

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMNM051013

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other: COAL BED METHANE8. Well Name and No.
CARSON 615H

2. Name of Operator

DJR OPERATING LLC

Contact: MIKE DEUTSCH

E-Mail: mike@permitswest.com

9. API Well No.

30-045-35878-00-X1

3a. Address

1600 BROADWAY SUITE 1960
DENVER, CO 80202

3b. Phone No. (include area code)

Ph: 505-466-8120

10. Field and Pool or Exploratory Area
BISTI LOWER GALLUP

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 21 T25N R12W SWSW 671FSL 691FWL
36.381271 N Lat, 108.123428 W Lon

11. County or Parish, State

SAN JUAN COUNTY, NM

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

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

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

Surface hole location changed from 671' FSL & 691' FWL to 572' FSL & 790' FWL to better accommodate rig layout. C-102 acreage dedication plat revised at request of Aztec, NM OCD to comply with new horizontal rule.

**ADHERE TO PREVIOUS NMOCD
CONDITIONS OF APPROVAL**NMOCD
SEP 10 2018
DISTRICT III

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

**Electronic Submission #433007 verified by the BLM Well Information System
For DJR OPERATING LLC, sent to the Farmington
Committed to AFMSS for processing by VIRGINIA BARBER on 09/04/2018 (18VB0303SE)**

Name (Printed/Typed) MIKE DEUTSCH

Title CONSULTANT

Signature (Electronic Submission)

Date 08/28/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By VIRGINIA BARBER

Title LAND LAW EXAMINER

Date 09/04/2018

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

Office Farmington

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

(Instructions on page 2)

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

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 30-045-35878	² Pool Code 97232 / 5890	³ Pool Name Basin Mancos / Bisti Lower Gallup
⁴ Property Code 322323	⁵ Property Name CARSON	
⁷ OGRID No. 371838	⁶ Operator Name DJR OPERATING, LLC	⁸ Well Number 615H
		⁹ Elevation 6350

¹⁰ Surface Location

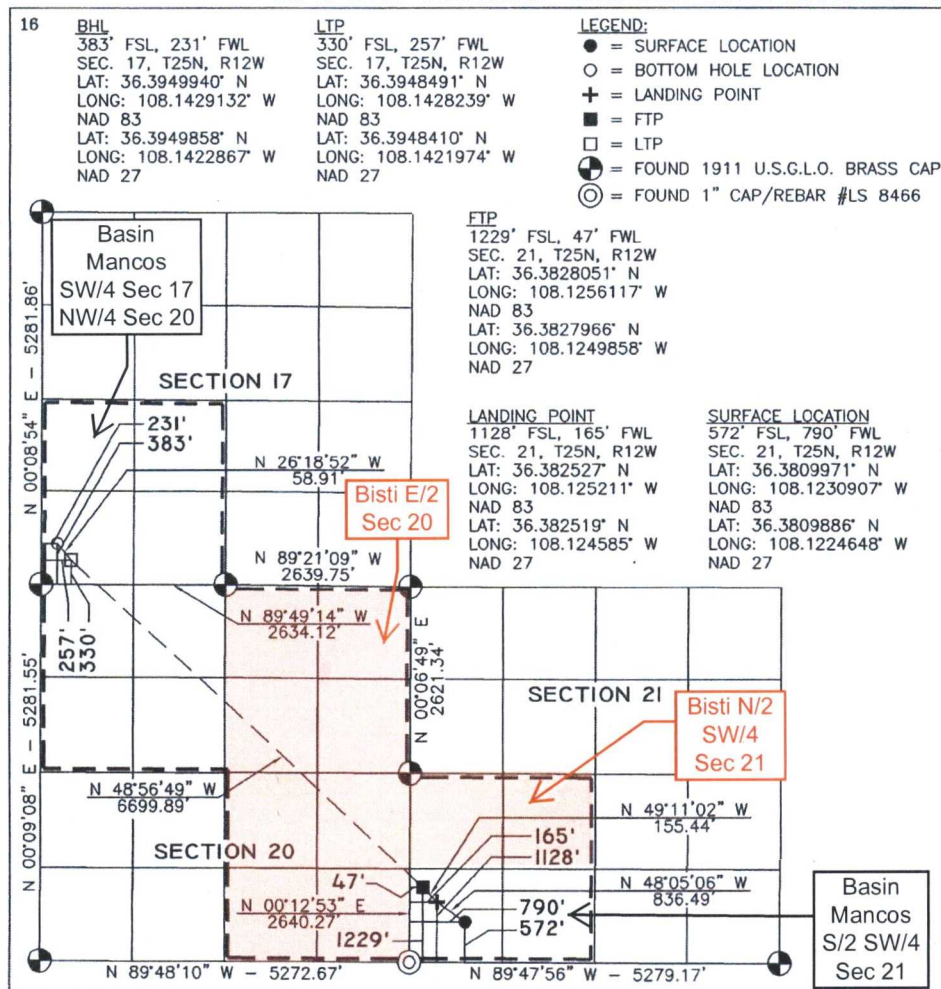
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	21	25 N	12 W		572	SOUTH	790	WEST	SAN JUAN

