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

Gabriel Wade, Acting 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: 12/14/2018
Well information;
Operator DJR, Well Name and Number Carson 611H

API# 30-045-35914, Section 21, Township 25 N/S, Range 12 E/W

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

- ✓ Notify Aztec OCD 24hrs prior to casing & cement.
- ✓ Hold C-104 for directional survey & "As Drilled" Plat
- o Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o 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
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- o Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ✓ 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 — Date 3/25/19

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

5. Lease Serial No.
NMNM051013

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.
CARSON
611H

NMOCD
MAR 12 2019
DISTRICT III

2. Name of Operator
DJR OPERATING LLC

9. API Well No.
30-045-35914

3a. Address
1600 Broadway #1960 Denver CO 80202

3b. Phone No. *(include area code)*
(303)407-7397

10. Field and Pool, or Exploratory
BASIN MANCOS / BISTI LOWER GALLU

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface: SWSW / 614 FSL / 748 FWL / LAT 36.381114 / LONG -108.123234
At proposed prod. zone: SWSW / 1258 FSL / 1043 FWL / LAT 36.397397 / LONG -108.1401567

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 21 / T25N / R12W / NMP

14. Distance in miles and direction from nearest town or post office*
11 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)
628 feet

16. No of acres in lease
680

17. Spacing Unit dedicated to this well
1120

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
20 feet

19. Proposed Depth
4667 feet / 12560 feet

20. BLM/BIA Bond No. in file
FED: NMB001464

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6350 feet

22. Approximate date work will start*
06/01/2019

23. Estimated duration
60 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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Brian Wood / Ph: (505)466-8120	12/14/2018

Title: President

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
	Richard A Fitz	3/5/19
Title: **Field Manager**	Office: FARMINGTON	

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.

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

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

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

(Continued on page 2)

*(Instructions on page 2)

NMOCD

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

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

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-35914	97232 / 5890	Basin Mancos / Bisti Lower Gallup

[4] Property Code	[5] Property Name	[6] Well Number
322323	Carson	611H

[7] OGRID No.	[8] Operator Name	[9] Elevation
371838	DJR Operating, LLC	6351

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	21	25 N	12 W		614	South	748	West	San Juan

[11] Bottom Hole Location If Different From Surface

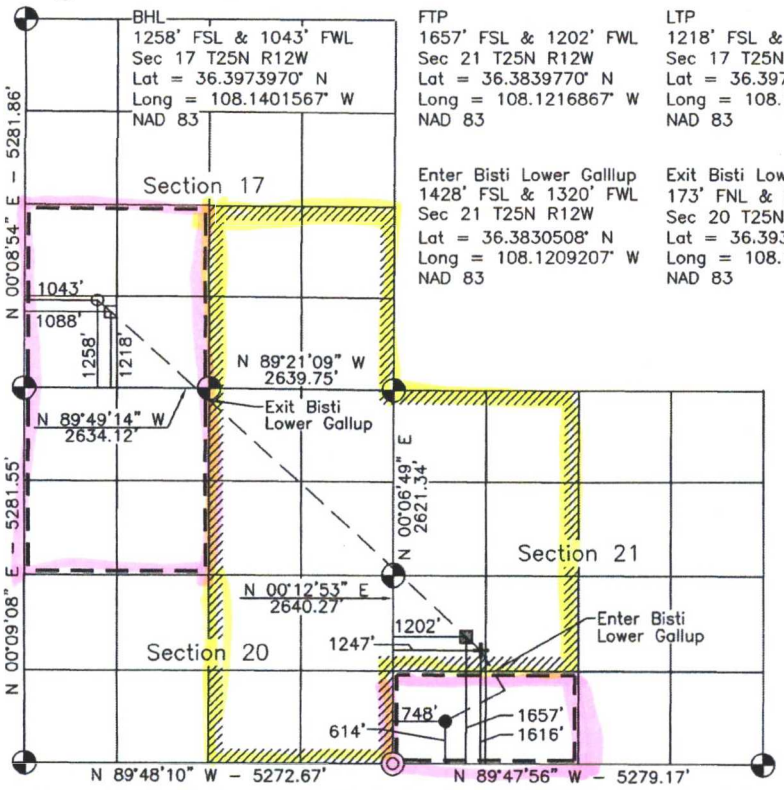
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	17	25 N	12 W		1258	South	1043	West	San Juan

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
Basin Mancos 400 Ac. Bisti 720 Ac.			

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

16

Legend:
- ● = Surface Location
- ○ = Bottom Hole Location (BHL)
- ✚ = Heel Location
- ▨ = First Take Point (FTP)
- □ = Last Take Point (LTP)
- ◔ = Found 1911 USGLO Brass Cap
- ◎ = Found 1" Cap/Rebar LS 8466



Surface Location
614' FSL & 748' FWL
Sec 21 T25N R12W
Lat = 36.3811139° N
Long = 108.1232344° W
NAD 83

Heel Location
1616' FSL & 1247' FWL
Sec 21 T25N R12W
Lat = 36.3838668° N
Long = 108.1215350° W
NAD 83

FTP
1657' FSL & 1202' FWL
Sec 21 T25N R12W
Lat = 36.3839770° N
Long = 108.1216867° W
NAD 83

LTP
1218' FSL & 1088' FWL
Sec 17 T25N R12W
Lat = 36.3972868° N
Long = 108.1400051° W
NAD 83

Enter Bisti Lower Galllup
1428' FSL & 1320' FWL
Sec 21 T25N R12W
Lat = 36.3830508° N
Long = 108.1209207° W
NAD 83

Exit Bisti Lower Gallup
173' FNL & 2640' FEL
Sec 20 T25N R12W
Lat = 36.3934672° N
Long = 108.1347471° W
NAD 83

[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.

11/01/18
Signature Date

Mike Deutsch
Printed Name

mike@permitswest.com
E-mail Address

[18] 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.

8-16-18
Date of Survey

Signature and Seal of Professional Surveyor:

MARSHALL W. LINDEEN
NEW MEXICO
17078
10-31-18
PROFESSIONAL SURVEYOR

17078
Certificate Number

DJR Operating

DRILLING PLAN
Carson 611H
San Juan County, New Mexico

Surface Location
748-ft FWL & 614-ft FSL
Sec 21 T25N R12W
Graded Elevation 6350' MSL
RKB Elevation 6370' (20' KB)

SHL Geographical Coordinates (NAD-83)
Slot A-4
Latitude 36.3811139° N
Longitude 108.1232344° W

Kick Off Point for Horizontal Build Curve
4126-ft MD
3992-ft TVD

Local Coordinates (from SHL)
437-ft North
844-ft East

Heel Location (Pay zone entry)
1244-ft FWL & 1620-ft FSL
Sec 21 T25N R12W

Heel Geographical Coordinates (NAD-83)
Latitude 36.38386677° N
Longitude 108.12153500° W

Bottom Hole Location (TD)
1062-ft FWL & 1248-ft FSL
Sec 17 T25N R12W

BHL Geographical Coordinates (NAD-83)
Latitude 36.39739698° N
Longitude 108.1401567° W

First Take Point (FTP)
5251-ft MD
Gallup B Sand

FTP Geographical Coordinates (NAD-83)
Latitude 36.3839770° N
Longitude 108.1216867° W

Last Take Point (LTP)
12500-ft MD
Gallup B Sand

LTP Geographical Coordinates (NAD-83)
Latitude 36.3972868° N
Longitude 108.1400051° W

Well objectives
This well is planned as a 7370-ft lateral in the Gallup B sand.

Bottom Hole temperature and pressure
The temperature in the Gallup B horizontal objective is 133°F. Bottom hole pressure in the Gallup B is forecast to be 2500 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)
Kirtland	-	G.L.	Sh	W	8.3	8.4 – 8.8
Fruitland	946	943	C	G	8.3	9.0 - 9.5
Picture Cliffs	1200	1190	Sd	G	8.3	9.0 - 9.5
Lewis	1303	1289	Sh	-		9.0 - 9.5
Chacra	1995	1952	Sd	-	8.3	9.0 - 9.5
Menefee	2586	2518	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	3692	3576	Sd	-	8.3	9.0 - 9.5
Mancos	3868	3745	Sh	-		9.0 - 9.5
Mancos Silt	4524	4360	Slt	O/G	8.5	9.0 - 9.5
Gallup A	4895	4602	Slt	O/G	8.5	9.0 - 9.5
Gallup B (objective)	5191	4667	Sd	O/G	8.5	8.8 -9.0
Gallup C	NP	NP	Sd	O/G	8.5	8.8 -9.0
Lower Mancos	NP	NP	Sh	-	8.5	8.8 -9.0

Casing Program

Casing OD	Hole Size	Weight (#/ft)	Grade	Coupling	MD Top	MD Bottom	TVD Top	TVD Bottom	Top of Cement
9-5/8"	12-1/4"	36	K-55	STC	surf	350	surf	350	surface
7"	8-3/4"	23	K-55	LTC	surf	5181	surf	4667	surface

4-1/2"	6-1/8"	11.6	P-110	LTC	4981	12560	4634	4667	4981

Note: all casing will be new

Casing Design Load Cases

	Description	Casing String 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

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

Cement Design

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

9-5/8" Surface Casing	Lead
Halliburton Name	HALCEM
Type	Class G
Additives	A
Planned top	Surface
Density (ppg)	15.80
Yield (cf/sx)	1.17
Mix water (gal/sx)	5.15
Volume (sx)	205
Volume (bbls)	42

7" Intermediate Casing	Lead	Tail
Halliburton Name	HALCEM	VARICEM
Type	Poz/G	Poz/G
Additives	Ex, L, SA	Ex, Fl, SA, L, THX
Planned top	Surface	3368-ft
Density (ppg)	12.30	13.50

Yield (cf/sx)	1.95	1.30
Mix water (gal/sx)	10.14	5.64
Volume (sx)	425	362
Volume (bbls)	148	84

4-1/2" Production Liner	Lead
Halliburton Name	EXTENDACEM
Type	Poz/G
Additives	B, De, Di, FI, Re, V
Planned top	4981-ft
Density (ppg)	13.3
Yield (cf/sx)	1.36
Mix water (gal/sx)	5.94
Volume (sx)	779
Volume (bbls)	189

Wellhead & Pressure Control
The well head will be an 11" 5M multi-bowl system. The BOP will consist of, at a minimum, two 5M pipe rams, a 5M annular preventer, a low pressure rotating head, a 3" 5M choke manifold plumbed to a gas buster and a flare stack and a 2" 5M kill line. Diagrams of the wellhead, BOP equipment and choke manifold are provided. All systems will conform to Onshore Order #2 and 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 at all times to maintain adequate pit volumes.

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 – 5181	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5181 – 12560	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 CBL will be run in the 7" casing from the 4-1/2" liner top to surface.

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" gas lift tubing string with packer. The stimulation and completion plan will be sundried at a later date.

DJR Operating

Pad name : WC 21-2
Well name : Carson 611H
Sec 21 T25N R12W

SHL Latitude : 36.38111390
SHL Longitude : -108.12323440

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

TRAJECTORY DETAILS
Pad elevation : 6350.0 Rig (copy) @ 6370.0usft (RIG TBD 20' KB)

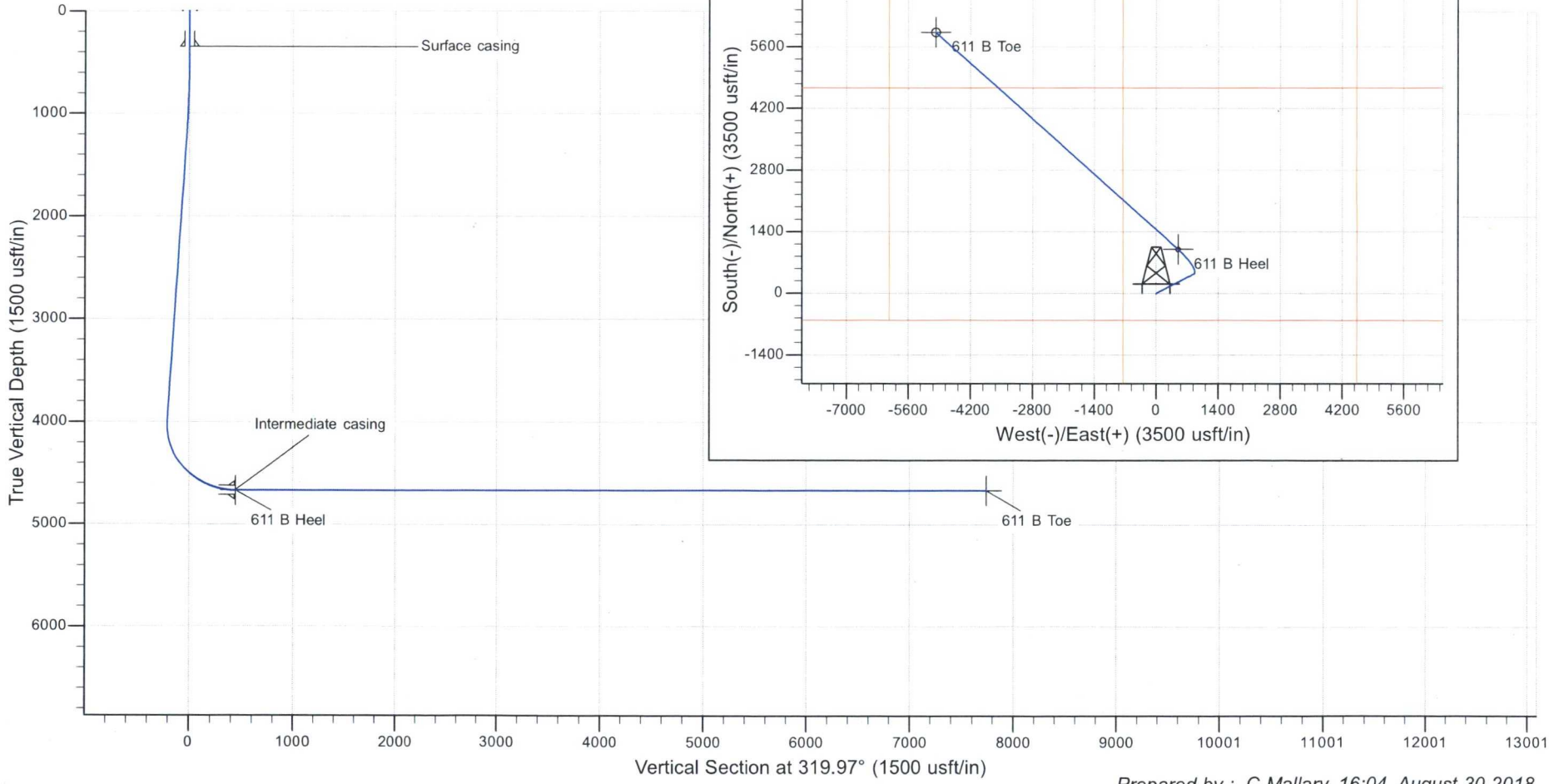
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
420.0	0.00	0.00	420.0	0.0	0.0	0.00	0.00	0.0	
1259.6	16.79	62.62	1247.6	56.2	108.5	2.00	62.62	-26.8	
4126.0	16.79	62.62	3991.9	437.0	843.8	0.00	0.00	-208.2	
5191.1	90.00	311.95	4667.0	1002.1	500.2	9.00	-109.86	445.5	611 B Heel
12559.9	90.00	311.95	4667.0	5928.0	-4980.2	0.00	0.00	7742.4	611 B Toe

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
611 B Heel	4667.0	1002.1	500.2	1959156	2638260	36.38386677	-108.12153500
611 B Toe	4667.0	5928.0	-4980.2	1964099	2632795	36.39739698	-108.14015670

T M Azimuths to True North
Magnetic North: 9.29°

Magnetic Field
Strength: 49701.1nT
Dip Angle: 62.96°
Date: 3/29/2018
Model: IGRF2015



Prepared by : C Mallary 16:04, August 30 2018

DJR Operating

Proposed Carson Unit
WC 21-2
Slot 4

Carson 611H

Plan: Lateral plan

Standard Planning Report

30 August, 2018

Database:	EDM	**Local Co-ordinate Reference:**	Well Slot 4
Company:	DJR Operating	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Project:	Proposed Carson Unit	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site:	WC 21-2	**North Reference:**	True
Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Carson 611H		
Design:	Lateral plan		

Project	Proposed Carson 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	WC 21-2, C Mallary				
Site Position:		**Northing:**	1,958,212 usft	**Latitude:**	36.38126970
From:	Lat/Long	**Easting:**	2,637,701 usft	**Longitude:**	-108.12342620
Position Uncertainty:	0.0 usft	**Slot Radius:**	16.000 in	**Grid Convergence:**	-0.17 °

Well	Slot 4				
Well Position	**+N/-S**	-56.7 usft	**Northing:**	1,958,156 usft	**Latitude:**	36.38111390
	+E/-W	56.5 usft	**Easting:**	2,637,757 usft	**Longitude:**	-108.12323440
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	6,350.0 usft

Wellbore	Carson 611H				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	3/29/2018	9.29	62.96	49,701.11471983

Design	Lateral plan				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	319.97	

Plan Survey Tool Program **Date** 8/30/2018

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	12,559.9	Lateral plan (Carson 611H)	MWD+IGRF OWSG MWD + IGRF or WMM	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
420.0	0.00	0.00	420.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,259.6	16.79	62.62	1,247.6	56.2	108.5	2.00	2.00	0.00	62.62	
4,126.0	16.79	62.62	3,991.9	437.0	843.8	0.00	0.00	0.00	0.00	
5,191.1	90.00	311.95	4,667.0	1,002.1	500.2	9.00	6.87	-10.39	-109.86	611 B Heel
12,559.9	90.00	311.95	4,667.0	5,928.0	-4,980.2	0.00	0.00	0.00	0.00	611 B Toe

Database:	EDM	**Local Co-ordinate Reference:**	Well Slot 4
Company:	DJR Operating	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Project:	Proposed Carson Unit	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site:	WC 21-2	**North Reference:**	True
Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Carson 611H		
Design:	Lateral plan		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
25.0	0.00	0.00	25.0	0.0	0.0	0.0	0.00	0.00	0.00
Kirtland									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	0.00
Surface casing									
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
420.0	0.00	0.00	420.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
500.0	1.60	62.62	500.0	0.5	1.0	-0.2	2.00	2.00	0.00
600.0	3.60	62.62	599.9	2.6	5.0	-1.2	2.00	2.00	0.00
700.0	5.60	62.62	699.6	6.3	12.1	-3.0	2.00	2.00	0.00
800.0	7.60	62.62	798.9	11.6	22.3	-5.5	2.00	2.00	0.00
900.0	9.60	62.62	897.8	18.5	35.6	-8.8	2.00	2.00	0.00
945.9	10.52	62.62	943.0	22.1	42.8	-10.5	2.00	2.00	0.00
Fruitland									
1,000.0	11.60	62.62	996.0	26.9	52.0	-12.8	2.00	2.00	0.00
1,100.0	13.60	62.62	1,093.6	36.9	71.3	-17.6	2.00	2.00	0.00
1,199.6	15.59	62.62	1,190.0	48.5	93.6	-23.1	2.00	2.00	0.00
Picture Cliffs									
1,200.0	15.60	62.62	1,190.4	48.5	93.7	-23.1	2.00	2.00	0.00
1,259.6	16.79	62.62	1,247.6	56.2	108.5	-26.8	2.00	2.00	0.00
1,300.0	16.79	62.62	1,286.3	61.5	118.8	-29.3	0.00	0.00	0.00
1,302.8	16.79	62.62	1,289.0	61.9	119.6	-29.5	0.00	0.00	0.00
Lewis									
1,400.0	16.79	62.62	1,382.0	74.8	144.5	-35.6	0.00	0.00	0.00
1,500.0	16.79	62.62	1,477.8	88.1	170.1	-42.0	0.00	0.00	0.00
1,600.0	16.79	62.62	1,573.5	101.4	195.8	-48.3	0.00	0.00	0.00
1,700.0	16.79	62.62	1,669.3	114.7	221.4	-54.6	0.00	0.00	0.00
1,800.0	16.79	62.62	1,765.0	128.0	247.1	-61.0	0.00	0.00	0.00
1,900.0	16.79	62.62	1,860.7	141.3	272.8	-67.3	0.00	0.00	0.00
1,995.3	16.79	62.62	1,952.0	153.9	297.2	-73.3	0.00	0.00	0.00
Chacra									
2,000.0	16.79	62.62	1,956.5	154.6	298.4	-73.6	0.00	0.00	0.00
2,100.0	16.79	62.62	2,052.2	167.8	324.1	-79.9	0.00	0.00	0.00
2,200.0	16.79	62.62	2,147.9	181.1	349.7	-86.3	0.00	0.00	0.00
2,300.0	16.79	62.62	2,243.7	194.4	375.4	-92.6	0.00	0.00	0.00
2,400.0	16.79	62.62	2,339.4	207.7	401.0	-98.9	0.00	0.00	0.00
2,500.0	16.79	62.62	2,435.1	221.0	426.7	-105.3	0.00	0.00	0.00
2,586.5	16.79	62.62	2,518.0	232.5	448.9	-110.7	0.00	0.00	0.00
Menefee									
2,600.0	16.79	62.62	2,530.9	234.3	452.3	-111.6	0.00	0.00	0.00
2,700.0	16.79	62.62	2,626.6	247.6	478.0	-117.9	0.00	0.00	0.00
2,800.0	16.79	62.62	2,722.4	260.8	503.6	-124.2	0.00	0.00	0.00
2,900.0	16.79	62.62	2,818.1	274.1	529.3	-130.6	0.00	0.00	0.00
3,000.0	16.79	62.62	2,913.8	287.4	554.9	-136.9	0.00	0.00	0.00
3,100.0	16.79	62.62	3,009.6	300.7	580.6	-143.2	0.00	0.00	0.00
3,200.0	16.79	62.62	3,105.3	314.0	606.2	-149.5	0.00	0.00	0.00
3,300.0	16.79	62.62	3,201.0	327.3	631.9	-155.9	0.00	0.00	0.00
3,400.0	16.79	62.62	3,296.8	340.6	657.5	-162.2	0.00	0.00	0.00
3,500.0	16.79	62.62	3,392.5	353.8	683.2	-168.5	0.00	0.00	0.00

