.30	-0.11	502464.30	639096.59	1.50	
800.00	3.00	185.01	799.91	-2391.09	0.47	-5.21	-0.46	502460.39	639096.24	1.50	Hold
900.00	3.00	185.01	899.77	-2291.23	0.93	-10.43	-0.91	502455.17	639095.79	0.00	
1000.00	3.00	185.01	999.63	-2191.37	1.40	-15.64	-1.37	502449.96	639095.33	0.00	Drop
1100.00	2.00	185.00	1099.54	-2091.46	1.78	-19.99	-1.75	502445.61	639094.95	1.00	
1200.00	1.00	185.00	1199.50	-1991.50	2.01	-22.60	-1.98	502443.00	639094.72	1.00	
1300.00	0.00	0.00	1299.50	-1891.50	2.09	-23.46	-2.05	502442.14	639094.65	1.00	Hold
1400.00	0.00	0.00	1399.50	-1791.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
1500.00	0.00	0.00	1499.50	-1691.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
1600.00	0.00	0.00	1599.50	-1591.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
1700.00	0.00	0.00	1699.50	-1491.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
1800.00	0.00	0.00	1799.50	-1391.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
1900.00	0.00	0.00	1899.50	-1291.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2000.00	0.00	0.00	1999.50	-1191.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2100.00	0.00	0.00	2099.50	-1091.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2200.00	0.00	0.00	2199.50	-991.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2300.00	0.00	0.00	2299.50	-891.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2400.00	0.00	0.00	2399.50	-791.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2500.00	0.00	0.00	2499.50	-691.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2600.00	0.00	0.00	2599.50	-591.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2700.00	0.00	0.00	2699.50	-491.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2800.00	0.00	0.00	2799.50	-391.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
2900.00	0.00	0.00	2899.50	-291.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
3000.00	0.00	0.00	2999.50	-191.50	2.09	-23.46	-2.05	502442.14	639094.65	0.00	
3000.50	0.00	0.00	3000.00	-191.00	2.09	-23.46	-2.05	502442.14	639094.65	0.00	Nudge
3100.00	1.49	197.62	3099.49	-91.51	2.49	-24.70	-2.45	502440.90	639094.25	1.50	
3200.00	2.99	197.62	3199.41	8.41	3.68	-28.43	-3.63	502437.17	639093.07	1.50	
3300.00	4.49	197.62	3299.19	108.19	5.66	-34.65	-5.61	502430.95	639091.09	1.50	

