

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-5 form.

Operator Signature Date: **Original APD 2/11/2014**
Sundry Date 3/4/2019

WELL INFORMATION:

DJR OPERATING LLC

30-045-35514 BETONNIE TSOSIE WASH UNIT #728H

Conditions of Approval:

(See the below checked and handwritten conditions)

- ✓ Notify Aztec OCD 24hrs prior to casing & cement.
- ✓ Hold C-104 for directional survey & "As Drilled" Plat
- ✓ Hold C-104 for NSL, NSP, DHC,
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ✓ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - ✓ A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - ✓ A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - ✓ A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ✓ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ✓ Submit Gas Capture Plan form prior to spudding or initiating recompletions operations.
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

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✓ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

✓ Comply with current regulations at time of spud
Prior to production operator needs to be in compliance with RULE 19.15.5.9

- Operator Change Completed w/ this
sundry approval

Richard P. Pugh

NMOCD Approved by Signature

3/15/19
Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

MAR 04 2019

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

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

5. Lease Serial No.
NMNM 136161

6. If Indian, Allottee or Tribe Name
N/A

SUBMIT IN TRIPLICATE – Other instructions on page 2.

7. If Unit of CA/Agreement, Name and/or No.
NMNM 135219X

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
BETONNIE TSOSIE WASH UNIT 728H

2. Name of Operator
DJR Operating LLC.

9. API Well No.
30-045-35514

3a. Address
1 Road 3263
Aztec, New Mexico 87410

3b. Phone No. (include area code)
505-632-3476

10. Field and Pool or Exploratory Area
Betonnie Tsosie Wash Mancos (OIL)

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL: 362' FSL and 203' FWL Section 11, T23N, R8W BHL: 497' FNL and 366' FEL Section 23, T23N, R8W

11. County or Parish, State
San Juan County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Name Change, BHL Change & New Drilling Plan
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

DJR Operating LLC. has an approved APD for the proposed well, Lybrook M11-2308 01H well (API 30-045-35514) which will now be a part of the BETONNIE TSOSIE WASH UNIT. DJR Operating is submitting this sundry to change the well name from the Lybrook M11-2308 01H to the BETONNIE TSOSIE WASH UNIT #728H (API 30-045-35514).

Please find attached an updated C-102 package reflecting the BHL change and a new drilling plan.

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

NMOC

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Steven Merrell

Title Regulatory Specialist

Signature

Steven Merrell

Date 03/04/2019

MAR 11 2019

DISTRICT III

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Troy Salvors

Title CE

Date 3/7/2019

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office FFO

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)

NMOC

DISTRICT I

1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II

811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1253 Fax: (575) 748-9720

DISTRICT III

1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6176 Fax: (505) 334-6170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35514	² Pool Code 98175	³ Pool Name BETONNIE TSOSIE WASH MANCOS (OIL)
⁴ Property Code 316771	⁵ Property Name BETONNIE TSOSIE WASH UNIT	⁶ Well Number 728H
⁷ OGRID No. 371838	⁸ Operator Name DJR OPERATING, LLC	⁹ Elevation 6905'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	11	23N	8W		362'	SOUTH	203'	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	23	23N	8W		497'	NORTH	366'	EAST	SAN JUAN

¹² Dedicated Acres
PENETRATED SPACING UNIT:
NW/NW, SW/SW, SE/NW, NE/SW, NW/SE, SW/SE, &
SE/SE SEC 14 (280 ACRES) &
NE/NE SEC 23 (40 ACRES)
520.00 ACRES TOTAL

¹³ Joint or Infill

¹⁴ Consolidation Code

¹⁵ Order No.

R-13930A- 13,137 ACRES (UNDIVIDED)

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

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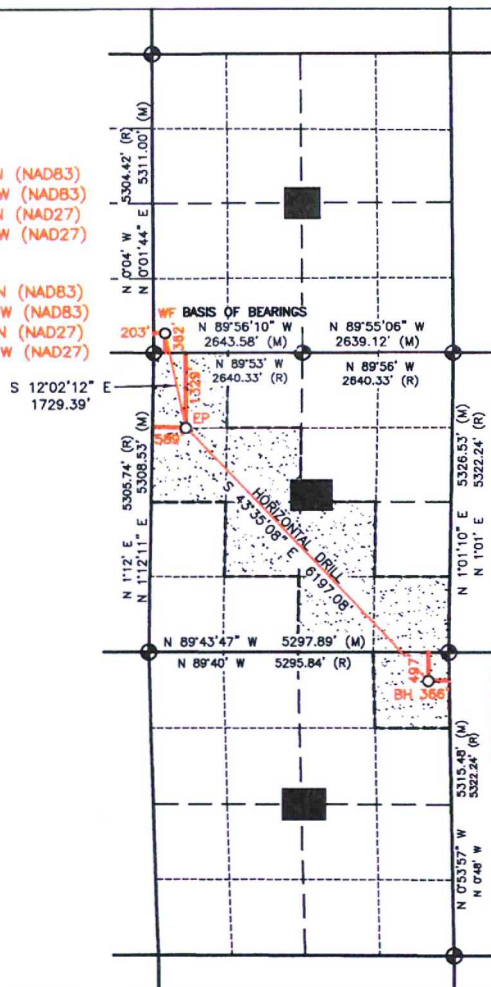
ALL CORNERS
FND 21' BC
GLO 1947

WELL FLAG

LAT. 36.235277° N (NAD83)
LONG. 107.659301° W (NAD83)
LAT. 36.235264° N (NAD27)
LONG. 107.658691° W (NAD27)

ENTRY POINT

LAT. 36.230629° N (NAD83)
LONG. 107.658089° W (NAD83)
LAT. 36.230616° N (NAD27)
LONG. 107.657478° W (NAD27)

**BOTTOM HOLE**

LAT. 36.218276° N (NAD83)
LONG. 107.643632° W (NAD83)
LAT. 36.218263° N (NAD27)
LONG. 107.643022° W (NAD27)

17 OPERATOR CERTIFICATION

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

Steven Merrell
Signature

2/28/19

Date

Steven Merrell

Printed Name

smerrell@djrlc.com

E-mail Address

SURVEYOR CERTIFICATION

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

MAY 21, 2014

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number

11393

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State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

☐ AMENDED REPORT

DJR OPERATING, LLC
BETONNIE TSOSIE WASH UNIT #728H

PENETRATED SPACING UNIT; NW/NW, SW/SW, SE/NW,
NE/SW, NW/SE, SW/SE, & SE/SE SEC 14 (280 ACRES) &
NE/NE SEC 23 (40 ACRES) = 320.00 ACRES TOTAL
13,137.00 ACRES - ALL SEC 18, T23N, R7W; ALL 11, 13, 14, 21-23,
26-28, 33-35, T23N, R8W; ALL 3-5, 7, 8, 10, 6 (E/2 & SW/4), 9
(E/2 & NW/4), T22N R8W - UNDIVIDED UNIT

NORTHWEST CORNER SEC. 14

LAT. 36.234283° N (NAD83)
LONG. 107.659990° W (NAD83)
LAT. 36.234270° N (NAD27)
LONG. 107.659380° W (NAD27)

NORTHWEST CORNER SEC. 14

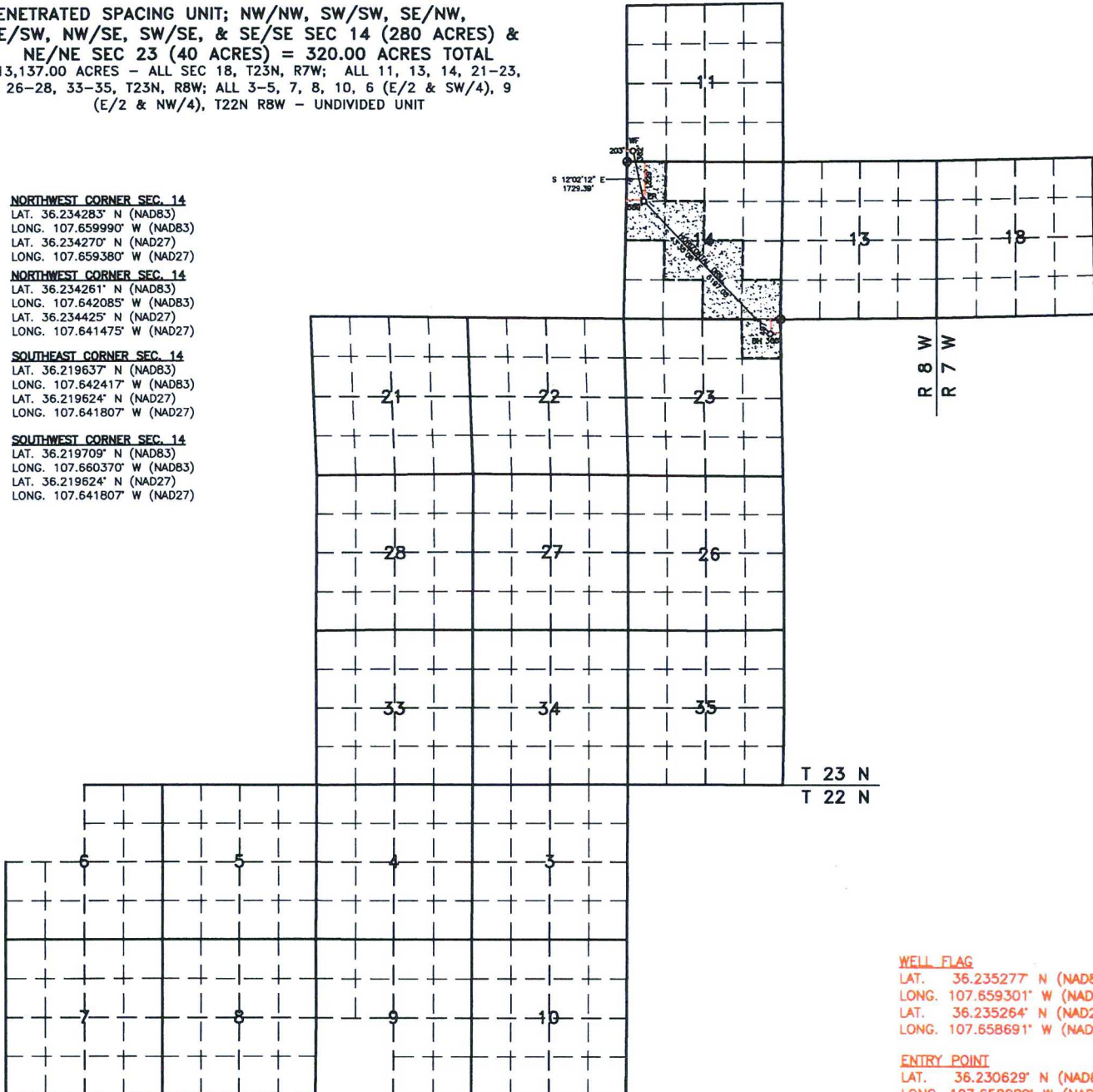
LAT. 36.234261° N (NAD83)
LONG. 107.642085° W (NAD83)
LAT. 36.234425° N (NAD27)
LONG. 107.641475° W (NAD27)

SOUTHEAST CORNER SEC. 14

LAT. 36.219637° N (NAD83)
LONG. 107.642417° W (NAD83)
LAT. 36.219624° N (NAD27)
LONG. 107.641807° W (NAD27)

SOUTHWEST CORNER SEC. 14

LAT. 36.219709° N (NAD83)
LONG. 107.660370° W (NAD83)
LAT. 36.219624° N (NAD27)
LONG. 107.641807° W (NAD27)

**WELL FLAG**

LAT. 36.235277° N (NAD83)
LONG. 107.659301° W (NAD83)
LAT. 36.235264° N (NAD27)
LONG. 107.658691° W (NAD27)

ENTRY POINT

LAT. 36.230629° N (NAD83)
LONG. 107.658089° W (NAD83)
LAT. 36.230615° N (NAD27)
LONG. 107.657478° W (NAD27)

BOTTOM HOLE

LAT. 36.218275° N (NAD83)
LONG. 107.643632° W (NAD83)
LAT. 36.218263° N (NAD27)
LONG. 107.643022° W (NAD27)

DRILLING PLAN

Bettonie Tsosie Wash Unit 728H

San Juan County, New Mexico

Surface Location
 203-ft FWL & 362-ft FSL
 Sec 11 T23N R8W
 Graded Elevation 6905' MSL
 RKB Elevation 6919' (14' KB)

SHL Geographical Coordinates (NAD-83)
 Latitude 36.2352800° N
 Longitude 107.6593000° W

Kick Off Point for Horizontal Build Curve
 4900-ft MD
 4733-ft TVD

Local Coordinates (from SHL)
 1171-ft South
 3-ft East

Heel Location (Pay zone entry)
 589-ft FWL & 1329-ft FSL
 Sec 14 T23N R8W

Heel Geographical Coordinates (NAD-83)
 Latitude 36.23062917° N
 Longitude 107.65808850° W

Bottom Hole Location (TD)
 366-ft FWL & 497-ft FSL
 Sec 23 T23N R8W

BHL Geographical Coordinates (NAD-83)
 Latitude 36.21827589° N
 Longitude 107.6436316° W

First Take Point (FTP)
 5826-ft MD
 Gallup C Sand

FTP Geographical Coordinates (NAD-83)
 Latitude 36.2305097° N
 Longitude -107.6579486° W

Last Take Point (LTP)
 11903-ft MD
 Gallup C Sand

LTP Geographical Coordinates (NAD-83)
 Latitude 36.2183956° N
 Longitude -107.6437716° W

Well objectives

This well is planned as a 6200-ft lateral in the Gallup C sand.

Bottom Hole temperature and pressure

The temperature in the Gallup C horizontal objective is 148°F. Bottom hole pressure in the Gallup C is forecast to be 1985 psi.

Formation Tops (Sd = Sand; Sh = Shale; Siltstone = Slt, Coal = C; W = water; O = oil; G = gas; NP = no penetration)

Name	MD (ft)	TVD (ft)	Lithology	Pore fluid	Expected Pore Pressure (ppg)	Planned Mud Weight (ppg)
Ojo Alamo	963	960	Sd	W	8.3	8.4 – 8.8
Kirtland	1068	1062	Sh	-	8.3	8.4 – 8.8
Fruitland	1246	1233	C	G	8.3	9.0 - 9.5
Picture Cliffs	1592	1565	Sd	W	8.3	9.0 - 9.5
Lewis	1818	1781	Sh	-		9.0 - 9.5
Chacra	2424	2361	Sd	-	8.3	9.0 - 9.5
Menefee	3211	3115	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	4105	3971	Sd	-	8.3	9.0 - 9.5
Mancos	4309	4167	Sh	-		9.0 - 9.5
Mancos Silt	4654	4497	Slt	O/G	6.6	9.0 - 9.5
Gallup A	5145	4952	Slt	O/G	6.6	9.0 - 9.5
Gallup B	5198	4994	Sd	O/G	6.6	8.8 - 9.0
Gallup C	5325	5082	Sd	O/G	6.6	8.8 - 9.0
Target	5766	5226	Sd	O/G	6.6	8.8 - 9.0

Casing Program

Casing OD	Hole Size	Weight (#/ft)	Grade	Coupling	MD Top	MD Bottom	TVD Top	TVD Bottom	Top of Cement
9-5/8"	12-1/4"	36	K-55	STC	surf	350	surf	350	surface
7"	8-3/4"	23	K-55	LTC	surf	5756	surf	5226	surface
4-1/2"	6-1/8"	11.6	P-110	LTC	5556	11963	5192	5226	5556

Note: all casing will be new

Casing Design Load Cases

		Casing String		
	Description	9-5/8" Surface	7" Intermediate	4-1/2" Production Liner
Collapse	Full internal evacuation ¹	✓	✓	✓
	Cementing	✓	✓	✓
Burst	Pressure test	✓ ²	✓ ²	✓
	Gas kick		✓ ³	
	Fracture at shoe, 1/3 BHP at surface		✓ ⁴	
	Injection down casing			✓ ⁵
Axial	Dynamic load on casing coupling ⁶	✓	✓	✓
Axial	Overpull ⁷	✓	✓	✓

Note

- 1 Fluid level at shoe, air column to surface, pore pressure outside
- 2 Tested to 80% of minimum internal yield with freshwater inside, pore pressure outside
- 3 50 bbl kick at TD, 0.50 ppg intensity, 4" drill pipe, 9.0 ppg mud, fracture gradient at shoe
- 4 2060 psi BHP, 687 psi surface pressure, 12.5 ppg EMW shoe integrity
- 5 Surface stimulation pressure of 8000 psi on 8.3 ppg fluid column. Stimulation will be down frac string, so load does not apply to 7" intermediate casing.
- 6 Shock load from abrupt pipe deceleration, evaluated against coupling rating
- 7 Overpull values as follows: Surface casing 20,000 lbs, Intermediate & Production 100,000 lbs

Casing Design Factors

		Design Factors			
Casing string	Casing OD	Burst	Collapse	Axial	Triaxial
Surface	9-5/8"	1.25	13.38	8.16	1.56
Intermediate	7"	1.25	1.50	1.68	1.34
Production liner	4-1/2"	1.37	3.68	1.88	1.69

Cement Design

Additives: A=Accelerator; B=Bond Enhancer; De=Defoamer; Di=Dispersant; Ex=Extender; FI=Fluid Loss L=Lost Circulation; R=Retarder; SA=Suspending Agent; THX=Thixotropic Additive; V=Viscosifier

9-5/8" Surface Casing

Halliburton Name	Lead
Type	HALCEM
Additives	Class G
Planned top	A
Density (ppg)	Surface
Yield (cf/sx)	15.80
Mix water (gal/sx)	1.17
Volume (sx)	5.15
Volume (bbls)	205
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<u>7" Intermediate Casing</u>	<u>Lead</u>	<u>Tail</u>
Halliburton Name	HALCEM	VARICEM
Type	Poz/G	Poz/G
Additives	Ex, L, SA	Ex, FI, SA, L, THX
Planned top	Surface	3809-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	1.95	1.30
Mix water (gal/sx)	10.14	5.64
Volume (sx)	482	389
Volume (bbls)	168	90

<u>4-1/2" Production Liner</u>	<u>Lead</u>
Halliburton Name	EXTENDACEM
Type	Poz/G
Additives	B, De, Di, FI, Re, V
Planned top	5556-ft
Density (ppg)	13.3
Yield (cf/sx)	1.36
Mix water (gal/sx)	5.94
Volume (sx)	664
Volume (bbls)	161

Wellhead & Pressure Control

The well head will be an 11" 5M multi-bowl system. A 2M BOPE conforming to Onshore Order #2 will be installed on the surface casing. The BOP and accumulator will meet API 16D and 16E respectively.

A PVT mud monitoring system and a trip tank will be rigged up and operational for all hole intervals. An electronic geograph will be employed to monitor and record drilling data (ROP, WOB, SPM, Pressure, RPM and torque).

Mud Program

Surface hole will be drilled with a fresh water, native mud system. In intermediate hole, a low weight 7% KCl LSND drilling fluid will be used, with KCl providing chemical stability for the young shales and clays present in the interval. In production hole a LSND system with polymer and lubricant additives is programmed. Sufficient drill water and mud additives will be on hand to maintain adequate pit volumes and maintain well control.

Hole Section	Fluid type	Interval (MD)	Density (ppg)	Funnel Viscosity	Yield Point	Fluid Loss (cc/30 min)
Surface	Fresh water spud mud	0 – 350	8.4 – 8.8	32 – 44	2 – 12	NC
Intermediate	7% KCl Low solids, non-dispersed	350 – 5756	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5756 – 11963	8.8 – 9.2	34 – 38	6 – 8	6 – 8

Cores, tests and logs

Wellbore surveying: Drift (inclination only) surveys will be obtained in surface hole. MWD directional surveys will be taken in intermediate and production hole.

Logging while drilling: None in surface hole. MWD GR in intermediate and production hole.

Mud logging: a two-person mud logging unit with C1 – C4 gas analysis will be operational in intermediate and production hole.

Electric logging: No open hole electric logs are programmed. A cased hole GR/CCL will be run during completions for perforating depth control.

Cuttings and drilling fluids management

A closed loop, steel tank-based circulating system will be used. In addition to the rig solids control equipment, a dewatering centrifuge and chemical flocculation system will be operational to strip solids from the whole mud. All solids will be collected in 3-sided bins and will then be put into transports with a bucket loader. Drying agents will be

used if necessary. The solids will be taken to a licensed commercial disposal facility. Whole mud will be dewatered back to drill water and used as make up for subsequent wells or hauled off for disposal. A diagram of the closed loop system is included.

Completion

It is envisioned that this well will be completed with a multi-stage sand frac, using the plug and perf technique. After drilling out the plugs, the current plan is to install a 2-7/8" plunger-assisted gas lift tubing string. The stimulation and completion plan will be sundried at a later date.



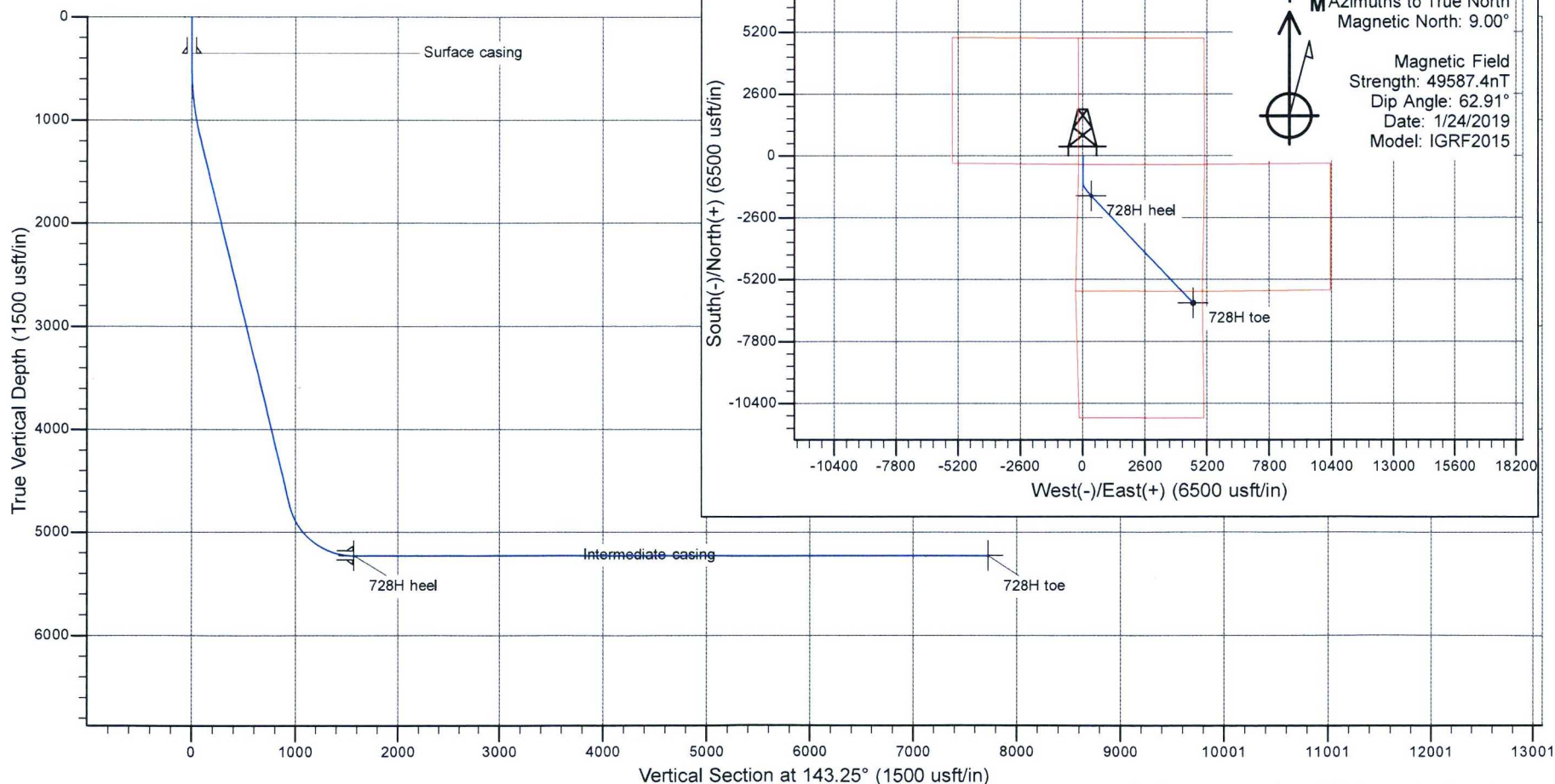
Pad name : M11 2308 Pad
Well name : Bettonie Tsosie Wash Unit #728H

SHL Latitude : 36.23528000
 SHL Longitude : -107.65930000

US State Plane 1983
 North American Datum 1983
 New Mexico Western Zone

TRAJECTORY DETAILS									
Pad elevation : 6905.0 RKB @ 6919.0usft (AD 920)									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
1169.3	16.73	179.87	1159.9	-97.0	0.2	2.50	179.87	77.9	
4900.5	16.73	179.87	4733.1	-1171.3	2.7	0.00	0.00	940.2	
5766.2	90.00	136.52	5226.0	-1693.0	357.3	9.00	-44.59	1570.3	728H heel
11963.3	90.00	136.52	5226.0	-6189.5	4621.7	0.00	0.00	7724.7	728H toe

TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
728H heel	5226.0	-1693.0	357.3	1903294	2774776	36.23062917	-107.65808850
728H toe	5226.0	-6189.5	4621.7	1898805	2779048	36.21827589	-107.64363160