Database:	EDM	**Local Co-ordinate Reference:**	Well Slot 4
Company:	DJR Operating	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Project:	Proposed Carson Unit	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site:	WC 21-2	**North Reference:**	True
Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Carson 611H		
Design:	Lateral plan		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,600.0	16.79	62.62	3,488.2	367.1	708.9	-174.9	0.00	0.00	0.00
3,691.7	16.79	62.62	3,576.0	379.3	732.4	-180.7	0.00	0.00	0.00
Point Lookout									
3,700.0	16.79	62.62	3,584.0	380.4	734.5	-181.2	0.00	0.00	0.00
3,800.0	16.79	62.62	3,679.7	393.7	760.2	-187.5	0.00	0.00	0.00
3,868.2	16.79	62.62	3,745.0	402.8	777.7	-191.8	0.00	0.00	0.00
Mancos									
3,900.0	16.79	62.62	3,775.4	407.0	785.8	-193.8	0.00	0.00	0.00
4,000.0	16.79	62.62	3,871.2	420.3	811.5	-200.2	0.00	0.00	0.00
4,100.0	16.79	62.62	3,966.9	433.6	837.1	-206.5	0.00	0.00	0.00
4,126.0	16.79	62.62	3,991.8	437.0	843.8	-208.1	0.00	0.00	0.00
KOP #2									
4,150.0	16.18	55.33	4,014.8	440.5	849.6	-209.2	8.98	-2.54	-30.39
4,200.0	15.79	39.00	4,062.9	449.8	859.6	-208.6	9.00	-0.79	-32.66
4,250.0	16.61	23.09	4,111.0	461.6	866.7	-204.1	9.00	1.65	-31.82
4,300.0	18.50	9.50	4,158.6	476.0	870.8	-195.7	9.00	3.77	-27.18
4,350.0	21.16	358.77	4,205.7	492.9	871.9	-183.5	9.00	5.33	-21.45
4,400.0	24.35	350.54	4,251.8	512.1	870.1	-167.6	9.00	6.38	-16.46
4,450.0	27.89	344.19	4,296.7	533.5	865.2	-148.0	9.00	7.07	-12.69
4,500.0	31.65	339.21	4,340.1	557.1	857.3	-125.0	9.00	7.52	-9.97
4,523.6	33.48	337.22	4,360.0	568.9	852.6	-112.9	9.00	7.77	-8.45
Mancos Silt									
4,550.0	35.57	335.21	4,381.7	582.5	846.6	-98.5	9.00	7.90	-7.62
4,600.0	39.59	331.91	4,421.4	609.8	833.0	-68.9	9.00	8.05	-6.59
4,650.0	43.70	329.13	4,458.7	638.7	816.6	-36.2	9.00	8.21	-5.55
4,700.0	47.86	326.75	4,493.6	669.1	797.6	-0.8	9.00	8.33	-4.77
4,750.0	52.07	324.66	4,525.7	700.7	776.0	37.3	9.00	8.41	-4.18
4,800.0	56.31	322.80	4,555.0	733.3	752.0	77.8	9.00	8.48	-3.72
4,850.0	60.57	321.11	4,581.2	766.9	725.7	120.3	9.00	8.53	-3.37
4,895.2	64.44	319.71	4,602.0	797.7	700.2	160.4	9.00	8.57	-3.11
Gallup A									
4,900.0	64.86	319.56	4,604.1	801.1	697.4	164.8	9.00	8.58	-2.99
4,950.0	69.16	318.12	4,623.6	835.7	667.1	210.8	9.00	8.60	-2.89
5,000.0	73.47	316.76	4,639.6	870.6	635.0	258.1	9.00	8.62	-2.73
5,050.0	77.79	315.45	4,652.0	905.5	601.5	306.4	9.00	8.64	-2.61
5,100.0	82.11	314.19	4,660.7	940.2	566.5	355.4	9.00	8.65	-2.52
5,150.0	86.44	312.96	4,665.7	974.4	530.5	404.8	9.00	8.66	-2.47
5,181.1	89.14	312.19	4,666.9	995.5	507.6	435.7	9.00	8.66	-2.45
Intermediate casing									
5,191.1	90.00	311.95	4,667.0	1,002.1	500.2	445.5	9.00	8.66	-2.45
Gallup B - 611 B Heel									
5,200.0	90.00	311.95	4,667.0	1,008.1	493.6	454.4	0.00	0.00	0.00
5,251.1	90.00	311.95	4,667.0	1,042.3	455.6	505.0	0.00	0.00	0.00
First take point									
5,300.0	90.00	311.95	4,667.0	1,075.0	419.2	553.4	0.00	0.00	0.00
5,400.0	90.00	311.95	4,667.0	1,141.8	344.8	652.4	0.00	0.00	0.00
5,500.0	90.00	311.95	4,667.0	1,208.7	270.5	751.4	0.00	0.00	0.00
5,600.0	90.00	311.95	4,667.0	1,275.5	196.1	850.5	0.00	0.00	0.00
5,700.0	90.00	311.95	4,667.0	1,342.3	121.7	949.5	0.00	0.00	0.00
5,800.0	90.00	311.95	4,667.0	1,409.2	47.3	1,048.5	0.00	0.00	0.00
5,900.0	90.00	311.95	4,667.0	1,476.0	-27.0	1,147.5	0.00	0.00	0.00
6,000.0	90.00	311.95	4,667.0	1,542.9	-101.4	1,246.6	0.00	0.00	0.00
6,100.0	90.00	311.95	4,667.0	1,609.7	-175.8	1,345.6	0.00	0.00	0.00

Database:	EDM	**Local Co-ordinate Reference:**	Well Slot 4
Company:	DJR Operating	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Project:	Proposed Carson Unit	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site:	WC 21-2	**North Reference:**	True
Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Carson 611H		
Design:	Lateral plan		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,200.0	90.00	311.95	4,667.0	1,676.6	-250.2	1,444.6	0.00	0.00	0.00
6,300.0	90.00	311.95	4,667.0	1,743.4	-324.5	1,543.6	0.00	0.00	0.00
6,400.0	90.00	311.95	4,667.0	1,810.3	-398.9	1,642.7	0.00	0.00	0.00
6,500.0	90.00	311.95	4,667.0	1,877.1	-473.3	1,741.7	0.00	0.00	0.00
6,600.0	90.00	311.95	4,667.0	1,944.0	-547.6	1,840.7	0.00	0.00	0.00
6,700.0	90.00	311.95	4,667.0	2,010.8	-622.0	1,939.7	0.00	0.00	0.00
6,800.0	90.00	311.95	4,667.0	2,077.7	-696.4	2,038.7	0.00	0.00	0.00
6,900.0	90.00	311.95	4,667.0	2,144.5	-770.8	2,137.8	0.00	0.00	0.00
7,000.0	90.00	311.95	4,667.0	2,211.4	-845.1	2,236.8	0.00	0.00	0.00
7,100.0	90.00	311.95	4,667.0	2,278.2	-919.5	2,335.8	0.00	0.00	0.00
7,200.0	90.00	311.95	4,667.0	2,345.1	-993.9	2,434.8	0.00	0.00	0.00
7,300.0	90.00	311.95	4,667.0	2,411.9	-1,068.3	2,533.9	0.00	0.00	0.00
7,400.0	90.00	311.95	4,667.0	2,478.8	-1,142.6	2,632.9	0.00	0.00	0.00
7,500.0	90.00	311.95	4,667.0	2,545.6	-1,217.0	2,731.9	0.00	0.00	0.00
7,600.0	90.00	311.95	4,667.0	2,612.5	-1,291.4	2,830.9	0.00	0.00	0.00
7,700.0	90.00	311.95	4,667.0	2,679.3	-1,365.7	2,929.9	0.00	0.00	0.00
7,800.0	90.00	311.95	4,667.0	2,746.2	-1,440.1	3,029.0	0.00	0.00	0.00
7,900.0	90.00	311.95	4,667.0	2,813.0	-1,514.5	3,128.0	0.00	0.00	0.00
8,000.0	90.00	311.95	4,667.0	2,879.8	-1,588.9	3,227.0	0.00	0.00	0.00
8,100.0	90.00	311.95	4,667.0	2,946.7	-1,663.2	3,326.0	0.00	0.00	0.00
8,200.0	90.00	311.95	4,667.0	3,013.5	-1,737.6	3,425.1	0.00	0.00	0.00
8,300.0	90.00	311.95	4,667.0	3,080.4	-1,812.0	3,524.1	0.00	0.00	0.00
8,400.0	90.00	311.95	4,667.0	3,147.2	-1,886.4	3,623.1	0.00	0.00	0.00
8,500.0	90.00	311.95	4,667.0	3,214.1	-1,960.7	3,722.1	0.00	0.00	0.00
8,600.0	90.00	311.95	4,667.0	3,280.9	-2,035.1	3,821.2	0.00	0.00	0.00
8,700.0	90.00	311.95	4,667.0	3,347.8	-2,109.5	3,920.2	0.00	0.00	0.00
8,800.0	90.00	311.95	4,667.0	3,414.6	-2,183.9	4,019.2	0.00	0.00	0.00
8,900.0	90.00	311.95	4,667.0	3,481.5	-2,258.2	4,118.2	0.00	0.00	0.00
9,000.0	90.00	311.95	4,667.0	3,548.3	-2,332.6	4,217.2	0.00	0.00	0.00
9,100.0	90.00	311.95	4,667.0	3,615.2	-2,407.0	4,316.3	0.00	0.00	0.00
9,200.0	90.00	311.95	4,667.0	3,682.0	-2,481.3	4,415.3	0.00	0.00	0.00
9,300.0	90.00	311.95	4,667.0	3,748.9	-2,555.7	4,514.3	0.00	0.00	0.00
9,400.0	90.00	311.95	4,667.0	3,815.7	-2,630.1	4,613.3	0.00	0.00	0.00
9,500.0	90.00	311.95	4,667.0	3,882.6	-2,704.5	4,712.4	0.00	0.00	0.00
9,600.0	90.00	311.95	4,667.0	3,949.4	-2,778.8	4,811.4	0.00	0.00	0.00
9,700.0	90.00	311.95	4,667.0	4,016.3	-2,853.2	4,910.4	0.00	0.00	0.00
9,800.0	90.00	311.95	4,667.0	4,083.1	-2,927.6	5,009.4	0.00	0.00	0.00
9,900.0	90.00	311.95	4,667.0	4,150.0	-3,002.0	5,108.5	0.00	0.00	0.00
10,000.0	90.00	311.95	4,667.0	4,216.8	-3,076.3	5,207.5	0.00	0.00	0.00
10,100.0	90.00	311.95	4,667.0	4,283.6	-3,150.7	5,306.5	0.00	0.00	0.00
10,200.0	90.00	311.95	4,667.0	4,350.5	-3,225.1	5,405.5	0.00	0.00	0.00
10,300.0	90.00	311.95	4,667.0	4,417.3	-3,299.5	5,504.5	0.00	0.00	0.00
10,400.0	90.00	311.95	4,667.0	4,484.2	-3,373.8	5,603.6	0.00	0.00	0.00
10,500.0	90.00	311.95	4,667.0	4,551.0	-3,448.2	5,702.6	0.00	0.00	0.00
10,600.0	90.00	311.95	4,667.0	4,617.9	-3,522.6	5,801.6	0.00	0.00	0.00
10,700.0	90.00	311.95	4,667.0	4,684.7	-3,596.9	5,900.6	0.00	0.00	0.00
10,800.0	90.00	311.95	4,667.0	4,751.6	-3,671.3	5,999.7	0.00	0.00	0.00
10,900.0	90.00	311.95	4,667.0	4,818.4	-3,745.7	6,098.7	0.00	0.00	0.00
11,000.0	90.00	311.95	4,667.0	4,885.3	-3,820.1	6,197.7	0.00	0.00	0.00
11,100.0	90.00	311.95	4,667.0	4,952.1	-3,894.4	6,296.7	0.00	0.00	0.00
11,200.0	90.00	311.95	4,667.0	5,019.0	-3,968.8	6,395.7	0.00	0.00	0.00
11,300.0	90.00	311.95	4,667.0	5,085.8	-4,043.2	6,494.8	0.00	0.00	0.00
11,400.0	90.00	311.95	4,667.0	5,152.7	-4,117.6	6,593.8	0.00	0.00	0.00
11,500.0	90.00	311.95	4,667.0	5,219.5	-4,191.9	6,692.8	0.00	0.00	0.00

Database:	EDM	**Local Co-ordinate Reference:**	Well Slot 4
Company:	DJR Operating	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Project:	Proposed Carson Unit	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site:	WC 21-2	**North Reference:**	True
Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Carson 611H		
Design:	Lateral plan		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,600.0	90.00	311.95	4,667.0	5,286.4	-4,266.3	6,791.8	0.00	0.00	0.00
11,700.0	90.00	311.95	4,667.0	5,353.2	-4,340.7	6,890.9	0.00	0.00	0.00
11,800.0	90.00	311.95	4,667.0	5,420.1	-4,415.0	6,989.9	0.00	0.00	0.00
11,900.0	90.00	311.95	4,667.0	5,486.9	-4,489.4	7,088.9	0.00	0.00	0.00
12,000.0	90.00	311.95	4,667.0	5,553.8	-4,563.8	7,187.9	0.00	0.00	0.00
12,100.0	90.00	311.95	4,667.0	5,620.6	-4,638.2	7,287.0	0.00	0.00	0.00
12,200.0	90.00	311.95	4,667.0	5,687.5	-4,712.5	7,386.0	0.00	0.00	0.00
12,300.0	90.00	311.95	4,667.0	5,754.3	-4,786.9	7,485.0	0.00	0.00	0.00
12,400.0	90.00	311.95	4,667.0	5,821.1	-4,861.3	7,584.0	0.00	0.00	0.00
12,499.9	90.00	311.95	4,667.0	5,887.9	-4,935.6	7,682.9	0.00	0.00	0.00
Last take point									
12,500.0	90.00	311.95	4,667.0	5,888.0	-4,935.7	7,683.0	0.00	0.00	0.00
12,559.9	90.00	311.95	4,667.0	5,928.0	-4,980.2	7,742.4	0.00	0.00	0.00
611 B Toe									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
611 B Heel - plan hits target center - Circle (radius 50.0)	0.00	0.00	4,667.0	1,002.1	500.2	1,959,156	2,638,260	36.38386677	-108.12153500
611 B Toe - plan hits target center - Circle (radius 100.0)	0.00	0.00	4,667.0	5,928.0	-4,980.2	1,964,099	2,632,795	36.39739698	-108.14015670

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
350.0	350.0	Surface casing	9.625	12.250
5,181.1	4,666.9	Intermediate casing	7.000	8.750

Database:	EDM	**Local Co-ordinate Reference:**	Well Slot 4
Company:	DJR Operating	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Project:	Proposed Carson Unit	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site:	WC 21-2	**North Reference:**	True
Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Carson 611H		
Design:	Lateral plan		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
25.0	25.0	Kirtland			
945.9	943.0	Fruitland			
1,199.6	1,190.0	Picture Cliffs			
1,302.8	1,289.0	Lewis			
1,995.3	1,952.0	Chacra			
2,586.5	2,518.0	Menefee			
3,691.7	3,576.0	Point Lookout			
3,868.2	3,745.0	Mancos			
4,523.6	4,360.0	Mancos Silt			
4,895.2	4,602.0	Gallup A			
5,191.1	4,667.0	Gallup B			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
420.0	420.0	0.0	0.0	KOP #1
4,126.0	3,991.8	437.0	843.8	KOP #2
5,251.1	4,667.0	1,042.3	455.6	First take point
12,499.9	4,667.0	5,887.9	-4,935.6	Last take point

DJR Operating

Proposed Carson Unit
WC 21-2
Slot 4

Carson 611H
Lateral plan

Anticollision Report

30 August, 2018

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

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

Survey Tool Program **Date** 8/30/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	12,559.9	Lateral plan (Carson 611H)	MWD+IGRF	OWSG MWD + IGRF or WMM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
WC 21-2						
Bisti Coal 21 Com 2 - Original drilling - Original drilling	1,249.7	1,213.3	136.6	127.7	15.251	CC
Bisti Coal 21 Com 2 - Original drilling - Original drilling	1,259.6	1,222.8	136.6	127.6	15.105	ES
Bisti Coal 21 Com 2 - Original drilling - Original drilling	1,300.0	1,261.5	137.4	128.0	14.601	SF
Slot 1 - Carson 615 - Pilot hole	741.5	740.9	57.2	52.3	11.693	CC, ES
Slot 1 - Carson 615 - Pilot hole	900.0	897.8	61.3	55.2	10.086	SF
Slot 1 - Carson 615H - Lateral plan	741.5	740.9	57.2	52.3	11.693	CC, ES
Slot 1 - Carson 615H - Lateral plan	12,559.9	12,003.3	1,191.9	800.3	3.043	SF
Slot 2 - Carson 617H - Lateral plan	400.0	400.0	40.0	37.5	16.399	CC
Slot 2 - Carson 617H - Lateral plan	420.0	419.9	40.0	37.4	15.524	ES
Slot 2 - Carson 617H - Lateral plan	12,559.9	12,449.0	1,768.6	1,373.0	4.471	SF
Slot 3 - Carson 584H - Lateral plan	812.6	813.2	11.3	5.9	2.090	CC, ES, SF
Slot 5 - Carson 613H - Lateral plan	420.0	420.0	20.1	17.5	7.771	CC
Slot 5 - Carson 613H - Lateral plan	500.0	500.0	20.4	17.3	6.480	ES
Slot 5 - Carson 613H - Lateral plan	12,526.2	12,506.1	579.3	189.4	1.486	Level 3, SF

Offset Design WC 21-2 - Bisti Coal 21 Com 2 - Original drilling - Original drilling

Survey Program: 103-MWD+IGRF

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	13.61	175.7	42.5	182.5				
100.0	100.0	75.0	75.0	0.1	0.1	13.61	175.7	42.5	180.8	180.5	0.28	650.518	
200.0	200.0	175.0	175.0	0.5	0.4	13.61	175.7	42.5	180.8	179.8	0.94	191.386	
300.0	300.0	275.0	275.0	0.9	0.8	13.61	175.7	42.5	180.8	179.1	1.66	108.807	
400.0	400.0	375.0	375.0	1.2	1.2	13.61	175.7	42.5	180.8	178.4	2.38	76.010	
420.0	420.0	395.0	395.0	1.3	1.2	13.59	176.0	42.5	181.1	178.6	2.52	71.806	
500.0	500.0	475.1	475.1	1.6	1.5	-49.31	176.0	42.5	180.3	177.2	3.09	58.307	
600.0	599.9	575.1	575.1	1.9	1.9	-50.46	175.9	42.5	177.3	173.5	3.81	46.574	
700.0	699.6	674.6	674.6	2.3	2.2	-52.58	175.7	42.5	172.1	167.6	4.53	38.021	
800.0	798.9	773.9	773.9	2.7	2.6	-55.84	175.7	42.5	165.4	160.1	5.26	31.437	
900.0	897.8	872.8	872.8	3.1	2.9	-60.45	175.7	42.5	157.4	151.4	6.01	26.174	
1,000.0	996.0	971.1	971.0	3.5	3.3	-66.67	175.7	42.5	149.1	142.3	6.80	21.928	
1,100.0	1,093.6	1,068.7	1,068.7	4.0	3.6	-74.74	176.0	42.5	142.0	134.4	7.63	18.616	
1,200.0	1,190.4	1,165.6	1,165.6	4.5	4.0	-84.72	175.9	42.5	137.3	128.8	8.51	16.137	

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

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Bisti Coal 21 Com 2 - Original drilling - Original drilling — **Offset Site Error:** 0.0 usft

Survey Program: 103-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,249.7	1,238.1	1,213.3	1,213.3	4.8	4.2	-90.28	175.9	42.5	136.6	127.7	8.96	15.251	CC
1,259.6	1,247.6	1,222.8	1,222.8	4.8	4.2	-91.43	175.9	42.5	136.6	127.6	9.05	15.105	ES
1,300.0	1,286.3	1,261.5	1,261.5	5.1	4.3	-96.11	175.8	42.5	137.4	128.0	9.41	14.601	SF
1,400.0	1,382.0	1,330.0	1,330.0	5.7	4.5	-104.16	175.7	42.5	146.0	136.0	9.99	14.609	
1,500.0	1,477.8	1,330.0	1,330.0	6.3	4.5	-104.16	175.7	42.5	197.6	188.6	8.92	22.145	
1,600.0	1,573.5	1,330.0	1,330.0	6.9	4.5	-104.16	175.7	42.5	277.1	269.1	7.96	34.791	
1,700.0	1,669.3	1,330.0	1,330.0	7.5	4.5	-104.16	175.7	42.5	366.7	359.3	7.45	49.235	
1,800.0	1,765.0	1,330.0	1,330.0	8.2	4.5	-104.16	175.7	42.5	460.7	453.5	7.18	64.144	
1,900.0	1,860.7	1,330.0	1,330.0	8.8	4.5	-104.16	175.7	42.5	556.7	549.7	7.05	79.015	
2,000.0	1,956.5	1,330.0	1,330.0	9.4	4.5	-104.16	175.7	42.5	654.0	647.0	6.98	93.642	
2,100.0	2,052.2	1,330.0	1,330.0	10.1	4.5	-104.16	175.7	42.5	751.9	745.0	6.97	107.936	
2,200.0	2,147.9	1,330.0	1,330.0	10.7	4.5	-104.16	175.7	42.5	850.4	843.4	6.98	121.851	
2,300.0	2,243.7	1,330.0	1,330.0	11.4	4.5	-104.16	175.7	42.5	949.1	942.1	7.01	135.365	
2,400.0	2,339.4	1,330.0	1,330.0	12.0	4.5	-104.16	175.7	42.5	1,048.1	1,041.1	7.06	148.467	
2,500.0	2,435.1	1,330.0	1,330.0	12.7	4.5	-104.16	175.7	42.5	1,147.3	1,140.2	7.12	161.153	
2,600.0	2,530.9	1,330.0	1,330.0	13.3	4.5	-104.16	175.7	42.5	1,246.6	1,239.4	7.19	173.419	
2,700.0	2,626.6	1,330.0	1,330.0	14.0	4.5	-104.16	175.7	42.5	1,346.0	1,338.8	7.27	185.270	
2,800.0	2,722.4	1,330.0	1,330.0	14.6	4.5	-104.16	175.7	42.5	1,445.5	1,438.2	7.35	196.707	
2,900.0	2,818.1	1,330.0	1,330.0	15.3	4.5	-104.16	175.7	42.5	1,545.1	1,537.6	7.44	207.736	
3,000.0	2,913.8	1,330.0	1,330.0	15.9	4.5	-104.16	175.7	42.5	1,644.7	1,637.2	7.53	218.361	
3,100.0	3,009.6	1,330.0	1,330.0	16.6	4.5	-104.16	175.7	42.5	1,744.3	1,736.7	7.63	228.591	
3,200.0	3,105.3	1,330.0	1,330.0	17.2	4.5	-104.16	175.7	42.5	1,844.0	1,836.3	7.73	238.432	
3,300.0	3,201.0	1,330.0	1,330.0	17.9	4.5	-104.16	175.7	42.5	1,943.8	1,935.9	7.84	247.892	
3,400.0	3,296.8	1,330.0	1,330.0	18.6	4.5	-104.16	175.7	42.5	2,043.5	2,035.6	7.95	256.978	
3,500.0	3,392.5	1,330.0	1,330.0	19.2	4.5	-104.16	175.7	42.5	2,143.3	2,135.2	8.07	265.700	
3,600.0	3,488.2	1,330.0	1,330.0	19.9	4.5	-104.16	175.7	42.5	2,243.1	2,234.9	8.18	274.066	
3,700.0	3,584.0	1,330.0	1,330.0	20.5	4.5	-104.16	175.7	42.5	2,342.9	2,334.6	8.31	282.084	
3,800.0	3,679.7	1,330.0	1,330.0	21.2	4.5	-104.16	175.7	42.5	2,442.7	2,434.3	8.43	289.764	
3,900.0	3,775.4	1,330.0	1,330.0	21.9	4.5	-104.16	175.7	42.5	2,542.6	2,534.0	8.56	297.114	
4,000.0	3,871.2	1,330.0	1,330.0	22.5	4.5	-104.16	175.7	42.5	2,642.4	2,633.7	8.69	304.144	
4,100.0	3,966.9	1,330.0	1,330.0	23.2	4.5	-104.16	175.7	42.5	2,742.3	2,733.4	8.82	310.862	
4,126.0	3,991.9	1,330.0	1,330.0	23.3	4.5	-104.16	175.7	42.5	2,768.3	2,759.4	8.86	312.562	
4,150.0	4,014.8	1,330.0	1,330.0	23.5	4.5	-99.59	175.7	42.5	2,792.2	2,783.3	8.89	314.154	
4,200.0	4,062.9	1,330.0	1,330.0	23.8	4.5	-85.43	175.7	42.5	2,841.8	2,832.8	8.95	317.568	
4,250.0	4,111.0	1,330.0	1,330.0	24.1	4.5	-70.70	175.7	42.5	2,890.7	2,881.7	9.00	321.136	
4,300.0	4,158.6	1,330.0	1,330.0	24.3	4.5	-58.02	175.7	42.5	2,938.8	2,929.8	9.05	324.809	
4,350.0	4,205.7	1,330.0	1,330.0	24.6	4.5	-48.10	175.7	42.5	2,985.8	2,976.7	9.09	328.548	
4,400.0	4,251.8	1,330.0	1,330.0	24.8	4.5	-40.62	175.7	42.5	3,031.4	3,022.3	9.12	332.303	
4,450.0	4,296.7	1,330.0	1,330.0	24.9	4.5	-35.00	175.7	42.5	3,075.5	3,066.3	9.15	336.007	
4,500.0	4,340.1	1,330.0	1,330.0	25.1	4.5	-30.73	175.7	42.5	3,117.7	3,108.5	9.18	339.573	
4,550.0	4,381.7	1,330.0	1,330.0	25.2	4.5	-27.44	175.7	42.5	3,158.0	3,148.8	9.21	342.895	
4,600.0	4,421.4	1,330.0	1,330.0	25.3	4.5	-24.86	175.7	42.5	3,196.2	3,187.0	9.24	345.843	
4,650.0	4,458.7	1,330.0	1,330.0	25.4	4.5	-22.82	175.7	42.5	3,232.1	3,222.8	9.28	348.269	
4,700.0	4,493.6	1,330.0	1,330.0	25.5	4.5	-21.17	175.7	42.5	3,265.6	3,256.3	9.33	350.012	
4,750.0	4,525.7	1,330.0	1,330.0	25.6	4.5	-19.85	175.7	42.5	3,296.5	3,287.1	9.39	350.906	
4,800.0	4,555.0	1,330.0	1,330.0	25.7	4.5	-18.77	175.7	42.5	3,324.8	3,315.3	9.48	350.797	
4,850.0	4,581.2	1,330.0	1,330.0	25.7	4.5	-17.90	175.7	42.5	3,350.3	3,340.7	9.58	349.556	
4,900.0	4,604.1	1,330.0	1,330.0	25.8	4.5	-17.20	175.7	42.5	3,372.9	3,363.2	9.72	347.099	
4,950.0	4,623.6	1,330.0	1,330.0	25.9	4.5	-16.65	175.7	42.5	3,392.5	3,382.7	9.88	343.397	
5,000.0	4,639.6	1,330.0	1,330.0	25.9	4.5	-16.22	175.7	42.5	3,409.2	3,399.1	10.07	338.482	
5,050.0	4,652.0	1,330.0	1,330.0	26.0	4.5	-15.90	175.7	42.5	3,422.8	3,412.5	10.30	332.449	
5,100.0	4,660.7	1,330.0	1,330.0	26.1	4.5	-15.68	175.7	42.5	3,433.2	3,422.7	10.55	325.439	

