

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 3160-3 APD form.

Operator Signature Date: 3/27/2020

Operator: DJR **Well Name and Number:** Nageezi Unit 308H

API#: 30-045-38211 **Section:** 35, **Township:** 24N, **Range:** 9 W

Conditions of Approval: (See the below checked and handwritten conditions)

☒ Notify appropriate OCD district office 24hrs prior to spud, casing & cement.

☒ If cement does not circulate on any casing string or stage tool a CBL will be required. Contact the regulatory agencies prior to proceeding.

☒ Hold C-104 for directional survey & "As Drilled" Plat

☐ Hold C-104 for: ☐ NSL, ☐ NSP, ☐ DHC, ☐ 5.9 Compliance

☐ 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

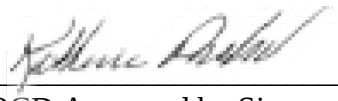
☒ Any change of plans must adhere to 19.15.7.14(A)(1). Field operation changes requiring immediate approval must be approved by the District Office prior to implementation.

☒ 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 freshwater zone or zones and shall immediately set in cement the water protection string

☒ 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.

☒ 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.



NMOCD Approved by Signature

11/23/2020
Date

NMOCD REC'D
11-17-20

Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. N0G14011830	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name NAVAJO NATION	
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☒ Multiple Zone		7. If Unit or CA Agreement, Name and No. NMNM 132981A	
2. Name of Operator DJR OPERATING LLC		8. Lease Name and Well No. NAGEEZI UNIT	
3a. Address 1700 LINCOLN STREET, SUITE 2800, DENVER, CO 802		9. API Well No. 308H	
3b. Phone No. (include area code) (505) 632-3476		10. Field and Pool, or Exploratory BASIN MANCOS/NAGEEZI UNIT HZ OIL	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWNE / 2333 FNL / 2295 FEL / LAT 36.271416 / LONG -107.757853 At proposed prod. zone NENW / 536 FNL / 1360 FWL / LAT 36.29089 / LONG -107.781106		11. Sec., T, R, M. or Blk. and Survey or Area SEC 35/T24N/R9W/NMP	
14. Distance in miles and direction from nearest town or post office* 37 miles		12. County or Parish SAN JUAN	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 2295 feet	16. No of acres in lease 160	17. Spacing Unit dedicated to this well 480.0	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20 feet	19. Proposed Depth 5180 feet / 14896 feet	20. BLM/BIA Bond No. in file IND: B010611	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6899 feet	22. Approximate date work will start* 08/15/2020	23. Estimated duration 10 days	
24. Attachments			
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)			
1. Well plat certified by a registered surveyor.		4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).	
2. A Drilling Plan.		5. Operator certification.	
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).		6. Such other site specific information and/or plans as may be requested by the BLM.	
25. Signature (Electronic Submission)	Name (Printed/Typed) SHAW N / Ph: (505) 632-3476	Date 03/27/2020	
Title Regulatory Specialist			
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) RICHARD FIELDS / Ph: (505) 564-7612	Date 11/13/2020	
Title Field Manager			
Office Farmington Field Office			
Application approval 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.			
Conditions of approval, if any, are attached.			
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.			



(Continued on page 2)

*(Instructions on page 2)

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (505) 393-8181 Fax: (505) 393-0720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (505) 748-1283 Fax: (505) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Artec, N.M. 87410
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 478-3460 Fax: (505) 478-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-38211		² Pool Code 98080		³ Pool Name NAGEEZI UNIT MANCOS OIL POOL	
⁴ Property Code 325268		⁵ Property Name NAGEEZI UNIT			⁶ Well Number 308H
⁷ UGMD No. 371838		⁸ Operator Name DJR OPERATING, LLC			⁹ Elevation 6899'

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
G	35	24N	9W		2333'	NORTH	2295'	EAST	SAN JUAN

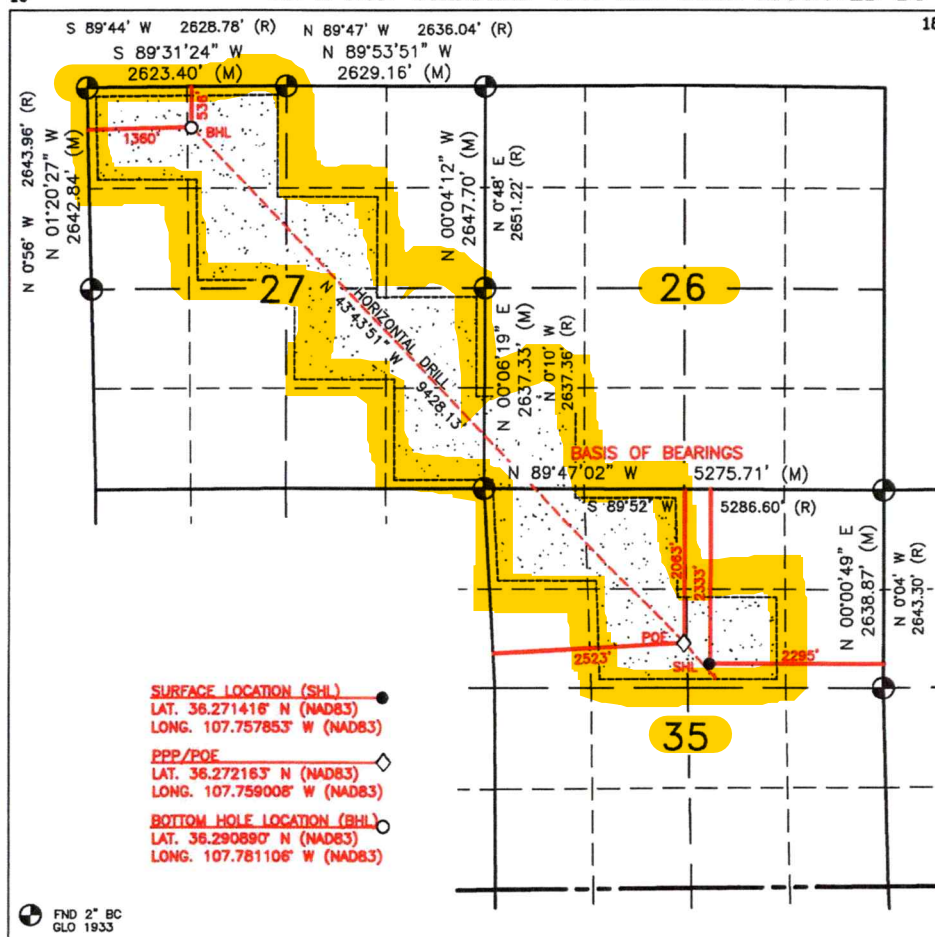
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	27	24N	9W		536'	NORTH	1360'	WEST	SAN JUAN

¹² Dedicated Acres PENETRATED SPACING UNIT; SEC 35: SW/NE, SE/NW, NE/NW & NW/NW (160 AC.); SEC 26: SW/SW (40 AC.); SEC 27: SE/SE, NE/SE, NW/SE, SW/NE, SE/NW, NE/NW & NW/NW (280 AC.) = 480 ACRES	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13856 R-13856A
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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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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.

Shaw-Marie Ford 6/12/20
Signature Date

Shaw-Marie Ford

Printed Name

sford@djrlc.com

E-mail Address

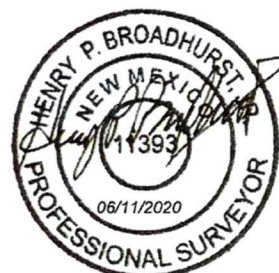
SURVEYOR CERTIFICATION

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.

OCTOBER 7, 2019

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number

11393

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OIL CONSERVATION DIVISION

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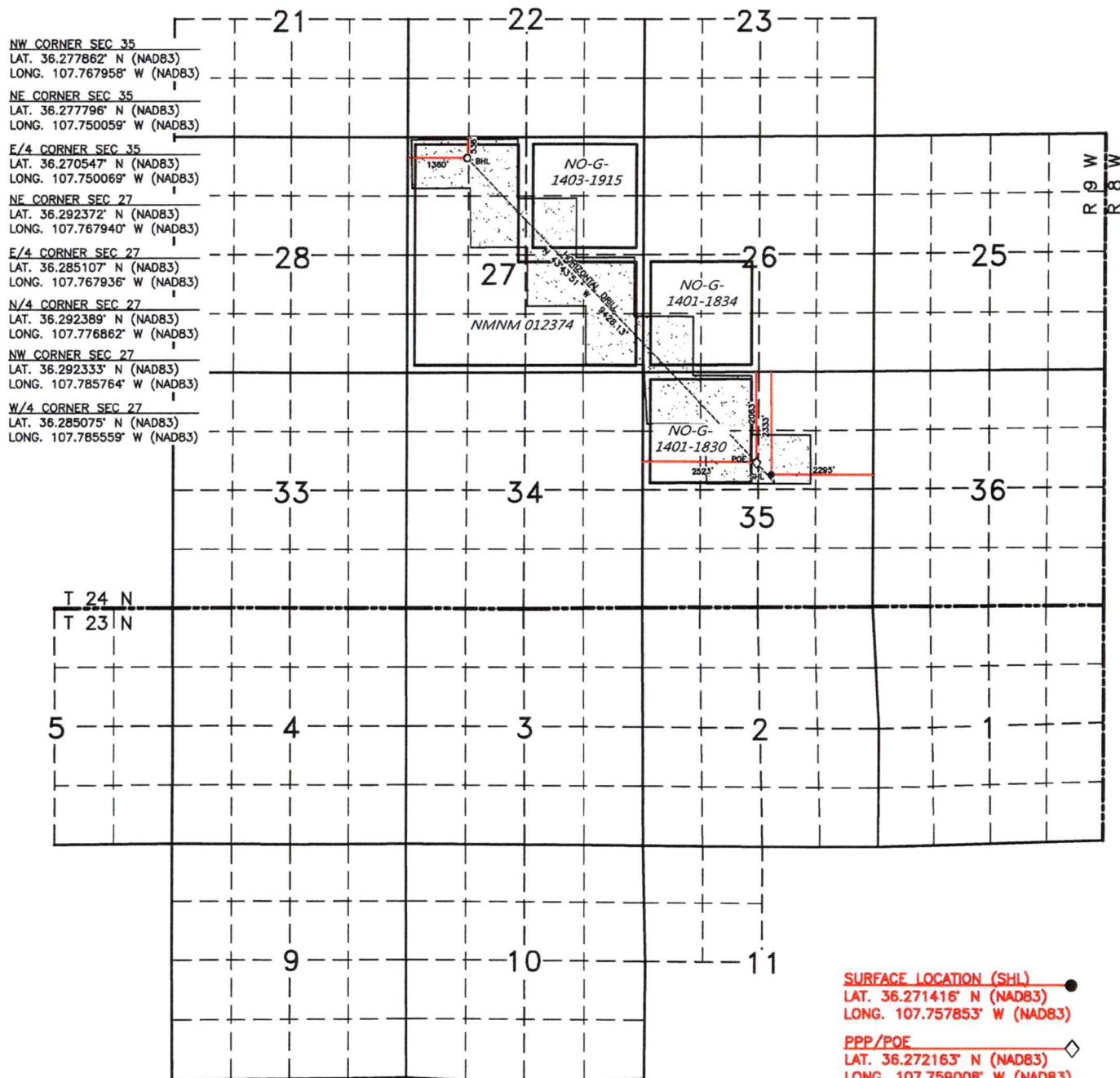
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Revised August 1, 2011

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☐ AMENDED REPORT

DJR OPERATING, LLC
NAGEEZI UNIT #308H



PENETRATED SPACING UNIT:
SEC 35: SW/NE, SE/NW, NE/NW & NW/NW (160 AC.); SEC 26: SW/SW (40 AC.); SEC 27: SE/SE, NE/SE, NW/SE, SW/NE, SE/NW, NE/NW & NW/NW (280 AC.) = 480 ACRES
TOTAL 10,415.12 ACRES: T24N R9W, SEC. 21-23 (5/2), 25-26, 33-36, 1-4, 9-10 (ALL); T23N R9W, SEC. 5 (W/2), 11 (NW/4) - UNDIVIDED UNIT

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OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

☐ AMENDED REPORT

NAGEEZI UNIT #308H

2864.82 LINEAR FEET OF WELLBORE WITHIN

NO-G-1401-1830

LOCATED IN THE NW/NW, NE/NW &

SE/NW OF SECTION 35,

T24N, R9W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

WELLBORE	NS-FOOT	NS INDICATOR	EW-FOOT	EW INDICATOR	LATITUDE	LONGITUDE
FROM	2063	FNL	2523	FWL	36.272163° N	107.759008° W
TO	0	FNL	659	FWL	36.277854° N	107.765721° W

951.90 LINEAR FEET OF WELLBORE WITHIN

NO-G-1401-1834

LOCATED IN THE SW/SW OF SECTION 26,

T24N, R9W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

WELLBORE	NS-FOOT	NS INDICATOR	EW-FOOT	EW INDICATOR	LATITUDE	LONGITUDE
FROM	0	FSL	659	FWL	36.277854° N	107.765721° W
TO	685	FSL	0	FWL	36.279745° N	107.767952° W

2694.10 LINEAR FEET OF WELLBORE WITHIN

NMNM 012374

LOCATED IN THE SE/SE, NE/SE &

NW/SE OF SECTION 27,

T24N, R9W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

WELLBORE	NS-FOOT	NS INDICATOR	EW-FOOT	EW INDICATOR	LATITUDE	LONGITUDE
FROM	685	FSL	0	FEL	36.279745° N	107.767952° W
TO	2632	FSL	1865	FEL	36.285096° N	107.774267° W

1109.86 LINEAR FEET OF WELLBORE WITHIN

NO-G-1403-1915

LOCATED IN THE SW/NE OF SECTION 27,

T24N, R9W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

WELLBORE	NS-FOOT	NS INDICATOR	EW-FOOT	EW INDICATOR	LATITUDE	LONGITUDE
FROM	2632	FSL	1865	FEL	36.285096° N	107.774267° W
TO	1853	FNL	2579	FWL	36.287300° N	107.776868° W

1807.45 LINEAR FEET OF WELLBORE WITHIN

NMNM 012374

LOCATED IN THE SE/NW &

NE/NW OF SECTION 27,

T24N, R9W, N.M.P.M.,

SAN JUAN COUNTY, NEW MEXICO

WELLBORE	NS-FOOT	NS INDICATOR	EW-FOOT	EW INDICATOR	LATITUDE	LONGITUDE
FROM	1853	FNL	2579	FWL	36.287300° N	107.776868° W
TO	536	FNL	1360	FWL	36.290890° N	107.781106° W

Rev 0



DRILLING PLAN Nageezi Unit 308H San Juan County, New Mexico

Surface Location

2295-ft FEL & 2333-ft FNL
Sec 35 T24N R09W
Graded Elevation 6899' MSL
RKB Elevation 6913' (14' KB)

SHL Geographical Coordinates (NAD-83)

Latitude 36.2714160° N
Longitude 107.7578530° W

Kick Off Point for Horizontal Build Curve

4440-ft MD
4434-ft TVD

Local Coordinates (from SHL)

204-ft South
79-ft East

Heel Location (Pay zone entry)

2523-ft FWL & 2063-ft FNL
Sec 35 T24N R09W

Heel Geographical Coordinates (NAD-83)

Latitude 36.2721631° N
Longitude 107.75900780° W

Bottom Hole Location (TD)

1360-ft FWL & 536-ft FNL
Sec 27 T24N R09W

BHL Geographical Coordinates (NAD-83)

Latitude 36.2908898° N
Longitude 107.7811056° W

Well objectives

This well is planned as a 9430-ft lateral in the Gallup B sand.

Bottom Hole temperature and pressure

The temperature in the Gallup B horizontal objective is 140°F. Bottom hole pressure in the Gallup B 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	820	820	Sd	W	8.3	8.4 – 8.8
Kirtland	974	973	Sh	-	8.3	8.4 – 8.8
Fruitland	1263	1262	C	G	8.3	9.0 - 9.5
Pictured Cliffs	1610	1608	Sd	W	8.3	9.0 - 9.5
Lewis	1707	1705	Sh	-		9.0 - 9.5
Chacra	2351	2348	Sd	-	8.3	9.0 - 9.5
Menefee	3101	3097	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	4056	4051	Sd	-	8.3	9.0 - 9.5
Mancos	4232	4226	Sh	-		9.0 - 9.5
Mancos Silt	4550	4544	Slt	O/G	6.6	9.0 - 9.5
Gallup A	5185	5039	Slt	O/G	6.6	9.0 - 9.5
Gallup B	5293	5078	Sd	O/G	6.6	8.8 - 9.0
Gallup C	NP	NP	Sd	O/G	6.6	8.8 - 9.0
Target	5467	5103	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"	26	K-55	LTC	surf	5417	surf	5101	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	5139	14896	5018	5180	5139

Note: all casing will be new

Rev 0



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

9-5/8" Surface Casing

	Lead
Name	Redi-Mix
Type	I-II
Planned top	Surface
Density (ppg)	14.50
Yield (cf/sx)	1.61
Mix water (gal/sx)	7.41
Volume (sx)	114
Volume (bbls)	33
Volume (cu. ft.)	185
Excess %	50

7" Intermediate Casing

	Lead	Tail
Type	BJ Services	BJ Services
Planned top	III	Poz/G
Density (ppg)	Surface	3940-ft
Yield (cf/sx)	12.30	13.50
Mix water (gal/sx)	2.34	1.50
Volume (sx)	13.26	7.20
Volume (bbls)	394	244
Volume (cu.ft.)	164	65
Excess %	922	364
	50	50

Rev 0

4-1/2" Production Liner

	BJ Services
Type	Poz/G
Planned top	5139-ft
Density (ppg)	13.3
Yield (cf/sx)	1.56
Mix water (gal/sx)	7.71
Volume (sx)	821
Volume (bbls)	228
Volume (cu.ft)	1283
Excess %	40

Wellhead & Pressure Control

The well head will be an 11" 5M multi-bowl system. A 3M 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 geolograph 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 – 5417	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5417 – 14896	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.

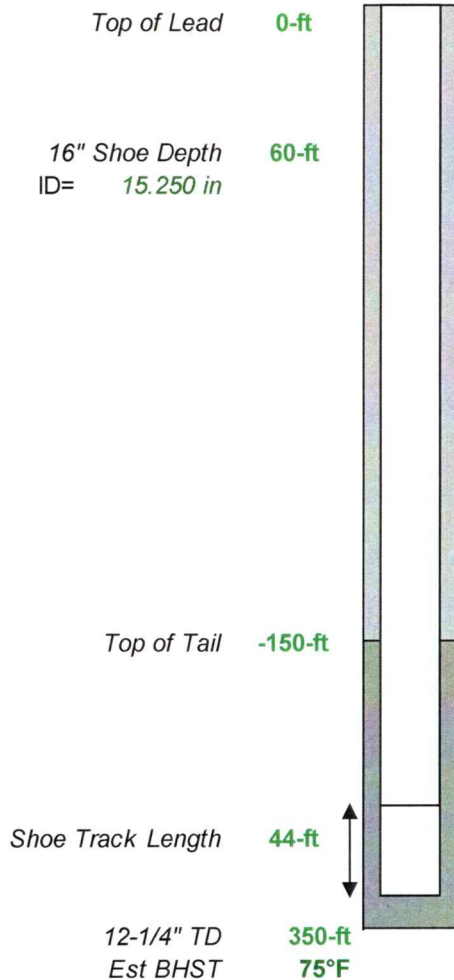
Completion

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.

