

Well Name: NAGEEZI UNIT	Well Location: T23N / R9W / SEC 2 / NWNW / 36.263257 / -107.766482	County or Parish/State: SAN JUAN / NM
Well Number: 319H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM008005, NMNM8005	Unit or CA Name:	Unit or CA Number: NMNM132981A
US Well Number: 3004538199	Well Status: Drilling Well	Operator: DJR OPERATING LLC

Notice of Intent

Sundry ID: 2640853

Type of Submission: Notice of Intent	Type of Action: Other
Date Sundry Submitted: 10/20/2021	Time Sundry Submitted: 12:09
Date proposed operation will begin: 10/20/2021	

Procedure Description: DJR Operating, LLC requests approval to modify the Drilling Plan Report target formation from the Gallup B sand to the Gallup C sandstone. None of the points (SHL, POE, & BHL) have changed.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

319H_DPR_Rev1_20211020120259.pdf

Received by OCD: 12/21/2021 1:39:42 PM

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NWNW / 36.263257 / -107.766482

County or Parish/State: SAN
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Lease Number: NMNM008005,
NMNM8005

Unit or CA Name:

Unit or CA Number:
NMNM132981A

US Well Number: 3004538199

Well Status: Drilling Well

Operator: DJR OPERATING LLC

Operator Certification

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: SHAW-MARIE FORD

Signed on: OCT 20, 2021 12:08 PM

Name: DJR OPERATING LLC

Title: Regulatory Specialist

Street Address: 1 Road 3263

City: Aztec

State: NM

Phone: (505) 632-3476

Email address: sford@djrlc.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: DAVE J MANKIEWICZ

BLM POC Title: AFM-Minerals

BLM POC Phone: 5055647761

BLM POC Email Address: DMANKIEW@BLM.GOV

Disposition: Approved

Disposition Date: 12/21/2021

Signature: Dave Mankiewicz

Sundry



DRILLING PLAN

Nageezi Unit 319H

San Juan County, New Mexico

Surface Location

277-ft FWL & 10-ft FNL
 Sec 2 T23N R09W
 Graded Elevation 6865' MSL
 RKB Elevation 6891' (26' KB)

SHL Geographical Coordinates (NAD-83)

Latitude 36.2632570° N
 Longitude 107.7664820° W

Kick Off Point for Horizontal Build Curve

4498-ft MD
 4455-ft TVD

Local Coordinates (from SHL)

545-ft South
 175-ft East

Heel Location (Pay zone entry)

26-ft FEL & 143-ft FNL
 Sec 3 T23N R9W

Heel Geographical Coordinates (NAD-83)

Latitude 36.262883° N
 Longitude 107.76750670° W

Bottom Hole Location (TD)

874-ft FWL & 1035-ft FNL
 Sec 27 T24N R9W

BHL Geographical Coordinates (NAD-83)

Latitude 36.2749932° N
 Longitude 107.7823797° W

Well objectives

This well is planned as a 6220-ft lateral in the Gallup C R3 sand.

Bottom Hole temperature and pressure

The temperature in the Gallup C R3 horizontal objective is 140°F. Bottom hole pressure in the Gallup C R3 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	699	699	Sd	W	8.3	8.4 – 8.8
Kirtland	853	852	Sh	-	8.3	8.4 – 8.8
Fruitland	1145	1141	C	G	8.3	9.0 - 9.5
Pictured Cliffs	1495	1487	Sd	W	8.3	9.0 - 9.5
Lewis	1593	1584	Sh	-		9.0 - 9.5
Chacra	2244	2227	Sd	-	8.3	9.0 - 9.5
Menefee	3002	2976	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	3967	3930	Sd	-	8.3	9.0 - 9.5
Mancos	4144	4105	Sh	-		9.0 - 9.5
Mancos Silt	4466	4423	Slt	O/G	6.6	9.0 - 9.5
Gallup A	4989	4918	Slt	O/G	6.6	9.0 - 9.5
Gallup B	5039	4957	Sd	O/G	6.6	8.8 - 9.0
Gallup C	5218	5074	Sd	O/G	6.6	8.8 - 9.0
Target	5580	5176	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	5529	surf	5174	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	5250	11797	5090	5222	5250

Note: all casing will be new

Sundry



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
	American Cementing	American Cementing
Type	III	Poz/G
Planned top	Surface	3998-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	2.34	1.50
Mix water (gal/sx)	13.26	7.20
Volume (sx)	392	246
Volume (bbls)	162	65
Volume (cu.ft.)	909	366
Excess %	55	55



Sundry

4-1/2" Production Liner

	American Cementing
Type	Poz/G
Planned top	5250-ft
Density (ppg)	13.3
Yield (cf/sx)	1.56
Mix water (gal/sx)	7.71
Volume (sx)	551
Volume (bbls)	153
Volume (cu.ft)	859
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 – 5529	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5529 – 11797	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.

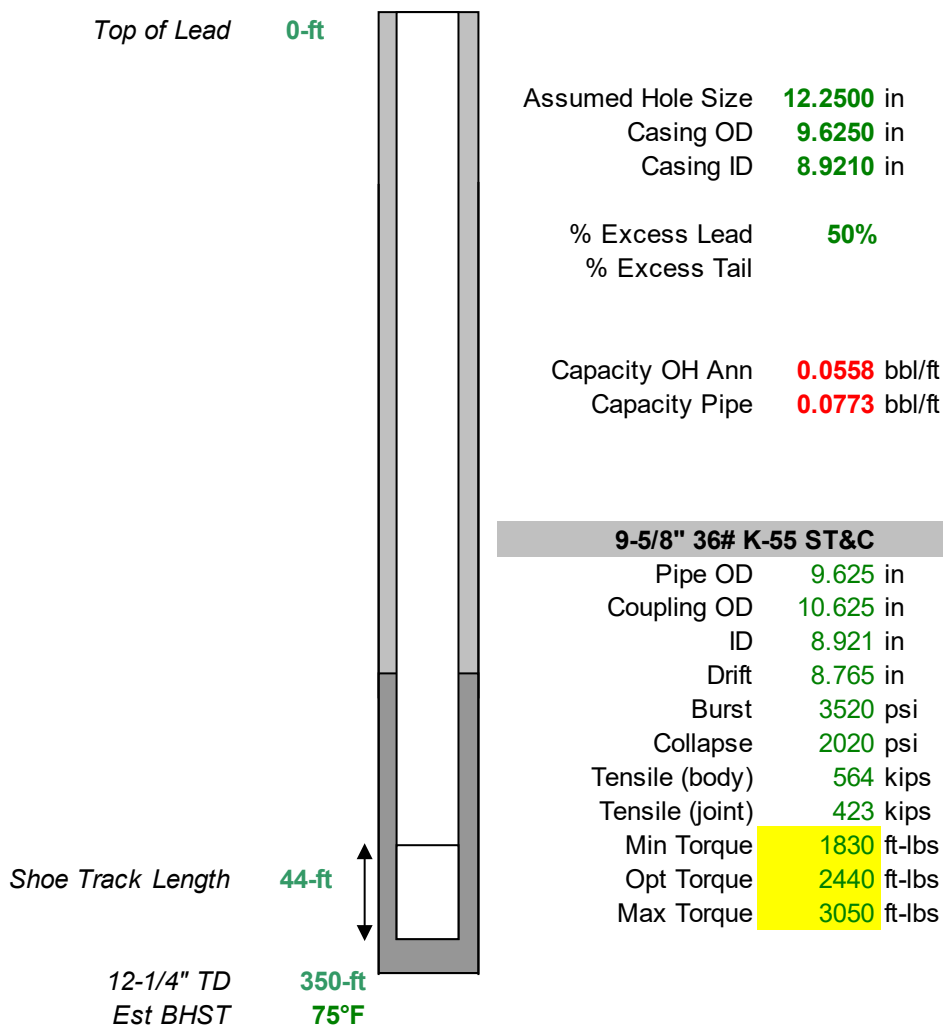
Completion

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.

Sundry



9-5/8" Surface Casing & Cementing



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

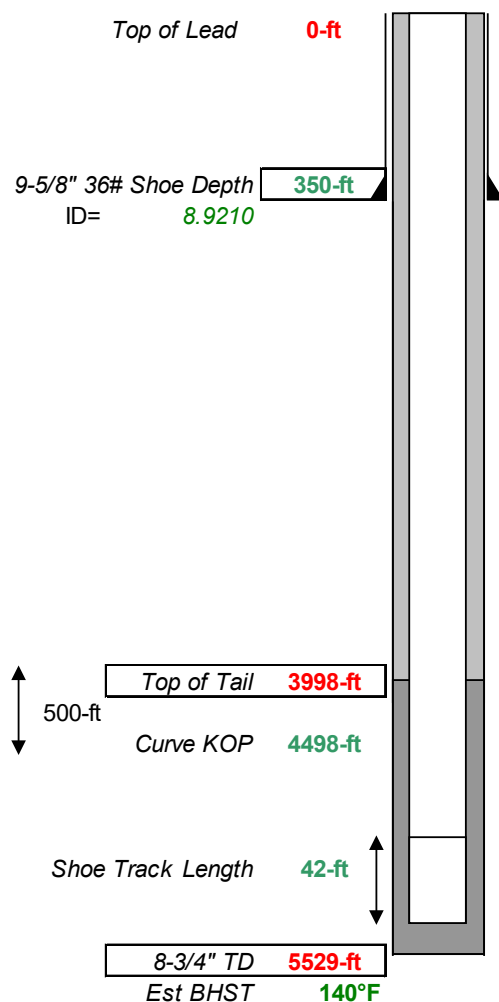
Volumes

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

Sundry



7" Intermediate Casing & Cementing Nageezi Unit 319H



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	55%
% OH Excess Tail	55%

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

Lead Slurry - American Cementing		Properties
ASTM Type III		Density 12.30 ppg
BA-90 5 lb/sx		Yield 2.3200 cf/sk
KCI 3% BWOB		Water required 13.20 gal/sk
GW-86 0.1% BWOB		Thickening Time 4:18 hr:min
FL-66 0.2% BWOB		Time to 50 psi (95°F) 5:22 hr:min
R-3 0.3% BWOB		24-hr UCA (95°F) 728 psi
FP-24 0.3% BWOB		
POLI 0.130 lb/sx		
Tail Slurry - American Cementing		Properties
G+Pozz 50:50		Density 13.50 ppg
BA-90 3 lb/sx		Yield 1.49 cf/sk
FL-66 0.4% BWOB		Water required 7.2 gal/sk
FP-24 0.3% BWOB		Thickening Time 3:55 hr:min
A-2 0.5% BWOB		Time to 50 psi (95°F) 3:45 hr:min
A-10 3% BWOB		Time to 500 psi (95°F) 11:42 hr:min
POLI 0.130 lb/sx		24-hr UCA (95°F) 1016 psi