Prepared by : 15:47, February 25 2019



DJR Operating

Betonne Tsoie Unit

M11 2308 Pad

728H

Original drilling

Plan: APD

Standard Planning Report

25 February, 2019

Planning Report

Database: EDM
Company: DJR Operating
Project: Betonnie Tsosie Unit
Site: M11 2308 Pad
Well: # 728H
Wellbore: Original drilling
Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	Betonnie Tsosie Unit		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	M11 2308 Pad		
Site Position:		Northing:	1,904,963 usft
From:	Lat/Long	Easting:	2,774,401 usft
Position Uncertainty:	0.0 usft	Slot Radius:	16.000 in
		Latitude:	36.23521667
		Longitude:	-107.65935000
		Grid Convergence:	0.10 °

Well	# 728H		
Well Position	+N/-S	23.1 usft	Northing: 1,904,986 usft
	+E/-W	14.7 usft	Easting: 2,774,415 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Latitude: 36.23528000
			Longitude: -107.65930000
			Ground Level: 6,905.0 usft

Wellbore	Original drilling		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	1/24/2019	9.00
			Dip Angle (°) 62.91
			Field Strength (nT) 49,587.40633066

Design	APD		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	Direction (°) 143.25

Plan Survey Tool Program	Date 2/25/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name
1	0.0	11,963.3 APD (Original drilling)	MWD+IGRF
			OWSG MWD + IGRF or WMM

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,169.3	16.73	179.87	1,159.9	-97.0	0.2	2.50	2.50	0.00	179.87	
4,900.5	16.73	179.87	4,733.1	-1,171.3	2.7	0.00	0.00	0.00	0.00	
5,766.2	90.00	136.52	5,226.0	-1,693.0	357.3	9.00	8.46	-5.01	-44.59	728H heel
11,963.3	90.00	136.52	5,226.0	-6,189.5	4,621.7	0.00	0.00	0.00	0.00	728H toe

Planning Report

Database: EDM
Company: DJR Operating
Project: Betonnies Tsosie Unit
Site: M11 2308 Pad
Well: # 728H
Wellbore: Original drilling
Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	0.00
Surface casing									
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	2.50	179.87	600.0	-2.2	0.0	1.8	2.50	2.50	0.00
700.0	5.00	179.87	699.7	-8.7	0.0	7.0	2.50	2.50	0.00
800.0	7.50	179.87	799.1	-19.6	0.0	15.7	2.50	2.50	0.00
900.0	10.00	179.87	898.0	-34.8	0.1	27.9	2.50	2.50	0.00
963.1	11.58	179.87	960.0	-46.6	0.1	37.4	2.50	2.50	0.00
Ojo Alamo									
1,000.0	12.50	179.87	996.0	-54.3	0.1	43.6	2.50	2.50	0.00
1,067.8	14.19	179.87	1,062.0	-70.0	0.2	56.2	2.50	2.50	0.00
Kirtland									
1,100.0	15.00	179.87	1,093.2	-78.1	0.2	62.7	2.50	2.50	0.00
1,169.3	16.73	179.87	1,159.9	-97.0	0.2	77.9	2.50	2.50	0.00
1,200.0	16.73	179.87	1,189.2	-105.9	0.2	85.0	0.00	0.00	0.00
1,245.7	16.73	179.87	1,233.0	-119.0	0.3	95.5	0.00	0.00	0.00
Fruitland									
1,300.0	16.73	179.87	1,285.0	-134.7	0.3	108.1	0.00	0.00	0.00
1,400.0	16.73	179.87	1,380.8	-163.5	0.4	131.2	0.00	0.00	0.00
1,500.0	16.73	179.87	1,476.5	-192.3	0.5	154.3	0.00	0.00	0.00
1,592.4	16.73	179.87	1,565.0	-218.9	0.5	175.7	0.00	0.00	0.00
Picture Cliffs									
1,600.0	16.73	179.87	1,572.3	-221.0	0.5	177.4	0.00	0.00	0.00
1,700.0	16.73	179.87	1,668.1	-249.8	0.6	200.5	0.00	0.00	0.00
1,800.0	16.73	179.87	1,763.8	-278.6	0.7	223.6	0.00	0.00	0.00
1,817.9	16.73	179.87	1,781.0	-283.8	0.7	227.8	0.00	0.00	0.00
Lewis									
1,900.0	16.73	179.87	1,859.6	-307.4	0.7	246.8	0.00	0.00	0.00
2,000.0	16.73	179.87	1,955.4	-336.2	0.8	269.9	0.00	0.00	0.00
2,100.0	16.73	179.87	2,051.1	-365.0	0.9	293.0	0.00	0.00	0.00
2,200.0	16.73	179.87	2,146.9	-393.8	0.9	316.1	0.00	0.00	0.00
2,300.0	16.73	179.87	2,242.6	-422.6	1.0	339.2	0.00	0.00	0.00
2,400.0	16.73	179.87	2,338.4	-451.4	1.1	362.3	0.00	0.00	0.00
2,423.6	16.73	179.87	2,361.0	-458.2	1.1	367.8	0.00	0.00	0.00
Chacra									
2,500.0	16.73	179.87	2,434.2	-480.2	1.1	385.4	0.00	0.00	0.00
2,600.0	16.73	179.87	2,529.9	-509.0	1.2	408.5	0.00	0.00	0.00
2,700.0	16.73	179.87	2,625.7	-537.8	1.3	431.6	0.00	0.00	0.00
2,800.0	16.73	179.87	2,721.5	-566.5	1.3	454.7	0.00	0.00	0.00
2,900.0	16.73	179.87	2,817.2	-595.3	1.4	477.9	0.00	0.00	0.00
3,000.0	16.73	179.87	2,913.0	-624.1	1.5	501.0	0.00	0.00	0.00
3,100.0	16.73	179.87	3,008.8	-652.9	1.5	524.1	0.00	0.00	0.00
3,119.0	16.73	179.87	3,027.0	-658.4	1.5	528.5	0.00	0.00	0.00
Cliffhouse									
3,200.0	16.73	179.87	3,104.5	-681.7	1.6	547.2	0.00	0.00	0.00
3,210.9	16.73	179.87	3,115.0	-684.9	1.6	549.7	0.00	0.00	0.00
Menefee									
3,300.0	16.73	179.87	3,200.3	-710.5	1.7	570.3	0.00	0.00	0.00

Planning Report

Database: EDM
Company: DJR Operating
Project: Bettonnie Tsosie Unit
Site: M11 2308 Pad
Well: # 728H
Wellbore: Original drilling
Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,400.0	16.73	179.87	3,296.1	-739.3	1.7	593.4	0.00	0.00	0.00
3,500.0	16.73	179.87	3,391.8	-768.1	1.8	616.5	0.00	0.00	0.00
3,600.0	16.73	179.87	3,487.6	-796.9	1.9	639.6	0.00	0.00	0.00
3,700.0	16.73	179.87	3,583.4	-825.7	1.9	662.7	0.00	0.00	0.00
3,800.0	16.73	179.87	3,679.1	-854.5	2.0	685.8	0.00	0.00	0.00
3,900.0	16.73	179.87	3,774.9	-883.3	2.1	709.0	0.00	0.00	0.00
4,000.0	16.73	179.87	3,870.7	-912.0	2.1	732.1	0.00	0.00	0.00
4,100.0	16.73	179.87	3,966.4	-940.8	2.2	755.2	0.00	0.00	0.00
4,104.8	16.73	179.87	3,971.0	-942.2	2.2	756.3	0.00	0.00	0.00
Point Lookout									
4,200.0	16.73	179.87	4,062.2	-969.6	2.3	778.3	0.00	0.00	0.00
4,300.0	16.73	179.87	4,158.0	-998.4	2.3	801.4	0.00	0.00	0.00
4,309.4	16.73	179.87	4,167.0	-1,001.1	2.3	803.6	0.00	0.00	0.00
Mancos									
4,400.0	16.73	179.87	4,253.7	-1,027.2	2.4	824.5	0.00	0.00	0.00
4,500.0	16.73	179.87	4,349.5	-1,056.0	2.5	847.6	0.00	0.00	0.00
4,600.0	16.73	179.87	4,445.3	-1,084.8	2.5	870.7	0.00	0.00	0.00
4,654.0	16.73	179.87	4,497.0	-1,100.3	2.6	883.2	0.00	0.00	0.00
Mancos Silt									
4,700.0	16.73	179.87	4,541.0	-1,113.6	2.6	893.8	0.00	0.00	0.00
4,800.0	16.73	179.87	4,636.8	-1,142.4	2.7	916.9	0.00	0.00	0.00
4,900.5	16.73	179.87	4,733.0	-1,171.3	2.7	940.2	0.00	0.00	0.00
KOP									
4,950.0	20.14	170.76	4,780.0	-1,186.9	4.1	953.5	8.99	6.88	-18.40
5,000.0	23.92	164.24	4,826.3	-1,205.1	8.3	970.6	9.00	7.57	-13.04
5,050.0	27.91	159.45	4,871.3	-1,225.8	15.1	991.3	9.00	7.97	-9.58
5,100.0	32.02	155.78	4,914.6	-1,248.9	24.7	1,015.5	9.00	8.23	-7.33
5,145.1	35.80	153.14	4,952.0	-1,271.6	35.5	1,040.1	9.00	8.39	-5.86
Gallup A									
5,150.0	36.22	152.88	4,956.0	-1,274.2	36.9	1,043.0	9.00	8.45	-5.26
5,198.4	40.34	150.58	4,994.0	-1,300.5	51.1	1,072.7	9.00	8.51	-4.75
Gallup B									
5,200.0	40.47	150.51	4,995.2	-1,301.4	51.6	1,073.7	9.00	8.55	-4.33
5,250.0	44.77	148.53	5,032.0	-1,330.6	68.8	1,107.3	9.00	8.59	-3.98
5,300.0	49.09	146.82	5,066.1	-1,361.4	88.3	1,143.7	9.00	8.65	-3.41
5,324.8	51.24	146.05	5,082.0	-1,377.3	98.8	1,162.7	9.00	8.68	-3.09
Gallup C									
5,350.0	53.44	145.32	5,097.4	-1,393.8	110.1	1,182.7	9.00	8.70	-2.90
5,400.0	57.80	143.98	5,125.6	-1,427.4	134.0	1,223.9	9.00	8.73	-2.67
5,450.0	62.18	142.77	5,150.6	-1,462.2	159.8	1,267.2	9.00	8.75	-2.43
5,500.0	66.56	141.65	5,172.3	-1,497.8	187.4	1,312.3	9.00	8.77	-2.24
5,550.0	70.96	140.60	5,190.4	-1,534.0	216.7	1,358.8	9.00	8.79	-2.10
5,600.0	75.35	139.61	5,204.9	-1,570.7	247.4	1,406.6	9.00	8.80	-1.99
5,650.0	79.76	138.65	5,215.6	-1,607.7	279.3	1,455.3	9.00	8.80	-1.91
5,700.0	84.16	137.73	5,222.6	-1,644.5	312.3	1,504.6	9.00	8.81	-1.86
5,750.0	88.57	136.81	5,225.8	-1,681.2	346.2	1,554.2	9.00	8.81	-1.83
5,756.2	89.11	136.70	5,225.9	-1,685.7	350.4	1,560.3	9.00	8.81	-1.82
Intermediate casing									
5,766.2	90.00	136.52	5,226.0	-1,693.0	357.3	1,570.3	9.00	8.81	-1.82
Target									
5,800.0	90.00	136.52	5,226.0	-1,717.5	380.5	1,603.8	0.00	0.00	0.00
5,826.2	90.00	136.52	5,226.0	-1,736.5	398.6	1,629.9	0.00	0.00	0.00

Planning Report

Database: EDM
Company: DJR Operating
Project: Bettonnie Tsosie Unit
Site: M11 2308 Pad
Well: # 728H
Wellbore: Original drilling
Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
First take point									
5,900.0	90.00	136.52	5,226.0	-1,790.1	449.3	1,703.2	0.00	0.00	0.00
6,000.0	90.00	136.52	5,226.0	-1,862.6	518.2	1,802.5	0.00	0.00	0.00
6,100.0	90.00	136.52	5,226.0	-1,935.2	587.0	1,901.8	0.00	0.00	0.00
6,200.0	90.00	136.52	5,226.0	-2,007.7	655.8	2,001.1	0.00	0.00	0.00
6,300.0	90.00	136.52	5,226.0	-2,080.3	724.6	2,100.4	0.00	0.00	0.00
6,400.0	90.00	136.52	5,226.0	-2,152.8	793.4	2,199.7	0.00	0.00	0.00
6,500.0	90.00	136.52	5,226.0	-2,225.4	862.2	2,299.0	0.00	0.00	0.00
6,600.0	90.00	136.52	5,226.0	-2,298.0	931.0	2,398.3	0.00	0.00	0.00
6,700.0	90.00	136.52	5,226.0	-2,370.5	999.8	2,497.6	0.00	0.00	0.00
6,800.0	90.00	136.52	5,226.0	-2,443.1	1,068.7	2,596.9	0.00	0.00	0.00
6,900.0	90.00	136.52	5,226.0	-2,515.6	1,137.5	2,696.3	0.00	0.00	0.00
7,000.0	90.00	136.52	5,226.0	-2,588.2	1,206.3	2,795.6	0.00	0.00	0.00
7,100.0	90.00	136.52	5,226.0	-2,660.8	1,275.1	2,894.9	0.00	0.00	0.00
7,200.0	90.00	136.52	5,226.0	-2,733.3	1,343.9	2,994.2	0.00	0.00	0.00
7,300.0	90.00	136.52	5,226.0	-2,805.9	1,412.7	3,093.5	0.00	0.00	0.00
7,400.0	90.00	136.52	5,226.0	-2,878.4	1,481.5	3,192.8	0.00	0.00	0.00
7,500.0	90.00	136.52	5,226.0	-2,951.0	1,550.4	3,292.1	0.00	0.00	0.00
7,600.0	90.00	136.52	5,226.0	-3,023.5	1,619.2	3,391.4	0.00	0.00	0.00
7,700.0	90.00	136.52	5,226.0	-3,096.1	1,688.0	3,490.7	0.00	0.00	0.00
7,800.0	90.00	136.52	5,226.0	-3,168.7	1,756.8	3,590.1	0.00	0.00	0.00
7,900.0	90.00	136.52	5,226.0	-3,241.2	1,825.6	3,689.4	0.00	0.00	0.00
8,000.0	90.00	136.52	5,226.0	-3,313.8	1,894.4	3,788.7	0.00	0.00	0.00
8,100.0	90.00	136.52	5,226.0	-3,386.3	1,963.2	3,888.0	0.00	0.00	0.00
8,200.0	90.00	136.52	5,226.0	-3,458.9	2,032.0	3,987.3	0.00	0.00	0.00
8,300.0	90.00	136.52	5,226.0	-3,531.5	2,100.9	4,086.6	0.00	0.00	0.00
8,400.0	90.00	136.52	5,226.0	-3,604.0	2,169.7	4,185.9	0.00	0.00	0.00
8,500.0	90.00	136.52	5,226.0	-3,676.6	2,238.5	4,285.2	0.00	0.00	0.00
8,600.0	90.00	136.52	5,226.0	-3,749.1	2,307.3	4,384.5	0.00	0.00	0.00
8,700.0	90.00	136.52	5,226.0	-3,821.7	2,376.1	4,483.8	0.00	0.00	0.00
8,800.0	90.00	136.52	5,226.0	-3,894.3	2,444.9	4,583.2	0.00	0.00	0.00
8,900.0	90.00	136.52	5,226.0	-3,966.8	2,513.7	4,682.5	0.00	0.00	0.00
9,000.0	90.00	136.52	5,226.0	-4,039.4	2,582.6	4,781.8	0.00	0.00	0.00
9,100.0	90.00	136.52	5,226.0	-4,111.9	2,651.4	4,881.1	0.00	0.00	0.00
9,200.0	90.00	136.52	5,226.0	-4,184.5	2,720.2	4,980.4	0.00	0.00	0.00
9,300.0	90.00	136.52	5,226.0	-4,257.0	2,789.0	5,079.7	0.00	0.00	0.00
9,400.0	90.00	136.52	5,226.0	-4,329.6	2,857.8	5,179.0	0.00	0.00	0.00
9,500.0	90.00	136.52	5,226.0	-4,402.2	2,926.6	5,278.3	0.00	0.00	0.00
9,600.0	90.00	136.52	5,226.0	-4,474.7	2,995.4	5,377.6	0.00	0.00	0.00
9,700.0	90.00	136.52	5,226.0	-4,547.3	3,064.3	5,476.9	0.00	0.00	0.00
9,800.0	90.00	136.52	5,226.0	-4,619.8	3,133.1	5,576.3	0.00	0.00	0.00
9,900.0	90.00	136.52	5,226.0	-4,692.4	3,201.9	5,675.6	0.00	0.00	0.00
10,000.0	90.00	136.52	5,226.0	-4,765.0	3,270.7	5,774.9	0.00	0.00	0.00
10,100.0	90.00	136.52	5,226.0	-4,837.5	3,339.5	5,874.2	0.00	0.00	0.00
10,200.0	90.00	136.52	5,226.0	-4,910.1	3,408.3	5,973.5	0.00	0.00	0.00
10,300.0	90.00	136.52	5,226.0	-4,982.6	3,477.1	6,072.8	0.00	0.00	0.00
10,400.0	90.00	136.52	5,226.0	-5,055.2	3,545.9	6,172.1	0.00	0.00	0.00
10,500.0	90.00	136.52	5,226.0	-5,127.7	3,614.8	6,271.4	0.00	0.00	0.00
10,600.0	90.00	136.52	5,226.0	-5,200.3	3,683.6	6,370.7	0.00	0.00	0.00
10,700.0	90.00	136.52	5,226.0	-5,272.9	3,752.4	6,470.0	0.00	0.00	0.00
10,800.0	90.00	136.52	5,226.0	-5,345.4	3,821.2	6,569.4	0.00	0.00	0.00
10,900.0	90.00	136.52	5,226.0	-5,418.0	3,890.0	6,668.7	0.00	0.00	0.00
11,000.0	90.00	136.52	5,226.0	-5,490.5	3,958.8	6,768.0	0.00	0.00	0.00
11,100.0	90.00	136.52	5,226.0	-5,563.1	4,027.6	6,867.3	0.00	0.00	0.00

Planning Report

Database: EDM
Company: DJR Operating
Project: Bettonnie Tsosie Unit
Site: M11 2308 Pad
Well: # 728H
Wellbore: Original drilling
Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,200.0	90.00	136.52	5,226.0	-5,635.7	4,096.5	6,966.6	0.00	0.00	0.00
11,300.0	90.00	136.52	5,226.0	-5,708.2	4,165.3	7,065.9	0.00	0.00	0.00
11,400.0	90.00	136.52	5,226.0	-5,780.8	4,234.1	7,165.2	0.00	0.00	0.00
11,500.0	90.00	136.52	5,226.0	-5,853.3	4,302.9	7,264.5	0.00	0.00	0.00
11,600.0	90.00	136.52	5,226.0	-5,925.9	4,371.7	7,363.8	0.00	0.00	0.00
11,700.0	90.00	136.52	5,226.0	-5,998.4	4,440.5	7,463.1	0.00	0.00	0.00
11,800.0	90.00	136.52	5,226.0	-6,071.0	4,509.3	7,562.5	0.00	0.00	0.00
11,900.0	90.00	136.52	5,226.0	-6,143.6	4,578.1	7,661.8	0.00	0.00	0.00
11,903.3	90.00	136.52	5,226.0	-6,146.0	4,580.4	7,665.0	0.00	0.00	0.00
Last take point									
11,963.3	90.00	136.52	5,226.0	-6,189.5	4,621.7	7,724.7	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
728H toe - plan hits target center - Circle (radius 100.0)	0.00	0.00	5,226.0	-6,189.5	4,621.7	1,898,805	2,779,048	36.21827589	-107.64363160
728H heel - plan hits target center - Circle (radius 50.0)	0.00	0.00	5,226.0	-1,693.0	357.3	1,903,294	2,774,776	36.23062917	-107.65808850

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
350.0	350.0	Surface casing	9.625	12.250
5,756.2	5,225.9	Intermediate casing	7.000	8.750

Planning Report

Database: EDM
Company: DJR Operating
Project: Bettonnie Tosie Unit
Site: M11 2308 Pad
Well: # 728H
Wellbore: Original drilling
Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
963.1	960.0	Ojo Alamo		0.00	
1,067.8	1,062.0	Kirtland		0.00	
1,245.7	1,233.0	Fruitland		0.00	
1,592.4	1,565.0	Picture Cliffs		0.00	
1,817.9	1,781.0	Lewis		0.00	
2,423.6	2,361.0	Chacra		0.00	
3,119.0	3,027.0	Cliffhouse		0.00	
3,210.9	3,115.0	Menefee		0.00	
4,104.8	3,971.0	Point Lookout		0.00	
4,309.4	4,167.0	Mancos		0.00	
4,654.0	4,497.0	Mancos Silt		0.00	
5,145.1	4,952.0	Gallup A		0.00	
5,198.4	4,994.0	Gallup B		0.00	
5,324.8	5,082.0	Gallup C		0.00	
5,766.2	5,226.0	Target		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,900.5	4,733.0	-1,171.3	2.7	KOP
5,826.2	5,226.0	-1,736.5	398.6	First take point
11,903.3	5,226.0	-6,146.0	4,580.4	Last take point

DJR Operating

Betonnies Tsosie Unit

M11 2308 Pad

728H

Original drilling

APD

Anticollision Report

25 February, 2019

Anticollision Report

Company:	DJR Operating	Local Co-ordinate Reference:	Well # 728H
Project:	Betonnies Tsoie Unit	TVD Reference:	RKB @ 6919.0usft (AD 920)
Reference Site:	M11 2308 Pad	MD Reference:	RKB @ 6919.0usft (AD 920)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	# 728H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	EDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference	APD		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	2/25/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,963.3	APD (Original drilling)	MWD+IGRF	OWSG MWD + IGRF or WMM	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Athena 2308-14L (Logos)						
1H - Original drilling - As drilled	7,384.2	4,589.9	1,879.2	1,795.9	22.538	CC
1H - Original drilling - As drilled	7,400.0	4,589.3	1,879.3	1,795.5	22.414	ES
1H - Original drilling - As drilled	8,000.0	4,580.0	1,977.3	1,879.1	20.138	SF
2H - Original drilling - As drilled	7,862.2	4,661.7	2,344.3	2,245.4	23.699	CC
2H - Original drilling - As drilled	7,900.0	4,675.0	2,344.5	2,244.2	23.366	ES
2H - Original drilling - As drilled	8,900.0	4,819.0	2,552.4	2,425.3	20.090	SF
3H - Original drilling - As drilled	7,138.3	4,799.8	1,285.1	1,207.5	16.564	CC
3H - Original drilling - As drilled	7,200.0	4,788.5	1,286.5	1,207.2	16.235	ES
3H - Original drilling - As drilled	7,500.0	4,767.0	1,333.3	1,247.2	15.487	SF
Chaco 2308-14E (Enduring)						
151H - Original drilling - Pathfinder	3,795.8	3,812.0	116.3	73.8	2.734	CC
151H - Original drilling - Pathfinder	3,800.0	3,815.7	116.4	73.8	2.732	ES, SF
152H - Original drilling - Pathfinder	6,234.5	4,926.0	1,005.0	943.1	16.222	CC
152H - Original drilling - Pathfinder	6,300.0	4,926.0	1,007.2	942.9	15.662	ES
152H - Original drilling - Pathfinder	6,600.0	4,890.5	1,068.0	996.0	14.832	SF
M11 2308 Pad						
# 108H - APD plan - APD	675.9	675.7	25.7	21.3	5.824	CC, ES
# 108H - APD plan - APD	11,900.0	13,715.1	1,126.0	747.3	2.973	SF
P&A'd conductor - Abandoned - Abandoned	0.0	6.0	31.3			
P&A'd conductor - Abandoned - Abandoned	100.0	40.0	73.1	68.9	17.593	SF