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
3400.00	5.99	197.62	3398.77	207.77	8.44	-43.36	-8.37	502422.24	639088.33	1.50	
3500.00	7.49	197.62	3498.08	307.08	12.01	-54.55	-11.93	502411.05	639084.77	1.50	
3600.00	8.99	197.62	3597.04	406.04	16.37	-68.21	-16.27	502397.39	639080.43	1.50	
3700.00	10.49	197.62	3695.59	504.59	21.52	-84.34	-21.39	502381.26	639075.31	1.50	
3800.00	11.99	197.62	3793.67	602.67	27.45	-102.92	-27.29	502362.68	639069.41	1.50	
3900.00	13.49	197.62	3891.21	700.21	34.16	-123.94	-33.96	502341.66	639062.74	1.50	
4000.00	14.99	197.62	3988.13	797.13	41.64	-147.39	-41.41	502318.21	639055.29	1.50	
4100.00	16.49	197.62	4084.38	893.38	49.89	-173.25	-49.62	502292.35	639047.08	1.50	
4200.00	17.99	197.62	4179.88	988.88	58.91	-201.50	-58.59	502264.10	639038.11	1.50	
4300.00	19.49	197.62	4274.57	1083.57	68.68	-232.12	-68.32	502233.48	639028.38	1.50	
4400.00	20.99	197.62	4368.40	1177.40	79.21	-265.10	-78.79	502200.50	639017.91	1.50	
4500.00	22.49	197.62	4461.28	1270.28	90.48	-300.40	-90.00	502165.20	639006.70	1.50	
4594.61	23.91	197.62	4548.24	1357.24	101.81	-335.93	-101.29	502129.67	638995.41	1.50	Hold
4600.00	23.91	197.62	4553.16	1362.16	102.48	-338.01	-101.95	502127.59	638994.75	0.00	
4700.00	23.91	197.62	4644.58	1453.58	114.81	-376.64	-114.22	502088.96	638982.48	0.00	
4800.00	23.91	197.62	4736.00	1545.00	127.14	-415.27	-126.48	502050.33	638970.22	0.00	
4900.00	23.91	197.62	4827.41	1636.41	139.47	-453.90	-138.75	502011.70	638957.95	0.00	
5000.00	23.91	197.62	4918.83	1727.83	151.80	-492.53	-151.02	501973.07	638945.68	0.00	
5100.00	23.91	197.62	5010.25	1819.25	164.12	-531.16	-163.29	501934.44	638933.41	0.00	
5200.00	23.91	197.62	5101.66	1910.66	176.45	-569.80	-175.56	501895.80	638921.14	0.00	
5300.00	23.91	197.62	5193.08	2002.08	188.78	-608.43	-187.83	501857.17	638908.87	0.00	
5400.00	23.91	197.62	5284.50	2093.50	201.11	-647.06	-200.10	501818.54	638896.60	0.00	
5500.00	23.91	197.62	5375.92	2184.92	213.44	-685.69	-212.36	501779.91	638884.34	0.00	
5600.00	23.91	197.62	5467.33	2276.33	225.77	-724.32	-224.63	501741.28	638872.07	0.00	
5700.00	23.91	197.62	5558.75	2367.75	238.10	-762.95	-236.90	501702.65	638859.80	0.00	
5800.00	23.91	197.62	5650.17	2459.17	250.43	-801.58	-249.17	501664.02	638847.53	0.00	
5900.00	23.91	197.62	5741.59	2550.59	262.76	-840.22	-261.44	501625.38	638835.26	0.00	
6000.00	23.91	197.62	5833.00	2642.00	275.09	-878.85	-273.71	501586.75	638822.99	0.00	
6100.00	23.91	197.62	5924.42	2733.42	287.42	-917.48	-285.98	501548.12	638810.72	0.00	
6200.00	23.91	197.62	6015.84	2824.84	299.75	-956.11	-298.24	501509.49	638798.46	0.00	
6300.00	23.91	197.62	6107.25	2916.25	312.08	-994.74	-310.51	501470.86	638786.19	0.00	
6400.00	23.91	197.62	6198.67	3007.67	324.40	-1033.37	-322.78	501432.23	638773.92	0.00	
6500.00	23.91	197.62	6290.09	3099.09	336.73	-1072.00	-335.05	501393.60	638761.65	0.00	
6600.00	23.91	197.62	6381.51	3190.51	349.06	-1110.64	-347.32	501354.96	638749.38	0.00	
6700.00	23.91	197.62	6472.92	3281.92	361.39	-1149.27	-359.59	501316.33	638737.11	0.00	
6800.00	23.91	197.62	6564.34	3373.34	373.72	-1187.90	-371.86	501277.70	638724.84	0.00	
6900.00	23.91	197.62	6655.76	3464.76	386.05	-1226.53	-384.12	501239.07	638712.58	0.00	
7000.00	23.91	197.62	6747.17	3556.17	398.38	-1265.16	-396.39	501200.44	638700.31	0.00	
7100.00	23.91	197.62	6838.59	3647.59	410.71	-1303.79	-408.66	501161.81	638688.04	0.00	
7200.00	23.91	197.62	6930.01	3739.01	423.04	-1342.42	-420.93	501123.18	638675.77	0.00	
7300.00	23.91	197.62	7021.43	3830.43	435.37	-1381.06	-433.20	501084.54	638663.50	0.00	
7400.00	23.91	197.62	7112.84	3921.84	447.70	-1419.69	-445.47	501045.91	638651.23	0.00	
7500.00	23.91	197.62	7204.26	4013.26	460.03	-1458.32	-457.74	501007.28	638638.96	0.00	
7600.00	23.91	197.62	7295.68	4104.68	472.36	-1496.95	-470.00	500968.65	638626.70	0.00	
7700.00	23.91	197.62	7387.09	4196.09	484.68	-1535.58	-482.27	500930.02	638614.43	0.00	
7800.00	23.91	197.62	7478.51	4287.51	497.01	-1574.21	-494.54	500891.39	638602.16	0.00	
7900.00	23.91	197.62	7569.93	4378.93	509.34	-1612.84	-506.81	500852.76	638589.89	0.00	
8000.00	23.91	197.62	7661.35	4470.35	521.67	-1651.47	-519.08	500814.13	638577.62	0.00	
8100.00	23.91	197.62	7752.76	4561.76	534.00	-1690.11	-531.35	500775.49	638565.35	0.00	
8200.00	23.91	197.62	7844.18	4653.18	546.33	-1728.74	-543.62	500736.86	638553.08	0.00	
8300.00	23.91	197.62	7935.60	4744.60	558.66	-1767.37	-555.88	500698.23	638540.82	0.00	
8400.00	23.91	197.62	8027.01	4836.01	570.99	-1806.00	-568.15	500659.60	638528.55	0.00	
8500.00	23.91	197.62	8118.43	4927.43	583.32	-1844.63	-580.42	500620.97	638516.28	0.00	
8600.00	23.91	197.62	8209.85	5018.85	595.65	-1883.26	-592.69	500582.34	638504.01	0.00	
8700.00	23.91	197.62	8301.27	5110.27	607.98	-1921.89	-604.96	500543.71	638491.74	0.00	
8800.00	23.91	197.62	8392.68	5201.68	620.31	-1960.53	-617.23	500505.07	638479.47	0.00	
8900.00	23.91	197.62	8484.10	5293.10	632.64	-1999.16	-629.50	500466.44	638467.20	0.00	
9000.00	23.91	197.62	8575.52	5384.52	644.96	-2037.79	-641.76	500427.81	638454.94	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
9100.00	23.91	197.62	8666.93	5475.93	657.29	-2076.42	-654.03	500389.18	638442.67	0.00	
9200.00	23.91	197.62	8758.35	5567.35	669.62	-2115.05	-666.30	500350.55	638430.40	0.00	
9300.00	23.91	197.62	8849.77	5658.77	681.95	-2153.68	-678.57	500311.92	638418.13	0.00	
9400.00	23.91	197.62	8941.19	5750.19	694.28	-2192.31	-690.84	500273.29	638405.86	0.00	
9461.14	23.91	197.62	8997.08	5806.08	701.82	-2215.93	-698.34	500249.67	638398.36	0.00	KOP
9500.00	25.29	206.36	9032.42	5841.42	707.91	-2230.88	-704.41	500234.72	638392.29	10.00	
9600.00	30.75	224.33	9120.82	5929.82	735.39	-2268.41	-731.83	500197.19	638364.87	10.00	
9700.00	37.95	236.70	9203.43	6012.43	779.12	-2303.67	-775.50	500161.93	638321.20	10.00	
9800.00	46.07	245.45	9277.73	6086.73	837.78	-2335.59	-834.11	500130.01	638262.59	10.00	
9900.00	54.70	252.04	9341.47	6150.47	909.58	-2363.20	-905.87	500102.40	638190.83	10.00	
10000.00	63.62	257.33	9392.71	6201.71	992.34	-2385.67	-988.60	500079.93	638108.10	10.00	
10100.00	72.70	261.85	9429.90	6238.90	1083.56	-2402.31	-1079.79	500063.29	638016.91	10.00	
10200.00	81.87	265.93	9451.89	6260.89	1180.45	-2412.62	-1176.66	500052.98	637920.04	10.00	
10300.00	91.08	269.84	9458.04	6267.04	1280.07	-2416.28	-1276.28	500049.32	637820.42	10.00	
10301.83	91.25	269.91	9458.00	6267.00	1281.90	-2416.28	-1278.11	500049.32	637818.59	10.00	LP
10400.00	91.25	269.91	9455.86	6264.86	1380.05	-2416.44	-1376.25	500049.16	637720.45	0.00	
10500.00	91.25	269.91	9453.68	6262.68	1480.02	-2416.60	-1476.23	500049.00	637620.47	0.00	
10600.00	91.25	269.91	9451.50	6260.50	1580.00	-2416.75	-1576.20	500048.85	637520.50	0.00	
10700.00	91.25	269.91	9449.31	6258.31	1679.98	-2416.91	-1676.18	500048.69	637420.52	0.00	
10800.00	91.25	269.91	9447.13	6256.13	1779.95	-2417.07	-1776.16	500048.53	637320.54	0.00	
10900.00	91.25	269.91	9444.95	6253.95	1879.93	-2417.22	-1876.13	500048.38	637220.57	0.00	
11000.00	91.25	269.91	9442.77	6251.77	1979.90	-2417.38	-1976.11	500048.22	637120.59	0.00	
11100.00	91.25	269.91	9440.59	6249.59	2079.88	-2417.54	-2076.09	500048.06	637020.61	0.00	
11200.00	91.25	269.91	9438.41	6247.41	2179.86	-2417.69	-2176.06	500047.91	636920.64	0.00	
11300.00	91.25	269.91	9436.23	6245.23	2279.83	-2417.85	-2276.04	500047.75	636820.66	0.00	
11400.00	91.25	269.91	9434.05	6243.05	2379.81	-2418.01	-2376.01	500047.59	636720.69	0.00	
11500.00	91.25	269.91	9431.87	6240.87	2479.78	-2418.17	-2475.99	500047.43	636620.71	0.00	
11600.00	91.25	269.91	9429.69	6238.69	2579.76	-2418.32	-2575.97	500047.28	636520.73	0.00	
11700.00	91.25	269.91	9427.51	6236.51	2679.74	-2418.48	-2675.94	500047.12	636420.76	0.00	
11800.00	91.25	269.91	9425.33	6234.33	2779.71	-2418.64	-2775.92	500046.96	636320.78	0.00	
11900.00	91.25	269.91	9423.15	6232.15	2879.69	-2418.79	-2875.89	500046.81	636220.81	0.00	
12000.00	91.25	269.91	9420.97	6229.97	2979.67	-2418.95	-2975.87	500046.65	636120.83	0.00	
12100.00	91.25	269.91	9418.79	6227.79	3079.64	-2419.11	-3075.85	500046.49	636020.85	0.00	
12200.00	91.25	269.91	9416.61	6225.61	3179.62	-2419.27	-3175.82	500046.33	635920.88	0.00	
12300.00	91.25	269.91	9414.43	6223.43	3279.59	-2419.42	-3275.80	500046.18	635820.90	0.00	
12400.00	91.25	269.91	9412.26	6221.26	3379.57	-2419.58	-3375.77	500046.02	635720.93	0.00	
12500.00	91.25	269.91	9410.08	6219.08	3479.55	-2419.74	-3475.75	500045.86	635620.95	0.00	
12600.00	91.25	269.91	9407.90	6216.90	3579.52	-2419.89	-3575.73	500045.71	635520.97	0.00	
12700.00	91.25	269.91	9405.72	6214.72	3679.50	-2420.05	-3675.70	500045.55	635421.00	0.00	
12800.00	91.25	269.91	9403.54	6212.54	3779.48	-2420.21	-3775.68	500045.39	635321.02	0.00	
12900.00	91.25	269.91	9401.36	6210.36	3879.45	-2420.36	-3875.66	500045.24	635221.04	0.00	
13000.00	91.25	269.91	9399.18	6208.18	3979.43	-2420.52	-3975.63	500045.08	635121.07	0.00	
13100.00	91.25	269.91	9397.01	6206.01	4079.40	-2420.68	-4075.61	500044.92	635021.09	0.00	
13200.00	91.25	269.91	9394.83	6203.83	4179.38	-2420.84	-4175.58	500044.76	634921.12	0.00	
13300.00	91.25	269.91	9392.65	6201.65	4279.36	-2420.99	-4275.56	500044.61	634821.14	0.00	
13400.00	91.25	269.91	9390.47	6199.47	4379.33	-2421.15	-4375.54	500044.45	634721.16	0.00	
13500.00	91.25	269.91	9388.29	6197.29	4479.31	-2421.31	-4475.51	500044.29	634621.19	0.00	
13600.00	91.25	269.91	9386.12	6195.12	4579.29	-2421.46	-4575.49	500044.14	634521.21	0.00	
13700.00	91.25	269.91	9383.94	6192.94	4679.26	-2421.62	-4675.46	500043.98	634421.24	0.00	
13800.00	91.25	269.91	9381.76	6190.76	4779.24	-2421.78	-4775.44	500043.82	634321.26	0.00	
13900.00	91.25	269.91	9379.59	6188.59	4879.22	-2421.93	-4875.42	500043.67	634221.28	0.00	
14000.00	91.25	269.91	9377.41	6186.41	4979.19	-2422.09	-4975.39	500043.51	634121.31	0.00	
14100.00	91.25	269.91	9375.23	6184.23	5079.17	-2422.25	-5075.37	500043.35	634021.33	0.00	
14200.00	91.25	269.91	9373.05	6182.05	5179.14	-2422.41	-5175.35	500043.19	633921.35	0.00	
14298.88	91.25	269.91	9371.00	6180.00	5278.00	-2422.56	-5274.20	500043.04	633822.50	0.00	5278'VS
14300.00	91.26	269.91	9370.98	6179.98	5279.12	-2422.56	-5275.32	500043.04	633821.38	1.50	
14345.35	91.94	269.91	9369.71	6178.71	5324.46	-2422.63	-5320.66	500042.97	633776.04	1.50	Hold
14400.00	91.94	269.91	9367.85	6176.85	5379.07	-2422.72	-5375.27	500042.88	633721.43	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
14500.00	91.94	269.91	9364.46	6173.46	5479.02	-2422.88	-5475.22	500042.72	633621.48	0.00	
14600.00	91.94	269.91	9361.07	6170.07	5578.96	-2423.03	-5575.16	500042.57	633521.54	0.00	
14700.00	91.94	269.91	9357.67	6166.67	5678.90	-2423.19	-5675.10	500042.41	633421.60	0.00	
14800.00	91.94	269.91	9354.28	6163.28	5778.84	-2423.35	-5775.04	500042.25	633321.66	0.00	
14900.00	91.94	269.91	9350.89	6159.89	5878.79	-2423.50	-5874.99	500042.10	633221.71	0.00	
15000.00	91.94	269.91	9347.49	6156.49	5978.73	-2423.66	-5974.93	500041.94	633121.77	0.00	
15100.00	91.94	269.91	9344.10	6153.10	6078.67	-2423.82	-6074.87	500041.78	633021.83	0.00	
15200.00	91.94	269.91	9340.71	6149.71	6178.61	-2423.97	-6174.81	500041.63	632921.89	0.00	
15300.00	91.94	269.91	9337.32	6146.32	6278.55	-2424.13	-6274.75	500041.47	632821.95	0.00	
15400.00	91.94	269.91	9333.92	6142.92	6378.50	-2424.29	-6374.70	500041.31	632722.00	0.00	
15500.00	91.94	269.91	9330.53	6139.53	6478.44	-2424.45	-6474.64	500041.15	632622.06	0.00	
15600.00	91.94	269.91	9327.14	6136.14	6578.38	-2424.60	-6574.58	500041.00	632522.12	0.00	
15700.00	91.94	269.91	9323.74	6132.74	6678.32	-2424.76	-6674.52	500040.84	632422.18	0.00	
15800.00	91.94	269.91	9320.35	6129.35	6778.27	-2424.92	-6774.47	500040.68	632322.23	0.00	
15900.00	91.94	269.91	9316.96	6125.96	6878.21	-2425.07	-6874.41	500040.53	632222.29	0.00	
16000.00	91.94	269.91	9313.57	6122.57	6978.15	-2425.23	-6974.35	500040.37	632122.35	0.00	
16100.00	91.94	269.91	9310.17	6119.17	7078.09	-2425.39	-7074.29	500040.21	632022.41	0.00	
16200.00	91.94	269.91	9306.78	6115.78	7178.04	-2425.54	-7174.24	500040.06	631922.46	0.00	
16300.00	91.94	269.91	9303.39	6112.39	7277.98	-2425.70	-7274.18	500039.90	631822.52	0.00	
16400.00	91.94	269.91	9299.99	6108.99	7377.92	-2425.86	-7374.12	500039.74	631722.58	0.00	
16500.00	91.94	269.91	9296.60	6105.60	7477.86	-2426.02	-7474.06	500039.58	631622.64	0.00	
16600.00	91.94	269.91	9293.21	6102.21	7577.81	-2426.17	-7574.00	500039.43	631522.70	0.00	
16700.00	91.94	269.91	9289.81	6098.81	7677.75	-2426.33	-7673.95	500039.27	631422.75	0.00	
16800.00	91.94	269.91	9286.42	6095.42	7777.69	-2426.49	-7773.89	500039.11	631322.81	0.00	
16900.00	91.94	269.91	9283.03	6092.03	7877.63	-2426.64	-7873.83	500038.96	631222.87	0.00	
17000.00	91.94	269.91	9279.64	6088.64	7977.58	-2426.80	-7973.77	500038.80	631122.93	0.00	
17100.00	91.94	269.91	9276.24	6085.24	8077.52	-2426.96	-8073.72	500038.64	631022.98	0.00	
17200.00	91.94	269.91	9272.85	6081.85	8177.46	-2427.12	-8173.66	500038.48	630923.04	0.00	
17300.00	91.94	269.91	9269.46	6078.46	8277.40	-2427.27	-8273.60	500038.33	630823.10	0.00	
17400.00	91.94	269.91	9266.06	6075.06	8377.35	-2427.43	-8373.54	500038.17	630723.16	0.00	
17500.00	91.94	269.91	9262.67	6071.67	8477.29	-2427.59	-8473.49	500038.01	630623.21	0.00	
17600.00	91.94	269.91	9259.28	6068.28	8577.23	-2427.74	-8573.43	500037.86	630523.27	0.00	
17700.00	91.94	269.91	9255.89	6064.89	8677.17	-2427.90	-8673.37	500037.70	630423.33	0.00	
17800.00	91.94	269.91	9252.49	6061.49	8777.12	-2428.06	-8773.31	500037.54	630323.39	0.00	
17900.00	91.94	269.91	9249.10	6058.10	8877.06	-2428.21	-8873.25	500037.39	630223.45	0.00	
18000.00	91.94	269.91	9245.71	6054.71	8977.00	-2428.37	-8973.20	500037.23	630123.50	0.00	
18100.00	91.94	269.91	9242.31	6051.31	9076.94	-2428.53	-9073.14	500037.07	630023.56	0.00	
18200.00	91.94	269.91	9238.92	6047.92	9176.89	-2428.69	-9173.08	500036.91	629923.62	0.00	
18300.00	91.94	269.91	9235.53	6044.53	9276.83	-2428.84	-9273.02	500036.76	629823.68	0.00	
18400.00	91.94	269.91	9232.14	6041.14	9376.77	-2429.00	-9372.97	500036.60	629723.73	0.00	
18500.00	91.94	269.91	9228.74	6037.74	9476.71	-2429.16	-9472.91	500036.44	629623.79	0.00	
18600.00	91.94	269.91	9225.35	6034.35	9576.65	-2429.31	-9572.85	500036.29	629523.85	0.00	
18700.00	91.94	269.91	9221.96	6030.96	9676.60	-2429.47	-9672.79	500036.13	629423.91	0.00	
18800.00	91.94	269.91	9218.56	6027.56	9776.54	-2429.63	-9772.74	500035.97	629323.96	0.00	
18900.00	91.94	269.91	9215.17	6024.17	9876.48	-2429.78	-9872.68	500035.82	629224.02	0.00	
19000.00	91.94	269.91	9211.78	6020.78	9976.42	-2429.94	-9972.62	500035.66	629124.08	0.00	
19100.00	91.94	269.91	9208.39	6017.39	10076.37	-2430.10	-10072.56	500035.50	629024.14	0.00	
19200.00	91.94	269.91	9204.99	6013.99	10176.31	-2430.26	-10172.50	500035.34	628924.20	0.00	
19300.00	91.94	269.91	9201.60	6010.60	10276.25	-2430.41	-10272.45	500035.19	628824.25	0.00	
19400.00	91.94	269.91	9198.21	6007.21	10376.19	-2430.57	-10372.39	500035.03	628724.31	0.00	
19500.00	91.94	269.91	9194.81	6003.81	10476.14	-2430.73	-10472.33	500034.87	628624.37	0.00	
19600.00	91.94	269.91	9191.42	6000.42	10576.08	-2430.88	-10572.27	500034.72	628524.43	0.00	
19700.00	91.94	269.91	9188.03	5997.03	10676.02	-2431.04	-10672.22	500034.56	628424.48	0.00	
19800.00	91.94	269.91	9184.63	5993.63	10775.96	-2431.20	-10772.16	500034.40	628324.54	0.00	
19900.00	91.94	269.91	9181.24	5990.24	10875.91	-2431.35	-10872.10	500034.25	628224.60	0.00	
20000.00	91.94	269.91	9177.85	5986.85	10975.85	-2431.51	-10972.04	500034.09	628124.66	0.00	
20100.00	91.94	269.91	9174.46	5983.46	11075.79	-2431.67	-11071.99	500033.93	628024.71	0.00	
20200.00	91.94	269.91	9171.06	5980.06	11175.73	-2431.83	-11171.93	500033.77	627924.77	0.00	