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		383	SOUTH	231	WEST	SAN JUAN

¹² Dedicated Acres Basin Mancos 400 ac. Bisti 400 ac.	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--	-------------------------------	----------------------------------	-------------------------

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



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.

[Signature] **8/27/2018**
Signature Date
Mike Deutsch
Printed Name
mike@permitswest.com
E-mail Address

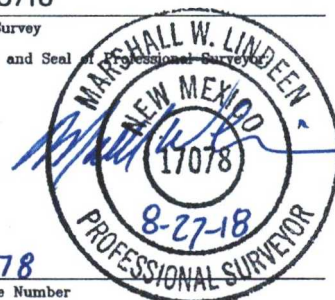
18 SURVEYOR CERTIFICATION

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



17078
Certificate Number

DRILLING PLAN SUNDRY **Carson 615H** **San Juan County, New Mexico**

Surface Location

795-ft FWL & 571-ft FSL
 Sec 21 T25N R12W
 Graded Elevation 6350' MSL
 RKB Elevation 6370' (20' KB)

SHL Geographical Coordinates (NAD-83)

Slot A-1
 Latitude 36.3809971° N
 Longitude 108.1230907° W

Kick Off Point for Horizontal Build Curve

3831-ft MD
 3831-ft TVD

Local Coordinates (from SHL)

0-ft North
 0-ft East

Heel Location (Pay zone entry)

172-ft FWL & 1127-ft FSL
 Sec 21 T25N R12W

Heel Geographical Coordinates (NAD-83)

Latitude 36.38252673° N
 Longitude 108.12521057° W

Bottom Hole Location (TD)

251-ft FWL & 371-ft FSL
 Sec 17 T25N R12W

BHL Geographical Coordinates (NAD-83)

Latitude 36.39499397° N
 Longitude 108.1429132° W

First Take Point (FTP)

5204-ft MD
 Gallup B Sand

FTP Geographical Coordinates (NAD-83)

Latitude 36.3826358° N
 Longitude 108.1253617° W

Last Take Point (LTP)

11994-ft MD
 Gallup B Sand

LTP Geographical Coordinates (NAD-83)

Latitude 36.3948864° N
 Longitude 108.1427567° W

Well objectives

A vertical pilot well will be drilled to 4999-ft TVD, reaching TD 100-ft into the Lower Mancos. Approximately 330-ft of core will be cut in the Mancos formation, and a suite of wireline logs will be run. The well will be plugged back with cement to about 3811-ft TVD, and then 7" casing will be run and cemented back to surface. After securing the wellbore, the rig will move off for approximately 60-days. During this period the core and wireline logs will be analyzed. A rig will then return to the well, drill out the 7" casing, land a build curve and drill a planned 6910-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.

Pilot Hole 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	943	943	C	G	8.3	9.0 - 9.5
Picture Cliffs	1190	1190	Sd	G	8.3	9.0 - 9.5
Lewis	1289	1289	Sh	-		9.0 - 9.5
Chacra	1952	1952	Sd	-	8.3	9.0 - 9.5
Menefee	2518	2518	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	3576	3576	Sd	-	8.3	9.0 - 9.5
Mancos	3745	3745	Sh	-		9.0 - 9.5
Mancos Silt	4360	4360	Slt	O/G	8.5	9.0 - 9.5
Gallup A	4602	4602	Slt	O/G	8.5	9.0 - 9.5
Gallup B	4667	4667	Sd	O/G	8.5	8.8 - 9.0
Gallup C	4764	4764	Sd	O/G	8.5	8.8 - 9.0
Lower Mancos	4899	4899	Sh	-	8.5	8.8 - 9.0
TD	4999	4999		-	8.5	8.8 - 9.0