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 418-MWD+IGRF												Offset Well Error:	0.0 usft
Reference													
Semi Major Axis													
Distance													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	175.02	-3,503.0	305.0	3,516.3				
100.0	100.0	70.2	70.2	0.2	0.1	175.02	-3,503.0	305.0	3,516.3	3,516.0	0.28	N/A	
200.0	200.0	166.4	166.4	0.5	0.3	175.02	-3,503.1	305.0	3,516.4	3,515.6	0.80	4,390.112	
300.0	300.0	262.6	262.6	0.9	0.5	175.03	-3,503.4	305.0	3,516.6	3,515.3	1.33	2,651.818	
400.0	400.0	358.8	358.8	1.2	0.6	175.03	-3,503.7	305.0	3,517.0	3,515.1	1.85	1,899.779	
500.0	500.0	457.6	457.6	1.6	0.9	175.03	-3,504.2	304.9	3,517.4	3,515.0	2.45	1,433.493	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnie Tosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Athena 2308-14L (Logos) - 1H - Original drilling - As drilled											Offset Site Error: 0.0 usft	
Survey Program: 418-MWD+IGRF											Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance					Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	
600.0	600.0	544.8	544.8	1.9	1.2	-4.84	-3,504.7	304.7	3,515.8	3,512.7	3.11	1,131.268
700.0	699.7	638.4	638.3	2.3	1.5	-4.85	-3,505.4	304.4	3,510.1	3,506.3	3.78	928.580
800.0	799.1	728.8	728.8	2.6	1.8	-4.88	-3,506.6	303.8	3,500.4	3,496.0	4.45	786.559
900.0	898.0	833.7	833.6	3.0	2.2	-4.91	-3,507.9	302.5	3,486.4	3,481.2	5.18	673.194
1,000.0	996.0	975.6	975.5	3.4	2.7	-4.96	-3,508.5	300.7	3,467.2	3,461.2	6.04	574.043
1,100.0	1,093.2	1,073.6	1,073.6	3.9	3.1	-5.02	-3,508.6	299.2	3,443.5	3,436.7	6.75	510.154
1,169.3	1,159.9	1,135.0	1,134.9	4.3	3.3	-5.07	-3,508.6	298.1	3,424.5	3,417.3	7.22	473.985
1,200.0	1,189.2	1,162.6	1,162.5	4.5	3.4	-5.07	-3,508.6	297.6	3,415.7	3,408.2	7.44	459.259
1,300.0	1,285.0	1,248.3	1,248.2	5.0	3.7	-5.09	-3,508.7	296.4	3,387.1	3,379.0	8.10	417.977
1,400.0	1,380.8	1,340.3	1,340.2	5.6	4.0	-5.11	-3,509.2	295.3	3,358.8	3,350.0	8.80	381.676
1,500.0	1,476.5	1,442.8	1,442.7	6.2	4.4	-5.13	-3,509.6	293.9	3,330.3	3,320.8	9.54	349.157
1,600.0	1,572.3	1,527.5	1,527.4	6.8	4.7	-5.14	-3,510.0	292.2	3,301.9	3,291.7	10.22	323.114
1,700.0	1,668.1	1,622.8	1,622.7	7.5	5.0	-5.14	-3,510.9	289.9	3,274.0	3,263.0	10.94	299.223
1,800.0	1,763.8	1,714.7	1,714.5	8.1	5.4	-5.15	-3,511.7	287.7	3,245.9	3,234.2	11.66	278.495
1,900.0	1,859.6	1,812.7	1,812.4	8.7	5.7	-5.15	-3,512.5	285.6	3,217.8	3,205.4	12.39	259.681
2,000.0	1,955.4	1,908.1	1,907.8	9.4	6.0	-5.16	-3,513.2	283.8	3,189.7	3,176.5	13.12	243.100
2,100.0	2,051.1	1,976.1	1,975.8	10.0	6.3	-5.17	-3,514.0	282.5	3,161.9	3,148.2	13.76	229.750
2,200.0	2,146.9	2,021.7	2,021.4	10.6	6.5	-5.17	-3,515.1	281.2	3,135.4	3,121.1	14.33	218.753
2,300.0	2,242.6	2,057.0	2,056.7	11.3	6.6	-5.16	-3,516.6	279.9	3,110.7	3,095.8	14.87	209.177
2,400.0	2,338.4	2,118.0	2,117.5	11.9	6.8	-5.13	-3,520.2	277.3	3,087.3	3,071.8	15.50	199.218
2,500.0	2,434.2	2,179.0	2,178.3	12.6	7.0	-5.12	-3,524.6	275.4	3,065.3	3,049.2	16.12	190.120
2,600.0	2,529.9	2,220.2	2,219.3	13.2	7.2	-5.12	-3,528.2	274.9	3,044.8	3,028.1	16.68	182.556
2,700.0	2,625.7	2,274.4	2,273.2	13.9	7.4	-5.14	-3,533.7	274.8	3,025.9	3,008.7	17.28	175.128
2,800.0	2,721.5	2,332.3	2,330.8	14.5	7.6	-5.14	-3,540.4	273.7	3,008.4	2,990.5	17.89	168.137
2,900.0	2,817.2	2,389.7	2,387.7	15.2	7.8	-5.12	-3,547.9	272.0	2,992.2	2,973.7	18.51	161.689
3,000.0	2,913.0	2,442.0	2,439.4	15.8	8.0	-5.10	-3,555.5	270.3	2,977.4	2,958.3	19.10	155.881
3,100.0	3,008.8	2,482.0	2,478.8	16.5	8.2	-5.08	-3,562.0	268.9	2,964.3	2,944.6	19.65	150.878
3,200.0	3,104.5	2,543.0	2,538.8	17.1	8.4	-5.04	-3,572.8	266.3	2,952.7	2,932.5	20.27	145.662
3,300.0	3,200.3	2,604.0	2,598.6	17.8	8.7	-4.99	-3,584.5	263.4	2,942.5	2,921.7	20.90	140.823
3,400.0	3,296.1	2,665.0	2,658.2	18.4	8.9	-4.95	-3,597.0	260.8	2,933.8	2,912.2	21.52	136.342
3,500.0	3,391.8	2,726.0	2,717.7	19.1	9.2	-4.93	-3,610.4	259.5	2,926.4	2,904.2	22.14	132.199
3,600.0	3,487.6	2,813.8	2,803.3	19.7	9.6	-4.91	-3,629.9	258.1	2,919.6	2,896.7	22.86	127.697
3,700.0	3,583.4	2,877.3	2,865.1	20.4	9.9	-4.89	-3,644.8	256.6	2,913.8	2,890.3	23.49	124.036
3,800.0	3,679.1	2,946.7	2,932.3	21.0	10.2	-4.86	-3,661.9	254.8	2,909.2	2,885.1	24.14	120.493
3,900.0	3,774.9	3,008.0	2,991.5	21.7	10.5	-4.83	-3,677.6	253.2	2,905.7	2,881.0	24.76	117.351
4,000.0	3,870.7	3,140.9	3,119.7	22.4	11.2	-4.76	-3,712.5	249.3	2,903.1	2,877.4	25.70	112.979
4,100.0	3,966.4	3,205.0	3,181.6	23.0	11.5	-4.73	-3,728.8	247.6	2,899.6	2,873.2	26.33	110.134
4,200.0	4,062.2	3,252.8	3,227.6	23.7	11.8	-4.71	-3,741.9	246.8	2,897.8	2,870.9	26.88	107.797
4,244.5	4,104.8	3,274.5	3,248.5	24.0	11.9	-4.70	-3,748.1	246.4	2,897.6	2,870.5	27.13	106.809
4,300.0	4,158.0	3,330.7	3,302.2	24.3	12.2	-4.68	-3,764.4	245.3	2,897.7	2,870.1	27.57	105.093
4,400.0	4,253.7	3,448.6	3,415.2	25.0	12.8	-4.65	-3,797.8	243.9	2,897.1	2,868.6	28.45	101.825
4,500.0	4,349.5	3,588.2	3,549.4	25.6	13.6	-4.64	-3,836.4	243.2	2,895.9	2,866.5	29.43	98.403
4,600.0	4,445.3	3,721.8	3,678.3	26.3	14.4	-4.65	-3,871.4	243.7	2,893.3	2,862.9	30.37	95.252
4,700.0	4,541.0	3,839.0	3,791.6	26.9	15.0	-4.65	-3,901.4	243.4	2,889.9	2,858.7	31.25	92.481
4,800.0	4,636.8	3,937.3	3,886.9	27.6	15.5	-4.63	-3,925.7	242.1	2,885.6	2,853.5	32.04	90.059
4,900.5	4,733.1	3,985.0	3,932.9	28.3	15.8	-4.62	-3,938.1	241.3	2,882.6	2,850.0	32.61	88.402
4,950.0	4,780.0	4,020.9	3,967.4	28.6	16.0	4.19	-3,947.8	240.5	2,880.3	2,847.3	32.94	87.429
5,000.0	4,826.3	4,054.8	4,000.0	29.0	16.2	10.61	-3,957.3	239.6	2,875.2	2,841.9	33.27	86.415
5,050.0	4,871.3	4,200.5	4,140.4	29.4	17.1	15.86	-3,996.0	237.5	2,866.9	2,832.7	34.11	84.045
5,100.0	4,914.6	4,505.8	4,438.6	29.9	18.6	21.41	-4,057.3	222.3	2,850.9	2,815.4	35.50	80.317
5,150.0	4,956.0	4,525.9	4,458.0	30.4	18.7	25.30	-4,060.8	218.1	2,831.9	2,796.2	35.78	79.140
5,200.0	4,995.2	4,548.0	4,479.0	30.9	18.8	28.93	-4,064.8	212.5	2,810.9	2,774.8	36.08	77.916

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnie Tsosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Athena 2308-14L (Logos) - 1H - Original drilling - As drilled													Offset Site Error:	0.0 usft
Survey Program: 418-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,250.0	5,032.0	4,607.3	4,534.3	31.4	19.2	33.03	-4,075.4	193.9	2,787.6	2,751.1	36.52	76.338		
5,300.0	5,066.1	4,639.5	4,563.8	32.0	19.3	36.82	-4,080.9	182.1	2,762.3	2,725.4	36.87	74.930		
5,350.0	5,097.4	4,665.0	4,586.8	32.6	19.5	40.59	-4,085.3	172.1	2,735.3	2,698.1	37.20	73.526		
5,400.0	5,125.6	4,675.0	4,595.7	33.3	19.5	44.15	-4,087.0	167.9	2,706.9	2,669.4	37.49	72.203		
5,450.0	5,150.6	4,686.9	4,606.3	34.0	19.6	47.88	-4,089.0	162.9	2,677.3	2,639.5	37.81	70.809		
5,500.0	5,172.3	4,692.5	4,611.2	34.7	19.6	51.59	-4,090.0	160.4	2,646.8	2,608.7	38.13	69.415		
5,550.0	5,190.4	4,696.4	4,614.7	35.4	19.6	55.38	-4,090.7	158.7	2,615.5	2,577.1	38.48	67.974		
5,600.0	5,204.9	4,707.0	4,623.9	36.2	19.7	59.46	-4,092.6	153.9	2,583.7	2,544.8	38.91	66.409		
5,650.0	5,215.6	4,707.0	4,623.9	37.0	19.7	63.31	-4,092.6	153.9	2,551.4	2,512.1	39.33	64.876		
5,700.0	5,222.6	4,707.0	4,623.9	37.8	19.7	67.18	-4,092.6	153.9	2,518.9	2,479.1	39.80	63.282		
5,750.0	5,225.8	4,696.3	4,614.6	38.6	19.6	70.72	-4,090.7	158.8	2,486.4	2,446.1	40.27	61.735		
5,766.2	5,226.0	4,695.2	4,613.7	38.8	19.6	71.93	-4,090.5	159.2	2,475.9	2,435.4	40.46	61.199		
5,800.0	5,226.0	4,692.9	4,611.6	39.4	19.6	71.86	-4,090.1	160.2	2,454.1	2,413.3	40.85	60.073		
5,900.0	5,226.0	4,686.4	4,605.8	41.1	19.6	71.66	-4,088.9	163.1	2,391.4	2,349.2	42.22	56.643		
6,000.0	5,226.0	4,675.0	4,595.7	42.9	19.5	71.32	-4,087.0	167.9	2,331.2	2,287.4	43.82	53.196		
6,100.0	5,226.0	4,675.0	4,595.7	44.7	19.5	71.32	-4,087.0	167.9	2,273.7	2,227.9	45.78	49.664		
6,200.0	5,226.0	4,663.5	4,585.4	46.7	19.4	70.98	-4,085.0	172.7	2,219.2	2,171.3	47.89	46.337		
6,300.0	5,226.0	4,654.6	4,577.4	48.6	19.4	70.71	-4,083.5	176.3	2,167.9	2,117.7	50.25	43.140		
6,400.0	5,226.0	4,643.0	4,566.9	50.6	19.3	70.37	-4,081.5	180.8	2,120.0	2,067.2	52.79	40.159		
6,500.0	5,226.0	4,643.0	4,566.9	52.7	19.3	70.37	-4,081.5	180.8	2,075.8	2,020.2	55.64	37.310		
6,600.0	5,226.0	4,631.7	4,556.7	54.8	19.3	70.03	-4,079.6	185.1	2,035.5	1,977.0	58.52	34.785		
6,700.0	5,226.0	4,625.2	4,550.8	56.9	19.2	69.83	-4,078.5	187.5	1,999.3	1,937.7	61.58	32.467		
6,800.0	5,226.0	4,611.0	4,537.7	59.0	19.2	69.40	-4,076.0	192.6	1,967.5	1,902.9	64.63	30.441		
6,900.0	5,226.0	4,611.0	4,537.7	61.2	19.2	69.40	-4,076.0	192.6	1,940.3	1,872.4	67.94	28.558		
7,000.0	5,226.0	4,611.0	4,537.7	63.4	19.2	69.40	-4,076.0	192.6	1,917.9	1,846.6	71.28	26.905		
7,100.0	5,226.0	4,611.0	4,537.7	65.6	19.2	69.40	-4,076.0	192.6	1,900.5	1,825.9	74.62	25.469		
7,200.0	5,226.0	4,598.1	4,525.8	67.9	19.1	69.01	-4,073.8	197.0	1,888.2	1,810.5	77.71	24.298		
7,300.0	5,226.0	4,593.6	4,521.6	70.1	19.1	68.87	-4,073.0	198.5	1,881.1	1,800.3	80.84	23.271		
7,384.2	5,226.0	4,589.9	4,518.3	72.0	19.1	68.76	-4,072.3	199.8	1,879.2	1,795.9	83.38	22.538	CC	
7,400.0	5,226.0	4,589.3	4,517.6	72.4	19.1	68.74	-4,072.2	200.0	1,879.3	1,795.5	83.84	22.414	ES	
7,500.0	5,226.0	4,580.0	4,509.0	74.7	19.0	68.46	-4,070.6	203.0	1,882.8	1,796.2	86.61	21.739		
7,600.0	5,226.0	4,580.0	4,509.0	77.0	19.0	68.46	-4,070.6	203.0	1,891.5	1,802.2	89.35	21.169		
7,700.0	5,226.0	4,580.0	4,509.0	79.3	19.0	68.46	-4,070.6	203.0	1,905.5	1,813.6	91.90	20.735		
7,800.0	5,226.0	4,580.0	4,509.0	81.6	19.0	68.46	-4,070.6	203.0	1,924.5	1,830.3	94.22	20.426		
7,900.0	5,226.0	4,580.0	4,509.0	83.9	19.0	68.46	-4,070.6	203.0	1,948.5	1,852.2	96.32	20.230		
8,000.0	5,226.0	4,580.0	4,509.0	86.2	19.0	68.46	-4,070.6	203.0	1,977.3	1,879.1	98.19	20.138	SF	
8,100.0	5,226.0	4,568.1	4,497.9	88.6	19.0	68.10	-4,068.5	206.7	2,010.5	1,910.9	99.60	20.186		
8,200.0	5,226.0	4,566.0	4,496.0	90.9	18.9	68.04	-4,068.1	207.3	2,048.2	1,947.2	100.98	20.283		
8,300.0	5,226.0	4,564.0	4,494.1	93.3	18.9	67.98	-4,067.7	207.9	2,089.9	1,987.7	102.15	20.460		
8,400.0	5,226.0	4,562.2	4,492.4	95.6	18.9	67.92	-4,067.4	208.5	2,135.5	2,032.4	103.13	20.708		
8,500.0	5,226.0	4,560.4	4,490.7	98.0	18.9	67.87	-4,067.1	209.0	2,184.7	2,080.8	103.93	21.022		
8,600.0	5,226.0	4,548.0	4,479.0	100.4	18.8	67.49	-4,064.8	212.5	2,237.4	2,133.1	104.35	21.443		
8,700.0	5,226.0	4,548.0	4,479.0	102.8	18.8	67.49	-4,064.8	212.5	2,293.2	2,188.3	104.87	21.867		
8,800.0	5,226.0	4,548.0	4,479.0	105.1	18.8	67.49	-4,064.8	212.5	2,351.8	2,246.6	105.26	22.342		
8,900.0	5,226.0	4,548.0	4,479.0	107.5	18.8	67.49	-4,064.8	212.5	2,413.2	2,307.7	105.54	22.865		
9,000.0	5,226.0	4,548.0	4,479.0	109.9	18.8	67.49	-4,064.8	212.5	2,477.1	2,371.4	105.72	23.431		
9,100.0	5,226.0	4,548.0	4,479.0	112.3	18.8	67.49	-4,064.8	212.5	2,543.3	2,437.5	105.81	24.037		
9,200.0	5,226.0	4,548.0	4,479.0	114.7	18.8	67.49	-4,064.8	212.5	2,611.7	2,505.9	105.82	24.680		
9,300.0	5,226.0	4,548.0	4,479.0	117.1	18.8	67.49	-4,064.8	212.5	2,682.1	2,576.3	105.77	25.357		
9,400.0	5,226.0	4,548.0	4,479.0	119.5	18.8	67.49	-4,064.8	212.5	2,754.3	2,648.6	105.67	26.065		
9,500.0	5,226.0	4,548.0	4,479.0	121.9	18.8	67.49	-4,064.8	212.5	2,828.2	2,722.6	105.52	26.802		
9,600.0	5,226.0	4,548.0	4,479.0	124.3	18.8	67.49	-4,064.8	212.5	2,903.6	2,798.3	105.34	27.566		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Bettonnie Tsoie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Athena 2308-14L (Logos) - 1H - Original drilling - As drilled													Offset Site Error:	0.0 usft
Survey Program: 418-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
9,700.0	5,226.0	4,548.0	4,479.0	126.7	18.8	67.49	-4,064.8	212.5	2,980.5	2,875.4	105.12	28.354		
9,800.0	5,226.0	4,548.0	4,479.0	129.2	18.8	67.49	-4,064.8	212.5	3,058.8	2,953.9	104.87	29.166		
9,900.0	5,226.0	4,548.0	4,479.0	131.6	18.8	67.49	-4,064.8	212.5	3,138.2	3,033.6	104.61	30.000		
10,000.0	5,226.0	4,548.0	4,479.0	134.0	18.8	67.49	-4,064.8	212.5	3,218.9	3,114.5	104.33	30.853		
10,100.0	5,226.0	4,548.0	4,479.0	136.4	18.8	67.49	-4,064.8	212.5	3,300.5	3,196.5	104.04	31.725		
10,200.0	5,226.0	4,548.0	4,479.0	138.8	18.8	67.49	-4,064.8	212.5	3,383.2	3,279.5	103.73	32.614		
10,300.0	5,226.0	4,548.0	4,479.0	141.3	18.8	67.49	-4,064.8	212.5	3,466.8	3,363.3	103.42	33.520		
10,400.0	5,226.0	4,548.0	4,479.0	143.7	18.8	67.49	-4,064.8	212.5	3,551.2	3,448.1	103.11	34.441		
10,500.0	5,226.0	4,548.0	4,479.0	146.1	18.8	67.49	-4,064.8	212.5	3,636.4	3,533.6	102.79	35.376		
10,600.0	5,226.0	4,548.0	4,479.0	148.5	18.8	67.49	-4,064.8	212.5	3,722.4	3,619.9	102.48	36.324		
10,700.0	5,226.0	4,548.0	4,479.0	151.0	18.8	67.49	-4,064.8	212.5	3,809.0	3,706.8	102.16	37.284		
10,800.0	5,226.0	4,548.0	4,479.0	153.4	18.8	67.49	-4,064.8	212.5	3,896.3	3,794.4	101.85	38.257		
10,900.0	5,226.0	4,548.0	4,479.0	155.8	18.8	67.49	-4,064.8	212.5	3,984.1	3,882.6	101.53	39.240		
11,000.0	5,226.0	4,548.0	4,479.0	158.3	18.8	67.49	-4,064.8	212.5	4,072.6	3,971.4	101.22	40.233		
11,100.0	5,226.0	4,548.0	4,479.0	160.7	18.8	67.49	-4,064.8	212.5	4,161.5	4,060.6	100.92	41.236		
11,200.0	5,226.0	4,548.0	4,479.0	163.1	18.8	67.49	-4,064.8	212.5	4,251.0	4,150.4	100.62	42.248		
11,300.0	5,226.0	4,548.0	4,479.0	165.6	18.8	67.49	-4,064.8	212.5	4,340.9	4,240.6	100.32	43.269		
11,400.0	5,226.0	4,548.0	4,479.0	168.0	18.8	67.49	-4,064.8	212.5	4,431.2	4,331.2	100.03	44.297		
11,500.0	5,226.0	4,548.0	4,479.0	170.5	18.8	67.49	-4,064.8	212.5	4,522.0	4,422.2	99.75	45.334		
11,600.0	5,226.0	4,548.0	4,479.0	172.9	18.8	67.49	-4,064.8	212.5	4,613.1	4,513.6	99.47	46.377		
11,700.0	5,226.0	4,548.0	4,479.0	175.4	18.8	67.49	-4,064.8	212.5	4,704.6	4,605.4	99.20	47.427		
11,800.0	5,226.0	4,548.0	4,479.0	177.8	18.8	67.49	-4,064.8	212.5	4,796.4	4,697.5	98.93	48.483		
11,900.0	5,226.0	4,548.0	4,479.0	180.2	18.8	67.49	-4,064.8	212.5	4,888.6	4,789.9	98.67	49.545		
11,963.3	5,226.0	4,548.0	4,479.0	181.8	18.8	67.49	-4,064.8	212.5	4,947.1	4,848.6	98.51	50.221		