SD 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
20300.00	91.94	269.91	9167.67	5976.67	11275.68	-2431.98	-11271.87	500033.62	627824.83	0.00	
20400.00	91.94	269.91	9164.28	5973.28	11375.62	-2432.14	-11371.81	500033.46	627724.89	0.00	
20500.00	91.94	269.91	9160.88	5969.88	11475.56	-2432.30	-11471.75	500033.30	627624.95	0.00	
20600.00	91.94	269.91	9157.49	5966.49	11575.50	-2432.45	-11571.70	500033.15	627525.00	0.00	
20700.00	91.94	269.91	9154.10	5963.10	11675.45	-2432.61	-11671.64	500032.99	627425.06	0.00	
20800.00	91.94	269.91	9150.71	5959.71	11775.39	-2432.77	-11771.58	500032.83	627325.12	0.00	
20863.63	91.94	269.91	9148.55	5957.55	11838.98	-2432.87	-11835.17	500032.73	627261.53	0.00	Drop
20900.00	91.40	269.91	9147.49	5956.49	11875.34	-2432.92	-11871.53	500032.68	627225.17	1.50	
20922.67	91.06	269.91	9147.00	5956.00	11898.00	-2432.96	-11894.19	500032.64	627202.51	1.50	11989'VS
21000.00	91.06	269.91	9145.57	5954.57	11975.32	-2433.08	-11971.51	500032.52	627125.19	0.00	
21100.00	91.06	269.91	9143.72	5952.72	12075.30	-2433.24	-12071.49	500032.36	627025.21	0.00	
21200.00	91.06	269.91	9141.88	5950.88	12175.28	-2433.40	-12171.48	500032.20	626925.22	0.00	
21300.00	91.06	269.91	9140.03	5949.03	12275.27	-2433.55	-12271.46	500032.05	626825.24	0.00	
21400.00	91.06	269.91	9138.18	5947.18	12375.25	-2433.71	-12371.44	500031.89	626725.26	0.00	
21500.00	91.06	269.91	9136.33	5945.33	12475.23	-2433.87	-12471.42	500031.73	626625.28	0.00	
21600.00	91.06	269.91	9134.48	5943.48	12575.22	-2434.02	-12571.41	500031.58	626525.29	0.00	
21700.00	91.06	269.91	9132.64	5941.64	12675.20	-2434.18	-12671.39	500031.42	626425.31	0.00	
21800.00	91.06	269.91	9130.79	5939.79	12775.18	-2434.34	-12771.37	500031.26	626325.33	0.00	
21900.00	91.06	269.91	9128.94	5937.94	12875.16	-2434.50	-12871.36	500031.10	626225.34	0.00	
22000.00	91.06	269.91	9127.09	5936.09	12975.15	-2434.65	-12971.34	500030.95	626125.36	0.00	
22100.00	91.06	269.91	9125.25	5934.25	13075.13	-2434.81	-13071.32	500030.79	626025.38	0.00	
22200.00	91.06	269.91	9123.40	5932.40	13175.11	-2434.97	-13171.30	500030.63	625925.40	0.00	
22300.00	91.06	269.91	9121.55	5930.55	13275.10	-2435.12	-13271.29	500030.48	625825.41	0.00	
22400.00	91.06	269.91	9119.70	5928.70	13375.08	-2435.28	-13371.27	500030.32	625725.43	0.00	
22500.00	91.06	269.91	9117.85	5926.85	13475.06	-2435.44	-13471.25	500030.16	625625.45	0.00	
22600.00	91.06	269.91	9116.01	5925.01	13575.04	-2435.59	-13571.24	500030.01	625525.46	0.00	
22700.00	91.06	269.91	9114.16	5923.16	13675.03	-2435.75	-13671.22	500029.85	625425.48	0.00	
22800.00	91.06	269.91	9112.31	5921.31	13775.01	-2435.91	-13771.20	500029.69	625325.50	0.00	
22900.00	91.06	269.91	9110.46	5919.46	13874.99	-2436.07	-13871.18	500029.53	625225.52	0.00	
23000.00	91.06	269.91	9108.62	5917.62	13974.98	-2436.22	-13971.17	500029.38	625125.53	0.00	
23100.00	91.06	269.91	9106.77	5915.77	14074.96	-2436.38	-14071.15	500029.22	625025.55	0.00	
23200.00	91.06	269.91	9104.92	5913.92	14174.94	-2436.54	-14171.13	500029.06	624925.57	0.00	
23253.86	91.06	269.91	9103.92	5912.92	14228.79	-2436.62	-14224.98	500028.98	624871.72	0.00	LTP
23300.00	91.06	269.91	9103.07	5912.07	14274.92	-2436.69	-14271.11	500028.91	624825.59	0.00	
23303.89	91.06	269.91	9103.00	5912.00	14278.81	-2436.70	-14275.00	500028.90	624821.70	0.00	PBHL 211H

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
Rustler	151.00	0.00	0.00	151.00	-3040.00	0.00	0.00	502465.60	639096.70		
Salado	544.00	0.00	0.00	544.00	-2647.00	0.00	0.00	502465.60	639096.70		
Base Salt	3303.82	4.55	197.62	3303.00	112.00	-34.94	-5.70	502430.66	639091.00		
Delaware/La mar	3529.19	7.93	197.62	3527.00	336.00	-58.28	-13.11	502407.32	639083.59		
Bell Canyon	3576.68	8.64	197.62	3574.00	383.00	-64.80	-15.18	502400.80	639081.52		
Cherry Canyon	4499.70	22.49	197.62	4461.00	1270.00	-300.29	-89.97	502165.31	639006.73		
Manzanita Marker	4714.68	23.91	197.62	4658.00	1467.00	-382.31	-116.02	502083.29	638980.68		
Brushy Canyon Ss.	5942.02	23.91	197.62	5780.00	2589.00	-856.45	-266.59	501609.15	638830.11		
Basal Brushy Canyon Ss.	7381.58	23.91	197.62	7096.00	3905.00	-1412.57	-443.21	501053.03	638653.49		
Bone Spring Lm.	7696.62	23.91	197.62	7384.00	4193.00	-1534.27	-481.86	500931.33	638614.84		
Avalon Ss.	7742.56	23.91	197.62	7426.00	4235.00	-1552.02	-487.49	500913.58	638609.21		
Upper Avalon Carb.	7975.56	23.91	197.62	7639.00	4448.00	-1642.03	-516.08	500823.57	638580.62		
Upper Avalon Sh.	8060.88	23.91	197.62	7717.00	4526.00	-1674.99	-526.55	500790.61	638570.15		

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 Carb.	8157.14	23.91	197.62	7805.00	4614.00	-1712.18	-538.36	500753.42	638558.34	
Lw. Avalon Sh.	8333.26	23.91	197.62	7966.00	4775.00	-1780.22	-559.96	500685.38	638536.74	
Bone Spring Carb.	8536.72	23.91	197.62	8152.00	4961.00	-1858.82	-584.93	500606.78	638511.77	
First Bone Spring Ss.	8781.75	23.91	197.62	8376.00	5185.00	-1953.48	-614.99	500512.12	638481.71	
Second Bone Spring Carb.	9301.35	23.91	197.62	8851.00	5660.00	-2154.20	-678.74	500311.40	638417.96	
Second Bone Spring A Ss.	9665.81	35.35	232.97	9176.00	5985.00	-2291.94	-758.81	500173.66	638337.89	
Second Bone Spring A/B Carb.	9899.18	54.63	251.99	9341.00	6150.00	-2363.00	-905.24	500102.60	638191.46	



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 BS2A-7E #211H*

File number: *13783654*

5 June 2019





Weatherford

James Ranch Unit DI 1 BS2A-7E #211H

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 BS2A- 7E #211H	Position (Relative to Site Centre)			
	+N/-S: -0.20 US ft	Northing: 502465.60 US ft	Latitude: 32° 22' 50.12"	
	+E/-W: 13.90 US ft	Easting: 639096.70 US ft	Longitude: -103° 52' 57.93"	
	Elevation above MSL: 3166.00 US ft			
Comment:				
Well: James Ranch Unit DI 1 BS2A- 7E #211H	Type: Main well	UWI:	Plan: P1:V6	
	File Number: 13783654	Comment:		
	Closure Distance: 14481.5 US ft	Closure Azimuth: 260.31°		
	Vertical Section: Position of Origin (Relative to Slot centre)			
	+N/-S: 0.00 US ft	+E/-W: 0.00 US ft	Az: 269.91°	
	Magnetic Parameters:			
	Model: MagVAR	Field Strength: 47923.0 nT	Declination: 7.15°	Dip: 60.11°
	IFR		Date: 06/Jun/2019	

Drill floor: Plan P1:V6

Rig Height (Well TVD Reference): Elevation above MSL: 3191.00 US ft **Inclination:** 0.00° **Azimuth:** 0.00°
25.00 US 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 BS2A-7E #211H (p)	0.00	23303.89	100.00	2

Secondary Well Names:

James Ranch Unit DI 1A #204H (s)
James Ranch Unit DI 1A #206H (s)
James Ranch Unit DI 1 #157H (s)
James Ranch Unit DI 1 BS1-3E #213H (s)
James Ranch Unit 12-1H (s)
James Ranch Unit 21 1 SWD (s)
James Ranch Unit DI 1 #164H (s)
James Ranch Unit DI 1 BS2A-5W #210H (s)

5D Anti-Collision Report

Secondary Well Names:

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:****Survey Tool Ranges: (Using Anticipated Survey Program)**

Name	Start MD (USFt)	End MD (USFt)	Source Survey
MWD + IFR	0.00	9324.00	
MWD + IFR + MS	9324.00	24406.00	

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)								
SF								
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 BS1-3E #213H (s)	3346.88	3345.90	154.90	3346.62	12.43	26.13	1.91	SF(Lo); CC (Lo)
James Ranch Unit DI 1 BS2A-7W #212H (p)	3036.72	3036.22	-154.78	3036.22	15.34	29.10	2.12	CC (Lo)
James Ranch Unit DI 1 BS2A-5W #210H (s)	22838.28	9111.60	5920.60	23800.98	414.56	645.57	2.79	
James Ranch Unit DI 1 #157H (s)	23150.00	9105.84	5914.84	23308.56	1482.75	1976.86	4.00	
James Ranch Unit 12-1H (s)	3214.45	3213.84	22.84	3215.55	60.39	79.02	4.24	
James Ranch Unit DI 1 #164H (s)	4028.32	4015.46	824.46	4036.48	208.97	232.11	10.03	
James Ranch Unit 21 1 SWD (s)	3775.98	3770.16	579.16	3745.91	166.59	182.02	11.80	
James Ranch Unit DI 1A #206H (s)	9350.39	8895.83	5704.83	9223.68	1479.73	1520.02	37.73	
James Ranch Unit DI 1A #204H (s)	5401.17	5285.57	2094.57	5257.61	1106.40	1131.18	45.64	
CC								
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 (s)	0.00	0.00	-3191.00	0.00	13.07	13.90	16.79	CC (Med)
James Ranch Unit DI 1 BS2A-7W #212H (p)	0.00	0.00	-3191.00	0.00	14.06	14.60	26.96	CC (Med)
James Ranch Unit DI 1 BS1-3E #213H (s)	3330.27	3329.36	138.36	3330.15	12.44	26.07	1.91	SF(Lo); CC (Lo)
James Ranch Unit 12-1H (s)	3146.68	3146.14	-44.86	3148.03	59.97	78.22	4.29	
James Ranch Unit DI 1 #157H (s)	840.82	840.67	-2350.33	841.97	169.92	173.79	45.00	
James Ranch Unit 21 1 SWD (s)	3543.55	3541.22	350.22	3517.15	162.43	176.92	12.21	
James Ranch Unit DI 1 #164H (s)	517.97	517.97	-2673.03	515.97	198.48	201.71	62.58	
James Ranch Unit DI 1A #204H (s)	4030.66	4017.72	826.72	4021.62	952.91	970.51	55.12	
James Ranch Unit DI 1A #206H (s)	4723.05	4665.65	1474.65	4685.08	970.88	989.46	53.26	