Rev 0



9-5/8" Surface Casing & Cementing



Assumed Hole Size 12.2500 in
Casing OD 9.6250 in
Casing ID 8.9210 in

% Excess Lead 50%
% Excess Tail

Capacity CH Ann 0.1359 bbl/ft
Capacity OH Ann 0.0558 bbl/ft
Capacity Pipe 0.0773 bbl/ft

9-5/8" 36# K-55 ST&C

Pipe OD 9.625 in
Coupling OD 10.625 in
ID 8.921 in
Drift 8.765 in
Burst 3520 psi
Collapse 2020 psi
Tensile (body) 564 kips
Tensile (joint) 423 kips
Min Torque 1830 ft-lbs
Opt Torque 2440 ft-lbs
Max Torque 3050 ft-lbs

Lead Slurry

Properties

Redi Mix Type I/II Density 14.50 ppg
20% Fly Ash Yield 1.61 cf/sk
Total Mix Fluid 7.41 gal/sk
Est pump time (70Bc) NA
8-hr compressive 475 psi
24-hr compressive 1375 psi

Tail Slurry

Properties

None Density ppg
Yield cf/sk
Total Mix Fluid gal/sk
Est pump time (70Bc)
50 psi strength in
24/72 hr strength psi

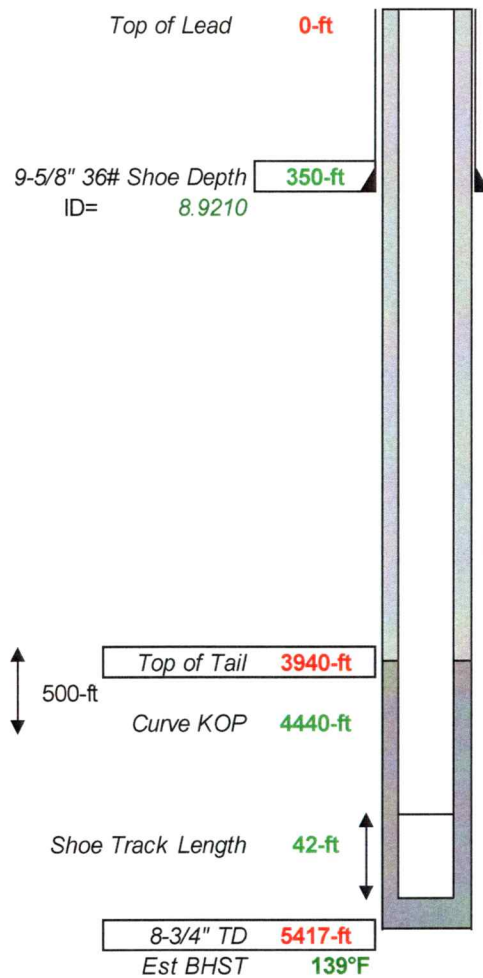
Volumes

Lead Volume 33 bbls 114 sx
Tail Volume bbls sx
Displacement 24 bbls
Total Volume 56 bbls

Rev 0



7" Intermediate Casing & Cementing Nageezi Unit 308H



Assumed Hole Size Lead	8.7500 in
Assumed Hole Size Tail	8.7500 in
Casing OD	7.0000 in
Casing ID	6.2760 in

% OH Excess Lead	60%
% OH Excess Tail	60%

Capacity CH Ann	0.0297 bbl/ft
Capacity OH Ann Lead	0.0268 bbl/ft
Capacity OH Ann Tail	0.0268 bbl/ft
Capacity Pipe	0.0383 bbl/ft

7" 26# K-55 LT&C

Pipe OD	7.000 in
Weight	26 lbs/ft
Grade	K-55
Coupling	LTC
Coupling OD	7.656 in
ID	6.276 in
Drift	6.151 in
Burst	4980 psi
Collapse	4320 psi
Tensile (body)	415 kips
Tensile (joint)	401 kips
Min Torque	3008 ft-lbs
Opt Torque	4010 ft-lbs
Max Torque	5013 ft-lbs

BJ Lead Slurry

Type III	
BA-90	5 lb/sx%
KCI	3.00%
GW-86	0.10%
FL-66	0.20%
R-3	0.50%
FP-25	0.30%

Properties

Density	12.30 ppg
Yield	2.3404 cf/sk
Total Mix Fluid	13.26 gal/sk
Thickening Time	3:11 hr:min
Time to 50 psi (80°F)	5:10 hr:min
24-hr UCA (80°F)	659 psi

BJ Tail Slurry

G+Pozz	50:50
BA-90	3 lb/sx
FL-66	0.40%
FP-25	0.30%
Sod. Met	0.50%
Gyp	3.00%

Properties

Density	13.50 ppg
Yield	1.4946 cf/sk
Total Mix Fluid	7.24 gal/sk
Thickening Time	3:26 hr:min
Time to 50 psi (135°F)	2:55 hr:min
Time to 500 psi (135°F)	6:40 hr:min

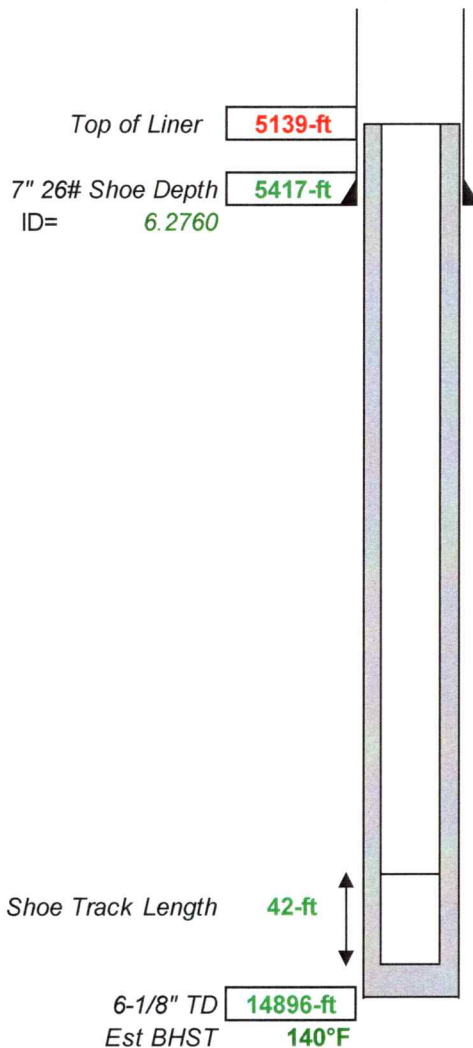
Volumes

Lead Volume	164 bbls	394 sx
Tail Volume	65 bbls	244 sx
Approx Displacement	206 bbls	
Total Volume	435 bbls	

Rev 0



4-1/2" Liner Cementing Nageezi Unit 308H

Assumed Hole Size **6.1250** inCasing OD **4.5000** inCasing ID **4.0000** in% Excess Open Hole **40%**Capacity CH Ann **0.0186** bbl/ftCapacity OH Ann **0.0168** bbl/ftCapacity Pipe **0.0155** bbl/ft

4-1/2" 11.6# HCP-110 BTC

Pipe OD **4.500** inWeight **11.6** lbs/ftGrade **P-110**Coupling **LTC**Coupling OD **5.000** inID **4.000** inDrift **3.875** inBurst **10690** psiCollapse **8650** psiTensile (body) **367** kipsTensile (joint) **385** kipsMin Torque **ft-lbs**Opt Torque **Triangle** ft-lbsMax Torque **ft-lbs**

BJ Lead Slurry

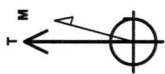
G+Pozz **50:50**BA-90 **3 lb/sx**GW-86 **0.10%**R-3 **0.40%**FP-25 **30.00%**FL-24 **0.40%**Gel **4.00%**

Properties

Density **13.30** ppgYield **1.5629** cf/skTotal Mix Fluid **7.70** gal/skThickening Time **6:04** hr:minTime to 50 psi (147°F) **7:15** hr:min24-hr UCA (147°F) **1293** psi

Volumes

Lead Volume **228** bbls **821** sxApprox Displacement **161** bblsTotal Volume **389** bbls



Azimuths to True North
Magnetic North: 8.78°

Magnetic Field
Strength: 49429.6nT
Dip Angle: 62.80°
Date: 12/20/2019
Model: HDGM FILE

SECTION DETAILS

	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSeet	Target
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
	558.36	3.17	158.89	558.28	-4.08	1.58	2.00	158.89	-4.02	
	4440.09	3.17	158.89	4434.08	-204.15	78.82	0.00	0.00	-201.22	
	5467.39	89.53	316.31	5103.01	242.12	-366.93	9.00	157.40	429.48	308H Heel
	14895.85	89.53	316.31	5180.01	7059.94	-6879.02	9.00	157.40	9857.17	308H Toe

308H Heel
308H Toe

DESIGN TARGET DETAILS

Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
308H Heel	5103.01	242.12	-366.93	1918374.81	2745000.04	36.272	-107.759
308H Toe	5180.01	7059.94	-6879.02	1925187.54	2738483.04	36.291	-107.781

WELL DETAILS: 308H

GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)

	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
	0.00	0.00	1918132.98	2745367.56	36.271	-107.758

Plan: APD (308H/Original Drilling)

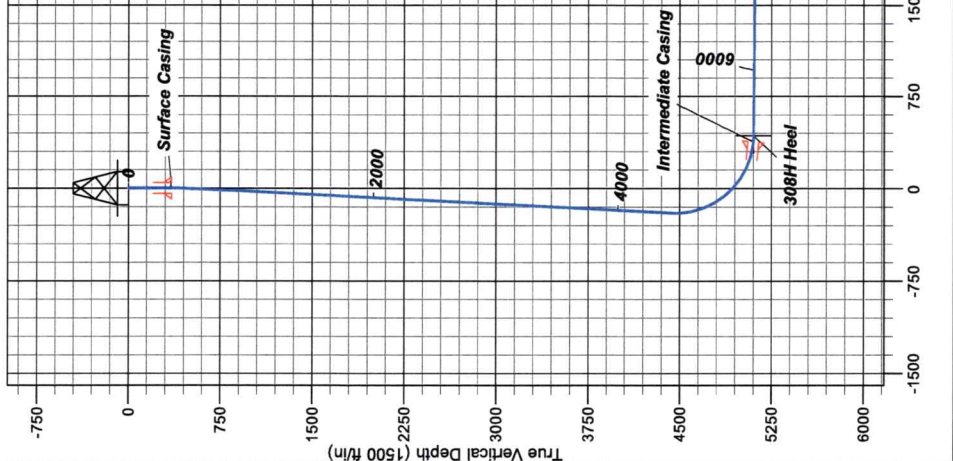
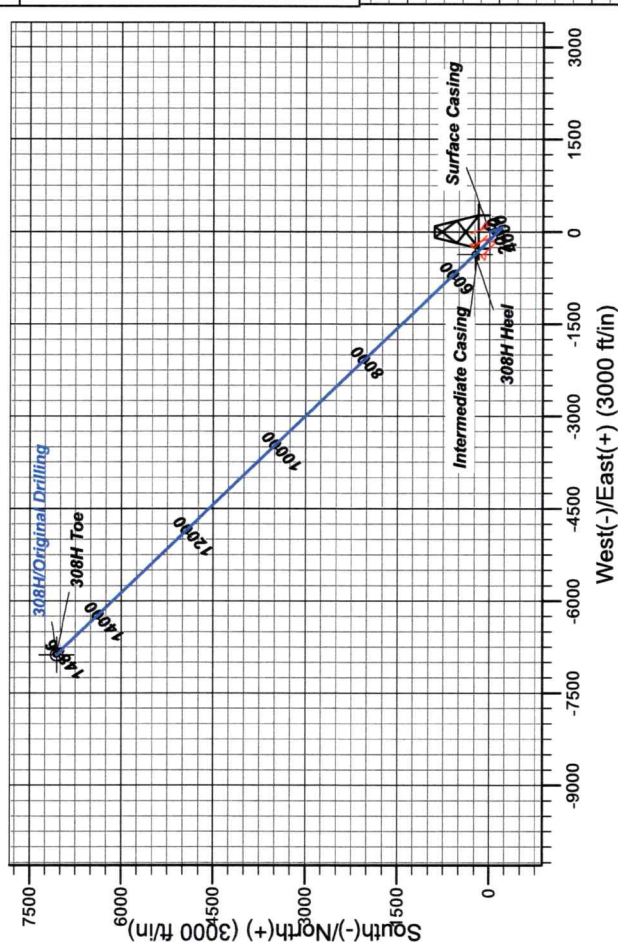
Created By: Janie Collins Date: 8:37, January 09 2020

CASING DETAILS

TVD	MD	Name
350.00	350.00	Surface Casing
5100.53	5416.17	Intermediate Casing

FORMATION DETAILS

Formation	MDPath	VDPath
Ojo Alamo	820.48	820.00
Kirtland	973.72	973.00
Fruitland	1263.16	1262.00
Pictured Cliffs	1609.69	1608.00
Lewis	1706.84	1705.00
Chacra	2350.82	2348.00
Menefee	3100.97	3097.01
Point Lookout	4056.43	4051.01
Mancos	4231.70	4226.01
Mancos Silt	4550.25	4544.01
Gallup A	5184.60	5039.01
Gallup B	5293.49	5078.01





DJR Operating

Nageezi Unit

G35 2409

308H - Slot 5

Original Drilling

Plan: APD

Standard Planning Report

09 January, 2020



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Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 308H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site:	G35 2409	North Reference:	True
Well:	308H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Project	Nageezi 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		G35 2409			
Site Position:		Northing:	1,918,072.88 usft	Latitude:	36.271
From:	Lat/Long	Easting:	2,745,314.54 usft	Longitude:	-107.758
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.04 °

Well	308H - Slot 5					
Well Position	+N/-S	60.06 ft	Northing:	1,918,132.98 usft	Latitude:	36.271
	+E/-W	53.06 ft	Easting:	2,745,367.56 usft	Longitude:	-107.758
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	6,899.01 ft

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	12/20/2019	8.78	62.80	49,429.60000000

Design	APD			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	315.74

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
558.36	3.17	158.89	558.28	-4.08	1.58	2.00	2.00	0.00	158.89	
4,440.09	3.17	158.89	4,434.08	-204.15	78.82	0.00	0.00	0.00	0.00	
5,467.39	89.53	316.31	5,103.01	242.12	-366.93	9.00	8.41	15.32	157.40	308H Heel
14,895.85	89.53	316.31	5,180.01	7,059.94	-6,879.02	0.00	0.00	0.00	0.00	308H Toe



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Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 308H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site:	G35 2409	North Reference:	True
Well:	308H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	2.00	158.89	499.98	-1.63	0.63	-1.60	2.00	2.00	0.00
558.36	3.17	158.89	558.28	-4.08	1.58	-4.02	2.00	2.00	0.00
600.00	3.17	158.89	599.86	-6.23	2.40	-6.14	0.00	0.00	0.00
700.00	3.17	158.89	699.70	-11.38	4.39	-11.22	0.00	0.00	0.00
800.00	3.17	158.89	799.55	-16.54	6.38	-16.30	0.00	0.00	0.00
900.00	3.17	158.89	899.40	-21.69	8.37	-21.38	0.00	0.00	0.00
1,000.00	3.17	158.89	999.24	-26.84	10.36	-26.46	0.00	0.00	0.00
1,100.00	3.17	158.89	1,099.09	-32.00	12.35	-31.54	0.00	0.00	0.00
1,200.00	3.17	158.89	1,198.94	-37.15	14.34	-36.62	0.00	0.00	0.00
1,300.00	3.17	158.89	1,298.79	-42.31	16.33	-41.70	0.00	0.00	0.00
1,400.00	3.17	158.89	1,398.63	-47.46	18.32	-46.78	0.00	0.00	0.00
1,500.00	3.17	158.89	1,498.48	-52.62	20.31	-51.86	0.00	0.00	0.00
1,600.00	3.17	158.89	1,598.33	-57.77	22.30	-56.94	0.00	0.00	0.00
1,700.00	3.17	158.89	1,698.18	-62.92	24.29	-62.02	0.00	0.00	0.00
1,800.00	3.17	158.89	1,798.02	-68.08	26.28	-67.10	0.00	0.00	0.00
1,900.00	3.17	158.89	1,897.87	-73.23	28.27	-72.18	0.00	0.00	0.00
2,000.00	3.17	158.89	1,997.72	-78.39	30.26	-77.26	0.00	0.00	0.00
2,100.00	3.17	158.89	2,097.56	-83.54	32.25	-82.34	0.00	0.00	0.00
2,200.00	3.17	158.89	2,197.41	-88.69	34.24	-87.42	0.00	0.00	0.00
2,300.00	3.17	158.89	2,297.26	-93.85	36.23	-92.50	0.00	0.00	0.00
2,400.00	3.17	158.89	2,397.11	-99.00	38.22	-97.58	0.00	0.00	0.00
2,500.00	3.17	158.89	2,496.95	-104.16	40.21	-102.66	0.00	0.00	0.00
2,600.00	3.17	158.89	2,596.80	-109.31	42.20	-107.74	0.00	0.00	0.00
2,700.00	3.17	158.89	2,696.65	-114.46	44.19	-112.82	0.00	0.00	0.00
2,800.00	3.17	158.89	2,796.50	-119.62	46.18	-117.90	0.00	0.00	0.00
2,900.00	3.17	158.89	2,896.34	-124.77	48.17	-122.98	0.00	0.00	0.00
3,000.00	3.17	158.89	2,996.19	-129.93	50.16	-128.06	0.00	0.00	0.00
3,100.00	3.17	158.89	3,096.04	-135.08	52.15	-133.14	0.00	0.00	0.00
3,200.00	3.17	158.89	3,195.88	-140.24	54.14	-138.22	0.00	0.00	0.00
3,300.00	3.17	158.89	3,295.73	-145.39	56.13	-143.30	0.00	0.00	0.00
3,400.00	3.17	158.89	3,395.58	-150.54	58.12	-148.38	0.00	0.00	0.00
3,500.00	3.17	158.89	3,495.43	-155.70	60.11	-153.46	0.00	0.00	0.00
3,600.00	3.17	158.89	3,595.27	-160.85	62.10	-158.54	0.00	0.00	0.00
3,700.00	3.17	158.89	3,695.12	-166.01	64.09	-163.62	0.00	0.00	0.00
3,800.00	3.17	158.89	3,794.97	-171.16	66.08	-168.70	0.00	0.00	0.00
3,900.00	3.17	158.89	3,894.82	-176.31	68.07	-173.78	0.00	0.00	0.00
4,000.00	3.17	158.89	3,994.66	-181.47	70.06	-178.86	0.00	0.00	0.00
4,100.00	3.17	158.89	4,094.51	-186.62	72.05	-183.94	0.00	0.00	0.00
4,200.00	3.17	158.89	4,194.36	-191.78	74.04	-189.02	0.00	0.00	0.00
4,300.00	3.17	158.89	4,294.20	-196.93	76.03	-194.10	0.00	0.00	0.00
4,400.00	3.17	158.89	4,394.05	-202.08	78.02	-199.18	0.00	0.00	0.00
4,440.09	3.17	158.89	4,434.08	-204.15	78.82	-201.22	0.00	0.00	0.00
4,500.00	2.75	290.09	4,493.95	-205.20	78.06	-201.45	9.00	-0.70	219.01
4,600.00	11.53	310.35	4,593.09	-197.89	68.17	-189.31	9.00	8.78	20.26
4,700.00	20.50	313.07	4,689.11	-179.42	47.72	-161.81	9.00	8.97	2.72
4,800.00	29.49	314.17	4,779.65	-150.25	17.21	-119.62	9.00	8.99	1.10
4,900.00	38.48	314.79	4,862.49	-111.10	-22.61	-63.80	9.00	8.99	0.62
5,000.00	47.48	315.21	4,935.57	-62.93	-70.75	4.30	9.00	9.00	0.41
5,100.00	56.48	315.52	4,997.10	-6.92	-126.03	83.00	9.00	9.00	0.31