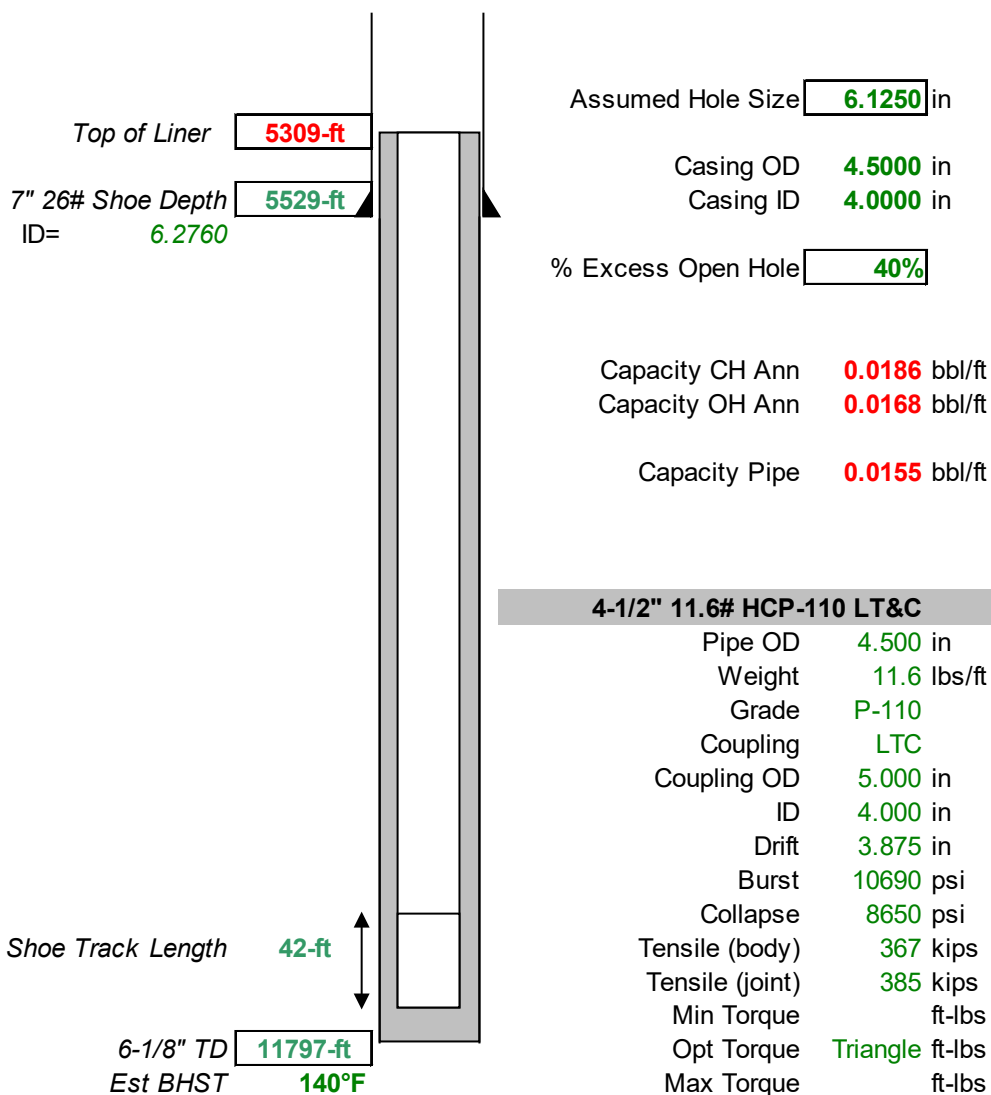
Volumes

Lead Volume	162	bbls	392	sx
Tail Volume	65	bbls	246	sx
Approx Displacement	210	bbls		
Total Volume	437	bbls		

Sundry



4-1/2" Liner Cementing Nageezi Unit 319H



Slurry - American Cementing		Properties	
G+Pozz	50:50	Density	13.3 ppg
BA-90	3 lb/sx	Yield	1.56 cf/sk
GW-86	0.1% BWOB	Total Mix Fluid	7.7 gal/sk
R-3	0.4% BWOB	Thickening Time	5:41 hr:min
FP-24	0.3% BWOB	Time to 50 psi (143°F)	4:54 hr:min
FL-24	0.4% BWOB	24-hr UCA (143°F)	1817 psi
Gel	4% BWOB		
Volumes			
Lead Volume	152 bbls	547	sx
Approx Displacement	127 bbls		
Total Volume	279 bbls		



Company: DJR Operating
Project: Nageezi Unit
Site: M35 2409
Well: 319H
Wellbore: Original Drilling
Design: APD Rev 1

PROJECT DETAILS: Nageezi Unit

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Local North: True

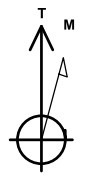


WELL DETAILS: 319H

		GL 6865' & RKB 26' @ 6891ft (H&P 443)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
0	0	1915131.17	2742799.52	36.26325700	-107.76648200	1	

Plan: APD Rev 1 (319H/Original Drilling)

Created By: Janie Collins Date: 9:33, October 20 2021



Azimuths to True North: 0°
Magnetic North: 8.86°

Magnetic Field
Strength: 49493.71
Dip Angle: 62.69°
Date: 12/20/2019
Model: IGRF2015

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
319H Heel Rev 1	5176	-136	-302	1914994.82	2742497.53	36.26288300	-107.76750670
319H Toe Rev 1	5222	4273	-4686	1919400.58	2738110.61	36.27499320	-107.78237970

SECTION DETAILS

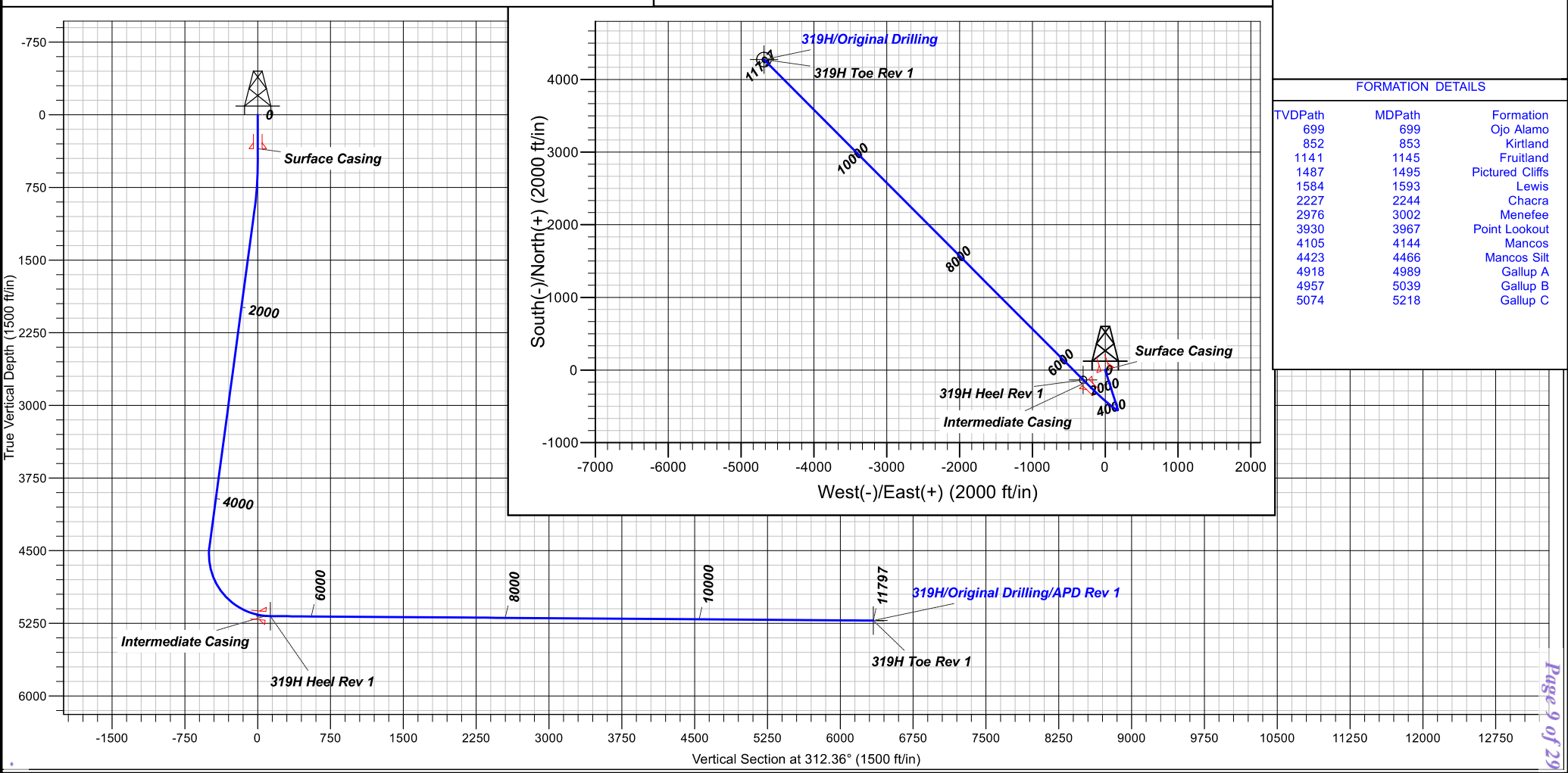
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0	0.00	0.00	0	0	0	0.00	0.00	0
515	0.00	0.00	515	-32	10	0.00	162.21	-29
952	8.74	162.21	950	-545	175	0.00	0.00	-496
4498	8.74	162.21	4455	-136	-302	9.00	152.71	131
5580	89.58	315.16	5176	-136	-302	9.00	152.71	131
11797	89.58	315.16	5222	4273	-4686	0.00	0.00	6341

CASING DETAILS

TVD	MD	Name
350	350	Surface Casing
5174	5529	Intermediate Casing

FORMATION DETAILS

TVDPath	MDPath	Formation
699	699	Ojo Alamo
852	853	Kirtland
1141	1145	Fruitland
1487	1495	Pictured Cliffs
1584	1593	Lewis
2227	2244	Chacara
2976	3002	Menefee
3930	3967	Point Lookout
4105	4144	Mancos
4423	4466	Mancos Silt
4918	4989	Gallup A
4957	5039	Gallup B
5074	5218	Gallup C