5D Anti-Collision Report

Range Summary														
Secondary Well Name: James Ranch Unit DI 1 BS1-3E														
#213H (s)														
SF												CC		
Start MD (US ft)			End MD (US ft)			Risk			Start MD (US ft)			End MD (US ft)		Risk
3300.00			3400.00			SF (Lo)			0.00			300.00		CC (Lo)
									1800.00			2000.00		CC (Lo)
									3200.00			3400.00		CC (Lo)
Secondary Well Name: James Ranch Unit DI 1 BS2A-5W #210H (s)														
CC														
Start MD (US ft)			End MD (US ft)			Risk								
0.00			400.00			CC (Med)								
500.00			500.00			CC (Lo)								
600.00			700.00			CC (Med)								
800.00			800.00			CC (Lo)								
Secondary Well Name: James Ranch Unit DI 1 BS2A-7W #212H (p)														
CC														
Start MD (US ft)			End MD (US ft)			Risk								
0.00			900.00			CC (Med)								
1000.00			3000.00			CC (Lo)								
Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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	89.22	11.58	14.60	4.84	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Med)		
700.00	1.50	185.01	699.99	-2491.01	1.43	1.43	259.16	11.35	14.79	4.30	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Med)		
800.00	3.00	185.01	799.91	-2391.09	1.61	1.61	245.24	12.16	16.00	4.16	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Med)		
900.00	3.00	185.01	899.77	-2291.23	1.81	1.81	230.62	14.55	18.81	4.41	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Med)		
1000.00	3.00	185.00	999.63	-2191.37	2.01	2.00	220.27	17.81	22.49	4.80	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)		
1300.00	0.00	0.00	1299.50	-1891.50	2.66	2.65	35.14	22.93	28.94	4.82	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)		
1400.00	0.00	0.00	1399.50	-1791.50	2.87	2.87	35.14	22.49	28.94	4.49	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)		
1500.00	0.00	0.00	1499.50	-1691.50	3.09	3.09	35.14	22.05	28.94	4.20	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)		
1600.00	0.00	0.00	1599.50	-1591.50	3.31	3.31	35.14	21.60	28.94	3.94	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)		
1700.00	0.00	0.00	1699.50	-1491.50	3.53	3.53	35.14	21.15	28.94	3.72	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)		
1800.00	0.00	0.00	1799.50	-1391.50	3.75	3.75	35.14	20.71	28.94	3.52	James Ranch Unit DI 1 BS2A-	CC (Lo)		

SD Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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
1900.00	0.00	0.00	1899.50	-1291.50	3.98	3.97	35.14	20.26	28.94	3.34	7W #212H (p) James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
1900.00	0.00	0.00	1899.50	-1291.50	3.98	3.97	294.76	20.98	28.64	3.74	James Ranch Unit DI 1 BS1- 3E #213H (s)	CC (Lo)
2000.00	0.00	0.00	1999.50	-1191.50	4.20	4.20	35.14	19.82	28.94	3.17	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
2100.00	0.00	0.00	2099.50	-1091.50	4.42	4.42	35.14	19.37	28.94	3.02	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
2200.00	0.00	0.00	2199.50	-991.50	4.64	4.64	35.14	18.92	28.94	2.89	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
2300.00	0.00	0.00	2299.50	-891.50	4.86	4.86	35.14	18.47	28.94	2.77	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
2400.00	0.00	0.00	2399.50	-791.50	5.09	5.09	35.14	18.03	28.94	2.65	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
2500.00	0.00	0.00	2499.50	-691.50	5.31	5.31	35.14	17.58	28.94	2.55	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
2600.00	0.00	0.00	2599.50	-591.50	5.53	5.53	35.14	17.13	28.94	2.45	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
2700.00	0.00	0.00	2699.50	-491.50	5.76	5.76	35.14	16.68	28.94	2.36	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
2800.00	0.00	0.00	2799.50	-391.50	5.98	5.98	35.14	16.23	28.94	2.28	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
2900.00	0.00	0.00	2899.50	-291.50	6.20	6.20	35.14	15.79	28.94	2.20	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
3000.00	0.00	0.00	2999.50	-191.50	6.43	6.43	35.14	15.34	28.94	2.13	James Ranch Unit DI 1 BS2A- 7W #212H (p)	CC (Lo)
3100.00	1.49	197.62	3099.49	-91.51	6.62	6.62	196.78	16.16	30.18	2.15	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
3200.00	2.99	197.62	3199.41	8.41	6.80	6.80	79.77	14.85	27.97	2.13	James Ranch Unit DI 1 BS1- 3E #213H (s)	CC (Lo)
3300.00	4.49	197.62	3299.19	108.19	6.99	6.98	91.53	12.72	26.24	1.94	James Ranch Unit DI 1 BS1- 3E #213H (s)	SF(Lo); CC (Lo)

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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)	GC (US ft)	SF	Nearest Well	Risk
3346.88	5.20	197.62	3345.90	154.90	7.08	7.06	99.80	12.43	26.13	1.91	James Ranch Unit DI 1 BS1- 3E #213H (s)	SF(Lo); CC (Lo)
3400.00	5.99	197.62	3398.77	207.77	7.18	7.16	109.87	13.33	27.24	1.96	James Ranch Unit DI 1 BS1- 3E #213H (s)	SF(Lo); CC (Lo)
3500.00	7.49	197.62	3498.08	307.08	7.38	7.34	127.39	18.88	33.20	2.32	James Ranch Unit DI 1 BS1- 3E #213H (s)	
3600.00	8.99	197.62	3597.04	406.04	7.59	7.51	140.58	28.99	43.51	3.00	James Ranch Unit DI 1 BS1- 3E #213H (s)	
3700.00	10.49	197.62	3695.59	504.59	7.80	7.69	149.88	42.28	57.01	3.87	James Ranch Unit DI 1 BS1- 3E #213H (s)	
3800.00	11.99	197.62	3793.67	602.67	8.02	7.87	156.26	58.56	73.51	4.92	James Ranch Unit DI 1 BS1- 3E #213H (s)	
15500.00	91.94	269.91	9330.53	6139.53	66.57	44.73	283.64	545.47	683.36	4.96	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
15600.00	91.94	269.91	9327.14	6136.14	67.53	45.42	283.55	543.31	683.05	4.89	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
15700.00	91.94	269.91	9323.74	6132.74	68.48	46.12	283.46	541.15	682.74	4.82	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
15800.00	91.94	269.91	9320.35	6129.35	69.44	46.81	283.37	538.99	682.43	4.76	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
15900.00	91.94	269.91	9316.96	6125.96	70.41	47.51	283.28	536.82	682.12	4.69	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
16000.00	91.94	269.91	9313.57	6122.57	71.37	48.20	283.19	534.66	681.82	4.63	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
16100.00	91.94	269.91	9310.17	6119.17	72.34	48.90	283.10	532.48	681.52	4.57	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
16200.00	91.94	269.91	9306.78	6115.78	73.30	49.60	283.01	530.31	681.22	4.51	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
16300.00	91.94	269.91	9303.39	6112.39	74.27	50.30	282.92	528.13	680.92	4.46	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
16300.00	91.94	269.91	9303.39	6112.39	74.27	50.30	76.76	525.53	657.39	4.99	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
16400.00	91.94	269.91	9299.99	6108.99	75.25	51.00	282.83	525.95	680.62	4.40	James Ranch Unit	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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	
16400.00	91.94	269.91	9299.99	6108.99	75.25	51.00	76.68	519.95	651.31	4.96	DI 1 BS2A-7W #212H (p) James Ranch Unit DI 1 BS2A-5W #210H (s)		
16500.00	91.94	269.91	9296.60	6105.60	76.22	51.70	282.74	523.76	680.32	4.35	James Ranch Unit DI 1 BS2A-7W #212H (p)		
16500.00	91.94	269.91	9296.60	6105.60	76.22	51.70	76.73	515.07	647.55	4.89	James Ranch Unit DI 1 BS2A-5W #210H (s)		
16600.00	91.94	269.91	9293.21	6102.21	77.19	52.40	282.65	521.58	680.03	4.29	James Ranch Unit DI 1 BS2A-7W #212H (p)		
16600.00	91.94	269.91	9293.21	6102.21	77.19	52.40	76.96	508.32	643.05	4.77	James Ranch Unit DI 1 BS2A-5W #210H (s)		
16700.00	91.94	269.91	9289.81	6098.81	78.17	53.10	282.56	519.39	679.74	4.24	James Ranch Unit DI 1 BS2A-7W #212H (p)		
16700.00	91.94	269.91	9289.81	6098.81	78.17	53.10	77.00	503.51	638.77	4.72	James Ranch Unit DI 1 BS2A-5W #210H (s)		
16800.00	91.94	269.91	9286.42	6095.42	79.15	53.80	282.47	517.20	679.44	4.19	James Ranch Unit DI 1 BS2A-7W #212H (p)		
16800.00	91.94	269.91	9286.42	6095.42	79.15	53.80	76.98	503.38	637.54	4.75	James Ranch Unit DI 1 BS2A-5W #210H (s)		
16900.00	91.94	269.91	9283.03	6092.03	80.13	54.51	282.38	515.00	679.16	4.14	James Ranch Unit DI 1 BS2A-7W #212H (p)		
16900.00	91.94	269.91	9283.03	6092.03	80.13	54.51	77.02	508.00	640.25	4.84	James Ranch Unit DI 1 BS2A-5W #210H (s)		
17000.00	91.94	269.91	9279.64	6088.64	81.11	55.21	282.29	512.81	678.87	4.09	James Ranch Unit DI 1 BS2A-7W #212H (p)		
17000.00	91.94	269.91	9279.64	6088.64	81.11	55.21	77.11	514.41	646.23	4.90	James Ranch Unit DI 1 BS2A-5W #210H (s)		
17100.00	91.94	269.91	9276.24	6085.24	82.09	55.92	282.20	510.61	678.58	4.04	James Ranch Unit DI 1 BS2A-7W #212H (p)		
17100.00	91.94	269.91	9276.24	6085.24	82.09	55.92	77.15	521.96	653.82	4.96	James Ranch Unit DI 1 BS2A-5W #210H (s)		
17200.00	91.94	269.91	9272.85	6081.85	83.08	56.62	282.11	508.41	678.30	3.99	James Ranch Unit DI 1 BS2A-		

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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	91.94	269.91	9272.85	6081.85	83.08	56.62	77.17	527.77	661.95	4.93	7W #212H (p) James Ranch Unit DI 1 BS2A- 5W #210H (s)	
17300.00	91.94	269.91	9269.46	6078.46	84.06	57.33	282.02	506.21	678.01	3.95	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
17300.00	91.94	269.91	9269.46	6078.46	84.06	57.33	77.20	530.58	668.31	4.85	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
17400.00	91.94	269.91	9266.06	6075.06	85.05	58.04	281.93	504.00	677.73	3.90	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
17400.00	91.94	269.91	9266.06	6075.06	85.05	58.04	77.16	530.81	672.31	4.75	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
17500.00	91.94	269.91	9262.67	6071.67	86.04	58.75	281.84	501.80	677.45	3.86	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
17500.00	91.94	269.91	9262.67	6071.67	86.04	58.75	77.17	531.29	674.54	4.71	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
17600.00	91.94	269.91	9259.28	6068.28	87.02	59.46	281.75	499.59	677.18	3.81	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
17700.00	91.94	269.91	9255.89	6064.89	88.01	60.16	281.66	497.38	676.90	3.77	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
17800.00	91.94	269.91	9252.49	6061.49	89.01	60.87	281.57	495.17	676.63	3.73	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
17900.00	91.94	269.91	9249.10	6058.10	90.00	61.58	281.47	492.96	676.35	3.69	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
18000.00	91.94	269.91	9245.71	6054.71	90.99	62.29	281.38	490.75	676.08	3.65	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
18100.00	91.94	269.91	9242.31	6051.31	91.98	63.01	281.29	488.54	675.81	3.61	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
18100.00	91.94	269.91	9242.31	6051.31	91.98	63.01	77.49	514.98	674.08	4.24	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
18200.00	91.94	269.91	9238.92	6047.92	92.98	63.72	281.20	486.32	675.55	3.57	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
18200.00	91.94	269.91	9238.92	6047.92	92.98	63.72	77.38	509.23	669.55	4.18	James Ranch Unit DI 1 BS2A- 5W #210H (s)	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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	
18300.00	91.94	269.91	9235.53	6044.53	93.98	64.43	281.11	484.11	675.28	3.53	James Ranch Unit DI 1 BS2A- 7W #212H (p)		
18300.00	91.94	269.91	9235.53	6044.53	93.98	64.43	77.37	503.84	665.54	4.12	James Ranch Unit DI 1 BS2A- 5W #210H (s)		
18400.00	91.94	269.91	9232.14	6041.14	94.97	65.14	281.02	481.89	675.02	3.50	James Ranch Unit DI 1 BS2A- 7W #212H (p)		
18400.00	91.94	269.91	9232.14	6041.14	94.97	65.14	77.31	499.87	662.01	4.08	James Ranch Unit DI 1 BS2A- 5W #210H (s)		
18500.00	91.94	269.91	9228.74	6037.74	95.97	65.86	280.93	479.67	674.76	3.46	James Ranch Unit DI 1 BS2A- 7W #212H (p)		
18500.00	91.94	269.91	9228.74	6037.74	95.97	65.86	77.23	502.78	662.07	4.16	James Ranch Unit DI 1 BS2A- 5W #210H (s)		
18600.00	91.94	269.91	9225.35	6034.35	96.97	66.57	280.84	477.45	674.49	3.42	James Ranch Unit DI 1 BS2A- 7W #212H (p)		
18600.00	91.94	269.91	9225.35	6034.35	96.97	66.57	77.19	509.29	666.16	4.25	James Ranch Unit DI 1 BS2A- 5W #210H (s)		
18700.00	91.94	269.91	9221.96	6030.96	97.97	67.28	280.74	475.23	674.24	3.39	James Ranch Unit DI 1 BS2A- 7W #212H (p)		
18700.00	91.94	269.91	9221.96	6030.96	97.97	67.28	77.37	512.08	671.95	4.20	James Ranch Unit DI 1 BS2A- 5W #210H (s)		
18800.00	91.94	269.91	9218.56	6027.56	98.97	68.00	280.65	473.01	673.98	3.35	James Ranch Unit DI 1 BS2A- 7W #212H (p)		
18900.00	91.94	269.91	9215.17	6024.17	99.97	68.71	280.56	470.79	673.72	3.32	James Ranch Unit DI 1 BS2A- 7W #212H (p)		
18900.00	91.94	269.91	9215.17	6024.17	99.97	68.71	78.00	503.17	673.45	3.95	James Ranch Unit DI 1 BS2A- 5W #210H (s)		
19000.00	91.94	269.91	9211.78	6020.78	100.97	69.43	280.47	468.56	673.47	3.29	James Ranch Unit DI 1 BS2A- 7W #212H (p)		
19000.00	91.94	269.91	9211.78	6020.78	100.97	69.43	78.25	499.07	672.19	3.88	James Ranch Unit DI 1 BS2A- 5W #210H (s)		
19100.00	91.94	269.91	9208.39	6017.39	101.97	70.14	280.38	466.34	673.22	3.25	James Ranch Unit DI 1 BS2A- 7W #212H (p)		
19100.00	91.94	269.91	9208.39	6017.39	101.97	70.14	78.73	492.18	668.97	3.78	James Ranch Unit		