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Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 308H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site:	G35 2409	North Reference:	True
Well:	308H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,200.00	65.47	315.77	5,045.57	55.54	-187.10	170.35	9.00	9.00	0.25	
5,300.00	74.47	315.99	5,079.79	122.92	-252.44	264.20	9.00	9.00	0.22	
5,400.00	83.47	316.18	5,098.90	193.55	-320.44	362.25	9.00	9.00	0.20	
5,467.39	89.53	316.31	5,103.01	242.12	-366.93	429.48	9.00	9.00	0.19	
5,500.00	89.53	316.31	5,103.28	265.70	-389.46	462.09	0.00	0.00	0.00	
5,600.00	89.53	316.31	5,104.09	338.01	-458.53	562.08	0.00	0.00	0.00	
5,700.00	89.53	316.31	5,104.91	410.32	-527.60	662.08	0.00	0.00	0.00	
5,800.00	89.53	316.31	5,105.73	482.63	-596.66	762.07	0.00	0.00	0.00	
5,900.00	89.53	316.31	5,106.54	554.94	-665.73	862.06	0.00	0.00	0.00	
6,000.00	89.53	316.31	5,107.36	627.25	-734.80	962.05	0.00	0.00	0.00	
6,100.00	89.53	316.31	5,108.18	699.57	-803.87	1,062.04	0.00	0.00	0.00	
6,200.00	89.53	316.31	5,108.99	771.88	-872.94	1,162.03	0.00	0.00	0.00	
6,300.00	89.53	316.31	5,109.81	844.19	-942.01	1,262.03	0.00	0.00	0.00	
6,400.00	89.53	316.31	5,110.63	916.50	-1,011.08	1,362.02	0.00	0.00	0.00	
6,500.00	89.53	316.31	5,111.44	988.81	-1,080.14	1,462.01	0.00	0.00	0.00	
6,600.00	89.53	316.31	5,112.26	1,061.12	-1,149.21	1,562.00	0.00	0.00	0.00	
6,700.00	89.53	316.31	5,113.08	1,133.43	-1,218.28	1,661.99	0.00	0.00	0.00	
6,800.00	89.53	316.31	5,113.89	1,205.74	-1,287.35	1,761.98	0.00	0.00	0.00	
6,900.00	89.53	316.31	5,114.71	1,278.05	-1,356.42	1,861.98	0.00	0.00	0.00	
7,000.00	89.53	316.31	5,115.53	1,350.36	-1,425.49	1,961.97	0.00	0.00	0.00	
7,100.00	89.53	316.31	5,116.34	1,422.67	-1,494.56	2,061.96	0.00	0.00	0.00	
7,200.00	89.53	316.31	5,117.16	1,494.99	-1,563.62	2,161.95	0.00	0.00	0.00	
7,300.00	89.53	316.31	5,117.98	1,567.30	-1,632.69	2,261.94	0.00	0.00	0.00	
7,400.00	89.53	316.31	5,118.79	1,639.61	-1,701.76	2,361.94	0.00	0.00	0.00	
7,500.00	89.53	316.31	5,119.61	1,711.92	-1,770.83	2,461.93	0.00	0.00	0.00	
7,600.00	89.53	316.31	5,120.43	1,784.23	-1,839.90	2,561.92	0.00	0.00	0.00	
7,700.00	89.53	316.31	5,121.24	1,856.54	-1,908.97	2,661.91	0.00	0.00	0.00	
7,800.00	89.53	316.31	5,122.06	1,928.85	-1,978.04	2,761.90	0.00	0.00	0.00	
7,900.00	89.53	316.31	5,122.88	2,001.16	-2,047.10	2,861.89	0.00	0.00	0.00	
8,000.00	89.53	316.31	5,123.69	2,073.47	-2,116.17	2,961.89	0.00	0.00	0.00	
8,100.00	89.53	316.31	5,124.51	2,145.78	-2,185.24	3,061.88	0.00	0.00	0.00	
8,200.00	89.53	316.31	5,125.33	2,218.09	-2,254.31	3,161.87	0.00	0.00	0.00	
8,300.00	89.53	316.31	5,126.14	2,290.41	-2,323.38	3,261.86	0.00	0.00	0.00	
8,400.00	89.53	316.31	5,126.96	2,362.72	-2,392.45	3,361.85	0.00	0.00	0.00	
8,500.00	89.53	316.31	5,127.78	2,435.03	-2,461.52	3,461.84	0.00	0.00	0.00	
8,600.00	89.53	316.31	5,128.59	2,507.34	-2,530.58	3,561.84	0.00	0.00	0.00	
8,700.00	89.53	316.31	5,129.41	2,579.65	-2,599.65	3,661.83	0.00	0.00	0.00	
8,800.00	89.53	316.31	5,130.23	2,651.96	-2,668.72	3,761.82	0.00	0.00	0.00	
8,900.00	89.53	316.31	5,131.04	2,724.27	-2,737.79	3,861.81	0.00	0.00	0.00	
9,000.00	89.53	316.31	5,131.86	2,796.58	-2,806.86	3,961.80	0.00	0.00	0.00	
9,100.00	89.53	316.31	5,132.68	2,868.89	-2,875.93	4,061.79	0.00	0.00	0.00	
9,200.00	89.53	316.31	5,133.49	2,941.20	-2,944.99	4,161.79	0.00	0.00	0.00	
9,300.00	89.53	316.31	5,134.31	3,013.52	-3,014.06	4,261.78	0.00	0.00	0.00	
9,400.00	89.53	316.31	5,135.13	3,085.83	-3,083.13	4,361.77	0.00	0.00	0.00	
9,500.00	89.53	316.31	5,135.94	3,158.14	-3,152.20	4,461.76	0.00	0.00	0.00	
9,600.00	89.53	316.31	5,136.76	3,230.45	-3,221.27	4,561.75	0.00	0.00	0.00	
9,700.00	89.53	316.31	5,137.58	3,302.76	-3,290.34	4,661.74	0.00	0.00	0.00	
9,800.00	89.53	316.31	5,138.39	3,375.07	-3,359.41	4,761.74	0.00	0.00	0.00	
9,900.00	89.53	316.31	5,139.21	3,447.38	-3,428.47	4,861.73	0.00	0.00	0.00	
10,000.00	89.53	316.31	5,140.03	3,519.69	-3,497.54	4,961.72	0.00	0.00	0.00	
10,100.00	89.53	316.31	5,140.84	3,592.00	-3,566.61	5,061.71	0.00	0.00	0.00	
10,200.00	89.53	316.31	5,141.66	3,664.31	-3,635.68	5,161.70	0.00	0.00	0.00	
10,300.00	89.53	316.31	5,142.48	3,736.62	-3,704.75	5,261.69	0.00	0.00	0.00	
10,400.00	89.53	316.31	5,143.29	3,808.94	-3,773.82	5,361.69	0.00	0.00	0.00	



Scientific Drilling, Intl

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 308H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site:	G35 2409	North Reference:	True
Well:	308H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,500.00	89.53	316.31	5,144.11	3,881.25	-3,842.89	5,461.68	0.00	0.00	0.00
10,600.00	89.53	316.31	5,144.93	3,953.56	-3,911.95	5,561.67	0.00	0.00	0.00
10,700.00	89.53	316.31	5,145.74	4,025.87	-3,981.02	5,661.66	0.00	0.00	0.00
10,800.00	89.53	316.31	5,146.56	4,098.18	-4,050.09	5,761.65	0.00	0.00	0.00
10,900.00	89.53	316.31	5,147.38	4,170.49	-4,119.16	5,861.65	0.00	0.00	0.00
11,000.00	89.53	316.31	5,148.19	4,242.80	-4,188.23	5,961.64	0.00	0.00	0.00
11,100.00	89.53	316.31	5,149.01	4,315.11	-4,257.30	6,061.63	0.00	0.00	0.00
11,200.00	89.53	316.31	5,149.83	4,387.42	-4,326.37	6,161.62	0.00	0.00	0.00
11,300.00	89.53	316.31	5,150.64	4,459.73	-4,395.43	6,261.61	0.00	0.00	0.00
11,400.00	89.53	316.31	5,151.46	4,532.04	-4,464.50	6,361.60	0.00	0.00	0.00
11,500.00	89.53	316.31	5,152.28	4,604.36	-4,533.57	6,461.60	0.00	0.00	0.00
11,600.00	89.53	316.31	5,153.09	4,676.67	-4,602.64	6,561.59	0.00	0.00	0.00
11,700.00	89.53	316.31	5,153.91	4,748.98	-4,671.71	6,661.58	0.00	0.00	0.00
11,800.00	89.53	316.31	5,154.73	4,821.29	-4,740.78	6,761.57	0.00	0.00	0.00
11,900.00	89.53	316.31	5,155.54	4,893.60	-4,809.85	6,861.56	0.00	0.00	0.00
12,000.00	89.53	316.31	5,156.36	4,965.91	-4,878.91	6,961.55	0.00	0.00	0.00
12,100.00	89.53	316.31	5,157.18	5,038.22	-4,947.98	7,061.55	0.00	0.00	0.00
12,200.00	89.53	316.31	5,157.99	5,110.53	-5,017.05	7,161.54	0.00	0.00	0.00
12,300.00	89.53	316.31	5,158.81	5,182.84	-5,086.12	7,261.53	0.00	0.00	0.00
12,400.00	89.53	316.31	5,159.63	5,255.15	-5,155.19	7,361.52	0.00	0.00	0.00
12,500.00	89.53	316.31	5,160.44	5,327.46	-5,224.26	7,461.51	0.00	0.00	0.00
12,600.00	89.53	316.31	5,161.26	5,399.78	-5,293.33	7,561.50	0.00	0.00	0.00
12,700.00	89.53	316.31	5,162.08	5,472.09	-5,362.39	7,661.50	0.00	0.00	0.00
12,800.00	89.53	316.31	5,162.89	5,544.40	-5,431.46	7,761.49	0.00	0.00	0.00
12,900.00	89.53	316.31	5,163.71	5,616.71	-5,500.53	7,861.48	0.00	0.00	0.00
13,000.00	89.53	316.31	5,164.53	5,689.02	-5,569.60	7,961.47	0.00	0.00	0.00
13,100.00	89.53	316.31	5,165.34	5,761.33	-5,638.67	8,061.46	0.00	0.00	0.00
13,200.00	89.53	316.31	5,166.16	5,833.64	-5,707.74	8,161.45	0.00	0.00	0.00
13,300.00	89.53	316.31	5,166.98	5,905.95	-5,776.81	8,261.45	0.00	0.00	0.00
13,400.00	89.53	316.31	5,167.79	5,978.26	-5,845.87	8,361.44	0.00	0.00	0.00
13,500.00	89.53	316.31	5,168.61	6,050.57	-5,914.94	8,461.43	0.00	0.00	0.00
13,600.00	89.53	316.31	5,169.43	6,122.88	-5,984.01	8,561.42	0.00	0.00	0.00
13,700.00	89.53	316.31	5,170.24	6,195.20	-6,053.08	8,661.41	0.00	0.00	0.00
13,800.00	89.53	316.31	5,171.06	6,267.51	-6,122.15	8,761.40	0.00	0.00	0.00
13,900.00	89.53	316.31	5,171.88	6,339.82	-6,191.22	8,861.40	0.00	0.00	0.00
14,000.00	89.53	316.31	5,172.69	6,412.13	-6,260.29	8,961.39	0.00	0.00	0.00
14,100.00	89.53	316.31	5,173.51	6,484.44	-6,329.35	9,061.38	0.00	0.00	0.00
14,200.00	89.53	316.31	5,174.33	6,556.75	-6,398.42	9,161.37	0.00	0.00	0.00
14,300.00	89.53	316.31	5,175.14	6,629.06	-6,467.49	9,261.36	0.00	0.00	0.00
14,400.00	89.53	316.31	5,175.96	6,701.37	-6,536.56	9,361.36	0.00	0.00	0.00
14,500.00	89.53	316.31	5,176.78	6,773.68	-6,605.63	9,461.35	0.00	0.00	0.00
14,600.00	89.53	316.31	5,177.59	6,845.99	-6,674.70	9,561.34	0.00	0.00	0.00
14,700.00	89.53	316.31	5,178.41	6,918.30	-6,743.77	9,661.33	0.00	0.00	0.00
14,800.00	89.53	316.31	5,179.23	6,990.62	-6,812.83	9,761.32	0.00	0.00	0.00
14,895.85	89.53	316.31	5,180.01	7,059.94	-6,879.02	9,857.17	0.00	0.00	0.00



Scientific Drilling, Intl
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 308H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site:	G35 2409	North Reference:	True
Well:	308H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
308H Heel	0.00	0.00	5,103.01	242.12	-366.93	1,918,374.81	2,745,000.44	36.272	-107.759
- plan hits target center									
- Circle (radius 50.00)									
308H Toe	0.00	0.00	5,180.01	7,059.94	-6,879.02	1,925,187.54	2,738,483.04	36.291	-107.781
- plan hits target center									
- Circle (radius 100.00)									

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(ft)	(ft)		(in)	(in)	
350.00	350.00	Surface Casing	9.620	12.250	
5,416.17	5,100.53	Intermediate Casing	7.000	8.750	

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
820.48	820.00	Ojo Alamo		0.00	0.00	
973.72	973.00	Kirtland		0.00	0.00	
1,263.16	1,262.00	Fruitland		0.00	0.00	
1,609.69	1,608.00	Pictured Cliffs		0.00	0.00	
1,706.84	1,705.00	Lewis		0.00	0.00	
2,350.82	2,348.00	Chacra		0.00	0.00	
3,100.97	3,097.01	Menefee		0.00	0.00	
4,056.43	4,051.01	Point Lookout		0.00	0.00	
4,231.70	4,226.01	Mancos		0.00	0.00	
4,550.25	4,544.01	Mancos Silt		0.00	0.00	
5,184.60	5,039.01	Gallup A		0.00	0.00	
5,293.49	5,078.01	Gallup B		0.00	0.00	



DJR Operating

Nageezi Unit

G35 2409

308H

Original Drilling

APD

Anticollision Report

09 January, 2020



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Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference	APD		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.00 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	1/9/2020		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	14,895.85	APD (Original Drilling)	MWD+IGRF	OWSG MWD + IGRF or WMM	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
G35 2409						
309H - Original Drilling - APD	305.56	305.56	40.21	38.43	22.563	CC
309H - Original Drilling - APD	400.00	399.68	40.31	37.85	16.426	ES
309H - Original Drilling - APD	4,500.00	4,489.85	269.98	237.28	8.257	SF
310H - Original Drilling - APD	400.00	400.00	19.97	17.51	8.120	CC
310H - Original Drilling - APD	500.00	499.49	20.44	17.30	6.506	ES
310H - Original Drilling - APD	14,600.00	15,169.28	644.39	181.27	1.391	Level 3, SF
313H - Original Drilling - APD	305.56	305.56	39.66	37.88	22.256	CC
313H - Original Drilling - APD	400.00	399.72	39.75	37.29	16.170	ES
313H - Original Drilling - APD	600.00	596.47	50.94	47.08	13.216	SF
632H - Original Drilling - APD	400.00	400.00	19.69	17.23	8.009	CC, ES
632H - Original Drilling - APD	14,895.85	14,581.65	651.56	189.51	1.410	Level 3, SF

Offset Design													
G35 2409 - 309H - Original Drilling - APD													
Survey Program: 0-MWD+IGRF													
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-138.71	-30.21	-26.53	40.21				
100.00	100.00	100.00	100.00	0.15	0.15	-138.71	-30.21	-26.53	40.21	39.90	0.31	130.423	
200.00	200.00	200.00	200.00	0.51	0.51	-138.71	-30.21	-26.53	40.21	39.18	1.03	39.218	
300.00	300.00	300.00	300.00	0.87	0.87	-138.71	-30.21	-26.53	40.21	38.47	1.74	23.079	
305.56	305.56	305.56	305.56	0.89	0.89	-138.71	-30.21	-26.53	40.21	38.43	1.78	22.563	CC
400.00	400.00	399.68	399.68	1.23	1.22	-138.77	-30.31	-26.56	40.31	37.85	2.45	16.426	ES
500.00	499.98	498.38	498.35	1.57	1.55	62.96	-32.75	-27.30	41.85	38.73	3.12	13.393	
600.00	599.86	596.98	596.75	1.91	1.90	65.25	-38.43	-29.03	45.11	41.31	3.80	11.873	
700.00	699.70	696.29	695.68	2.26	2.26	66.35	-46.79	-31.56	50.62	46.13	4.50	11.260	
800.00	799.55	796.12	795.11	2.62	2.63	67.12	-55.42	-34.18	56.37	51.16	5.21	10.823	
900.00	899.40	895.95	894.53	2.98	3.01	67.75	-64.05	-36.80	62.12	56.19	5.93	10.478	
1,000.00	999.24	995.79	993.95	3.34	3.40	68.27	-72.68	-39.42	67.88	61.22	6.66	10.199	
1,100.00	1,099.09	1,095.62	1,093.38	3.71	3.78	68.71	-81.31	-42.04	73.64	66.25	7.39	9.970	
1,200.00	1,198.94	1,195.45	1,192.80	4.08	4.17	69.09	-89.95	-44.65	79.41	71.29	8.12	9.779	
1,300.00	1,298.79	1,295.28	1,292.23	4.45	4.57	69.41	-98.58	-47.27	85.18	76.32	8.86	9.617	
1,400.00	1,398.63	1,395.12	1,391.65	4.82	4.96	69.69	-107.21	-49.89	90.95	81.35	9.60	9.478	