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

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Bisti Coal 21 Com 2 - Original drilling - Original drilling — **Offset Site Error:** 0.0 usft

Survey Program: 103-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,150.0	4,665.7	1,330.0	1,330.0	26.2	4.5	-15.56	175.7	42.5	3,440.5	3,429.7	10.83	317.632	
5,191.1	4,667.0	1,330.0	1,330.0	26.4	4.5	-15.53	175.7	42.5	3,444.1	3,433.0	11.08	310.771	
5,200.0	4,667.0	1,330.0	1,330.0	26.4	4.5	-15.53	175.7	42.5	3,444.7	3,433.5	11.14	309.263	
5,300.0	4,667.0	1,330.0	1,330.0	26.9	4.5	-15.53	175.7	42.5	3,452.5	3,440.7	11.82	292.039	
5,400.0	4,667.0	1,330.0	1,330.0	27.8	4.5	-15.53	175.7	42.5	3,463.3	3,450.7	12.57	275.540	
5,500.0	4,667.0	1,330.0	1,330.0	29.0	4.5	-15.53	175.7	42.5	3,476.8	3,463.5	13.36	260.221	
5,600.0	4,667.0	1,330.0	1,330.0	30.5	4.5	-15.53	175.7	42.5	3,493.2	3,479.0	14.18	246.278	
5,700.0	4,667.0	1,330.0	1,330.0	32.2	4.5	-15.53	175.7	42.5	3,512.4	3,497.3	15.03	233.744	
5,800.0	4,667.0	1,330.0	1,330.0	34.0	4.5	-15.53	175.7	42.5	3,534.2	3,518.4	15.88	222.566	
5,900.0	4,667.0	1,330.0	1,330.0	36.0	4.5	-15.53	175.7	42.5	3,558.8	3,542.1	16.74	212.646	
6,000.0	4,667.0	1,330.0	1,330.0	38.0	4.5	-15.53	175.7	42.5	3,586.0	3,568.4	17.59	203.871	
6,100.0	4,667.0	1,330.0	1,330.0	40.1	4.5	-15.53	175.7	42.5	3,615.7	3,597.3	18.44	196.126	
6,200.0	4,667.0	1,330.0	1,330.0	42.2	4.5	-15.53	175.7	42.5	3,648.0	3,628.7	19.27	189.300	
6,300.0	4,667.0	1,330.0	1,330.0	44.4	4.5	-15.53	175.7	42.5	3,682.6	3,662.6	20.09	183.292	
6,400.0	4,667.0	1,330.0	1,330.0	46.6	4.5	-15.53	175.7	42.5	3,719.7	3,698.8	20.90	178.011	
6,500.0	4,667.0	1,330.0	1,330.0	48.9	4.5	-15.53	175.7	42.5	3,759.0	3,737.3	21.68	173.377	
6,600.0	4,667.0	1,330.0	1,330.0	51.2	4.5	-15.53	175.7	42.5	3,800.6	3,778.1	22.45	169.318	
6,700.0	4,667.0	1,330.0	1,330.0	53.5	4.5	-15.53	175.7	42.5	3,844.3	3,821.1	23.19	165.772	
6,800.0	4,667.0	1,330.0	1,330.0	55.8	4.5	-15.53	175.7	42.5	3,890.1	3,866.2	23.91	162.684	
6,900.0	4,667.0	1,330.0	1,330.0	58.1	4.5	-15.53	175.7	42.5	3,937.9	3,913.3	24.61	160.007	
7,000.0	4,667.0	1,330.0	1,330.0	60.5	4.5	-15.53	175.7	42.5	3,987.6	3,962.4	25.29	157.697	
7,100.0	4,667.0	1,330.0	1,330.0	62.9	4.5	-15.53	175.7	42.5	4,039.2	4,013.3	25.94	155.719	
7,200.0	4,667.0	1,330.0	1,330.0	65.3	4.5	-15.53	175.7	42.5	4,092.6	4,066.1	26.57	154.040	
7,300.0	4,667.0	1,330.0	1,330.0	67.7	4.5	-15.53	175.7	42.5	4,147.8	4,120.6	27.18	152.630	
7,400.0	4,667.0	1,330.0	1,330.0	70.1	4.5	-15.53	175.7	42.5	4,204.5	4,176.8	27.76	151.465	
7,500.0	4,667.0	1,330.0	1,330.0	72.5	4.5	-15.53	175.7	42.5	4,262.9	4,234.6	28.32	150.523	
7,600.0	4,667.0	1,330.0	1,330.0	74.9	4.5	-15.53	175.7	42.5	4,322.8	4,293.9	28.86	149.783	
7,700.0	4,667.0	1,330.0	1,330.0	77.3	4.5	-15.53	175.7	42.5	4,384.1	4,354.8	29.38	149.227	
7,800.0	4,667.0	1,330.0	1,330.0	79.8	4.5	-15.53	175.7	42.5	4,446.9	4,417.0	29.88	148.840	
7,900.0	4,667.0	1,330.0	1,330.0	82.2	4.5	-15.53	175.7	42.5	4,511.0	4,480.6	30.36	148.608	
8,000.0	4,667.0	1,330.0	1,330.0	84.6	4.5	-15.53	175.7	42.5	4,576.4	4,545.6	30.81	148.517	
8,100.0	4,667.0	1,330.0	1,330.0	87.1	4.5	-15.53	175.7	42.5	4,643.0	4,611.7	31.25	148.557	
8,200.0	4,667.0	1,330.0	1,330.0	89.5	4.5	-15.53	175.7	42.5	4,710.8	4,679.1	31.68	148.717	
8,300.0	4,667.0	1,330.0	1,330.0	92.0	4.5	-15.53	175.7	42.5	4,779.7	4,747.6	32.08	148.987	
8,400.0	4,667.0	1,330.0	1,330.0	94.5	4.5	-15.53	175.7	42.5	4,849.7	4,817.3	32.47	149.360	
8,500.0	4,667.0	1,330.0	1,330.0	96.9	4.5	-15.53	175.7	42.5	4,920.8	4,888.0	32.84	149.828	
8,600.0	4,667.0	1,330.0	1,330.0	99.4	4.5	-15.53	175.7	42.5	4,992.8	4,959.6	33.20	150.383	
8,700.0	4,667.0	1,330.0	1,330.0	101.9	4.5	-15.53	175.7	42.5	5,065.8	5,032.3	33.54	151.020	
8,800.0	4,667.0	1,330.0	1,330.0	104.3	4.5	-15.53	175.7	42.5	5,139.7	5,105.9	33.87	151.732	
8,900.0	4,667.0	1,330.0	1,330.0	106.8	4.5	-15.53	175.7	42.5	5,214.5	5,180.3	34.19	152.514	
9,000.0	4,667.0	1,330.0	1,330.0	109.3	4.5	-15.53	175.7	42.5	5,290.1	5,255.6	34.49	153.363	
9,100.0	4,667.0	1,330.0	1,330.0	111.8	4.5	-15.53	175.7	42.5	5,366.5	5,331.7	34.79	154.272	
9,200.0	4,667.0	1,330.0	1,330.0	114.3	4.5	-15.53	175.7	42.5	5,443.7	5,408.6	35.07	155.238	
9,300.0	4,667.0	1,330.0	1,330.0	116.8	4.5	-15.53	175.7	42.5	5,521.6	5,486.2	35.34	156.257	
9,400.0	4,667.0	1,330.0	1,330.0	119.2	4.5	-15.53	175.7	42.5	5,600.2	5,564.6	35.60	157.326	
9,500.0	4,667.0	1,330.0	1,330.0	121.7	4.5	-15.53	175.7	42.5	5,679.5	5,643.6	35.85	158.442	
9,600.0	4,667.0	1,330.0	1,330.0	124.2	4.5	-15.53	175.7	42.5	5,759.4	5,723.3	36.09	159.601	
9,700.0	4,667.0	1,330.0	1,330.0	126.7	4.5	-15.53	175.7	42.5	5,839.9	5,803.6	36.32	160.801	
9,800.0	4,667.0	1,330.0	1,330.0	129.2	4.5	-15.53	175.7	42.5	5,921.0	5,884.5	36.54	162.039	
9,900.0	4,667.0	1,330.0	1,330.0	131.7	4.5	-15.53	175.7	42.5	6,002.7	5,966.0	36.76	163.314	
10,000.0	4,667.0	1,330.0	1,330.0	134.2	4.5	-15.53	175.7	42.5	6,085.0	6,048.0	36.96	164.621	
10,100.0	4,667.0	1,330.0	1,330.0	136.7	4.5	-15.53	175.7	42.5	6,167.8	6,130.6	37.16	165.961	

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

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Bisti Coal 21 Com 2 - Original drilling - Original drilling

Offset Site Error: 0.0 usft

Survey Program: 103-MWD+IGRF **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.0	4,667.0	1,330.0	1,330.0	139.2	4.5	-15.53	175.7	42.5	6,251.0	6,213.7	37.36	167.330	
10,300.0	4,667.0	1,330.0	1,330.0	141.7	4.5	-15.53	175.7	42.5	6,334.8	6,297.3	37.54	168.727	
10,400.0	4,667.0	1,330.0	1,330.0	144.2	4.5	-15.53	175.7	42.5	6,419.0	6,381.3	37.73	170.151	
10,500.0	4,667.0	1,330.0	1,330.0	146.7	4.5	-15.53	175.7	42.5	6,503.7	6,465.8	37.90	171.599	
10,600.0	4,667.0	1,330.0	1,330.0	149.2	4.5	-15.53	175.7	42.5	6,588.8	6,550.7	38.07	173.070	
10,700.0	4,667.0	1,330.0	1,330.0	151.7	4.5	-15.53	175.7	42.5	6,674.3	6,636.1	38.23	174.564	
10,800.0	4,667.0	1,330.0	1,330.0	154.2	4.5	-15.53	175.7	42.5	6,760.2	6,721.8	38.39	176.077	
10,900.0	4,667.0	1,330.0	1,330.0	156.7	4.5	-15.53	175.7	42.5	6,846.5	6,808.0	38.55	177.610	
11,000.0	4,667.0	1,330.0	1,330.0	159.2	4.5	-15.53	175.7	42.5	6,933.2	6,894.5	38.70	179.162	
11,100.0	4,667.0	1,330.0	1,330.0	161.7	4.5	-15.53	175.7	42.5	7,020.2	6,981.4	38.84	180.730	
11,200.0	4,667.0	1,330.0	1,330.0	164.3	4.5	-15.53	175.7	42.5	7,107.6	7,068.6	38.99	182.315	
11,300.0	4,667.0	1,330.0	1,330.0	166.8	4.5	-15.53	175.7	42.5	7,195.3	7,156.1	39.12	183.914	
11,400.0	4,667.0	1,330.0	1,330.0	169.3	4.5	-15.53	175.7	42.5	7,283.3	7,244.0	39.26	185.528	
11,500.0	4,667.0	1,330.0	1,330.0	171.8	4.5	-15.53	175.7	42.5	7,371.6	7,332.2	39.39	187.155	
11,600.0	4,667.0	1,330.0	1,330.0	174.3	4.5	-15.53	175.7	42.5	7,460.2	7,420.7	39.51	188.795	
11,700.0	4,667.0	1,330.0	1,330.0	176.8	4.5	-15.53	175.7	42.5	7,549.1	7,509.4	39.64	190.446	
11,800.0	4,667.0	1,330.0	1,330.0	179.3	4.5	-15.53	175.7	42.5	7,638.2	7,598.5	39.76	192.108	
11,900.0	4,667.0	1,330.0	1,330.0	181.8	4.5	-15.53	175.7	42.5	7,727.7	7,687.8	39.88	193.781	
12,000.0	4,667.0	1,330.0	1,330.0	184.3	4.5	-15.53	175.7	42.5	7,817.4	7,777.4	39.99	195.464	
12,100.0	4,667.0	1,330.0	1,330.0	186.9	4.5	-15.53	175.7	42.5	7,907.3	7,867.2	40.11	197.155	
12,200.0	4,667.0	1,330.0	1,330.0	189.4	4.5	-15.53	175.7	42.5	7,997.5	7,957.3	40.22	198.855	
12,300.0	4,667.0	1,330.0	1,330.0	191.9	4.5	-15.53	175.7	42.5	8,087.9	8,047.5	40.33	200.563	
12,400.0	4,667.0	1,330.0	1,330.0	194.4	4.5	-15.53	175.7	42.5	8,178.5	8,138.1	40.43	202.278	
12,500.0	4,667.0	1,330.0	1,330.0	196.9	4.5	-15.53	175.7	42.5	8,269.3	8,228.8	40.54	204.000	
12,559.9	4,667.0	1,330.0	1,330.0	198.4	4.5	-15.53	175.7	42.5	8,323.9	8,283.3	40.60	205.035	

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 1 - Carson 615 - Pilot hole — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	135.13	-42.5	42.3	60.0				
100.0	100.0	100.0	100.0	0.1	0.1	135.13	-42.5	42.3	60.0	59.7	0.29	209.128	
200.0	200.0	200.0	200.0	0.5	0.5	135.13	-42.5	42.3	60.0	59.0	1.00	59.751	
300.0	300.0	300.0	300.0	0.9	0.9	135.13	-42.5	42.3	60.0	58.3	1.72	34.855	
400.0	400.0	400.0	400.0	1.2	1.2	135.13	-42.5	42.3	60.0	57.5	2.44	24.603	
420.0	420.0	420.0	420.0	1.3	1.3	135.13	-42.5	42.3	60.0	57.4	2.58	23.236	
500.0	500.0	500.0	500.0	1.6	1.6	73.54	-42.5	42.3	59.6	56.5	3.15	18.929	
600.0	599.9	599.9	599.9	1.9	1.9	77.82	-42.5	42.3	58.5	54.7	3.86	15.148	
700.0	699.6	699.6	699.6	2.3	2.3	85.67	-42.5	42.3	57.4	52.8	4.59	12.510	
741.5	740.9	740.9	740.9	2.5	2.4	90.00	-42.5	42.3	57.2	52.3	4.89	11.693	CC, ES
800.0	798.9	798.9	798.9	2.7	2.6	97.05	-42.5	42.3	57.6	52.3	5.32	10.826	
900.0	897.8	897.8	897.8	3.1	3.0	110.85	-42.5	42.3	61.3	55.2	6.08	10.086	SF
1,000.0	996.0	996.0	996.0	3.5	3.4	124.74	-42.5	42.3	70.1	63.2	6.84	10.250	
1,100.0	1,093.6	1,093.6	1,093.6	4.0	3.7	136.63	-42.5	42.3	84.6	77.0	7.58	11.155	
1,200.0	1,190.4	1,190.4	1,190.4	4.5	4.1	145.84	-42.5	42.3	104.5	96.2	8.31	12.578	
1,259.6	1,247.6	1,247.6	1,247.6	4.8	4.3	150.15	-42.5	42.3	118.8	110.1	8.74	13.588	
1,300.0	1,286.3	1,286.3	1,286.3	5.1	4.4	152.71	-42.5	42.3	129.2	120.1	9.03	14.299	
1,400.0	1,382.0	1,382.0	1,382.0	5.7	4.7	157.56	-42.5	42.3	155.6	145.8	9.74	15.971	
1,500.0	1,477.8	1,477.8	1,477.8	6.3	5.1	161.01	-42.5	42.3	182.8	172.3	10.45	17.484	
1,600.0	1,573.5	1,573.5	1,573.5	6.9	5.4	163.56	-42.5	42.3	210.4	199.2	11.17	18.842	
1,700.0	1,669.3	1,669.3	1,669.3	7.5	5.8	165.52	-42.5	42.3	238.3	226.4	11.88	20.057	
1,800.0	1,765.0	1,765.0	1,765.0	8.2	6.1	167.07	-42.5	42.3	266.5	253.9	12.60	21.146	
1,900.0	1,860.7	1,860.7	1,860.7	8.8	6.5	168.32	-42.5	42.3	294.7	281.4	13.32	22.124	
2,000.0	1,956.5	1,956.5	1,956.5	9.4	6.8	169.36	-42.5	42.3	323.1	309.1	14.04	23.007	
2,100.0	2,052.2	2,052.2	2,052.2	10.1	7.1	170.23	-42.5	42.3	351.6	336.8	14.77	23.806	
2,200.0	2,147.9	2,147.9	2,147.9	10.7	7.5	170.97	-42.5	42.3	380.1	364.6	15.50	24.532	
2,300.0	2,243.7	2,243.7	2,243.7	11.4	7.8	171.60	-42.5	42.3	408.7	392.5	16.22	25.194	
2,400.0	2,339.4	2,339.4	2,339.4	12.0	8.2	172.15	-42.5	42.3	437.3	420.4	16.95	25.799	
2,500.0	2,435.1	2,435.1	2,435.1	12.7	8.5	172.64	-42.5	42.3	466.0	448.3	17.68	26.355	
2,600.0	2,530.9	2,530.9	2,530.9	13.3	8.9	173.07	-42.5	42.3	494.7	476.3	18.41	26.867	
2,700.0	2,626.6	2,626.6	2,626.6	14.0	9.2	173.45	-42.5	42.3	523.4	504.2	19.14	27.340	
2,800.0	2,722.4	2,722.4	2,722.4	14.6	9.5	173.79	-42.5	42.3	552.1	532.2	19.88	27.779	
2,900.0	2,818.1	2,818.1	2,818.1	15.3	9.9	174.10	-42.5	42.3	580.9	560.2	20.61	28.186	
3,000.0	2,913.8	2,913.8	2,913.8	15.9	10.2	174.38	-42.5	42.3	609.6	588.3	21.34	28.564	
3,100.0	3,009.6	3,009.6	3,009.6	16.6	10.6	174.63	-42.5	42.3	638.4	616.3	22.08	28.918	
3,200.0	3,105.3	3,105.3	3,105.3	17.2	10.9	174.86	-42.5	42.3	667.2	644.3	22.81	29.249	
3,300.0	3,201.0	3,201.0	3,201.0	17.9	11.3	175.08	-42.5	42.3	695.9	672.4	23.54	29.559	
3,400.0	3,296.8	3,296.8	3,296.8	18.6	11.6	175.27	-42.5	42.3	724.7	700.5	24.28	29.850	
3,500.0	3,392.5	3,392.5	3,392.5	19.2	11.9	175.45	-42.5	42.3	753.5	728.5	25.02	30.123	
3,600.0	3,488.2	3,488.2	3,488.2	19.9	12.3	175.62	-42.5	42.3	782.4	756.6	25.75	30.381	
3,700.0	3,584.0	3,584.0	3,584.0	20.5	12.6	175.78	-42.5	42.3	811.2	784.7	26.49	30.624	
3,800.0	3,679.7	3,679.7	3,679.7	21.2	13.0	175.92	-42.5	42.3	840.0	812.8	27.22	30.855	
3,900.0	3,775.4	3,775.4	3,775.4	21.9	13.3	176.06	-42.5	42.3	868.8	840.9	27.96	31.072	
4,000.0	3,871.2	3,871.2	3,871.2	22.5	13.7	176.18	-42.5	42.3	897.6	868.9	28.70	31.279	
4,100.0	3,966.9	3,966.9	3,966.9	23.2	14.0	176.30	-42.5	42.3	926.5	897.0	29.44	31.475	
4,126.0	3,991.9	3,991.9	3,991.9	23.3	14.1	176.33	-42.5	42.3	934.0	904.4	29.63	31.524	
4,150.0	4,014.8	4,014.8	4,014.8	23.5	14.2	-176.06	-42.5	42.3	940.8	911.0	29.80	31.566	
4,200.0	4,062.9	4,062.9	4,062.9	23.8	14.3	-159.34	-42.5	42.3	954.1	924.0	30.17	31.626	
4,250.0	4,111.0	4,111.0	4,111.0	24.1	14.5	-143.37	-42.5	42.3	966.3	935.8	30.53	31.651	
4,300.0	4,158.6	4,158.6	4,158.6	24.3	14.7	-130.04	-42.5	42.3	977.4	946.5	30.89	31.644	
4,350.0	4,205.7	4,205.7	4,205.7	24.6	14.9	-119.85	-42.5	42.3	987.4	956.2	31.24	31.608	
4,400.0	4,251.8	4,251.8	4,251.8	24.8	15.0	-112.42	-42.5	42.3	996.4	964.8	31.58	31.546	