Released to Imaging: 12/21/2021 12:39:07 PM

Received by OCB: 12/21/2021 12:39:42 PM



DJR Operating

Nageezi Unit

M35 2409

319H - Slot 1

Original Drilling

Plan: APD Rev 1

Standard Planning Report

20 October, 2021





Lonestar Consulting, LLC
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 319H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Project:	Nageezi Unit	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site:	M35 2409	North Reference:	True
Well:	319H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD Rev 1		

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	M35 2409		
Site Position:		Northing:	1,915,230.54 usft
From:	Lat/Long	Easting:	2,742,788.84 usft
Position Uncertainty:	0 ft	Slot Radius:	13.20 in
		Latitude:	36.26353000
		Longitude:	-107.76651800
		Grid Convergence:	0.04 °

Well	319H - Slot 1		
Well Position	+N/-S	-99 ft	Northing: 1,915,131.17 usft
	+E/-W	11 ft	Easting: 2,742,799.52 usft
Position Uncertainty		0 ft	Wellhead Elevation: 6865 ft
			Latitude: 36.26325700
			Longitude: -107.76648200
			Ground Level: 6865 ft

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/20/2019	8.96	62.90	49,493.47440809

Design	APD Rev 1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0	0	0	312.36

Plan Survey Tool Program	Date	10/20/2021		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0	11,797	APD Rev 1 (Original Drilling)	MWD+IGRF
				OWSG MWD + IGRF or WMM

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00	
515	0.00	0.00	515	0	0	0.00	0.00	0.00	0.00	
952	8.74	162.21	950	-32	10	2.00	2.00	0.00	162.21	
4498	8.74	162.21	4455	-545	175	0.00	0.00	0.00	0.00	
5580	89.58	315.16	5176	-136	-302	9.00	7.47	14.14	152.71	319H Heel Rev 1
11,797	89.58	315.16	5222	4273	-4686	0.00	0.00	0.00	0.00	319H Toe Rev 1



Lonestar Consulting, LLC
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 319H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Project:	Nageezi Unit	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site:	M35 2409	North Reference:	True
Well:	319H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD Rev 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0	0.00	0.00	0	0	0	0	0.00	0.00	0.00
100	0.00	0.00	100	0	0	0	0.00	0.00	0.00
200	0.00	0.00	200	0	0	0	0.00	0.00	0.00
300	0.00	0.00	300	0	0	0	0.00	0.00	0.00
400	0.00	0.00	400	0	0	0	0.00	0.00	0.00
500	0.00	0.00	500	0	0	0	0.00	0.00	0.00
515	0.00	0.00	515	0	0	0	0.00	0.00	0.00
600	1.70	162.21	600	-1	0	-1	2.00	2.00	0.00
700	3.70	162.21	700	-6	2	-5	2.00	2.00	0.00
800	5.70	162.21	800	-13	4	-12	2.00	2.00	0.00
900	7.70	162.21	899	-25	8	-22	2.00	2.00	0.00
952	8.74	162.21	950	-32	10	-29	2.00	2.00	0.00
1000	8.74	162.21	998	-39	12	-35	0.00	0.00	0.00
1100	8.74	162.21	1097	-53	17	-48	0.00	0.00	0.00
1200	8.74	162.21	1195	-68	22	-62	0.00	0.00	0.00
1300	8.74	162.21	1294	-82	26	-75	0.00	0.00	0.00
1400	8.74	162.21	1393	-97	31	-88	0.00	0.00	0.00
1500	8.74	162.21	1492	-111	36	-101	0.00	0.00	0.00
1600	8.74	162.21	1591	-125	40	-114	0.00	0.00	0.00
1700	8.74	162.21	1690	-140	45	-127	0.00	0.00	0.00
1800	8.74	162.21	1788	-154	50	-141	0.00	0.00	0.00
1900	8.74	162.21	1887	-169	54	-154	0.00	0.00	0.00
2000	8.74	162.21	1986	-183	59	-167	0.00	0.00	0.00
2100	8.74	162.21	2085	-198	63	-180	0.00	0.00	0.00
2200	8.74	162.21	2184	-212	68	-193	0.00	0.00	0.00
2300	8.74	162.21	2283	-227	73	-207	0.00	0.00	0.00
2400	8.74	162.21	2381	-241	77	-220	0.00	0.00	0.00
2500	8.74	162.21	2480	-256	82	-233	0.00	0.00	0.00
2600	8.74	162.21	2579	-270	87	-246	0.00	0.00	0.00
2700	8.74	162.21	2678	-285	91	-259	0.00	0.00	0.00
2800	8.74	162.21	2777	-299	96	-272	0.00	0.00	0.00
2900	8.74	162.21	2876	-314	101	-286	0.00	0.00	0.00
3000	8.74	162.21	2975	-328	105	-299	0.00	0.00	0.00
3100	8.74	162.21	3073	-343	110	-312	0.00	0.00	0.00
3200	8.74	162.21	3172	-357	115	-325	0.00	0.00	0.00
3300	8.74	162.21	3271	-371	119	-338	0.00	0.00	0.00
3400	8.74	162.21	3370	-386	124	-352	0.00	0.00	0.00
3500	8.74	162.21	3469	-400	128	-365	0.00	0.00	0.00
3600	8.74	162.21	3568	-415	133	-378	0.00	0.00	0.00
3700	8.74	162.21	3666	-429	138	-391	0.00	0.00	0.00
3800	8.74	162.21	3765	-444	142	-404	0.00	0.00	0.00
3900	8.74	162.21	3864	-458	147	-417	0.00	0.00	0.00
4000	8.74	162.21	3963	-473	152	-431	0.00	0.00	0.00
4100	8.74	162.21	4062	-487	156	-444	0.00	0.00	0.00
4200	8.74	162.21	4161	-502	161	-457	0.00	0.00	0.00
4300	8.74	162.21	4259	-516	166	-470	0.00	0.00	0.00
4400	8.74	162.21	4358	-531	170	-483	0.00	0.00	0.00
4498	8.74	162.21	4455	-545	175	-496	0.00	0.00	0.00
4500	8.57	162.81	4457	-545	175	-497	9.00	-7.98	27.69
4600	4.24	244.68	4557	-554	174	-502	9.00	-4.33	81.88
4700	11.14	294.43	4656	-551	162	-491	9.00	6.91	49.75
4800	19.80	304.01	4752	-538	139	-465	9.00	8.66	9.58
4900	28.67	307.85	4843	-514	106	-424	9.00	8.87	3.85
5000	37.59	309.99	4927	-479	63	-370	9.00	8.93	2.13



Lonestar Consulting, LLC

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 319H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Project:	Nageezi Unit	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site:	M35 2409	North Reference:	True
Well:	319H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD Rev 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5100	46.55	311.40	5001	-436	13	-303	9.00	8.95	1.41
5200	55.51	312.44	5064	-384	-45	-225	9.00	8.96	1.04
5300	64.48	313.28	5114	-325	-109	-139	9.00	8.97	0.84
5400	73.45	314.00	5150	-260	-176	-45	9.00	8.97	0.72
5500	82.43	314.66	5170	-192	-246	52	9.00	8.98	0.66
5580	89.58	315.16	5176	-136	-302	131	9.00	8.98	0.63
5600	89.58	315.16	5176	-122	-316	152	0.00	0.00	0.00
5700	89.58	315.16	5177	-51	-387	252	0.00	0.00	0.00
5800	89.58	315.16	5178	20	-457	352	0.00	0.00	0.00
5900	89.58	315.16	5178	91	-528	452	0.00	0.00	0.00
6000	89.58	315.16	5179	162	-599	551	0.00	0.00	0.00
6100	89.58	315.16	5180	233	-669	651	0.00	0.00	0.00
6200	89.58	315.16	5181	304	-740	751	0.00	0.00	0.00
6300	89.58	315.16	5181	375	-810	851	0.00	0.00	0.00
6400	89.58	315.16	5182	446	-881	951	0.00	0.00	0.00
6500	89.58	315.16	5183	517	-951	1051	0.00	0.00	0.00
6600	89.58	315.16	5184	587	-1022	1151	0.00	0.00	0.00
6700	89.58	315.16	5184	658	-1092	1251	0.00	0.00	0.00
6800	89.58	315.16	5185	729	-1163	1350	0.00	0.00	0.00
6900	89.58	315.16	5186	800	-1233	1450	0.00	0.00	0.00
7000	89.58	315.16	5187	871	-1304	1550	0.00	0.00	0.00
7100	89.58	315.16	5187	942	-1374	1650	0.00	0.00	0.00
7200	89.58	315.16	5188	1013	-1445	1750	0.00	0.00	0.00
7300	89.58	315.16	5189	1084	-1515	1850	0.00	0.00	0.00
7400	89.58	315.16	5189	1155	-1586	1950	0.00	0.00	0.00
7500	89.58	315.16	5190	1226	-1656	2050	0.00	0.00	0.00
7600	89.58	315.16	5191	1297	-1727	2149	0.00	0.00	0.00
7700	89.58	315.16	5192	1367	-1797	2249	0.00	0.00	0.00
7800	89.58	315.16	5192	1438	-1868	2349	0.00	0.00	0.00
7900	89.58	315.16	5193	1509	-1938	2449	0.00	0.00	0.00
8000	89.58	315.16	5194	1580	-2009	2549	0.00	0.00	0.00
8100	89.58	315.16	5195	1651	-2079	2649	0.00	0.00	0.00
8200	89.58	315.16	5195	1722	-2150	2749	0.00	0.00	0.00
8300	89.58	315.16	5196	1793	-2220	2849	0.00	0.00	0.00
8400	89.58	315.16	5197	1864	-2291	2948	0.00	0.00	0.00
8500	89.58	315.16	5198	1935	-2361	3048	0.00	0.00	0.00
8600	89.58	315.16	5198	2006	-2432	3148	0.00	0.00	0.00
8700	89.58	315.16	5199	2077	-2502	3248	0.00	0.00	0.00
8800	89.58	315.16	5200	2147	-2573	3348	0.00	0.00	0.00
8900	89.58	315.16	5201	2218	-2643	3448	0.00	0.00	0.00
9000	89.58	315.16	5201	2289	-2714	3548	0.00	0.00	0.00
9100	89.58	315.16	5202	2360	-2784	3648	0.00	0.00	0.00
9200	89.58	315.16	5203	2431	-2855	3747	0.00	0.00	0.00
9300	89.58	315.16	5204	2502	-2925	3847	0.00	0.00	0.00
9400	89.58	315.16	5204	2573	-2996	3947	0.00	0.00	0.00
9500	89.58	315.16	5205	2644	-3066	4047	0.00	0.00	0.00
9600	89.58	315.16	5206	2715	-3137	4147	0.00	0.00	0.00
9700	89.58	315.16	5206	2786	-3207	4247	0.00	0.00	0.00
9800	89.58	315.16	5207	2857	-3278	4347	0.00	0.00	0.00
9900	89.58	315.16	5208	2927	-3348	4447	0.00	0.00	0.00
10,000	89.58	315.16	5209	2998	-3419	4546	0.00	0.00	0.00
10,100	89.58	315.16	5209	3069	-3489	4646	0.00	0.00	0.00
10,200	89.58	315.16	5210	3140	-3560	4746	0.00	0.00	0.00
10,300	89.58	315.16	5211	3211	-3630	4846	0.00	0.00	0.00