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
1,500.00	1,498.48	1,494.95	1,491.08	5.19	5.35	69.94	-115.84	-52.51	96.72	86.39	10.34	9.358		
1,600.00	1,598.33	1,594.78	1,590.50	5.56	5.75	70.17	-124.47	-55.13	102.50	91.42	11.08	9.253		
1,700.00	1,698.18	1,694.61	1,689.92	5.93	6.14	70.36	-133.10	-57.74	108.27	96.45	11.82	9.161		
1,800.00	1,798.02	1,794.45	1,789.35	6.30	6.54	70.54	-141.73	-60.36	114.05	101.49	12.56	9.079		
1,900.00	1,897.87	1,894.28	1,888.77	6.68	6.93	70.70	-150.36	-62.98	119.83	106.52	13.31	9.006		
2,000.00	1,997.72	1,994.11	1,988.20	7.05	7.33	70.85	-158.99	-65.60	125.61	111.56	14.05	8.940		
2,100.00	2,097.56	2,093.94	2,087.62	7.42	7.73	70.98	-167.62	-68.22	131.39	116.59	14.79	8.881		
2,200.00	2,197.41	2,193.78	2,187.04	7.80	8.12	71.10	-176.26	-70.83	137.17	121.63	15.54	8.827		
2,300.00	2,297.26	2,293.61	2,286.47	8.17	8.52	71.22	-184.89	-73.45	142.95	126.67	16.29	8.778		
2,400.00	2,397.11	2,393.44	2,385.89	8.54	8.92	71.32	-193.52	-76.07	148.73	131.70	17.03	8.733		
2,500.00	2,496.95	2,493.27	2,485.32	8.92	9.32	71.42	-202.15	-78.69	154.52	136.74	17.78	8.692		
2,600.00	2,596.80	2,593.10	2,584.74	9.29	9.71	71.50	-210.78	-81.31	160.30	141.77	18.52	8.653		
2,700.00	2,696.65	2,692.94	2,684.16	9.66	10.11	71.59	-219.41	-83.92	166.08	146.81	19.27	8.618		
2,800.00	2,796.50	2,792.77	2,783.59	10.04	10.51	71.66	-228.04	-86.54	171.87	151.85	20.02	8.586		
2,900.00	2,896.34	2,892.60	2,883.01	10.41	10.91	71.74	-236.67	-89.16	177.65	156.88	20.77	8.555		
3,000.00	2,996.19	2,992.43	2,982.44	10.79	11.31	71.80	-245.30	-91.78	183.43	161.92	21.51	8.527		
3,100.00	3,096.04	3,092.27	3,081.86	11.16	11.70	71.87	-253.94	-94.40	189.22	166.96	22.26	8.500		
3,200.00	3,195.88	3,192.10	3,181.28	11.53	12.10	71.93	-262.57	-97.01	195.00	171.99	23.01	8.476		
3,300.00	3,295.73	3,291.93	3,280.71	11.91	12.50	71.98	-271.20	-99.63	200.79	177.03	23.76	8.452		
3,400.00	3,395.58	3,391.76	3,380.13	12.28	12.90	72.04	-279.83	-102.25	206.57	182.07	24.50	8.430		
3,500.00	3,495.43	3,491.60	3,479.56	12.66	13.30	72.09	-288.46	-104.87	212.36	187.11	25.25	8.410		
3,600.00	3,595.27	3,591.43	3,578.98	13.03	13.70	72.13	-297.09	-107.49	218.14	192.14	26.00	8.390		
3,700.00	3,695.12	3,691.26	3,678.41	13.41	14.09	72.18	-305.72	-110.11	223.93	197.18	26.75	8.372		
3,800.00	3,794.97	3,791.09	3,777.83	13.78	14.49	72.22	-314.35	-112.72	229.71	202.22	27.50	8.355		
3,900.00	3,894.82	3,890.93	3,877.25	14.15	14.89	72.26	-322.98	-115.34	235.50	207.26	28.24	8.338		
4,000.00	3,994.66	3,990.76	3,976.68	14.53	15.29	72.30	-331.61	-117.96	241.28	212.29	28.99	8.322		
4,100.00	4,094.51	4,090.59	4,076.10	14.90	15.69	72.34	-340.25	-120.58	247.07	217.33	29.74	8.308		
4,200.00	4,194.36	4,190.42	4,175.53	15.28	16.09	72.37	-348.88	-123.20	252.86	222.37	30.49	8.293		
4,300.00	4,294.20	4,290.25	4,274.95	15.65	16.49	72.41	-357.51	-125.81	258.64	227.41	31.24	8.280		
4,400.00	4,394.05	4,390.09	4,374.37	16.03	16.88	72.44	-366.14	-128.43	264.43	232.44	31.99	8.267		
4,500.00	4,493.95	4,489.85	4,473.73	16.38	17.28	-58.98	-374.76	-131.05	269.98	237.28	32.70	8.257 SF		
4,600.00	4,593.09	4,588.21	4,571.69	16.66	17.68	-82.18	-383.27	-133.63	274.85	241.61	33.25	8.267		
4,700.00	4,689.11	4,684.78	4,668.87	16.89	18.05	-90.34	-391.44	-136.11	281.57	247.92	33.66	8.365		
4,800.00	4,779.65	4,762.91	4,745.34	17.10	18.39	-97.99	-401.33	-135.29	295.75	261.82	33.94	8.715		
4,900.00	4,862.49	4,822.28	4,803.26	17.31	18.65	-103.56	-413.18	-130.16	326.08	291.99	34.09	9.566		
5,000.00	4,935.57	4,861.68	4,840.97	17.60	18.84	-104.84	-423.13	-124.64	376.29	342.13	34.16	11.017		
5,100.00	4,997.10	4,884.26	4,862.26	18.07	18.95	-100.88	-429.56	-120.72	443.66	409.44	34.22	12.967		
5,200.00	5,045.57	4,900.00	4,876.94	18.76	19.03	-92.43	-434.35	-117.68	522.74	488.29	34.45	15.174		
5,300.00	5,079.79	4,900.00	4,876.94	19.69	19.03	-77.74	-434.35	-117.68	608.16	573.52	34.64	17.556		
5,400.00	5,098.90	4,884.21	4,862.21	20.85	18.95	-59.64	-429.54	-120.73	695.81	661.05	34.76	20.016		
5,500.00	5,103.28	4,870.08	4,848.92	22.19	18.88	-48.87	-425.46	-123.25	783.11	748.05	35.06	22.337		
5,600.00	5,104.09	4,850.00	4,829.87	23.71	18.78	-46.62	-420.01	-126.45	871.82	836.56	35.26	24.724		
5,700.00	5,104.91	4,850.00	4,829.87	25.38	18.78	-46.62	-420.01	-126.45	962.30	926.64	35.65	26.991		
5,800.00	5,105.73	4,833.58	4,814.15	27.17	18.71	-44.86	-415.86	-128.74	1,054.17	1,018.37	35.80	29.449		
5,900.00	5,106.54	4,824.11	4,805.03	29.06	18.66	-43.88	-413.60	-129.94	1,147.20	1,111.23	35.98	31.888		
6,000.00	5,107.36	4,800.00	4,781.65	31.04	18.55	-41.50	-408.28	-132.53	1,241.43	1,205.44	35.99	34.492		
6,100.00	5,108.18	4,800.00	4,781.65	33.08	18.55	-41.50	-408.28	-132.53	1,335.91	1,299.71	36.20	36.903		
6,200.00	5,108.99	4,800.00	4,781.65	35.17	18.55	-41.50	-408.28	-132.53	1,431.13	1,394.75	36.38	39.343		
6,300.00	5,109.81	4,800.00	4,781.65	37.32	18.55	-41.50	-408.28	-132.53	1,526.97	1,490.44	36.53	41.805		
6,400.00	5,110.63	4,800.00	4,781.65	39.50	18.55	-41.50	-408.28	-132.53	1,623.30	1,586.65	36.66	44.284		
6,500.00	5,111.44	4,800.00	4,781.65	41.71	18.55	-41.50	-408.28	-132.53	1,720.06	1,683.29	36.77	46.778		
6,600.00	5,112.26	4,779.15	4,761.28	43.95	18.46	-39.57	-404.19	-134.26	1,816.71	1,779.97	36.74	49.441		

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 309H - Original Drilling - APD													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
6,700.00	5,113.08	4,774.72	4,756.94	46.22	18.44	-39.18	-403.38	-134.57	1,913.91	1,877.09	36.82	51.987		
6,800.00	5,113.89	4,770.63	4,752.92	48.50	18.42	-38.82	-402.65	-134.84	2,011.35	1,974.47	36.88	54.536		
6,900.00	5,114.71	4,750.00	4,732.60	50.80	18.33	-37.07	-399.26	-135.89	2,109.28	2,072.43	36.85	57.243		
7,000.00	5,115.53	4,750.00	4,732.60	53.12	18.33	-37.07	-399.26	-135.89	2,207.01	2,170.08	36.93	59.766		
7,100.00	5,116.34	4,750.00	4,732.60	55.45	18.33	-37.07	-399.26	-135.89	2,304.92	2,267.92	37.00	62.292		
7,200.00	5,117.16	4,750.00	4,732.60	57.80	18.33	-37.07	-399.26	-135.89	2,403.01	2,365.94	37.07	64.822		
7,300.00	5,117.98	4,750.00	4,732.60	60.15	18.33	-37.07	-399.26	-135.89	2,501.25	2,464.12	37.14	67.354		
7,400.00	5,118.79	4,750.00	4,732.60	62.52	18.33	-37.07	-399.26	-135.89	2,599.63	2,562.43	37.20	69.887		
7,500.00	5,119.61	4,750.00	4,732.60	64.89	18.33	-37.07	-399.26	-135.89	2,698.12	2,660.87	37.26	72.420		
7,600.00	5,120.43	4,750.00	4,732.60	67.27	18.33	-37.07	-399.26	-135.89	2,796.73	2,759.41	37.31	74.952		
7,700.00	5,121.24	4,750.00	4,732.60	69.65	18.33	-37.07	-399.26	-135.89	2,895.42	2,858.05	37.37	77.483		
7,800.00	5,122.06	4,750.00	4,732.60	72.04	18.33	-37.07	-399.26	-135.89	2,994.21	2,956.79	37.42	80.012		
7,900.00	5,122.88	4,750.00	4,732.60	74.44	18.33	-37.07	-399.26	-135.89	3,093.07	3,055.60	37.47	82.539		
8,000.00	5,123.69	4,750.00	4,732.60	76.84	18.33	-37.07	-399.26	-135.89	3,192.00	3,154.48	37.52	85.063		
8,100.00	5,124.51	4,750.00	4,732.60	79.25	18.33	-37.07	-399.26	-135.89	3,291.00	3,253.42	37.58	87.584		
8,200.00	5,125.33	4,750.00	4,732.60	81.66	18.33	-37.07	-399.26	-135.89	3,390.06	3,352.43	37.62	90.102		
8,300.00	5,126.14	4,750.00	4,732.60	84.07	18.33	-37.07	-399.26	-135.89	3,489.17	3,451.49	37.67	92.615		
8,400.00	5,126.96	4,750.00	4,732.60	86.49	18.33	-37.07	-399.26	-135.89	3,588.33	3,550.60	37.72	95.124		
8,500.00	5,127.78	4,750.00	4,732.60	88.91	18.33	-37.07	-399.26	-135.89	3,687.53	3,649.76	37.77	97.629		
8,600.00	5,128.59	4,728.43	4,711.26	91.33	18.24	-35.35	-396.21	-136.49	3,786.35	3,748.62	37.73	100.352		
8,700.00	5,129.41	4,727.06	4,709.91	93.76	18.24	-35.24	-396.04	-136.51	3,885.58	3,847.81	37.77	102.863		
8,800.00	5,130.23	4,725.76	4,708.61	96.18	18.23	-35.14	-395.87	-136.53	3,984.85	3,947.03	37.82	105.369		
8,900.00	5,131.04	4,724.51	4,707.37	98.61	18.22	-35.05	-395.72	-136.55	4,084.15	4,046.29	37.86	107.869		
9,000.00	5,131.86	4,723.32	4,706.19	101.05	18.22	-34.96	-395.57	-136.56	4,183.48	4,145.57	37.91	110.362		
9,100.00	5,132.68	4,722.17	4,705.05	103.48	18.22	-34.87	-395.43	-136.57	4,282.84	4,244.89	37.95	112.850		
9,200.00	5,133.49	4,700.00	4,683.02	105.92	18.12	-33.25	-392.99	-136.50	4,382.62	4,344.71	37.91	115.592		
9,300.00	5,134.31	4,700.00	4,683.02	108.36	18.12	-33.25	-392.99	-136.50	4,481.99	4,444.03	37.97	118.056		
9,400.00	5,135.13	4,700.00	4,683.02	110.80	18.12	-33.25	-392.99	-136.50	4,581.39	4,543.38	38.02	120.513		
9,500.00	5,135.94	4,700.00	4,683.02	113.24	18.12	-33.25	-392.99	-136.50	4,680.82	4,642.75	38.07	122.963		
9,600.00	5,136.76	4,700.00	4,683.02	115.68	18.12	-33.25	-392.99	-136.50	4,780.27	4,742.15	38.12	125.406		
9,700.00	5,137.58	4,700.00	4,683.02	118.12	18.12	-33.25	-392.99	-136.50	4,879.74	4,841.57	38.17	127.842		
9,800.00	5,138.39	4,700.00	4,683.02	120.57	18.12	-33.25	-392.99	-136.50	4,979.23	4,941.01	38.22	130.270		
9,900.00	5,139.21	4,700.00	4,683.02	123.01	18.12	-33.25	-392.99	-136.50	5,078.74	5,040.47	38.27	132.691		
10,000.00	5,140.03	4,700.00	4,683.02	125.46	18.12	-33.25	-392.99	-136.50	5,178.27	5,139.94	38.33	135.104		
10,100.00	5,140.84	4,700.00	4,683.02	127.91	18.12	-33.25	-392.99	-136.50	5,277.82	5,239.44	38.38	137.510		
10,200.00	5,141.66	4,700.00	4,683.02	130.36	18.12	-33.25	-392.99	-136.50	5,377.39	5,338.95	38.44	139.907		
10,300.00	5,142.48	4,700.00	4,683.02	132.81	18.12	-33.25	-392.99	-136.50	5,476.97	5,438.48	38.49	142.296		
10,400.00	5,143.29	4,700.00	4,683.02	135.26	18.12	-33.25	-392.99	-136.50	5,576.56	5,538.02	38.54	144.677		
10,500.00	5,144.11	4,700.00	4,683.02	137.71	18.12	-33.25	-392.99	-136.50	5,676.17	5,637.57	38.60	147.049		
10,600.00	5,144.93	4,700.00	4,683.02	140.16	18.12	-33.25	-392.99	-136.50	5,775.80	5,737.14	38.66	149.413		
10,700.00	5,145.74	4,700.00	4,683.02	142.62	18.12	-33.25	-392.99	-136.50	5,875.43	5,836.72	38.71	151.769		
10,800.00	5,146.56	4,700.00	4,683.02	145.07	18.12	-33.25	-392.99	-136.50	5,975.08	5,936.31	38.77	154.115		
10,900.00	5,147.38	4,700.00	4,683.02	147.52	18.12	-33.25	-392.99	-136.50	6,074.74	6,035.92	38.83	156.453		
11,000.00	5,148.19	4,700.00	4,683.02	149.98	18.12	-33.25	-392.99	-136.50	6,174.41	6,135.53	38.89	158.781		
11,100.00	5,149.01	4,700.00	4,683.02	152.44	18.12	-33.25	-392.99	-136.50	6,274.10	6,235.15	38.95	161.101		
11,200.00	5,149.83	4,700.00	4,683.02	154.89	18.12	-33.25	-392.99	-136.50	6,373.79	6,334.78	39.00	163.411		
11,300.00	5,150.64	4,700.00	4,683.02	157.35	18.12	-33.25	-392.99	-136.50	6,473.49	6,434.43	39.06	165.712		
11,400.00	5,151.46	4,700.00	4,683.02	159.81	18.12	-33.25	-392.99	-136.50	6,573.20	6,534.07	39.13	168.004		
11,500.00	5,152.28	4,700.00	4,683.02	162.26	18.12	-33.25	-392.99	-136.50	6,672.92	6,633.73	39.19	170.286		
11,600.00	5,153.09	4,700.00	4,683.02	164.72	18.12	-33.25	-392.99	-136.50	6,772.65	6,733.40	39.25	172.559		
11,700.00	5,153.91	4,700.00	4,683.02	167.18	18.12	-33.25	-392.99	-136.50	6,872.38	6,833.07	39.31	174.822		
11,800.00	5,154.73	4,700.00	4,683.02	169.64	18.12	-33.25	-392.99	-136.50	6,972.12	6,932.75	39.37	177.076		

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 309H - Original Drilling - APD													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
11,900.00	5,155.54	4,700.00	4,683.02	172.10	18.12	-33.25	-392.99	-136.50	7,071.87	7,032.44	39.44	179.320		
12,000.00	5,156.36	4,700.00	4,683.02	174.56	18.12	-33.25	-392.99	-136.50	7,171.63	7,132.13	39.50	181.554		
12,100.00	5,157.18	4,700.00	4,683.02	177.02	18.12	-33.25	-392.99	-136.50	7,271.39	7,231.83	39.57	183.778		
12,200.00	5,157.99	4,700.00	4,683.02	179.48	18.12	-33.25	-392.99	-136.50	7,371.17	7,331.53	39.63	185.993		
12,300.00	5,158.81	4,700.00	4,683.02	181.94	18.12	-33.25	-392.99	-136.50	7,470.94	7,431.24	39.70	188.197		
12,400.00	5,159.63	4,700.00	4,683.02	184.40	18.12	-33.25	-392.99	-136.50	7,570.72	7,530.96	39.76	190.391		
12,500.00	5,160.44	4,700.00	4,683.02	186.87	18.12	-33.25	-392.99	-136.50	7,670.51	7,630.68	39.83	192.576		
12,600.00	5,161.26	4,700.00	4,683.02	189.33	18.12	-33.25	-392.99	-136.50	7,770.30	7,730.41	39.90	194.750		
12,700.00	5,162.08	4,700.00	4,683.02	191.79	18.12	-33.25	-392.99	-136.50	7,870.10	7,830.14	39.97	196.914		
12,800.00	5,162.89	4,700.00	4,683.02	194.25	18.12	-33.25	-392.99	-136.50	7,969.91	7,929.87	40.04	199.068		
12,900.00	5,163.71	4,700.00	4,683.02	196.72	18.12	-33.25	-392.99	-136.50	8,069.72	8,029.61	40.11	201.212		
13,000.00	5,164.53	4,700.00	4,683.02	199.18	18.12	-33.25	-392.99	-136.50	8,169.53	8,129.35	40.18	203.346		
13,100.00	5,165.34	4,700.00	4,683.02	201.64	18.12	-33.25	-392.99	-136.50	8,269.35	8,229.10	40.25	205.469		
13,200.00	5,166.16	4,700.00	4,683.02	204.11	18.12	-33.25	-392.99	-136.50	8,369.17	8,328.85	40.32	207.582		
13,300.00	5,166.98	4,700.00	4,683.02	206.57	18.12	-33.25	-392.99	-136.50	8,468.99	8,428.60	40.39	209.685		
13,400.00	5,167.79	4,700.00	4,683.02	209.03	18.12	-33.25	-392.99	-136.50	8,568.82	8,528.36	40.46	211.777		
13,500.00	5,168.61	4,700.00	4,683.02	211.50	18.12	-33.25	-392.99	-136.50	8,668.66	8,628.12	40.53	213.859		
13,600.00	5,169.43	4,700.00	4,683.02	213.96	18.12	-33.25	-392.99	-136.50	8,768.50	8,727.89	40.61	215.931		
13,700.00	5,170.24	4,700.00	4,683.02	216.43	18.12	-33.25	-392.99	-136.50	8,868.34	8,827.66	40.68	217.992		
13,800.00	5,171.06	4,695.13	4,678.17	218.89	18.10	-32.91	-392.53	-136.42	8,968.16	8,927.42	40.74	220.135		
13,900.00	5,171.88	4,694.84	4,677.88	221.36	18.10	-32.89	-392.50	-136.41	9,068.01	9,027.20	40.81	222.182		
14,000.00	5,172.69	4,690.01	4,673.07	223.82	18.08	-32.56	-392.07	-136.30	9,167.88	9,127.00	40.87	224.306		
14,100.00	5,173.51	4,690.01	4,673.07	226.29	18.08	-32.56	-392.07	-136.30	9,267.73	9,226.78	40.95	226.327		
14,200.00	5,174.33	4,690.01	4,673.07	228.76	18.08	-32.56	-392.07	-136.30	9,367.58	9,326.55	41.03	228.337		
14,300.00	5,175.14	4,690.01	4,673.07	231.22	18.08	-32.56	-392.07	-136.30	9,467.44	9,426.33	41.10	230.337		
14,400.00	5,175.96	4,690.01	4,673.07	233.69	18.08	-32.56	-392.07	-136.30	9,567.30	9,526.12	41.18	232.326		
14,500.00	5,176.78	4,690.01	4,673.07	236.15	18.08	-32.56	-392.07	-136.30	9,667.16	9,625.90	41.26	234.305		
14,600.00	5,177.59	4,690.01	4,673.07	238.62	18.08	-32.56	-392.07	-136.30	9,767.02	9,725.69	41.34	236.274		
14,700.00	5,178.41	4,690.01	4,673.07	241.09	18.08	-32.56	-392.07	-136.30	9,866.89	9,825.47	41.42	238.232		
14,800.00	5,179.23	4,690.01	4,673.07	243.55	18.08	-32.56	-392.07	-136.30	9,966.76	9,925.27	41.50	240.180		