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

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 1 - Carson 615 - Pilot hole — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,450.0	4,296.7	4,296.7	4,296.7	24.9	15.2	-107.10	-42.5	42.3	1,004.5	972.5	31.92	31.463	
4,500.0	4,340.1	4,340.1	4,340.1	25.1	15.3	-103.33	-42.5	42.3	1,011.8	979.5	32.26	31.363	
4,550.0	4,381.7	4,381.7	4,381.7	25.2	15.5	-100.68	-42.5	42.3	1,018.6	986.0	32.60	31.249	
4,600.0	4,421.4	4,421.4	4,421.4	25.3	15.6	-98.86	-42.5	42.3	1,025.0	992.1	32.93	31.126	
4,650.0	4,458.7	4,458.7	4,458.7	25.4	15.8	-97.61	-42.5	42.3	1,031.3	998.0	33.27	30.997	
4,700.0	4,493.6	4,493.6	4,493.6	25.5	15.9	-96.78	-42.5	42.3	1,037.6	1,004.0	33.62	30.866	
4,750.0	4,525.7	4,525.7	4,525.7	25.6	16.0	-96.20	-42.5	42.3	1,044.3	1,010.3	33.98	30.736	
4,800.0	4,555.0	4,555.0	4,555.0	25.7	16.1	-95.78	-42.5	42.3	1,051.5	1,017.1	34.35	30.612	
4,850.0	4,581.2	4,581.2	4,581.2	25.7	16.2	-95.42	-42.5	42.3	1,059.3	1,024.6	34.73	30.498	
4,900.0	4,604.1	4,604.1	4,604.1	25.8	16.3	-95.04	-42.5	42.3	1,068.0	1,032.9	35.13	30.398	
4,950.0	4,623.6	4,623.6	4,623.6	25.9	16.4	-94.58	-42.5	42.3	1,077.8	1,042.2	35.55	30.317	
5,000.0	4,639.6	4,639.6	4,639.6	25.9	16.4	-93.99	-42.5	42.3	1,088.6	1,052.6	35.97	30.262	
5,050.0	4,652.0	4,652.0	4,652.0	26.0	16.5	-93.23	-42.5	42.3	1,100.6	1,064.2	36.40	30.236	
5,100.0	4,660.7	4,660.7	4,660.7	26.1	16.5	-92.27	-42.5	42.3	1,113.7	1,076.9	36.82	30.246	
5,150.0	4,665.7	4,665.7	4,665.7	26.2	16.5	-91.11	-42.5	42.3	1,128.0	1,090.8	37.24	30.295	
5,191.1	4,667.0	4,667.0	4,667.0	26.4	16.5	-90.00	-42.5	42.3	1,140.6	1,103.0	37.56	30.367	
5,200.0	4,667.0	4,667.0	4,667.0	26.4	16.5	-90.00	-42.5	42.3	1,143.4	1,105.8	37.63	30.387	
5,300.0	4,667.0	4,667.0	4,667.0	26.9	16.5	-90.00	-42.5	42.3	1,179.3	1,140.9	38.40	30.708	
5,400.0	4,667.0	4,667.0	4,667.0	27.8	16.5	-90.00	-42.5	42.3	1,222.3	1,183.2	39.14	31.226	
5,500.0	4,667.0	4,667.0	4,667.0	29.0	16.5	-90.00	-42.5	42.3	1,271.8	1,232.0	39.83	31.929	
5,600.0	4,667.0	4,667.0	4,667.0	30.5	16.5	-90.00	-42.5	42.3	1,326.9	1,286.5	40.45	32.803	
5,700.0	4,667.0	4,667.0	4,667.0	32.2	16.5	-90.00	-42.5	42.3	1,387.1	1,346.1	41.00	33.829	
5,800.0	4,667.0	4,667.0	4,667.0	34.0	16.5	-90.00	-42.5	42.3	1,451.7	1,410.2	41.49	34.990	
5,900.0	4,667.0	4,667.0	4,667.0	36.0	16.5	-90.00	-42.5	42.3	1,520.1	1,478.2	41.91	36.270	
6,000.0	4,667.0	4,667.0	4,667.0	38.0	16.5	-90.00	-42.5	42.3	1,591.9	1,549.6	42.28	37.654	
6,100.0	4,667.0	4,667.0	4,667.0	40.1	16.5	-90.00	-42.5	42.3	1,666.6	1,624.0	42.59	39.127	
6,200.0	4,667.0	4,667.0	4,667.0	42.2	16.5	-90.00	-42.5	42.3	1,743.8	1,700.9	42.87	40.678	
6,300.0	4,667.0	4,667.0	4,667.0	44.4	16.5	-90.00	-42.5	42.3	1,823.2	1,780.1	43.10	42.297	
6,400.0	4,667.0	4,667.0	4,667.0	46.6	16.5	-90.00	-42.5	42.3	1,904.6	1,861.3	43.31	43.975	
6,500.0	4,667.0	4,667.0	4,667.0	48.9	16.5	-90.00	-42.5	42.3	1,987.7	1,944.2	43.49	45.705	
6,600.0	4,667.0	4,667.0	4,667.0	51.2	16.5	-90.00	-42.5	42.3	2,072.2	2,028.6	43.64	47.480	
6,700.0	4,667.0	4,667.0	4,667.0	53.5	16.5	-90.00	-42.5	42.3	2,158.1	2,114.3	43.78	49.294	
6,800.0	4,667.0	4,667.0	4,667.0	55.8	16.5	-90.00	-42.5	42.3	2,245.2	2,201.3	43.90	51.142	
6,900.0	4,667.0	4,667.0	4,667.0	58.1	16.5	-90.00	-42.5	42.3	2,333.3	2,289.3	44.01	53.021	
7,000.0	4,667.0	4,667.0	4,667.0	60.5	16.5	-90.00	-42.5	42.3	2,422.3	2,378.2	44.10	54.927	
7,100.0	4,667.0	4,667.0	4,667.0	62.9	16.5	-90.00	-42.5	42.3	2,512.1	2,468.0	44.18	56.856	
7,200.0	4,667.0	4,667.0	4,667.0	65.3	16.5	-90.00	-42.5	42.3	2,602.7	2,558.5	44.26	58.806	
7,300.0	4,667.0	4,667.0	4,667.0	67.7	16.5	-90.00	-42.5	42.3	2,694.0	2,649.6	44.33	60.774	
7,400.0	4,667.0	4,667.0	4,667.0	70.1	16.5	-90.00	-42.5	42.3	2,785.8	2,741.4	44.39	62.759	
7,500.0	4,667.0	4,667.0	4,667.0	72.5	16.5	-90.00	-42.5	42.3	2,878.2	2,833.8	44.45	64.757	
7,600.0	4,667.0	4,667.0	4,667.0	74.9	16.5	-90.00	-42.5	42.3	2,971.1	2,926.6	44.50	66.769	
7,700.0	4,667.0	4,667.0	4,667.0	77.3	16.5	-90.00	-42.5	42.3	3,064.5	3,019.9	44.55	68.792	
7,800.0	4,667.0	4,667.0	4,667.0	79.8	16.5	-90.00	-42.5	42.3	3,158.2	3,113.6	44.59	70.824	
7,900.0	4,667.0	4,667.0	4,667.0	82.2	16.5	-90.00	-42.5	42.3	3,252.3	3,207.7	44.63	72.866	
8,000.0	4,667.0	4,667.0	4,667.0	84.6	16.5	-90.00	-42.5	42.3	3,346.8	3,302.1	44.67	74.915	
8,100.0	4,667.0	4,667.0	4,667.0	87.1	16.5	-90.00	-42.5	42.3	3,441.5	3,396.8	44.71	76.971	
8,200.0	4,667.0	4,667.0	4,667.0	89.5	16.5	-90.00	-42.5	42.3	3,536.6	3,491.9	44.75	79.032	
8,300.0	4,667.0	4,667.0	4,667.0	92.0	16.5	-90.00	-42.5	42.3	3,631.9	3,587.1	44.78	81.099	
8,400.0	4,667.0	4,667.0	4,667.0	94.5	16.5	-90.00	-42.5	42.3	3,727.5	3,682.7	44.82	83.170	
8,500.0	4,667.0	4,667.0	4,667.0	96.9	16.5	-90.00	-42.5	42.3	3,823.3	3,778.4	44.85	85.245	
8,600.0	4,667.0	4,667.0	4,667.0	99.4	16.5	-90.00	-42.5	42.3	3,919.3	3,874.4	44.88	87.323	
8,700.0	4,667.0	4,667.0	4,667.0	101.9	16.5	-90.00	-42.5	42.3	4,015.5	3,970.6	44.91	89.404	

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

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 1 - Carson 615 - Pilot hole — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,800.0	4,667.0	4,667.0	4,667.0	104.3	16.5	-90.00	-42.5	42.3	4,111.9	4,066.9	44.95	91.486	
8,900.0	4,667.0	4,667.0	4,667.0	106.8	16.5	-90.00	-42.5	42.3	4,208.4	4,163.5	44.98	93.571	
9,000.0	4,667.0	4,667.0	4,667.0	109.3	16.5	-90.00	-42.5	42.3	4,305.1	4,260.1	45.01	95.656	
9,100.0	4,667.0	4,667.0	4,667.0	111.8	16.5	-90.00	-42.5	42.3	4,402.0	4,357.0	45.04	97.742	
9,200.0	4,667.0	4,667.0	4,667.0	114.3	16.5	-90.00	-42.5	42.3	4,499.0	4,453.9	45.07	99.829	
9,300.0	4,667.0	4,667.0	4,667.0	116.8	16.5	-90.00	-42.5	42.3	4,596.1	4,551.0	45.10	101.916	
9,400.0	4,667.0	4,667.0	4,667.0	119.2	16.5	-90.00	-42.5	42.3	4,693.4	4,648.2	45.13	104.002	
9,500.0	4,667.0	4,667.0	4,667.0	121.7	16.5	-90.00	-42.5	42.3	4,790.7	4,745.6	45.16	106.088	
9,600.0	4,667.0	4,667.0	4,667.0	124.2	16.5	-90.00	-42.5	42.3	4,888.2	4,843.0	45.19	108.173	
9,700.0	4,667.0	4,667.0	4,667.0	126.7	16.5	-90.00	-42.5	42.3	4,985.7	4,940.5	45.22	110.257	
9,800.0	4,667.0	4,667.0	4,667.0	129.2	16.5	-90.00	-42.5	42.3	5,083.4	5,038.1	45.25	112.340	
9,900.0	4,667.0	4,667.0	4,667.0	131.7	16.5	-90.00	-42.5	42.3	5,181.1	5,135.9	45.28	114.421	
10,000.0	4,667.0	4,667.0	4,667.0	134.2	16.5	-90.00	-42.5	42.3	5,279.0	5,233.7	45.31	116.500	
10,100.0	4,667.0	4,667.0	4,667.0	136.7	16.5	-90.00	-42.5	42.3	5,376.9	5,331.5	45.35	118.577	
10,200.0	4,667.0	4,667.0	4,667.0	139.2	16.5	-90.00	-42.5	42.3	5,474.9	5,429.5	45.38	120.652	
10,300.0	4,667.0	4,667.0	4,667.0	141.7	16.5	-90.00	-42.5	42.3	5,572.9	5,527.5	45.41	122.725	
10,400.0	4,667.0	4,667.0	4,667.0	144.2	16.5	-90.00	-42.5	42.3	5,671.1	5,625.6	45.44	124.795	
10,500.0	4,667.0	4,667.0	4,667.0	146.7	16.5	-90.00	-42.5	42.3	5,769.3	5,723.8	45.48	126.862	
10,600.0	4,667.0	4,667.0	4,667.0	149.2	16.5	-90.00	-42.5	42.3	5,867.5	5,822.0	45.51	128.927	
10,700.0	4,667.0	4,667.0	4,667.0	151.7	16.5	-90.00	-42.5	42.3	5,965.8	5,920.3	45.54	130.988	
10,800.0	4,667.0	4,667.0	4,667.0	154.2	16.5	-90.00	-42.5	42.3	6,064.2	6,018.6	45.58	133.046	
10,900.0	4,667.0	4,667.0	4,667.0	156.7	16.5	-90.00	-42.5	42.3	6,162.6	6,117.0	45.61	135.101	
11,000.0	4,667.0	4,667.0	4,667.0	159.2	16.5	-90.00	-42.5	42.3	6,261.1	6,215.4	45.65	137.152	
11,100.0	4,667.0	4,667.0	4,667.0	161.7	16.5	-90.00	-42.5	42.3	6,359.6	6,313.9	45.69	139.199	
11,200.0	4,667.0	4,667.0	4,667.0	164.3	16.5	-90.00	-42.5	42.3	6,458.1	6,412.4	45.72	141.243	
11,300.0	4,667.0	4,667.0	4,667.0	166.8	16.5	-90.00	-42.5	42.3	6,556.8	6,511.0	45.76	143.283	
11,400.0	4,667.0	4,667.0	4,667.0	169.3	16.5	-90.00	-42.5	42.3	6,655.4	6,609.6	45.80	145.319	
11,500.0	4,667.0	4,667.0	4,667.0	171.8	16.5	-90.00	-42.5	42.3	6,754.1	6,708.2	45.84	147.350	
11,600.0	4,667.0	4,667.0	4,667.0	174.3	16.5	-90.00	-42.5	42.3	6,852.8	6,806.9	45.88	149.378	
11,700.0	4,667.0	4,667.0	4,667.0	176.8	16.5	-90.00	-42.5	42.3	6,951.6	6,905.7	45.91	151.401	
11,800.0	4,667.0	4,667.0	4,667.0	179.3	16.5	-90.00	-42.5	42.3	7,050.4	7,004.4	45.95	153.420	
11,900.0	4,667.0	4,667.0	4,667.0	181.8	16.5	-90.00	-42.5	42.3	7,149.2	7,103.2	46.00	155.434	
12,000.0	4,667.0	4,667.0	4,667.0	184.3	16.5	-90.00	-42.5	42.3	7,248.1	7,202.0	46.04	157.444	
12,100.0	4,667.0	4,667.0	4,667.0	186.9	16.5	-90.00	-42.5	42.3	7,347.0	7,300.9	46.08	159.449	
12,200.0	4,667.0	4,667.0	4,667.0	189.4	16.5	-90.00	-42.5	42.3	7,445.9	7,399.8	46.12	161.449	
12,300.0	4,667.0	4,667.0	4,667.0	191.9	16.5	-90.00	-42.5	42.3	7,544.8	7,498.7	46.16	163.444	
12,400.0	4,667.0	4,667.0	4,667.0	194.4	16.5	-90.00	-42.5	42.3	7,643.8	7,597.6	46.20	165.434	
12,500.0	4,667.0	4,667.0	4,667.0	196.9	16.5	-90.00	-42.5	42.3	7,742.8	7,696.6	46.25	167.420	
12,559.9	4,667.0	4,667.0	4,667.0	198.4	16.5	-90.00	-42.5	42.3	7,802.1	7,755.9	46.27	168.606	

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 1 - Carson 615H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF, 3831-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	135.13	-42.5	42.3	60.0				
100.0	100.0	100.0	100.0	0.1	0.1	135.13	-42.5	42.3	60.0	59.7	0.29	209.128	
200.0	200.0	200.0	200.0	0.5	0.5	135.13	-42.5	42.3	60.0	59.0	1.00	59.751	
300.0	300.0	300.0	300.0	0.9	0.9	135.13	-42.5	42.3	60.0	58.3	1.72	34.855	
400.0	400.0	400.0	400.0	1.2	1.2	135.13	-42.5	42.3	60.0	57.5	2.44	24.603	
420.0	420.0	420.0	420.0	1.3	1.3	135.13	-42.5	42.3	60.0	57.4	2.58	23.236	
500.0	500.0	500.0	500.0	1.6	1.6	73.54	-42.5	42.3	59.6	56.5	3.15	18.929	
600.0	599.9	599.9	599.9	1.9	1.9	77.82	-42.5	42.3	58.5	54.7	3.86	15.148	
700.0	699.6	699.6	699.6	2.3	2.3	85.67	-42.5	42.3	57.4	52.8	4.59	12.510	
741.5	740.9	740.9	740.9	2.5	2.4	90.00	-42.5	42.3	57.2	52.3	4.89	11.693	CC, ES
800.0	798.9	798.9	798.9	2.7	2.6	97.05	-42.5	42.3	57.6	52.3	5.32	10.826	
900.0	897.8	897.8	897.8	3.1	3.0	110.85	-42.5	42.3	61.3	55.2	6.08	10.086	
1,000.0	996.0	996.0	996.0	3.5	3.4	124.74	-42.5	42.3	70.1	63.2	6.84	10.250	
1,100.0	1,093.6	1,093.6	1,093.6	4.0	3.7	136.63	-42.5	42.3	84.6	77.0	7.58	11.155	
1,200.0	1,190.4	1,190.4	1,190.4	4.5	4.1	145.84	-42.5	42.3	104.5	96.2	8.31	12.578	
1,259.6	1,247.6	1,247.6	1,247.6	4.8	4.3	150.15	-42.5	42.3	118.8	110.1	8.74	13.588	
1,300.0	1,286.3	1,286.3	1,286.3	5.1	4.4	152.71	-42.5	42.3	129.2	120.1	9.03	14.299	
1,400.0	1,382.0	1,382.0	1,382.0	5.7	4.7	157.56	-42.5	42.3	155.6	145.8	9.74	15.971	
1,500.0	1,477.8	1,477.8	1,477.8	6.3	5.1	161.01	-42.5	42.3	182.8	172.3	10.45	17.484	
1,600.0	1,573.5	1,573.5	1,573.5	6.9	5.4	163.56	-42.5	42.3	210.4	199.2	11.17	18.842	
1,700.0	1,669.3	1,669.3	1,669.3	7.5	5.8	165.52	-42.5	42.3	238.3	226.4	11.88	20.057	
1,800.0	1,765.0	1,765.0	1,765.0	8.2	6.1	167.07	-42.5	42.3	266.5	253.9	12.60	21.146	
1,900.0	1,860.7	1,860.7	1,860.7	8.8	6.5	168.32	-42.5	42.3	294.7	281.4	13.32	22.124	
2,000.0	1,956.5	1,956.5	1,956.5	9.4	6.8	169.36	-42.5	42.3	323.1	309.1	14.04	23.007	
2,100.0	2,052.2	2,052.2	2,052.2	10.1	7.1	170.23	-42.5	42.3	351.6	336.8	14.77	23.806	
2,200.0	2,147.9	2,147.9	2,147.9	10.7	7.5	170.97	-42.5	42.3	380.1	364.6	15.50	24.532	
2,300.0	2,243.7	2,243.7	2,243.7	11.4	7.8	171.60	-42.5	42.3	408.7	392.5	16.22	25.194	
2,400.0	2,339.4	2,339.4	2,339.4	12.0	8.2	172.15	-42.5	42.3	437.3	420.4	16.95	25.799	
2,500.0	2,435.1	2,435.1	2,435.1	12.7	8.5	172.64	-42.5	42.3	466.0	448.3	17.68	26.355	
2,600.0	2,530.9	2,530.9	2,530.9	13.3	8.9	173.07	-42.5	42.3	494.7	476.3	18.41	26.867	
2,700.0	2,626.6	2,626.6	2,626.6	14.0	9.2	173.45	-42.5	42.3	523.4	504.2	19.14	27.340	
2,800.0	2,722.4	2,722.4	2,722.4	14.6	9.5	173.79	-42.5	42.3	552.1	532.2	19.88	27.779	
2,900.0	2,818.1	2,818.1	2,818.1	15.3	9.9	174.10	-42.5	42.3	580.9	560.2	20.61	28.186	
3,000.0	2,913.8	2,913.8	2,913.8	15.9	10.2	174.38	-42.5	42.3	609.6	588.3	21.34	28.564	
3,100.0	3,009.6	3,009.6	3,009.6	16.6	10.6	174.63	-42.5	42.3	638.4	616.3	22.08	28.918	
3,200.0	3,105.3	3,105.3	3,105.3	17.2	10.9	174.86	-42.5	42.3	667.2	644.3	22.81	29.249	
3,300.0	3,201.0	3,201.0	3,201.0	17.9	11.3	175.08	-42.5	42.3	695.9	672.4	23.54	29.559	
3,400.0	3,296.8	3,296.8	3,296.8	18.6	11.6	175.27	-42.5	42.3	724.7	700.5	24.28	29.850	
3,500.0	3,392.5	3,392.5	3,392.5	19.2	11.9	175.45	-42.5	42.3	753.5	728.5	25.02	30.123	
3,600.0	3,488.2	3,488.2	3,488.2	19.9	12.3	175.62	-42.5	42.3	782.4	756.6	25.75	30.381	
3,700.0	3,584.0	3,584.0	3,584.0	20.5	12.6	175.78	-42.5	42.3	811.2	784.7	26.49	30.624	
3,800.0	3,679.7	3,679.7	3,679.7	21.2	13.0	175.92	-42.5	42.3	840.0	812.8	27.22	30.855	
3,900.0	3,775.4	3,775.4	3,775.4	21.9	13.3	176.06	-42.5	42.3	868.8	840.9	27.96	31.072	
4,000.0	3,871.2	3,861.4	3,861.4	22.5	13.6	176.21	-42.1	41.9	897.9	869.3	28.55	31.448	
4,100.0	3,966.9	3,932.6	3,932.4	23.2	13.6	176.65	-38.4	37.7	929.0	900.1	28.84	32.215	
4,126.0	3,991.9	3,950.0	3,949.6	23.3	13.6	176.81	-36.8	36.0	937.5	908.6	28.90	32.436	
4,150.0	4,014.8	3,967.3	3,966.7	23.5	13.6	-175.32	-35.1	34.0	945.4	916.4	28.97	32.635	
4,200.0	4,062.9	4,000.0	3,998.8	23.8	13.6	-157.93	-31.1	29.6	961.4	932.4	29.08	33.062	
4,250.0	4,111.0	4,036.5	4,034.4	24.1	13.6	-141.11	-25.7	23.5	976.9	947.7	29.21	33.449	
4,300.0	4,158.6	4,071.1	4,067.8	24.3	13.6	-126.77	-19.7	16.7	991.7	962.4	29.32	33.827	
4,350.0	4,205.7	4,100.0	4,095.4	24.6	13.6	-115.47	-13.9	10.2	1,005.8	976.4	29.39	34.223	
4,400.0	4,251.8	4,140.4	4,133.4	24.8	13.6	-106.83	-4.8	0.0	1,018.9	989.4	29.54	34.497	