Anticollision Report

Company: DJR Operating
Project: Betonnie Tsosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Athena 2308-14L (Logos) - 2H - Original drilling - As drilled													Offset Site Error: 0.0 usft			
Survey Program: 415-MWD+GRF															Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis				Distance						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	175.13	-3,522.3	300.0	3,535.1							
100.0	100.0	74.3	74.3	0.2	0.1	175.13	-3,522.3	299.9	3,535.0	3,534.7	0.28	N/A				
200.0	200.0	176.2	176.2	0.5	0.3	175.14	-3,522.2	299.6	3,535.0	3,534.1	0.82	4,320.173				
300.0	300.0	278.0	278.0	0.9	0.5	175.15	-3,522.2	299.0	3,534.8	3,533.5	1.35	2,611.877				
400.0	400.0	379.8	379.8	1.2	0.7	175.16	-3,522.1	298.2	3,534.7	3,532.8	1.89	1,871.690				
500.0	500.0	483.2	483.2	1.6	1.0	175.18	-3,521.9	297.0	3,534.4	3,531.9	2.55	1,384.308				
600.0	600.0	559.3	559.3	1.9	1.2	-4.67	-3,521.8	295.9	3,532.1	3,528.9	3.17	1,114.682				
700.0	699.7	597.0	597.0	2.3	1.4	-4.68	-3,522.3	295.2	3,526.8	3,523.1	3.64	969.205				
800.0	799.1	657.0	656.9	2.6	1.6	-4.68	-3,523.9	294.1	3,518.5	3,514.3	4.20	838.736				
900.0	898.0	746.6	746.5	3.0	1.9	-4.69	-3,527.2	292.5	3,506.8	3,502.0	4.86	720.852				
1,000.0	996.0	841.1	840.9	3.4	2.2	-4.72	-3,530.8	290.9	3,490.9	3,485.4	5.56	627.840				
1,100.0	1,093.2	932.8	932.5	3.9	2.6	-4.77	-3,534.3	289.7	3,470.9	3,464.6	6.25	555.125				
1,169.3	1,159.9	1,015.8	1,015.5	4.3	2.9	-4.81	-3,537.5	288.7	3,454.5	3,447.7	6.81	507.372				
1,200.0	1,189.2	1,053.5	1,053.1	4.5	3.0	-4.82	-3,538.8	288.1	3,446.7	3,439.6	7.06	488.245				
1,300.0	1,285.0	1,168.5	1,168.1	5.0	3.4	-4.83	-3,542.3	286.2	3,420.7	3,412.9	7.84	436.479				
1,400.0	1,380.8	1,269.8	1,269.3	5.6	3.8	-4.84	-3,545.0	284.7	3,394.5	3,385.9	8.57	396.052				
1,500.0	1,476.5	1,381.2	1,380.7	6.2	4.2	-4.86	-3,547.7	283.1	3,368.1	3,358.7	9.34	360.434				
1,600.0	1,572.3	1,473.8	1,473.2	6.8	4.5	-4.88	-3,549.8	282.3	3,341.4	3,331.4	10.05	332.355				
1,700.0	1,668.1	1,587.6	1,587.0	7.5	4.9	-4.91	-3,552.0	281.3	3,314.5	3,303.7	10.84	305.781				
1,800.0	1,763.8	1,676.0	1,675.4	8.1	5.3	-4.93	-3,553.6	280.6	3,287.5	3,276.0	11.54	284.854				
1,900.0	1,859.6	1,795.1	1,794.5	8.7	5.7	-4.97	-3,555.3	279.8	3,260.1	3,247.7	12.35	264.030				
2,000.0	1,955.4	1,892.9	1,892.2	9.4	6.0	-5.00	-3,556.6	279.2	3,232.6	3,219.5	13.08	247.079				
2,100.0	2,051.1	1,986.8	1,986.2	10.0	6.4	-5.04	-3,557.5	279.2	3,204.8	3,191.0	13.80	232.162				
2,200.0	2,146.9	2,054.0	2,053.3	10.6	6.6	-5.08	-3,558.8	279.3	3,177.9	3,163.5	14.44	220.061				
2,300.0	2,242.6	2,115.0	2,114.3	11.3	6.8	-5.10	-3,560.8	279.1	3,152.1	3,137.1	15.06	209.259				
2,400.0	2,338.4	2,176.0	2,175.2	11.9	7.1	-5.11	-3,563.3	278.4	3,127.2	3,111.6	15.69	199.331				
2,500.0	2,434.2	2,236.0	2,235.2	12.6	7.3	-5.12	-3,566.5	277.8	3,103.5	3,087.2	16.31	190.258				
2,600.0	2,529.9	2,279.1	2,278.2	13.2	7.4	-5.14	-3,569.4	277.8	3,081.1	3,064.3	16.88	182.534				
2,700.0	2,625.7	2,321.3	2,320.3	13.9	7.6	-5.16	-3,572.8	277.9	3,060.4	3,042.9	17.44	175.434				
2,800.0	2,721.5	2,357.0	2,355.7	14.5	7.7	-5.16	-3,576.5	277.6	3,041.5	3,023.5	17.99	169.109				
2,900.0	2,817.2	2,390.3	2,388.8	15.2	7.9	-5.15	-3,580.6	276.7	3,024.7	3,006.2	18.52	163.347				
3,000.0	2,913.0	2,418.0	2,416.1	15.8	8.0	-5.14	-3,584.7	275.5	3,010.1	2,991.1	19.02	158.237				
3,100.0	3,008.8	2,479.0	2,476.1	16.5	8.2	-5.08	-3,595.2	271.8	2,997.7	2,978.0	19.65	152.543				
3,200.0	3,104.5	2,479.0	2,476.1	17.1	8.2	-5.08	-3,595.2	271.8	2,987.2	2,967.2	20.04	149.068				
3,300.0	3,200.3	2,540.0	2,535.4	17.8	8.5	-4.99	-3,608.6	266.7	2,979.2	2,958.6	20.66	144.181				
3,400.0	3,296.1	2,540.0	2,535.4	18.4	8.5	-4.99	-3,608.6	266.7	2,973.4	2,952.4	21.03	141.404				
3,500.0	3,391.8	2,578.5	2,572.3	19.1	8.7	-4.92	-3,618.6	262.9	2,970.1	2,948.6	21.55	137.853				
3,584.4	3,472.6	2,601.0	2,593.8	19.6	8.8	-4.87	-3,625.0	260.7	2,969.2	2,947.3	21.93	135.388				
3,600.0	3,487.6	2,601.0	2,593.8	19.7	8.8	-4.87	-3,625.0	260.7	2,969.3	2,947.3	21.98	135.073				
3,700.0	3,583.4	2,640.4	2,631.1	20.4	9.0	-4.79	-3,637.0	256.7	2,970.6	2,948.1	22.49	132.098				
3,800.0	3,679.1	2,662.0	2,651.4	21.0	9.1	-4.75	-3,644.1	254.5	2,974.4	2,951.5	22.90	129.899				
3,900.0	3,774.9	2,700.0	2,686.9	21.7	9.3	-4.68	-3,657.3	250.9	2,980.5	2,957.1	23.38	127.491				
4,000.0	3,870.7	2,723.0	2,708.1	22.4	9.4	-4.63	-3,665.9	248.7	2,989.0	2,965.2	23.77	125.747				
4,100.0	3,966.4	2,782.0	2,762.0	23.0	9.7	-4.52	-3,689.2	243.6	2,999.7	2,975.4	24.34	123.220				
4,200.0	4,062.2	2,811.1	2,788.4	23.7	9.9	-4.47	-3,701.3	241.3	3,012.3	2,987.5	24.75	121.717				
4,300.0	4,158.0	2,845.0	2,819.0	24.3	10.1	-4.42	-3,715.7	239.0	3,026.7	3,001.5	25.17	120.256				
4,400.0	4,253.7	2,909.0	2,876.3	25.0	10.6	-4.32	-3,743.9	234.9	3,042.7	3,017.0	25.76	118.126				
4,500.0	4,349.5	2,936.4	2,900.6	25.6	10.7	-4.29	-3,756.5	233.4	3,060.7	3,034.6	26.12	117.168				
4,600.0	4,445.3	2,972.0	2,931.8	26.3	11.0	-4.25	-3,773.6	232.1	3,080.9	3,054.3	26.53	116.142				
4,700.0	4,541.0	3,004.2	2,959.8	26.9	11.2	-4.23	-3,789.5	231.4	3,103.0	3,076.1	26.90	115.361				
4,800.0	4,636.8	3,036.0	2,987.1	27.6	11.5	-4.21	-3,805.8	231.0	3,127.1	3,099.9	27.26	114.726				
4,900.5	4,733.1	3,073.7	3,019.1	28.3	11.8	-4.19	-3,825.6	230.6	3,153.3	3,125.6	27.65	114.053				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnie Tsosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Athena 2308-14L (Logos) - 2H - Original drilling - As drilled												Offset Site Error: 0.0 usft	
Survey Program: 415-MWD+IGRF												Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,950.0	4,780.0	3,099.0	3,040.4	28.6	12.0	3.76	-3,839.4	230.3	3,165.5	3,137.6	27.88	113.530	
5,000.0	4,826.3	3,140.4	3,075.0	29.0	12.3	9.34	-3,862.1	230.0	3,175.2	3,146.9	28.23	112.474	
5,050.0	4,871.3	3,207.6	3,131.5	29.4	12.9	13.46	-3,898.4	230.1	3,181.6	3,152.8	28.76	110.615	
5,100.0	4,914.6	3,226.0	3,147.0	29.9	13.0	16.49	-3,908.3	230.3	3,185.1	3,156.1	28.96	109.981	
5,150.0	4,956.0	3,263.3	3,178.3	30.4	13.3	19.01	-3,928.6	230.4	3,185.7	3,156.4	29.30	108.744	
5,200.0	4,995.2	3,289.0	3,199.7	30.9	13.6	21.11	-3,942.9	230.4	3,183.9	3,154.3	29.55	107.729	
5,250.0	5,032.0	3,334.3	3,237.3	31.4	14.0	23.12	-3,968.1	230.6	3,179.3	3,149.3	29.96	106.106	
5,300.0	5,066.1	3,387.7	3,281.7	32.0	14.5	25.09	-3,997.8	231.9	3,171.6	3,141.2	30.44	104.187	
5,350.0	5,097.4	3,431.1	3,317.9	32.6	14.9	26.99	-4,021.8	233.5	3,161.2	3,130.3	30.86	102.422	
5,400.0	5,125.6	3,464.0	3,345.2	33.3	15.2	28.84	-4,040.0	234.8	3,148.0	3,116.8	31.23	100.810	
5,450.0	5,150.6	3,479.0	3,357.7	34.0	15.3	30.60	-4,048.3	235.4	3,132.5	3,101.0	31.48	99.497	
5,500.0	5,172.3	3,515.2	3,387.6	34.7	15.7	32.67	-4,068.6	236.9	3,114.7	3,082.7	31.92	97.573	
5,550.0	5,190.4	3,543.0	3,410.5	35.4	15.9	34.81	-4,084.4	238.0	3,094.7	3,062.4	32.33	95.724	
5,600.0	5,204.9	3,543.0	3,410.5	36.2	15.9	36.73	-4,084.4	238.0	3,072.8	3,040.2	32.57	94.352	
5,650.0	5,215.6	3,568.7	3,431.6	37.0	16.2	39.17	-4,099.1	239.0	3,048.9	3,015.9	33.04	92.289	
5,700.0	5,222.6	3,582.0	3,442.4	37.8	16.3	41.62	-4,106.8	239.5	3,023.5	2,990.1	33.46	90.369	
5,750.0	5,225.8	3,606.0	3,461.8	38.6	16.5	44.47	-4,120.8	240.5	2,996.6	2,962.6	34.01	88.115	
5,766.2	5,226.0	3,606.0	3,461.8	38.8	16.5	45.30	-4,120.8	240.5	2,987.5	2,953.4	34.14	87.510	
5,800.0	5,226.0	3,606.0	3,461.8	39.4	16.5	45.30	-4,120.8	240.5	2,968.7	2,934.3	34.42	86.240	
5,900.0	5,226.0	3,668.8	3,512.7	41.1	17.2	46.53	-4,157.5	243.1	2,913.9	2,878.0	35.90	81.176	
6,000.0	5,226.0	3,718.1	3,552.8	42.9	17.7	47.51	-4,186.2	244.9	2,860.7	2,823.2	37.48	76.319	
6,100.0	5,226.0	3,767.1	3,592.8	44.7	18.2	48.50	-4,214.5	246.1	2,809.2	2,769.9	39.29	71.502	
6,200.0	5,226.0	3,858.9	3,668.0	46.7	19.1	50.40	-4,267.1	247.8	2,759.5	2,717.8	41.69	66.199	
6,300.0	5,226.0	3,885.1	3,689.6	48.6	19.4	50.95	-4,281.8	248.2	2,711.5	2,667.8	43.73	62.002	
6,400.0	5,226.0	3,923.0	3,720.7	50.6	19.8	51.75	-4,303.5	248.7	2,666.0	2,619.9	46.08	57.854	
6,500.0	5,226.0	3,944.2	3,738.0	52.7	20.0	52.20	-4,315.7	248.9	2,622.9	2,574.5	48.46	54.129	
6,600.0	5,226.0	4,018.0	3,798.9	54.8	20.8	53.79	-4,357.6	248.5	2,582.3	2,530.7	51.56	50.085	
6,700.0	5,226.0	4,082.7	3,852.6	56.9	21.5	55.21	-4,393.4	247.8	2,543.7	2,488.9	54.77	46.447	
6,800.0	5,226.0	4,113.0	3,877.9	59.0	21.8	55.88	-4,410.2	247.4	2,507.8	2,450.1	57.77	43.408	
6,900.0	5,226.0	4,113.0	3,877.9	61.2	21.8	55.88	-4,410.2	247.4	2,475.2	2,414.7	60.55	40.877	
7,000.0	5,226.0	4,142.5	3,902.4	63.4	22.1	56.53	-4,426.7	246.7	2,445.8	2,382.0	63.80	38.336	
7,100.0	5,226.0	4,176.0	3,929.8	65.6	22.5	57.28	-4,445.9	245.5	2,420.3	2,353.0	67.21	36.011	
7,200.0	5,226.0	4,176.0	3,929.8	67.9	22.5	57.28	-4,445.9	245.5	2,398.0	2,327.8	70.22	34.149	
7,300.0	5,226.0	4,176.0	3,929.8	70.1	22.5	57.28	-4,445.9	245.5	2,379.7	2,306.5	73.25	32.489	
7,400.0	5,226.0	4,201.5	3,950.4	72.4	22.8	57.85	-4,460.8	244.3	2,365.1	2,288.4	76.70	30.837	
7,500.0	5,226.0	4,216.3	3,962.2	74.7	22.9	58.18	-4,469.6	243.4	2,354.6	2,274.6	79.98	29.440	
7,600.0	5,226.0	4,239.0	3,980.3	77.0	23.2	58.69	-4,483.4	242.0	2,348.0	2,264.6	83.39	28.158	
7,700.0	5,226.0	4,260.4	3,997.2	79.3	23.4	59.17	-4,496.4	240.5	2,345.3	2,258.5	86.74	27.037	
7,724.3	5,226.0	4,271.3	4,005.8	79.8	23.5	59.42	-4,503.0	239.7	2,345.2	2,257.5	87.67	26.751	
7,800.0	5,226.0	4,650.6	4,321.2	81.6	27.6	68.01	-4,711.9	224.4	2,345.3	2,248.5	96.73	24.246	
7,862.2	5,226.0	4,661.7	4,331.0	83.0	27.7	68.27	-4,717.1	224.0	2,344.3	2,245.4	98.92	23.699 CC	
7,900.0	5,226.0	4,675.0	4,342.8	83.9	27.8	68.58	-4,723.4	223.5	2,344.5	2,244.2	100.34	23.366 ES	
8,000.0	5,226.0	4,675.0	4,342.8	86.2	27.8	68.58	-4,723.4	223.5	2,347.8	2,244.4	103.45	22.695	
8,100.0	5,226.0	4,675.0	4,342.8	88.6	27.8	68.58	-4,723.4	223.5	2,355.3	2,248.9	106.41	22.135	
8,200.0	5,226.0	4,703.3	4,367.6	90.9	28.1	69.23	-4,736.9	222.1	2,366.6	2,256.8	109.74	21.566	
8,300.0	5,226.0	4,714.0	4,376.9	93.3	28.2	69.48	-4,742.2	221.4	2,382.0	2,269.4	112.59	21.156	
8,400.0	5,226.0	4,739.0	4,398.5	95.6	28.4	70.06	-4,754.6	219.6	2,401.5	2,285.9	115.57	20.779	
8,500.0	5,226.0	4,739.0	4,398.5	98.0	28.4	70.06	-4,754.6	219.6	2,424.6	2,306.7	117.87	20.571	
8,600.0	5,226.0	4,753.6	4,411.1	100.4	28.6	70.40	-4,761.9	218.5	2,451.5	2,331.2	120.29	20.380	
8,700.0	5,226.0	4,777.4	4,431.5	102.8	28.8	70.95	-4,774.1	216.6	2,481.8	2,359.1	122.75	20.219	
8,800.0	5,226.0	4,802.0	4,452.4	105.1	29.1	71.51	-4,786.8	214.8	2,515.5	2,390.4	125.07	20.113	
8,900.0	5,226.0	4,819.0	4,466.8	107.5	29.2	71.89	-4,795.8	213.5	2,552.4	2,425.3	127.05	20.090 SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnie Tsosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Athena 2308-14L (Logos) - 2H - Original drilling - As drilled													Offset Site Error:	0.0 usft
Survey Program: 415-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
							+N/-S (usft)	+E/-W (usft)						
9,000.0	5,226.0	4,836.2	4,481.3	109.9	29.4	72.28	-4,805.1	212.2	2,592.3	2,463.5	128.88	20.114		
9,100.0	5,226.0	4,866.0	4,506.1	112.3	29.7	72.95	-4,821.4	209.8	2,635.3	2,504.5	130.88	20.136		
9,200.0	5,226.0	4,866.0	4,506.1	114.7	29.7	72.95	-4,821.4	209.8	2,681.1	2,549.1	131.97	20.316		
9,300.0	5,226.0	4,866.0	4,506.1	117.1	29.7	72.95	-4,821.4	209.8	2,729.7	2,596.8	132.90	20.539		
9,400.0	5,226.0	4,897.0	4,531.3	119.5	30.1	73.64	-4,839.1	206.8	2,780.9	2,646.3	134.55	20.668		
9,500.0	5,226.0	4,897.0	4,531.3	121.9	30.1	73.64	-4,839.1	206.8	2,834.4	2,699.2	135.22	20.961		
9,600.0	5,226.0	4,897.0	4,531.3	124.3	30.1	73.64	-4,839.1	206.8	2,890.5	2,754.7	135.77	21.290		
9,700.0	5,226.0	4,897.0	4,531.3	126.7	30.1	73.64	-4,839.1	206.8	2,948.9	2,812.7	136.19	21.652		
9,800.0	5,226.0	4,912.0	4,543.4	129.2	30.3	73.97	-4,847.9	205.0	3,009.2	2,872.2	136.98	21.969		
9,900.0	5,226.0	4,929.0	4,556.8	131.6	30.4	74.34	-4,857.9	202.5	3,071.8	2,934.1	137.74	22.301		
10,000.0	5,226.0	4,929.0	4,556.8	134.0	30.4	74.34	-4,857.9	202.5	3,136.0	2,998.1	137.90	22.741		
10,100.0	5,226.0	4,929.0	4,556.8	136.4	30.4	74.34	-4,857.9	202.5	3,202.1	3,064.1	137.99	23.205		
10,200.0	5,226.0	4,929.0	4,556.8	138.8	30.4	74.34	-4,857.9	202.5	3,269.9	3,131.9	138.01	23.693		
10,300.0	5,226.0	4,929.0	4,556.8	141.3	30.4	74.34	-4,857.9	202.5	3,339.3	3,201.4	137.97	24.203		
10,400.0	5,226.0	4,929.0	4,556.8	143.7	30.4	74.34	-4,857.9	202.5	3,410.3	3,272.4	137.88	24.734		
10,500.0	5,226.0	4,944.1	4,568.7	146.1	30.6	74.66	-4,866.9	199.9	3,482.4	3,344.1	138.24	25.191		
10,600.0	5,226.0	4,960.0	4,581.1	148.5	30.8	75.01	-4,876.3	196.6	3,556.1	3,417.5	138.59	25.659		
10,700.0	5,226.0	4,960.0	4,581.1	151.0	30.8	75.01	-4,876.3	196.6	3,630.8	3,492.4	138.39	26.237		
10,800.0	5,226.0	4,960.0	4,581.1	153.4	30.8	75.01	-4,876.3	196.6	3,706.7	3,568.5	138.15	26.831		
10,900.0	5,226.0	4,960.0	4,581.1	155.8	30.8	75.01	-4,876.3	196.6	3,783.7	3,645.8	137.89	27.440		
11,000.0	5,226.0	4,960.0	4,581.1	158.3	30.8	75.01	-4,876.3	196.6	3,861.8	3,724.2	137.61	28.064		
11,100.0	5,226.0	4,960.0	4,581.1	160.7	30.8	75.01	-4,876.3	196.6	3,940.9	3,803.6	137.30	28.702		
11,200.0	5,226.0	4,973.2	4,591.4	163.1	30.9	75.29	-4,884.0	193.6	4,020.7	3,883.3	137.43	29.256		
11,300.0	5,226.0	4,978.1	4,595.3	165.6	31.0	75.40	-4,886.8	192.4	4,101.5	3,964.2	137.27	29.879		
11,400.0	5,226.0	4,992.0	4,606.1	168.0	31.2	75.70	-4,894.8	189.1	4,183.2	4,045.7	137.40	30.445		
11,500.0	5,226.0	4,992.0	4,606.1	170.5	31.2	75.70	-4,894.8	189.1	4,265.4	4,128.4	137.06	31.122		
11,600.0	5,226.0	4,992.0	4,606.1	172.9	31.2	75.70	-4,894.8	189.1	4,348.5	4,211.8	136.70	31.810		
11,700.0	5,226.0	5,001.6	4,613.6	175.4	31.3	75.90	-4,900.2	186.6	4,432.2	4,295.5	136.67	32.430		
11,800.0	5,226.0	5,011.3	4,621.3	177.8	31.4	76.11	-4,905.6	184.2	4,516.5	4,379.9	136.63	33.056		
11,900.0	5,226.0	5,044.2	4,647.5	180.2	31.7	76.82	-4,923.8	175.8	4,601.4	4,464.0	137.36	33.499		
11,963.3	5,226.0	5,055.0	4,656.0	181.8	31.8	77.05	-4,929.7	173.1	4,655.4	4,517.9	137.48	33.862		