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.00	0.00	0.00	0.00	0.00	0.00	-138.35	-14.92	-13.27	19.97					
100.00	100.00	100.00	100.00	0.15	0.15	-138.35	-14.92	-13.27	19.97	19.66	0.31	64.772		
200.00	200.00	200.00	200.00	0.51	0.51	-138.35	-14.92	-13.27	19.97	18.94	1.03	19.477		
300.00	300.00	300.00	300.00	0.87	0.87	-138.35	-14.92	-13.27	19.97	18.23	1.74	11.462		
400.00	400.00	400.00	400.00	1.23	1.23	-138.35	-14.92	-13.27	19.97	17.51	2.46	8.120 CC		
500.00	499.98	499.49	499.47	1.57	1.57	63.78	-16.65	-13.23	20.44	17.30	3.14	6.506 ES		
600.00	599.86	598.96	598.80	1.91	1.91	65.87	-21.82	-13.12	22.03	18.21	3.81	5.776		
700.00	699.70	698.29	697.75	2.26	2.26	63.21	-30.43	-12.92	25.82	21.31	4.51	5.729		
800.00	799.55	797.27	796.00	2.62	2.63	57.20	-42.41	-12.65	32.32	27.11	5.21	6.206		
900.00	899.40	895.66	893.19	2.98	3.04	50.67	-57.68	-12.31	41.97	36.06	5.91	7.105		
1,000.00	999.24	993.84	989.64	3.34	3.47	45.11	-76.02	-11.90	54.82	48.22	6.61	8.296		
1,100.00	1,099.09	1,092.81	1,086.73	3.71	3.93	41.43	-95.17	-11.47	68.64	61.31	7.33	9.369		
1,200.00	1,198.94	1,191.77	1,183.83	4.08	4.40	38.99	-114.33	-11.04	82.63	74.59	8.04	10.272		
1,300.00	1,298.79	1,290.74	1,280.92	4.45	4.88	37.25	-133.48	-10.61	96.74	87.97	8.77	11.029		
1,400.00	1,398.63	1,389.70	1,378.01	4.82	5.36	35.96	-152.64	-10.18	110.90	101.41	9.50	11.676		
1,500.00	1,498.48	1,488.66	1,475.10	5.19	5.85	34.96	-171.79	-9.75	125.12	114.89	10.23	12.233		
1,600.00	1,598.33	1,587.63	1,572.19	5.56	6.34	34.17	-190.95	-9.32	139.36	128.40	10.96	12.716		
1,700.00	1,698.18	1,686.59	1,669.28	5.93	6.84	33.52	-210.11	-8.89	153.62	141.92	11.69	13.139		
1,800.00	1,798.02	1,785.56	1,766.38	6.30	7.34	32.98	-229.26	-8.45	167.89	155.47	12.43	13.512		
1,900.00	1,897.87	1,884.52	1,863.47	6.68	7.84	32.53	-248.42	-8.02	182.18	169.02	13.16	13.843		
2,000.00	1,997.72	1,983.49	1,960.56	7.05	8.34	32.14	-267.57	-7.59	196.48	182.59	13.90	14.139		
2,100.00	2,097.56	2,082.45	2,057.55	7.42	8.84	31.81	-286.73	-7.16	210.79	196.16	14.63	14.406		
2,200.00	2,197.41	2,181.41	2,154.74	7.80	9.35	31.51	-305.88	-6.73	225.10	209.73	15.37	14.646		
2,300.00	2,297.26	2,280.38	2,251.83	8.17	9.85	31.26	-325.04	-6.30	239.42	223.31	16.11	14.865		
2,400.00	2,397.11	2,379.34	2,348.93	8.54	10.36	31.03	-344.20	-5.87	253.74	236.90	16.84	15.064		
2,500.00	2,496.95	2,478.31	2,446.02	8.92	10.86	30.82	-363.35	-5.44	268.07	250.49	17.58	15.246		
2,600.00	2,596.80	2,577.27	2,543.11	9.29	11.37	30.64	-382.51	-5.01	282.40	264.08	18.32	15.413		
2,700.00	2,696.65	2,676.24	2,640.20	9.66	11.88	30.47	-401.66	-4.58	296.73	277.67	19.06	15.568		
2,800.00	2,796.50	2,775.20	2,737.29	10.04	12.38	30.32	-420.82	-4.15	311.06	291.26	19.80	15.711		
2,900.00	2,896.34	2,874.16	2,834.39	10.41	12.89	30.19	-439.97	-3.72	325.40	304.86	20.54	15.843		
3,000.00	2,996.19	2,973.13	2,931.48	10.79	13.40	30.06	-459.13	-3.29	339.73	318.46	21.28	15.966		
3,100.00	3,096.04	3,072.09	3,028.57	11.16	13.91	29.95	-478.29	-2.86	354.07	332.05	22.02	16.081		
3,200.00	3,195.88	3,171.06	3,125.66	11.53	14.42	29.84	-497.44	-2.43	368.41	345.65	22.76	16.188		
3,300.00	3,295.73	3,270.02	3,222.75	11.91	14.92	29.74	-516.60	-2.00	382.75	359.26	23.50	16.288		
3,400.00	3,395.58	3,368.99	3,319.84	12.28	15.43	29.65	-535.75	-1.57	397.10	372.86	24.24	16.382		
3,500.00	3,495.43	3,467.95	3,416.94	12.66	15.94	29.57	-554.91	-1.14	411.44	386.46	24.98	16.471		
3,600.00	3,595.27	3,566.91	3,514.03	13.03	16.45	29.49	-574.06	-0.71	425.78	400.06	25.72	16.554		
3,700.00	3,695.12	3,665.88	3,611.12	13.41	16.96	29.41	-593.22	-0.28	440.13	413.67	26.46	16.633		
3,800.00	3,794.97	3,764.84	3,708.21	13.78	17.47	29.34	-612.38	0.15	454.47	427.27	27.20	16.707		
3,900.00	3,894.82	3,863.81	3,805.30	14.15	17.98	29.28	-631.53	0.58	468.82	440.88	27.94	16.778		
4,000.00	3,994.66	3,962.77	3,902.39	14.53	18.49	29.22	-650.69	1.02	483.16	454.48	28.68	16.844		
4,100.00	4,094.51	4,061.74	3,999.49	14.90	19.00	29.16	-669.84	1.45	497.51	468.09	29.43	16.908		
4,200.00	4,194.36	4,160.70	4,096.58	15.28	19.51	29.11	-689.00	1.88	511.86	481.69	30.17	16.968		
4,300.00	4,294.20	4,259.66	4,193.67	15.65	20.02	29.05	-708.16	2.31	526.21	495.30	30.91	17.025		
4,400.00	4,394.05	4,358.63	4,290.76	16.03	20.53	29.00	-727.31	2.74	540.55	508.91	31.65	17.080		
4,500.00	4,493.95	4,457.24	4,387.51	16.38	21.04	-101.68	-746.40	3.17	556.63	524.26	32.37	17.196		
4,600.00	4,593.09	4,553.05	4,481.50	16.66	21.54	-121.39	-764.94	3.58	581.53	548.53	32.99	17.625		
4,700.00	4,689.11	4,656.06	4,582.61	16.89	22.06	-124.11	-784.67	3.82	616.12	582.47	33.64	18.314		
4,800.00	4,779.65	4,738.93	4,658.97	17.10	22.84	-127.76	-788.27	-44.27	645.86	611.80	34.06	18.963		
4,900.00	4,862.49	4,823.75	4,740.81	17.31	22.72	-126.42	-697.16	-178.59	653.45	620.94	32.51	20.099		
5,000.00	4,935.57	4,895.97	4,812.98	17.60	22.16	-119.84	-518.45	-380.43	639.26	606.98	32.28	19.805		
5,100.00	4,997.10	4,957.76	4,874.16	18.07	22.36	-113.79	-385.99	-513.23	613.20	578.01	35.19	17.426		

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 310H - Original Drilling - APD														Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF														Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
5,200.00	5,045.57	5,828.50	5,284.88	18.76	23.36	-111.94	-323.03	-574.34	592.06	554.17	37.89	15.626			
5,300.00	5,079.79	5,922.63	5,285.65	19.69	24.63	-110.19	-255.48	-639.90	579.39	538.68	40.71	14.234			
5,400.00	5,098.90	6,020.83	5,286.45	20.85	26.11	-109.02	-185.01	-708.29	573.51	529.92	43.59	13.157			
5,478.88	5,104.59	6,099.53	5,287.09	21.90	27.37	-108.60	-128.55	-763.10	572.37	526.48	45.89	12.472			
5,500.00	5,103.28	6,120.70	5,287.26	22.19	27.73	-108.73	-113.35	-777.85	573.04	526.57	46.47	12.333			
5,600.00	5,104.09	6,220.70	5,288.07	23.71	29.47	-108.71	-41.60	-847.49	573.80	524.25	49.55	11.581			
5,700.00	5,104.91	6,320.70	5,288.89	25.38	31.30	-108.68	30.16	-917.13	574.55	521.68	52.88	10.866			
5,800.00	5,105.73	6,420.69	5,289.70	27.17	33.21	-108.66	101.91	-986.77	575.31	518.90	56.41	10.199			
5,900.00	5,106.54	6,520.69	5,290.52	29.06	35.18	-108.63	173.66	-1,056.42	576.07	515.96	60.11	9.583			
6,000.00	5,107.36	6,620.69	5,291.34	31.04	37.22	-108.60	245.42	-1,126.06	576.83	512.88	63.95	9.020			
6,100.00	5,108.18	6,720.68	5,292.15	33.08	39.30	-108.58	317.17	-1,195.70	577.58	509.68	67.91	8.506			
6,200.00	5,108.99	6,820.68	5,292.97	35.17	41.42	-108.55	388.92	-1,265.34	578.34	506.39	71.96	8.037			
6,300.00	5,109.81	6,920.68	5,293.78	37.32	43.59	-108.53	460.68	-1,334.99	579.10	503.01	76.09	7.611			
6,400.00	5,110.63	7,020.68	5,294.60	39.50	45.78	-108.50	532.43	-1,404.63	579.86	499.57	80.29	7.222			
6,500.00	5,111.44	7,120.67	5,295.41	41.71	48.00	-108.48	604.19	-1,474.27	580.62	496.07	84.55	6.867			
6,600.00	5,112.26	7,220.67	5,296.23	43.95	50.24	-108.45	675.94	-1,543.92	581.38	492.52	88.86	6.543			
6,700.00	5,113.08	7,320.67	5,297.04	46.22	52.50	-108.43	747.69	-1,613.56	582.13	488.92	93.21	6.245			
6,800.00	5,113.89	7,420.66	5,297.86	48.50	54.79	-108.40	819.45	-1,683.20	582.89	485.29	97.60	5.972			
6,900.00	5,114.71	7,520.66	5,298.67	50.80	57.09	-108.38	891.20	-1,752.84	583.65	481.63	102.03	5.721			
7,000.00	5,115.53	7,620.66	5,299.49	53.12	59.40	-108.35	962.95	-1,822.49	584.41	477.93	106.48	5.489			
7,100.00	5,116.34	7,720.65	5,300.30	55.45	61.73	-108.33	1,034.71	-1,892.13	585.17	474.21	110.96	5.274			
7,200.00	5,117.16	7,820.65	5,301.12	57.80	64.06	-108.30	1,106.46	-1,961.77	585.93	470.47	115.46	5.075			
7,300.00	5,117.98	7,920.65	5,301.93	60.15	66.41	-108.28	1,178.22	-2,031.41	586.69	466.71	119.98	4.890			
7,400.00	5,118.79	8,020.64	5,302.75	62.52	68.77	-108.25	1,249.97	-2,101.06	587.45	462.93	124.52	4.718			
7,500.00	5,119.61	8,120.64	5,303.56	64.89	71.14	-108.23	1,321.72	-2,170.70	588.21	459.13	129.07	4.557			
7,600.00	5,120.43	8,220.64	5,304.38	67.27	73.51	-108.20	1,393.48	-2,240.34	588.97	455.32	133.64	4.407			
7,700.00	5,121.24	8,320.63	5,305.19	69.65	75.89	-108.18	1,465.23	-2,309.99	589.73	451.50	138.23	4.266			
7,800.00	5,122.06	8,420.63	5,306.01	72.04	78.28	-108.16	1,536.98	-2,379.63	590.49	447.66	142.82	4.134			
7,900.00	5,122.88	8,520.63	5,306.82	74.44	80.67	-108.13	1,608.74	-2,449.27	591.25	443.81	147.43	4.010			
8,000.00	5,123.69	8,620.62	5,307.64	76.84	83.07	-108.11	1,680.49	-2,518.91	592.01	439.96	152.05	3.894			
8,100.00	5,124.51	8,720.62	5,308.45	79.25	85.47	-108.08	1,752.24	-2,588.56	592.77	436.09	156.68	3.783			
8,200.00	5,125.33	8,820.62	5,309.27	81.66	87.88	-108.06	1,824.00	-2,658.20	593.53	432.21	161.31	3.679			
8,300.00	5,126.14	8,920.61	5,310.08	84.07	90.29	-108.03	1,895.75	-2,727.84	594.29	428.33	165.96	3.581			
8,400.00	5,126.96	9,020.61	5,310.90	86.49	92.70	-108.01	1,967.51	-2,797.48	595.05	424.44	170.61	3.488			
8,500.00	5,127.78	9,120.61	5,311.71	88.91	95.12	-107.99	2,039.26	-2,867.13	595.81	420.54	175.27	3.399			
8,600.00	5,128.59	9,220.60	5,312.53	91.33	97.54	-107.96	2,111.01	-2,936.77	596.57	416.64	179.93	3.316			
8,700.00	5,129.41	9,320.60	5,313.34	93.76	99.97	-107.94	2,182.77	-3,006.41	597.33	412.72	184.60	3.236			
8,800.00	5,130.23	9,420.60	5,314.16	96.18	102.40	-107.92	2,254.52	-3,076.06	598.09	408.81	189.28	3.160			
8,900.00	5,131.04	9,520.60	5,314.97	98.61	104.83	-107.89	2,326.27	-3,145.70	598.85	404.89	193.96	3.087			
9,000.00	5,131.86	9,620.59	5,315.79	101.05	107.26	-107.87	2,398.03	-3,215.34	599.61	400.96	198.65	3.018			
9,100.00	5,132.68	9,720.59	5,316.60	103.48	109.70	-107.84	2,469.78	-3,284.98	600.37	397.03	203.34	2.953			
9,200.00	5,133.49	9,820.59	5,317.42	105.92	112.13	-107.82	2,541.53	-3,354.63	601.13	393.09	208.04	2.890			
9,300.00	5,134.31	9,920.58	5,318.23	108.36	114.57	-107.80	2,613.29	-3,424.27	601.89	389.15	212.74	2.829			
9,400.00	5,135.13	10,020.58	5,319.05	110.80	117.01	-107.77	2,685.04	-3,493.91	602.66	385.21	217.45	2.772			
9,500.00	5,135.94	10,120.58	5,319.86	113.24	119.46	-107.75	2,756.80	-3,563.55	603.42	381.26	222.16	2.716			
9,600.00	5,136.76	10,220.57	5,320.68	115.68	121.90	-107.73	2,828.55	-3,633.20	604.18	377.31	226.87	2.663			
9,700.00	5,137.58	10,320.57	5,321.49	118.12	124.35	-107.70	2,900.30	-3,702.84	604.94	373.36	231.59	2.612			
9,800.00	5,138.39	10,420.57	5,322.31	120.57	126.79	-107.68	2,972.06	-3,772.48	605.70	369.40	236.31	2.563			
9,900.00	5,139.21	10,520.56	5,323.12	123.01	129.24	-107.66	3,043.81	-3,842.13	606.46	365.44	241.03	2.516			
10,000.00	5,140.03	10,620.56	5,323.94	125.46	131.69	-107.63	3,115.56	-3,911.77	607.23	361.47	245.75	2.471			
10,100.00	5,140.84	10,720.56	5,324.75	127.91	134.15	-107.61	3,187.32	-3,981.41	607.99	357.51	250.48	2.427			
10,200.00	5,141.66	10,820.55	5,325.57	130.36	136.60	-107.59	3,259.07	-4,051.05	608.75	353.54	255.22	2.385			

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 310H - Original Drilling - APD													Offset Site Error: 0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error: 0.00 ft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,300.00	5,142.48	10,920.55	5,326.38	132.81	139.05	-107.57	3,330.82	-4,120.70	609.51	349.56	259.95	2.345	
10,400.00	5,143.29	11,020.55	5,327.20	135.26	141.51	-107.54	3,402.58	-4,190.34	610.28	345.59	264.69	2.306	
10,500.00	5,144.11	11,120.54	5,328.01	137.71	143.96	-107.52	3,474.33	-4,259.98	611.04	341.61	269.43	2.268	
10,600.00	5,144.93	11,220.54	5,328.83	140.16	146.42	-107.50	3,546.09	-4,329.62	611.80	337.63	274.17	2.231	
10,700.00	5,145.74	11,320.54	5,329.64	142.62	148.88	-107.48	3,617.84	-4,399.27	612.56	333.65	278.91	2.196	
10,800.00	5,146.56	11,420.53	5,330.46	145.07	151.34	-107.45	3,689.59	-4,468.91	613.33	329.66	283.66	2.162	
10,900.00	5,147.38	11,520.53	5,331.27	147.52	153.80	-107.43	3,761.35	-4,538.55	614.09	325.68	288.41	2.129	
11,000.00	5,148.19	11,620.53	5,332.09	149.98	156.26	-107.41	3,833.10	-4,608.20	614.85	321.69	293.16	2.097	
11,100.00	5,149.01	11,720.52	5,332.90	152.44	158.72	-107.39	3,904.85	-4,677.84	615.62	317.70	297.92	2.066	
11,200.00	5,149.83	11,820.52	5,333.72	154.89	161.18	-107.36	3,976.61	-4,747.48	616.38	313.71	302.67	2.036	
11,300.00	5,150.64	11,920.52	5,334.53	157.35	163.64	-107.34	4,048.36	-4,817.12	617.14	309.71	307.43	2.007	
11,400.00	5,151.46	12,020.52	5,335.35	159.81	166.10	-107.32	4,120.11	-4,886.77	617.91	305.72	312.19	1.979	
11,500.00	5,152.28	12,120.51	5,336.16	162.26	168.57	-107.30	4,191.87	-4,956.41	618.67	301.72	316.95	1.952	
11,600.00	5,153.09	12,220.51	5,336.98	164.72	171.03	-107.27	4,263.62	-5,026.05	619.43	297.72	321.71	1.925	
11,700.00	5,153.91	12,320.51	5,337.79	167.18	173.50	-107.25	4,335.38	-5,095.69	620.20	293.72	326.48	1.900	
11,800.00	5,154.73	12,420.50	5,338.61	169.64	175.96	-107.23	4,407.13	-5,165.34	620.96	289.71	331.24	1.875	
11,900.00	5,155.54	12,520.50	5,339.42	172.10	178.43	-107.21	4,478.88	-5,234.98	621.72	285.71	336.01	1.850	
12,000.00	5,156.36	12,620.50	5,340.24	174.56	180.90	-107.19	4,550.64	-5,304.62	622.49	281.70	340.78	1.827	
12,100.00	5,157.18	12,720.49	5,341.05	177.02	183.36	-107.16	4,622.39	-5,374.27	623.25	277.70	345.55	1.804	
12,200.00	5,157.99	12,820.49	5,341.87	179.48	185.83	-107.14	4,694.14	-5,443.91	624.02	273.69	350.33	1.781	
12,300.00	5,158.81	12,920.49	5,342.68	181.94	188.30	-107.12	4,765.90	-5,513.55	624.78	269.68	355.10	1.759	
12,400.00	5,159.63	13,020.48	5,343.50	184.40	190.77	-107.10	4,837.65	-5,583.19	625.54	265.66	359.88	1.738	
12,500.00	5,160.44	13,120.48	5,344.31	186.87	193.24	-107.08	4,909.40	-5,652.84	626.31	261.65	364.66	1.718	
12,600.00	5,161.26	13,220.48	5,345.13	189.33	195.71	-107.06	4,981.16	-5,722.48	627.07	257.64	369.44	1.697	
12,700.00	5,162.08	13,320.47	5,345.94	191.79	198.17	-107.03	5,052.91	-5,792.12	627.84	253.62	374.22	1.678	
12,800.00	5,162.89	13,420.47	5,346.76	194.25	200.64	-107.01	5,124.67	-5,861.76	628.60	249.60	379.00	1.659	
12,900.00	5,163.71	13,520.47	5,347.57	196.72	203.12	-106.99	5,196.42	-5,931.41	629.37	245.58	383.78	1.640	
13,000.00	5,164.53	13,620.46	5,348.39	199.18	205.59	-106.97	5,268.17	-6,001.05	630.13	241.56	388.57	1.622	
13,100.00	5,165.34	13,720.46	5,349.20	201.64	208.06	-106.95	5,339.93	-6,070.69	630.90	237.54	393.35	1.604	
13,200.00	5,166.16	13,820.46	5,350.02	204.11	210.53	-106.93	5,411.68	-6,140.34	631.66	233.52	398.14	1.587	
13,300.00	5,166.98	13,920.45	5,350.83	206.57	213.00	-106.91	5,483.43	-6,209.98	632.43	229.50	402.93	1.570	
13,400.00	5,167.79	14,020.45	5,351.65	209.03	215.47	-106.88	5,555.19	-6,279.62	633.19	225.47	407.72	1.553	
13,500.00	5,168.61	14,120.45	5,352.46	211.50	217.94	-106.86	5,626.94	-6,349.26	633.96	221.44	412.51	1.537	
13,600.00	5,169.43	14,220.44	5,353.28	213.96	220.42	-106.84	5,698.69	-6,418.91	634.72	217.42	417.30	1.521	
13,700.00	5,170.24	14,320.44	5,354.09	216.43	222.89	-106.82	5,770.45	-6,488.55	635.49	213.39	422.10	1.506	
13,800.00	5,171.06	14,420.44	5,354.91	218.89	225.36	-106.80	5,842.20	-6,558.19	636.25	209.36	426.89	1.490 Level 3	
13,900.00	5,171.88	14,520.44	5,355.72	221.36	227.84	-106.78	5,913.96	-6,627.83	637.02	205.33	431.69	1.476 Level 3	
14,000.00	5,172.69	14,620.43	5,356.54	223.82	230.31	-106.76	5,985.71	-6,697.48	637.78	201.30	436.49	1.461 Level 3	
14,100.00	5,173.51	14,720.43	5,357.35	226.29	232.78	-106.74	6,057.46	-6,767.12	638.55	197.27	441.28	1.447 Level 3	
14,200.00	5,174.33	14,820.43	5,358.17	228.76	235.26	-106.72	6,129.22	-6,836.76	639.32	193.23	446.08	1.433 Level 3	
14,300.00	5,175.14	14,920.42	5,358.98	231.22	237.73	-106.70	6,200.97	-6,906.41	640.08	189.20	450.88	1.420 Level 3	
14,400.00	5,175.96	15,020.42	5,359.80	233.69	240.21	-106.68	6,272.72	-6,976.05	640.85	185.16	455.69	1.406 Level 3	
14,500.00	5,176.78	15,120.57	5,360.61	236.15	242.68	-106.65	6,344.59	-7,045.80	641.61	181.12	460.49	1.393 Level 3	
14,600.00	5,177.59	15,169.28	5,361.01	238.62	243.89	-106.64	6,379.55	-7,079.71	644.39	181.27	463.12	1.391 Level 3, SF	
14,700.00	5,178.41	15,169.28	5,361.01	241.09	243.89	-106.64	6,379.55	-7,079.71	660.65	204.97	455.68	1.450 Level 3	
14,800.00	5,179.23	15,169.28	5,361.01	243.55	243.89	-106.64	6,379.55	-7,079.71	691.13	251.67	439.46	1.573	
14,895.85	5,180.01	15,169.28	5,361.01	245.92	243.89	-106.64	6,379.55	-7,079.71	732.10	313.61	418.49	1.749	