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

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 1 - Carson 615H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF, 3831-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,450.0	4,296.7	4,175.1	4,165.5	24.9	13.7	-100.25	4.1	-9.9	1,031.1	1,001.5	29.65	34.772	
4,500.0	4,340.1	4,210.0	4,197.1	25.1	13.7	-95.19	13.8	-20.8	1,042.4	1,012.6	29.78	34.999	
4,550.0	4,381.7	4,250.0	4,232.7	25.2	13.8	-91.31	26.0	-34.5	1,052.7	1,022.7	29.97	35.121	
4,600.0	4,421.4	4,279.9	4,258.6	25.3	13.8	-88.23	35.9	-45.5	1,061.9	1,031.8	30.11	35.265	
4,650.0	4,458.7	4,315.0	4,288.4	25.4	13.9	-85.87	48.3	-59.4	1,070.1	1,039.7	30.33	35.285	
4,700.0	4,493.6	4,350.0	4,317.3	25.5	14.0	-84.06	61.4	-74.2	1,077.1	1,046.5	30.58	35.220	
4,750.0	4,525.7	4,385.7	4,345.8	25.6	14.2	-82.72	75.7	-90.1	1,083.1	1,052.2	30.91	35.044	
4,800.0	4,555.0	4,421.3	4,373.4	25.7	14.3	-81.77	90.6	-106.9	1,088.0	1,056.7	31.29	34.766	
4,850.0	4,581.2	4,457.0	4,400.1	25.7	14.5	-81.16	106.5	-124.6	1,091.8	1,060.0	31.76	34.378	
4,900.0	4,604.1	4,492.9	4,425.9	25.8	14.7	-80.86	123.1	-143.3	1,094.6	1,062.2	32.31	33.874	
4,950.0	4,623.6	4,529.1	4,450.7	25.9	14.9	-80.83	140.6	-162.9	1,096.3	1,063.3	32.96	33.257	
5,000.0	4,639.6	4,565.5	4,474.5	25.9	15.2	-81.07	158.9	-183.4	1,097.1	1,063.4	33.71	32.540	
5,050.0	4,652.0	4,600.0	4,496.0	26.0	15.5	-81.50	176.9	-203.6	1,096.9	1,062.4	34.53	31.766	
5,100.0	4,660.7	4,638.9	4,518.9	26.1	15.8	-82.25	197.9	-227.1	1,095.9	1,060.3	35.52	30.849	
5,150.0	4,665.7	4,676.1	4,539.3	26.2	16.2	-83.18	218.6	-250.2	1,094.0	1,057.5	36.58	29.908	
5,191.1	4,667.0	4,706.8	4,555.1	26.4	16.6	-84.11	236.1	-269.9	1,092.0	1,054.5	37.51	29.108	
5,200.0	4,667.0	4,713.5	4,558.4	26.4	16.7	-84.28	240.0	-274.2	1,091.5	1,053.8	37.73	28.931	
5,300.0	4,667.0	4,793.1	4,594.3	26.9	17.7	-86.17	287.2	-327.2	1,087.6	1,047.3	40.32	26.972	
5,400.0	4,667.0	4,880.0	4,625.6	27.8	19.0	-87.81	341.2	-387.7	1,085.9	1,042.6	43.34	25.059	
5,495.5	4,667.0	4,969.0	4,648.7	28.9	20.5	-89.03	398.4	-451.8	1,085.6	1,039.0	46.55	23.322	
5,500.0	4,667.0	4,973.3	4,649.6	29.0	20.6	-89.08	401.2	-454.9	1,085.6	1,038.8	46.74	23.228	
5,600.0	4,667.0	5,071.0	4,663.8	30.5	22.5	-89.83	465.6	-527.0	1,085.8	1,035.3	50.47	21.515	
5,700.0	4,667.0	5,170.7	4,667.0	32.2	24.5	-90.00	531.9	-601.4	1,086.1	1,031.7	54.42	19.958	
5,800.0	4,667.0	5,270.4	4,667.0	34.0	26.5	-90.00	598.2	-675.7	1,086.5	1,028.0	58.54	18.562	
5,900.0	4,667.0	5,370.0	4,667.0	36.0	28.7	-90.00	664.5	-750.1	1,087.0	1,024.2	62.78	17.312	
6,000.0	4,667.0	5,469.6	4,667.0	38.0	30.9	-90.00	730.7	-824.5	1,087.4	1,020.3	67.15	16.195	
6,100.0	4,667.0	5,569.3	4,667.0	40.1	33.2	-90.00	797.0	-898.9	1,087.9	1,016.3	71.60	15.195	
6,200.0	4,667.0	5,668.9	4,667.0	42.2	35.5	-90.00	863.2	-973.4	1,088.4	1,012.3	76.12	14.298	
6,300.0	4,667.0	5,768.5	4,667.0	44.4	37.8	-90.00	929.4	-1,047.8	1,089.0	1,008.3	80.71	13.492	
6,400.0	4,667.0	5,868.1	4,667.0	46.6	40.2	-90.00	995.5	-1,122.3	1,089.6	1,004.2	85.35	12.765	
6,500.0	4,667.0	5,967.8	4,667.0	48.9	42.5	-90.00	1,061.7	-1,196.8	1,090.2	1,000.1	90.04	12.108	
6,600.0	4,667.0	6,067.4	4,667.0	51.2	44.9	-90.00	1,127.8	-1,271.3	1,090.8	996.1	94.76	11.512	
6,700.0	4,667.0	6,167.0	4,667.0	53.5	47.3	-90.00	1,193.8	-1,345.9	1,091.5	992.0	99.52	10.968	
6,800.0	4,667.0	6,266.6	4,667.0	55.8	49.7	-90.00	1,259.9	-1,420.5	1,092.3	988.0	104.30	10.472	
6,900.0	4,667.0	6,366.3	4,667.0	58.1	52.2	-90.00	1,325.9	-1,495.1	1,093.0	983.9	109.11	10.018	
7,000.0	4,667.0	6,465.9	4,667.0	60.5	54.6	-90.00	1,391.9	-1,569.7	1,093.8	979.9	113.94	9.600	
7,100.0	4,667.0	6,565.5	4,667.0	62.9	57.0	-90.00	1,457.9	-1,644.3	1,094.7	975.9	118.79	9.215	
7,200.0	4,667.0	6,665.1	4,667.0	65.3	59.5	-90.00	1,523.9	-1,719.0	1,095.5	971.9	123.65	8.860	
7,300.0	4,667.0	6,764.7	4,667.0	67.7	61.9	-90.00	1,589.8	-1,793.7	1,096.4	967.9	128.53	8.530	
7,400.0	4,667.0	6,864.4	4,667.0	70.1	64.4	-90.00	1,655.7	-1,868.4	1,097.4	963.9	133.42	8.225	
7,500.0	4,667.0	6,964.0	4,667.0	72.5	66.9	-90.00	1,721.6	-1,943.1	1,098.3	960.0	138.33	7.940	
7,600.0	4,667.0	7,063.6	4,667.0	74.9	69.3	-90.00	1,787.4	-2,017.9	1,099.3	956.1	143.24	7.675	
7,700.0	4,667.0	7,163.2	4,667.0	77.3	71.8	-90.00	1,853.2	-2,092.7	1,100.4	952.2	148.17	7.426	
7,800.0	4,667.0	7,262.8	4,667.0	79.8	74.3	-90.00	1,919.0	-2,167.5	1,101.4	948.3	153.10	7.194	
7,900.0	4,667.0	7,362.5	4,667.0	82.2	76.8	-90.00	1,984.8	-2,242.3	1,102.5	944.5	158.04	6.976	
8,000.0	4,667.0	7,462.1	4,667.0	84.6	79.3	-90.00	2,050.5	-2,317.1	1,103.7	940.7	162.99	6.771	
8,100.0	4,667.0	7,561.7	4,667.0	87.1	81.8	-90.00	2,116.3	-2,392.0	1,104.8	936.9	167.94	6.579	
8,200.0	4,667.0	7,661.3	4,666.9	89.5	84.3	-90.00	2,181.9	-2,466.9	1,106.1	933.1	172.90	6.397	
8,300.0	4,667.0	7,760.9	4,666.9	92.0	86.7	-90.00	2,247.6	-2,541.8	1,107.3	929.4	177.87	6.225	
8,400.0	4,667.0	7,860.5	4,666.9	94.5	89.2	-90.00	2,313.2	-2,616.7	1,108.6	925.7	182.84	6.063	
8,500.0	4,667.0	7,960.1	4,666.9	96.9	91.7	-90.00	2,378.9	-2,691.6	1,109.9	922.1	187.82	5.909	
8,600.0	4,667.0	8,059.7	4,666.9	99.4	94.2	-90.00	2,444.4	-2,766.6	1,111.2	918.4	192.80	5.764	

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 1 - Carson 615H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF, 3831-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	4,667.0	8,159.4	4,666.9	101.9	96.7	-90.00	2,510.0	-2,841.6	1,112.6	914.8	197.78	5.625	
8,800.0	4,667.0	8,259.0	4,666.9	104.3	99.2	-90.00	2,575.5	-2,916.6	1,114.0	911.2	202.77	5.494	
8,900.0	4,667.0	8,358.6	4,666.9	106.8	101.8	-90.00	2,641.0	-2,991.7	1,115.5	907.7	207.76	5.369	
9,000.0	4,667.0	8,458.2	4,666.9	109.3	104.3	-90.00	2,706.5	-3,066.7	1,116.9	904.2	212.76	5.250	
9,100.0	4,667.0	8,557.8	4,666.9	111.8	106.8	-90.00	2,772.0	-3,141.8	1,118.5	900.7	217.76	5.136	
9,200.0	4,667.0	8,657.4	4,666.9	114.3	109.3	-90.00	2,837.4	-3,216.9	1,120.0	897.2	222.76	5.028	
9,300.0	4,667.0	8,757.0	4,666.9	116.8	111.8	-90.00	2,902.8	-3,292.0	1,121.6	893.8	227.76	4.924	
9,400.0	4,667.0	8,856.6	4,666.9	119.2	114.3	-90.00	2,968.2	-3,367.2	1,123.2	890.4	232.76	4.825	
9,500.0	4,667.0	8,956.2	4,666.9	121.7	116.8	-90.00	3,033.5	-3,442.3	1,124.9	887.1	237.77	4.731	
9,600.0	4,667.0	9,055.8	4,666.9	124.2	119.3	-90.00	3,098.9	-3,517.5	1,126.5	883.8	242.78	4.640	
9,700.0	4,667.0	9,155.4	4,666.9	126.7	121.8	-90.00	3,164.2	-3,592.7	1,128.3	880.5	247.80	4.553	
9,800.0	4,667.0	9,255.0	4,666.9	129.2	124.4	-90.00	3,229.4	-3,668.0	1,130.0	877.2	252.81	4.470	
9,900.0	4,667.0	9,354.6	4,666.9	131.7	126.9	-90.00	3,294.7	-3,743.2	1,131.8	874.0	257.83	4.390	
10,000.0	4,667.0	9,454.2	4,666.9	134.2	129.4	-90.00	3,359.9	-3,818.5	1,133.6	870.8	262.84	4.313	
10,100.0	4,667.0	9,553.8	4,666.9	136.7	131.9	-90.00	3,425.1	-3,893.8	1,135.5	867.6	267.86	4.239	
10,200.0	4,667.0	9,653.4	4,667.0	139.2	134.4	-90.00	3,490.2	-3,969.1	1,137.4	864.5	272.88	4.168	
10,300.0	4,667.0	9,753.0	4,667.0	141.7	136.9	-90.00	3,555.4	-4,044.4	1,139.3	861.4	277.91	4.100	
10,400.0	4,667.0	9,852.6	4,667.0	144.2	139.5	-90.00	3,620.5	-4,119.8	1,141.3	858.3	282.93	4.034	
10,500.0	4,667.0	9,952.1	4,667.0	146.7	142.0	-90.00	3,685.6	-4,195.2	1,143.3	855.3	287.96	3.970	
10,600.0	4,667.0	10,051.7	4,667.0	149.2	144.5	-90.00	3,750.6	-4,270.6	1,145.3	852.3	292.98	3.909	
10,700.0	4,667.0	10,151.3	4,667.0	151.7	147.0	-90.00	3,815.7	-4,346.0	1,147.3	849.3	298.01	3.850	
10,800.0	4,667.0	10,250.9	4,667.0	154.2	149.6	-90.00	3,880.7	-4,421.5	1,149.4	846.4	303.04	3.793	
10,900.0	4,667.0	10,350.5	4,667.0	156.7	152.1	-90.00	3,945.6	-4,496.9	1,151.6	843.5	308.07	3.738	
11,000.0	4,667.0	10,450.1	4,667.0	159.2	154.6	-90.00	4,010.6	-4,572.4	1,153.7	840.6	313.10	3.685	
11,100.0	4,667.0	10,549.7	4,667.0	161.7	157.1	-90.00	4,075.5	-4,647.9	1,155.9	837.8	318.13	3.634	
11,200.0	4,667.0	10,649.2	4,667.0	164.3	159.6	-90.00	4,140.4	-4,723.4	1,158.2	835.0	323.17	3.584	
11,300.0	4,667.0	10,748.8	4,667.0	166.8	162.2	-90.00	4,205.3	-4,799.0	1,160.4	832.2	328.20	3.536	
11,400.0	4,667.0	10,848.4	4,667.0	169.3	164.7	-90.00	4,270.1	-4,874.6	1,162.7	829.5	333.23	3.489	
11,500.0	4,667.0	10,948.0	4,667.0	171.8	167.2	-90.00	4,334.9	-4,950.2	1,165.1	826.8	338.27	3.444	
11,600.0	4,667.0	11,047.5	4,667.0	174.3	169.8	-90.00	4,399.7	-5,025.8	1,167.4	824.1	343.31	3.401	
11,700.0	4,667.0	11,147.1	4,667.0	176.8	172.3	-90.00	4,464.5	-5,101.4	1,169.9	821.5	348.34	3.358	
11,800.0	4,667.0	11,246.7	4,667.0	179.3	174.8	-90.00	4,529.2	-5,177.1	1,172.3	818.9	353.38	3.317	
11,900.0	4,667.0	11,346.2	4,667.0	181.8	177.3	-90.00	4,593.9	-5,252.7	1,174.8	816.3	358.42	3.278	
12,000.0	4,667.0	11,445.8	4,667.0	184.3	179.9	-90.00	4,658.6	-5,328.4	1,177.3	813.8	363.46	3.239	
12,100.0	4,667.0	11,545.4	4,667.0	186.9	182.4	-90.00	4,723.2	-5,404.1	1,179.8	811.3	368.50	3.202	
12,200.0	4,667.0	11,644.9	4,667.0	189.4	184.9	-90.00	4,787.9	-5,479.9	1,182.4	808.8	373.54	3.165	
12,300.0	4,667.0	11,744.5	4,667.0	191.9	187.5	-90.00	4,852.5	-5,555.6	1,185.0	806.4	378.58	3.130	
12,400.0	4,667.0	11,844.1	4,667.0	194.4	190.0	-90.00	4,917.0	-5,631.4	1,187.6	804.0	383.63	3.096	
12,500.0	4,667.0	11,943.6	4,667.0	196.9	192.5	-90.00	4,981.6	-5,707.2	1,190.3	801.7	388.67	3.063	
12,559.9	4,667.0	12,003.3	4,667.0	198.4	194.0	-90.00	5,020.2	-5,752.6	1,191.9	800.3	391.69	3.043	SF

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 2 - Carson 617H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	135.13	-28.3	28.2	40.0				
100.0	100.0	100.0	100.0	0.1	0.1	135.13	-28.3	28.2	40.0	39.7	0.29	139.387	
200.0	200.0	200.0	200.0	0.5	0.5	135.13	-28.3	28.2	40.0	39.0	1.00	39.825	
300.0	300.0	300.0	300.0	0.9	0.9	135.13	-28.3	28.2	40.0	38.3	1.72	23.231	
400.0	400.0	400.0	400.0	1.2	1.2	135.13	-28.3	28.2	40.0	37.5	2.44	16.399	CC
420.0	420.0	419.9	419.9	1.3	1.3	135.21	-28.4	28.2	40.0	37.4	2.58	15.524	ES
500.0	500.0	499.2	499.2	1.6	1.6	76.03	-30.0	27.8	40.6	37.5	3.13	12.976	
600.0	599.9	597.8	597.7	1.9	1.9	87.24	-35.0	26.7	43.4	39.6	3.82	11.375	
700.0	699.6	695.4	694.9	2.3	2.2	102.42	-43.2	24.8	51.3	46.8	4.52	11.339	
800.0	798.9	791.3	790.0	2.7	2.6	116.30	-54.3	22.3	66.5	61.3	5.23	12.717	
900.0	897.8	886.1	883.8	3.1	3.0	126.53	-68.2	19.2	89.3	83.4	5.94	15.030	
1,000.0	996.0	981.4	977.9	3.5	3.4	133.69	-82.7	15.9	116.8	110.1	6.67	17.505	
1,100.0	1,093.6	1,075.6	1,071.0	4.0	3.8	138.85	-97.0	12.6	148.0	140.6	7.41	19.968	
1,200.0	1,190.4	1,168.6	1,162.9	4.5	4.2	142.73	-111.2	9.4	182.7	174.5	8.16	22.392	
1,259.6	1,247.6	1,223.5	1,217.1	4.8	4.4	144.62	-119.5	7.5	204.9	196.3	8.61	23.805	
1,300.0	1,286.3	1,260.5	1,253.7	5.1	4.6	145.92	-125.1	6.3	220.4	211.5	8.91	24.738	
1,400.0	1,382.0	1,352.2	1,344.2	5.7	5.0	148.45	-139.1	3.1	259.2	249.5	9.66	26.843	
1,500.0	1,477.8	1,443.8	1,434.7	6.3	5.4	150.33	-153.0	-0.1	298.3	287.9	10.40	28.666	
1,600.0	1,573.5	1,535.5	1,525.3	6.9	5.9	151.77	-166.9	-3.2	337.5	326.4	11.16	30.252	
1,700.0	1,669.3	1,627.2	1,615.8	7.5	6.3	152.92	-180.9	-6.4	377.0	365.1	11.91	31.642	
1,800.0	1,765.0	1,718.8	1,706.4	8.2	6.7	153.85	-194.8	-9.5	416.5	403.8	12.67	32.867	
1,900.0	1,860.7	1,810.5	1,796.9	8.8	7.1	154.62	-208.7	-12.7	456.1	442.7	13.43	33.952	
2,000.0	1,956.5	1,902.2	1,887.4	9.4	7.5	155.26	-222.7	-15.8	495.8	481.6	14.20	34.921	
2,100.0	2,052.2	1,993.8	1,978.0	10.1	8.0	155.81	-236.6	-19.0	535.5	520.5	14.96	35.789	
2,200.0	2,147.9	2,085.5	2,068.5	10.7	8.4	156.29	-250.5	-22.2	575.3	559.5	15.73	36.571	
2,300.0	2,243.7	2,177.1	2,159.1	11.4	8.8	156.70	-264.5	-25.3	615.0	598.5	16.50	37.279	
2,400.0	2,339.4	2,268.8	2,249.6	12.0	9.2	157.06	-278.4	-28.5	654.8	637.6	17.27	37.923	
2,500.0	2,435.1	2,360.5	2,340.2	12.7	9.7	157.38	-292.3	-31.6	694.7	676.6	18.04	38.511	
2,600.0	2,530.9	2,452.1	2,430.7	13.3	10.1	157.67	-306.3	-34.8	734.5	715.7	18.81	39.049	
2,700.0	2,626.6	2,543.8	2,521.2	14.0	10.5	157.93	-320.2	-38.0	774.4	754.8	19.58	39.544	
2,800.0	2,722.4	2,635.5	2,611.8	14.6	10.9	158.16	-334.1	-41.1	814.2	793.9	20.36	40.001	
2,900.0	2,818.1	2,727.1	2,702.3	15.3	11.4	158.37	-348.1	-44.3	854.1	833.0	21.13	40.423	
3,000.0	2,913.8	2,818.8	2,792.9	15.9	11.8	158.56	-362.0	-47.4	894.0	872.1	21.90	40.815	
3,100.0	3,009.6	2,910.4	2,883.4	16.6	12.2	158.74	-375.9	-50.6	933.9	911.2	22.68	41.179	
3,200.0	3,105.3	3,002.1	2,974.0	17.2	12.6	158.90	-389.9	-53.8	973.8	950.3	23.45	41.518	
3,300.0	3,201.0	3,093.8	3,064.5	17.9	13.1	159.05	-403.8	-56.9	1,013.7	989.5	24.23	41.835	
3,400.0	3,296.8	3,185.4	3,155.0	18.6	13.5	159.18	-417.7	-60.1	1,053.6	1,028.6	25.01	42.132	
3,500.0	3,392.5	3,277.1	3,245.6	19.2	13.9	159.31	-431.7	-63.2	1,093.5	1,067.7	25.78	42.410	
3,600.0	3,488.2	3,368.8	3,336.1	19.9	14.3	159.43	-445.6	-66.4	1,133.4	1,106.9	26.56	42.672	
3,700.0	3,584.0	3,460.4	3,426.7	20.5	14.8	159.54	-459.5	-69.5	1,173.4	1,146.0	27.34	42.918	
3,800.0	3,679.7	3,552.1	3,517.2	21.2	15.2	159.64	-473.5	-72.7	1,213.3	1,185.2	28.12	43.150	
3,900.0	3,775.4	3,643.7	3,607.7	21.9	15.6	159.74	-487.4	-75.9	1,253.2	1,224.3	28.90	43.370	
4,000.0	3,871.2	3,735.4	3,698.3	22.5	16.1	159.83	-501.3	-79.0	1,293.2	1,263.5	29.67	43.577	
4,100.0	3,966.9	3,827.1	3,788.8	23.2	16.5	159.91	-515.3	-82.2	1,333.1	1,302.6	30.45	43.774	
4,126.0	3,991.9	3,850.9	3,812.4	23.3	16.6	159.93	-518.9	-83.0	1,343.5	1,312.8	30.66	43.823	
4,150.0	4,014.8	3,872.9	3,834.1	23.5	16.7	167.86	-522.2	-83.8	1,353.1	1,322.2	30.84	43.871	
4,200.0	4,062.9	3,918.7	3,879.3	23.8	16.9	-174.61	-529.2	-85.3	1,373.0	1,341.8	31.21	43.989	
4,250.0	4,111.0	3,964.1	3,924.1	24.1	17.1	-157.69	-536.1	-86.9	1,392.8	1,361.2	31.56	44.127	
4,300.0	4,158.6	4,008.8	3,968.4	24.3	17.3	-143.27	-542.9	-88.4	1,412.3	1,380.4	31.89	44.285	
4,350.0	4,205.7	4,052.2	4,011.2	24.6	17.5	-131.88	-549.5	-90.0	1,431.7	1,399.5	32.20	44.468	
4,400.0	4,251.8	4,093.8	4,052.4	24.8	17.7	-123.06	-554.6	-92.7	1,450.8	1,418.3	32.46	44.693	
4,450.0	4,296.7	4,136.2	4,094.3	24.9	17.9	-116.20	-558.3	-97.4	1,469.6	1,436.9	32.70	44.938	