Lonestar Consulting, LLC
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 319H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Project:	Nageezi Unit	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site:	M35 2409	North Reference:	True
Well:	319H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD Rev 1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,400	89.58	315.16	5212	3282	-3701	4946	0.00	0.00	0.00	
10,500	89.58	315.16	5212	3353	-3771	5046	0.00	0.00	0.00	
10,600	89.58	315.16	5213	3424	-3842	5146	0.00	0.00	0.00	
10,700	89.58	315.16	5214	3495	-3912	5246	0.00	0.00	0.00	
10,800	89.58	315.16	5215	3566	-3983	5346	0.00	0.00	0.00	
10,900	89.58	315.16	5215	3636	-4053	5445	0.00	0.00	0.00	
11,000	89.58	315.16	5216	3707	-4124	5545	0.00	0.00	0.00	
11,100	89.58	315.16	5217	3778	-4194	5645	0.00	0.00	0.00	
11,200	89.58	315.16	5218	3849	-4265	5745	0.00	0.00	0.00	
11,300	89.58	315.16	5218	3920	-4335	5845	0.00	0.00	0.00	
11,400	89.58	315.16	5219	3991	-4406	5945	0.00	0.00	0.00	
11,500	89.58	315.16	5220	4062	-4476	6045	0.00	0.00	0.00	
11,600	89.58	315.16	5221	4133	-4547	6145	0.00	0.00	0.00	
11,700	89.58	315.16	5221	4204	-4617	6244	0.00	0.00	0.00	
11,797	89.58	315.16	5222	4273	-4686	6341	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
319H Heel Rev 1	0.00	0.00	5176	-136	-302	1,914,994.82	2,742,497.53	36.26288300	-107.76750670	
- plan hits target center										
- Circle (radius 50)										
319H Toe Rev 1	0.00	0.00	5222	4273	-4686	1,919,400.58	2,738,110.61	36.27499320	-107.78237970	
- plan hits target center										
- Circle (radius 100)										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (in)	Hole Diameter (in)
350	350	Surface Casing		9.62	12.25
5529	5174	Intermediate Casing		7.00	8.75



Lonestar Consulting, LLC
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 319H - Slot 1
Company:	DJR Operating	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Project:	Nageezi Unit	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site:	M35 2409	North Reference:	True
Well:	319H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD Rev 1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
699	699	Ojo Alamo		0.00	0.00	
853	852	Kirtland		0.00	0.00	
1145	1141	Fruitland		0.00	0.00	
1495	1487	Pictured Cliffs		0.00	0.00	
1593	1584	Lewis		0.00	0.00	
2244	2227	Chacra		0.00	0.00	
3002	2976	Menefee		0.00	0.00	
3967	3930	Point Lookout		0.00	0.00	
4144	4105	Mancos		0.00	0.00	
4466	4423	Mancos Silt		0.00	0.00	
4989	4918	Gallup A		0.00	0.00	
5039	4957	Gallup B		0.00	0.00	
5218	5074	Gallup C		0.00	0.00	



DJR Operating

Nageezi Unit

M35 2409

319H

Original Drilling

APD Rev 1

Anticollision Report

20 October, 2021





Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Reference	APD Rev 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 2000ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	10/20/2021		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0	11,797	APD Rev 1 (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						
M35 2409						
314H - Original Drilling - APD	312	299	80	78	45.516	CC
314H - Original Drilling - APD	400	387	80	78	33.548	ES
314H - Original Drilling - APD	700	677	102	98	22.845	SF
315H - Original Drilling - APD	312	299	40	38	22.859	CC
315H - Original Drilling - APD	400	387	40	38	16.849	ES
315H - Original Drilling - APD	11,797	10,900	1301	986	4.123	SF
316H - Original Drilling - APD	400	387	60	58	25.104	CC, ES
316H - Original Drilling - APD	600	583	67	63	17.606	SF
318H - Original Drilling - APD	400	387	20	18	8.418	CC
318H - Original Drilling - APD	500	487	21	17	6.612	ES
318H - Original Drilling - APD	600	587	23	19	6.003	SF

Offset Design:	M35 2409 - 314H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program:	0-MWD+IGRF												Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance			Rule Assigned:					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0	0	0	0	0	0	-5.91	80	-8	81					
100	100	87	87	0	0	-5.91	80	-8	80	80	0.27	300.489		
200	200	187	187	0	0	-5.91	80	-8	80	79	0.96	83.743		
300	300	287	287	1	1	-5.91	80	-8	80	78	1.67	47.879		
312	312	299	299	1	1	-5.91	80	-8	80	78	1.76	45.516	CC	
400	400	387	387	1	1	-5.91	80	-8	80	78	2.39	33.548	ES	
500	500	484	484	2	2	-5.72	82	-8	82	79	3.10	26.547		
515	515	498	498	2	2	-5.67	82	-8	83	80	3.20	25.857		
600	600	581	581	2	2	-167.63	87	-8	89	85	3.79	23.441		
700	700	677	676	2	2	-167.53	96	-8	102	98	4.48	22.845	SF	
800	800	771	770	3	3	-167.57	107	-7	122	117	5.16	23.690		
900	899	863	861	3	3	-167.68	121	-7	149	143	5.84	25.477		
952	950	910	907	3	3	-167.74	130	-7	165	159	6.19	26.662		
1000	998	953	949	3	3	-167.84	138	-7	181	175	6.50	27.850		
1100	1097	1040	1034	4	4	-167.93	157	-6	217	209	7.13	30.365		
1200	1195	1126	1117	4	4	-167.91	177	-5	255	247	7.75	32.898		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Offset Design: M35 2409 - 314H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		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		
1300	1294	1209	1197	5	5	-167.82	200	-5	296	288	8.36	35.407		
1400	1393	1290	1275	5	5	-167.69	225	-4	340	331	8.96	37.914		
1500	1492	1379	1359	6	6	-167.56	253	-3	385	375	9.64	39.890		
1600	1591	1469	1444	6	6	-167.46	281	-2	429	419	10.33	41.578		
1700	1690	1558	1529	6	7	-167.37	309	-2	474	463	11.02	43.038		
1800	1788	1648	1614	7	7	-167.30	336	-1	519	507	11.72	44.310		
1900	1887	1737	1699	7	8	-167.24	364	0	564	552	12.42	45.428		
2000	1986	1826	1784	8	9	-167.19	392	1	609	596	13.12	46.417		
2100	2085	1916	1869	8	9	-167.15	420	2	654	640	13.82	47.297		
2200	2184	2005	1954	9	10	-167.11	448	2	699	684	14.53	48.085		
2300	2283	2094	2039	9	10	-167.08	476	3	743	728	15.24	48.794		
2400	2381	2184	2123	10	11	-167.05	504	4	788	772	15.95	49.435		
2500	2480	2273	2208	10	12	-167.02	532	5	833	816	16.66	50.018		
2600	2579	2363	2293	10	12	-167.00	560	6	878	861	17.37	50.549		
2700	2678	2452	2378	11	13	-166.98	588	6	923	905	18.08	51.036		
2800	2777	2541	2463	11	13	-166.96	616	7	968	949	18.80	51.483		
2900	2876	2631	2548	12	14	-166.94	644	8	1013	993	19.51	51.894		
3000	2975	2720	2633	12	15	-166.93	672	9	1057	1037	20.23	52.275		
3100	3073	2809	2718	13	15	-166.91	700	10	1102	1081	20.94	52.628		
3200	3172	2899	2802	13	16	-166.90	728	10	1147	1125	21.66	52.955		
3300	3271	2988	2887	14	16	-166.89	756	11	1192	1170	22.38	53.260		
3400	3370	3078	2972	14	17	-166.87	784	12	1237	1214	23.10	53.545		
3500	3469	3167	3057	15	18	-166.86	812	13	1282	1258	23.82	53.811		
3600	3568	3256	3142	15	18	-166.85	840	14	1326	1302	24.54	54.061		
3700	3666	3346	3227	16	19	-166.84	868	14	1371	1346	25.26	54.295		
3800	3765	3435	3312	16	19	-166.83	896	15	1416	1390	25.98	54.515		
3900	3864	3525	3397	16	20	-166.83	924	16	1461	1434	26.70	54.723		
4000	3963	3614	3482	17	21	-166.82	952	17	1506	1478	27.42	54.918		
4100	4062	6029	4828	17	32	-121.05	381	1043	1465	1426	39.39	37.204		
4200	4161	6041	4828	18	32	-120.51	373	1052	1421	1380	41.36	34.366		
4300	4259	6053	4828	18	32	-119.96	364	1060	1383	1340	43.33	31.920		
4400	4358	6066	4827	19	32	-119.42	355	1069	1351	1306	45.25	29.854		
4498	4455	6078	4827	19	32	-118.88	346	1078	1326	1279	47.04	28.184		
4500	4457	6078	4827	19	32	-119.42	346	1078	1325	1278	47.08	28.151		
4550	4507	6082	4827	19	33	-142.79	343	1081	1315	1267	47.89	27.463		
4600	4557	6083	4827	20	33	160.91	343	1081	1307	1258	48.55	26.920		
4650	4606	6079	4827	20	32	124.91	346	1078	1300	1251	49.04	26.516		
4700	4656	6071	4827	20	32	111.97	351	1073	1296	1246	49.38	26.244		
4750	4704	6060	4828	20	32	105.77	359	1065	1293	1244	49.55	26.097		
4798	4750	6045	4828	20	32	102.00	370	1055	1292	1243	49.58	26.069		
4800	4752	6044	4828	20	32	101.88	370	1054	1292	1243	49.57	26.070		
4850	4798	6025	4828	20	31	98.93	384	1041	1293	1244	49.45	26.155		
4900	4843	6003	4828	20	31	96.40	400	1025	1296	1247	49.19	26.343		
4950	4886	5977	4828	20	31	94.05	418	1007	1299	1251	48.81	26.623		
5000	4927	5948	4829	20	30	91.80	439	986	1304	1256	48.34	26.983		
5050	4965	5915	4829	20	30	89.62	462	963	1310	1262	47.80	27.409		
5100	5001	5880	4830	20	29	87.50	487	938	1316	1269	47.20	27.886		
5150	5034	5842	4830	20	28	85.48	514	912	1323	1276	46.59	28.395		
5200	5064	5802	4830	20	28	83.58	542	883	1330	1284	45.98	28.912		
5250	5090	5759	4831	20	27	81.82	572	853	1336	1291	45.38	29.439		
5300	5114	5715	4831	20	26	80.26	604	822	1342	1297	44.86	29.912		
5350	5133	5669	4832	20	26	78.91	637	789	1347	1303	44.37	30.366		