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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	Nearst Well	Risk
19200.00	91.94	269.91	9204.99	6013.99	102.97	70.86	280.29	464.12	672.97	3.22	DI 1 BS2A- 5W #210H (s) James Ranch Unit DI 1 BS2A- 7W #212H (p)	
19200.00	91.94	269.91	9204.99	6013.99	102.97	70.86	79.29	486.57	665.07	3.73	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
19300.00	91.94	269.91	9201.60	6010.60	103.98	71.57	280.19	461.89	672.72	3.19	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
19300.00	91.94	269.91	9201.60	6010.60	103.98	71.57	79.66	483.58	662.48	3.70	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
19400.00	91.94	269.91	9198.21	6007.21	104.98	72.29	280.10	459.67	672.47	3.16	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
19400.00	91.94	269.91	9198.21	6007.21	104.98	72.29	79.76	482.86	661.57	3.70	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
19500.00	91.94	269.91	9194.81	6003.81	105.99	73.01	280.01	457.44	672.23	3.13	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
19500.00	91.94	269.91	9194.81	6003.81	105.99	73.01	79.75	483.65	662.19	3.71	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
19600.00	91.94	269.91	9191.42	6000.42	106.99	73.72	279.92	455.21	671.99	3.10	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
19600.00	91.94	269.91	9191.42	6000.42	106.99	73.72	79.72	485.27	663.96	3.72	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
19700.00	91.94	269.91	9188.03	5997.03	108.00	74.44	279.83	452.99	671.74	3.07	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
19700.00	91.94	269.91	9188.03	5997.03	108.00	74.44	79.76	486.79	666.42	3.71	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
19800.00	91.94	269.91	9184.63	5993.63	109.00	75.16	279.73	450.76	671.50	3.04	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
19800.00	91.94	269.91	9184.63	5993.63	109.00	75.16	79.89	488.16	669.02	3.70	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
19900.00	91.94	269.91	9181.24	5990.24	110.01	75.88	279.64	448.53	671.27	3.01	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
20000.00	91.94	269.91	9177.85	5986.85	111.02	76.59	279.55	446.30	671.03	2.99	James Ranch Unit DI 1 BS2A-	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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
20100.00	91.94	269.91	9174.46	5983.46	112.03	77.31	279.46	444.07	670.80	2.96	7W #212H (p) James Ranch Unit DI 1 BS2A- 7W #212H (p)	
20200.00	91.94	269.91	9171.06	5980.06	113.04	78.03	279.36	441.85	670.56	2.93	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
20300.00	91.94	269.91	9167.67	5976.67	114.04	78.75	279.27	439.62	670.33	2.91	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
20400.00	91.94	269.91	9164.28	5973.28	115.05	79.47	279.18	437.39	670.10	2.88	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
20500.00	91.94	269.91	9160.88	5969.88	116.06	80.19	279.08	435.16	669.88	2.85	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
20600.00	91.94	269.91	9157.49	5966.49	117.08	80.91	278.99	432.93	669.65	2.83	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
20700.00	91.94	269.91	9154.10	5963.10	118.09	81.63	278.90	430.70	669.43	2.80	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
20800.00	91.94	269.91	9150.71	5959.71	119.10	82.35	278.81	428.47	669.20	2.78	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
20900.00	91.40	269.91	9147.49	5956.49	120.11	83.07	278.73	426.28	669.01	2.76	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21000.00	91.06	269.91	9145.57	5954.57	121.12	83.78	278.76	424.34	669.01	2.73	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21100.00	91.06	269.91	9143.72	5952.72	122.13	84.50	278.80	422.41	669.03	2.71	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21100.00	91.06	269.91	9143.72	5952.72	122.13	84.50	80.88	460.84	668.97	3.21	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
21200.00	91.06	269.91	9141.88	5950.88	123.14	85.23	278.84	420.48	669.05	2.69	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21200.00	91.06	269.91	9141.88	5950.88	123.14	85.23	80.95	457.45	666.18	3.19	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
21300.00	91.06	269.91	9140.03	5949.03	124.16	85.95	278.87	418.55	669.06	2.67	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21300.00	91.06	269.91	9140.03	5949.03	124.16	85.95	81.02	456.42	664.82	3.19	James Ranch Unit DI 1 BS2A- 5W #210H (s)	

SD Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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
21400.00	91.06	269.91	9138.18	5947.18	125.17	86.67	278.91	416.62	669.08	2.65	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21400.00	91.06	269.91	9138.18	5947.18	125.17	86.67	81.10	455.65	664.78	3.18	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
21500.00	91.06	269.91	9136.33	5945.33	126.19	87.39	278.95	414.69	669.09	2.63	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21500.00	91.06	269.91	9136.33	5945.33	126.19	87.39	81.17	452.71	664.65	3.14	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
21600.00	91.06	269.91	9134.48	5943.48	127.20	88.11	278.99	412.76	669.11	2.61	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21600.00	91.06	269.91	9134.48	5943.48	127.20	88.11	81.23	449.08	663.59	3.09	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
21700.00	91.06	269.91	9132.64	5941.64	128.22	88.83	279.03	410.83	669.13	2.59	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21700.00	91.06	269.91	9132.64	5941.64	128.22	88.83	81.28	445.12	661.88	3.05	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
21800.00	91.06	269.91	9130.79	5939.79	129.23	89.56	279.06	408.90	669.14	2.57	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21800.00	91.06	269.91	9130.79	5939.79	129.23	89.56	81.31	441.37	659.85	3.02	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
21900.00	91.06	269.91	9128.94	5937.94	130.25	90.28	279.10	406.97	669.16	2.55	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
21900.00	91.06	269.91	9128.94	5937.94	130.25	90.28	81.36	437.92	658.02	2.99	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
22000.00	91.06	269.91	9127.09	5936.09	131.27	91.00	279.14	405.04	669.18	2.53	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
22000.00	91.06	269.91	9127.09	5936.09	131.27	91.00	81.41	433.00	655.62	2.94	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
22100.00	91.06	269.91	9125.25	5934.25	132.28	91.73	279.18	403.11	669.20	2.51	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
22100.00	91.06	269.91	9125.25	5934.25	132.28	91.73	81.45	428.30	652.74	2.91	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
22200.00	91.06	269.91	9123.40	5932.40	133.30	92.45	279.21	401.18	669.22	2.50	James Ranch Unit	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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
22200.00	91.06	269.91	9123.40	5932.40	133.30	92.45	81.46	424.05	649.98	2.88	DI 1 BS2A-7W #212H (p)	
22300.00	91.06	269.91	9121.55	5930.55	134.32	93.17	279.25	399.25	669.23	2.48	James Ranch Unit DI 1 BS2A-5W #210H (s)	
22300.00	91.06	269.91	9121.55	5930.55	134.32	93.17	81.43	420.23	647.43	2.85	James Ranch Unit DI 1 BS2A-7W #212H (p)	
22400.00	91.06	269.91	9119.70	5928.70	135.34	93.90	279.29	397.32	669.25	2.46	James Ranch Unit DI 1 BS2A-5W #210H (s)	
22400.00	91.06	269.91	9119.70	5928.70	135.34	93.90	81.39	417.24	645.39	2.83	James Ranch Unit DI 1 BS2A-7W #212H (p)	
22500.00	91.06	269.91	9117.85	5926.85	136.35	94.62	279.33	395.39	669.27	2.44	James Ranch Unit DI 1 BS2A-5W #210H (s)	
22500.00	91.06	269.91	9117.85	5926.85	136.35	94.62	81.38	415.29	644.04	2.82	James Ranch Unit DI 1 BS2A-7W #212H (p)	
22600.00	91.06	269.91	9116.01	5925.01	137.37	95.34	279.37	393.46	669.29	2.43	James Ranch Unit DI 1 BS2A-5W #210H (s)	
22600.00	91.06	269.91	9116.01	5925.01	137.37	95.34	81.36	414.56	643.61	2.81	James Ranch Unit DI 1 BS2A-7W #212H (p)	
22700.00	91.06	269.91	9114.16	5923.16	138.39	96.07	279.40	391.53	669.31	2.41	James Ranch Unit DI 1 BS2A-5W #210H (s)	
22700.00	91.06	269.91	9114.16	5923.16	138.39	96.07	81.37	414.57	644.05	2.81	James Ranch Unit DI 1 BS2A-7W #212H (p)	
22800.00	91.06	269.91	9112.31	5921.31	139.41	96.79	279.44	389.60	669.33	2.39	James Ranch Unit DI 1 BS2A-5W #210H (s)	
22800.00	91.06	269.91	9112.31	5921.31	139.41	96.79	81.38	414.61	645.10	2.80	James Ranch Unit DI 1 BS2A-7W #212H (p)	
22900.00	91.06	269.91	9110.46	5919.46	140.43	97.52	279.48	387.67	669.35	2.38	James Ranch Unit DI 1 BS2A-5W #210H (s)	
22900.00	91.06	269.91	9110.46	5919.46	140.43	97.52	81.39	415.70	646.54	2.80	James Ranch Unit DI 1 BS2A-7W #212H (p)	
23000.00	91.06	269.91	9108.62	5917.62	141.45	98.24	279.52	385.74	669.37	2.36	James Ranch Unit DI 1 BS2A-5W #210H (s)	

5D Anti-Collision Report

Primary Well: James Ranch Unit DI 1 BS2A-7E #211H (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
23000.00	91.06	269.91	9108.62	5917.62	141.45	98.24	81.40	418.09	648.91	2.81	7W #212H (p) James Ranch Unit DI 1 BS2A- 5W #210H (s)	
23100.00	91.06	269.91	9106.77	5915.77	142.47	98.96	279.55	383.81	669.39	2.34	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
23100.00	91.06	269.91	9106.77	5915.77	142.47	98.96	81.43	420.61	651.97	2.82	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
23200.00	91.06	269.91	9104.92	5913.92	143.49	99.69	279.59	381.88	669.42	2.33	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
23200.00	91.06	269.91	9104.92	5913.92	143.49	99.69	81.46	422.71	655.39	2.82	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
23300.00	91.06	269.91	9103.07	5912.07	144.51	100.41	279.63	379.66	669.44	2.31	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
23300.00	91.06	269.91	9103.07	5912.07	144.51	100.41	81.49	425.34	658.96	2.82	James Ranch Unit DI 1 BS2A- 5W #210H (s)	
23303.89	91.06	269.91	9103.00	5912.00	144.55	100.44	279.63	379.54	669.44	2.31	James Ranch Unit DI 1 BS2A- 7W #212H (p)	
23303.89	91.06	269.91	9103.00	5912.00	144.55	100.44	81.49	425.46	659.11	2.82	James Ranch Unit DI 1 BS2A- 5W #210H (s)	