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

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 2 - Carson 617H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,500.0	4,340.1	4,179.3	4,136.9	25.1	18.0	-110.80	-560.3	-104.1	1,488.0	1,455.1	32.93	45.192	
4,550.0	4,381.7	4,223.4	4,180.1	25.2	18.2	-106.48	-560.6	-112.9	1,506.0	1,472.8	33.14	45.446	
4,600.0	4,421.4	4,268.7	4,224.0	25.3	18.3	-102.98	-558.9	-124.0	1,523.4	1,490.0	33.34	45.687	
4,650.0	4,458.7	4,315.3	4,268.4	25.4	18.5	-100.12	-555.3	-137.6	1,540.2	1,506.6	33.55	45.902	
4,700.0	4,493.6	4,363.5	4,313.4	25.5	18.6	-97.78	-549.4	-153.7	1,556.3	1,522.5	33.78	46.078	
4,750.0	4,525.7	4,413.5	4,358.8	25.6	18.7	-95.88	-541.1	-172.8	1,571.6	1,537.6	34.02	46.196	
4,800.0	4,555.0	4,465.5	4,404.5	25.7	18.8	-94.35	-530.1	-195.1	1,586.1	1,551.8	34.30	46.236	
4,850.0	4,581.2	4,519.8	4,450.3	25.7	18.9	-93.15	-516.0	-220.8	1,599.6	1,565.0	34.64	46.178	
4,900.0	4,604.1	4,576.9	4,495.9	25.8	19.0	-92.24	-498.6	-250.3	1,612.1	1,577.1	35.05	45.996	
4,950.0	4,623.6	4,636.9	4,540.8	25.9	19.0	-91.61	-477.5	-283.9	1,623.5	1,587.9	35.55	45.665	
5,000.0	4,639.6	4,700.3	4,584.6	25.9	19.1	-91.24	-452.2	-322.1	1,633.6	1,597.5	36.17	45.161	
5,050.0	4,652.0	4,767.3	4,626.4	26.0	19.2	-91.12	-422.2	-365.2	1,642.5	1,605.5	36.96	44.441	
5,100.0	4,660.7	4,838.4	4,665.2	26.1	19.4	-91.22	-387.2	-413.3	1,649.9	1,612.0	37.92	43.505	
5,150.0	4,665.7	4,913.8	4,699.7	26.2	19.7	-91.55	-346.9	-466.8	1,655.8	1,616.6	39.12	42.331	
5,191.1	4,667.0	4,979.1	4,723.9	26.4	20.1	-91.97	-309.5	-514.5	1,659.4	1,619.1	40.28	41.195	
5,200.0	4,667.0	4,993.7	4,728.6	26.4	20.3	-92.13	-300.9	-525.4	1,660.0	1,619.5	40.55	40.938	
5,300.0	4,667.0	5,168.7	4,762.1	26.9	22.3	-93.28	-191.7	-657.3	1,665.0	1,620.8	44.26	37.622	
5,400.0	4,667.0	5,292.3	4,764.0	27.8	24.2	-93.34	-110.5	-750.5	1,666.6	1,618.8	47.79	34.872	
5,500.0	4,667.0	5,392.3	4,764.0	29.0	25.9	-93.33	-44.7	-825.8	1,668.0	1,616.7	51.26	32.539	
5,600.0	4,667.0	5,492.2	4,764.0	30.5	27.8	-93.33	21.1	-901.0	1,669.3	1,614.3	54.98	30.364	
5,700.0	4,667.0	5,592.2	4,764.0	32.2	29.7	-93.33	86.9	-976.2	1,670.7	1,611.8	58.89	28.368	
5,800.0	4,667.0	5,692.2	4,764.0	34.0	31.8	-93.33	152.7	-1,051.5	1,672.0	1,609.1	62.97	26.552	
5,900.0	4,667.0	5,792.1	4,764.0	36.0	33.9	-93.32	218.5	-1,126.7	1,673.4	1,606.2	67.19	24.907	
6,000.0	4,667.0	5,892.1	4,764.0	38.0	36.0	-93.32	284.3	-1,202.0	1,674.7	1,603.2	71.51	23.420	
6,100.0	4,667.0	5,992.0	4,764.0	40.1	38.2	-93.32	350.1	-1,277.2	1,676.1	1,600.2	75.93	22.076	
6,200.0	4,667.0	6,092.0	4,764.0	42.2	40.4	-93.32	415.9	-1,352.5	1,677.5	1,597.1	80.42	20.860	
6,300.0	4,667.0	6,191.9	4,764.0	44.4	42.7	-93.31	481.7	-1,427.7	1,678.9	1,593.9	84.97	19.757	
6,400.0	4,667.0	6,291.9	4,764.0	46.6	45.0	-93.31	547.4	-1,503.0	1,680.2	1,590.6	89.58	18.756	
6,500.0	4,667.0	6,391.9	4,764.0	48.9	47.3	-93.31	613.2	-1,578.2	1,681.6	1,587.4	94.24	17.843	
6,600.0	4,667.0	6,491.8	4,764.0	51.2	49.7	-93.30	679.0	-1,653.5	1,683.0	1,584.0	98.94	17.010	
6,700.0	4,667.0	6,591.8	4,764.0	53.5	52.1	-93.30	744.8	-1,728.7	1,684.3	1,580.7	103.67	16.247	
6,800.0	4,667.0	6,691.7	4,764.0	55.8	54.4	-93.30	810.6	-1,804.0	1,685.7	1,577.3	108.43	15.546	
6,900.0	4,667.0	6,791.7	4,764.0	58.1	56.8	-93.30	876.4	-1,879.2	1,687.1	1,573.9	113.22	14.901	
7,000.0	4,667.0	6,891.6	4,764.0	60.5	59.2	-93.29	942.2	-1,954.5	1,688.5	1,570.5	118.03	14.306	
7,100.0	4,667.0	6,991.6	4,764.0	62.9	61.7	-93.29	1,007.9	-2,029.8	1,689.9	1,567.0	122.86	13.754	
7,200.0	4,667.0	7,091.5	4,764.0	65.3	64.1	-93.29	1,073.7	-2,105.0	1,691.3	1,563.6	127.71	13.243	
7,300.0	4,667.0	7,191.5	4,764.0	67.7	66.5	-93.29	1,139.5	-2,180.3	1,692.7	1,560.1	132.58	12.767	
7,400.0	4,667.0	7,291.5	4,764.0	70.1	69.0	-93.28	1,205.3	-2,255.6	1,694.0	1,556.6	137.46	12.324	
7,500.0	4,667.0	7,391.4	4,764.0	72.5	71.4	-93.28	1,271.0	-2,330.8	1,695.4	1,553.1	142.35	11.910	
7,600.0	4,667.0	7,491.4	4,764.0	74.9	73.9	-93.28	1,336.8	-2,406.1	1,696.8	1,549.6	147.25	11.523	
7,700.0	4,667.0	7,591.3	4,764.0	77.3	76.3	-93.27	1,402.6	-2,481.4	1,698.2	1,546.1	152.17	11.160	
7,800.0	4,667.0	7,691.3	4,764.0	79.8	78.8	-93.27	1,468.4	-2,556.6	1,699.6	1,542.5	157.09	10.819	
7,900.0	4,667.0	7,791.2	4,764.0	82.2	81.2	-93.27	1,534.1	-2,631.9	1,701.0	1,539.0	162.02	10.499	
8,000.0	4,667.0	7,891.2	4,764.0	84.6	83.7	-93.27	1,599.9	-2,707.2	1,702.4	1,535.5	166.97	10.196	
8,100.0	4,667.0	7,991.1	4,764.0	87.1	86.2	-93.26	1,665.7	-2,782.4	1,703.8	1,531.9	171.91	9.911	
8,200.0	4,667.0	8,091.1	4,764.0	89.5	88.7	-93.26	1,731.4	-2,857.7	1,705.3	1,528.4	176.87	9.641	
8,300.0	4,667.0	8,191.1	4,764.0	92.0	91.2	-93.26	1,797.2	-2,933.0	1,706.7	1,524.8	181.83	9.386	
8,400.0	4,667.0	8,291.0	4,764.0	94.5	93.7	-93.26	1,862.9	-3,008.3	1,708.1	1,521.3	186.79	9.144	
8,500.0	4,667.0	8,391.0	4,764.0	96.9	96.1	-93.25	1,928.7	-3,083.6	1,709.5	1,517.7	191.77	8.914	
8,600.0	4,667.0	8,490.9	4,764.0	99.4	98.6	-93.25	1,994.5	-3,158.8	1,710.9	1,514.2	196.74	8.696	
8,700.0	4,667.0	8,590.9	4,764.0	101.9	101.1	-93.25	2,060.2	-3,234.1	1,712.3	1,510.6	201.72	8.489	
8,800.0	4,667.0	8,690.8	4,764.0	104.3	103.6	-93.25	2,126.0	-3,309.4	1,713.7	1,507.0	206.71	8.291	

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 2 - Carson 617H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,900.0	4,667.0	8,790.8	4,764.0	106.8	106.1	-93.24	2,191.7	-3,384.7	1,715.2	1,503.5	211.70	8.102	
9,000.0	4,667.0	8,890.7	4,764.0	109.3	108.6	-93.24	2,257.5	-3,460.0	1,716.6	1,499.9	216.69	7.922	
9,100.0	4,667.0	8,990.7	4,764.0	111.8	111.1	-93.24	2,323.2	-3,535.3	1,718.0	1,496.3	221.68	7.750	
9,200.0	4,667.0	9,090.6	4,764.0	114.3	113.6	-93.23	2,389.0	-3,610.5	1,719.4	1,492.8	226.68	7.585	
9,300.0	4,667.0	9,190.6	4,764.0	116.8	116.1	-93.23	2,454.7	-3,685.8	1,720.9	1,489.2	231.68	7.428	
9,400.0	4,667.0	9,290.6	4,764.0	119.2	118.6	-93.23	2,520.4	-3,761.1	1,722.3	1,485.6	236.69	7.277	
9,500.0	4,667.0	9,390.5	4,764.0	121.7	121.2	-93.23	2,586.2	-3,836.4	1,723.7	1,482.0	241.69	7.132	
9,600.0	4,667.0	9,490.5	4,764.0	124.2	123.7	-93.22	2,651.9	-3,911.7	1,725.2	1,478.5	246.70	6.993	
9,700.0	4,667.0	9,590.4	4,764.0	126.7	126.2	-93.22	2,717.7	-3,987.0	1,726.6	1,474.9	251.71	6.859	
9,800.0	4,667.0	9,690.4	4,764.0	129.2	128.7	-93.22	2,783.4	-4,062.3	1,728.1	1,471.3	256.73	6.731	
9,900.0	4,667.0	9,790.3	4,764.0	131.7	131.2	-93.22	2,849.1	-4,137.6	1,729.5	1,467.8	261.74	6.608	
10,000.0	4,667.0	9,890.3	4,764.0	134.2	133.7	-93.21	2,914.9	-4,212.9	1,730.9	1,464.2	266.76	6.489	
10,100.0	4,667.0	9,990.2	4,764.0	136.7	136.2	-93.21	2,980.6	-4,288.2	1,732.4	1,460.6	271.78	6.374	
10,200.0	4,667.0	10,090.2	4,764.0	139.2	138.7	-93.21	3,046.3	-4,363.5	1,733.8	1,457.0	276.80	6.264	
10,300.0	4,667.0	10,190.1	4,764.0	141.7	141.3	-93.20	3,112.1	-4,438.8	1,735.3	1,453.5	281.82	6.157	
10,400.0	4,667.0	10,290.1	4,764.0	144.2	143.8	-93.20	3,177.8	-4,514.1	1,736.7	1,449.9	286.85	6.055	
10,500.0	4,667.0	10,390.1	4,764.0	146.7	146.3	-93.20	3,243.5	-4,589.4	1,738.2	1,446.3	291.87	5.955	
10,600.0	4,667.0	10,490.0	4,764.0	149.2	148.8	-93.20	3,309.3	-4,664.7	1,739.7	1,442.8	296.90	5.859	
10,700.0	4,667.0	10,590.0	4,764.0	151.7	151.3	-93.19	3,375.0	-4,740.0	1,741.1	1,439.2	301.93	5.767	
10,800.0	4,667.0	10,689.9	4,764.0	154.2	153.9	-93.19	3,440.7	-4,815.3	1,742.6	1,435.6	306.96	5.677	
10,900.0	4,667.0	10,789.9	4,764.0	156.7	156.4	-93.19	3,506.4	-4,890.6	1,744.0	1,432.1	311.99	5.590	
11,000.0	4,667.0	10,889.8	4,764.0	159.2	158.9	-93.19	3,572.1	-4,965.9	1,745.5	1,428.5	317.02	5.506	
11,100.0	4,667.0	10,989.8	4,764.0	161.7	161.4	-93.18	3,637.9	-5,041.3	1,747.0	1,424.9	322.05	5.425	
11,200.0	4,667.0	11,089.7	4,764.0	164.3	164.0	-93.18	3,703.6	-5,116.6	1,748.4	1,421.4	327.08	5.346	
11,300.0	4,667.0	11,189.7	4,764.0	166.8	166.5	-93.18	3,769.3	-5,191.9	1,749.9	1,417.8	332.12	5.269	
11,400.0	4,667.0	11,289.6	4,764.0	169.3	169.0	-93.18	3,835.0	-5,267.2	1,751.4	1,414.2	337.15	5.195	
11,500.0	4,667.0	11,389.6	4,764.0	171.8	171.5	-93.17	3,900.7	-5,342.5	1,752.9	1,410.7	342.19	5.122	
11,600.0	4,667.0	11,489.5	4,764.0	174.3	174.0	-93.17	3,966.4	-5,417.8	1,754.3	1,407.1	347.23	5.052	
11,700.0	4,667.0	11,589.5	4,764.0	176.8	176.6	-93.17	4,032.1	-5,493.2	1,755.8	1,403.6	352.27	4.984	
11,800.0	4,667.0	11,689.4	4,764.0	179.3	179.1	-93.16	4,097.8	-5,568.5	1,757.3	1,400.0	357.31	4.918	
11,900.0	4,667.0	11,789.4	4,764.0	181.8	181.6	-93.16	4,163.5	-5,643.8	1,758.8	1,396.4	362.35	4.854	
12,000.0	4,667.0	11,889.4	4,764.0	184.3	184.2	-93.16	4,229.2	-5,719.1	1,760.3	1,392.9	367.39	4.791	
12,100.0	4,667.0	11,989.3	4,764.0	186.9	186.7	-93.16	4,294.9	-5,794.5	1,761.8	1,389.3	372.43	4.730	
12,200.0	4,667.0	12,089.3	4,764.0	189.4	189.2	-93.15	4,360.6	-5,869.8	1,763.3	1,385.8	377.47	4.671	
12,300.0	4,667.0	12,189.2	4,764.0	191.9	191.7	-93.15	4,426.3	-5,945.1	1,764.7	1,382.2	382.51	4.614	
12,400.0	4,667.0	12,289.2	4,764.0	194.4	194.3	-93.15	4,492.0	-6,020.4	1,766.2	1,378.7	387.56	4.557	
12,500.0	4,667.0	12,389.1	4,764.0	196.9	196.8	-93.15	4,557.7	-6,095.8	1,767.7	1,375.1	392.60	4.503	
12,559.9	4,667.0	12,449.0	4,764.0	198.4	198.3	-93.14	4,597.1	-6,140.9	1,768.6	1,373.0	395.62	4.471	SF

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 3 - Carson 584H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	135.13	-14.2	14.1	20.0				
100.0	100.0	100.0	100.0	0.1	0.1	135.13	-14.2	14.1	20.0	19.7	0.29	69.647	
200.0	200.0	200.0	200.0	0.5	0.5	135.13	-14.2	14.1	20.0	19.0	1.00	19.899	
300.0	300.0	300.0	300.0	0.9	0.9	135.13	-14.2	14.1	20.0	18.3	1.72	11.608	
400.0	400.0	400.0	400.0	1.2	1.2	135.13	-14.2	14.1	20.0	17.5	2.44	8.194	
420.0	420.0	420.0	420.0	1.3	1.3	135.13	-14.2	14.1	20.0	17.4	2.58	7.739	
500.0	500.0	500.0	500.0	1.6	1.6	75.62	-14.2	14.1	19.7	16.5	3.15	6.241	
600.0	599.9	600.3	600.3	1.9	1.9	85.01	-12.5	14.6	17.9	14.0	3.87	4.625	
700.0	699.6	700.6	700.4	2.3	2.3	101.29	-7.5	16.2	14.3	9.8	4.59	3.127	
800.0	798.9	800.6	800.1	2.7	2.7	136.21	0.9	18.8	11.3	6.0	5.30	2.136	
812.6	811.4	813.2	812.6	2.7	2.7	142.38	2.2	19.2	11.3	5.9	5.39	2.090	CC, ES, SF
900.0	897.8	900.4	899.1	3.1	3.0	-176.73	12.5	22.4	14.6	8.6	6.02	2.420	
1,000.0	996.0	999.8	997.3	3.5	3.4	-151.33	27.4	27.0	25.0	18.2	6.84	3.656	
1,100.0	1,093.6	1,098.7	1,094.4	4.0	3.9	-139.70	45.4	32.6	39.7	31.9	7.71	5.141	
1,200.0	1,190.4	1,197.0	1,190.2	4.5	4.3	-133.35	66.4	39.1	57.4	48.8	8.65	6.641	
1,259.6	1,247.6	1,255.3	1,246.6	4.8	4.6	-130.77	80.4	43.5	69.4	60.1	9.25	7.504	
1,300.0	1,286.3	1,294.7	1,284.6	5.1	4.8	-129.30	90.4	46.6	77.8	68.2	9.65	8.062	
1,400.0	1,382.0	1,392.3	1,378.4	5.7	5.4	-126.27	116.1	54.6	99.0	88.3	10.71	9.245	
1,500.0	1,477.8	1,490.0	1,472.3	6.3	5.9	-124.31	141.8	62.5	120.4	108.6	11.79	10.206	
1,600.0	1,573.5	1,587.6	1,566.1	6.9	6.5	-122.94	167.4	70.5	141.8	128.9	12.90	10.995	
1,700.0	1,669.3	1,685.2	1,660.0	7.5	7.0	-121.93	193.1	78.5	163.3	149.3	14.02	11.651	
1,800.0	1,765.0	1,782.8	1,753.8	8.2	7.6	-121.15	218.7	86.4	184.9	169.7	15.15	12.202	
1,900.0	1,860.7	1,880.5	1,847.7	8.8	8.2	-120.54	244.4	94.4	206.4	190.1	16.29	12.671	
2,000.0	1,956.5	1,978.1	1,941.5	9.4	8.8	-120.04	270.1	102.4	228.0	210.6	17.44	13.073	
2,100.0	2,052.2	2,075.7	2,035.4	10.1	9.3	-119.63	295.7	110.4	249.6	231.0	18.60	13.422	
2,200.0	2,147.9	2,173.3	2,129.2	10.7	9.9	-119.29	321.4	118.3	271.2	251.5	19.76	13.726	
2,300.0	2,243.7	2,271.0	2,223.1	11.4	10.5	-118.99	347.1	126.3	292.8	271.9	20.93	13.995	
2,400.0	2,339.4	2,368.6	2,316.9	12.0	11.1	-118.74	372.7	134.3	314.5	292.4	22.10	14.232	
2,500.0	2,435.1	2,466.2	2,410.8	12.7	11.7	-118.52	398.4	142.2	336.1	312.8	23.27	14.445	
2,600.0	2,530.9	2,563.8	2,504.6	13.3	12.3	-118.32	424.0	150.2	357.7	333.3	24.44	14.635	
2,700.0	2,626.6	2,661.5	2,598.5	14.0	12.9	-118.15	449.7	158.2	379.4	353.8	25.62	14.807	
2,800.0	2,722.4	2,759.1	2,692.4	14.6	13.5	-117.99	475.4	166.2	401.0	374.2	26.80	14.962	
2,900.0	2,818.1	2,856.7	2,786.2	15.3	14.1	-117.86	501.0	174.1	422.7	394.7	27.98	15.104	
3,000.0	2,913.8	2,954.3	2,880.1	15.9	14.7	-117.73	526.7	182.1	444.3	415.1	29.17	15.233	
3,100.0	3,009.6	3,052.0	2,973.9	16.6	15.3	-117.62	552.4	190.1	465.9	435.6	30.35	15.352	
3,200.0	3,105.3	3,149.6	3,067.8	17.2	15.9	-117.52	578.0	198.0	487.6	456.1	31.54	15.461	
3,300.0	3,201.0	3,247.2	3,161.6	17.9	16.5	-117.42	603.7	206.0	509.2	476.5	32.72	15.562	
3,400.0	3,296.8	3,344.8	3,255.5	18.6	17.1	-117.33	629.3	214.0	530.9	497.0	33.91	15.655	
3,500.0	3,392.5	3,442.5	3,349.3	19.2	17.7	-117.25	655.0	222.0	552.6	517.4	35.10	15.742	
3,600.0	3,488.2	3,540.1	3,443.2	19.9	18.3	-117.18	680.7	229.9	574.2	537.9	36.29	15.822	
3,700.0	3,584.0	3,637.7	3,537.0	20.5	18.9	-117.11	706.3	237.9	595.9	558.4	37.48	15.898	
3,800.0	3,679.7	3,735.3	3,630.9	21.2	19.5	-117.05	732.0	245.9	617.5	578.8	38.67	15.968	
3,900.0	3,775.4	3,833.0	3,724.7	21.9	20.1	-116.99	757.7	253.8	639.2	599.3	39.86	16.034	
4,000.0	3,871.2	3,930.6	3,818.6	22.5	20.7	-116.93	783.3	261.8	660.8	619.8	41.06	16.096	
4,100.0	3,966.9	4,028.2	3,912.5	23.2	21.3	-116.88	809.0	269.8	682.5	640.2	42.25	16.154	
4,126.0	3,991.9	5,224.9	4,667.0	23.3	26.0	-160.30	513.7	910.5	682.8	668.2	14.56	46.887	
4,150.0	4,014.8	5,227.0	4,667.0	23.5	26.0	-165.82	512.4	912.1	659.1	644.5	14.64	45.023	
4,200.0	4,062.9	5,228.4	4,667.0	23.8	26.0	178.08	511.4	913.2	609.6	594.8	14.80	41.202	
4,250.0	4,111.0	5,226.0	4,667.0	24.1	26.0	167.80	513.0	911.4	560.2	545.2	14.95	37.470	
4,300.0	4,158.6	5,219.6	4,667.0	24.3	25.9	166.34	517.2	906.6	511.3	496.2	15.12	33.820	
4,350.0	4,205.7	5,209.4	4,667.0	24.6	25.8	168.71	523.9	898.9	463.1	447.8	15.32	30.240	
4,400.0	4,251.8	5,195.4	4,667.0	24.8	25.7	172.13	533.1	888.3	416.1	400.6	15.57	26.720	

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

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 3 - Carson 584H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,450.0	4,296.7	5,177.6	4,667.0	24.9	25.6	175.72	544.7	874.9	370.6	354.7	15.93	23.261	
4,500.0	4,340.1	5,140.6	4,666.2	25.1	25.3	-177.96	568.9	846.8	326.5	309.9	16.61	19.659	
4,550.0	4,381.7	5,101.1	4,663.2	25.2	25.1	-171.22	594.1	816.6	283.3	265.4	17.86	15.857	
4,600.0	4,421.4	5,064.8	4,658.3	25.3	24.9	-164.60	616.7	788.6	241.1	221.5	19.62	12.290	
4,650.0	4,458.7	5,030.7	4,651.8	25.4	24.7	-157.49	637.4	762.3	200.6	178.7	21.91	9.156	
4,700.0	4,493.6	4,998.2	4,644.1	25.5	24.6	-149.27	656.6	737.2	162.7	137.8	24.92	6.528	
4,750.0	4,525.7	4,966.9	4,635.3	25.6	24.5	-139.27	674.4	713.1	129.0	100.0	28.93	4.458	
4,800.0	4,555.0	4,936.5	4,625.3	25.7	24.4	-126.88	691.2	689.8	102.8	69.0	33.86	3.037	
4,850.0	4,581.2	4,906.9	4,614.3	25.7	24.3	-112.09	707.0	667.3	90.0	52.3	37.70	2.387	
4,861.5	4,586.7	4,900.1	4,611.6	25.8	24.3	-108.45	710.5	662.2	89.5	51.5	38.03	2.353	
4,900.0	4,604.1	4,877.8	4,602.3	25.8	24.3	-96.07	721.9	645.4	94.7	57.3	37.40	2.532	
4,950.0	4,623.6	4,850.0	4,589.8	25.9	24.2	-81.26	735.6	624.7	113.9	78.9	34.99	3.254	
5,000.0	4,639.6	4,820.9	4,575.6	25.9	24.1	-68.24	749.2	603.3	140.8	107.8	33.03	4.263	
5,050.0	4,652.0	4,793.0	4,560.9	26.0	24.1	-58.40	761.7	583.0	171.1	138.8	32.32	5.295	
5,100.0	4,660.7	4,765.3	4,545.4	26.1	24.0	-51.00	773.5	563.4	202.7	170.3	32.38	6.259	
5,150.0	4,665.7	4,737.9	4,529.1	26.2	24.0	-45.45	784.5	544.2	234.4	201.5	32.87	7.129	
5,191.1	4,667.0	4,715.5	4,515.2	26.4	24.0	-41.94	793.0	528.9	260.0	226.6	33.46	7.772	
5,200.0	4,667.0	4,710.6	4,512.1	26.4	23.9	-41.55	794.7	525.6	265.6	232.0	33.59	7.906	
5,300.0	4,667.0	4,660.8	4,478.8	26.9	23.9	-37.91	811.7	492.7	331.8	296.6	35.22	9.422	
5,400.0	4,667.0	4,618.0	4,448.0	27.8	23.8	-35.31	824.5	465.8	404.1	367.3	36.75	10.997	
5,500.0	4,667.0	4,581.1	4,420.1	29.0	23.7	-33.40	834.0	443.7	481.0	442.9	38.07	12.635	
5,600.0	4,667.0	4,550.0	4,395.6	30.5	23.6	-31.99	841.0	425.9	561.5	522.3	39.22	14.318	
5,700.0	4,667.0	4,521.4	4,372.3	32.2	23.6	-30.83	846.5	410.2	644.9	604.8	40.10	16.082	
5,800.0	4,667.0	4,500.0	4,354.4	34.0	23.5	-30.04	850.1	399.0	730.7	689.7	40.97	17.835	
5,900.0	4,667.0	4,475.9	4,333.9	36.0	23.4	-29.22	853.6	386.8	818.3	776.8	41.51	19.713	
6,000.0	4,667.0	4,450.0	4,311.5	38.0	23.4	-28.42	856.6	374.3	907.6	865.7	41.86	21.680	
6,100.0	4,667.0	4,450.0	4,311.5	40.1	23.4	-28.42	856.6	374.3	998.1	955.4	42.73	23.356	
6,200.0	4,667.0	4,425.2	4,289.6	42.2	23.3	-27.71	858.9	363.0	1,089.5	1,046.6	42.89	25.405	
6,300.0	4,667.0	4,400.0	4,266.9	44.4	23.2	-27.06	860.5	352.1	1,182.1	1,139.1	42.99	27.501	
6,400.0	4,667.0	4,400.0	4,266.9	46.6	23.2	-27.06	860.5	352.1	1,275.2	1,231.7	43.51	29.311	
6,500.0	4,667.0	4,400.0	4,266.9	48.9	23.2	-27.06	860.5	352.1	1,369.2	1,325.3	43.93	31.168	
6,600.0	4,667.0	4,378.6	4,247.4	51.2	23.1	-26.54	861.3	343.3	1,463.6	1,419.6	43.96	33.293	
6,700.0	4,667.0	4,369.5	4,239.0	53.5	23.1	-26.33	861.6	339.7	1,558.5	1,514.4	44.15	35.301	
6,800.0	4,667.0	4,350.0	4,220.9	55.8	23.0	-25.91	861.7	332.4	1,654.0	1,609.9	44.17	37.448	
6,900.0	4,667.0	4,350.0	4,220.9	58.1	23.0	-25.91	861.7	332.4	1,749.7	1,705.3	44.43	39.385	
7,000.0	4,667.0	4,350.0	4,220.9	60.5	23.0	-25.91	861.7	332.4	1,845.8	1,801.2	44.65	41.342	
7,100.0	4,667.0	4,350.0	4,220.9	62.9	23.0	-25.91	861.7	332.4	1,942.3	1,897.5	44.84	43.315	
7,200.0	4,667.0	4,350.0	4,220.9	65.3	23.0	-25.91	861.7	332.4	2,039.2	1,994.2	45.01	45.301	
7,300.0	4,667.0	4,327.9	4,200.3	67.7	22.9	-25.46	861.4	324.5	2,135.8	2,090.9	44.94	47.531	
7,400.0	4,667.0	4,322.6	4,195.3	70.1	22.9	-25.35	861.2	322.7	2,232.9	2,187.9	45.03	49.590	
7,500.0	4,667.0	4,300.0	4,174.0	72.5	22.8	-24.93	860.2	315.3	2,330.6	2,285.6	44.94	51.858	
7,600.0	4,667.0	4,300.0	4,174.0	74.9	22.8	-24.93	860.2	315.3	2,427.9	2,382.9	45.07	53.869	
7,700.0	4,667.0	4,300.0	4,174.0	77.3	22.8	-24.93	860.2	315.3	2,525.5	2,480.3	45.19	55.886	
7,800.0	4,667.0	4,300.0	4,174.0	79.8	22.8	-24.93	860.2	315.3	2,623.2	2,577.9	45.30	57.909	
7,900.0	4,667.0	4,300.0	4,174.0	82.2	22.8	-24.93	860.2	315.3	2,721.1	2,675.7	45.40	59.936	
8,000.0	4,667.0	4,300.0	4,174.0	84.6	22.8	-24.93	860.2	315.3	2,819.2	2,773.7	45.49	61.967	
8,100.0	4,667.0	4,300.0	4,174.0	87.1	22.8	-24.93	860.2	315.3	2,917.4	2,871.8	45.58	64.001	
8,200.0	4,667.0	4,300.0	4,174.0	89.5	22.8	-24.93	860.2	315.3	3,015.7	2,970.0	45.67	66.037	
8,300.0	4,667.0	4,300.0	4,174.0	92.0	22.8	-24.93	860.2	315.3	3,114.1	3,068.4	45.75	68.074	
8,400.0	4,667.0	4,300.0	4,174.0	94.5	22.8	-24.93	860.2	315.3	3,212.6	3,166.8	45.82	70.112	
8,500.0	4,667.0	4,300.0	4,174.0	96.9	22.8	-24.93	860.2	315.3	3,311.2	3,265.3	45.89	72.151	
8,600.0	4,667.0	4,300.0	4,174.0	99.4	22.8	-24.93	860.2	315.3	3,409.9	3,363.9	45.96	74.190	