Anticollision Report

Company: DJR Operating
Project: Betonnie Tsosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Athena 2308-14L (Logos) - 3H - Original drilling - As drilled													Offset Site Error:
Survey Program: 440-MWD+IGRF													0.0 usft
Reference													Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	174.86	-3,473.9	312.3	3,488.0				
100.0	100.0	70.1	70.1	0.2	0.1	174.86	-3,473.9	312.4	3,487.9	3,487.6	0.28	N/A	
200.0	200.0	166.2	166.2	0.5	0.3	174.86	-3,474.0	312.4	3,488.0	3,487.2	0.80	4,353.790	
300.0	300.0	262.3	262.3	0.9	0.5	174.86	-3,474.3	312.6	3,488.3	3,487.0	1.33	2,629.915	
400.0	400.0	358.4	358.4	1.2	0.6	174.86	-3,474.6	312.7	3,488.7	3,486.8	1.85	1,884.107	
500.0	500.0	454.3	454.3	1.6	0.8	174.85	-3,475.0	313.0	3,489.1	3,486.7	2.40	1,452.037	
600.0	600.0	555.7	555.7	1.9	1.2	-5.02	-3,475.6	313.3	3,487.6	3,484.5	3.11	1,122.223	
700.0	699.7	676.3	676.3	2.3	1.6	-5.06	-3,475.7	314.0	3,481.1	3,477.3	3.87	899.475	
800.0	799.1	779.5	779.5	2.6	2.0	-5.11	-3,475.4	314.6	3,470.1	3,465.5	4.58	757.834	
900.0	898.0	877.3	877.3	3.0	2.3	-5.18	-3,475.2	315.2	3,454.8	3,449.5	5.28	654.650	
1,000.0	996.0	972.2	972.2	3.4	2.6	-5.26	-3,475.0	315.8	3,435.2	3,429.2	5.97	575.061	
1,100.0	1,093.2	1,063.5	1,063.5	3.9	3.0	-5.36	-3,474.9	316.3	3,411.5	3,404.8	6.66	511.916	
1,169.3	1,159.9	1,130.4	1,130.4	4.3	3.2	-5.44	-3,475.0	316.6	3,392.7	3,385.5	7.16	473.685	
1,200.0	1,189.2	1,161.8	1,161.8	4.5	3.3	-5.46	-3,475.0	316.7	3,383.9	3,376.5	7.39	457.948	
1,300.0	1,285.0	1,257.9	1,257.9	5.0	3.7	-5.52	-3,474.9	317.1	3,355.2	3,347.1	8.09	414.536	
1,400.0	1,380.8	1,356.6	1,356.5	5.6	4.0	-5.57	-3,474.9	317.3	3,326.5	3,317.7	8.81	377.460	
1,500.0	1,476.5	1,440.6	1,440.5	6.2	4.3	-5.62	-3,474.9	317.6	3,297.9	3,288.5	9.49	347.682	
1,600.0	1,572.3	1,528.0	1,528.0	6.8	4.6	-5.67	-3,475.2	318.1	3,269.7	3,259.5	10.18	321.345	
1,700.0	1,668.1	1,625.2	1,625.2	7.5	5.0	-5.73	-3,475.7	318.6	3,241.6	3,230.6	10.90	297.351	
1,800.0	1,763.8	1,720.1	1,720.0	8.1	5.3	-5.79	-3,476.1	319.0	3,213.4	3,201.7	11.62	276.489	
1,900.0	1,859.6	1,802.1	1,802.1	8.7	5.6	-5.84	-3,476.6	319.4	3,185.4	3,173.1	12.30	258.919	
2,000.0	1,955.4	1,915.4	1,915.4	9.4	6.0	-5.91	-3,477.6	320.3	3,157.6	3,144.5	13.09	241.238	
2,100.0	2,051.1	2,007.0	2,006.9	10.0	6.3	-5.97	-3,477.9	320.6	3,129.3	3,115.5	13.80	226.693	
2,200.0	2,146.9	2,104.5	2,104.5	10.6	6.7	-6.03	-3,478.5	320.6	3,101.2	3,086.7	14.53	213.367	
2,300.0	2,242.6	2,209.2	2,209.1	11.3	7.0	-6.08	-3,478.9	320.3	3,072.9	3,057.7	15.28	201.114	
2,400.0	2,338.4	2,285.7	2,285.7	11.9	7.3	-6.12	-3,479.3	320.0	3,044.8	3,028.8	15.94	190.980	
2,500.0	2,434.2	2,377.2	2,377.2	12.6	7.6	-6.18	-3,480.2	320.2	3,017.1	3,000.5	16.66	181.096	
2,600.0	2,529.9	2,474.7	2,474.7	13.2	8.0	-6.25	-3,481.1	320.7	2,989.4	2,972.0	17.40	171.791	
2,700.0	2,625.7	2,560.9	2,560.8	13.9	8.3	-6.31	-3,482.0	321.0	2,961.8	2,943.7	18.11	163.554	
2,800.0	2,721.5	2,645.3	2,645.3	14.5	8.6	-6.36	-3,483.2	321.3	2,934.6	2,915.8	18.81	155.998	
2,900.0	2,817.2	2,742.1	2,742.0	15.2	8.9	-6.42	-3,484.9	321.4	2,907.7	2,888.1	19.55	148.725	
3,000.0	2,913.0	2,871.7	2,871.6	15.8	9.4	-6.51	-3,486.1	321.3	2,879.8	2,859.4	20.38	141.334	
3,100.0	3,008.8	2,959.3	2,959.2	16.5	9.7	-6.58	-3,486.2	321.8	2,851.4	2,830.3	21.08	135.236	
3,200.0	3,104.5	3,048.9	3,048.8	17.1	10.0	-6.68	-3,486.9	323.9	2,823.8	2,802.0	21.81	129.483	
3,300.0	3,200.3	3,131.9	3,131.7	17.8	10.3	-6.81	-3,487.5	327.0	2,796.3	2,773.8	22.52	124.188	
3,400.0	3,296.1	3,207.8	3,207.5	18.4	10.6	-6.95	-3,488.4	331.2	2,769.5	2,746.3	23.21	119.331	
3,500.0	3,391.8	3,282.0	3,281.5	19.1	10.8	-7.10	-3,489.8	336.0	2,743.4	2,719.5	23.90	114.797	
3,600.0	3,487.6	3,357.1	3,356.3	19.7	11.1	-7.29	-3,491.6	342.3	2,718.1	2,693.5	24.59	110.522	
3,700.0	3,583.4	3,450.0	3,448.7	20.4	11.4	-7.58	-3,493.7	352.4	2,693.2	2,667.8	25.35	106.246	
3,800.0	3,679.1	3,544.0	3,541.8	21.0	11.8	-7.93	-3,495.9	365.0	2,668.5	2,642.4	26.11	102.186	
3,900.0	3,774.9	3,609.3	3,606.4	21.7	12.0	-8.19	-3,497.8	374.7	2,644.7	2,617.9	26.80	98.679	
4,000.0	3,870.7	3,700.7	3,696.5	22.4	12.4	-8.60	-3,500.7	389.6	2,621.7	2,594.1	27.58	95.065	
4,100.0	3,966.4	3,799.9	3,794.3	23.0	12.8	-9.03	-3,503.8	405.3	2,598.6	2,570.2	28.39	91.547	
4,200.0	4,062.2	3,899.1	3,892.4	23.7	13.2	-9.46	-3,507.0	419.9	2,575.5	2,546.3	29.20	88.207	
4,300.0	4,158.0	3,970.9	3,963.2	24.3	13.5	-9.80	-3,509.2	432.1	2,552.8	2,522.9	29.93	85.286	
4,400.0	4,253.7	4,037.6	4,028.5	25.0	13.7	-10.15	-3,511.9	444.7	2,531.5	2,500.8	30.66	82.577	
4,500.0	4,349.5	4,120.6	4,109.9	25.6	14.1	-10.60	-3,515.8	460.7	2,511.1	2,479.7	31.45	79.857	
4,600.0	4,445.3	4,199.4	4,186.0	26.3	15.5	-11.87	-3,522.3	495.2	2,487.7	2,454.8	32.99	75.405	
4,700.0	4,541.0	4,261.6	4,245.7	26.9	16.0	-11.47	-3,520.2	468.3	2,454.8	2,421.2	33.67	72.901	
4,800.0	4,636.8	4,329.6	4,310.5	27.6	16.1	-11.06	-3,520.9	448.0	2,422.0	2,387.7	34.29	70.638	
4,900.5	4,733.1	5,213.3	5,086.6	28.3	18.1	-4.07	-3,516.0	160.2	2,380.6	2,345.1	35.53	67.003	
4,950.0	4,780.0	5,225.4	5,092.5	28.6	18.2	6.37	-3,515.8	149.7	2,358.1	2,322.1	35.96	65.579	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Bettonie Tsosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Athena 2308-14L (Logos) - 3H - Original drilling - As drilled													Offset Site Error: 0.0 usft
Survey Program: 440-MWD+IGRF													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,826.3	5,241.0	5,099.8	29.0	18.4	14.57	-3,515.7	135.9	2,333.5	2,297.1	36.41	64.097	
5,050.0	4,871.3	5,248.2	5,103.0	29.4	18.4	21.07	-3,515.6	129.5	2,307.2	2,270.4	36.80	62.698	
5,100.0	4,914.6	5,269.8	5,112.4	29.9	18.6	27.12	-3,515.5	110.0	2,279.3	2,242.0	37.30	61.114	
5,150.0	4,956.0	5,281.6	5,117.4	30.4	18.8	32.42	-3,515.4	99.3	2,250.0	2,212.3	37.71	59.667	
5,200.0	4,995.2	5,285.9	5,119.1	30.9	18.8	37.22	-3,515.3	95.4	2,219.5	2,181.4	38.05	58.323	
5,250.0	5,032.0	5,284.5	5,118.5	31.4	18.8	41.71	-3,515.4	96.7	2,187.9	2,149.5	38.35	57.057	
5,300.0	5,066.1	5,278.5	5,116.1	32.0	18.7	46.00	-3,515.4	102.1	2,155.4	2,116.8	38.59	55.848	
5,350.0	5,097.4	5,268.8	5,112.0	32.6	18.6	50.17	-3,515.5	110.9	2,122.1	2,083.3	38.81	54.682	
5,400.0	5,125.6	5,256.0	5,106.5	33.3	18.5	54.28	-3,515.6	122.4	2,088.2	2,049.2	39.00	53.545	
5,450.0	5,150.6	5,241.0	5,099.8	34.0	18.4	58.35	-3,515.7	135.9	2,053.8	2,014.6	39.18	52.422	
5,500.0	5,172.3	5,241.0	5,099.8	34.7	18.4	63.00	-3,515.7	135.9	2,019.1	1,979.5	39.54	51.062	
5,550.0	5,190.4	5,227.1	5,093.3	35.4	18.2	67.17	-3,515.8	148.2	1,984.2	1,944.4	39.80	49.848	
5,600.0	5,204.9	5,218.5	5,089.2	36.2	18.2	71.49	-3,515.9	155.7	1,949.4	1,909.2	40.16	48.536	
5,650.0	5,215.6	5,208.9	5,084.4	37.0	18.1	75.68	-3,516.1	164.0	1,914.8	1,874.2	40.56	47.207	
5,700.0	5,222.6	5,194.0	5,076.8	37.8	18.0	79.58	-3,516.6	176.9	1,880.7	1,839.7	40.95	45.923	
5,750.0	5,225.8	5,182.2	5,070.4	38.6	17.9	83.39	-3,517.0	186.9	1,847.2	1,805.7	41.46	44.557	
5,766.2	5,226.0	5,175.7	5,066.9	38.8	17.8	84.51	-3,517.2	192.2	1,836.4	1,794.8	41.60	44.143	
5,800.0	5,226.0	5,162.5	5,059.5	39.4	17.7	84.17	-3,517.7	203.2	1,814.3	1,772.4	41.93	43.270	
5,900.0	5,226.0	5,124.5	5,036.6	41.1	17.5	83.12	-3,519.1	233.4	1,750.0	1,706.9	43.13	40.576	
6,000.0	5,226.0	5,086.5	5,011.5	42.9	17.3	81.96	-3,520.5	262.0	1,688.0	1,643.4	44.64	37.813	
6,100.0	5,226.0	5,052.0	4,987.0	44.7	17.1	80.81	-3,521.6	286.2	1,628.5	1,582.0	46.51	35.016	
6,200.0	5,226.0	5,017.8	4,961.2	46.7	17.0	79.59	-3,522.4	308.6	1,572.0	1,523.4	48.68	32.294	
6,300.0	5,226.0	4,981.9	4,932.8	48.6	16.8	78.24	-3,523.1	330.6	1,519.2	1,468.1	51.09	29.734	
6,400.0	5,226.0	4,957.0	4,912.6	50.6	16.7	77.27	-3,523.4	345.1	1,470.2	1,416.2	53.91	27.271	
6,500.0	5,226.0	4,928.9	4,889.2	52.7	16.7	76.16	-3,523.5	360.6	1,425.7	1,368.8	56.89	25.062	
6,600.0	5,226.0	4,910.0	4,873.1	54.8	16.6	75.39	-3,523.6	370.6	1,386.6	1,326.4	60.18	23.042	
6,700.0	5,226.0	4,891.5	4,857.1	56.9	16.5	74.63	-3,523.8	380.0	1,353.2	1,289.6	63.58	21.283	
6,800.0	5,226.0	4,863.0	4,832.2	59.0	16.5	73.44	-3,524.1	393.6	1,326.2	1,259.4	66.83	19.845	
6,900.0	5,226.0	4,855.0	4,825.0	61.2	16.4	73.10	-3,524.2	397.3	1,305.7	1,235.3	70.42	18.542	
7,000.0	5,226.0	4,828.7	4,801.5	63.4	16.4	71.99	-3,524.1	409.0	1,292.1	1,218.6	73.52	17.575	
7,100.0	5,226.0	4,807.2	4,782.0	65.6	16.3	71.07	-3,523.6	418.1	1,285.6	1,209.1	76.49	16.806	
7,138.3	5,226.0	4,799.8	4,775.3	66.5	16.3	70.75	-3,523.4	421.2	1,285.1	1,207.5	77.58	16.564 CC	
7,200.0	5,226.0	4,788.5	4,765.0	67.9	16.3	70.26	-3,523.0	425.8	1,286.5	1,207.2	79.24	16.235 ES	
7,300.0	5,226.0	4,767.0	4,745.2	70.1	16.2	69.33	-3,522.2	434.3	1,294.7	1,213.2	81.59	15.870	
7,400.0	5,226.0	4,767.0	4,745.2	72.4	16.2	69.33	-3,522.2	434.3	1,310.4	1,226.3	84.04	15.593	
7,500.0	5,226.0	4,767.0	4,745.2	74.7	16.2	69.33	-3,522.2	434.3	1,333.3	1,247.2	86.10	15.487 SF	
7,600.0	5,226.0	4,745.0	4,724.9	77.0	16.2	68.38	-3,521.4	442.5	1,362.8	1,275.5	87.29	15.613	
7,700.0	5,226.0	4,737.5	4,717.9	79.3	16.1	68.06	-3,521.2	445.2	1,398.8	1,310.4	88.43	15.818	
7,800.0	5,226.0	4,720.0	4,701.4	81.6	16.1	67.30	-3,520.7	451.2	1,440.9	1,351.8	89.03	16.185	
7,900.0	5,226.0	4,720.0	4,701.4	83.9	16.1	67.30	-3,520.7	451.2	1,488.2	1,398.5	89.71	16.589	
8,000.0	5,226.0	4,720.0	4,701.4	86.2	16.1	67.30	-3,520.7	451.2	1,540.6	1,450.4	90.13	17.093	
8,100.0	5,226.0	4,720.0	4,701.4	88.6	16.1	67.30	-3,520.7	451.2	1,597.5	1,507.1	90.33	17.685	
8,200.0	5,226.0	4,703.3	4,685.6	90.9	16.1	66.59	-3,520.5	456.5	1,658.2	1,568.1	90.04	18.415	
8,300.0	5,226.0	4,697.2	4,679.8	93.3	16.0	66.32	-3,520.4	458.4	1,722.6	1,632.8	89.83	19.177	
8,400.0	5,226.0	4,691.3	4,674.2	95.6	16.0	66.07	-3,520.3	460.2	1,790.2	1,700.7	89.51	20.001	
8,500.0	5,226.0	4,673.0	4,656.6	98.0	16.0	65.30	-3,520.2	463.3	1,860.8	1,771.9	88.90	20.932	
8,600.0	5,226.0	4,673.0	4,656.6	100.4	16.0	65.30	-3,520.2	463.3	1,933.8	1,845.2	88.54	21.840	
8,700.0	5,226.0	4,673.0	4,656.6	102.8	16.0	65.30	-3,520.2	463.3	2,009.0	1,920.9	88.14	22.794	
8,800.0	5,226.0	4,673.0	4,656.6	105.1	16.0	65.30	-3,520.2	463.3	2,086.4	1,998.7	87.70	23.790	
8,900.0	5,226.0	4,673.0	4,656.6	107.5	16.0	65.30	-3,520.2	463.3	2,165.6	2,078.3	87.24	24.823	
9,000.0	5,226.0	4,673.0	4,656.6	109.9	16.0	65.30	-3,520.2	463.3	2,246.4	2,159.6	86.76	25.891	
9,100.0	5,226.0	4,652.0	4,636.3	112.3	15.9	64.41	-3,520.3	470.8	2,328.4	2,242.4	86.00	27.075	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnie Tsosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Athena 2308-14L (Logos) - 3H - Original drilling - As drilled													Offset Site Error: 0.0 usft
Survey Program: 440-MWD+IGRF													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,200.0	5,226.0	4,646.6	4,631.1	114.7	15.9	64.19	-3,520.3	472.1	2,412.0	2,326.5	85.46	28.224	
9,300.0	5,226.0	4,626.0	4,611.1	117.1	15.9	63.34	-3,520.6	476.9	2,496.8	2,412.1	84.74	29.466	
9,400.0	5,226.0	4,626.0	4,611.1	119.5	15.9	63.34	-3,520.6	476.9	2,582.5	2,498.2	84.28	30.641	
9,500.0	5,226.0	4,626.0	4,611.1	121.9	15.9	63.34	-3,520.6	476.9	2,669.1	2,585.3	83.83	31.838	
9,600.0	5,226.0	4,626.0	4,611.1	124.3	15.9	63.34	-3,520.6	476.9	2,756.7	2,673.3	83.40	33.055	
9,700.0	5,226.0	4,626.0	4,611.1	126.7	15.9	63.34	-3,520.6	476.9	2,845.1	2,762.1	82.97	34.290	
9,800.0	5,226.0	4,626.0	4,611.1	129.2	15.9	63.34	-3,520.6	476.9	2,934.2	2,851.6	82.56	35.542	
9,900.0	5,226.0	4,626.0	4,611.1	131.6	15.9	63.34	-3,520.6	476.9	3,024.0	2,941.8	82.15	36.809	
10,000.0	5,226.0	4,626.0	4,611.1	134.0	15.9	63.34	-3,520.6	476.9	3,114.4	3,032.7	81.77	38.090	
10,100.0	5,226.0	4,626.0	4,611.1	136.4	15.9	63.34	-3,520.6	476.9	3,205.4	3,124.0	81.39	39.383	
10,200.0	5,226.0	4,606.1	4,591.6	138.8	15.8	62.53	-3,520.9	481.0	3,296.6	3,215.8	80.83	40.783	
10,300.0	5,226.0	4,603.2	4,588.7	141.3	15.8	62.41	-3,521.0	481.6	3,388.6	3,308.1	80.46	42.115	
10,400.0	5,226.0	4,600.4	4,586.0	143.7	15.8	62.29	-3,521.0	482.1	3,480.9	3,400.8	80.10	43.457	
10,500.0	5,226.0	4,597.6	4,583.3	146.1	15.8	62.18	-3,521.0	482.6	3,573.6	3,493.9	79.76	44.807	
10,600.0	5,226.0	4,578.0	4,564.0	148.5	15.7	61.40	-3,521.3	486.0	3,667.0	3,587.7	79.27	46.256	
10,700.0	5,226.0	4,578.0	4,564.0	151.0	15.7	61.40	-3,521.3	486.0	3,760.4	3,681.4	78.98	47.611	
10,800.0	5,226.0	4,578.0	4,564.0	153.4	15.7	61.40	-3,521.3	486.0	3,854.1	3,775.4	78.70	48.973	
10,900.0	5,226.0	4,578.0	4,564.0	155.8	15.7	61.40	-3,521.3	486.0	3,948.1	3,869.7	78.43	50.342	
11,000.0	5,226.0	4,578.0	4,564.0	158.3	15.7	61.40	-3,521.3	486.0	4,042.5	3,964.3	78.17	51.717	
11,100.0	5,226.0	4,578.0	4,564.0	160.7	15.7	61.40	-3,521.3	486.0	4,137.0	4,059.1	77.91	53.098	
11,200.0	5,226.0	4,578.0	4,564.0	163.1	15.7	61.40	-3,521.3	486.0	4,231.9	4,154.2	77.67	54.484	
11,300.0	5,226.0	4,578.0	4,564.0	165.6	15.7	61.40	-3,521.3	486.0	4,327.0	4,249.5	77.44	55.876	
11,400.0	5,226.0	4,578.0	4,564.0	168.0	15.7	61.40	-3,521.3	486.0	4,422.3	4,345.0	77.21	57.272	
11,500.0	5,226.0	4,578.0	4,564.0	170.5	15.7	61.40	-3,521.3	486.0	4,517.7	4,440.7	77.00	58.672	
11,600.0	5,226.0	4,578.0	4,564.0	172.9	15.7	61.40	-3,521.3	486.0	4,613.4	4,536.6	76.79	60.077	
11,700.0	5,226.0	4,578.0	4,564.0	175.4	15.7	61.40	-3,521.3	486.0	4,709.3	4,632.7	76.59	61.484	
11,800.0	5,226.0	4,578.0	4,564.0	177.8	15.7	61.40	-3,521.3	486.0	4,805.3	4,728.9	76.40	62.896	
11,900.0	5,226.0	4,578.0	4,564.0	180.2	15.7	61.40	-3,521.3	486.0	4,901.5	4,825.3	76.22	64.310	
11,963.3	5,226.0	4,578.0	4,564.0	181.8	15.7	61.40	-3,521.3	486.0	4,962.5	4,886.4	76.10	65.207	

Anticollision Report

Company: DJR Operating
Project: Bettonie Tsoie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Chaco 2308-14E (Enduring) - 151H - Original drilling - Pathfinder													Offset Site Error:	0.0 usft
Survey Program: 451-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	177.64	-1,791.0	73.7	1,792.6					
100.0	100.0	81.9	81.9	0.2	0.1	177.65	-1,791.0	73.6	1,792.6	1,792.3	0.30	6,039.134		
200.0	200.0	179.4	179.4	0.5	0.3	177.66	-1,791.2	73.3	1,792.7	1,791.9	0.83	2,172.715		
300.0	300.0	277.0	277.0	0.9	0.5	177.68	-1,791.6	72.7	1,793.1	1,791.7	1.35	1,324.866		
400.0	400.0	374.5	374.5	1.2	0.7	177.70	-1,792.1	71.9	1,793.5	1,791.6	1.88	953.165		
500.0	500.0	471.7	471.7	1.6	0.9	177.74	-1,792.7	70.8	1,794.1	1,791.7	2.45	732.964		
600.0	600.0	796.4	795.8	1.9	2.0	-2.17	-1,777.9	71.0	1,789.7	1,785.8	3.93	455.849		
700.0	699.7	918.3	916.6	2.3	2.5	-2.31	-1,762.4	73.8	1,770.6	1,765.9	4.70	376.947		
800.0	799.1	1,150.5	1,145.2	2.6	3.5	-2.59	-1,722.1	78.3	1,742.3	1,736.5	5.88	296.494		
900.0	898.0	1,319.5	1,309.6	3.0	4.3	-2.78	-1,683.3	79.1	1,704.9	1,698.1	6.83	249.630		
1,000.0	996.0	1,492.7	1,476.1	3.4	5.3	-2.92	-1,635.5	77.0	1,659.0	1,651.2	7.79	212.854		
1,100.0	1,093.2	1,652.7	1,627.7	3.9	6.3	-3.15	-1,584.5	75.9	1,605.6	1,596.9	8.70	184.593		
1,169.3	1,159.9	1,726.6	1,696.9	4.3	6.8	-3.38	-1,558.5	76.9	1,564.5	1,555.3	9.21	169.953		
1,200.0	1,189.2	1,753.9	1,722.4	4.5	7.0	-3.45	-1,548.8	77.4	1,545.9	1,536.5	9.41	164.241		
1,300.0	1,285.0	1,817.0	1,781.5	5.0	7.4	-3.61	-1,526.7	78.5	1,485.4	1,475.4	9.98	148.796		
1,400.0	1,380.8	1,877.0	1,837.9	5.6	7.8	-3.75	-1,506.3	79.0	1,426.0	1,415.4	10.56	135.054		
1,500.0	1,476.5	1,959.6	1,915.8	6.2	8.4	-3.94	-1,478.9	79.3	1,367.1	1,355.9	11.20	122.010		
1,600.0	1,572.3	2,043.2	1,994.5	6.8	9.0	-4.22	-1,450.7	81.0	1,307.9	1,296.0	11.86	110.259		
1,700.0	1,668.1	2,120.0	2,066.8	7.5	9.5	-4.52	-1,424.9	82.8	1,248.8	1,236.3	12.51	99.821		
1,800.0	1,763.8	2,196.0	2,138.5	8.1	10.0	-4.82	-1,399.6	84.4	1,190.1	1,176.9	13.17	90.392		
1,900.0	1,859.6	2,275.1	2,213.2	8.7	10.6	-5.15	-1,373.7	85.7	1,131.7	1,117.9	13.83	81.825		
2,000.0	1,955.4	2,392.7	2,323.6	9.4	11.4	-5.62	-1,333.1	86.2	1,071.8	1,057.3	14.54	73.713		
2,100.0	2,051.1	2,473.7	2,399.1	10.0	12.0	-5.97	-1,303.9	86.2	1,010.6	995.4	15.21	66.456		
2,200.0	2,146.9	2,553.1	2,473.0	10.6	12.6	-6.51	-1,275.1	88.1	949.4	933.5	15.89	59.762		
2,300.0	2,242.6	2,637.6	2,551.5	11.3	13.2	-7.35	-1,243.9	92.3	888.0	871.4	16.58	53.554		
2,400.0	2,338.4	2,709.0	2,617.8	11.9	13.8	-8.16	-1,217.6	95.9	826.6	809.3	17.30	47.786		
2,500.0	2,434.2	2,777.8	2,682.0	12.6	14.3	-8.98	-1,193.0	98.8	766.4	748.3	18.04	42.484		
2,600.0	2,529.9	2,856.4	2,755.5	13.2	14.9	-10.01	-1,165.5	101.5	706.7	687.9	18.79	37.619		
2,700.0	2,625.7	2,930.3	2,824.8	13.9	15.4	-11.13	-1,139.8	104.0	647.6	628.0	19.57	33.087		
2,800.0	2,721.5	3,002.1	2,892.4	14.5	15.9	-12.36	-1,115.8	106.2	589.6	569.2	20.40	28.899		
2,900.0	2,817.2	3,077.3	2,963.6	15.2	16.4	-13.81	-1,091.8	108.0	533.1	511.8	21.27	25.062		
3,000.0	2,913.0	3,170.1	3,051.4	15.8	17.1	-16.00	-1,061.7	110.0	476.5	454.4	22.11	21.555		
3,100.0	3,008.8	3,254.9	3,130.9	16.5	17.7	-18.64	-1,032.2	111.6	418.4	395.3	23.08	18.125		
3,200.0	3,104.5	3,332.5	3,203.9	17.1	18.3	-21.65	-1,005.7	112.5	361.4	337.1	24.26	14.898		
3,300.0	3,200.3	3,415.5	3,281.8	17.8	18.9	-25.97	-977.3	113.2	305.1	279.5	25.63	11.904		
3,400.0	3,296.1	3,492.5	3,354.1	18.4	19.4	-31.67	-950.9	114.2	250.8	223.2	27.59	9.090		
3,500.0	3,391.8	3,571.5	3,428.7	19.1	20.0	-39.91	-924.8	115.2	200.5	170.1	30.35	6.606		
3,600.0	3,487.6	3,650.6	3,503.5	19.7	20.5	-52.06	-899.2	116.3	156.8	122.3	34.48	4.548		
3,700.0	3,583.4	3,730.9	3,580.2	20.4	21.1	-69.13	-875.2	117.6	126.5	86.9	39.60	3.194		
3,795.8	3,675.1	3,812.0	3,658.6	21.0	21.5	-89.19	-854.5	118.3	116.3	73.8	42.55	2.734 CC		
3,800.0	3,679.1	3,815.7	3,662.2	21.0	21.6	-90.11	-853.7	118.4	116.4	73.8	42.59	2.732 ES, SF		
3,900.0	3,774.9	3,903.3	3,747.4	21.7	22.1	-110.80	-833.2	118.7	127.5	86.1	41.37	3.081		
4,000.0	3,870.7	3,993.1	3,835.3	22.4	22.5	-126.56	-815.1	119.2	153.2	114.6	38.68	3.962		
4,100.0	3,966.4	4,085.4	3,926.0	23.0	23.0	-137.78	-798.2	119.2	186.1	149.5	36.64	5.079		
4,200.0	4,062.2	4,178.8	4,018.1	23.7	23.4	-145.53	-783.1	118.7	221.7	186.2	35.50	6.244		
4,300.0	4,158.0	4,275.1	4,113.6	24.3	23.8	-150.82	-770.1	119.2	258.1	223.0	35.09	7.354		
4,400.0	4,253.7	4,375.5	4,213.5	25.0	24.1	-154.45	-760.0	120.6	293.2	258.0	35.14	8.341		
4,500.0	4,349.5	4,480.2	4,317.9	25.6	24.5	-157.15	-753.1	122.0	326.0	290.5	35.44	9.199		
4,600.0	4,445.3	4,587.5	4,425.2	26.3	24.7	-159.34	-750.2	122.1	355.3	319.5	35.82	9.921		
4,700.0	4,541.0	4,687.4	4,525.1	26.9	25.0	-161.11	-749.3	121.1	383.1	346.9	36.21	10.579		
4,800.0	4,636.8	4,788.9	4,626.3	27.6	25.2	-163.53	-747.9	113.8	409.9	373.4	36.53	11.221		
4,900.5	4,733.1	4,913.1	4,748.0	28.3	25.4	-167.94	-747.6	90.3	433.8	397.1	36.67	11.829		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnée Tsoisie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Chaco 2308-14E (Enduring) - 151H - Original drilling - Pathfinder													Offset Site Error: 0.0 usft	
Survey Program: 451-MWD+IGRF													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
4,950.0	4,780.0	4,964.5	4,796.5	28.6	25.5	-161.21	-748.2	73.2	445.3	408.6	36.73	12.123		
5,000.0	4,826.3	5,003.2	4,831.8	29.0	25.6	-156.74	-748.4	57.3	459.9	423.0	36.85	12.481		
5,050.0	4,871.3	5,032.7	4,858.1	29.4	25.7	-153.34	-747.9	43.9	478.8	441.8	37.02	12.935		
5,100.0	4,914.6	5,059.5	4,881.4	29.9	25.7	-150.69	-747.1	30.9	502.1	464.9	37.19	13.503		
5,150.0	4,956.0	5,083.2	4,901.6	30.4	25.8	-148.31	-746.2	18.4	529.7	492.3	37.35	14.180		
5,200.0	4,995.2	5,101.9	4,917.2	30.9	25.8	-145.59	-745.4	8.0	561.2	523.7	37.50	14.966		
5,250.0	5,032.0	5,119.6	4,931.5	31.4	25.9	-142.67	-744.5	-2.3	596.4	558.7	37.67	15.833		
5,300.0	5,066.1	5,135.3	4,944.0	32.0	25.9	-139.17	-743.9	-11.8	634.5	596.7	37.85	16.766		
5,350.0	5,097.4	5,145.4	4,951.8	32.6	26.0	-134.28	-743.6	-18.2	675.3	637.3	37.98	17.781		
5,400.0	5,125.6	5,150.8	4,955.9	33.3	26.0	-127.69	-743.5	-21.6	718.1	680.0	38.06	18.868		
5,450.0	5,150.6	5,152.2	4,957.0	34.0	26.0	-119.14	-743.4	-22.5	762.5	724.4	38.11	20.010		
5,500.0	5,172.3	5,150.1	4,955.4	34.7	26.0	-108.61	-743.5	-21.2	808.0	769.8	38.13	21.192		
5,550.0	5,190.4	5,145.1	4,951.6	35.4	26.0	-96.64	-743.6	-18.0	854.1	816.0	38.13	22.400		
5,600.0	5,204.9	5,137.4	4,945.6	36.2	25.9	-84.34	-743.8	-13.1	900.4	862.3	38.12	23.619		
5,650.0	5,215.6	5,127.4	4,937.7	37.0	25.9	-72.98	-744.2	-7.0	946.6	908.5	38.11	24.838		
5,700.0	5,222.6	5,110.0	4,923.7	37.8	25.9	-62.92	-745.0	3.4	992.3	954.3	38.01	26.110		
5,750.0	5,225.8	5,110.0	4,923.7	38.6	25.9	-56.06	-745.0	3.4	1,037.2	999.0	38.25	27.120		
5,766.2	5,226.0	5,110.0	4,923.7	38.8	25.9	-54.11	-745.0	3.4	1,051.7	1,013.3	38.33	27.439		
5,800.0	5,226.0	5,093.8	4,910.4	39.4	25.8	-53.29	-745.7	12.6	1,081.4	1,043.2	38.24	28.280		
5,900.0	5,226.0	5,074.7	4,894.4	41.1	25.8	-52.33	-746.5	23.0	1,170.6	1,132.2	38.44	30.449		
6,000.0	5,226.0	5,047.0	4,870.6	42.9	25.7	-50.94	-747.5	37.1	1,261.0	1,222.5	38.50	32.752		
6,100.0	5,226.0	5,047.0	4,870.6	44.7	25.7	-50.94	-747.5	37.1	1,352.0	1,313.1	38.93	34.727		
6,200.0	5,226.0	5,047.0	4,870.6	46.7	25.7	-50.94	-747.5	37.1	1,444.3	1,405.0	39.32	36.733		
6,300.0	5,226.0	5,018.3	4,845.3	48.6	25.6	-49.54	-748.2	50.6	1,536.8	1,497.4	39.37	39.030		
6,400.0	5,226.0	5,007.8	4,835.9	50.6	25.6	-49.04	-748.3	55.3	1,630.2	1,590.6	39.58	41.186		
6,500.0	5,226.0	4,984.0	4,814.4	52.7	25.6	-47.93	-748.3	65.5	1,724.3	1,684.7	39.59	43.554		
6,600.0	5,226.0	4,984.0	4,814.4	54.8	25.6	-47.93	-748.3	65.5	1,818.6	1,778.7	39.88	45.606		
6,700.0	5,226.0	4,984.0	4,814.4	56.9	25.6	-47.93	-748.3	65.5	1,913.4	1,873.3	40.14	47.674		
6,800.0	5,226.0	4,984.0	4,814.4	59.0	25.6	-47.93	-748.3	65.5	2,008.8	1,968.4	40.37	49.755		
6,900.0	5,226.0	4,984.0	4,814.4	61.2	25.6	-47.93	-748.3	65.5	2,104.6	2,064.0	40.59	51.848		
7,000.0	5,226.0	4,955.7	4,788.3	63.4	25.5	-46.63	-748.1	76.4	2,200.1	2,159.6	40.54	54.271		
7,100.0	5,226.0	4,948.6	4,781.7	65.6	25.5	-46.31	-748.0	79.0	2,296.3	2,255.6	40.68	56.448		
7,200.0	5,226.0	4,921.0	4,755.6	67.9	25.5	-45.04	-747.7	88.0	2,393.0	2,352.3	40.68	58.829		
7,300.0	5,226.0	4,921.0	4,755.6	70.1	25.5	-45.04	-747.7	88.0	2,489.5	2,448.6	40.86	60.932		
7,400.0	5,226.0	4,921.0	4,755.6	72.4	25.5	-45.04	-747.7	88.0	2,586.2	2,545.2	41.02	63.041		
7,500.0	5,226.0	4,921.0	4,755.6	74.7	25.5	-45.04	-747.7	88.0	2,683.2	2,642.0	41.18	65.154		
7,600.0	5,226.0	4,921.0	4,755.6	77.0	25.5	-45.04	-747.7	88.0	2,780.4	2,739.0	41.33	67.271		
7,700.0	5,226.0	4,921.0	4,755.6	79.3	25.5	-45.04	-747.7	88.0	2,877.8	2,836.3	41.47	69.391		
7,800.0	5,226.0	4,921.0	4,755.6	81.6	25.5	-45.04	-747.7	88.0	2,975.3	2,933.7	41.60	71.513		
7,900.0	5,226.0	4,921.0	4,755.6	83.9	25.5	-45.04	-747.7	88.0	3,073.0	3,031.3	41.73	73.636		
8,000.0	5,226.0	4,921.0	4,755.6	86.2	25.5	-45.04	-747.7	88.0	3,170.9	3,129.0	41.85	75.760		
8,100.0	5,226.0	4,895.9	4,731.5	88.6	25.4	-43.89	-747.5	95.0	3,268.5	3,226.6	41.82	78.157		
8,200.0	5,226.0	4,891.9	4,727.6	90.9	25.4	-43.71	-747.4	96.1	3,366.4	3,324.5	41.91	80.321		
8,300.0	5,226.0	4,888.1	4,724.0	93.3	25.4	-43.54	-747.4	97.0	3,464.5	3,422.5	42.00	82.482		
8,400.0	5,226.0	4,884.5	4,720.5	95.6	25.4	-43.37	-747.4	97.9	3,562.6	3,520.5	42.09	84.638		
8,500.0	5,226.0	4,857.0	4,693.6	98.0	25.3	-42.11	-747.3	103.7	3,661.2	3,619.2	42.06	87.048		
8,600.0	5,226.0	4,857.0	4,693.6	100.4	25.3	-42.11	-747.3	103.7	3,759.5	3,717.3	42.17	89.160		
8,700.0	5,226.0	4,857.0	4,693.6	102.8	25.3	-42.11	-747.3	103.7	3,857.8	3,815.5	42.27	91.271		
8,800.0	5,226.0	4,857.0	4,693.6	105.1	25.3	-42.11	-747.3	103.7	3,956.2	3,913.8	42.37	93.379		
8,900.0	5,226.0	4,857.0	4,693.6	107.5	25.3	-42.11	-747.3	103.7	4,054.7	4,012.2	42.46	95.485		
9,000.0	5,226.0	4,857.0	4,693.6	109.9	25.3	-42.11	-747.3	103.7	4,153.2	4,110.7	42.56	97.589		
9,100.0	5,226.0	4,857.0	4,693.6	112.3	25.3	-42.11	-747.3	103.7	4,251.8	4,209.2	42.65	99.689		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnies Tsoie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Chaco 2308-14E (Enduring) - 151H - Original drilling - Pathfinder													Offset Site Error: 0.0 usft
Survey Program: 451-MWD+IGRF													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,200.0	5,226.0	4,857.0	4,693.6	114.7	25.3	-42.11	-747.3	103.7	4,350.5	4,307.8	42.74	101.786	
9,300.0	5,226.0	4,857.0	4,693.6	117.1	25.3	-42.11	-747.3	103.7	4,449.3	4,406.4	42.83	103.879	
9,400.0	5,226.0	4,857.0	4,693.6	119.5	25.3	-42.11	-747.3	103.7	4,548.0	4,505.1	42.92	105.969	
9,500.0	5,226.0	4,857.0	4,693.6	121.9	25.3	-42.11	-747.3	103.7	4,646.9	4,603.9	43.01	108.055	
9,600.0	5,226.0	4,857.0	4,693.6	124.3	25.3	-42.11	-747.3	103.7	4,745.8	4,702.7	43.09	110.136	
9,700.0	5,226.0	4,857.0	4,693.6	126.7	25.3	-42.11	-747.3	103.7	4,844.7	4,801.6	43.17	112.213	
9,800.0	5,226.0	4,857.0	4,693.6	129.2	25.3	-42.11	-747.3	103.7	4,943.7	4,900.5	43.26	114.286	
9,900.0	5,226.0	4,857.0	4,693.6	131.6	25.3	-42.11	-747.3	103.7	5,042.7	4,999.4	43.34	116.353	
10,000.0	5,226.0	4,834.3	4,671.3	134.0	25.3	-41.08	-747.3	107.7	5,141.6	5,098.3	43.32	118.694	
10,100.0	5,226.0	4,831.1	4,668.1	136.4	25.3	-40.93	-747.3	108.2	5,240.7	5,197.3	43.39	120.792	
10,200.0	5,226.0	4,827.9	4,665.0	138.8	25.3	-40.79	-747.4	108.7	5,339.7	5,296.3	43.45	122.884	
10,300.0	5,226.0	4,824.9	4,661.9	141.3	25.3	-40.66	-747.4	109.2	5,438.8	5,395.3	43.52	124.969	
10,400.0	5,226.0	4,821.9	4,659.0	143.7	25.3	-40.52	-747.4	109.6	5,538.0	5,494.4	43.59	127.048	
10,500.0	5,226.0	4,819.0	4,656.2	146.1	25.2	-40.39	-747.4	110.0	5,637.1	5,593.5	43.66	129.120	
10,600.0	5,226.0	4,794.0	4,631.4	148.5	25.2	-39.29	-747.8	113.3	5,736.5	5,692.8	43.64	131.455	
10,700.0	5,226.0	4,794.0	4,631.4	151.0	25.2	-39.29	-747.8	113.3	5,835.6	5,791.9	43.72	133.482	
10,800.0	5,226.0	4,794.0	4,631.4	153.4	25.2	-39.29	-747.8	113.3	5,934.8	5,891.0	43.80	135.502	
10,900.0	5,226.0	4,794.0	4,631.4	155.8	25.2	-39.29	-747.8	113.3	6,034.0	5,990.2	43.88	137.517	
11,000.0	5,226.0	4,794.0	4,631.4	158.3	25.2	-39.29	-747.8	113.3	6,133.3	6,089.3	43.96	139.525	
11,100.0	5,226.0	4,794.0	4,631.4	160.7	25.2	-39.29	-747.8	113.3	6,232.5	6,188.5	44.04	141.528	
11,200.0	5,226.0	4,794.0	4,631.4	163.1	25.2	-39.29	-747.8	113.3	6,331.8	6,287.7	44.12	143.524	
11,300.0	5,226.0	4,794.0	4,631.4	165.6	25.2	-39.29	-747.8	113.3	6,431.1	6,386.9	44.20	145.514	
11,400.0	5,226.0	4,794.0	4,631.4	168.0	25.2	-39.29	-747.8	113.3	6,530.5	6,486.2	44.28	147.498	
11,500.0	5,226.0	4,794.0	4,631.4	170.5	25.2	-39.29	-747.8	113.3	6,629.8	6,585.5	44.35	149.475	
11,600.0	5,226.0	4,794.0	4,631.4	172.9	25.2	-39.29	-747.8	113.3	6,729.2	6,684.8	44.43	151.446	
11,700.0	5,226.0	4,794.0	4,631.4	175.4	25.2	-39.29	-747.8	113.3	6,828.6	6,784.1	44.51	153.410	
11,800.0	5,226.0	4,794.0	4,631.4	177.8	25.2	-39.29	-747.8	113.3	6,928.0	6,883.4	44.59	155.368	
11,900.0	5,226.0	4,794.0	4,631.4	180.2	25.2	-39.29	-747.8	113.3	7,027.4	6,982.7	44.67	157.319	
11,963.3	5,226.0	4,794.0	4,631.4	181.8	25.2	-39.29	-747.8	113.3	7,090.4	7,045.7	44.72	158.551	