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 313H - Original Drilling - APD													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.00	0.00	0.00	0.00	0.00	0.00	41.97	29.49	26.52	39.66					
100.00	100.00	100.00	100.00	0.15	0.15	41.97	29.49	26.52	39.66	39.35	0.31	128.654		
200.00	200.00	200.00	200.00	0.51	0.51	41.97	29.49	26.52	39.66	38.64	1.03	38.686		
300.00	300.00	300.00	300.00	0.87	0.87	41.97	29.49	26.52	39.66	37.92	1.74	22.766		
305.56	305.56	305.56	305.56	0.89	0.89	41.97	29.49	26.52	39.66	37.88	1.78	22.256 CC		
400.00	400.00	399.72	399.72	1.23	1.23	41.88	29.60	26.53	39.75	37.29	2.46	16.170 ES		
500.00	499.98	498.45	498.41	1.57	1.58	-121.03	32.13	26.80	42.75	39.59	3.16	13.539		
600.00	599.86	596.47	596.25	1.91	1.94	-129.19	38.00	27.41	50.94	47.08	3.85	13.216 SF		
700.00	699.70	693.59	692.93	2.26	2.30	-136.33	47.09	28.36	63.55	59.01	4.55	13.975		
800.00	799.55	789.65	788.21	2.62	2.68	-141.52	59.28	29.63	80.11	74.88	5.23	15.305		
900.00	899.40	884.47	881.79	2.98	3.07	-145.16	74.43	31.21	100.35	94.44	5.91	16.975		
1,000.00	999.24	977.86	973.42	3.34	3.49	-147.70	92.35	33.08	124.05	117.48	6.58	18.858		
1,100.00	1,099.09	1,071.50	1,064.71	3.71	3.93	-149.51	113.06	35.24	150.82	143.57	7.25	20.796		
1,200.00	1,198.94	1,167.59	1,158.27	4.08	4.41	-150.82	134.87	37.52	178.28	170.33	7.95	22.436		
1,300.00	1,298.79	1,263.68	1,251.82	4.45	4.90	-151.78	156.68	39.79	205.80	197.14	8.66	23.770		
1,400.00	1,398.63	1,359.77	1,345.37	4.82	5.40	-152.51	178.50	42.07	233.36	223.99	9.37	24.911		
1,500.00	1,498.48	1,455.86	1,438.92	5.19	5.90	-153.09	200.31	44.35	260.95	250.87	10.08	25.888		
1,600.00	1,598.33	1,551.94	1,532.48	5.56	6.41	-153.56	222.12	46.62	288.56	277.77	10.79	26.732		
1,700.00	1,698.18	1,648.03	1,626.03	5.93	6.92	-153.95	243.93	48.90	316.18	304.67	11.51	27.468		
1,800.00	1,798.02	1,744.12	1,719.58	6.30	7.44	-154.27	265.75	51.17	343.82	331.59	12.23	28.115		
1,900.00	1,897.87	1,840.21	1,813.14	6.68	7.96	-154.55	287.56	53.45	371.46	358.51	12.95	28.689		
2,000.00	1,997.72	1,936.30	1,906.69	7.05	8.48	-154.78	309.37	55.72	399.11	385.45	13.67	29.200		
2,100.00	2,097.56	2,032.39	2,000.24	7.42	9.00	-154.99	331.19	58.00	426.77	412.38	14.39	29.658		
2,200.00	2,197.41	2,128.48	2,093.79	7.80	9.52	-155.17	353.00	60.28	454.43	439.32	15.11	30.072		
2,300.00	2,297.26	2,224.57	2,187.35	8.17	10.04	-155.33	374.81	62.55	482.10	466.26	15.83	30.446		
2,400.00	2,397.11	2,320.66	2,280.90	8.54	10.57	-155.48	396.62	64.83	509.76	493.21	16.56	30.787		
2,500.00	2,496.95	2,416.74	2,374.45	8.92	11.09	-155.61	418.44	67.10	537.43	520.15	17.28	31.099		
2,600.00	2,596.80	2,512.83	2,468.00	9.29	11.62	-155.72	440.25	69.38	565.11	547.10	18.01	31.384		
2,700.00	2,696.65	2,608.92	2,561.56	9.66	12.14	-155.83	462.06	71.66	592.78	574.05	18.73	31.647		
2,800.00	2,796.50	2,705.01	2,655.11	10.04	12.67	-155.92	483.88	73.93	620.46	601.00	19.46	31.890		
2,900.00	2,896.34	2,801.10	2,748.66	10.41	13.20	-156.01	505.69	76.21	648.13	627.95	20.18	32.115		
3,000.00	2,996.19	2,897.19	2,842.21	10.79	13.72	-156.09	527.50	78.48	675.81	654.91	20.91	32.324		
3,100.00	3,096.04	2,993.28	2,935.77	11.16	14.25	-156.16	549.31	80.76	703.49	681.86	21.63	32.518		
3,200.00	3,195.88	3,089.37	3,029.32	11.53	14.78	-156.23	571.13	83.03	731.17	708.81	22.36	32.700		
3,300.00	3,295.73	3,185.46	3,122.87	11.91	15.31	-156.30	592.94	85.31	758.86	735.77	23.09	32.870		
3,400.00	3,395.58	3,281.55	3,216.42	12.28	15.84	-156.36	614.75	87.59	786.54	762.72	23.81	33.029		
3,500.00	3,495.43	3,377.63	3,309.98	12.66	16.37	-156.41	636.57	89.86	814.22	789.68	24.54	33.178		
3,600.00	3,595.27	3,473.72	3,403.53	13.03	16.90	-156.46	658.38	92.14	841.91	816.64	25.27	33.318		
3,700.00	3,695.12	3,569.81	3,497.08	13.41	17.42	-156.51	680.19	94.41	869.59	843.59	26.00	33.451		
3,800.00	3,794.97	3,665.90	3,590.64	13.78	17.95	-156.56	702.00	96.69	897.28	870.55	26.72	33.576		
3,900.00	3,894.82	3,761.99	3,684.19	14.15	18.48	-156.60	723.82	98.97	924.96	897.51	27.45	33.694		
4,000.00	3,994.66	3,858.08	3,777.74	14.53	19.01	-156.64	745.63	101.24	952.65	924.47	28.18	33.806		
4,100.00	4,094.51	3,954.17	3,871.29	14.90	19.54	-156.68	767.44	103.52	980.33	951.43	28.91	33.912		
4,200.00	4,194.36	4,050.26	3,964.85	15.28	20.07	-156.71	789.26	105.79	1,008.02	978.38	29.64	34.012		
4,300.00	4,294.20	4,146.35	4,058.40	15.65	20.60	-156.75	811.07	108.07	1,035.71	1,005.34	30.37	34.108		
4,400.00	4,394.05	4,242.43	4,151.95	16.03	21.13	-156.78	832.88	110.34	1,063.40	1,032.30	31.09	34.199		
4,500.00	4,493.95	4,338.99	4,245.96	16.38	21.67	-156.81	854.80	112.63	1,089.17	1,057.36	31.81	34.239		
4,600.00	4,593.09	4,436.94	4,341.32	16.66	22.21	-156.84	877.04	114.95	1,105.01	1,072.52	32.49	34.276		
4,700.00	4,689.11	4,534.13	4,435.95	16.89	22.75	-156.87	899.10	117.25	1,110.02	1,076.88	33.13	34.310		
4,800.00	4,779.65	4,617.30	4,513.26	17.10	23.28	-156.90	921.16	119.56	1,125.86	1,091.84	33.77	34.340		
4,900.00	4,862.49	4,692.70	4,583.80	17.31	23.81	-156.93	943.21	121.87	1,141.69	1,107.59	34.41	34.366		
5,000.00	4,935.57	4,757.56	4,645.63	17.60	24.32	-156.95	965.26	124.18	1,157.51	1,123.21	35.06	34.388		

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 313H - Original Drilling - APD													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
5,100.00	4,997.10	5,336.48	5,160.23	18.07	24.62	88.64	854.09	341.82	993.39	956.57	36.82	26.979		
5,200.00	5,045.57	5,278.00	5,120.83	18.76	24.69	87.93	879.78	307.11	963.99	925.87	38.12	25.290		
5,300.00	5,079.79	5,210.80	5,070.74	19.69	24.75	86.14	905.02	270.17	940.68	901.17	39.51	23.806		
5,400.00	5,098.90	5,150.53	5,022.17	20.85	24.78	84.22	923.79	239.87	923.63	882.59	41.03	22.508		
5,500.00	5,103.28	5,094.63	4,974.42	22.19	24.77	81.83	937.77	214.41	912.66	869.98	42.68	21.385		
5,583.67	5,103.96	5,057.26	4,941.25	23.46	24.75	79.69	945.22	198.91	909.50	865.33	44.16	20.594		
5,600.00	5,104.09	5,050.97	4,935.58	23.71	24.74	79.33	946.32	196.43	909.62	865.17	44.45	20.462		
5,700.00	5,104.91	5,018.05	4,905.51	25.38	24.70	77.40	951.37	184.03	915.92	869.65	46.27	19.795		
5,800.00	5,105.73	4,992.45	4,881.72	27.17	24.67	75.88	954.45	175.10	931.89	883.87	48.02	19.407		
5,900.00	5,106.54	4,972.05	4,862.53	29.06	24.63	74.65	956.38	168.44	957.36	907.77	49.59	19.305		
6,000.00	5,107.36	4,950.01	4,841.60	31.04	24.60	73.32	957.93	161.72	991.82	940.94	50.88	19.492		
6,100.00	5,108.18	4,950.01	4,841.60	33.08	24.60	73.32	957.93	161.72	1,034.49	982.35	52.14	19.839		
6,200.00	5,108.99	4,930.06	4,822.50	35.17	24.55	72.12	958.85	156.05	1,084.37	1,031.46	52.90	20.497		
6,300.00	5,109.81	4,920.17	4,812.98	37.32	24.53	71.52	959.14	153.39	1,140.71	1,087.16	53.55	21.303		
6,400.00	5,110.63	4,900.01	4,793.47	39.50	24.48	70.30	959.38	148.28	1,202.72	1,148.85	53.87	22.326		
6,500.00	5,111.44	4,900.01	4,793.47	41.71	24.48	70.30	959.38	148.28	1,269.25	1,214.97	54.28	23.385		
6,600.00	5,112.26	4,900.01	4,793.47	43.95	24.48	70.30	959.38	148.28	1,339.95	1,285.40	54.55	24.563		
6,700.00	5,113.08	4,900.01	4,793.47	46.22	24.48	70.30	959.38	148.28	1,414.19	1,359.47	54.72	25.843		
6,800.00	5,113.89	4,900.01	4,793.47	48.50	24.48	70.30	959.38	148.28	1,491.44	1,436.63	54.82	27.208		
6,900.00	5,114.71	4,882.13	4,776.09	50.80	24.43	69.22	959.21	144.10	1,570.95	1,516.29	54.66	28.740		
7,000.00	5,115.53	4,877.96	4,772.02	53.12	24.41	68.96	959.11	143.18	1,652.81	1,598.20	54.61	30.263		
7,100.00	5,116.34	4,874.18	4,768.33	55.45	24.40	68.74	959.01	142.36	1,736.54	1,682.00	54.54	31.837		
7,200.00	5,117.16	4,870.74	4,764.98	57.80	24.39	68.53	958.90	141.62	1,821.89	1,767.43	54.46	33.456		
7,300.00	5,117.98	4,850.01	4,744.69	60.15	24.33	67.28	957.97	137.45	1,908.93	1,854.76	54.17	35.237		
7,400.00	5,118.79	4,850.01	4,744.69	62.52	24.33	67.28	957.97	137.45	1,996.82	1,942.72	54.10	36.908		
7,500.00	5,119.61	4,850.01	4,744.69	64.89	24.33	67.28	957.97	137.45	2,085.79	2,031.77	54.02	38.610		
7,600.00	5,120.43	4,850.01	4,744.69	67.27	24.33	67.28	957.97	137.45	2,175.73	2,121.79	53.94	40.338		
7,700.00	5,121.24	4,850.01	4,744.69	69.65	24.33	67.28	957.97	137.45	2,266.51	2,212.66	53.85	42.089		
7,800.00	5,122.06	4,850.01	4,744.69	72.04	24.33	67.28	957.97	137.45	2,358.03	2,304.27	53.76	43.860		
7,900.00	5,122.88	4,850.01	4,744.69	74.44	24.33	67.28	957.97	137.45	2,450.21	2,396.54	53.68	45.648		
8,000.00	5,123.69	4,850.01	4,744.69	76.84	24.33	67.28	957.97	137.45	2,542.99	2,489.40	53.59	47.452		
8,100.00	5,124.51	4,850.01	4,744.69	79.25	24.33	67.28	957.97	137.45	2,636.30	2,582.79	53.51	49.269		
8,200.00	5,125.33	4,850.01	4,744.69	81.66	24.33	67.28	957.97	137.45	2,730.08	2,676.65	53.43	51.098		
8,300.00	5,126.14	4,850.01	4,744.69	84.07	24.33	67.28	957.97	137.45	2,824.28	2,770.93	53.35	52.938		
8,400.00	5,126.96	4,850.01	4,744.69	86.49	24.33	67.28	957.97	137.45	2,918.87	2,865.60	53.28	54.786		
8,500.00	5,127.78	4,850.01	4,744.69	88.91	24.33	67.28	957.97	137.45	3,013.81	2,960.61	53.21	56.642		
8,600.00	5,128.59	4,850.01	4,744.69	91.33	24.33	67.28	957.97	137.45	3,109.07	3,055.93	53.14	58.506		
8,700.00	5,129.41	4,850.01	4,744.69	93.76	24.33	67.28	957.97	137.45	3,204.62	3,151.54	53.08	60.375		
8,800.00	5,130.23	4,850.01	4,744.69	96.18	24.33	67.28	957.97	137.45	3,300.43	3,247.41	53.02	62.249		
8,900.00	5,131.04	4,850.01	4,744.69	98.61	24.33	67.28	957.97	137.45	3,396.48	3,343.52	52.96	64.128		
9,000.00	5,131.86	4,850.01	4,744.69	101.05	24.33	67.28	957.97	137.45	3,492.76	3,439.84	52.91	66.011		
9,100.00	5,132.68	4,850.01	4,744.69	103.48	24.33	67.28	957.97	137.45	3,589.23	3,536.37	52.86	67.897		
9,200.00	5,133.49	4,850.01	4,744.69	105.92	24.33	67.28	957.97	137.45	3,685.90	3,633.08	52.82	69.786		
9,300.00	5,134.31	4,850.01	4,744.69	108.36	24.33	67.28	957.97	137.45	3,782.74	3,729.96	52.77	71.677		
9,400.00	5,135.13	4,850.01	4,744.69	110.80	24.33	67.28	957.97	137.45	3,879.74	3,827.00	52.74	73.569		
9,500.00	5,135.94	4,850.01	4,744.69	113.24	24.33	67.28	957.97	137.45	3,976.89	3,924.19	52.70	75.463		
9,600.00	5,136.76	4,850.01	4,744.69	115.68	24.33	67.28	957.97	137.45	4,074.17	4,021.50	52.67	77.358		
9,700.00	5,137.58	4,850.01	4,744.69	118.12	24.33	67.28	957.97	137.45	4,171.59	4,118.95	52.64	79.253		
9,800.00	5,138.39	4,850.01	4,744.69	120.57	24.33	67.28	957.97	137.45	4,269.12	4,216.51	52.61	81.149		
9,900.00	5,139.21	4,850.01	4,744.69	123.01	24.33	67.28	957.97	137.45	4,366.76	4,314.18	52.58	83.044		
10,000.00	5,140.03	4,850.01	4,744.69	125.46	24.33	67.28	957.97	137.45	4,464.51	4,411.95	52.56	84.940		
10,100.00	5,140.84	4,850.01	4,744.69	127.91	24.33	67.28	957.97	137.45	4,562.36	4,509.82	52.54	86.834		