Horizontal Formation Tops (Note: "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	943	943	C	G	8.3	9.0 - 9.5
Picture Cliffs	1190	1190	Sd	G	8.3	9.0 - 9.5
Lewis	1289	1289	Sh	-		9.0 - 9.5
Chacra	1952	1952	Sd	-	8.3	9.0 - 9.5
Menefee	2518	2518	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	3576	3576	Sd	-	8.3	9.0 - 9.5
Mancos	3745	3745	Sh	-		9.0 - 9.5
Mancos Silt	4404	4360	Slt	O/G	8.5	9.0 - 9.5
Gallup A	4812	4602	Slt	O/G	8.5	9.0 - 9.5
Gallup B	5144	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	3811	surf	3811	surface
4-1/2"	6-1/8"	11.6	P-110	LTC	3611	12054	3611	4667	3611

Note: all casing will be new

Casing Design Load Cases

		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

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

Cement Design

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

<u>9-5/8" Surface Casing</u>	<u>Lead</u>
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

<u>7" Intermediate Casing</u>	<u>Lead</u>	<u>Tail</u>
Halliburton Name	HALCEM	VARICEM
Type	Poz/G	Poz/G
Additives	Ex, L, SA	Ex, FI, SA, L, THX
Planned top	Surface	3245-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	1.95	1.30
Mix water (gal/sx)	10.14	5.64
Volume (sx)	409	118
Volume (bbls)	142	27

<u>4-1/2" Production Liner</u>	<u>Lead</u>
Halliburton Name	EXTENDACEM
Type	Poz/G
Additives	B, De, Di, FI, Re, V
Planned top	3611-ft
Density (ppg)	13.3
Yield (cf/sx)	1.36
Mix water (gal/sx)	5.94
Volume (sx)	864
Volume (bbls)	209

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 – 3811	9.0 – 9.5	38 – 45	8 – 14	<20

Production	Low solids, non-dispersed	3811 – 12054	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.

Coring: Approximately 330-ft of 8-3/4" x 4" core will be cut in the pilot hole, in the Mancos interval.

Electric logging: A triple combo wireline run will be made in the vertical pilot hole, from TD to the base of surface casing. 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.

PLUGBACK PLAN SUNDRY **Carson 615 Pilot Hole** **San Juan County, New Mexico**

Surface Location

795-ft FWL & 571-ft FSL
 Sec 21 T25N R12W
 Graded Elevation 6350' MSL
 RKB Elevation 6370' (20' KB)

SHL Geographical Coordinates (NAD-83)

Slot A-1
 Latitude 36.3809971° N
 Longitude 108.1230907° W

Bottom Hole Location (TD)

795-ft FWL & 571-ft FSL
 Sec 21 T25N R12W
 4999-ft MD / 4999-ft TVD

BHL Geographical Coordinates (NAD-83)

Latitude 36.3809971° N
 Longitude 108.1230907° W

Plugback Objectives

Abandon the lower pilot hole from 4999-ft to 3811-ft with two balanced cement plugs.

Pilot Hole 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	943	943	C	G	8.3	9.0 - 9.5
Picture Cliffs	1190	1190	Sd	G	8.3	9.0 - 9.5
Lewis	1289	1289	Sh	-		9.0 - 9.5
Chacra	1952	1952	Sd	-	8.3	9.0 - 9.5
Menefee	2518	2518	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	3576	3576	Sd	-	8.3	9.0 - 9.5
Mancos	3745	3745	Sh	-		9.0 - 9.5
Mancos Silt	4360	4360	Slt	O/G	8.5	9.0 - 9.5
Gallup A	4602	4602	Slt	O/G	8.5	9.0 - 9.5
Gallup B	4667	4667	Sd	O/G	8.5	8.8 - 9.0
Gallup C	4764	4764	Sd	O/G	8.5	8.8 - 9.0
Lower Mancos	4899	4899	Sh	-	8.5	8.8 - 9.0
TD	4999	4999		-	8.5	8.8 - 9.0