Anticollision Report

Company: DJR Operating
Project: Bettonnie Tsoie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Chaco 2308-14E (Enduring) - 152H - Original drilling - Pathfinder												Offset Site Error:	0.0 usft
Survey Program: 433-MWD+IGRF												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
0.0	0.0	0.0	0.0	0.0	0.0	178.22	-1,805.6	56.0	1,806.5				
100.0	100.0	87.9	87.9	0.2	0.2	178.22	-1,805.5	56.0	1,806.3	1,806.0	0.31	5,888.672	
200.0	200.0	192.4	192.4	0.5	0.3	178.23	-1,805.1	55.8	1,806.0	1,805.1	0.85	2,132.795	
300.0	300.0	297.0	297.0	0.9	0.5	178.24	-1,804.5	55.5	1,805.4	1,804.0	1.39	1,301.878	
400.0	400.0	401.6	401.6	1.2	0.7	178.25	-1,803.6	55.0	1,804.6	1,802.6	1.93	936.584	
500.0	500.0	499.5	499.5	1.6	1.0	178.27	-1,802.7	54.4	1,803.5	1,801.0	2.58	699.645	
600.0	600.0	549.8	549.8	1.9	1.2	-1.58	-1,802.7	53.9	1,801.7	1,798.6	3.10	581.848	
700.0	699.7	579.0	579.0	2.3	1.3	-1.57	-1,803.6	53.6	1,798.8	1,795.2	3.53	509.521	
800.0	799.1	642.0	641.8	2.6	1.5	-1.57	-1,807.5	53.3	1,794.2	1,790.1	4.08	439.718	
900.0	898.0	705.0	704.6	3.0	1.7	-1.58	-1,813.3	53.5	1,788.1	1,783.5	4.64	385.356	
1,000.0	996.0	771.7	770.9	3.4	1.9	-1.61	-1,820.8	54.0	1,779.6	1,774.4	5.22	340.756	
1,100.0	1,093.2	863.8	862.3	3.9	2.3	-1.67	-1,831.5	55.2	1,767.3	1,761.4	5.91	299.041	
1,169.3	1,159.9	909.0	907.1	4.3	2.5	-1.70	-1,837.2	55.8	1,757.1	1,750.7	6.32	277.822	
1,200.0	1,189.2	926.1	924.1	4.5	2.5	-1.71	-1,839.6	56.1	1,752.4	1,745.9	6.50	269.684	
1,300.0	1,285.0	984.7	982.0	5.0	2.8	-1.75	-1,848.6	56.9	1,738.7	1,731.6	7.07	245.911	
1,400.0	1,380.8	1,045.9	1,042.2	5.6	3.1	-1.77	-1,859.3	57.4	1,727.2	1,719.5	7.66	225.457	
1,500.0	1,476.5	1,119.0	1,113.9	6.2	3.4	-1.77	-1,873.8	57.3	1,717.8	1,709.5	8.31	206.808	
1,600.0	1,572.3	1,205.0	1,198.1	6.8	3.8	-1.76	-1,891.3	56.8	1,709.2	1,700.2	9.01	189.703	
1,700.0	1,668.1	1,287.0	1,278.2	7.5	4.2	-1.76	-1,908.8	56.6	1,701.5	1,691.8	9.70	175.359	
1,800.0	1,763.8	1,377.3	1,366.2	8.1	4.7	-1.80	-1,929.1	57.7	1,695.0	1,684.5	10.44	162.409	
1,900.0	1,859.6	1,478.5	1,464.9	8.7	5.2	-1.88	-1,951.4	60.0	1,688.1	1,676.9	11.22	150.459	
2,000.0	1,955.4	1,539.5	1,524.1	9.4	5.6	-1.94	-1,965.6	61.6	1,682.6	1,670.7	11.84	142.167	
2,100.0	2,051.1	1,609.4	1,591.6	10.0	6.0	-2.00	-1,983.7	63.3	1,679.5	1,667.0	12.49	134.461	
2,200.0	2,146.9	1,705.7	1,684.4	10.6	6.5	-2.01	-2,009.3	63.6	1,677.2	1,664.0	13.27	126.419	
2,300.0	2,242.6	1,835.3	1,809.7	11.3	7.3	-2.02	-2,042.6	63.9	1,674.0	1,659.8	14.20	117.926	
2,400.0	2,338.4	1,927.6	1,899.1	11.9	7.8	-2.06	-2,065.6	65.0	1,670.0	1,655.1	14.96	111.647	
2,500.0	2,434.2	1,999.0	1,967.9	12.6	8.2	-2.12	-2,084.6	66.5	1,667.7	1,652.1	15.63	106.703	
2,600.0	2,529.9	2,081.7	2,047.3	13.2	8.8	-2.18	-2,107.7	68.4	1,666.8	1,650.5	16.35	101.922	
2,700.0	2,625.7	2,169.1	2,131.1	13.9	9.3	-2.21	-2,132.5	69.1	1,666.4	1,649.3	17.10	97.440	
2,800.0	2,721.5	2,304.6	2,261.2	14.5	10.2	-2.19	-2,170.1	68.6	1,665.4	1,647.3	18.08	92.130	
2,900.0	2,817.2	2,415.3	2,368.0	15.2	10.8	-2.18	-2,199.3	68.3	1,662.8	1,643.9	18.93	87.833	
3,000.0	2,913.0	2,507.7	2,457.2	15.8	11.4	-2.17	-2,223.5	68.2	1,660.1	1,640.4	19.70	84.250	
3,100.0	3,008.8	2,630.4	2,575.7	16.5	12.1	-2.16	-2,255.5	67.8	1,657.3	1,636.6	20.61	80.397	
3,200.0	3,104.5	2,747.6	2,689.3	17.1	12.8	-2.17	-2,284.1	67.8	1,652.7	1,631.2	21.49	76.895	
3,300.0	3,200.3	2,830.5	2,769.7	17.8	13.3	-2.16	-2,304.5	67.6	1,648.4	1,626.1	22.22	74.169	
3,400.0	3,296.1	2,940.8	2,876.4	18.4	14.0	-2.16	-2,332.1	67.3	1,644.4	1,621.4	23.08	71.264	
3,500.0	3,391.8	3,031.0	2,963.9	19.1	14.5	-2.17	-2,354.3	67.6	1,640.2	1,616.3	23.84	68.799	
3,600.0	3,487.6	3,115.3	3,045.4	19.7	15.0	-2.21	-2,375.8	68.5	1,636.8	1,612.2	24.58	66.592	
3,700.0	3,583.4	3,210.8	3,137.5	20.4	15.6	-2.27	-2,401.1	70.3	1,634.4	1,609.1	25.37	64.421	
3,800.0	3,679.1	3,311.6	3,234.8	21.0	16.2	-2.36	-2,427.3	72.9	1,631.7	1,605.5	26.19	62.310	
3,900.0	3,774.9	3,404.8	3,324.6	21.7	16.8	-2.44	-2,452.0	75.2	1,629.3	1,602.4	26.97	60.416	
4,000.0	3,870.7	3,507.4	3,423.6	22.4	17.4	-2.55	-2,478.9	78.2	1,626.9	1,599.1	27.79	58.533	
4,100.0	3,966.4	3,613.5	3,525.8	23.0	18.1	-2.67	-2,507.0	81.6	1,624.6	1,596.0	28.64	56.733	
4,200.0	4,062.2	3,761.9	3,669.6	23.7	18.9	-2.77	-2,543.7	84.3	1,620.6	1,590.9	29.65	54.656	
4,300.0	4,158.0	3,891.0	3,795.5	24.3	19.7	-2.83	-2,572.6	85.6	1,614.0	1,583.4	30.56	52.808	
4,400.0	4,253.7	4,066.3	3,967.5	25.0	20.6	-2.99	-2,606.0	89.1	1,604.0	1,572.5	31.59	50.775	
4,500.0	4,349.5	4,303.7	4,202.7	25.6	21.6	-3.06	-2,636.5	89.0	1,588.3	1,555.7	32.60	48.721	
4,600.0	4,445.3	4,525.5	4,424.4	26.3	22.2	-3.14	-2,643.3	88.1	1,560.9	1,527.6	33.31	46.862	
4,700.0	4,541.0	4,609.0	4,507.9	26.9	22.4	-3.15	-2,644.0	87.1	1,532.9	1,498.8	34.03	45.045	
4,800.0	4,636.8	4,672.0	4,570.7	27.6	22.6	-3.00	-2,645.6	82.3	1,506.2	1,471.4	34.77	43.320	
4,900.5	4,733.1	4,735.0	4,632.5	28.3	22.8	-2.57	-2,648.4	70.9	1,481.1	1,445.6	35.50	41.720	
4,950.0	4,780.0	4,769.7	4,666.1	28.6	22.9	7.23	-2,650.7	62.4	1,468.3	1,432.4	35.86	40.942	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnie Tosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Chaco 2308-14E (Enduring) - 152H - Original drilling - Pathfinder													Offset Site Error:	0.0 usft
Survey Program: 433-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.0	4,826.3	4,799.0	4,694.2	29.0	23.0	14.67	-2,653.1	54.5	1,453.4	1,417.2	36.22	40.124		
5,050.0	4,871.3	4,817.5	4,711.8	29.4	23.0	20.45	-2,654.9	49.1	1,436.6	1,400.1	36.58	39.276		
5,100.0	4,914.6	4,837.8	4,731.0	29.9	23.1	25.35	-2,657.1	42.9	1,418.3	1,381.3	36.93	38.406		
5,150.0	4,956.0	4,862.0	4,753.6	30.4	23.2	29.84	-2,660.1	34.8	1,398.4	1,361.2	37.28	37.507		
5,200.0	4,995.2	4,900.4	4,788.9	30.9	23.3	34.53	-2,664.9	20.6	1,377.0	1,339.4	37.68	36.545		
5,250.0	5,032.0	4,941.6	4,825.9	31.4	23.5	39.38	-2,669.5	2.9	1,353.9	1,315.8	38.12	35.513		
5,300.0	5,066.1	4,969.8	4,850.4	32.0	23.6	43.83	-2,672.2	-10.8	1,329.6	1,291.0	38.59	34.450		
5,350.0	5,097.4	4,990.0	4,867.5	32.6	23.7	47.95	-2,674.0	-21.3	1,304.6	1,265.5	39.11	33.360		
5,400.0	5,125.6	4,989.0	4,866.7	33.3	23.7	51.02	-2,673.9	-20.8	1,279.3	1,239.7	39.60	32.306		
5,450.0	5,150.6	5,005.4	4,880.3	34.0	23.7	54.89	-2,675.3	-29.8	1,253.9	1,213.7	40.27	31.140		
5,500.0	5,172.3	5,009.0	4,883.3	34.7	23.7	58.01	-2,675.6	-31.8	1,228.8	1,187.8	40.96	29.999		
5,550.0	5,190.4	5,010.1	4,884.2	35.4	23.7	60.89	-2,675.7	-32.4	1,204.0	1,162.3	41.75	28.841		
5,600.0	5,204.9	5,008.8	4,883.1	36.2	23.7	63.50	-2,675.6	-31.6	1,179.8	1,137.2	42.64	27.673		
5,650.0	5,215.6	5,005.4	4,880.3	37.0	23.7	65.84	-2,675.3	-29.7	1,156.4	1,112.8	43.64	26.503		
5,700.0	5,222.6	4,989.0	4,866.7	37.8	23.7	67.29	-2,673.9	-20.8	1,134.1	1,089.5	44.61	25.423		
5,750.0	5,225.8	4,989.0	4,866.7	38.6	23.7	69.46	-2,673.9	-20.8	1,112.6	1,066.7	45.93	24.226		
5,766.2	5,226.0	4,989.0	4,866.7	38.8	23.7	70.12	-2,673.9	-20.8	1,105.9	1,059.5	46.39	23.841		
5,800.0	5,226.0	4,989.0	4,866.7	39.4	23.7	70.12	-2,673.9	-20.8	1,092.5	1,045.2	47.39	23.053		
5,900.0	5,226.0	4,966.2	4,847.2	41.1	23.6	68.88	-2,671.9	-8.9	1,057.9	1,007.6	50.30	21.033		
6,000.0	5,226.0	4,951.2	4,834.3	42.9	23.5	68.07	-2,670.4	-1.6	1,031.5	977.8	53.63	19.233		
6,100.0	5,226.0	4,926.0	4,812.0	44.7	23.4	66.67	-2,667.8	9.9	1,014.0	957.1	56.88	17.826		
6,200.0	5,226.0	4,926.0	4,812.0	46.7	23.4	66.67	-2,667.8	9.9	1,005.6	945.0	60.67	16.575		
6,234.5	5,226.0	4,926.0	4,812.0	47.3	23.4	66.67	-2,667.8	9.9	1,005.0	943.1	61.95	16.222 CC		
6,300.0	5,226.0	4,926.0	4,812.0	48.6	23.4	66.67	-2,667.8	9.9	1,007.2	942.9	64.31	15.662 ES		
6,400.0	5,226.0	4,906.7	4,794.6	50.6	23.4	65.60	-2,665.7	18.0	1,018.2	951.0	67.13	15.167		
6,500.0	5,226.0	4,898.2	4,786.9	52.7	23.3	65.12	-2,664.7	21.5	1,038.7	968.9	69.80	14.881		
6,600.0	5,226.0	4,890.5	4,779.9	54.8	23.3	64.69	-2,663.7	24.5	1,068.0	996.0	72.00	14.832 SF		
6,700.0	5,226.0	4,883.7	4,773.6	56.9	23.3	64.31	-2,662.9	27.1	1,105.5	1,031.8	73.75	14.990		
6,800.0	5,226.0	4,862.0	4,753.6	59.0	23.2	63.10	-2,660.1	34.8	1,150.7	1,076.1	74.64	15.417		
6,900.0	5,226.0	4,862.0	4,753.6	61.2	23.2	63.10	-2,660.1	34.8	1,202.1	1,126.3	75.73	15.873		
7,000.0	5,226.0	4,862.0	4,753.6	63.4	23.2	63.10	-2,660.1	34.8	1,259.3	1,182.8	76.49	16.464		
7,100.0	5,226.0	4,862.0	4,753.6	65.6	23.2	63.10	-2,660.1	34.8	1,321.6	1,244.6	76.97	17.170		
7,200.0	5,226.0	4,862.0	4,753.6	67.9	23.2	63.10	-2,660.1	34.8	1,388.3	1,311.0	77.23	17.975		
7,300.0	5,226.0	4,862.0	4,753.6	70.1	23.2	63.10	-2,660.1	34.8	1,458.8	1,381.5	77.33	18.864		
7,400.0	5,226.0	4,862.0	4,753.6	72.4	23.2	63.10	-2,660.1	34.8	1,532.6	1,455.3	77.30	19.826		
7,500.0	5,226.0	4,839.3	4,732.4	74.7	23.1	61.84	-2,657.3	42.4	1,608.9	1,532.2	76.65	20.990		
7,600.0	5,226.0	4,833.9	4,727.3	77.0	23.1	61.54	-2,656.7	44.1	1,687.8	1,611.4	76.35	22.106		
7,700.0	5,226.0	4,828.5	4,722.2	79.3	23.1	61.24	-2,656.1	45.8	1,768.7	1,692.7	76.01	23.269		
7,800.0	5,226.0	4,823.2	4,717.2	81.6	23.1	60.95	-2,655.5	47.4	1,851.6	1,775.9	75.65	24.475		
7,900.0	5,226.0	4,799.0	4,694.2	83.9	23.0	59.63	-2,653.1	54.5	1,936.2	1,861.3	74.90	25.850		
8,000.0	5,226.0	4,799.0	4,694.2	86.2	23.0	59.63	-2,653.1	54.5	2,021.9	1,947.2	74.63	27.091		
8,100.0	5,226.0	4,799.0	4,694.2	88.6	23.0	59.63	-2,653.1	54.5	2,108.8	2,034.4	74.35	28.362		
8,200.0	5,226.0	4,799.0	4,694.2	90.9	23.0	59.63	-2,653.1	54.5	2,196.8	2,122.8	74.07	29.657		
8,300.0	5,226.0	4,799.0	4,694.2	93.3	23.0	59.63	-2,653.1	54.5	2,285.9	2,212.1	73.80	30.975		
8,400.0	5,226.0	4,799.0	4,694.2	95.6	23.0	59.63	-2,653.1	54.5	2,375.8	2,302.3	73.52	32.313		
8,500.0	5,226.0	4,799.0	4,694.2	98.0	23.0	59.63	-2,653.1	54.5	2,466.5	2,393.2	73.26	33.669		
8,600.0	5,226.0	4,780.9	4,676.8	100.4	22.9	58.67	-2,651.6	59.4	2,557.7	2,485.0	72.70	35.181		
8,700.0	5,226.0	4,775.4	4,671.6	102.8	22.9	58.38	-2,651.1	60.9	2,649.6	2,577.2	72.37	36.613		
8,800.0	5,226.0	4,770.0	4,666.4	105.1	22.9	58.09	-2,650.7	62.3	2,742.0	2,670.0	72.05	38.060		
8,900.0	5,226.0	4,764.7	4,661.2	107.5	22.9	57.81	-2,650.3	63.7	2,835.0	2,763.2	71.74	39.519		
9,000.0	5,226.0	4,759.4	4,656.2	109.9	22.8	57.54	-2,650.0	65.0	2,928.4	2,856.9	71.44	40.991		
9,100.0	5,226.0	4,754.2	4,651.1	112.3	22.8	57.27	-2,649.6	66.3	3,022.1	2,951.0	71.15	42.474		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnies Tsoosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design Chaco 2308-14E (Enduring) - 152H - Original drilling - Pathfinder													Offset Site Error:	0.0 usft
Survey Program: 433-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance				Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
9,200.0	5,226.0	4,735.0	4,632.5	114.7	22.8	56.28	-2,648.4	70.9	3,116.4	3,045.7	70.67	44.097		
9,300.0	5,226.0	4,735.0	4,632.5	117.1	22.8	56.28	-2,648.4	70.9	3,210.8	3,140.3	70.48	45.553		
9,400.0	5,226.0	4,735.0	4,632.5	119.5	22.8	56.28	-2,648.4	70.9	3,305.6	3,235.3	70.31	47.017		
9,500.0	5,226.0	4,735.0	4,632.5	121.9	22.8	56.28	-2,648.4	70.9	3,400.6	3,330.5	70.13	48.487		
9,600.0	5,226.0	4,735.0	4,632.5	124.3	22.8	56.28	-2,648.4	70.9	3,496.0	3,426.0	69.97	49.963		
9,700.0	5,226.0	4,735.0	4,632.5	126.7	22.8	56.28	-2,648.4	70.9	3,591.6	3,521.7	69.81	51.444		
9,800.0	5,226.0	4,735.0	4,632.5	129.2	22.8	56.28	-2,648.4	70.9	3,687.4	3,617.7	69.67	52.930		
9,900.0	5,226.0	4,735.0	4,632.5	131.6	22.8	56.28	-2,648.4	70.9	3,783.4	3,713.9	69.52	54.420		
10,000.0	5,226.0	4,735.0	4,632.5	134.0	22.8	56.28	-2,648.4	70.9	3,879.7	3,810.3	69.39	55.914		
10,100.0	5,226.0	4,735.0	4,632.5	136.4	22.8	56.28	-2,648.4	70.9	3,976.1	3,906.8	69.26	57.411		
10,200.0	5,226.0	4,735.0	4,632.5	138.8	22.8	56.28	-2,648.4	70.9	4,072.7	4,003.6	69.13	58.912		
10,300.0	5,226.0	4,735.0	4,632.5	141.3	22.8	56.28	-2,648.4	70.9	4,169.5	4,100.4	69.01	60.415		
10,400.0	5,226.0	4,735.0	4,632.5	143.7	22.8	56.28	-2,648.4	70.9	4,266.4	4,197.5	68.90	61.920		
10,500.0	5,226.0	4,735.0	4,632.5	146.1	22.8	56.28	-2,648.4	70.9	4,363.4	4,294.6	68.79	63.428		
10,600.0	5,226.0	4,735.0	4,632.5	148.5	22.8	56.28	-2,648.4	70.9	4,460.6	4,391.9	68.69	64.938		
10,700.0	5,226.0	4,735.0	4,632.5	151.0	22.8	56.28	-2,648.4	70.9	4,557.9	4,489.3	68.59	66.449		
10,800.0	5,226.0	4,735.0	4,632.5	153.4	22.8	56.28	-2,648.4	70.9	4,655.3	4,586.8	68.50	67.961		
10,900.0	5,226.0	4,708.4	4,606.5	155.8	22.7	54.95	-2,647.1	76.5	4,752.4	4,684.3	68.12	69.763		
11,000.0	5,226.0	4,706.9	4,605.1	158.3	22.7	54.88	-2,647.0	76.8	4,849.9	4,781.9	68.02	71.298		
11,100.0	5,226.0	4,705.4	4,603.6	160.7	22.7	54.81	-2,646.9	77.1	4,947.6	4,879.7	67.93	72.834		
11,200.0	5,226.0	4,704.0	4,602.2	163.1	22.7	54.74	-2,646.8	77.3	5,045.4	4,977.5	67.84	74.371		
11,300.0	5,226.0	4,702.6	4,600.9	165.6	22.7	54.67	-2,646.8	77.6	5,143.2	5,075.5	67.76	75.907		
11,400.0	5,226.0	4,701.3	4,599.5	168.0	22.7	54.60	-2,646.7	77.8	5,241.1	5,173.5	67.68	77.445		
11,500.0	5,226.0	4,699.9	4,598.2	170.5	22.7	54.54	-2,646.7	78.0	5,339.1	5,271.5	67.60	78.982		
11,600.0	5,226.0	4,672.0	4,570.7	172.9	22.6	53.21	-2,645.6	82.3	5,437.6	5,370.4	67.28	80.824		
11,700.0	5,226.0	4,672.0	4,570.7	175.4	22.6	53.21	-2,645.6	82.3	5,535.7	5,468.5	67.22	82.350		
11,800.0	5,226.0	4,672.0	4,570.7	177.8	22.6	53.21	-2,645.6	82.3	5,633.9	5,566.7	67.17	83.875		
11,900.0	5,226.0	4,672.0	4,570.7	180.2	22.6	53.21	-2,645.6	82.3	5,732.1	5,665.0	67.12	85.401		
11,963.3	5,226.0	4,672.0	4,570.7	181.8	22.6	53.21	-2,645.6	82.3	5,794.3	5,727.2	67.09	86.367		