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	
20800.00	21029.71	9150.71	8913.64	5722.64	91.10	267.26	329.71	88.46	83.25	1587.59	1992.19	4.92		
20900.00	21100.25	9147.49	8912.44	5721.44	90.85	268.14	331.75	88.97	83.25	1569.07	1988.14	4.74		
21000.00	21179.24	9145.57	8911.40	5720.40	90.72	268.77	333.95	89.54	83.25	1560.04	1985.69	4.67		
21100.00	21273.66	9143.72	8910.01	5719.01	91.30	268.86	336.54	90.24	83.25	1554.60	1983.86	4.62		
21200.00	21356.57	9141.88	8907.54	5716.54	91.67	269.32	338.81	90.84	83.22	1551.79	1982.31	4.60		
21300.00	21424.10	9140.03	8905.89	5714.89	91.21	270.32	340.58	91.33	83.21	1560.64	1982.25	4.70		
21400.00	21504.77	9138.18	8903.92	5712.92	91.59	270.83	342.71	91.91	83.20	1570.08	1983.47	4.80		
21500.00	21606.84	9136.33	8901.25	5710.25	91.37	270.80	345.53	92.65	83.18	1567.03	1985.18	4.75		
21600.00	21712.26	9134.48	8898.95	5707.95	91.17	270.66	348.46	93.42	83.18	1561.55	1986.67	4.67		
21700.00	21823.39	9132.64	8896.53	5705.53	91.24	270.33	351.57	94.22	83.17	1552.49	1987.67	4.57		
21800.00	21921.35	9130.79	8894.53	5703.53	91.26	270.39	354.26	94.94	83.17	1550.87	1988.39	4.54		
21900.00	22013.12	9128.94	8892.19	5701.19	91.57	270.59	356.75	95.60	83.15	1553.64	1989.56	4.56		
22000.00	22109.86	9127.09	8889.52	5698.52	91.62	270.68	359.40	96.31	83.13	1553.69	1990.82	4.55		
22100.00	22228.80	9125.25	8886.05	5695.05	91.60	270.13	362.76	97.17	83.10	1540.63	1992.41	4.41		
22200.00	22371.00	9123.40	8882.31	5691.31	91.47	268.93	366.73	98.20	83.06	1524.91	1991.52	4.27		
22300.00	22478.90	9121.55	8879.62	5688.62	91.51	268.69	369.69	98.99	83.03	1520.03	1989.64	4.24		
22400.00	22575.75	9119.70	8876.54	5685.54	92.08	268.71	372.35	99.69	82.99	1514.68	1987.69	4.20		
22500.00	22668.99	9117.85	8872.89	5681.89	92.32	268.88	374.92	100.36	82.93	1509.87	1985.96	4.17		
22600.00	22759.37	9116.01	8869.28	5678.28	92.29	269.16	377.40	101.02	82.87	1506.66	1984.77	4.15		
22700.00	22869.65	9114.16	8864.80	5673.80	92.30	268.86	380.43	101.82	82.79	1501.46	1983.48	4.11		

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
22800.00	22972.95	9112.31	8860.77	5669.77	92.26	268.77	383.26	102.57	82.72	1496.76	1981.74	4.09	
22900.00	23066.74	9110.46	8856.99	5665.99	92.31	268.94	385.84	103.25	82.66	1492.42	1980.19	4.06	
23000.00	23168.03	9108.62	8852.96	5661.96	92.29	268.90	388.62	103.99	82.59	1488.08	1978.86	4.03	
23100.00	23261.95	9106.77	8849.27	5658.27	92.11	269.10	391.20	104.67	82.53	1484.23	1977.37	4.01	
23200.00	23310.00	9104.92	8847.54	5656.54	92.05	269.21	392.52	105.02	82.50	1505.64	1976.96	4.19	
Secondary Well: James Ranch Unit DI 1 BS1-3E #213H (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
1600.00	1599.99	1599.50	1599.87	-1591.13	1.24	180.11	2.44	2.44	304.15	24.85	31.27	4.87	
1700.00	1699.91	1699.50	1699.78	-1491.22	0.93	175.34	2.63	2.63	301.05	23.45	30.29	4.43	
1800.00	1800.00	1799.50	1799.86	-1391.14	1.24	173.76	2.82	2.82	298.23	21.97	29.21	4.03	CC (Lo)
1900.00	1899.60	1899.50	1899.43	-1291.57	0.93	212.86	3.02	3.01	294.76	20.98	28.64	3.74	CC (Lo)
2000.00	1999.38	1999.50	1999.20	-1191.80	1.09	233.40	3.21	3.21	291.56	21.20	29.27	3.62	CC (Lo)
2100.00	2099.38	2099.50	2099.18	-1091.82	0.92	239.49	3.40	3.40	288.79	21.80	30.29	3.57	
2200.00	2199.32	2199.50	2199.12	-991.88	0.73	270.48	3.60	3.60	287.48	22.53	31.44	3.53	
2300.00	2299.26	2299.50	2299.05	-891.95	0.93	253.85	3.80	3.80	286.36	23.32	32.66	3.50	
2400.00	2399.03	2399.50	2398.79	-792.21	1.32	257.19	4.00	4.00	284.56	24.72	34.48	3.53	
2500.00	2498.98	2499.50	2498.72	-692.28	1.25	270.95	4.21	4.21	283.27	26.27	36.45	3.58	
2600.00	2598.97	2599.50	2598.69	-592.31	1.20	278.03	4.41	4.41	283.04	28.24	38.86	3.66	
2700.00	2699.85	2699.50	2699.55	-491.45	0.65	185.83	4.62	4.62	282.19	28.94	39.99	3.62	
2800.00	2800.65	2799.50	2800.33	-390.67	1.74	144.85	4.83	4.83	279.66	27.14	38.62	3.37	
2900.00	2900.82	2899.50	2900.43	-290.57	1.87	133.48	5.03	5.03	276.15	24.21	36.12	3.03	
3000.00	3000.86	2999.50	3000.42	-190.58	1.86	125.27	5.24	5.24	273.39	21.14	33.47	2.71	
3100.00	3100.62	3099.49	3100.14	-90.86	1.52	129.16	5.45	5.44	74.98	17.79	30.52	2.40	
3200.00	3200.29	3199.41	3199.78	8.78	1.07	141.47	5.65	5.65	79.77	14.85	27.97	2.13	CC (Lo)
3300.00	3300.02	3299.19	3299.50	108.50	0.72	130.88	5.85	5.85	91.53	12.72	26.24	1.94	SF(Lo); CC (Lo)
3346.88	3346.62	3345.90	3346.10	155.10	0.49	140.78	5.95	5.95	99.80	12.43	26.13	1.91	SF(Lo); CC (Lo)
3400.00	3399.33	3398.77	3398.80	207.80	0.45	208.05	6.06	6.05	109.87	13.33	27.24	1.96	SF(Lo); CC (Lo)
3500.00	3498.44	3498.08	3497.92	306.92	0.73	257.35	6.26	6.26	127.39	18.88	33.20	2.32	
3600.00	3597.66	3597.04	3597.12	406.12	0.73	240.30	6.40	6.40	140.58	28.99	43.51	3.00	
3700.00	3696.63	3695.59	3696.08	505.08	1.02	229.28	6.42	6.41	149.88	42.28	57.01	3.87	
3800.00	3795.03	3793.67	3794.47	603.47	0.94	223.16	6.43	6.43	156.26	58.56	73.51	4.92	
Secondary Well: James Ranch Unit DI 1 BS2A-SW #210H (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
3000.00	3001.70	2999.50	3003.24	-187.76	4.82	119.20	10.51	10.48	356.26	64.27	81.70	4.69	
3100.00	3101.50	3099.49	3102.69	-88.31	4.77	120.95	10.87	10.83	164.06	60.60	78.59	4.37	
3200.00	3201.15	3199.41	3201.99	10.99	4.86	120.56	11.23	11.19	170.18	60.17	78.71	4.25	
3300.00	3300.74	3299.19	3301.24	110.24	4.68	121.59	11.59	11.54	176.25	63.22	82.32	4.31	
3400.00	3400.39	3398.77	3400.59	209.59	4.24	124.92	11.95	11.89	181.34	69.56	89.22	4.54	
3500.00	3499.69	3498.08	3499.63	308.63	4.11	125.38	12.30	12.24	185.23	78.95	99.16	4.91	
Secondary Well: James Ranch Unit DI 1 BS2A-SW #210H (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
2900.00	2901.91	2899.50	2899.92	-291.08	2.94	146.60	3.09	3.03	46.83	38.48	48.45	4.86	
3000.00	3002.11	2999.50	2999.91	-191.09	4.60	150.66	3.29	3.23	54.42	37.24	47.63	4.58	
3100.00	3102.23	3099.49	3099.57	-91.43	6.11	155.76	3.50	3.44	227.16	37.19	47.97	4.45	
3200.00	3202.17	3199.41	3198.82	7.82	7.35	159.66	3.72	3.65	237.21	39.60	50.78	4.54	
3300.00	3301.81	3299.19	3297.56	106.56	7.90	160.75	3.95	3.86	245.45	44.31	55.89	4.83	
16300.00	17320.21	9303.39	9151.53	5960.53	91.64	265.01	63.07	40.18	76.76	525.53	657.39	4.99	
16400.00	17393.17	9299.99	9149.26	5958.26	91.70	267.42	63.26	40.30	76.68	519.95	651.31	4.96	
16500.00	17488.78	9296.60	9147.33	5956.33	90.57	268.07	63.71	40.51	76.73	515.07	647.55	4.89	
16600.00	17595.85	9293.21	9147.36	5956.36	90.22	267.50	64.36	40.73	76.96	508.32	643.05	4.77	
16700.00	17684.93	9289.81	9145.59	5954.59	91.74	268.14	64.79	40.85	77.00	503.51	638.77	4.72	