Well Status

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
	8.75"				350	4999		4999	-

Plugback Cement Design

Slurry : Halliburton Class "G" + 0.10% HR-5 retarder
 Density : 15.8 ppg
 Yield : 1.15 cf/sx
 Water : 4.98 gal/sx
 Hole size : 8-3/4"
 OH Capacity : 0.0744 bbl/ft
 Est % Excess : 40% (actual excess to be determined after reviewing open hole logs)

	Plug #1	Plug #2
Bottom of plug	4999-ft	4450-ft
Top of plug	4450-ft	3811-ft
Fill	549-ft	639-ft
Planned volume	57 bbls	67 bbls
Planned sack	279 sacks	325 sacks

Snapshot Procedure

1. After rigging down wireline loggers, pick up and run in hole with 750-ft of 2-7/8" tubing stinger on drill pipe.
2. Trip in hole, tag bottom. Circulate and condition mud until mud weight in = mud weight out and gas readings reach background levels.
3. Space out drill string to put cementing head at rig floor, rig up cementers.
4. Plug #1: Pump 15 bbls of freshwater, following by 279 sacks (57 bbls) of 15.8 ppg slurry. Displace with water and mud to balance cement.
5. Rig down cement head, pull out of hole slowly to 4450-ft. Pipe should pull dry. Circulate out cement while working pipe, treat out cement contamination and condition mud.
6. Space out drill string to put cementing head at rig floor, rig up cementers.
7. Plug #2: Pump 15 bbls of freshwater, following by 325 sacks (67 bbls) of 15.8 ppg slurry. Displace with water and mud to balance cement.
8. Rig down cement head, pull out of hole slowly to 3811-ft. Pipe should pull dry. Circulate out cement while working pipe, treat out cement contamination and condition mud.
9. Pull out of hole and lay down tubing stinger.
10. Rig up to run 7" casing to 3811-ft.



Pad name : WC 21-2
Well name : Carson 615H
Sec 21 T25N R12W

SHL Latitude : 36.38099714
SHL Longitude : -108.12309066

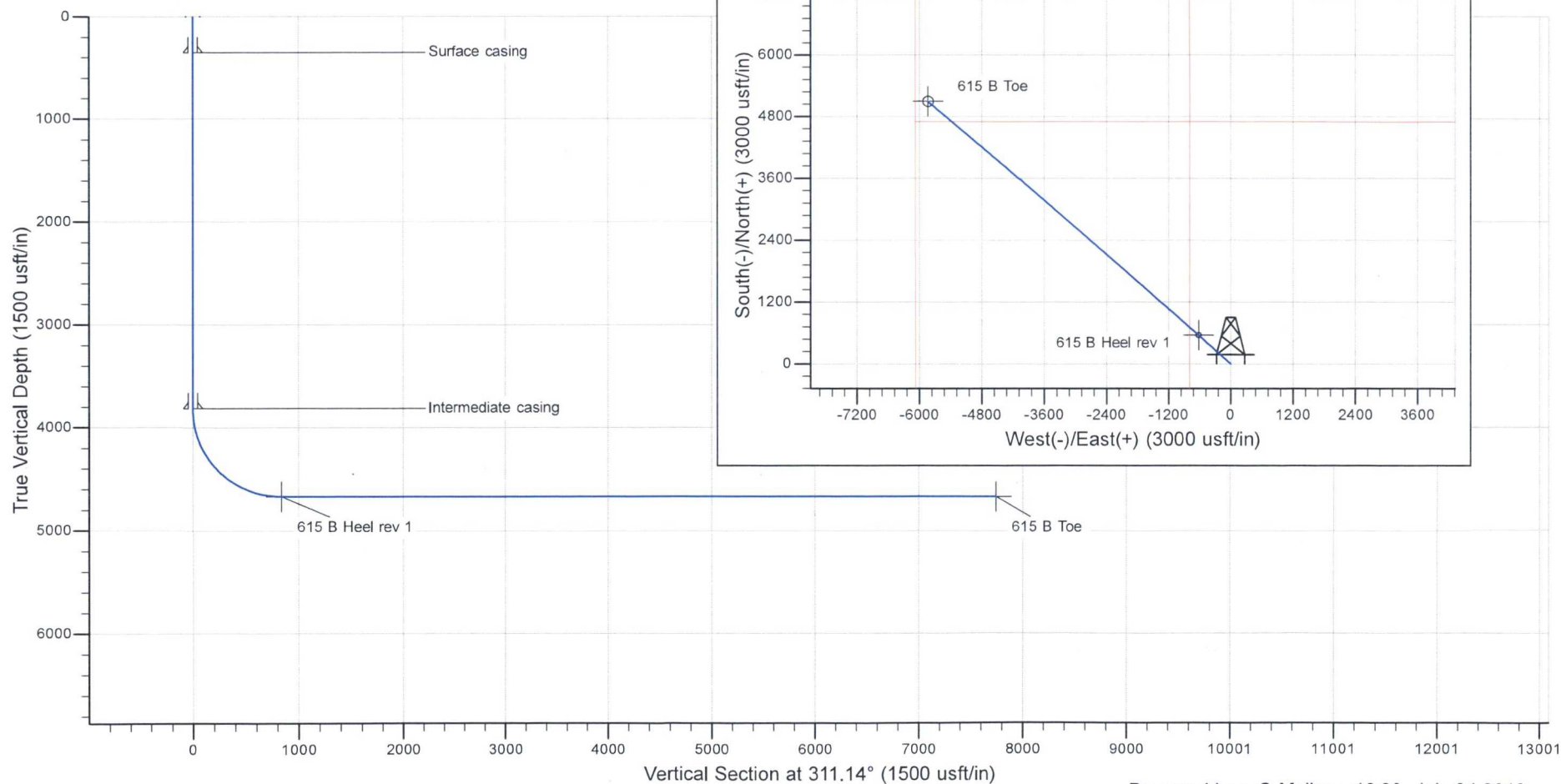
US State Plane 1983
North American Datum 1983
New Mexico Western Zone