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 313H - Original Drilling - APD														Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF														Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
10,200.00	5,141.66	4,850.01	4,744.69	130.36	24.33	67.28	957.97	137.45	4,660.30	4,607.78	52.52	88.728			
10,300.00	5,142.48	4,850.01	4,744.69	132.81	24.33	67.28	957.97	137.45	4,758.32	4,705.82	52.51	90.620			
10,400.00	5,143.29	4,827.55	4,722.65	135.26	24.25	65.95	956.41	133.45	4,855.99	4,803.67	52.32	92.819			
10,500.00	5,144.11	4,827.01	4,722.12	137.71	24.24	65.91	956.37	133.36	4,954.15	4,901.84	52.30	94.721			
10,600.00	5,144.93	4,826.48	4,721.60	140.16	24.24	65.88	956.32	133.28	5,052.38	5,000.09	52.29	96.621			
10,700.00	5,145.74	4,825.98	4,721.11	142.62	24.24	65.85	956.28	133.20	5,150.68	5,098.40	52.28	98.519			
10,800.00	5,146.56	4,825.49	4,720.63	145.07	24.24	65.82	956.24	133.12	5,249.04	5,196.77	52.27	100.416			
10,900.00	5,147.38	4,825.02	4,720.16	147.52	24.24	65.80	956.20	133.04	5,347.46	5,295.20	52.27	102.309			
11,000.00	5,148.19	4,824.56	4,719.71	149.98	24.23	65.77	956.16	132.96	5,445.94	5,393.68	52.26	104.201			
11,100.00	5,149.01	4,824.12	4,719.28	152.44	24.23	65.74	956.12	132.89	5,544.48	5,492.22	52.26	106.089			
11,200.00	5,149.83	4,823.69	4,718.86	154.89	24.23	65.72	956.08	132.82	5,643.06	5,590.80	52.26	107.975			
11,300.00	5,150.64	4,823.28	4,718.45	157.35	24.23	65.69	956.05	132.76	5,741.70	5,689.43	52.26	109.858			
11,400.00	5,151.46	4,822.88	4,718.06	159.81	24.23	65.67	956.01	132.69	5,840.38	5,788.11	52.27	111.738			
11,500.00	5,152.28	4,800.01	4,695.56	162.26	24.14	64.32	953.71	129.30	5,939.54	5,887.44	52.10	114.001			
11,600.00	5,153.09	4,800.01	4,695.56	164.72	24.14	64.32	953.71	129.30	6,038.29	5,986.18	52.11	115.873			
11,700.00	5,153.91	4,800.01	4,695.56	167.18	24.14	64.32	953.71	129.30	6,137.08	6,084.96	52.12	117.741			
11,800.00	5,154.73	4,800.01	4,695.56	169.64	24.14	64.32	953.71	129.30	6,235.91	6,183.77	52.14	119.606			
11,900.00	5,155.54	4,800.01	4,695.56	172.10	24.14	64.32	953.71	129.30	6,334.78	6,282.63	52.15	121.467			
12,000.00	5,156.36	4,800.01	4,695.56	174.56	24.14	64.32	953.71	129.30	6,433.68	6,381.51	52.17	123.324			
12,100.00	5,157.18	4,800.01	4,695.56	177.02	24.14	64.32	953.71	129.30	6,532.62	6,480.43	52.19	125.177			
12,200.00	5,157.99	4,800.01	4,695.56	179.48	24.14	64.32	953.71	129.30	6,631.58	6,579.38	52.21	127.027			
12,300.00	5,158.81	4,800.01	4,695.56	181.94	24.14	64.32	953.71	129.30	6,730.58	6,678.35	52.23	128.872			
12,400.00	5,159.63	4,800.01	4,695.56	184.40	24.14	64.32	953.71	129.30	6,829.61	6,777.36	52.25	130.714			
12,500.00	5,160.44	4,800.01	4,695.56	186.87	24.14	64.32	953.71	129.30	6,928.66	6,876.39	52.27	132.551			
12,600.00	5,161.26	4,800.01	4,695.56	189.33	24.14	64.32	953.71	129.30	7,027.74	6,975.45	52.30	134.384			
12,700.00	5,162.08	4,800.01	4,695.56	191.79	24.14	64.32	953.71	129.30	7,126.85	7,074.53	52.32	136.213			
12,800.00	5,162.89	4,800.01	4,695.56	194.25	24.14	64.32	953.71	129.30	7,225.98	7,173.64	52.35	138.037			
12,900.00	5,163.71	4,800.01	4,695.56	196.72	24.14	64.32	953.71	129.30	7,325.14	7,272.76	52.38	139.857			
13,000.00	5,164.53	4,800.01	4,695.56	199.18	24.14	64.32	953.71	129.30	7,424.32	7,371.91	52.41	141.672			
13,100.00	5,165.34	4,800.01	4,695.56	201.64	24.14	64.32	953.71	129.30	7,523.52	7,471.08	52.44	143.482			
13,200.00	5,166.16	4,800.01	4,695.56	204.11	24.14	64.32	953.71	129.30	7,622.74	7,570.27	52.47	145.288			
13,300.00	5,166.98	4,800.01	4,695.56	206.57	24.14	64.32	953.71	129.30	7,721.98	7,669.48	52.50	147.089			
13,400.00	5,167.79	4,800.01	4,695.56	209.03	24.14	64.32	953.71	129.30	7,821.24	7,768.71	52.53	148.886			
13,500.00	5,168.61	4,800.01	4,695.56	211.50	24.14	64.32	953.71	129.30	7,920.52	7,867.95	52.57	150.677			
13,600.00	5,169.43	4,800.01	4,695.56	213.96	24.14	64.32	953.71	129.30	8,019.81	7,967.21	52.60	152.464			
13,700.00	5,170.24	4,800.01	4,695.56	216.43	24.14	64.32	953.71	129.30	8,119.13	8,066.49	52.64	154.245			
13,800.00	5,171.06	4,800.01	4,695.56	218.89	24.14	64.32	953.71	129.30	8,218.46	8,165.78	52.68	156.022			
13,900.00	5,171.88	4,800.01	4,695.56	221.36	24.14	64.32	953.71	129.30	8,317.81	8,265.09	52.71	157.793			
14,000.00	5,172.69	4,800.01	4,695.56	223.82	24.14	64.32	953.71	129.30	8,417.17	8,364.42	52.75	159.559			
14,100.00	5,173.51	4,800.01	4,695.56	226.29	24.14	64.32	953.71	129.30	8,516.55	8,463.75	52.79	161.320			
14,200.00	5,174.33	4,800.01	4,695.56	228.76	24.14	64.32	953.71	129.30	8,615.94	8,563.10	52.83	163.076			
14,300.00	5,175.14	4,800.01	4,695.56	231.22	24.14	64.32	953.71	129.30	8,715.34	8,662.47	52.88	164.827			
14,400.00	5,175.96	4,800.01	4,695.56	233.69	24.14	64.32	953.71	129.30	8,814.76	8,761.84	52.92	166.572			
14,500.00	5,176.78	4,800.01	4,695.56	236.15	24.14	64.32	953.71	129.30	8,914.19	8,861.23	52.96	168.312			
14,600.00	5,177.59	4,800.01	4,695.56	238.62	24.14	64.32	953.71	129.30	9,013.64	8,960.63	53.01	170.047			
14,700.00	5,178.41	4,800.01	4,695.56	241.09	24.14	64.32	953.71	129.30	9,113.09	9,060.04	53.05	171.776			
14,800.00	5,179.23	4,800.01	4,695.56	243.55	24.14	64.32	953.71	129.30	9,212.56	9,159.46	53.10	173.500			
14,895.85	5,180.01	4,800.01	4,695.56	245.92	24.14	64.32	953.71	129.30	9,307.92	9,254.77	53.14	175.148			

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

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COMPASS 5000.15 Build 91D



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 632H - Original Drilling - APD													Offset Site Error: 0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error: 0.00 ft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore +N/-S (ft)	Centre +E/-W (ft)					
0.00	0.00	0.00	0.00	0.00	0.00	42.33	14.56	13.26	19.69				
100.00	100.00	100.00	100.00	0.15	0.15	42.33	14.56	13.26	19.69	19.39	0.31	63.882	
200.00	200.00	200.00	200.00	0.51	0.51	42.33	14.56	13.26	19.69	18.67	1.03	19.209	
300.00	300.00	300.00	300.00	0.87	0.87	42.33	14.56	13.26	19.69	17.95	1.74	11.304	
400.00	400.00	400.00	400.00	1.23	1.23	42.33	14.56	13.26	19.69	17.23	2.46	8.009 CC, ES	
500.00	499.98	499.33	499.31	1.57	1.59	-123.17	16.27	13.47	22.04	18.88	3.16	6.973	
600.00	599.86	598.02	597.86	1.91	1.94	-135.77	21.35	14.07	30.01	26.15	3.86	7.776	
700.00	699.70	695.87	695.34	2.26	2.30	-144.09	29.72	15.07	42.69	38.13	4.55	9.374	
800.00	799.55	792.74	791.51	2.62	2.67	-148.75	41.25	16.45	59.20	53.96	5.24	11.295	
900.00	899.40	891.00	888.86	2.98	3.07	-151.42	54.51	18.03	77.53	71.59	5.94	13.050	
1,000.00	999.24	989.26	986.20	3.34	3.47	-153.07	67.78	19.62	95.96	89.32	6.65	14.440	
1,100.00	1,099.09	1,087.51	1,083.55	3.71	3.88	-154.19	81.04	21.20	114.44	107.09	7.35	15.566	
1,200.00	1,198.94	1,185.77	1,180.89	4.08	4.29	-155.00	94.30	22.78	132.96	124.89	8.06	16.490	
1,300.00	1,298.79	1,284.02	1,278.23	4.45	4.70	-155.61	107.57	24.37	151.49	142.71	8.78	17.263	
1,400.00	1,398.63	1,382.28	1,375.58	4.82	5.12	-156.09	120.83	25.95	170.04	160.55	9.49	17.919	
1,500.00	1,498.48	1,480.54	1,472.92	5.19	5.54	-156.47	134.09	27.54	188.59	178.39	10.20	18.482	
1,600.00	1,598.33	1,578.79	1,570.27	5.56	5.96	-156.78	147.36	29.12	207.15	196.23	10.92	18.970	
1,700.00	1,698.18	1,677.05	1,667.61	5.93	6.38	-157.05	160.62	30.70	225.72	214.08	11.64	19.397	
1,800.00	1,798.02	1,775.31	1,764.96	6.30	6.80	-157.27	173.89	32.29	244.29	231.93	12.35	19.774	
1,900.00	1,897.87	1,873.56	1,862.30	6.68	7.23	-157.46	187.15	33.87	262.86	249.79	13.07	20.109	
2,000.00	1,997.72	1,971.82	1,959.64	7.05	7.65	-157.63	200.41	35.46	281.44	267.64	13.79	20.408	
2,100.00	2,097.56	2,070.08	2,056.99	7.42	8.08	-157.77	213.68	37.04	300.01	285.50	14.51	20.677	
2,200.00	2,197.41	2,168.33	2,154.33	7.80	8.50	-157.90	226.94	38.62	318.59	303.36	15.23	20.921	
2,300.00	2,297.26	2,266.59	2,251.68	8.17	8.93	-158.02	240.21	40.21	337.17	321.22	15.95	21.142	
2,400.00	2,397.11	2,364.85	2,349.02	8.54	9.35	-158.12	253.47	41.79	355.75	339.09	16.67	21.344	
2,500.00	2,496.95	2,463.10	2,446.37	8.92	9.78	-158.21	266.73	43.38	374.34	356.95	17.39	21.529	
2,600.00	2,596.80	2,561.36	2,543.71	9.29	10.20	-158.29	280.00	44.96	392.92	374.81	18.11	21.698	
2,700.00	2,696.65	2,659.62	2,641.05	9.66	10.63	-158.37	293.26	46.54	411.50	392.68	18.83	21.855	
2,800.00	2,796.50	2,757.87	2,738.40	10.04	11.06	-158.44	306.52	48.13	430.09	410.54	19.55	22.000	
2,900.00	2,896.34	2,856.13	2,835.74	10.41	11.48	-158.50	319.79	49.71	448.67	428.40	20.27	22.135	
3,000.00	2,996.19	2,954.39	2,933.09	10.79	11.91	-158.56	333.05	51.30	467.26	446.27	20.99	22.260	
3,100.00	3,096.04	3,052.64	3,030.43	11.16	12.34	-158.62	346.32	52.88	485.85	464.13	21.71	22.377	
3,200.00	3,195.88	3,150.90	3,127.78	11.53	12.76	-158.67	359.58	54.46	504.43	482.00	22.43	22.486	
3,300.00	3,295.73	3,249.16	3,225.12	11.91	13.19	-158.71	372.84	56.05	523.02	499.87	23.15	22.588	
3,400.00	3,395.58	3,347.41	3,322.46	12.28	13.62	-158.76	386.11	57.63	541.61	517.73	23.88	22.684	
3,500.00	3,495.43	3,445.67	3,419.81	12.66	14.04	-158.80	399.37	59.22	560.20	535.60	24.60	22.774	
3,600.00	3,595.27	3,543.93	3,517.15	13.03	14.47	-158.83	412.63	60.80	578.78	553.46	25.32	22.859	
3,700.00	3,695.12	3,642.18	3,614.50	13.41	14.90	-158.87	425.90	62.38	597.37	571.33	26.04	22.939	
3,800.00	3,794.97	3,740.44	3,711.84	13.78	15.33	-158.90	439.16	63.97	615.96	589.20	26.76	23.015	
3,900.00	3,894.82	3,838.70	3,809.19	14.15	15.75	-158.94	452.43	65.55	634.55	607.06	27.49	23.087	
4,000.00	3,994.66	3,936.95	3,906.53	14.53	16.18	-158.96	465.69	67.13	653.14	624.93	28.21	23.155	
4,100.00	4,094.51	4,035.21	4,003.88	14.90	16.61	-158.99	478.95	68.72	671.73	642.80	28.93	23.220	
4,200.00	4,194.36	4,133.46	4,101.22	15.28	17.04	-159.02	492.22	70.30	690.32	660.66	29.65	23.281	
4,300.00	4,294.20	4,231.72	4,198.56	15.65	17.47	-159.04	505.48	71.89	708.90	678.53	30.37	23.340	
4,400.00	4,394.05	4,329.98	4,295.91	16.03	17.89	-159.07	518.75	73.47	727.49	696.40	31.10	23.395	
4,500.00	4,493.95	4,428.53	4,393.55	16.38	18.32	-159.09	532.05	75.06	744.06	712.26	31.81	23.394	
4,600.00	4,593.09	4,527.58	4,491.67	16.66	18.75	-159.11	545.42	76.66	759.25	727.77	32.47	23.405	
4,700.00	4,689.11	4,624.87	4,588.06	16.89	19.18	-159.13	558.55	78.22	774.49	742.38	33.11	23.418	
4,800.00	4,779.65	4,718.02	4,680.34	17.10	19.58	-159.15	571.13	79.73	790.86	757.15	33.72	23.432	
4,900.00	4,862.49	4,794.29	4,755.89	17.31	19.92	-159.17	583.56	81.23	808.40	774.15	34.25	23.446	
5,000.00	4,935.57	4,850.01	4,810.62	17.60	20.18	-159.19	595.76	82.73	826.14	791.41	34.73	23.460	
5,100.00	4,997.10	4,900.01	4,858.94	18.07	20.44	-159.21	607.99	84.23	843.93	808.71	35.21	23.474	

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 632H - Original Drilling - APD													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
5,200.00	5,045.57	4,950.01	4,906.19	18.76	20.73	69.02	618.48	67.54	633.38	596.98	36.40	17.400		
5,300.00	5,079.79	5,000.01	4,952.07	19.69	21.03	74.19	635.73	57.77	612.79	574.87	37.92	16.161		
5,400.00	5,098.90	5,046.24	4,993.05	20.85	21.33	78.94	653.85	46.43	598.06	558.18	39.88	14.997		
5,500.00	5,103.28	5,097.95	5,036.95	22.19	21.70	83.56	676.50	31.20	591.70	549.51	42.19	14.026		
5,508.74	5,103.35	5,102.85	5,041.00	22.32	21.73	83.95	678.77	29.62	591.66	549.25	42.41	13.952		
5,600.00	5,104.09	5,161.41	5,087.65	23.71	22.18	88.46	707.50	8.98	596.11	551.55	44.57	13.376		
5,700.00	5,104.91	5,244.69	5,148.04	25.38	22.89	94.19	753.03	-25.73	609.24	562.35	46.89	12.993		
5,800.00	5,105.73	5,354.14	5,215.26	27.17	23.96	100.32	820.03	-79.98	626.74	577.56	49.18	12.744		
5,900.00	5,106.54	5,494.26	5,278.32	29.06	25.64	105.71	914.70	-161.31	642.94	591.23	51.71	12.433		
6,000.00	5,107.36	5,660.82	5,315.93	31.04	28.04	108.69	1,034.31	-270.23	651.94	596.97	54.96	11.861		
6,100.00	5,108.18	5,785.80	5,319.54	33.08	30.06	108.90	1,124.80	-356.28	652.56	593.89	58.67	11.123		
6,200.00	5,108.99	5,885.80	5,320.32	35.17	31.81	108.90	1,197.11	-425.35	652.55	590.16	62.38	10.460		
6,300.00	5,109.81	5,985.80	5,321.10	37.32	33.64	108.89	1,269.42	-494.42	652.54	586.30	66.23	9.852		
6,400.00	5,110.63	6,085.80	5,321.89	39.50	35.56	108.89	1,341.73	-563.49	652.53	582.34	70.19	9.297		
6,500.00	5,111.44	6,185.80	5,322.67	41.71	37.54	108.89	1,414.04	-632.56	652.51	578.28	74.23	8.790		
6,600.00	5,112.26	6,285.80	5,323.46	43.95	39.58	108.89	1,486.35	-701.63	652.50	574.15	78.35	8.328		
6,700.00	5,113.08	6,385.80	5,324.24	46.22	41.67	108.88	1,558.66	-770.70	652.49	569.95	82.54	7.905		
6,800.00	5,113.89	6,485.80	5,325.02	48.50	43.80	108.88	1,630.97	-839.76	652.48	565.70	86.78	7.519		
6,900.00	5,114.71	6,585.80	5,325.81	50.80	45.97	108.88	1,703.29	-908.83	652.47	561.40	91.07	7.165		
7,000.00	5,115.53	6,685.80	5,326.59	53.12	48.17	108.87	1,775.60	-977.90	652.46	557.06	95.39	6.840		
7,100.00	5,116.34	6,785.80	5,327.38	55.45	50.39	108.87	1,847.91	-1,046.97	652.45	552.69	99.76	6.540		
7,200.00	5,117.16	6,885.80	5,328.16	57.80	52.64	108.87	1,920.22	-1,116.04	652.44	548.28	104.15	6.264		
7,300.00	5,117.98	6,985.80	5,328.95	60.15	54.90	108.87	1,992.53	-1,185.11	652.43	543.85	108.57	6.009		
7,400.00	5,118.79	7,085.80	5,329.73	62.52	57.19	108.86	2,064.84	-1,254.18	652.41	539.39	113.02	5.773		
7,500.00	5,119.61	7,185.80	5,330.51	64.89	59.49	108.86	2,137.15	-1,323.25	652.40	534.91	117.49	5.553		
7,600.00	5,120.43	7,285.80	5,331.30	67.27	61.80	108.86	2,209.46	-1,392.32	652.39	530.42	121.97	5.349		
7,700.00	5,121.24	7,385.80	5,332.08	69.65	64.13	108.86	2,281.77	-1,461.39	652.38	525.90	126.48	5.158		
7,800.00	5,122.06	7,485.80	5,332.87	72.04	66.47	108.85	2,354.08	-1,530.46	652.37	521.37	130.99	4.980		
7,900.00	5,122.88	7,585.80	5,333.65	74.44	68.82	108.85	2,426.39	-1,599.53	652.36	516.83	135.53	4.814		
8,000.00	5,123.69	7,685.80	5,334.43	76.84	71.17	108.85	2,498.70	-1,668.60	652.35	512.28	140.07	4.657		
8,100.00	5,124.51	7,785.80	5,335.22	79.25	73.54	108.85	2,571.01	-1,737.66	652.34	507.71	144.63	4.511		
8,200.00	5,125.33	7,885.80	5,336.00	81.66	75.91	108.84	2,643.32	-1,806.73	652.32	503.13	149.19	4.372		
8,300.00	5,126.14	7,985.80	5,336.79	84.07	78.29	108.84	2,715.63	-1,875.80	652.31	498.55	153.76	4.242		
8,400.00	5,126.96	8,085.80	5,337.57	86.49	80.68	108.84	2,787.94	-1,944.87	652.30	493.95	158.35	4.119		
8,500.00	5,127.78	8,185.80	5,338.35	88.91	83.07	108.83	2,860.25	-2,013.94	652.29	489.35	162.94	4.003		
8,600.00	5,128.59	8,285.80	5,339.14	91.33	85.46	108.83	2,932.57	-2,083.01	652.28	484.74	167.54	3.893		
8,700.00	5,129.41	8,385.80	5,339.92	93.76	87.86	108.83	3,004.88	-2,152.08	652.27	480.13	172.14	3.789		
8,800.00	5,130.23	8,485.80	5,340.71	96.18	90.27	108.83	3,077.19	-2,221.15	652.26	475.51	176.75	3.690		
8,900.00	5,131.04	8,585.80	5,341.49	98.61	92.68	108.82	3,149.50	-2,290.22	652.25	470.88	181.37	3.596		
9,000.00	5,131.86	8,685.80	5,342.28	101.05	95.09	108.82	3,221.81	-2,359.29	652.23	466.25	185.99	3.507		
9,100.00	5,132.68	8,785.80	5,343.06	103.48	97.50	108.82	3,294.12	-2,428.36	652.22	461.61	190.61	3.422		
9,200.00	5,133.49	8,885.80	5,343.84	105.92	99.92	108.82	3,366.43	-2,497.43	652.21	456.97	195.24	3.341		
9,300.00	5,134.31	8,985.80	5,344.63	108.36	102.35	108.81	3,438.74	-2,566.50	652.20	452.33	199.88	3.263		
9,400.00	5,135.13	9,085.80	5,345.41	110.80	104.77	108.81	3,511.05	-2,635.57	652.19	447.68	204.51	3.189		
9,500.00	5,135.94	9,185.80	5,346.20	113.24	107.20	108.81	3,583.36	-2,704.63	652.18	443.02	209.16	3.118		
9,600.00	5,136.76	9,285.80	5,346.98	115.68	109.63	108.81	3,655.67	-2,773.70	652.17	438.37	213.80	3.050		
9,700.00	5,137.58	9,385.80	5,347.76	118.12	112.06	108.80	3,727.98	-2,842.77	652.16	433.71	218.45	2.985		
9,800.00	5,138.39	9,485.80	5,348.55	120.57	114.49	108.80	3,800.29	-2,911.84	652.14	429.04	223.10	2.923		
9,900.00	5,139.21	9,585.80	5,349.33	123.01	116.93	108.80	3,872.60	-2,980.91	652.13	424.38	227.75	2.863		
10,000.00	5,140.03	9,685.80	5,350.12	125.46	119.36	108.79	3,944.91	-3,049.98	652.12	419.71	232.41	2.806		
10,100.00	5,140.84	9,785.80	5,350.90	127.91	121.80	108.79	4,017.22	-3,119.05	652.11	415.04	237.07	2.751		
10,200.00	5,141.66	9,885.80	5,351.68	130.36	124.24	108.79	4,089.53	-3,188.12	652.10	410.37	241.73	2.698		