5D Anti-Collision Report

Secondary Well: James Ranch Unit DI 1 BS2A-SW #210H (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
16800.00	17761.04	9286.42	9143.01	5952.01	92.08	270.27	64.96	40.99	76.98	503.38	637.54	4.75	
16900.00	17834.75	9283.03	9140.46	5949.46	91.88	272.73	64.99	41.16	77.02	508.00	640.25	4.84	
17000.00	17921.20	9279.64	9137.35	5946.35	92.34	273.85	65.29	41.34	77.11	514.41	646.23	4.90	
17100.00	18011.61	9276.24	9133.28	5942.28	92.79	274.59	65.68	41.53	77.15	521.96	653.82	4.96	
17200.00	18117.26	9272.85	9128.00	5937.00	92.85	274.05	66.44	41.80	77.17	527.77	661.95	4.93	
17300.00	18231.03	9269.46	9122.94	5931.94	92.27	272.94	67.36	42.13	77.20	530.58	668.31	4.85	
17400.00	18347.26	9266.06	9117.48	5926.48	92.66	271.42	68.35	42.43	77.16	530.81	672.31	4.75	
17500.00	18448.83	9262.67	9113.63	5922.63	92.33	271.36	69.02	42.74	77.17	531.29	674.54	4.71	
17600.00	18542.08	9259.28	9109.05	5918.05	92.41	271.92	69.53	43.02	77.11	534.26	678.06	4.72	
17700.00	18654.56	9255.89	9106.70	5915.70	90.60	271.25	70.39	43.44	77.30	533.51	680.75	4.62	
17800.00	18766.60	9252.49	9105.23	5914.23	91.38	270.04	71.32	43.77	77.52	531.05	681.61	4.53	
17900.00	18881.52	9249.10	9102.11	5911.11	91.38	268.75	72.26	44.15	77.56	526.56	680.57	4.42	
18000.00	18984.72	9245.71	9099.22	5908.22	91.85	268.36	73.01	44.48	77.57	522.12	678.15	4.35	
18100.00	19099.28	9242.31	9095.43	5904.43	92.00	267.06	73.94	44.88	77.49	514.98	674.08	4.24	
18200.00	19195.32	9238.92	9091.85	5900.85	91.99	267.40	74.59	45.23	77.38	509.23	669.55	4.18	
18300.00	19292.46	9235.53	9089.30	5898.30	91.46	267.77	75.25	45.61	77.37	503.84	665.54	4.12	
18400.00	19381.90	9232.14	9086.30	5895.30	92.38	268.49	75.82	45.92	77.31	499.87	662.01	4.08	
18500.00	19451.31	9228.74	9083.00	5892.00	93.06	271.05	75.98	46.15	77.23	502.78	662.07	4.16	
18600.00	19528.80	9225.35	9079.24	5888.24	92.45	273.17	76.17	46.48	77.19	509.29	666.16	4.25	
18700.00	19635.51	9221.96	9076.31	5885.31	90.50	273.01	76.99	46.97	77.37	512.08	671.95	4.20	
18800.00	19765.99	9218.56	9075.65	5884.65	90.28	270.39	78.41	47.51	77.75	507.26	674.29	4.04	
18900.00	19875.17	9215.17	9074.98	5883.98	90.42	269.56	79.35	47.97	78.00	503.17	673.45	3.95	
19000.00	19981.89	9211.78	9074.48	5883.48	89.68	269.13	80.22	48.43	78.25	499.07	672.19	3.88	
19100.00	20094.66	9208.39	9076.91	5885.91	87.79	268.39	81.16	48.94	78.73	492.18	668.97	3.78	
19200.00	20190.29	9204.99	9080.73	5889.73	88.08	268.69	81.74	49.20	79.29	486.57	665.07	3.73	
19300.00	20279.66	9201.60	9082.34	5891.34	90.14	269.23	82.08	49.27	79.66	483.58	662.48	3.70	
19400.00	20368.81	9198.21	9080.69	5889.69	91.73	269.89	82.37	49.28	79.76	482.86	661.57	3.70	
19500.00	20459.92	9194.81	9077.31	5886.31	92.28	270.57	82.67	49.30	79.75	483.65	662.19	3.71	
19600.00	20553.57	9191.42	9073.57	5882.57	92.19	271.15	83.00	49.33	79.72	485.27	663.96	3.72	
19700.00	20651.27	9188.03	9070.27	5879.27	91.53	271.46	83.38	49.39	79.76	486.79	666.42	3.71	
19800.00	20750.17	9184.63	9067.96	5876.96	91.41	271.58	83.82	49.45	79.89	488.16	669.02	3.70	
19900.00	20842.01	9181.24	9065.56	5874.56	91.56	272.25	84.13	49.51	80.00	491.59	672.19	3.72	
20000.00	20935.78	9177.85	9062.93	5871.93	91.65	272.77	84.49	49.58	80.11	496.02	676.67	3.75	
20100.00	21047.96	9174.46	9059.86	5868.86	91.40	271.76	85.22	49.68	80.24	496.15	680.97	3.68	
20200.00	21163.06	9171.06	9057.06	5866.06	91.42	270.47	86.00	49.80	80.37	493.51	682.86	3.61	
20300.00	21277.36	9167.67	9054.26	5863.26	91.56	269.23	86.75	49.93	80.45	489.06	682.40	3.53	
20400.00	21380.15	9164.28	9050.92	5859.92	91.92	268.93	87.32	50.06	80.44	485.64	680.89	3.49	
20500.00	21484.83	9160.88	9047.95	5856.95	91.02	268.68	87.91	50.20	80.46	481.49	678.95	3.44	
20600.00	21594.60	9157.49	9047.06	5856.06	90.40	267.94	88.57	50.37	80.66	475.50	675.90	3.37	
20700.00	21678.25	9154.10	9045.63	5854.63	92.17	269.05	88.92	50.49	80.74	472.95	672.66	3.37	
20800.00	21765.14	9150.71	9041.18	5850.18	92.28	270.17	89.26	50.63	80.62	474.17	672.90	3.39	
20900.00	21872.79	9147.49	9039.23	5848.23	90.61	269.78	89.92	50.83	80.74	470.99	672.81	3.33	
21000.00	21984.42	9145.57	9038.16	5847.16	90.51	268.79	90.68	51.04	80.82	466.37	671.75	3.27	
21100.00	22092.46	9143.72	9037.36	5846.36	90.32	268.12	91.38	51.25	80.88	460.84	668.97	3.21	
21200.00	22185.08	9141.88	9036.86	5845.86	90.31	268.76	91.86	51.44	80.95	457.45	666.18	3.19	
21300.00	22273.72	9140.03	9036.27	5845.27	90.46	269.73	92.27	51.63	81.02	456.42	664.82	3.19	
21400.00	22369.17	9138.18	9035.38	5844.38	90.60	270.10	92.80	51.85	81.10	455.65	664.78	3.18	
21500.00	22475.03	9136.33	9034.24	5843.24	90.62	269.59	93.52	52.09	81.17	452.71	664.65	3.14	
21600.00	22580.00	9134.48	9033.11	5842.11	90.61	269.15	94.22	52.35	81.23	449.08	663.59	3.09	
21700.00	22683.45	9132.64	9032.05	5841.05	90.58	268.86	94.91	52.61	81.28	445.12	661.88	3.05	
21800.00	22783.80	9130.79	9030.93	5839.93	90.67	268.81	95.55	52.87	81.31	441.37	659.85	3.02	
21900.00	22883.44	9128.94	9029.84	5838.84	90.56	268.86	96.19	53.14	81.36	437.92	658.02	2.99	
22000.00	22988.52	9127.09	9028.94	5837.94	90.51	268.41	96.92	53.44	81.41	433.00	655.62	2.94	
22100.00	23089.38	9125.25	9027.90	5836.90	90.65	268.31	97.59	53.73	81.45	428.30	652.74	2.91	
22200.00	23188.15	9123.40	9026.64	5835.64	90.90	268.38	98.23	54.02	81.46	424.05	649.98	2.88	
22300.00	23285.82	9121.55	9024.82	5833.82	91.14	268.55	98.87	54.32	81.43	420.23	647.43	2.85	
22400.00	23381.94	9119.70	9022.91	5831.91	91.07	268.91	99.48	54.62	81.39	417.24	645.39	2.83	
22500.00	23476.58	9117.85	9021.20	5830.20	91.09	269.38	100.07	54.93	81.38	415.29	644.04	2.82	

5D Anti-Collision Report

Secondary Well: James Ranch Unit DI-1 BS2A-5W #210H (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
22600.00	23570.62	9116.01	9019.34	5828.34	91.10	269.92	100.64	55.23	81.36	414.56	643.61	2.81	
22700.00	23665.67	9114.16	9017.58	5826.58	91.05	270.37	101.23	55.55	81.37	414.57	644.05	2.81	
22800.00	23763.15	9112.31	9015.78	5824.78	91.09	270.59	101.88	55.89	81.38	414.61	645.10	2.80	
22900.00	23858.52	9110.46	9013.90	5822.90	91.18	270.99	102.49	56.22	81.39	415.70	646.54	2.80	
23000.00	23952.97	9108.62	9011.94	5820.94	91.12	271.50	103.07	56.56	81.40	418.09	648.91	2.81	
23100.00	24049.41	9106.77	9010.11	5819.11	91.13	271.81	103.70	56.91	81.43	420.61	651.97	2.82	
23200.00	24148.29	9104.92	9008.11	5817.11	91.17	271.90	104.39	57.27	81.46	422.71	655.39	2.82	
23300.00	24246.08	9103.07	9006.14	5815.14	91.13	272.09	105.06	57.64	81.49	425.34	658.96	2.82	
23303.89	24249.85	9103.00	9006.06	5815.06	91.12	272.10	105.09	57.66	81.49	425.46	659.11	2.82	

Secondary Well: James Ranch Unit DI-1 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
600.00	600.00	600.00	600.00	-2591.00	0.00	0.00	1.24	1.24	89.22	11.58	14.60	4.84	CC (Med)
700.00	699.99	699.99	699.99	-2491.01	0.00	0.00	1.46	1.46	259.16	11.35	14.79	4.30	CC (Med)
800.00	799.91	799.91	799.91	-2391.09	0.00	0.00	1.69	1.69	245.24	12.16	16.00	4.16	CC (Med)
900.00	899.77	899.77	899.77	-2291.23	0.00	0.00	1.91	1.91	230.62	14.55	18.81	4.41	CC (Med)
1000.00	999.63	999.63	999.63	-2191.37	0.00	0.00	2.14	2.14	220.27	17.81	22.49	4.80	CC (Lo)
1300.00	1299.50	1299.50	1299.50	-1891.50	0.00	0.00	2.81	2.81	35.14	22.93	28.94	4.82	CC (Lo)
1400.00	1399.50	1399.50	1399.50	-1791.50	0.00	0.00	3.04	3.04	35.14	22.49	28.94	4.49	CC (Lo)
1500.00	1499.50	1499.50	1499.50	-1691.50	0.00	0.00	3.26	3.26	35.14	22.05	28.94	4.20	CC (Lo)
1600.00	1599.50	1599.50	1599.50	-1591.50	0.00	0.00	3.48	3.48	35.14	21.60	28.94	3.94	CC (Lo)
1700.00	1699.50	1699.50	1699.50	-1491.50	0.00	0.00	3.71	3.71	35.14	21.15	28.94	3.72	CC (Lo)
1800.00	1799.50	1799.50	1799.50	-1391.50	0.00	0.00	3.93	3.93	35.14	20.71	28.94	3.52	CC (Lo)
1900.00	1899.50	1899.50	1899.50	-1291.50	0.00	0.00	4.16	4.16	35.14	20.26	28.94	3.34	CC (Lo)
2000.00	1999.50	1999.50	1999.50	-1191.50	0.00	0.00	4.38	4.38	35.14	19.82	28.94	3.17	CC (Lo)
2100.00	2099.50	2099.50	2099.50	-1091.50	0.00	0.00	4.61	4.61	35.14	19.37	28.94	3.02	CC (Lo)
2200.00	2199.50	2199.50	2199.50	-991.50	0.00	0.00	4.83	4.83	35.14	18.92	28.94	2.89	CC (Lo)
2300.00	2299.50	2299.50	2299.50	-891.50	0.00	0.00	5.06	5.06	35.14	18.47	28.94	2.77	CC (Lo)
2400.00	2399.50	2399.50	2399.50	-791.50	0.00	0.00	5.28	5.28	35.14	18.03	28.94	2.65	CC (Lo)
2500.00	2499.50	2499.50	2499.50	-691.50	0.00	0.00	5.51	5.51	35.14	17.58	28.94	2.55	CC (Lo)
2600.00	2599.50	2599.50	2599.50	-591.50	0.00	0.00	5.73	5.73	35.14	17.13	28.94	2.45	CC (Lo)
2700.00	2699.50	2699.50	2699.50	-491.50	0.00	0.00	5.96	5.96	35.14	16.68	28.94	2.36	CC (Lo)
2800.00	2799.50	2799.50	2799.50	-391.50	0.00	0.00	6.18	6.18	35.14	16.23	28.94	2.28	CC (Lo)
2900.00	2899.50	2899.50	2899.50	-291.50	0.00	0.00	6.41	6.41	35.14	15.79	28.94	2.20	CC (Lo)
3000.00	2999.50	2999.50	2999.50	-191.50	0.00	0.00	6.63	6.63	35.14	15.34	28.94	2.13	CC (Lo)
3100.00	3099.49	3099.49	3099.49	-91.51	0.00	0.00	6.86	6.86	196.78	16.16	30.18	2.15	
3200.00	3199.41	3199.41	3199.41	8.41	0.00	0.00	7.08	7.08	194.89	19.51	33.94	2.35	
3300.00	3299.19	3299.19	3299.19	108.19	0.00	0.00	7.31	7.31	192.53	25.45	40.28	2.71	
3400.00	3398.77	3398.77	3398.77	207.77	0.00	0.00	7.53	7.53	190.24	33.99	49.24	3.23	
3500.00	3498.08	3498.08	3498.08	307.08	0.00	0.00	7.75	7.75	188.30	45.16	60.83	3.88	
3600.00	3597.04	3597.04	3597.04	406.04	0.00	0.00	7.98	7.98	186.75	58.96	75.05	4.66	
15500.00	17132.01	9330.53	9169.43	5978.43	91.31	269.94	76.05	55.29	283.64	545.47	683.36	4.96	
15600.00	17232.00	9327.14	9167.14	5976.14	91.31	269.94	77.02	55.99	283.55	543.31	683.05	4.89	
15700.00	17332.00	9323.74	9164.85	5973.85	91.31	269.94	77.98	56.69	283.46	541.15	682.74	4.82	
15800.00	17431.99	9320.35	9162.57	5971.57	91.31	269.94	78.96	57.40	283.37	538.99	682.43	4.76	
15900.00	17531.99	9316.96	9160.28	5969.28	91.31	269.94	79.93	58.10	283.28	536.82	682.12	4.69	
16000.00	17631.98	9313.57	9158.00	5967.00	91.31	269.94	80.90	58.81	283.19	534.66	681.82	4.63	
16100.00	17731.97	9310.17	9155.71	5964.71	91.31	269.94	81.88	59.51	283.10	532.48	681.52	4.57	
16200.00	17831.97	9306.78	9153.42	5962.42	91.31	269.94	82.86	60.22	283.01	530.31	681.22	4.51	
16300.00	17931.96	9303.39	9151.14	5960.14	91.31	269.94	83.83	60.92	282.92	528.13	680.92	4.46	
16400.00	18031.96	9299.99	9148.85	5957.85	91.31	269.94	84.81	61.63	282.83	525.95	680.62	4.40	
16500.00	18131.95	9296.60	9146.57	5955.57	91.31	269.94	85.80	62.34	282.74	523.76	680.32	4.35	
16600.00	18231.94	9293.21	9144.28	5953.28	91.31	269.94	86.78	63.05	282.65	521.58	680.03	4.29	
16700.00	18331.94	9289.81	9141.99	5950.99	91.31	269.94	87.76	63.76	282.56	519.39	679.74	4.24	
16800.00	18431.93	9286.42	9139.71	5948.71	91.31	269.94	88.75	64.47	282.47	517.20	679.44	4.19	
16900.00	18531.93	9283.03	9137.42	5946.42	91.31	269.94	89.74	65.18	282.38	515.00	679.16	4.14	
17000.00	18631.92	9279.64	9135.14	5944.14	91.31	269.94	90.72	65.89	282.29	512.81	678.87	4.09	