TRAJECTORY DETAILS									
Pad elevation : 6350.0 Rig @ 6370.0usft (Rig TBD)									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
3830.7	0.00	0.00	3830.7	0.0	0.0	0.00	0.00	0.0	
5144.4	90.00	311.74	4667.0	556.8	-624.0	6.85	311.74	836.3	615 B Heel rev 1
12054.4	90.00	310.38	4667.0	5095.9	-5833.9	0.02	-90.15	7746.2	615 B Toe

TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
615 B Heel rev 1	4667.0	556.8	-624.0	1958672	2637177	36.38252673	-108.12521057
615 B Toe	4667.0	5095.9	-5833.9	1963226	2631981	36.39499397	-108.14291320

T
M Azimuths to True North
Magnetic North: 9.26°

Magnetic Field
Strength: 49665.1nT
Dip Angle: 62.95°
Date: 7/30/2018
Model: IGRF2015



Prepared by : C Mallary 16:29, July 31 2018

Snapshot Procedure

1. After rigging down wireline loggers, pick up and run in hole with 750-ft of 2-7/8" tubing stinger on drill pipe.
2. Trip in hole, tag bottom. Circulate and condition mud until mud weight in = mud weight out and gas readings reach background levels.
3. Space out drill string to put cementing head at rig floor, rig up cementers.
4. Plug #1: Pump 15 bbls of freshwater, following by 279 sacks (57 bbls) of 15.8 ppg slurry. Displace with water and mud to balance cement.
5. Rig down cement head, pull out of hole slowly to 4450-ft. Pipe should pull dry. Circulate out cement while working pipe, treat out cement contamination and condition mud.
6. Space out drill string to put cementing head at rig floor, rig up cementers.
7. Plug #2: Pump 15 bbls of freshwater, following by 325 sacks (67 bbls) of 15.8 ppg slurry. Displace with water and mud to balance cement.
8. Rig down cement head, pull out of hole slowly to 3811-ft. Pipe should pull dry. Circulate out cement while working pipe, treat out cement contamination and condition mud.
9. Pull out of hole and lay down tubing stinger.
10. Rig up to run 7" casing to 3811-ft.