Lonestar Consulting, LLC
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Offset Design: M35 2409 - 314H - Original Drilling - APD													Offset Site Error:	0 ft	
Survey Program:		0-MWD+IGRF						Rule Assigned:						Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5400	5150	5621	4832	20	25	77.80	670	756	1352	1308	44.13	30.628			
5450	5162	5573	4833	21	25	76.94	705	722	1355	1311	43.82	30.930			
5500	5170	5523	4834	21	25	76.36	740	687	1358	1314	43.65	31.105			
5550	5175	5473	4834	21	24	76.06	775	652	1359	1315	43.59	31.177			
5580	5176	5444	4834	22	25	76.01	796	631	1359	1316	43.62	31.158			
5600	5176	5423	4835	22	25	76.01	811	617	1359	1316	43.65	31.135			
5668	5177	5356	4834	23	25	75.98	858	569	1359	1315	43.92	30.944			
5700	5177	5325	4832	23	25	75.88	880	547	1359	1315	44.10	30.820			
5800	5178	5230	4817	24	25	75.18	943	478	1359	1315	44.91	30.268			
5900	5178	5142	4790	26	25	74.01	998	414	1361	1315	46.03	29.555			
6000	5179	5063	4757	28	26	72.55	1043	358	1363	1316	47.40	28.759			
6100	5180	4993	4721	30	26	70.99	1079	310	1369	1320	48.94	27.966			
6200	5181	4933	4685	31	26	69.43	1106	271	1377	1327	50.56	27.241			
6300	5181	4881	4651	33	26	67.96	1127	238	1390	1338	52.20	26.630			
6400	5182	4837	4620	35	26	66.62	1143	212	1408	1354	53.81	26.157			
6500	5183	4800	4592	38	26	65.44	1155	190	1430	1375	55.35	25.832			
6600	5184	4766	4565	40	26	64.32	1164	172	1457	1401	56.77	25.670			
6700	5184	4750	4552	42	26	63.78	1168	163	1490	1432	58.19	25.606			
6800	5185	4700	4510	44	26	62.05	1179	138	1527	1468	59.10	25.844			
6900	5186	4700	4510	46	26	62.05	1179	138	1570	1509	60.34	26.013			
7000	5187	4672	4486	49	26	61.07	1184	125	1616	1555	61.13	26.443			
7100	5187	4650	4466	51	26	60.29	1187	115	1667	1606	61.81	26.974			
7200	5188	4650	4466	53	26	60.29	1187	115	1722	1660	62.59	27.518			
7300	5189	4626	4445	55	26	59.44	1190	105	1781	1718	62.98	28.274			
7400	5189	4600	4421	58	26	58.49	1193	95	1843	1780	63.23	29.143			
7500	5190	4600	4421	60	26	58.49	1193	95	1907	1844	63.67	29.959			
7600	5191	4600	4421	63	26	58.49	1193	95	1975	1911	64.02	30.853			