Anticollision Report

Company: DJR Operating
Project: Betonnies Tsosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design M11 2308 Pad - # 108H - APD plan - APD														Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IGRF														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)		
4,950.0	4,780.0	7,024.1	5,262.0	28.6	41.9	-126.77	-347.8	952.8	1,355.1	1,292.4	62.72	21.604			
5,000.0	4,826.3	7,040.5	5,262.0	29.0	42.2	-120.72	-360.1	963.7	1,347.8	1,283.8	64.04	21.048			
5,050.0	4,871.3	7,060.6	5,262.0	29.4	42.6	-116.13	-375.1	977.0	1,342.2	1,276.8	65.40	20.522			
5,100.0	4,914.6	7,084.2	5,262.0	29.9	43.1	-112.44	-392.8	992.6	1,338.1	1,271.3	66.81	20.027			
5,150.0	4,956.0	7,111.2	5,262.0	30.4	43.6	-109.31	-413.0	1,010.5	1,335.3	1,267.1	68.28	19.558			
5,200.0	4,995.2	7,141.3	5,262.0	30.9	44.2	-106.55	-435.6	1,030.5	1,333.8	1,264.0	69.79	19.112			
5,250.0	5,032.0	7,174.6	5,262.0	31.4	44.9	-104.07	-460.5	1,052.5	1,333.3	1,261.9	71.34	18.688			
5,255.8	5,036.1	7,178.6	5,262.0	31.5	45.0	-103.80	-463.5	1,055.2	1,333.3	1,261.8	71.53	18.640			
5,300.0	5,066.1	7,210.6	5,262.0	32.0	45.7	-101.81	-487.5	1,076.4	1,333.6	1,260.6	72.95	18.282			
5,350.0	5,097.4	7,249.3	5,262.0	32.6	46.5	-99.74	-516.5	1,102.0	1,334.4	1,259.8	74.60	17.887			
5,400.0	5,125.6	7,290.3	5,262.0	33.3	47.3	-97.88	-547.2	1,129.2	1,335.6	1,259.3	76.30	17.503			
5,450.0	5,150.6	7,333.4	5,262.0	34.0	48.3	-96.22	-579.5	1,157.7	1,336.9	1,258.9	78.06	17.126			
5,500.0	5,172.3	7,378.4	5,262.0	34.7	49.2	-94.78	-613.2	1,187.5	1,338.2	1,258.3	79.87	16.754			
5,550.0	5,190.4	7,424.9	5,262.0	35.4	50.2	-93.58	-648.1	1,218.4	1,339.2	1,257.5	81.73	16.385			
5,600.0	5,204.9	7,472.8	5,262.0	36.2	51.2	-92.64	-683.9	1,250.1	1,339.8	1,256.2	83.64	16.019			
5,650.0	5,215.6	7,521.6	5,262.0	37.0	52.3	-91.98	-720.4	1,282.4	1,340.0	1,254.4	85.59	15.655			
5,700.0	5,222.6	7,571.1	5,262.0	37.8	53.4	-91.60	-757.5	1,315.2	1,339.5	1,251.9	87.58	15.294			
5,750.0	5,225.8	7,621.0	5,262.0	38.6	54.5	-91.51	-794.9	1,348.2	1,338.3	1,248.7	89.60	14.937			
5,766.2	5,226.0	7,637.2	5,262.0	38.8	54.8	-91.54	-807.0	1,359.0	1,337.8	1,247.5	90.25	14.822			
5,800.0	5,226.0	7,670.9	5,262.0	39.4	55.6	-91.54	-832.3	1,381.3	1,336.6	1,245.0	91.63	14.587			
5,900.0	5,226.0	7,770.9	5,262.0	41.1	57.8	-91.55	-907.2	1,447.5	1,333.1	1,237.4	95.76	13.921			
6,000.0	5,226.0	7,870.8	5,262.0	42.9	60.0	-91.55	-982.0	1,513.8	1,329.6	1,229.7	99.97	13.300			
6,100.0	5,226.0	7,970.7	5,262.0	44.7	62.3	-91.56	-1,056.9	1,580.0	1,326.2	1,221.9	104.25	12.721			
6,200.0	5,226.0	8,070.7	5,262.0	46.7	64.5	-91.56	-1,131.7	1,646.2	1,322.7	1,214.1	108.59	12.180			
6,300.0	5,226.0	8,170.6	5,262.0	48.6	66.8	-91.56	-1,206.6	1,712.4	1,319.2	1,206.2	112.98	11.676			
6,400.0	5,226.0	8,270.6	5,262.0	50.6	69.1	-91.57	-1,281.5	1,778.6	1,315.8	1,198.3	117.42	11.206			
6,500.0	5,226.0	8,370.5	5,262.0	52.7	71.4	-91.57	-1,356.3	1,844.8	1,312.3	1,190.4	121.90	10.766			
6,600.0	5,226.0	8,470.4	5,262.0	54.8	73.7	-91.58	-1,431.2	1,911.0	1,308.8	1,182.4	126.41	10.354			
6,700.0	5,226.0	8,570.4	5,262.0	56.9	76.0	-91.58	-1,506.0	1,977.2	1,305.3	1,174.4	130.95	9.988			
6,800.0	5,226.0	8,670.3	5,262.0	59.0	78.3	-91.59	-1,580.9	2,043.5	1,301.9	1,166.3	135.52	9.606			
6,900.0	5,226.0	8,770.3	5,262.0	61.2	80.7	-91.59	-1,655.8	2,109.7	1,298.4	1,158.3	140.12	9.266			
7,000.0	5,226.0	8,870.2	5,262.0	63.4	83.0	-91.59	-1,730.6	2,175.9	1,294.9	1,150.2	144.74	8.947			
7,100.0	5,226.0	8,970.1	5,262.0	65.6	85.3	-91.60	-1,805.5	2,242.1	1,291.4	1,142.1	149.37	8.646			
7,200.0	5,226.0	9,070.1	5,262.0	67.9	87.7	-91.60	-1,880.3	2,308.3	1,288.0	1,133.9	154.03	8.362			
7,300.0	5,226.0	9,170.0	5,262.0	70.1	90.0	-91.61	-1,955.2	2,374.5	1,284.5	1,125.8	158.71	8.094			
7,400.0	5,226.0	9,270.0	5,262.0	72.4	92.4	-91.61	-2,030.1	2,440.7	1,281.0	1,117.6	163.39	7.840			
7,500.0	5,226.0	9,369.9	5,262.0	74.7	94.8	-91.62	-2,104.9	2,506.9	1,277.6	1,109.5	168.10	7.600			
7,600.0	5,226.0	9,469.8	5,262.0	77.0	97.1	-91.62	-2,179.8	2,573.1	1,274.1	1,101.3	172.81	7.373			
7,700.0	5,226.0	9,569.8	5,262.0	79.3	99.5	-91.62	-2,254.6	2,639.4	1,270.6	1,093.1	177.54	7.157			
7,800.0	5,226.0	9,669.7	5,262.0	81.6	101.9	-91.63	-2,329.5	2,705.6	1,267.1	1,084.9	182.27	6.952			
7,900.0	5,226.0	9,769.7	5,262.0	83.9	104.2	-91.63	-2,404.4	2,771.8	1,263.7	1,076.6	187.02	6.757			
8,000.0	5,226.0	9,869.6	5,262.0	86.2	106.6	-91.64	-2,479.2	2,838.0	1,260.2	1,068.4	191.78	6.571			
8,100.0	5,226.0	9,969.5	5,262.0	88.6	109.0	-91.64	-2,554.1	2,904.2	1,256.7	1,060.2	196.54	6.394			
8,200.0	5,226.0	10,069.5	5,262.0	90.9	111.4	-91.65	-2,628.9	2,970.4	1,253.3	1,051.9	201.31	6.225			
8,300.0	5,226.0	10,169.4	5,262.0	93.3	113.8	-91.65	-2,703.8	3,036.6	1,249.8	1,043.7	206.09	6.064			
8,400.0	5,226.0	10,269.4	5,262.0	95.6	116.2	-91.66	-2,778.7	3,102.8	1,246.3	1,035.4	210.88	5.910			
8,500.0	5,226.0	10,369.3	5,262.0	98.0	118.6	-91.66	-2,853.5	3,169.0	1,242.8	1,027.2	215.67	5.763			
8,600.0	5,226.0	10,469.2	5,262.0	100.4	121.0	-91.67	-2,928.4	3,235.3	1,239.4	1,018.9	220.46	5.622			
8,700.0	5,226.0	10,569.2	5,262.0	102.8	123.4	-91.67	-3,003.2	3,301.5	1,235.9	1,010.6	225.27	5.486			
8,800.0	5,226.0	10,669.1	5,262.0	105.1	125.8	-91.67	-3,078.1	3,367.7	1,232.4	1,002.3	230.07	5.357			
8,900.0	5,226.0	10,769.0	5,262.0	107.5	128.2	-91.68	-3,153.0	3,433.9	1,228.9	994.1	234.89	5.232			
9,000.0	5,226.0	10,869.0	5,262.0	109.9	130.6	-91.68	-3,227.8	3,500.1	1,225.5	985.8	239.70	5.113			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Betonnies Tsoie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design M11 2308 Pad - # 108H - APD plan - APD													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,100.0	5,226.0	10,968.9	5,262.0	112.3	133.0	-91.69	-3,302.7	3,566.3	1,222.0	977.5	244.52	4.998		
9,200.0	5,226.0	11,068.9	5,262.0	114.7	135.4	-91.69	-3,377.5	3,632.5	1,218.5	969.2	249.35	4.887		
9,300.0	5,226.0	11,168.8	5,262.0	117.1	137.8	-91.70	-3,452.4	3,698.7	1,215.1	960.9	254.17	4.780		
9,400.0	5,226.0	11,268.7	5,262.0	119.5	140.2	-91.70	-3,527.3	3,764.9	1,211.6	952.6	259.01	4.678		
9,500.0	5,226.0	11,368.7	5,262.0	121.9	142.6	-91.71	-3,602.1	3,831.2	1,208.1	944.3	263.84	4.579		
9,600.0	5,226.0	11,468.6	5,262.0	124.3	145.0	-91.71	-3,677.0	3,897.4	1,204.6	936.0	268.68	4.484		
9,700.0	5,226.0	11,568.6	5,262.0	126.7	147.4	-91.72	-3,751.8	3,963.6	1,201.2	927.7	273.52	4.392		
9,800.0	5,226.0	11,668.5	5,262.0	129.2	149.8	-91.72	-3,826.7	4,029.8	1,197.7	919.3	278.36	4.303		
9,900.0	5,226.0	11,768.4	5,262.0	131.6	152.3	-91.73	-3,901.6	4,096.0	1,194.2	911.0	283.21	4.217		
10,000.0	5,226.0	11,868.4	5,262.0	134.0	154.7	-91.73	-3,976.4	4,162.2	1,190.8	902.7	288.06	4.134		
10,100.0	5,226.0	11,968.3	5,262.0	136.4	157.1	-91.74	-4,051.3	4,228.4	1,187.3	894.4	292.91	4.053		
10,200.0	5,226.0	12,068.3	5,262.0	138.8	159.5	-91.74	-4,126.1	4,294.6	1,183.8	886.1	297.76	3.976		
10,300.0	5,226.0	12,168.2	5,262.0	141.3	161.9	-91.75	-4,201.0	4,360.9	1,180.3	877.7	302.61	3.900		
10,400.0	5,226.0	12,268.1	5,262.0	143.7	164.3	-91.75	-4,275.9	4,427.1	1,176.9	869.4	307.47	3.828		
10,500.0	5,226.0	12,368.1	5,262.0	146.1	166.8	-91.76	-4,350.7	4,493.3	1,173.4	861.1	312.33	3.757		
10,600.0	5,226.0	12,468.0	5,262.0	148.5	169.2	-91.76	-4,425.6	4,559.5	1,169.9	852.7	317.19	3.688		
10,700.0	5,226.0	12,568.0	5,262.0	151.0	171.6	-91.77	-4,500.4	4,625.7	1,166.5	844.4	322.05	3.622		
10,800.0	5,226.0	12,667.9	5,262.0	153.4	174.0	-91.77	-4,575.3	4,691.9	1,163.0	836.1	326.92	3.557		
10,900.0	5,226.0	12,767.8	5,262.0	155.8	176.5	-91.78	-4,650.2	4,758.1	1,159.5	827.7	331.78	3.495		
11,000.0	5,226.0	12,867.8	5,262.0	158.3	178.9	-91.79	-4,725.0	4,824.3	1,156.0	819.4	336.65	3.434		
11,100.0	5,226.0	12,967.7	5,262.0	160.7	181.3	-91.79	-4,799.9	4,890.5	1,152.6	811.0	341.52	3.375		
11,200.0	5,226.0	13,067.7	5,262.0	163.1	183.7	-91.80	-4,874.7	4,956.8	1,149.1	802.7	346.39	3.317		
11,300.0	5,226.0	13,167.6	5,262.0	165.6	186.2	-91.80	-4,949.6	5,023.0	1,145.6	794.4	351.26	3.261		
11,400.0	5,226.0	13,267.5	5,262.0	168.0	188.6	-91.81	-5,024.5	5,089.2	1,142.1	786.0	356.13	3.207		
11,500.0	5,226.0	13,367.5	5,262.0	170.5	191.0	-91.81	-5,099.3	5,155.4	1,138.7	777.7	361.00	3.154		
11,600.0	5,226.0	13,467.4	5,262.0	172.9	193.4	-91.82	-5,174.2	5,221.6	1,135.2	769.3	365.88	3.103		
11,700.0	5,226.0	13,567.4	5,262.0	175.4	195.9	-91.82	-5,249.0	5,287.8	1,131.7	761.0	370.75	3.053		
11,800.0	5,226.0	13,667.3	5,262.0	177.8	198.3	-91.83	-5,323.9	5,354.0	1,128.3	752.6	375.63	3.004		
11,887.0	5,226.0	13,715.1	5,262.0	179.9	199.5	-91.83	-5,359.7	5,385.7	1,125.9	747.3	378.61	2.974		
11,900.0	5,226.0	13,715.1	5,262.0	180.2	199.5	-91.83	-5,359.7	5,385.7	1,126.0	747.3	378.73	2.973 SF		
11,963.3	5,226.0	13,715.1	5,262.0	181.8	199.5	-91.83	-5,359.7	5,385.7	1,128.5	749.9	378.58	2.981		