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 3 - Carson 584H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	4,667.0	4,276.6	4,151.7	101.9	22.7	-24.52	858.6	308.3	3,508.1	3,462.3	45.85	76.512	
8,800.0	4,667.0	4,274.2	4,149.5	104.3	22.7	-24.48	858.4	307.6	3,606.9	3,561.0	45.90	78.582	
8,900.0	4,667.0	4,272.0	4,147.3	106.8	22.7	-24.44	858.2	307.0	3,705.6	3,659.7	45.95	80.650	
9,000.0	4,667.0	4,250.0	4,126.2	109.3	22.6	-24.09	856.0	301.0	3,804.8	3,759.0	45.85	82.981	
9,100.0	4,667.0	4,250.0	4,126.2	111.8	22.6	-24.09	856.0	301.0	3,903.6	3,857.7	45.91	85.019	
9,200.0	4,667.0	4,250.0	4,126.2	114.3	22.6	-24.09	856.0	301.0	4,002.5	3,956.5	45.98	87.056	
9,300.0	4,667.0	4,250.0	4,126.2	116.8	22.6	-24.09	856.0	301.0	4,101.4	4,055.4	46.04	89.091	
9,400.0	4,667.0	4,250.0	4,126.2	119.2	22.6	-24.09	856.0	301.0	4,200.4	4,154.3	46.10	91.125	
9,500.0	4,667.0	4,250.0	4,126.2	121.7	22.6	-24.09	856.0	301.0	4,299.4	4,253.3	46.15	93.156	
9,600.0	4,667.0	4,250.0	4,126.2	124.2	22.6	-24.09	856.0	301.0	4,398.5	4,352.3	46.21	95.185	
9,700.0	4,667.0	4,250.0	4,126.2	126.7	22.6	-24.09	856.0	301.0	4,497.6	4,451.4	46.27	97.211	
9,800.0	4,667.0	4,250.0	4,126.2	129.2	22.6	-24.09	856.0	301.0	4,596.8	4,550.4	46.32	99.235	
9,900.0	4,667.0	4,250.0	4,126.2	131.7	22.6	-24.09	856.0	301.0	4,696.0	4,649.6	46.38	101.256	
10,000.0	4,667.0	4,250.0	4,126.2	134.2	22.6	-24.09	856.0	301.0	4,795.2	4,748.7	46.43	103.274	
10,100.0	4,667.0	4,250.0	4,126.2	136.7	22.6	-24.09	856.0	301.0	4,894.4	4,847.9	46.49	105.289	
10,200.0	4,667.0	4,250.0	4,126.2	139.2	22.6	-24.09	856.0	301.0	4,993.7	4,947.2	46.54	107.300	
10,300.0	4,667.0	4,250.0	4,126.2	141.7	22.6	-24.09	856.0	301.0	5,093.0	5,046.4	46.59	109.308	
10,400.0	4,667.0	4,250.0	4,126.2	144.2	22.6	-24.09	856.0	301.0	5,192.3	5,145.7	46.65	111.313	
10,500.0	4,667.0	4,250.0	4,126.2	146.7	22.6	-24.09	856.0	301.0	5,291.7	5,245.0	46.70	113.313	
10,600.0	4,667.0	4,250.0	4,126.2	149.2	22.6	-24.09	856.0	301.0	5,391.1	5,344.3	46.75	115.310	
10,700.0	4,667.0	4,250.0	4,126.2	151.7	22.6	-24.09	856.0	301.0	5,490.5	5,443.7	46.81	117.302	
10,800.0	4,667.0	4,250.0	4,126.2	154.2	22.6	-24.09	856.0	301.0	5,589.9	5,543.1	46.86	119.291	
10,900.0	4,667.0	4,250.0	4,126.2	156.7	22.6	-24.09	856.0	301.0	5,689.4	5,642.5	46.91	121.276	
11,000.0	4,667.0	4,250.0	4,126.2	159.2	22.6	-24.09	856.0	301.0	5,788.8	5,741.9	46.97	123.256	
11,100.0	4,667.0	4,250.0	4,126.2	161.7	22.6	-24.09	856.0	301.0	5,888.3	5,841.3	47.02	125.231	
11,200.0	4,667.0	4,250.0	4,126.2	164.3	22.6	-24.09	856.0	301.0	5,987.8	5,940.7	47.07	127.203	
11,300.0	4,667.0	4,250.0	4,126.2	166.8	22.6	-24.09	856.0	301.0	6,087.3	6,040.2	47.13	129.169	
11,400.0	4,667.0	4,250.0	4,126.2	169.3	22.6	-24.09	856.0	301.0	6,186.9	6,139.7	47.18	131.131	
11,500.0	4,667.0	4,250.0	4,126.2	171.8	22.6	-24.09	856.0	301.0	6,286.4	6,239.2	47.23	133.089	
11,600.0	4,667.0	4,250.0	4,126.2	174.3	22.6	-24.09	856.0	301.0	6,386.0	6,338.7	47.29	135.041	
11,700.0	4,667.0	4,250.0	4,126.2	176.8	22.6	-24.09	856.0	301.0	6,485.6	6,438.2	47.34	136.988	
11,800.0	4,667.0	4,250.0	4,126.2	179.3	22.6	-24.09	856.0	301.0	6,585.1	6,537.7	47.40	138.931	
11,900.0	4,667.0	4,250.0	4,126.2	181.8	22.6	-24.09	856.0	301.0	6,684.7	6,637.3	47.45	140.868	
12,000.0	4,667.0	4,250.0	4,126.2	184.3	22.6	-24.09	856.0	301.0	6,784.4	6,736.8	47.51	142.801	
12,100.0	4,667.0	4,250.0	4,126.2	186.9	22.6	-24.09	856.0	301.0	6,884.0	6,836.4	47.56	144.728	
12,200.0	4,667.0	4,250.0	4,126.2	189.4	22.6	-24.09	856.0	301.0	6,983.6	6,936.0	47.62	146.650	
12,300.0	4,667.0	4,250.0	4,126.2	191.9	22.6	-24.09	856.0	301.0	7,083.3	7,035.6	47.68	148.566	
12,400.0	4,667.0	4,250.0	4,126.2	194.4	22.6	-24.09	856.0	301.0	7,182.9	7,135.2	47.73	150.478	
12,500.0	4,667.0	4,250.0	4,126.2	196.9	22.6	-24.09	856.0	301.0	7,282.6	7,234.8	47.79	152.384	
12,559.9	4,667.0	4,250.0	4,126.2	198.4	22.6	-24.09	856.0	301.0	7,342.3	7,294.5	47.83	153.523	

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 5 - Carson 613H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-44.79	14.2	-14.1	20.1				
100.0	100.0	100.0	100.0	0.1	0.1	-44.79	14.2	-14.1	20.1	19.8	0.29	69.935	
200.0	200.0	200.0	200.0	0.5	0.5	-44.79	14.2	-14.1	20.1	19.1	1.00	19.981	
300.0	300.0	300.0	300.0	0.9	0.9	-44.79	14.2	-14.1	20.1	18.3	1.72	11.656	
400.0	400.0	400.0	400.0	1.2	1.2	-44.79	14.2	-14.1	20.1	17.6	2.44	8.228	
420.0	420.0	420.0	420.0	1.3	1.3	-44.79	14.2	-14.1	20.1	17.5	2.58	7.771	CC
500.0	500.0	500.0	500.0	1.6	1.6	-110.39	14.2	-14.1	20.4	17.3	3.15	6.480	ES
600.0	599.9	599.9	599.9	1.9	1.9	-121.29	14.2	-14.1	22.4	18.5	3.86	5.800	
700.0	699.6	699.6	699.6	2.3	2.3	-135.65	14.2	-14.1	27.4	22.9	4.58	5.991	
800.0	798.9	798.9	798.9	2.7	2.6	-148.22	14.2	-14.1	36.6	31.3	5.30	6.897	
900.0	897.8	899.1	899.1	3.1	3.0	-157.23	14.4	-13.0	48.9	42.8	6.02	8.119	
1,000.0	996.0	1,000.0	999.9	3.5	3.4	-163.70	14.9	-8.5	61.8	55.0	6.73	9.184	
1,100.0	1,093.6	1,101.4	1,100.9	4.0	3.7	-168.85	16.0	-0.4	75.1	67.7	7.44	10.102	
1,200.0	1,190.4	1,203.1	1,201.9	4.5	4.1	-173.26	17.5	11.2	88.9	80.7	8.15	10.904	
1,259.6	1,247.6	1,263.9	1,262.1	4.8	4.3	-175.64	18.6	19.9	97.3	88.7	8.58	11.335	
1,300.0	1,286.3	1,305.2	1,302.9	5.1	4.5	-177.17	19.4	26.5	102.8	93.9	8.88	11.582	
1,400.0	1,382.0	1,404.8	1,400.9	5.7	4.9	179.54	21.6	43.7	115.5	105.9	9.63	12.003	
1,500.0	1,477.8	1,503.8	1,498.4	6.3	5.3	176.91	23.8	60.8	128.5	118.1	10.39	12.365	
1,600.0	1,573.5	1,602.8	1,595.9	6.9	5.7	174.77	25.9	77.9	141.7	130.6	11.18	12.679	
1,700.0	1,669.3	1,701.8	1,693.4	7.5	6.2	172.99	28.1	95.0	155.1	143.1	11.98	12.952	
1,800.0	1,765.0	1,800.8	1,790.9	8.2	6.6	171.50	30.3	112.2	168.6	155.8	12.78	13.187	
1,900.0	1,860.7	1,899.8	1,888.3	8.8	7.1	170.23	32.5	129.3	182.2	168.6	13.60	13.392	
2,000.0	1,956.5	1,998.7	1,985.8	9.4	7.5	169.14	34.6	146.4	195.8	181.4	14.43	13.571	
2,100.0	2,052.2	2,097.7	2,083.3	10.1	8.0	168.18	36.8	163.5	209.5	194.3	15.27	13.727	
2,200.0	2,147.9	2,196.7	2,180.8	10.7	8.5	167.35	39.0	180.6	223.3	207.2	16.11	13.865	
2,300.0	2,243.7	2,295.7	2,278.3	11.4	8.9	166.61	41.2	197.7	237.1	220.2	16.95	13.987	
2,400.0	2,339.4	2,394.7	2,375.8	12.0	9.4	165.96	43.4	214.8	251.0	233.2	17.81	14.095	
2,500.0	2,435.1	2,493.7	2,473.2	12.7	9.8	165.37	45.5	232.0	264.9	246.2	18.66	14.191	
2,600.0	2,530.9	2,592.7	2,570.7	13.3	10.3	164.84	47.7	249.1	278.8	259.2	19.52	14.277	
2,700.0	2,626.6	2,691.7	2,668.2	14.0	10.8	164.36	49.9	266.2	292.7	272.3	20.39	14.355	
2,800.0	2,722.4	2,790.7	2,765.7	14.6	11.3	163.93	52.1	283.3	306.6	285.4	21.26	14.425	
2,900.0	2,818.1	2,889.7	2,863.2	15.3	11.7	163.53	54.2	300.4	320.6	298.4	22.13	14.489	
3,000.0	2,913.8	2,988.7	2,960.7	15.9	12.2	163.16	56.4	317.5	334.5	311.5	23.00	14.547	
3,100.0	3,009.6	3,087.7	3,058.1	16.6	12.7	162.83	58.6	334.7	348.5	324.6	23.87	14.600	
3,200.0	3,105.3	3,186.7	3,155.6	17.2	13.1	162.52	60.8	351.8	362.5	337.8	24.75	14.648	
3,300.0	3,201.0	3,285.7	3,253.1	17.9	13.6	162.23	62.9	368.9	376.5	350.9	25.63	14.692	
3,400.0	3,296.8	3,384.7	3,350.6	18.6	14.1	161.97	65.1	386.0	390.5	364.0	26.51	14.733	
3,500.0	3,392.5	3,483.7	3,448.1	19.2	14.6	161.72	67.3	403.1	404.5	377.1	27.39	14.771	
3,600.0	3,488.2	3,582.7	3,545.6	19.9	15.1	161.49	69.5	420.2	418.6	390.3	28.27	14.806	
3,700.0	3,584.0	3,681.7	3,643.0	20.5	15.5	161.27	71.6	437.3	432.6	403.4	29.15	14.839	
3,800.0	3,679.7	3,780.7	3,740.5	21.2	16.0	161.07	73.8	454.5	446.6	416.6	30.04	14.869	
3,900.0	3,775.4	3,879.7	3,838.0	21.9	16.5	160.88	76.0	471.6	460.7	429.7	30.92	14.898	
4,000.0	3,871.2	3,978.7	3,935.5	22.5	17.0	160.70	78.2	488.7	474.7	442.9	31.81	14.924	
4,100.0	3,966.9	4,077.7	4,033.0	23.2	17.4	160.53	80.4	505.8	488.8	456.1	32.70	14.949	
4,126.0	3,991.9	4,103.5	4,058.4	23.3	17.6	160.49	80.9	510.3	492.4	459.5	32.93	14.955	
4,150.0	4,014.8	4,126.9	4,081.5	23.5	17.7	167.74	81.7	514.1	495.8	462.7	33.13	14.964	
4,200.0	4,062.9	4,175.8	4,129.8	23.8	17.9	-176.03	85.1	520.0	502.8	469.3	33.52	15.000	
4,250.0	4,111.0	4,224.7	4,178.2	24.1	18.1	-160.24	91.0	523.1	509.9	476.0	33.86	15.058	
4,300.0	4,158.6	4,273.7	4,226.5	24.3	18.2	-146.78	99.4	523.5	516.9	482.7	34.15	15.134	
4,350.0	4,205.7	4,322.8	4,274.3	24.6	18.3	-136.20	110.3	521.0	523.7	489.3	34.40	15.226	
4,400.0	4,251.8	4,372.0	4,321.4	24.8	18.5	-128.15	123.6	515.6	530.5	495.9	34.61	15.327	
4,450.0	4,296.7	4,421.4	4,367.5	24.9	18.5	-122.01	139.2	507.5	537.0	502.2	34.79	15.435	

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

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Offset Design WC 21-2 - Slot 5 - Carson 613H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,500.0	4,340.1	4,470.9	4,412.3	25.1	18.6	-117.28	157.2	496.6	543.4	508.4	34.96	15.544	
4,550.0	4,381.7	4,520.5	4,455.5	25.2	18.7	-113.55	177.4	482.8	549.5	514.3	35.11	15.649	
4,600.0	4,421.4	4,570.3	4,496.9	25.3	18.7	-110.59	199.7	466.4	555.2	520.0	35.27	15.742	
4,650.0	4,458.7	4,620.3	4,536.2	25.4	18.7	-108.19	223.9	447.4	560.7	525.2	35.45	15.817	
4,700.0	4,493.6	4,670.4	4,573.1	25.5	18.7	-106.23	250.1	425.8	565.8	530.1	35.66	15.865	
4,750.0	4,525.7	4,720.8	4,607.5	25.6	18.7	-104.62	277.9	401.8	570.4	534.5	35.93	15.878	
4,800.0	4,555.0	4,771.2	4,638.9	25.7	18.7	-103.30	307.3	375.5	574.7	538.4	36.26	15.848	
4,850.0	4,581.2	4,821.9	4,667.3	25.7	18.7	-102.23	338.1	347.0	578.5	541.8	36.69	15.767	
4,900.0	4,604.1	4,872.7	4,692.4	25.8	18.7	-101.36	370.1	316.5	581.8	544.6	37.22	15.630	
4,950.0	4,623.6	4,923.7	4,713.9	25.9	18.7	-100.67	403.1	284.3	584.7	546.8	37.88	15.435	
5,000.0	4,639.6	4,974.7	4,731.8	25.9	18.7	-100.14	436.9	250.4	587.0	548.3	38.66	15.182	
5,050.0	4,652.0	5,026.0	4,745.9	26.0	19.2	-99.77	471.2	215.1	588.7	549.2	39.53	14.893	
5,100.0	4,660.7	5,077.3	4,756.0	26.1	19.8	-99.53	505.9	178.7	590.0	549.4	40.57	14.542	
5,150.0	4,665.7	5,128.7	4,762.0	26.2	20.4	-99.43	540.7	141.3	590.7	548.9	41.72	14.157	
5,191.1	4,667.0	5,171.0	4,763.9	26.4	20.9	-99.45	569.2	110.1	590.8	548.0	42.75	13.821	
5,200.0	4,667.0	5,180.1	4,764.0	26.4	21.1	-99.45	575.3	103.3	590.8	547.8	42.98	13.747	
5,300.0	4,667.0	5,280.1	4,764.0	26.9	22.5	-99.45	642.3	29.1	590.6	544.9	45.74	12.914	
5,400.0	4,667.0	5,380.1	4,764.0	27.8	24.1	-99.46	709.2	-45.2	590.5	541.6	48.85	12.087	
5,500.0	4,667.0	5,480.1	4,764.0	29.0	25.9	-99.46	776.2	-119.5	590.3	538.1	52.26	11.296	
5,600.0	4,667.0	5,580.1	4,764.0	30.5	27.8	-99.46	843.2	-193.7	590.2	534.3	55.90	10.557	
5,700.0	4,667.0	5,680.1	4,764.0	32.2	29.7	-99.46	910.1	-268.0	590.0	530.3	59.75	9.875	
5,800.0	4,667.0	5,780.1	4,764.0	34.0	31.8	-99.47	977.1	-342.3	589.8	526.1	63.75	9.252	
5,900.0	4,667.0	5,880.1	4,764.0	36.0	33.9	-99.47	1,044.1	-416.5	589.7	521.8	67.89	8.686	
6,000.0	4,667.0	5,980.1	4,764.0	38.0	36.0	-99.47	1,111.0	-490.8	589.5	517.4	72.13	8.173	
6,100.0	4,667.0	6,080.1	4,764.0	40.1	38.2	-99.47	1,178.0	-565.1	589.4	512.9	76.47	7.707	
6,200.0	4,667.0	6,180.1	4,764.0	42.2	40.5	-99.48	1,245.0	-639.3	589.2	508.3	80.88	7.285	
6,300.0	4,667.0	6,280.1	4,764.0	44.4	42.7	-99.48	1,311.9	-713.6	589.1	503.7	85.36	6.901	
6,400.0	4,667.0	6,380.1	4,764.0	46.6	45.0	-99.48	1,378.9	-787.9	588.9	499.0	89.89	6.551	
6,500.0	4,667.0	6,480.1	4,764.0	48.9	47.4	-99.48	1,445.9	-862.1	588.7	494.3	94.47	6.232	
6,600.0	4,667.0	6,580.1	4,764.0	51.2	49.7	-99.49	1,512.8	-936.4	588.6	489.5	99.10	5.940	
6,700.0	4,667.0	6,680.1	4,764.0	53.5	52.1	-99.49	1,579.8	-1,010.7	588.4	484.7	103.75	5.672	
6,800.0	4,667.0	6,780.1	4,764.0	55.8	54.4	-99.49	1,646.8	-1,084.9	588.3	479.8	108.44	5.425	
6,900.0	4,667.0	6,880.1	4,764.0	58.1	56.8	-99.49	1,713.7	-1,159.2	588.1	475.0	113.15	5.198	
7,000.0	4,667.0	6,980.1	4,764.0	60.5	59.2	-99.50	1,780.7	-1,233.5	588.0	470.1	117.89	4.987	
7,100.0	4,667.0	7,080.1	4,764.0	62.9	61.6	-99.50	1,847.7	-1,307.7	587.8	465.2	122.65	4.793	
7,200.0	4,667.0	7,180.1	4,764.0	65.3	64.0	-99.50	1,914.6	-1,382.0	587.6	460.2	127.42	4.612	
7,300.0	4,667.0	7,280.1	4,764.0	67.7	66.5	-99.50	1,981.6	-1,456.3	587.5	455.3	132.21	4.443	
7,400.0	4,667.0	7,380.1	4,764.0	70.1	68.9	-99.51	2,048.6	-1,530.5	587.3	450.3	137.02	4.286	
7,500.0	4,667.0	7,480.1	4,764.0	72.5	71.3	-99.51	2,115.5	-1,604.8	587.2	445.3	141.84	4.140	
7,600.0	4,667.0	7,580.1	4,764.0	74.9	73.8	-99.51	2,182.5	-1,679.1	587.0	440.3	146.67	4.002	
7,700.0	4,667.0	7,680.1	4,764.0	77.3	76.2	-99.51	2,249.4	-1,753.3	586.9	435.3	151.52	3.873	
7,800.0	4,667.0	7,780.1	4,764.0	79.8	78.7	-99.52	2,316.4	-1,827.6	586.7	430.3	156.37	3.752	
7,900.0	4,667.0	7,880.1	4,764.0	82.2	81.2	-99.52	2,383.4	-1,901.9	586.6	425.3	161.23	3.638	
8,000.0	4,667.0	7,980.1	4,764.0	84.6	83.6	-99.52	2,450.3	-1,976.1	586.4	420.3	166.10	3.530	
8,100.0	4,667.0	8,080.1	4,764.0	87.1	86.1	-99.52	2,517.3	-2,050.4	586.2	415.3	170.98	3.429	
8,200.0	4,667.0	8,180.1	4,764.0	89.5	88.6	-99.53	2,584.3	-2,124.7	586.1	410.2	175.86	3.333	
8,300.0	4,667.0	8,280.1	4,764.0	92.0	91.0	-99.53	2,651.2	-2,198.9	585.9	405.2	180.76	3.242	
8,400.0	4,667.0	8,380.1	4,764.0	94.5	93.5	-99.53	2,718.2	-2,273.2	585.8	400.1	185.65	3.155	
8,500.0	4,667.0	8,480.1	4,764.0	96.9	96.0	-99.53	2,785.2	-2,347.5	585.6	395.1	190.55	3.073	
8,600.0	4,667.0	8,580.1	4,764.0	99.4	98.5	-99.54	2,852.1	-2,421.7	585.5	390.0	195.46	2.995	
8,700.0	4,667.0	8,680.1	4,764.0	101.9	101.0	-99.54	2,919.1	-2,496.0	585.3	384.9	200.37	2.921	
8,800.0	4,667.0	8,780.1	4,764.0	104.3	103.5	-99.54	2,986.1	-2,570.3	585.1	379.9	205.28	2.850	