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Offset Design: M35 2409 - 315H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0	0	0	0	0	0	-5.88	40	-4	42					
100	100	87	87	0	0	-5.88	40	-4	40	40	0.27	150.914		
200	200	187	187	0	0	-5.88	40	-4	40	39	0.96	42.058		
300	300	287	287	1	1	-5.88	40	-4	40	39	1.67	24.046		
312	312	299	299	1	1	-5.88	40	-4	40	38	1.76	22.859 CC		
400	400	387	387	1	1	-5.86	40	-4	40	38	2.39	16.849 ES		
500	500	486	485	2	2	-4.80	42	-4	42	39	3.10	13.618		
515	515	500	500	2	2	-4.52	43	-3	43	40	3.21	13.347		
600	600	584	584	2	2	-165.02	47	-2	49	45	3.80	12.810		
700	700	681	681	2	2	-163.42	56	0	62	57	4.49	13.748		
800	800	777	776	3	3	-162.39	67	4	81	76	5.18	15.688		
900	899	871	868	3	3	-161.78	81	8	107	101	5.87	18.269		
952	950	918	915	3	3	-161.57	89	10	123	117	6.23	19.783		
1000	998	962	958	3	3	-161.47	98	12	139	132	6.54	21.223		
1100	1097	1056	1050	4	4	-161.26	116	18	172	165	7.24	23.802		
1200	1195	1150	1142	4	4	-161.11	134	23	206	198	7.93	25.939		
1300	1294	1245	1235	5	5	-161.01	153	28	239	231	8.64	27.687		
1400	1393	1339	1327	5	5	-160.93	171	33	273	263	9.35	29.159		
1500	1492	1433	1419	6	6	-160.87	189	39	306	296	10.07	30.411		
1600	1591	1527	1511	6	6	-160.82	208	44	340	329	10.78	31.488		
1700	1690	1622	1604	6	7	-160.77	226	49	373	361	11.50	32.423		
1800	1788	1716	1696	7	7	-160.74	244	54	406	394	12.23	33.242		
1900	1887	1810	1788	7	8	-160.71	262	60	440	427	12.95	33.965		
2000	1986	1904	1881	8	8	-160.69	281	65	473	460	13.68	34.608		
2100	2085	1998	1973	8	9	-160.67	299	70	507	492	14.40	35.183		
2200	2184	2093	2065	9	9	-160.65	317	75	540	525	15.13	35.700		
2300	2283	2187	2158	9	9	-160.63	336	81	574	558	15.86	36.167		
2400	2381	2281	2250	10	10	-160.62	354	86	607	590	16.59	36.591		
2500	2480	2375	2342	10	10	-160.60	372	91	640	623	17.32	36.978		
2600	2579	2470	2434	10	11	-160.59	391	96	674	656	18.05	37.332		
2700	2678	2564	2527	11	11	-160.58	409	102	707	689	18.78	37.657		
2800	2777	2658	2619	11	12	-160.57	427	107	741	721	19.52	37.957		
2900	2876	2752	2711	12	12	-160.56	446	112	774	754	20.25	38.234		
3000	2975	2847	2804	12	13	-160.55	464	117	808	787	20.98	38.491		
3100	3073	2941	2896	13	13	-160.55	482	123	841	819	21.72	38.730		
3200	3172	3035	2988	13	14	-160.54	501	128	875	852	22.45	38.953		
3300	3271	3129	3081	14	14	-160.53	519	133	908	885	23.19	39.161		
3400	3370	3224	3173	14	15	-160.53	537	138	941	918	23.92	39.355		
3500	3469	3318	3265	15	15	-160.52	556	143	975	950	24.66	39.538		
3600	3568	3412	3357	15	16	-160.51	574	149	1008	983	25.39	39.709		
3700	3666	3506	3450	16	16	-160.51	592	154	1042	1016	26.13	39.871		
3800	3765	3601	3542	16	17	-160.51	611	159	1075	1048	26.87	40.023		
3900	3864	3695	3634	16	17	-160.50	629	164	1109	1081	27.60	40.167		
4000	3963	3789	3727	17	18	-160.50	647	170	1142	1114	28.34	40.303		
4100	4062	3883	3819	17	18	-160.49	665	175	1176	1146	29.08	40.431		
4200	4161	3978	3911	18	19	-160.49	684	180	1209	1179	29.81	40.554		
4300	4259	4072	4003	18	19	-160.49	702	185	1242	1212	30.55	40.669		
4400	4358	4166	4096	19	20	-160.48	720	191	1276	1245	31.29	40.780		
4498	4455	4258	4186	19	20	-160.48	738	196	1309	1277	32.01	40.882		
4500	4457	4260	4188	19	20	-161.12	739	196	1309	1277	32.02	40.885		
4550	4507	4308	4235	19	20	173.42	748	199	1325	1292	32.38	40.904		
4600	4557	4356	4282	20	21	115.69	757	201	1337	1305	32.73	40.864		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Offset Design: M35 2409 - 315H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4650	4606	4404	4329	20	21	78.93	767	204	1347	1314	33.05	40.766	
4700	4656	4453	4377	20	21	65.87	776	207	1355	1321	33.36	40.609	
4750	4704	4501	4424	20	21	60.15	786	209	1359	1326	33.65	40.394	
4800	4752	4549	4470	20	22	57.31	795	212	1361	1328	33.93	40.123	
4850	4798	4595	4516	20	22	55.96	804	215	1361	1327	34.20	39.799	
4900	4843	4641	4561	20	22	55.52	813	217	1358	1324	34.45	39.423	
4950	4886	4685	4604	20	22	55.71	821	220	1353	1318	34.69	38.997	
5000	4927	4726	4644	20	23	56.36	829	222	1345	1310	34.92	38.532	
5050	4965	4750	4668	20	23	57.01	834	223	1336	1301	35.03	38.151	
5100	5001	4750	4668	20	23	57.27	834	223	1326	1291	34.96	37.939	
5150	5034	4778	4695	20	23	58.51	841	223	1315	1280	35.16	37.408	
5200	5064	4800	4716	20	23	59.79	847	223	1303	1268	35.34	36.869	
5250	5090	4800	4716	20	23	60.55	847	223	1290	1255	35.38	36.467	
5300	5114	4827	4742	20	23	62.35	855	222	1276	1241	35.74	35.714	
5350	5133	4850	4764	20	23	64.18	862	220	1262	1226	36.13	34.928	
5400	5150	4850	4764	20	23	65.28	862	220	1247	1211	36.39	34.276	
5450	5162	4872	4784	21	23	67.32	869	218	1232	1195	36.96	33.339	
5500	5170	4885	4796	21	23	69.12	874	217	1217	1179	37.54	32.418	
5550	5175	4900	4810	21	24	71.06	880	215	1202	1164	38.23	31.436	
5580	5176	4900	4810	22	24	71.82	880	215	1193	1154	38.59	30.912	
5600	5176	4900	4810	22	24	71.82	880	215	1187	1148	38.86	30.550	
5700	5177	4936	4842	23	24	73.45	894	209	1162	1122	40.73	28.541	
5800	5178	4967	4870	24	24	74.88	907	203	1145	1102	42.80	26.743	
5900	5178	5006	4904	26	24	76.59	925	195	1134	1089	45.15	25.121	
6000	5179	5055	4944	28	25	78.64	949	181	1130	1083	47.72	23.689	
6010	5179	5060	4948	28	25	78.87	952	180	1130	1082	48.00	23.549	
6100	5180	5117	4991	30	25	81.09	983	161	1133	1082	50.49	22.431	
6200	5181	5196	5047	31	26	83.93	1030	130	1140	1086	53.47	21.309	
6300	5181	5298	5107	33	27	86.98	1096	82	1149	1092	56.74	20.254	
6400	5182	5425	5164	35	28	89.77	1186	12	1159	1099	60.37	19.200	
6500	5183	5575	5200	38	30	91.53	1295	-83	1166	1102	64.55	18.068	
6600	5184	5705	5206	40	32	91.77	1390	-172	1169	1101	68.72	17.018	
6700	5184	5805	5207	42	34	91.76	1463	-241	1172	1099	72.69	16.122	
6800	5185	5905	5208	44	35	91.75	1535	-309	1175	1098	76.79	15.295	
6900	5186	6005	5208	46	37	91.74	1608	-378	1177	1096	80.99	14.533	
7000	5187	6105	5209	49	39	91.74	1681	-447	1180	1094	85.28	13.833	
7100	5187	6205	5210	51	41	91.73	1753	-515	1182	1092	89.64	13.188	
7200	5188	6305	5210	53	43	91.72	1826	-584	1185	1091	94.06	12.595	
7300	5189	6404	5211	55	45	91.72	1899	-653	1187	1089	98.53	12.049	
7400	5189	6504	5212	58	47	91.71	1971	-721	1190	1087	103.06	11.544	
7500	5190	6604	5212	60	49	91.70	2044	-790	1192	1085	107.62	11.078	
7600	5191	6704	5213	63	51	91.69	2117	-859	1195	1083	112.22	10.647	
7700	5192	6804	5214	65	54	91.69	2189	-927	1197	1080	116.85	10.247	
7800	5192	6904	5214	67	56	91.68	2262	-996	1200	1078	121.51	9.875	
7900	5193	7004	5215	70	58	91.67	2335	-1065	1202	1076	126.19	9.529	
8000	5194	7104	5216	72	60	91.67	2407	-1133	1205	1074	130.89	9.206	
8100	5195	7204	5216	74	63	91.66	2480	-1202	1207	1072	135.61	8.904	
8200	5195	7304	5217	77	65	91.65	2553	-1271	1210	1070	140.35	8.621	
8300	5196	7404	5218	79	67	91.65	2625	-1339	1213	1067	145.11	8.356	
8400	5197	7504	5218	82	70	91.64	2698	-1408	1215	1065	149.88	8.107	
8500	5198	7604	5219	84	72	91.63	2771	-1477	1218	1063	154.66	7.873	
8600	5198	7704	5220	87	74	91.63	2843	-1545	1220	1061	159.45	7.652	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Offset Design: M35 2409 - 315H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8700	5199	7804	5220	89	77	91.62	2916	-1614	1223	1058	164.25	7.444	
8800	5200	7904	5221	91	79	91.61	2988	-1683	1225	1056	169.07	7.247	
8900	5201	8004	5222	94	81	91.61	3061	-1751	1228	1054	173.89	7.060	
9000	5201	8104	5222	96	84	91.60	3134	-1820	1230	1052	178.72	6.884	
9100	5202	8204	5223	99	86	91.59	3206	-1889	1233	1049	183.56	6.716	
9200	5203	8304	5224	101	88	91.59	3279	-1957	1235	1047	188.40	6.557	
9300	5204	8404	5224	104	91	91.58	3352	-2026	1238	1045	193.25	6.405	
9400	5204	8504	5225	106	93	91.58	3424	-2095	1240	1042	198.11	6.261	
9500	5205	8604	5226	108	96	91.57	3497	-2163	1243	1040	202.97	6.124	
9600	5206	8704	5226	111	98	91.56	3570	-2232	1245	1038	207.84	5.992	
9700	5206	8804	5227	113	100	91.56	3642	-2300	1248	1035	212.71	5.867	
9800	5207	8904	5228	116	103	91.55	3715	-2369	1251	1033	217.58	5.747	
9900	5208	9004	5228	118	105	91.54	3788	-2438	1253	1031	222.46	5.633	
10,000	5209	9104	5229	121	108	91.54	3860	-2506	1256	1028	227.35	5.523	
10,100	5209	9204	5230	123	110	91.53	3933	-2575	1258	1026	232.23	5.417	
10,200	5210	9304	5230	126	112	91.53	4006	-2644	1261	1024	237.12	5.316	
10,300	5211	9404	5231	128	115	91.52	4078	-2712	1263	1021	242.02	5.219	
10,400	5212	9503	5232	131	117	91.51	4151	-2781	1266	1019	246.91	5.126	
10,500	5212	9603	5233	133	120	91.51	4224	-2850	1268	1016	251.81	5.036	
10,600	5213	9703	5233	136	122	91.50	4296	-2918	1271	1014	256.72	4.950	
10,700	5214	9803	5234	138	124	91.49	4369	-2987	1273	1012	261.62	4.867	
10,800	5215	9903	5235	140	127	91.49	4442	-3056	1276	1009	266.53	4.787	
10,900	5215	10,003	5235	143	129	91.48	4514	-3124	1278	1007	271.44	4.710	
11,000	5216	10,103	5236	145	132	91.48	4587	-3193	1281	1005	276.35	4.635	
11,100	5217	10,203	5237	148	134	91.47	4659	-3262	1283	1002	281.26	4.563	
11,200	5218	10,303	5237	150	137	91.46	4732	-3330	1286	1000	286.17	4.494	
11,300	5218	10,403	5238	153	139	91.46	4805	-3399	1289	997	291.09	4.427	
11,400	5219	10,503	5239	155	142	91.45	4877	-3468	1291	995	296.01	4.362	
11,500	5220	10,603	5239	158	144	91.45	4950	-3536	1294	993	300.93	4.299	
11,600	5221	10,703	5240	160	146	91.44	5023	-3605	1296	990	305.85	4.238	
11,700	5221	10,803	5241	163	149	91.44	5095	-3674	1299	988	310.77	4.179	
11,797	5222	10,900	5241	165	151	91.43	5166	-3741	1301	986	315.56	4.123 SF	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Offset Design: M35 2409 - 316H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0	0	0	0	0	0	-5.92	60	-6	61					
100	100	87	87	0	0	-5.92	60	-6	60	60	0.27	225.030		
200	200	187	187	0	0	-5.92	60	-6	60	59	0.96	62.714		
300	300	287	287	1	1	-5.92	60	-6	60	58	1.67	35.855		
400	400	387	387	1	1	-5.92	60	-6	60	58	2.39	25.104 CC, ES		
500	500	485	485	2	2	-5.53	61	-6	61	58	3.10	19.739		
515	515	500	500	2	2	-5.38	61	-6	62	58	3.21	19.228		
600	600	583	583	2	2	-166.66	65	-5	67	63	3.80	17.606 SF		
700	700	680	679	2	2	-165.63	73	-3	79	75	4.49	17.642		
800	800	775	774	3	3	-164.81	84	-1	98	93	5.18	18.926		
900	899	869	867	3	3	-164.22	97	3	123	117	5.86	21.018		
952	950	916	913	3	3	-163.98	105	5	139	133	6.21	22.323		
1000	998	959	956	3	3	-163.84	113	6	154	148	6.53	23.598		
1100	1097	1048	1043	4	4	-163.46	131	11	188	181	7.18	26.250		
1200	1195	1139	1131	4	4	-163.02	151	16	225	217	7.85	28.672		
1300	1294	1232	1221	5	5	-162.69	173	21	262	253	8.54	30.639		
1400	1393	1325	1312	5	5	-162.44	194	26	299	289	9.25	32.287		
1500	1492	1418	1402	6	6	-162.24	215	31	335	325	9.96	33.687		
1600	1591	1511	1492	6	6	-162.08	237	36	372	361	10.67	34.889		
1700	1690	1604	1583	6	7	-161.95	258	41	409	398	11.38	35.930		
1800	1788	1697	1673	7	7	-161.85	279	46	446	434	12.10	36.840		
1900	1887	1790	1764	7	8	-161.75	301	51	483	470	12.82	37.642		
2000	1986	1883	1854	8	8	-161.68	322	56	519	506	13.54	38.354		
2100	2085	1976	1944	8	9	-161.61	343	61	556	542	14.26	38.989		
2200	2184	2069	2035	9	9	-161.55	365	66	593	578	14.99	39.559		
2300	2283	2162	2125	9	10	-161.50	386	71	630	614	15.71	40.073		
2400	2381	2255	2215	10	10	-161.45	407	76	667	650	16.44	40.540		
2500	2480	2348	2306	10	11	-161.41	429	81	703	686	17.17	40.964		
2600	2579	2441	2396	10	11	-161.37	450	86	740	722	17.90	41.353		
2700	2678	2534	2486	11	12	-161.33	472	92	777	758	18.63	41.709		
2800	2777	2627	2577	11	12	-161.30	493	97	814	794	19.36	42.037		
2900	2876	2720	2667	12	13	-161.28	514	102	851	830	20.09	42.340		
3000	2975	2813	2757	12	13	-161.25	536	107	887	867	20.82	42.620		
3100	3073	2906	2848	13	14	-161.22	557	112	924	903	21.55	42.881		
3200	3172	2999	2938	13	14	-161.20	578	117	961	939	22.28	43.123		
3300	3271	3092	3029	14	15	-161.18	600	122	998	975	23.02	43.349		
3400	3370	3185	3119	14	15	-161.16	621	127	1035	1011	23.75	43.561		
3500	3469	3278	3209	15	16	-161.15	642	132	1071	1047	24.48	43.759		
3600	3568	3371	3300	15	16	-161.13	664	137	1108	1083	25.22	43.945		
3700	3666	3464	3390	16	17	-161.11	685	142	1145	1119	25.95	44.120		
3800	3765	3557	3480	16	18	-161.10	706	147	1182	1155	26.69	44.285		
3900	3864	3650	3571	16	18	-161.09	728	152	1219	1191	27.42	44.440		
4000	3963	3743	3661	17	19	-161.07	749	157	1255	1227	28.16	44.587		
4100	4062	3836	3751	17	19	-161.06	770	162	1292	1263	28.89	44.726		
4200	4161	3929	3842	18	20	-161.05	792	167	1329	1299	29.63	44.858		
4300	4259	4022	3932	18	20	-161.04	813	173	1366	1335	30.36	44.983		
4400	4358	4114	4022	19	21	-161.03	834	178	1403	1371	31.10	45.101		
4498	4455	6099	5195	19	30	-120.97	308	1045	1432	1393	38.92	36.808		
4500	4457	6099	5195	19	30	-121.45	307	1045	1431	1392	38.96	36.742		
4550	4507	6104	5195	19	30	-143.49	304	1048	1409	1369	39.90	35.311		
4600	4557	6104	5195	20	30	161.53	304	1048	1388	1347	40.75	34.059		
4650	4606	6100	5195	20	30	126.85	307	1046	1368	1327	41.49	32.981		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Offset Design: M35 2409 - 316H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
				(ft)	(ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
4700	4656	6092	5195	20	30	115.21	312	1040	1351	1308	42.11	32.070	
4750	4704	6081	5196	20	30	110.28	321	1032	1335	1292	42.61	31.317	
4800	4752	6065	5196	20	29	107.62	331	1022	1320	1277	42.99	30.713	
4850	4798	6046	5196	20	29	105.87	345	1008	1308	1265	43.25	30.248	
4900	4843	6024	5196	20	29	104.49	361	992	1298	1255	43.40	29.911	
4950	4886	5998	5197	20	28	103.24	379	974	1290	1246	43.42	29.701	
5000	4927	5969	5197	20	28	102.02	400	953	1283	1240	43.18	29.710	
5050	4965	5936	5197	20	28	100.80	423	931	1278	1235	43.04	29.683	
5100	5001	5901	5198	20	27	99.56	448	906	1274	1231	42.99	29.628	
5150	5034	5863	5198	20	27	98.32	475	879	1271	1228	42.85	29.666	
5200	5064	5823	5199	20	26	97.11	504	851	1269	1227	42.55	29.833	
5250	5090	5780	5199	20	26	95.95	534	821	1268	1226	42.24	30.034	
5300	5114	5736	5200	20	26	94.88	565	789	1268	1226	42.02	30.177	
5319	5122	5719	5200	20	25	94.50	578	777	1268	1226	41.94	30.236	
5350	5133	5688	5200	20	25	93.89	600	755	1268	1226	41.79	30.347	
5400	5150	5593	5194	20	25	92.20	665	688	1267	1226	41.34	30.660	
5450	5162	5507	5176	21	25	90.60	722	626	1265	1224	41.13	30.767	
5500	5170	5429	5151	21	25	89.12	771	570	1262	1221	41.13	30.687	
5550	5175	5358	5120	21	25	87.78	811	521	1258	1217	41.29	30.463	
5580	5176	5318	5100	22	25	87.06	832	494	1255	1214	41.46	30.273	
5600	5176	5293	5086	22	25	86.40	845	477	1253	1211	41.60	30.125	
5700	5177	5186	5019	23	25	83.22	893	409	1244	1201	42.55	29.224	
5800	5178	5106	4960	24	25	80.44	922	363	1237	1193	43.82	28.218	
5891	5178	5050	4916	26	25	78.33	939	334	1234	1189	45.17	27.324	
5900	5178	5046	4912	26	25	78.15	940	332	1234	1189	45.30	27.247	
6000	5179	5000	4873	28	25	76.32	951	310	1238	1191	46.91	26.388	
6100	5180	4963	4841	30	25	74.78	958	293	1248	1199	48.56	25.701	
6200	5181	4934	4815	31	25	73.54	962	281	1265	1215	50.19	25.200	
6300	5181	4910	4793	33	25	72.52	965	272	1288	1237	51.74	24.898	
6400	5182	4900	4784	35	25	72.09	966	268	1319	1265	53.27	24.752	
6500	5183	4874	4760	38	25	70.95	968	259	1355	1301	54.47	24.877	
6600	5184	4850	4737	40	24	69.90	970	251	1397	1342	55.50	25.178	
6700	5184	4850	4737	42	24	69.90	970	251	1445	1389	56.60	25.534	
6800	5185	4850	4737	44	24	69.90	970	251	1498	1441	57.52	26.044	
6900	5186	4828	4716	46	24	68.92	971	244	1555	1497	58.07	26.784	
7000	5187	4820	4708	49	24	68.56	971	241	1617	1558	58.62	27.577	
7100	5187	4800	4689	51	24	67.70	971	236	1682	1623	58.94	28.533	
7200	5188	4800	4689	53	24	67.70	971	236	1750	1691	59.36	29.478	
7300	5189	4800	4689	55	24	67.70	971	236	1821	1761	59.69	30.505	
7400	5189	4800	4689	58	24	67.70	971	236	1895	1835	59.95	31.604	
7500	5190	4800	4689	60	24	67.70	971	236	1971	1910	60.14	32.765	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Offset Design: M35 2409 - 318H - Original Drilling - APD													Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0 ft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		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		
0	0	0	0	0	0	-5.89	20	-2	24					
100	100	87	87	0	0	-5.89	20	-2	20	20	0.27	75.459		
200	200	187	187	0	0	-5.89	20	-2	20	19	0.96	21.030		
300	300	287	287	1	1	-5.89	20	-2	20	18	1.67	12.023		
400	400	387	387	1	1	-5.89	20	-2	20	18	2.39	8.418 CC		
500	500	487	487	2	2	-9.41	20	-3	21	17	3.10	6.612 ES		
515	515	502	502	2	2	-10.48	20	-4	21	17	3.21	6.435		
600	600	587	587	2	2	-178.59	21	-6	23	19	3.80	6.003 SF		
700	700	687	686	2	2	176.28	21	-9	29	24	4.49	6.418		
800	800	786	786	3	3	173.56	22	-11	38	33	5.18	7.406		
900	899	885	885	3	3	172.45	22	-14	51	46	5.89	8.743		
952	950	937	936	3	3	172.25	22	-15	60	53	6.26	9.532		
1000	998	984	984	3	3	172.17	22	-17	68	61	6.60	10.249		
1100	1097	1083	1082	4	4	172.05	23	-19	84	77	7.30	11.533		
1200	1195	1181	1181	4	4	171.98	23	-22	101	93	8.01	12.584		
1300	1294	1280	1279	5	4	171.92	24	-25	117	109	8.72	13.460		
1400	1393	1378	1378	5	5	171.88	24	-27	134	125	9.44	14.199		
1500	1492	1477	1477	6	5	171.85	25	-30	151	140	10.15	14.831		
1600	1591	1576	1575	6	5	171.82	25	-33	167	156	10.87	15.378		
1700	1690	1674	1674	6	6	171.80	25	-35	184	172	11.59	15.855		
1800	1788	1773	1772	7	6	171.78	26	-38	200	188	12.31	16.274		
1900	1887	1871	1871	7	7	171.76	26	-41	217	204	13.03	16.646		
2000	1986	1970	1969	8	7	171.75	27	-43	234	220	13.75	16.979		
2100	2085	2069	2068	8	7	171.74	27	-46	250	236	14.48	17.277		
2200	2184	2167	2167	9	8	171.73	28	-49	267	252	15.20	17.546		
2300	2283	2266	2265	9	8	171.72	28	-51	283	267	15.93	17.790		
2400	2381	2364	2364	10	8	171.71	28	-54	300	283	16.65	18.013		
2500	2480	2463	2462	10	9	171.71	29	-57	317	299	17.37	18.216		
2600	2579	2562	2561	10	9	171.70	29	-59	333	315	18.10	18.403		
2700	2678	2660	2660	11	9	171.70	30	-62	350	331	18.83	18.575		
2800	2777	2759	2758	11	10	171.69	30	-64	366	347	19.55	18.734		
2900	2876	2858	2857	12	10	171.69	31	-67	383	363	20.28	18.882		
3000	2975	2956	2955	12	10	171.68	31	-70	399	378	21.00	19.019		
3100	3073	3055	3054	13	11	171.68	31	-72	416	394	21.73	19.147		
3200	3172	3153	3152	13	11	171.67	32	-75	433	410	22.46	19.266		
3300	3271	3252	3251	14	11	171.67	32	-78	449	426	23.18	19.378		
3400	3370	3351	3350	14	12	171.67	33	-80	466	442	23.91	19.483		
3500	3469	3449	3448	15	12	171.66	33	-83	482	458	24.64	19.582		
3600	3568	3548	3547	15	13	171.66	34	-86	499	474	25.36	19.674		
3700	3666	3646	3645	16	13	171.66	34	-88	516	490	26.09	19.762		
3800	3765	3745	3744	16	13	171.66	34	-91	532	505	26.82	19.845		
3900	3864	3844	3842	16	14	171.65	35	-94	549	521	27.55	19.923		
4000	3963	3942	3941	17	14	171.65	35	-96	565	537	28.27	19.997		
4100	4062	4041	4040	17	14	171.65	36	-99	582	553	29.00	20.067		
4200	4161	4140	4138	18	15	171.65	36	-102	599	569	29.73	20.134		
4300	4259	4238	4237	18	15	171.65	37	-104	615	585	30.46	20.198		
4400	4358	4337	4335	19	15	171.64	37	-107	632	601	31.19	20.259		
4498	4455	4433	4432	19	16	171.64	37	-110	648	616	31.90	20.315		
4500	4457	4435	4434	19	16	171.04	37	-110	648	616	31.91	20.316		
4550	4507	4485	4483	19	16	146.43	38	-111	655	622	32.27	20.284		
4600	4557	5102	5026	20	18	103.54	-139	52	648	622	26.34	24.599		
4650	4606	5329	5132	20	20	97.48	-282	191	604	582	22.16	27.279		