Anticollision Report

Company: DJR Operating
Project: Bettonnie Tosie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design M11 2308 Pad - P&A'd conductor - Abandoned - Abandoned													Offset Site Error:	0.0 usft
Survey Program: 40-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.0	0.0	6.0	6.0	0.0	0.0	137.36	-23.1	21.2	31.3					
100.0	100.0	40.0	40.0	0.2	0.0	137.36	-23.1	21.2	73.1	68.9	4.15	17.593 SF		
200.0	200.0	40.0	40.0	0.5	0.0	137.36	-23.1	21.2	168.9	164.4	4.53	37.320		
300.0	300.0	40.0	40.0	0.9	0.0	137.36	-23.1	21.2	267.8	263.3	4.59	58.371		
400.0	400.0	40.0	40.0	1.2	0.0	137.36	-23.1	21.2	367.3	362.7	4.62	79.468		
500.0	500.0	40.0	40.0	1.6	0.0	137.36	-23.1	21.2	467.1	462.4	4.65	100.375		
600.0	600.0	40.0	40.0	1.9	0.0	-24.92	-23.1	21.2	566.8	562.1	4.68	121.008		
700.0	699.7	40.0	40.0	2.3	0.0	-16.32	-23.1	21.2	666.2	661.5	4.72	141.291		
800.0	799.1	40.0	40.0	2.6	0.0	-11.58	-23.1	21.2	765.4	760.7	4.75	161.144		
900.0	898.0	40.0	40.0	3.0	0.0	-8.69	-23.1	21.2	864.3	859.5	4.79	180.528		
1,000.0	996.0	40.0	40.0	3.4	0.0	-6.80	-23.1	21.2	962.8	958.0	4.83	199.408		
1,100.0	1,093.2	40.0	40.0	3.9	0.0	-5.47	-23.1	21.2	1,060.8	1,055.9	4.87	217.753		
1,169.3	1,159.9	40.0	40.0	4.3	0.0	-4.78	-23.1	21.2	1,128.5	1,123.6	4.90	230.259		
1,200.0	1,189.2	40.0	40.0	4.5	0.0	-4.78	-23.1	21.2	1,158.4	1,153.5	4.91	235.693		
1,300.0	1,285.0	40.0	40.0	5.0	0.0	-4.78	-23.1	21.2	1,256.1	1,251.2	4.98	252.159		
1,400.0	1,380.8	40.0	40.0	5.6	0.0	-4.78	-23.1	21.2	1,354.2	1,349.2	5.05	268.141		
1,500.0	1,476.5	40.0	40.0	6.2	0.0	-4.78	-23.1	21.2	1,452.6	1,447.4	5.12	283.607		
1,600.0	1,572.3	40.0	40.0	6.8	0.0	-4.78	-23.1	21.2	1,551.1	1,545.9	5.20	298.534		
1,700.0	1,668.1	40.0	40.0	7.5	0.0	-4.78	-23.1	21.2	1,649.8	1,644.6	5.27	312.909		
1,800.0	1,763.8	40.0	40.0	8.1	0.0	-4.78	-23.1	21.2	1,748.7	1,743.4	5.35	326.723		
1,900.0	1,859.6	40.0	40.0	8.7	0.0	-4.78	-23.1	21.2	1,847.7	1,842.3	5.43	339.974		
2,000.0	1,955.4	40.0	40.0	9.4	0.0	-4.78	-23.1	21.2	1,946.8	1,941.3	5.52	352.664		
2,100.0	2,051.1	40.0	40.0	10.0	0.0	-4.78	-23.1	21.2	2,046.0	2,040.4	5.61	364.796		
2,200.0	2,146.9	40.0	40.0	10.6	0.0	-4.78	-23.1	21.2	2,145.3	2,139.6	5.70	376.379		
2,300.0	2,242.6	40.0	40.0	11.3	0.0	-4.78	-23.1	21.2	2,244.6	2,238.8	5.79	387.422		
2,400.0	2,338.4	40.0	40.0	11.9	0.0	-4.78	-23.1	21.2	2,344.0	2,338.1	5.89	397.935		
2,500.0	2,434.2	40.0	40.0	12.6	0.0	-4.78	-23.1	21.2	2,443.4	2,437.4	5.99	407.932		
2,600.0	2,529.9	40.0	40.0	13.2	0.0	-4.78	-23.1	21.2	2,542.9	2,536.8	6.09	417.425		
2,700.0	2,625.7	40.0	40.0	13.9	0.0	-4.78	-23.1	21.2	2,642.4	2,636.2	6.20	426.428		
2,800.0	2,721.5	40.0	40.0	14.5	0.0	-4.78	-23.1	21.2	2,742.0	2,735.6	6.30	434.955		
2,900.0	2,817.2	40.0	40.0	15.2	0.0	-4.78	-23.1	21.2	2,841.5	2,835.1	6.41	443.022		
3,000.0	2,913.0	40.0	40.0	15.8	0.0	-4.78	-23.1	21.2	2,941.1	2,934.6	6.53	450.643		
3,100.0	3,008.8	40.0	40.0	16.5	0.0	-4.78	-23.1	21.2	3,040.8	3,034.1	6.64	457.833		
3,200.0	3,104.5	40.0	40.0	17.1	0.0	-4.78	-23.1	21.2	3,140.4	3,133.7	6.76	464.606		
3,300.0	3,200.3	40.0	40.0	17.8	0.0	-4.78	-23.1	21.2	3,240.1	3,233.2	6.88	470.977		
3,400.0	3,296.1	40.0	40.0	18.4	0.0	-4.78	-23.1	21.2	3,339.8	3,332.8	7.00	476.961		
3,500.0	3,391.8	40.0	40.0	19.1	0.0	-4.78	-23.1	21.2	3,439.5	3,432.4	7.13	482.571		
3,600.0	3,487.6	40.0	40.0	19.7	0.0	-4.78	-23.1	21.2	3,539.3	3,532.0	7.26	487.823		
3,700.0	3,583.4	40.0	40.0	20.4	0.0	-4.78	-23.1	21.2	3,639.0	3,631.6	7.39	492.728		
3,800.0	3,679.1	40.0	40.0	21.0	0.0	-4.78	-23.1	21.2	3,738.8	3,731.3	7.52	497.301		
3,900.0	3,774.9	40.0	40.0	21.7	0.0	-4.78	-23.1	21.2	3,838.6	3,830.9	7.65	501.554		
4,000.0	3,870.7	40.0	40.0	22.4	0.0	-4.78	-23.1	21.2	3,938.4	3,930.6	7.79	505.501		
4,100.0	3,966.4	40.0	40.0	23.0	0.0	-4.78	-23.1	21.2	4,038.2	4,030.2	7.93	509.153		
4,200.0	4,062.2	40.0	40.0	23.7	0.0	-4.78	-23.1	21.2	4,138.0	4,129.9	8.07	512.521		
4,300.0	4,158.0	40.0	40.0	24.3	0.0	-4.78	-23.1	21.2	4,237.8	4,229.6	8.22	515.619		
4,400.0	4,253.7	40.0	40.0	25.0	0.0	-4.78	-23.1	21.2	4,337.6	4,329.2	8.37	518.456		
4,500.0	4,349.5	40.0	40.0	25.6	0.0	-4.78	-23.1	21.2	4,437.4	4,428.9	8.52	521.043		
4,600.0	4,445.3	40.0	40.0	26.3	0.0	-4.78	-23.1	21.2	4,537.3	4,528.6	8.67	523.392		
4,700.0	4,541.0	40.0	40.0	26.9	0.0	-4.78	-23.1	21.2	4,637.1	4,628.3	8.82	525.511		
4,800.0	4,636.8	40.0	40.0	27.6	0.0	-4.78	-23.1	21.2	4,737.0	4,728.0	8.98	527.411		
4,900.5	4,733.1	40.0	40.0	28.3	0.0	-4.78	-23.1	21.2	4,837.4	4,828.2	9.14	529.110		
4,950.0	4,780.0	40.0	40.0	28.6	0.0	-20.05	-23.1	21.2	4,886.6	4,877.4	9.22	530.010		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Bettonnie Tsoie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design M11 2308 Pad - P&A'd conductor - Abandoned - Abandoned												Offset Site Error:	0.0 usft
Survey Program: 40-MWD+GRF												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
5,000.0	4,826.3	40.0	40.0	29.0	0.0	-20.20	-23.1	21.2	4,936.0	4,926.7	9.29	531.121	
5,050.0	4,871.3	40.0	40.0	29.4	0.0	-18.61	-23.1	21.2	4,984.6	4,975.2	9.36	532.393	
5,100.0	4,914.6	40.0	40.0	29.9	0.0	-16.95	-23.1	21.2	5,032.2	5,022.8	9.43	533.784	
5,150.0	4,956.0	40.0	40.0	30.4	0.0	-15.51	-23.1	21.2	5,078.5	5,069.1	9.49	535.244	
5,200.0	4,995.2	40.0	40.0	30.9	0.0	-14.31	-23.1	21.2	5,123.4	5,113.8	9.55	536.713	
5,250.0	5,032.0	40.0	40.0	31.4	0.0	-13.33	-23.1	21.2	5,166.4	5,156.8	9.60	538.122	
5,300.0	5,066.1	40.0	40.0	32.0	0.0	-12.52	-23.1	21.2	5,207.5	5,197.9	9.65	539.384	
5,350.0	5,097.4	40.0	40.0	32.6	0.0	-11.86	-23.1	21.2	5,246.4	5,236.7	9.71	540.404	
5,400.0	5,125.6	40.0	40.0	33.3	0.0	-11.32	-23.1	21.2	5,283.0	5,273.2	9.76	541.071	
5,450.0	5,150.6	40.0	40.0	34.0	0.0	-10.89	-23.1	21.2	5,317.0	5,307.2	9.82	541.271	
5,500.0	5,172.3	40.0	40.0	34.7	0.0	-10.55	-23.1	21.2	5,348.3	5,338.4	9.89	540.886	
5,550.0	5,190.4	40.0	40.0	35.4	0.0	-10.29	-23.1	21.2	5,376.8	5,366.8	9.96	539.804	
5,600.0	5,204.9	40.0	40.0	36.2	0.0	-10.09	-23.1	21.2	5,402.2	5,392.2	10.04	537.928	
5,650.0	5,215.6	40.0	40.0	37.0	0.0	-9.96	-23.1	21.2	5,424.7	5,414.5	10.14	535.184	
5,700.0	5,222.6	40.0	40.0	37.8	0.0	-9.89	-23.1	21.2	5,443.9	5,433.6	10.24	531.526	
5,750.0	5,225.8	40.0	40.0	38.6	0.0	-9.88	-23.1	21.2	5,459.8	5,449.5	10.36	526.945	
5,766.2	5,226.0	40.0	40.0	38.8	0.0	-9.89	-23.1	21.2	5,464.3	5,453.9	10.40	525.486	
5,800.0	5,226.0	40.0	40.0	39.4	0.0	-9.89	-23.1	21.2	5,473.3	5,462.8	10.50	521.468	
5,900.0	5,226.0	40.0	40.0	41.1	0.0	-9.89	-23.1	21.2	5,501.1	5,490.3	10.82	508.402	
6,000.0	5,226.0	40.0	40.0	42.9	0.0	-9.89	-23.1	21.2	5,530.6	5,519.4	11.18	494.545	
6,100.0	5,226.0	40.0	40.0	44.7	0.0	-9.89	-23.1	21.2	5,561.8	5,550.2	11.58	480.383	
6,200.0	5,226.0	40.0	40.0	46.7	0.0	-9.89	-23.1	21.2	5,594.5	5,582.5	12.00	466.291	
6,300.0	5,226.0	40.0	40.0	48.6	0.0	-9.89	-23.1	21.2	5,628.8	5,616.4	12.44	452.540	
6,400.0	5,226.0	40.0	40.0	50.6	0.0	-9.89	-23.1	21.2	5,664.7	5,651.8	12.89	439.314	
6,500.0	5,226.0	40.0	40.0	52.7	0.0	-9.89	-23.1	21.2	5,702.1	5,688.8	13.36	426.728	
6,600.0	5,226.0	40.0	40.0	54.8	0.0	-9.89	-23.1	21.2	5,741.1	5,727.2	13.84	414.849	
6,700.0	5,226.0	40.0	40.0	56.9	0.0	-9.89	-23.1	21.2	5,781.5	5,767.1	14.32	403.704	
6,800.0	5,226.0	40.0	40.0	59.0	0.0	-9.89	-23.1	21.2	5,823.3	5,808.5	14.81	393.295	
6,900.0	5,226.0	40.0	40.0	61.2	0.0	-9.89	-23.1	21.2	5,866.5	5,851.2	15.29	383.608	
7,000.0	5,226.0	40.0	40.0	63.4	0.0	-9.89	-23.1	21.2	5,911.1	5,895.3	15.78	374.616	
7,100.0	5,226.0	40.0	40.0	65.6	0.0	-9.89	-23.1	21.2	5,957.1	5,940.8	16.26	366.285	
7,200.0	5,226.0	40.0	40.0	67.9	0.0	-9.89	-23.1	21.2	6,004.3	5,987.6	16.74	358.580	
7,300.0	5,226.0	40.0	40.0	70.1	0.0	-9.89	-23.1	21.2	6,052.9	6,035.6	17.22	351.462	
7,400.0	5,226.0	40.0	40.0	72.4	0.0	-9.89	-23.1	21.2	6,102.7	6,085.0	17.69	344.892	
7,500.0	5,226.0	40.0	40.0	74.7	0.0	-9.89	-23.1	21.2	6,153.7	6,135.5	18.16	338.834	
7,600.0	5,226.0	40.0	40.0	77.0	0.0	-9.89	-23.1	21.2	6,205.9	6,187.3	18.62	333.253	
7,700.0	5,226.0	40.0	40.0	79.3	0.0	-9.89	-23.1	21.2	6,259.3	6,240.2	19.08	328.114	
7,800.0	5,226.0	40.0	40.0	81.6	0.0	-9.89	-23.1	21.2	6,313.8	6,294.3	19.52	323.387	
7,900.0	5,226.0	40.0	40.0	83.9	0.0	-9.89	-23.1	21.2	6,369.4	6,349.4	19.96	319.041	
8,000.0	5,226.0	40.0	40.0	86.2	0.0	-9.89	-23.1	21.2	6,426.1	6,405.7	20.40	315.050	
8,100.0	5,226.0	40.0	40.0	88.6	0.0	-9.89	-23.1	21.2	6,483.8	6,463.0	20.82	311.389	
8,200.0	5,226.0	40.0	40.0	90.9	0.0	-9.89	-23.1	21.2	6,542.6	6,521.3	21.24	308.033	
8,300.0	5,226.0	40.0	40.0	93.3	0.0	-9.89	-23.1	21.2	6,602.3	6,580.7	21.65	304.963	
8,400.0	5,226.0	40.0	40.0	95.6	0.0	-9.89	-23.1	21.2	6,663.0	6,641.0	22.05	302.157	
8,500.0	5,226.0	40.0	40.0	98.0	0.0	-9.89	-23.1	21.2	6,724.7	6,702.2	22.45	299.597	
8,600.0	5,226.0	40.0	40.0	100.4	0.0	-9.89	-23.1	21.2	6,787.2	6,764.4	22.83	297.268	
8,700.0	5,226.0	40.0	40.0	102.8	0.0	-9.89	-23.1	21.2	6,850.7	6,827.5	23.21	295.153	
8,800.0	5,226.0	40.0	40.0	105.1	0.0	-9.89	-23.1	21.2	6,915.0	6,891.4	23.58	293.238	
8,900.0	5,226.0	40.0	40.0	107.5	0.0	-9.89	-23.1	21.2	6,980.2	6,956.2	23.94	291.510	
9,000.0	5,226.0	40.0	40.0	109.9	0.0	-9.89	-23.1	21.2	7,046.1	7,021.8	24.30	289.957	
9,100.0	5,226.0	40.0	40.0	112.3	0.0	-9.89	-23.1	21.2	7,112.9	7,088.3	24.65	288.568	
9,200.0	5,226.0	40.0	40.0	114.7	0.0	-9.89	-23.1	21.2	7,180.4	7,155.4	24.99	287.333	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company: DJR Operating
Project: Bettonnie Tsoie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design M11 2308 Pad - P&A'd conductor - Abandoned - Abandoned												Offset Site Error: 0.0 usft	
Survey Program: 40-MWD+IGRF												Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)					
9,300.0	5,226.0	40.0	40.0	117.1	0.0	-9.89	-23.1	21.2	7,248.7	7,223.4	25.32	286.241	
9,400.0	5,226.0	40.0	40.0	119.5	0.0	-9.89	-23.1	21.2	7,317.7	7,292.1	25.65	285.284	
9,500.0	5,226.0	40.0	40.0	121.9	0.0	-9.89	-23.1	21.2	7,387.5	7,361.5	25.97	284.455	
9,600.0	5,226.0	40.0	40.0	124.3	0.0	-9.89	-23.1	21.2	7,457.9	7,431.6	26.28	283.744	
9,700.0	5,226.0	40.0	40.0	126.7	0.0	-9.89	-23.1	21.2	7,529.0	7,502.4	26.59	283.146	
9,800.0	5,226.0	40.0	40.0	129.2	0.0	-9.89	-23.1	21.2	7,600.7	7,573.8	26.89	282.653	
9,900.0	5,226.0	40.0	40.0	131.6	0.0	-9.89	-23.1	21.2	7,673.1	7,645.9	27.18	282.260	
10,000.0	5,226.0	40.0	40.0	134.0	0.0	-9.89	-23.1	21.2	7,746.1	7,718.6	27.47	281.961	
10,100.0	5,226.0	40.0	40.0	136.4	0.0	-9.89	-23.1	21.2	7,819.6	7,791.9	27.75	281.751	
10,200.0	5,226.0	40.0	40.0	138.8	0.0	-9.89	-23.1	21.2	7,893.8	7,865.8	28.03	281.624	
10,300.0	5,226.0	40.0	40.0	141.3	0.0	-9.89	-23.1	21.2	7,968.5	7,940.2	28.30	281.576	
10,400.0	5,226.0	40.0	40.0	143.7	0.0	-9.89	-23.1	21.2	8,043.8	8,015.2	28.56	281.603	
10,500.0	5,226.0	40.0	40.0	146.1	0.0	-9.89	-23.1	21.2	8,119.6	8,090.8	28.82	281.701	
10,600.0	5,226.0	40.0	40.0	148.5	0.0	-9.89	-23.1	21.2	8,195.9	8,166.9	29.08	281.865	
10,700.0	5,226.0	40.0	40.0	151.0	0.0	-9.89	-23.1	21.2	8,272.8	8,243.4	29.33	282.093	
10,800.0	5,226.0	40.0	40.0	153.4	0.0	-9.89	-23.1	21.2	8,350.1	8,320.5	29.57	282.381	
10,900.0	5,226.0	40.0	40.0	155.8	0.0	-9.89	-23.1	21.2	8,427.9	8,398.1	29.81	282.726	
11,000.0	5,226.0	40.0	40.0	158.3	0.0	-9.89	-23.1	21.2	8,506.2	8,476.1	30.04	283.125	
11,100.0	5,226.0	40.0	40.0	160.7	0.0	-9.89	-23.1	21.2	8,584.9	8,554.6	30.27	283.575	
11,200.0	5,226.0	40.0	40.0	163.1	0.0	-9.89	-23.1	21.2	8,664.0	8,633.5	30.50	284.074	
11,300.0	5,226.0	40.0	40.0	165.6	0.0	-9.89	-23.1	21.2	8,743.6	8,712.9	30.72	284.618	
11,400.0	5,226.0	40.0	40.0	168.0	0.0	-9.89	-23.1	21.2	8,823.6	8,792.7	30.94	285.207	
11,500.0	5,226.0	40.0	40.0	170.5	0.0	-9.89	-23.1	21.2	8,904.0	8,872.9	31.15	285.837	
11,600.0	5,226.0	40.0	40.0	172.9	0.0	-9.89	-23.1	21.2	8,984.8	8,953.5	31.36	286.507	
11,700.0	5,226.0	40.0	40.0	175.4	0.0	-9.89	-23.1	21.2	9,066.0	9,034.4	31.57	287.215	
11,800.0	5,226.0	40.0	40.0	177.8	0.0	-9.89	-23.1	21.2	9,147.5	9,115.8	31.77	287.958	
11,900.0	5,226.0	40.0	40.0	180.2	0.0	-9.89	-23.1	21.2	9,229.5	9,197.5	31.97	288.735	
11,963.3	5,226.0	40.0	40.0	181.8	0.0	-9.89	-23.1	21.2	9,281.5	9,249.4	32.09	289.245	

Anticollision Report

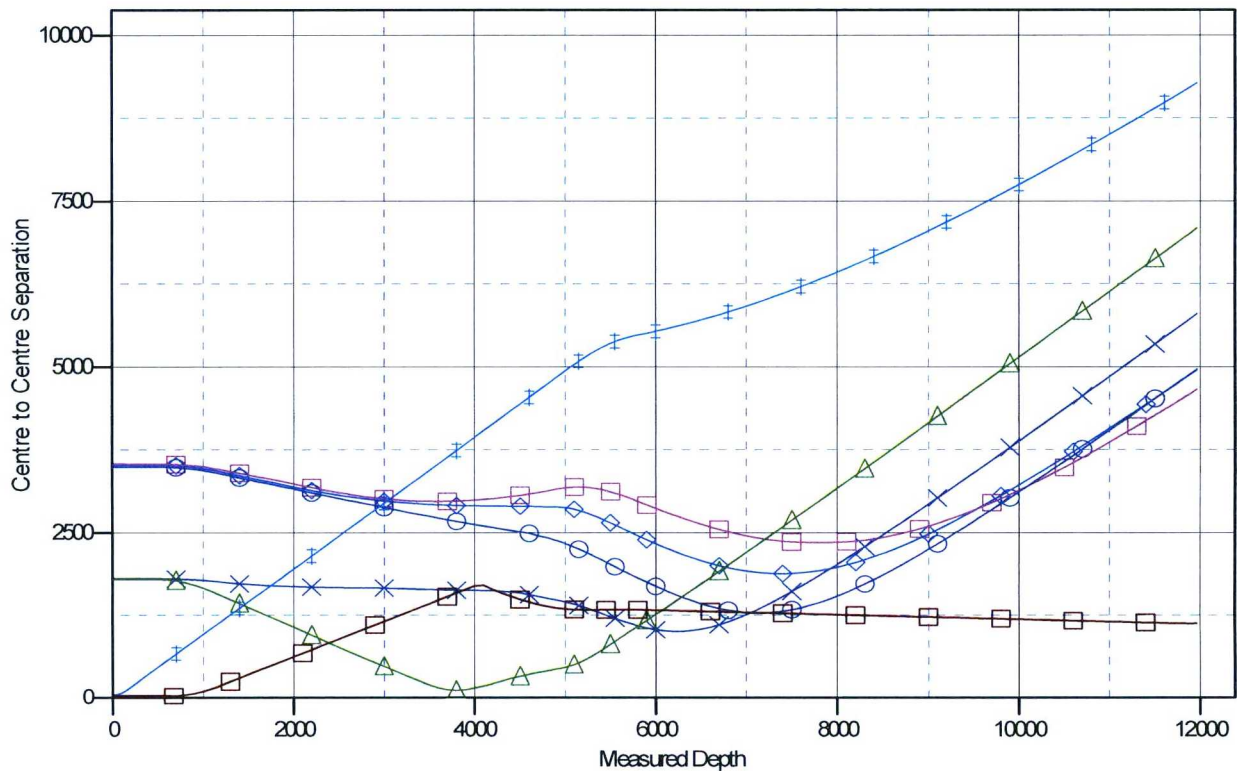
Company: DJR Operating
Project: Bettonnie Tsoie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Reference Depths are relative to RKB @ 6919.0usft (AD 920)
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.8333333

Coordinates are relative to: # 728H
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.10°

Ladder Plot



LEGEND

1H, Original drilling, As drilled V.O.
 2H, Original drilling, As drilled V.O.
 3H, Original drilling, As drilled V.O.
 152H, Original drilling, Pathfinder V.O.
 151H, Original drilling, Pathfinder V.O.
 P&A's conductor, Abandoned, As drilled V.O.
 # 108H, APD plan, APD V.O.

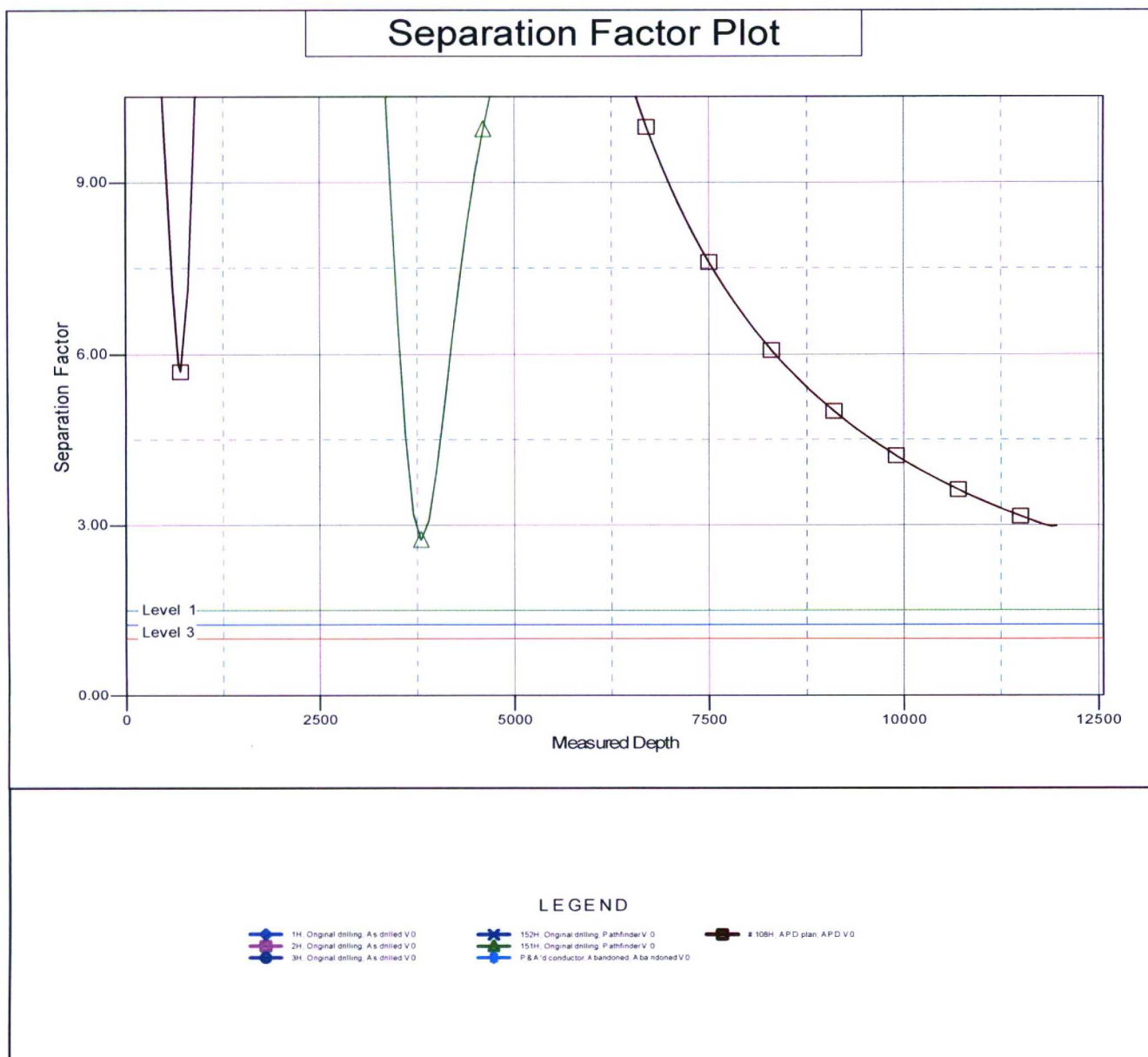
Anticollision Report

Company: DJR Operating
Project: Bettonnie Tsoie Unit
Reference Site: M11 2308 Pad
Site Error: 0.0 usft
Reference Well: # 728H
Well Error: 0.0 usft
Reference Wellbore: Original drilling
Reference Design: APD

Local Co-ordinate Reference: Well # 728H
TVD Reference: RKB @ 6919.0usft (AD 920)
MD Reference: RKB @ 6919.0usft (AD 920)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Reference Depths are relative to RKB @ 6919.0usft (AD 920)
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.8333333

Coordinates are relative to: # 728H
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.10°



DJR OPERATING, LLC

BETONNIE TSOSIE WASH UNIT #728H

362' FSL & 203' FWL

LOCATED IN THE SW/4 SW/4 OF SECTION 11, T23N, R8W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

DIRECTIONS

- 1) FROM THE INTERSECTION OF HWY 64 & HWY 550 IN BLOOMFIELD, GO SOUTH ON HWY 550, 39.0 MILES TO ROAD 7900 (INDIAN ROUTE 7061) (M.P. 112.6).
- 2) TURN RIGHT AND GO 1.7 MILES TO A DIRT ROAD WITH CATTLE GUARD.
- 3) TURN LEFT AND GO 0.6 MILES TO "Y" INTERSECTION.
- 4) TURN LEFT AND GO 0.9 MILES TO "T" INTERSECTION.
- 5) TURN LEFT AND GO 1.1 MILES TO ABANDONED 2-TRACK TO BE UPGRADED.

WELL FLAG LOCATED AT LAT. 36.235277° N, LONG. 107.659301° W (NAD 83).