5D Anti-Collision Report

Secondary Well: James Ranch Unit DI 1 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
17100.00	18731.91	9276.24	9132.85	5941.85	91.31	269.94	91.71	66.60	282.20	510.61	678.58	4.04	
17200.00	18831.91	9272.85	9130.56	5939.56	91.31	269.94	92.70	67.31	282.11	508.41	678.30	3.99	
17300.00	18931.90	9269.46	9128.28	5937.28	91.31	269.94	93.69	68.02	282.02	506.21	678.01	3.95	
17400.00	19031.89	9266.06	9125.99	5934.99	91.31	269.94	94.69	68.73	281.93	504.00	677.73	3.90	
17500.00	19131.89	9262.67	9123.71	5932.71	91.31	269.94	95.68	69.45	281.84	501.80	677.45	3.86	
17600.00	19231.88	9259.28	9121.42	5930.42	91.31	269.94	96.67	70.16	281.75	499.59	677.18	3.81	
17700.00	19331.88	9255.89	9119.13	5928.13	91.31	269.94	97.67	70.87	281.66	497.38	676.90	3.77	
17800.00	19431.87	9252.49	9116.85	5925.85	91.31	269.94	98.67	71.59	281.57	495.17	676.63	3.73	
17900.00	19531.86	9249.10	9114.56	5923.56	91.31	269.94	99.66	72.30	281.47	492.96	676.35	3.69	
18000.00	19631.86	9245.71	9112.28	5921.28	91.31	269.94	100.66	73.01	281.38	490.75	676.08	3.65	
18100.00	19731.85	9242.31	9109.99	5918.99	91.31	269.94	101.66	73.73	281.29	488.54	675.81	3.61	
18200.00	19831.85	9238.92	9107.70	5916.70	91.31	269.94	102.66	74.44	281.20	486.32	675.55	3.57	
18300.00	19931.84	9235.53	9105.42	5914.42	91.31	269.94	103.66	75.16	281.11	484.11	675.28	3.53	
18400.00	20031.83	9232.14	9103.13	5912.13	91.31	269.94	104.66	75.87	281.02	481.89	675.02	3.50	
18500.00	20131.83	9228.74	9100.85	5909.85	91.31	269.94	105.66	76.59	280.93	479.67	674.76	3.46	
18600.00	20231.82	9225.35	9098.56	5907.56	91.31	269.94	106.66	77.31	280.84	477.45	674.49	3.42	
18700.00	20331.81	9221.96	9096.27	5905.27	91.31	269.94	107.66	78.02	280.74	475.23	674.24	3.39	
18800.00	20431.81	9218.56	9093.99	5902.99	91.31	269.94	108.67	78.74	280.65	473.01	673.98	3.35	
18900.00	20531.80	9215.17	9091.70	5900.70	91.31	269.94	109.67	79.46	280.56	470.79	673.72	3.32	
19000.00	20631.80	9211.78	9089.42	5898.42	91.31	269.94	110.68	80.17	280.47	468.56	673.47	3.29	
19100.00	20731.79	9208.39	9087.13	5896.13	91.31	269.94	111.68	80.89	280.38	466.34	673.22	3.25	
19200.00	20831.78	9204.99	9084.84	5893.84	91.31	269.94	112.69	81.61	280.29	464.12	672.97	3.22	
19300.00	20931.78	9201.60	9082.56	5891.56	91.31	269.94	113.70	82.33	280.19	461.89	672.72	3.19	
19400.00	21031.77	9198.21	9080.27	5889.27	91.31	269.94	114.70	83.04	280.10	459.67	672.47	3.16	
19500.00	21131.77	9194.81	9077.99	5886.99	91.31	269.94	115.71	83.76	280.01	457.44	672.23	3.13	
19600.00	21231.76	9191.42	9075.70	5884.70	91.31	269.94	116.72	84.48	279.92	455.21	671.99	3.10	
19700.00	21331.75	9188.03	9073.41	5882.41	91.31	269.94	117.73	85.20	279.83	452.99	671.74	3.07	
19800.00	21431.75	9184.63	9071.13	5880.13	91.31	269.94	118.74	85.92	279.73	450.76	671.50	3.04	
19900.00	21531.74	9181.24	9068.84	5877.84	91.31	269.94	119.75	86.64	279.64	448.53	671.27	3.01	
20000.00	21631.73	9177.85	9066.55	5875.55	91.31	269.94	120.76	87.36	279.55	446.30	671.03	2.99	
20100.00	21731.73	9174.46	9064.27	5873.27	91.31	269.94	121.77	88.08	279.46	444.07	670.80	2.96	
20200.00	21831.72	9171.06	9061.98	5870.98	91.31	269.94	122.78	88.80	279.36	441.85	670.56	2.93	
20300.00	21931.72	9167.67	9059.70	5868.70	91.31	269.94	123.79	89.52	279.27	439.62	670.33	2.91	
20400.00	22031.71	9164.28	9057.41	5866.41	91.31	269.94	124.80	90.24	279.18	437.39	670.10	2.88	
20500.00	22131.70	9160.88	9055.12	5864.12	91.31	269.94	125.81	90.96	279.08	435.16	669.88	2.85	
20600.00	22231.70	9157.49	9052.84	5861.84	91.31	269.94	126.83	91.68	278.99	432.93	669.65	2.83	
20700.00	22331.69	9154.10	9050.55	5859.55	91.31	269.94	127.84	92.40	278.90	430.70	669.43	2.80	
20800.00	22431.69	9150.71	9048.27	5857.27	91.31	269.94	128.85	93.12	278.81	428.47	669.20	2.78	
20900.00	22531.68	9147.49	9045.98	5854.98	91.31	269.94	129.87	93.84	278.73	426.28	669.01	2.76	
21000.00	22631.68	9145.57	9043.69	5852.69	91.31	269.94	130.88	94.56	278.76	424.34	669.01	2.73	
21100.00	22731.68	9143.72	9041.41	5850.41	91.31	269.94	131.89	95.29	278.80	422.41	669.03	2.71	
21200.00	22831.68	9141.88	9039.12	5848.12	91.31	269.94	132.91	96.01	278.84	420.48	669.05	2.69	
21300.00	22931.68	9140.03	9036.84	5845.84	91.31	269.94	133.93	96.73	278.87	418.55	669.06	2.67	
21400.00	23031.68	9138.18	9034.55	5843.55	91.31	269.94	134.94	97.45	278.91	416.62	669.08	2.65	
21500.00	23131.68	9136.33	9032.26	5841.26	91.31	269.94	135.96	98.17	278.95	414.69	669.09	2.63	
21600.00	23231.67	9134.48	9029.98	5838.98	91.31	269.94	136.97	98.90	278.99	412.76	669.11	2.61	
21700.00	23331.67	9132.64	9027.69	5836.69	91.31	269.94	137.99	99.62	279.03	410.83	669.13	2.59	
21800.00	23431.67	9130.79	9025.41	5834.41	91.31	269.94	139.01	100.34	279.06	408.90	669.14	2.57	
21900.00	23531.67	9128.94	9023.12	5832.12	91.31	269.94	140.02	101.06	279.10	406.97	669.16	2.55	
22000.00	23631.67	9127.09	9020.83	5829.83	91.31	269.94	141.04	101.79	279.14	405.04	669.18	2.53	
22100.00	23731.67	9125.25	9018.55	5827.55	91.31	269.94	142.06	102.51	279.18	403.11	669.20	2.51	
22200.00	23831.67	9123.40	9016.26	5825.26	91.31	269.94	143.08	103.23	279.21	401.18	669.22	2.50	
22300.00	23931.67	9121.55	9013.97	5822.97	91.31	269.94	144.10	103.96	279.25	399.25	669.23	2.48	
22400.00	24031.67	9119.70	9011.69	5820.69	91.31	269.94	145.11	104.68	279.29	397.32	669.25	2.46	
22500.00	24131.67	9117.85	9009.40	5818.40	91.31	269.94	146.13	105.40	279.33	395.39	669.27	2.44	
22600.00	24231.66	9116.01	9007.12	5816.12	91.31	269.94	147.15	106.13	279.37	393.46	669.29	2.43	
22700.00	24331.66	9114.16	9004.83	5813.83	91.31	269.94	148.17	106.85	279.40	391.53	669.31	2.41	
22800.00	24431.66	9112.31	9002.54	5811.54	91.31	269.94	149.19	107.58	279.44	389.60	669.33	2.39	

5D Anti-Collision Report

Secondary Well: James Ranch Unit DI 1 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
22900.00	24531.66	9110.46	9000.26	5809.26	91.31	269.94	150.21	108.30	279.48	387.67	669.35	2.38	
23000.00	24631.66	9108.62	8997.97	5806.97	91.31	269.94	151.23	109.02	279.52	385.74	669.37	2.36	
23100.00	24731.66	9106.77	8995.68	5804.68	91.31	269.94	152.25	109.75	279.55	383.81	669.39	2.34	
23200.00	24831.66	9104.92	8993.40	5802.40	91.31	269.94	153.27	110.47	279.59	381.88	669.42	2.33	
23300.00	24931.66	9103.07	8991.11	5800.11	91.31	269.94	154.26	111.10	279.63	379.66	669.44	2.31	
23303.89	24935.54	9103.00	8991.02	5800.02	91.31	269.94	154.29	111.12	279.63	379.54	669.44	2.31	

GD4 Magnetic CheckSum Calculator for Spectrum/Core



Client: XTO Energy

Well: James Ranch Unit DI 1 BS2A-7E #211H

Projected Coordinate System: Nad 27 NME

Surface Hole Location Elevation Relative to MSL: 3166
 Latitude: 32.380588° Northing (Y): 502465.6
 Longitude: -103.882758° Easting (X): 639096.7

Azimuth Correction	
Magnetic Declination:	<u>7.15</u> deg
Magnetic Reference:	<u>Grid</u>
Magnetic Field (Bt):	<u>47923</u> nT
Azimuth Method:	<u>Long Collar</u>
Grid Convergence:	<u>0.24</u> deg
Total Correction:	<u>6.91</u> deg*
Dip Angle:	<u>60.11</u> deg
Checksum:	<u>6516</u>

* Total Correction is automatically calculated from Declination and Convergence values

Correction Point Location: MD/TVD: 3191' TVD
 Latitude: 32.380588° Northing (Y): 502465.6
 Longitude: -103.882758° Easting (X): 639096.7

	Magnetic Model	Run Date
Magnetic Declination:	<u>MagVAR IFR</u>	<u>6/6/2019</u>
Magnetic Field (Bt):	<u>MagVAR IFR</u>	<u>6/6/2019</u>
Grid Convergence:	<u>MagVAR IFR</u>	<u>6/6/2019</u>
Dip Angle:	<u>MagVAR IFR</u>	<u>6/6/2019</u>

Attach referenced Magnetic Calculator results for all data used in this report

Magnetic Data

Date (dd/mm/yyyy) 06/Jun/2019 Field Strength 47923 nT North Reference: Grid
 Model MagVAR IFR Dip 60.11 deg Convergence 0.24 deg
 Declination 7.15 deg Total Correction 6.91 deg
 Checksum 6516

Report Generated By: Russell Joyner