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Offset Design: M35 2409 - 318H - Original Drilling - APD												Offset Site Error:	0 ft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4700	4656	5393	5150	20	21	106.78	-325	234	560	538	22.03	25.407	
4750	4704	5392	5149	20	21	109.24	-324	233	515	492	23.02	22.385	
4800	4752	5379	5147	20	20	110.88	-316	225	472	448	24.26	19.458	
4850	4798	5341	5136	20	20	106.83	-290	199	430	404	26.06	16.516	
4900	4843	5343	5137	20	20	111.72	-291	201	391	364	27.36	14.291	
4950	4886	5322	5131	20	20	110.98	-277	187	354	325	29.20	12.129	
5000	4927	5301	5124	20	20	109.48	-262	172	321	290	31.20	10.285	
5050	4965	5278	5115	20	19	107.24	-247	158	292	259	33.28	8.777	
5100	5001	5255	5106	20	19	104.23	-232	143	269	234	35.24	7.628	
5150	5034	5232	5096	20	19	100.48	-217	128	252	215	36.86	6.846	
5200	5064	5208	5085	20	19	96.00	-202	114	243	206	37.83	6.436	
5230	5080	5194	5078	20	19	92.97	-193	105	242	204	38.05	6.361	
5250	5090	5185	5073	20	19	90.87	-188	99	243	205	38.03	6.380	
5300	5114	5161	5060	20	18	85.21	-173	85	249	212	37.55	6.641	
5350	5133	5137	5047	20	18	79.22	-159	71	263	226	36.66	7.162	
5400	5150	5113	5033	20	18	73.10	-145	58	281	245	35.67	7.872	
5450	5162	5088	5018	21	18	67.09	-131	45	303	268	34.79	8.701	
5500	5170	5064	5002	21	18	61.39	-118	32	327	293	34.11	9.587	
5550	5175	5040	4985	21	18	56.13	-105	20	353	319	33.65	10.483	
5580	5176	5025	4975	22	18	53.26	-98	12	368	335	33.48	11.003	
5600	5176	5015	4968	22	18	52.25	-93	8	379	346	33.40	11.362	
5700	5177	4972	4935	23	17	47.90	-72	-13	439	406	33.24	13.214	
5800	5178	4934	4906	24	17	44.44	-55	-28	507	473	33.34	15.194	
5900	5178	4900	4878	26	17	41.51	-41	-42	580	546	33.53	17.298	
6000	5179	4874	4856	28	17	39.43	-31	-51	658	624	33.84	19.438	
6100	5180	4850	4835	30	17	37.63	-22	-60	739	705	34.11	21.668	
6200	5181	4828	4816	31	17	36.10	-15	-67	823	789	34.36	23.964	
6300	5181	4800	4790	33	17	34.22	-6	-75	910	875	34.46	26.401	
6400	5182	4800	4790	35	17	34.22	-6	-75	998	963	34.85	28.634	
6500	5183	4778	4770	38	17	32.86	1	-81	1088	1053	34.95	31.117	
6600	5184	4750	4744	40	17	31.24	8	-88	1179	1144	34.98	33.692	
6700	5184	4750	4744	42	17	31.24	8	-88	1270	1235	35.22	36.071	
6800	5185	4750	4744	44	17	31.24	8	-88	1363	1328	35.41	38.502	
6900	5186	4732	4727	46	17	30.25	13	-92	1457	1421	35.46	41.078	
7000	5187	4723	4718	49	17	29.78	15	-94	1551	1515	35.55	43.617	
7100	5187	4700	4696	51	17	28.64	20	-98	1646	1610	35.57	46.263	
7200	5188	4700	4696	53	17	28.64	20	-98	1741	1705	35.68	48.776	
7300	5189	4700	4696	55	17	28.64	20	-98	1836	1800	35.78	51.311	
7400	5189	4700	4696	58	17	28.64	20	-98	1932	1896	35.87	53.864	