Anticollision Report

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

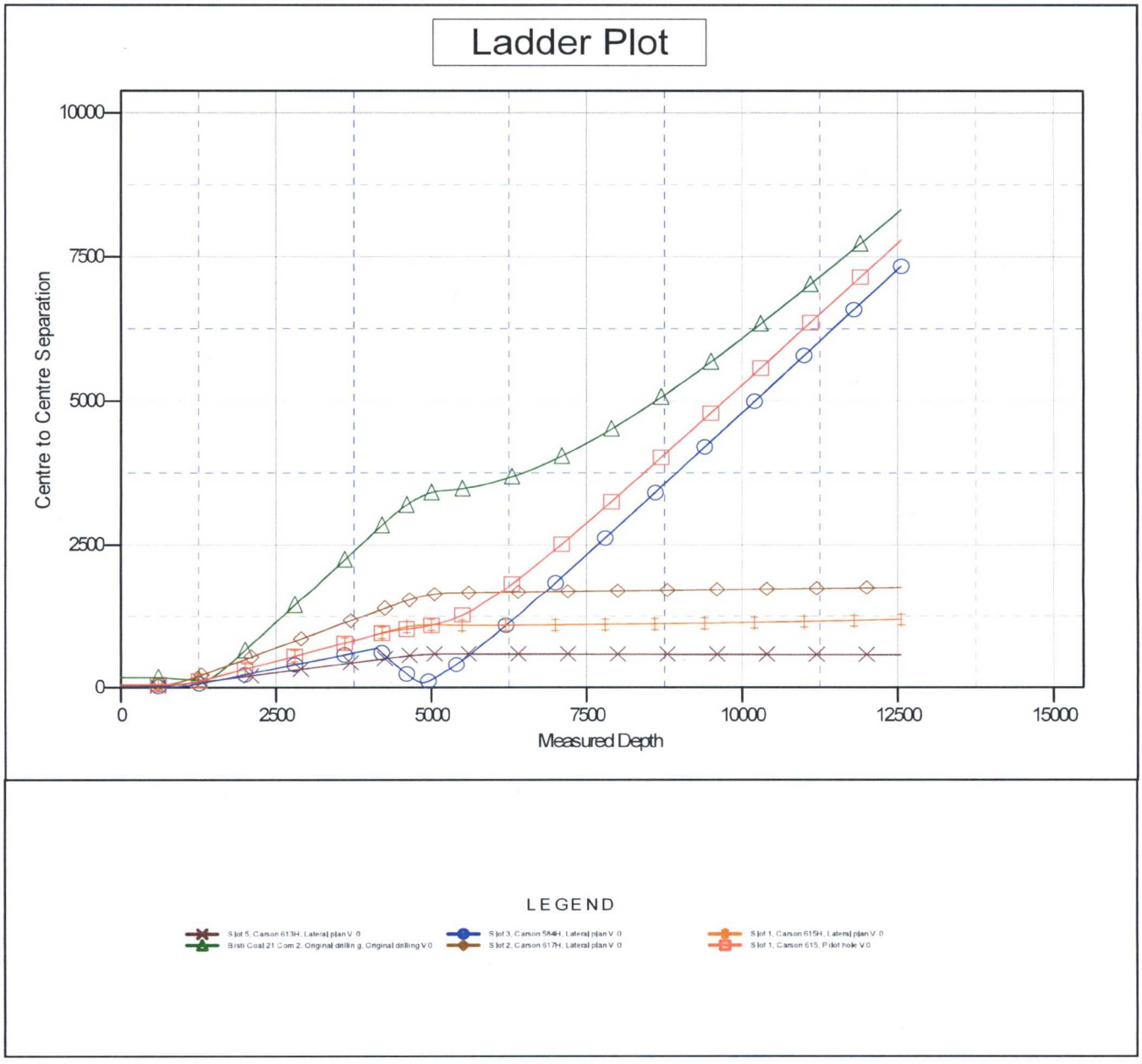
Offset Design WC 21-2 - Slot 5 - Carson 613H - Lateral plan — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,900.0	4,667.0	8,880.1	4,764.0	106.8	105.9	-99.54	3,053.0	-2,644.5	585.0	374.8	210.20	2.783	
9,000.0	4,667.0	8,980.1	4,764.0	109.3	108.4	-99.55	3,120.0	-2,718.8	584.8	369.7	215.13	2.719	
9,100.0	4,667.0	9,080.1	4,764.0	111.8	110.9	-99.55	3,187.0	-2,793.1	584.7	364.6	220.05	2.657	
9,200.0	4,667.0	9,180.1	4,764.0	114.3	113.4	-99.55	3,253.9	-2,867.3	584.5	359.5	224.98	2.598	
9,300.0	4,667.0	9,280.1	4,764.0	116.8	115.9	-99.55	3,320.9	-2,941.6	584.4	354.4	229.91	2.542	
9,400.0	4,667.0	9,380.1	4,764.0	119.2	118.4	-99.56	3,387.9	-3,015.9	584.2	349.4	234.85	2.488	
9,500.0	4,667.0	9,480.1	4,764.0	121.7	120.9	-99.56	3,454.8	-3,090.1	584.0	344.3	239.78	2.436	
9,600.0	4,667.0	9,580.1	4,764.0	124.2	123.4	-99.56	3,521.8	-3,164.4	583.9	339.2	244.72	2.386	
9,700.0	4,667.0	9,680.1	4,764.0	126.7	125.9	-99.57	3,588.8	-3,238.7	583.7	334.1	249.67	2.338	
9,800.0	4,667.0	9,780.1	4,764.0	129.2	128.4	-99.57	3,655.7	-3,312.9	583.6	329.0	254.61	2.292	
9,900.0	4,667.0	9,880.1	4,764.0	131.7	130.9	-99.57	3,722.7	-3,387.2	583.4	323.9	259.56	2.248	
10,000.0	4,667.0	9,980.1	4,764.0	134.2	133.4	-99.57	3,789.7	-3,461.5	583.3	318.8	264.50	2.205	
10,100.0	4,667.0	10,080.1	4,764.0	136.7	135.9	-99.58	3,856.6	-3,535.7	583.1	313.7	269.45	2.164	
10,200.0	4,667.0	10,180.1	4,764.0	139.2	138.4	-99.58	3,923.6	-3,610.0	583.0	308.5	274.40	2.124	
10,300.0	4,667.0	10,280.1	4,764.0	141.7	141.0	-99.58	3,990.6	-3,684.3	582.8	303.4	279.36	2.086	
10,400.0	4,667.0	10,380.1	4,764.0	144.2	143.5	-99.58	4,057.5	-3,758.5	582.6	298.3	284.31	2.049	
10,500.0	4,667.0	10,480.1	4,764.0	146.7	146.0	-99.59	4,124.5	-3,832.8	582.5	293.2	289.27	2.014	
10,600.0	4,667.0	10,580.1	4,764.0	149.2	148.5	-99.59	4,191.5	-3,907.1	582.3	288.1	294.22	1.979	
10,700.0	4,667.0	10,680.1	4,764.0	151.7	151.0	-99.59	4,258.4	-3,981.3	582.2	283.0	299.18	1.946	
10,800.0	4,667.0	10,780.1	4,764.0	154.2	153.5	-99.59	4,325.4	-4,055.6	582.0	277.9	304.14	1.914	
10,900.0	4,667.0	10,880.1	4,764.0	156.7	156.0	-99.60	4,392.4	-4,129.9	581.9	272.8	309.10	1.882	
11,000.0	4,667.0	10,980.1	4,764.0	159.2	158.5	-99.60	4,459.3	-4,204.2	581.7	267.6	314.07	1.852	
11,100.0	4,667.0	11,080.1	4,764.0	161.7	161.0	-99.60	4,526.3	-4,278.4	581.5	262.5	319.03	1.823	
11,200.0	4,667.0	11,180.1	4,764.0	164.3	163.6	-99.60	4,593.2	-4,352.7	581.4	257.4	323.99	1.794	
11,300.0	4,667.0	11,280.1	4,764.0	166.8	166.1	-99.61	4,660.2	-4,427.0	581.2	252.3	328.96	1.767	
11,400.0	4,667.0	11,380.1	4,764.0	169.3	168.6	-99.61	4,727.2	-4,501.2	581.1	247.2	333.92	1.740	
11,500.0	4,667.0	11,480.1	4,764.0	171.8	171.1	-99.61	4,794.1	-4,575.5	580.9	242.0	338.89	1.714	
11,600.0	4,667.0	11,580.1	4,764.0	174.3	173.6	-99.61	4,861.1	-4,649.8	580.8	236.9	343.86	1.689	
11,700.0	4,667.0	11,680.1	4,764.0	176.8	176.1	-99.62	4,928.1	-4,724.0	580.6	231.8	348.82	1.664	
11,800.0	4,667.0	11,780.1	4,764.0	179.3	178.6	-99.62	4,995.0	-4,798.3	580.4	226.7	353.79	1.641	
11,900.0	4,667.0	11,880.1	4,764.0	181.8	181.2	-99.62	5,062.0	-4,872.6	580.3	221.5	358.76	1.617	
12,000.0	4,667.0	11,980.1	4,764.0	184.3	183.7	-99.63	5,129.0	-4,946.8	580.1	216.4	363.73	1.595	
12,100.0	4,667.0	12,080.1	4,764.0	186.9	186.2	-99.63	5,195.9	-5,021.1	580.0	211.3	368.70	1.573	
12,200.0	4,667.0	12,180.1	4,764.0	189.4	188.7	-99.63	5,262.9	-5,095.4	579.8	206.1	373.68	1.552	
12,300.0	4,667.0	12,280.1	4,764.0	191.9	191.2	-99.63	5,329.9	-5,169.6	579.7	201.0	378.65	1.531	
12,400.0	4,667.0	12,380.1	4,764.0	194.4	193.7	-99.64	5,396.8	-5,243.9	579.5	195.9	383.62	1.511	
12,500.0	4,667.0	12,480.2	4,764.0	196.9	196.3	-99.64	5,463.8	-5,318.2	579.4	190.8	388.59	1.491	Level 3
12,526.2	4,667.0	12,506.1	4,764.0	197.6	196.9	-99.64	5,481.2	-5,337.4	579.3	189.4	389.88	1.486	Level 3, SF
12,559.9	4,667.0	12,506.1	4,764.0	198.4	196.9	-99.64	5,481.2	-5,337.4	580.3	191.2	389.06	1.491	Level 3

Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
Project:	Proposed Carson Unit	**TVD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Reference Site:	WC 21-2	**MD Reference:**	Rig (copy) @ 6370.0usft (RIG TBD 20' KB)
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	Slot 4	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Carson 611H	**Database:**	EDM
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to Rig (copy) @ 6370.0usft (RIG TBD 20	Coordinates are relative to: Slot 4
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: -0.17°



Company:	DJR Operating	**Local Co-ordinate Reference:**	Well Slot 4
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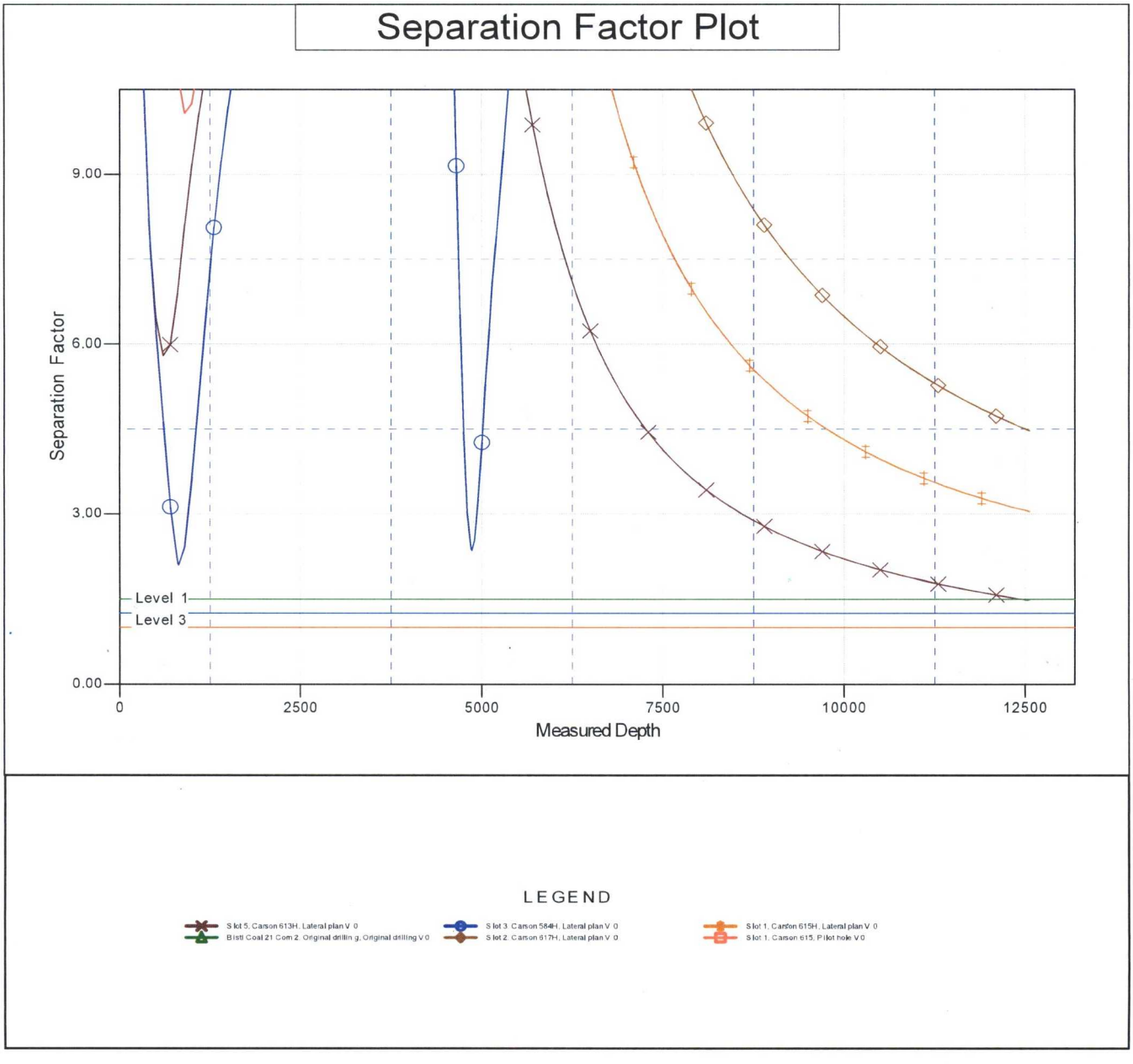
Reference Design:	Lateral plan	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to Rig (copy) @ 6370.0usft (RIG TBD 20	Coordinates are relative to: Slot 4
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: -0.17°

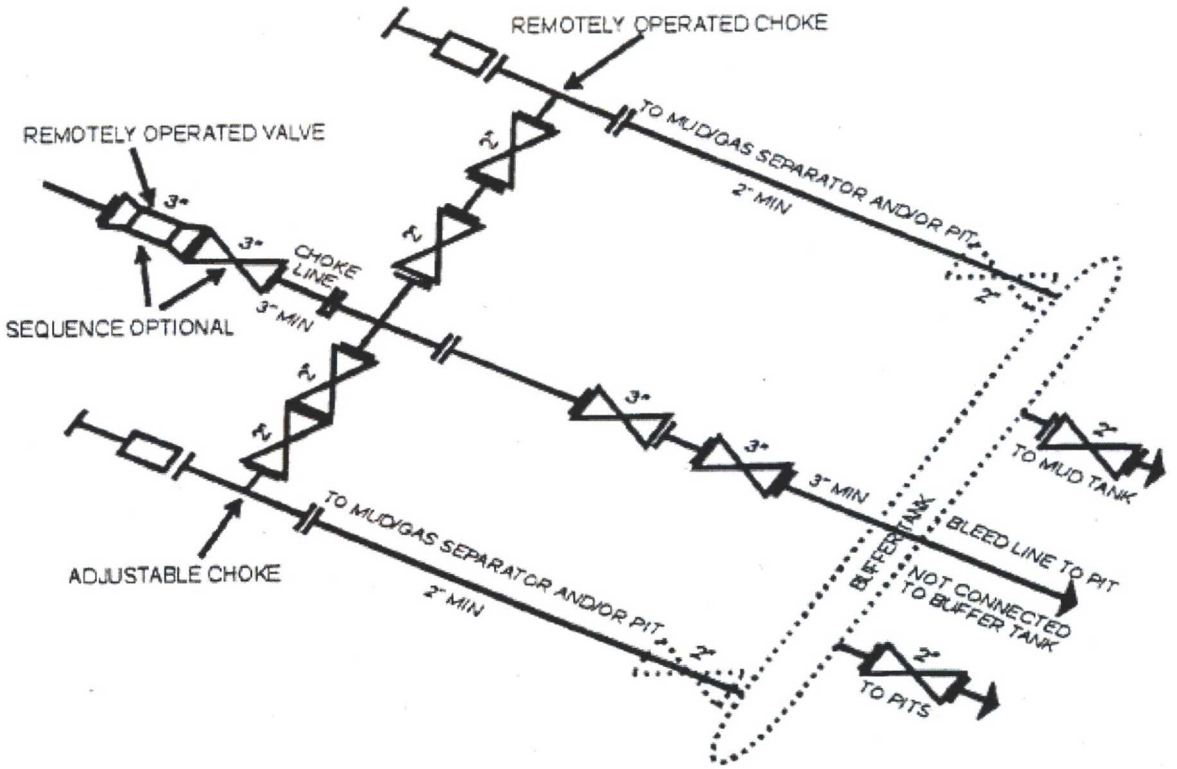


CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Choke Manifold

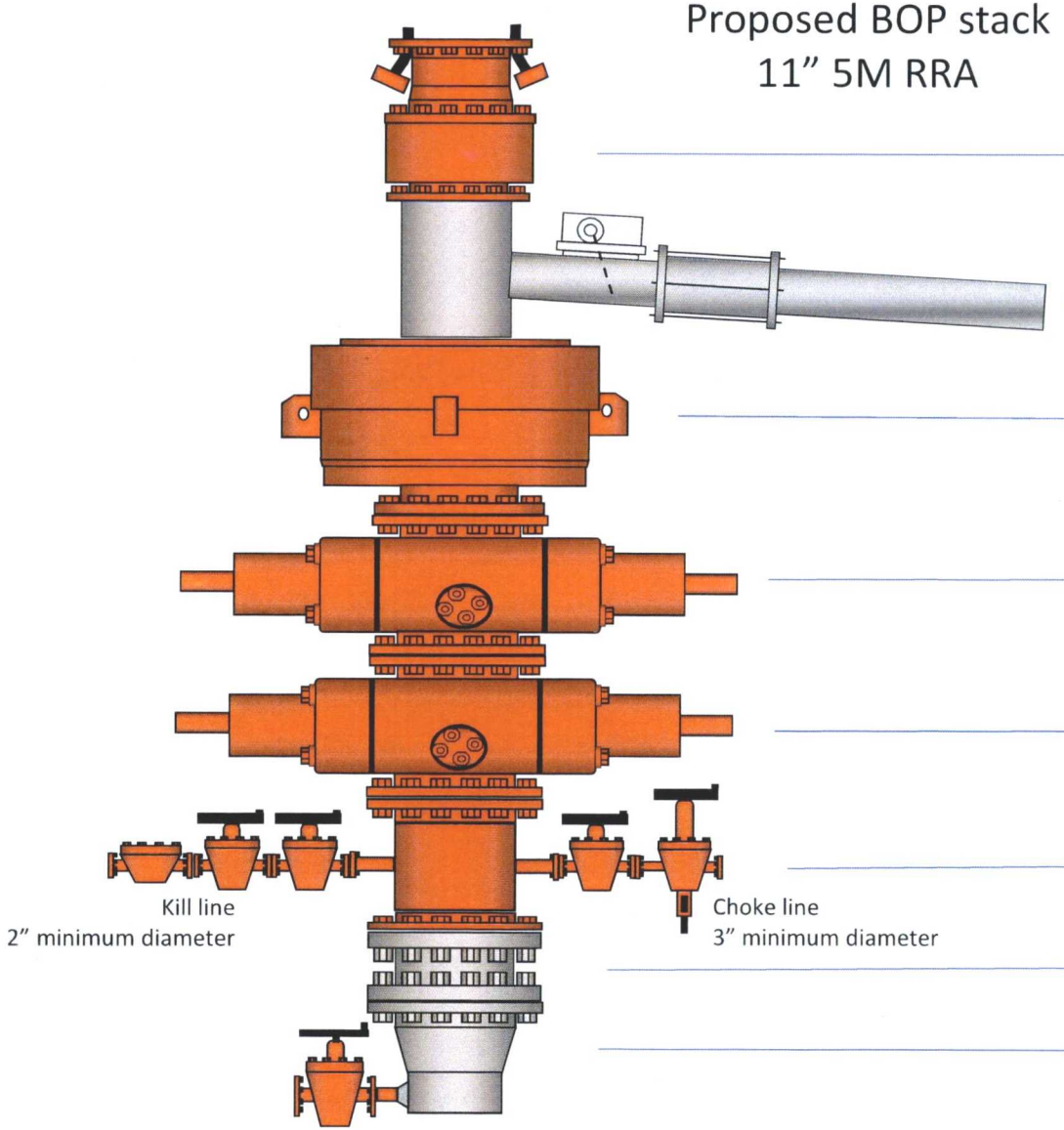
Actual system to conform with Onshore Order 2

DJR Operating



Proposed BOP stack
11" 5M RRA

DJR Operating



Low pressure rotating head

Flowline

3M Annular preventer

5M Pipe rams

5M Blind rams

5M Mud cross

5M Tie-down flange
(moves with BOP)

11" 5M Multi-bowl wellhead