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



Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design G35 2409 - 632H - Original Drilling - APD													Offset Site Error:	0.00 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,300.00	5,142.48	9,985.80	5,352.47	132.81	126.69	108.79	4,161.85	-3,257.19	652.09	405.69	246.40	2.647		
10,400.00	5,143.29	10,085.80	5,353.25	135.26	129.13	108.78	4,234.16	-3,326.26	652.08	401.02	251.06	2.597		
10,500.00	5,144.11	10,185.80	5,354.04	137.71	131.58	108.78	4,306.47	-3,395.33	652.07	396.34	255.73	2.550		
10,600.00	5,144.93	10,285.80	5,354.82	140.16	134.02	108.78	4,378.78	-3,464.40	652.06	391.66	260.40	2.504		
10,700.00	5,145.74	10,385.80	5,355.61	142.62	136.47	108.78	4,451.09	-3,533.47	652.04	386.97	265.07	2.460		
10,800.00	5,146.56	10,485.80	5,356.39	145.07	138.92	108.77	4,523.40	-3,602.53	652.03	382.29	269.74	2.417		
10,900.00	5,147.38	10,585.80	5,357.17	147.52	141.37	108.77	4,595.71	-3,671.60	652.02	377.60	274.42	2.376		
11,000.00	5,148.19	10,685.80	5,357.96	149.98	143.82	108.77	4,668.02	-3,740.67	652.01	372.91	279.10	2.336		
11,100.00	5,149.01	10,785.80	5,358.74	152.44	146.27	108.76	4,740.33	-3,809.74	652.00	368.22	283.78	2.298		
11,200.00	5,149.83	10,885.80	5,359.53	154.89	148.72	108.76	4,812.64	-3,878.81	651.99	363.53	288.45	2.260		
11,300.00	5,150.64	10,985.80	5,360.31	157.35	151.18	108.76	4,884.95	-3,947.88	651.98	358.84	293.14	2.224		
11,400.00	5,151.46	11,085.80	5,361.09	159.81	153.63	108.76	4,957.26	-4,016.95	651.97	354.15	297.82	2.189		
11,500.00	5,152.28	11,185.80	5,361.88	162.26	156.08	108.75	5,029.57	-4,086.02	651.95	349.45	302.50	2.155		
11,600.00	5,153.09	11,285.80	5,362.66	164.72	158.54	108.75	5,101.88	-4,155.09	651.94	344.76	307.19	2.122		
11,700.00	5,153.91	11,385.80	5,363.45	167.18	161.00	108.75	5,174.19	-4,224.16	651.93	340.06	311.87	2.090		
11,800.00	5,154.73	11,485.80	5,364.23	169.64	163.45	108.75	5,246.50	-4,293.23	651.92	335.36	316.56	2.059		
11,900.00	5,155.54	11,585.80	5,365.02	172.10	165.91	108.74	5,318.82	-4,362.30	651.91	330.66	321.25	2.029		
12,000.00	5,156.36	11,685.80	5,365.80	174.56	168.37	108.74	5,391.13	-4,431.37	651.90	325.96	325.94	2.000		
12,100.00	5,157.18	11,785.80	5,366.58	177.02	170.83	108.74	5,463.44	-4,500.44	651.89	321.26	330.63	1.972		
12,200.00	5,157.99	11,885.80	5,367.37	179.48	173.29	108.74	5,535.75	-4,569.50	651.88	316.56	335.32	1.944		
12,300.00	5,158.81	11,985.80	5,368.15	181.94	175.75	108.73	5,608.06	-4,638.57	651.87	311.86	340.01	1.917		
12,400.00	5,159.63	12,085.80	5,368.94	184.40	178.21	108.73	5,680.37	-4,707.64	651.85	307.15	344.70	1.891		
12,500.00	5,160.44	12,185.80	5,369.72	186.87	180.67	108.73	5,752.68	-4,776.71	651.84	302.45	349.40	1.866		
12,600.00	5,161.26	12,285.80	5,370.50	189.33	183.13	108.72	5,824.99	-4,845.78	651.83	297.74	354.09	1.841		
12,700.00	5,162.08	12,385.80	5,371.29	191.79	185.60	108.72	5,897.30	-4,914.85	651.82	293.03	358.79	1.817		
12,800.00	5,162.89	12,485.80	5,372.07	194.25	188.06	108.72	5,969.61	-4,983.92	651.81	288.33	363.48	1.793		
12,900.00	5,163.71	12,585.80	5,372.86	196.72	190.52	108.72	6,041.92	-5,052.99	651.80	283.62	368.18	1.770		
13,000.00	5,164.53	12,685.80	5,373.64	199.18	192.98	108.71	6,114.23	-5,122.06	651.79	278.91	372.88	1.748		
13,100.00	5,165.34	12,785.80	5,374.42	201.64	195.45	108.71	6,186.54	-5,191.13	651.78	274.20	377.58	1.726		
13,200.00	5,166.16	12,885.80	5,375.21	204.11	197.91	108.71	6,258.85	-5,260.20	651.77	269.49	382.28	1.705		
13,300.00	5,166.98	12,985.80	5,375.99	206.57	200.38	108.71	6,331.16	-5,329.27	651.75	264.78	386.98	1.684		
13,400.00	5,167.79	13,085.80	5,376.78	209.03	202.84	108.70	6,403.47	-5,398.34	651.74	260.07	391.68	1.664		
13,500.00	5,168.61	13,185.80	5,377.56	211.50	205.31	108.70	6,475.78	-5,467.40	651.73	255.36	396.38	1.644		
13,600.00	5,169.43	13,285.80	5,378.35	213.96	207.77	108.70	6,548.10	-5,536.47	651.72	250.64	401.08	1.625		
13,700.00	5,170.24	13,385.80	5,379.13	216.43	210.24	108.69	6,620.41	-5,605.54	651.71	245.93	405.78	1.606		
13,800.00	5,171.06	13,485.80	5,379.91	218.89	212.71	108.69	6,692.72	-5,674.61	651.70	241.22	410.48	1.588		
13,900.00	5,171.88	13,585.80	5,380.70	221.36	215.17	108.69	6,765.03	-5,743.68	651.69	236.50	415.19	1.570		
14,000.00	5,172.69	13,685.80	5,381.48	223.82	217.64	108.69	6,837.34	-5,812.75	651.68	231.79	419.89	1.552		
14,100.00	5,173.51	13,785.80	5,382.27	226.29	220.11	108.68	6,909.65	-5,881.82	651.67	227.07	424.59	1.535		
14,200.00	5,174.33	13,885.80	5,383.05	228.76	222.57	108.68	6,981.96	-5,950.89	651.65	222.35	429.30	1.518		
14,300.00	5,175.14	13,985.80	5,383.83	231.22	225.04	108.68	7,054.27	-6,019.96	651.64	217.64	434.01	1.501		
14,400.00	5,175.96	14,085.80	5,384.62	233.69	227.51	108.68	7,126.58	-6,089.03	651.63	212.92	438.71	1.485 Level 3		
14,500.00	5,176.78	14,185.80	5,385.40	236.15	229.98	108.67	7,198.89	-6,158.10	651.62	208.20	443.42	1.470 Level 3		
14,600.00	5,177.59	14,285.80	5,386.19	238.62	232.45	108.67	7,271.20	-6,227.17	651.61	203.48	448.12	1.454 Level 3		
14,700.00	5,178.41	14,385.80	5,386.97	241.09	234.92	108.67	7,343.51	-6,296.24	651.60	198.77	452.83	1.439 Level 3		
14,800.00	5,179.23	14,485.80	5,387.75	243.55	237.38	108.67	7,415.82	-6,365.31	651.59	194.05	457.54	1.424 Level 3		
14,895.85	5,180.01	14,581.65	5,388.51	245.92	239.75	108.66	7,485.13	-6,431.51	651.56	189.51	462.05	1.410 Level 3, SF		

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

1/9/2020 8:43:20AM

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COMPASS 5000.15 Build 91D



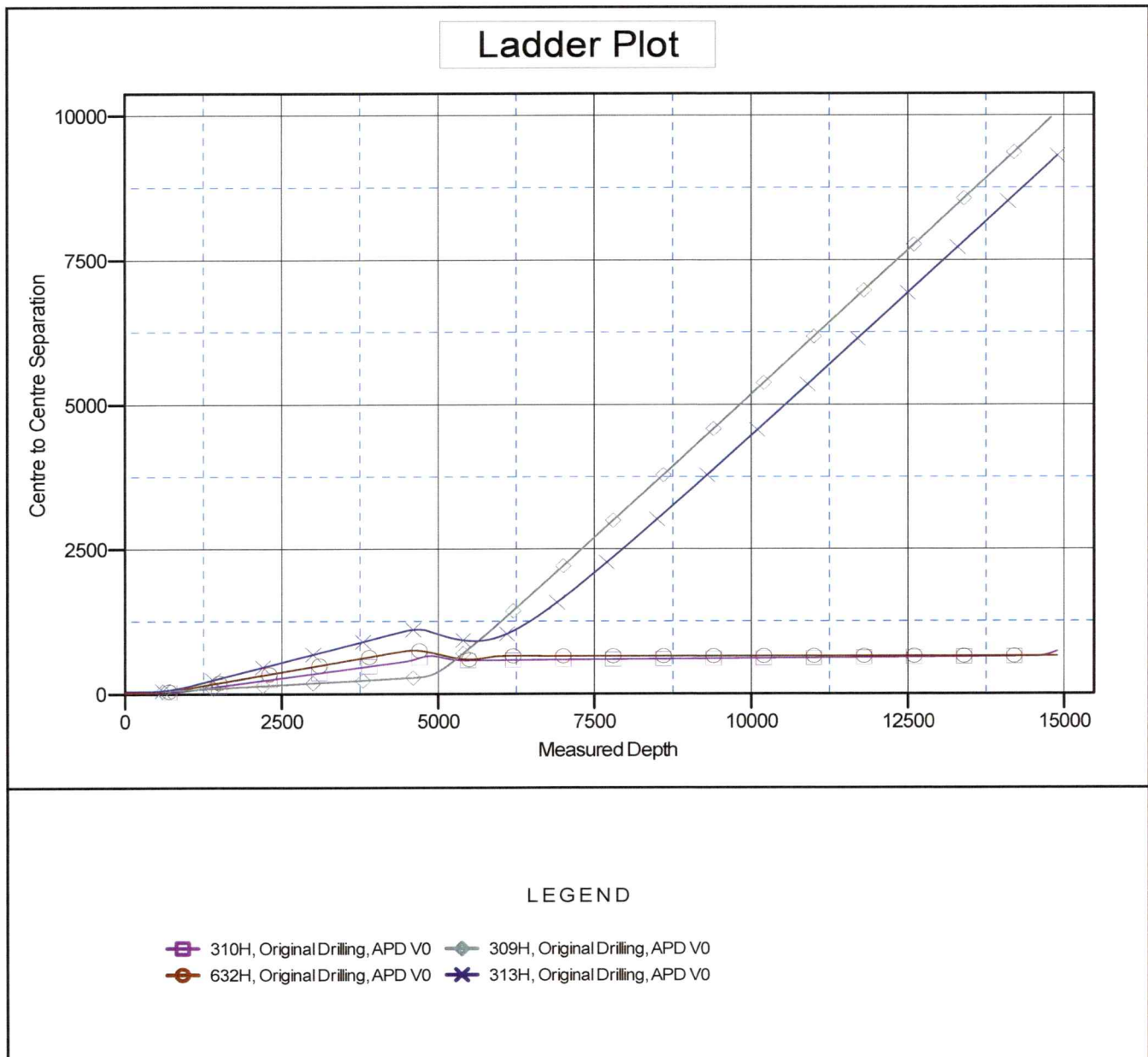
Scientific Drilling, Intl
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 308H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Reference Site:	G35 2409	MD Reference:	GL 6899' & RKB 14' @ 6913.01ft (Aztec 920)
Site Error:	0.00 ft	North Reference:	True
Reference Well:	308H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6899' & RKB 14' @ 6913.01ft (Azt
Offset Depths are relative to Offset Datum
Central Meridian is -107.833

Coordinates are relative to: 308H - Slot 5
Coordinate System is US State Plane 1983, New Mexico Western Zone
Grid Convergence at Surface is: 0.04°



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



Scientific Drilling, Intl

Anticollision Report

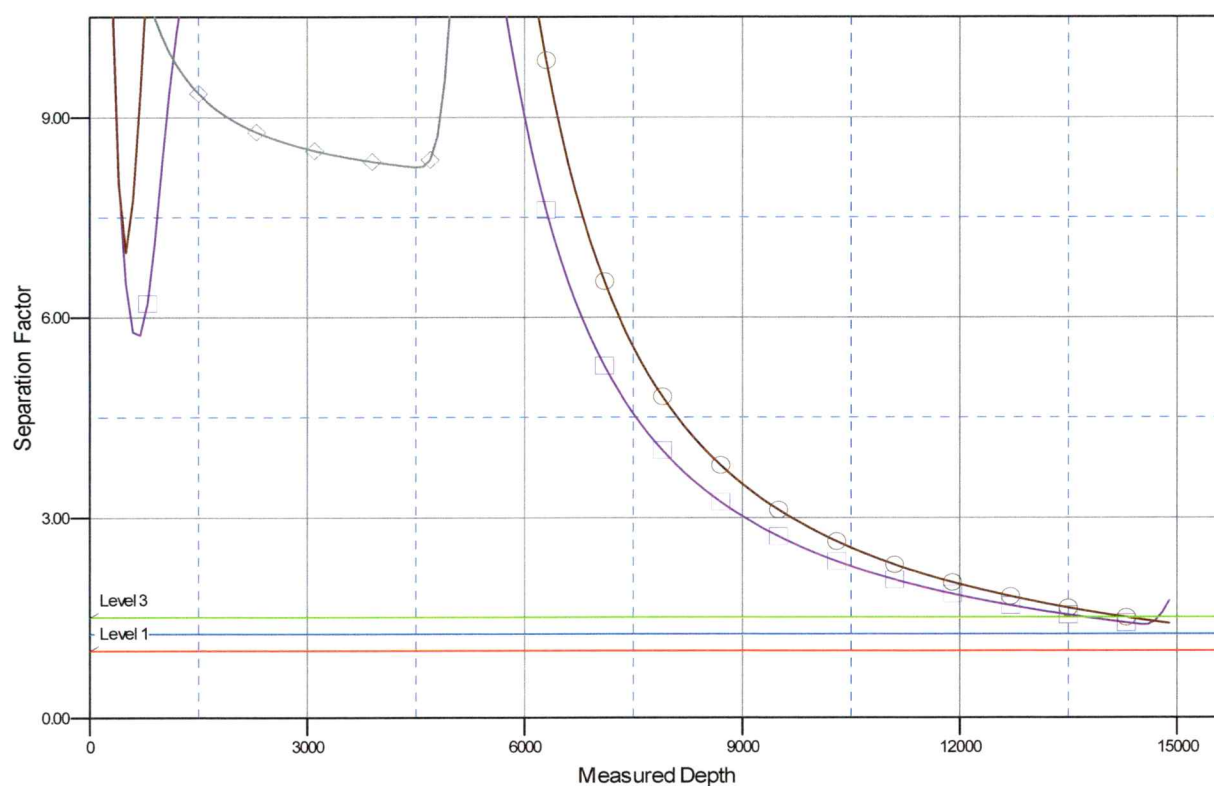


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Reference Depths are relative to GL 6899' & RKB 14' @ 6913.01ft (Azt)
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.833

Coordinates are relative to: 308H - Slot 5
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.04°

Separation Factor Plot



LEGEND

- 310H, Original Drilling, APD V0
- 309H, Original Drilling, APD V0
- 632H, Original Drilling, APD V0
- 313H, Original Drilling, APD V0

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

G35-2409

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: 2/4/2020

☒ Original

Operator & OGRID No.: DJR Operating LLC. ; 371838

☐ Amended - Reason for Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Nageezi Unit 308H	Pending	SWNE, Section 35, T24N, R9W	2333' FNL, 2295' FEL	850	Flared	
Nageezi Unit 309H	Pending	SWNE, Section 35, T24N, R9W	2363' FNL, 2321' FEL	975	Flared	
Nageezi Unit 310H	Pending	SWNE, Section 35, T24N, R9W	2348' FNL, 2308' FEL	975	Flared	
Nageezi Unit 313H	Pending	SWNE, Section 35, T24N, R9W	2303' FNL, 2268' FEL	960	Flared	
Nageezi Unit 632H	Pending	SWNE, Section 35, T24N, R9W	2318' FNL, 2282' FEL	975	Flared	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Enterprise Field Services, LLC (Enterprise) and will be connected to Enterprise's low/high pressure gathering system located in San Juan County, New Mexico. It will require approximately 11,270' of pipeline to connect the facility to DJR Operating LLC. low/high pressure Escrito Trunk in Sec. 3, T23N, R9W which ties into Enterprise's existing pipeline in Section 12, T24N, R10W. DJR Operating LLC. provides (periodically) to Enterprise a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, DJR Operating LLC. and Enterprise have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at the Chaco Processing Plant located in Sec. 16, Twn 26N, Rng 12W, San Juan County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Enterprise system at that time. Based on current information, it is DJR Operating LLC.'s belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

District I

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District II

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District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 16789

COMMENTS

Operator:	DJR OPERATING, LLC	1 Road 3263	Aztec, NM87410	OGRID:	371838	Action Number:	16789	Action Type:	FORM 3160-3
Created By	Comment						Comment Date		
ahvermersch	See attached letter for NMOCD COA's						02/03/2021		

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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 16789

CONDITIONS OF APPROVAL

Operator:	DJR OPERATING, LLC	1 Road 3263	Aztec, NM87410	OGRID:	371838	Action Number:	16789	Action Type:	FORM 3160-3
OCD Reviewer	Condition								
ahvermersch	Notify OCD 24 hours prior to casing & cement								