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6865' & RKB 26' @ 6891ft (H&P 4

Coordinates are relative to: 319H - Slot 1

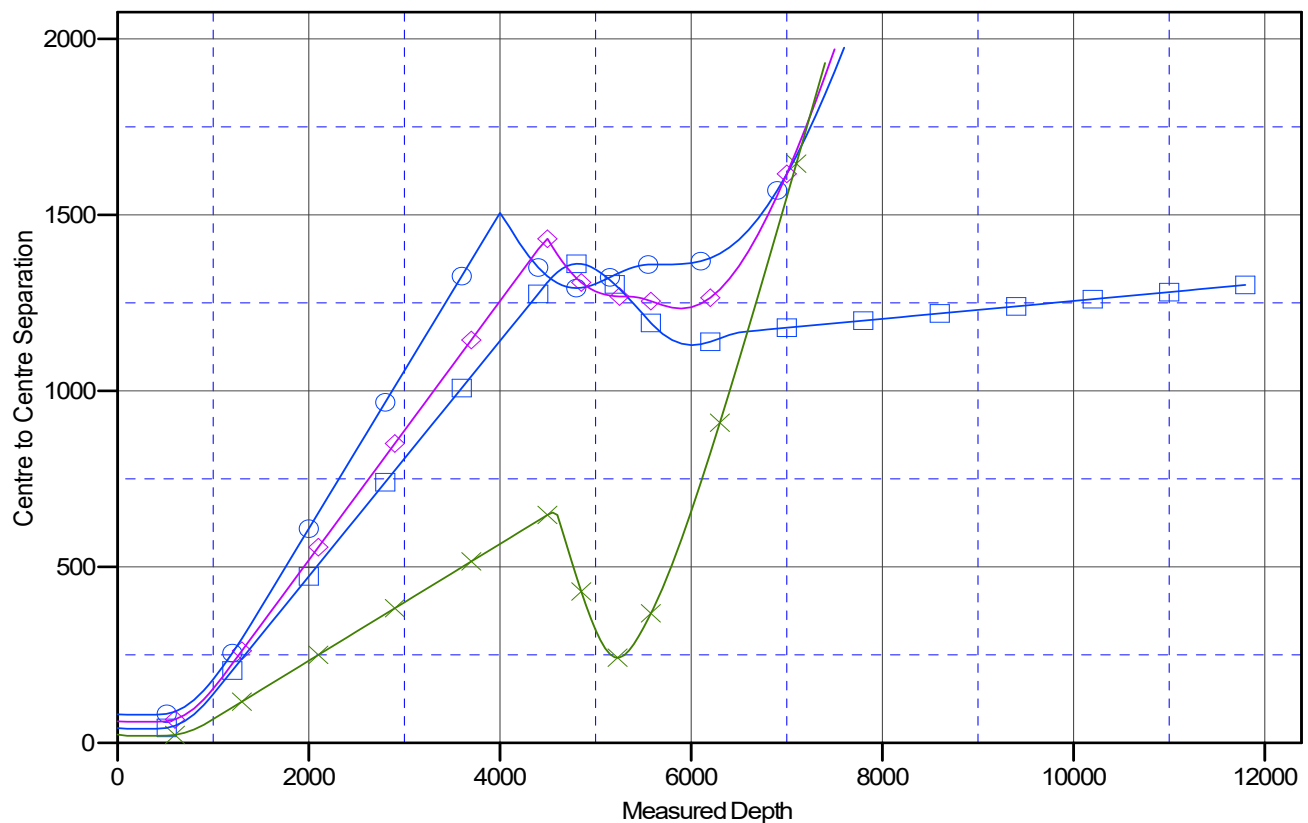
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, New Mexico Western Zone

Central Meridian is -107.83333333

Grid Convergence at Surface is: 0.04°

Ladder Plot



LEGEND

315H.OriginalDrilling, APDVO
 316H.OriginalDrilling, APDVO
 318H.OriginalDrilling, APDVO



Lonestar Consulting, LLC

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 319H - Slot 1
Project:	Nageezi Unit	TVD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Reference Site:	M35 2409	MD Reference:	GL 6865' & RKB 26' @ 6891ft (H&P 443)
Site Error:	0 ft	North Reference:	True
Reference Well:	319H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD Rev 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6865' & RKB 26' @ 6891ft (H&P 4

Offset Depths are relative to Offset Datum

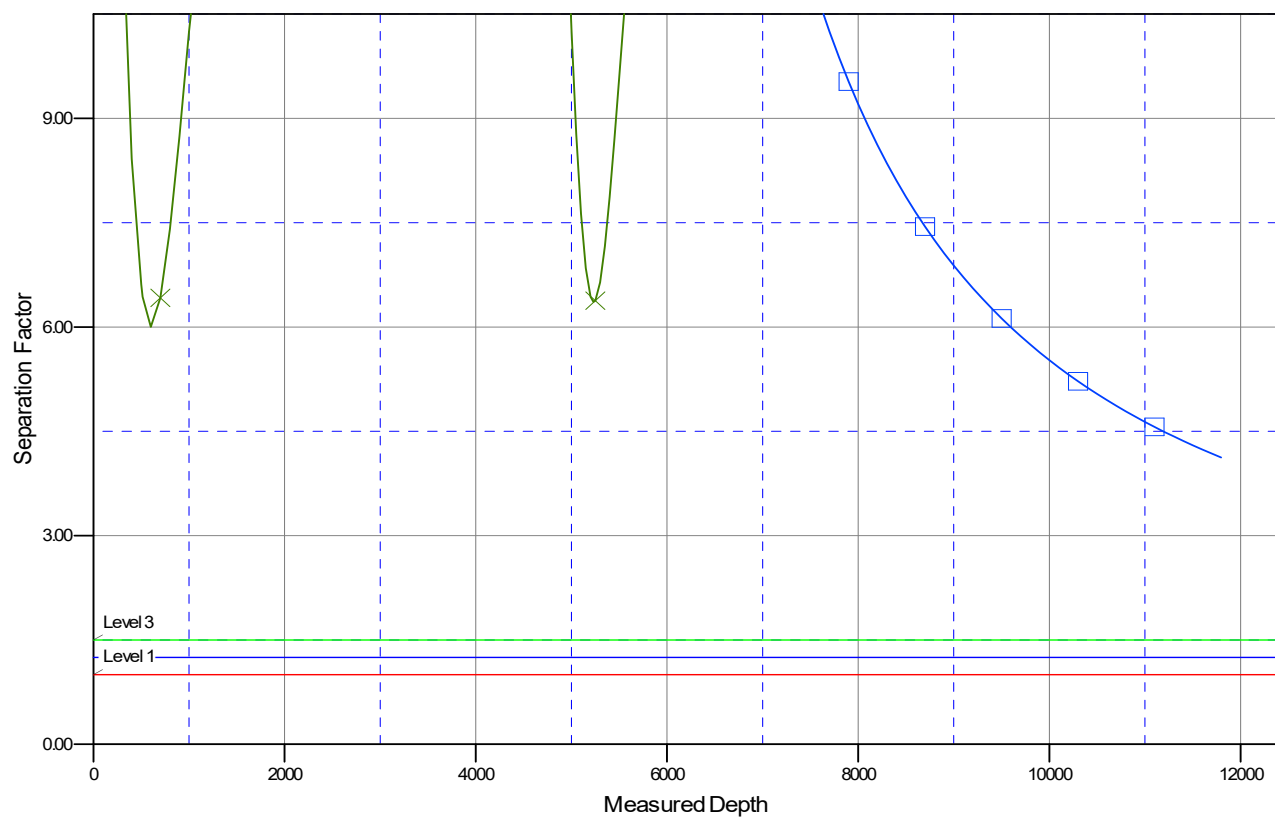
Central Meridian is -107.8333333

Coordinates are relative to: 319H - Slot 1

Coordinate System is US State Plane 1983, New Mexico Western Zone

Grid Convergence at Surface is: 0.04°

Separation Factor Plot



LEGEND

315H Original Drilling, APDVO
 316H Original Drilling, APDVO
 314H Original Drilling, APDVO
 318H Original Drilling, APDVO

District I
1625 N. French Dr., Hobbs, NM 88240
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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

CONDITIONS

Action 68278

CONDITIONS

Operator: DJR OPERATING, LLC 1 Road 3263 Aztec, NM 87410	OGRID: 371838
	Action Number: 68278
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD conditions of approval	12/21/2021