DJR Operating

Proposed Carson Unit

WC 21-2

Slot 1

Carson 615H

Plan: Lateral plan

Standard Planning Report

31 July, 2018



Database: EDM
Company: DJR Operating
Project: Proposed Carson Unit
Site: WC 21-2
Well: Slot 1
Wellbore: Carson 615H
Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature

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
From:	Lat/Long	Easting:	2,637,701 usft
Position Uncertainty:	0.0 usft	Slot Radius:	16,000 in
		Latitude:	36.38126970
		Longitude:	-108.12342620
		Grid Convergence:	-0.17 °

Well	Slot 1		
Well Position	+N/-S	-99.2 usft	Northing: 1,958,113 usft
	+E/-W	98.8 usft	Easting: 2,637,799 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level: 6,350.0 usft

Wellbore	Carson 615H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/30/2018	9.26	62.95	49,665.05558293

Design	Lateral plan				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	3,830.7	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	311.14	

Plan Survey Tool Program	Date	7/31/2018			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	3,830.7	12,054.4	Lateral plan (Carson 615H)	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
3,830.7	0.00	0.00	3,830.7	0.0	0.0	0.00	0.00	0.00	0.00	
5,144.4	90.00	311.74	4,667.0	556.8	-624.0	6.85	6.85	-3.67	311.74	615 B Heel rev 1
12,054.4	90.00	310.38	4,667.0	5,095.9	-5,833.9	0.02	0.00	-0.02	-90.15	615 B Toe

Database: EDM
Company: DJR Operating
Project: Proposed Carson Unit
Site: WC 21-2
Well: Slot 1
Wellbore: Carson 615H
Design: Lateral plan

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Slot 1
 Rig @ 6370.0usft (Rig TBD)
 Rig @ 6370.0usft (Rig TBD)
 True
 Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
350.0	0.00	0.00	350.0	0.0	0.0	0.0	0.00	0.00	0.00
Surface casing									
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,810.7	0.00	0.00	3,810.7	0.0	0.0	0.0	0.00	0.00	0.00
Intermediate casing									
3,830.7	0.00	0.00	3,830.7	0.0	0.0	0.0	0.00	0.00	0.00
3,850.0	1.32	311.74	3,850.0	0.1	-0.2	0.2	6.85	6.85	0.00
3,900.0	4.75	311.74	3,899.9	1.9	-2.1	2.9	6.85	6.85	0.00
3,950.0	8.17	311.74	3,949.6	5.7	-6.3	8.5	6.85	6.85	0.00
4,000.0	11.60	311.74	3,998.8	11.4	-12.7	17.1	6.85	6.85	0.00
4,050.0	15.02	311.74	4,047.5	19.0	-21.3	28.6	6.85	6.85	0.00
4,100.0	18.45	311.74	4,095.4	28.6	-32.1	43.0	6.85	6.85	0.00
4,150.0	21.88	311.74	4,142.3	40.1	-44.9	60.2	6.85	6.85	0.00
4,200.0	25.30	311.74	4,188.1	53.4	-59.9	80.2	6.85	6.85	0.00
4,250.0	28.73	311.74	4,232.7	68.5	-76.8	102.9	6.85	6.85	0.00
4,300.0	32.15	311.74	4,275.8	85.4	-95.7	128.3	6.85	6.85	0.00

Database: EDM
 Company: DJR Operating
 Project: Proposed Carson Unit
 Site: WC 21-2
 Well: Slot 1
 Wellbore: Carson 615H
 Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
 TVD Reference: Rig @ 6370.0usft (Rig TBD)
 MD Reference: Rig @ 6370.0usft (Rig TBD)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,350.0	35.58	311.74	4,317.3	103.9	-116.5	156.1	6.85	6.85	0.00
4,400.0	39.00	311.74	4,357.0	124.1	-139.1	186.4	6.85	6.85	0.00
4,403.8	39.26	311.74	4,360.0	125.7	-140.9	188.8	6.85	6.85	0.00
Mancos Silt									
4,450.0	42.43	311.74	4,394.9	145.8	-163.4	219.0	6.85	6.85	0.00
4,500.0	45.85	311.74	4,430.8	169.0	-189.4	253.8	6.85	6.85	0.00
4,550.0	49.28	311.74	4,464.5	193.6	-216.9	290.7	6.85	6.85	0.00
4,600.0	52.71	311.74	4,496.0	219.4	-245.9	329.6	6.85	6.85	0.00
4,650.0	56.13	311.74	4,525.1	246.5	-276.2	370.2	6.85	6.85	0.00
4,700.0	59.56	311.74	4,551.7	274.7	-307.8	412.5	6.85	6.85	0.00
4,750.0	62.98	311.74	4,575.7	303.9	-340.5	456.4	6.85	6.85	0.00
4,800.0	66.41	311.74	4,597.1	334.0	-374.3	501.6	6.85	6.85	0.00
4,812.5	67.26	311.74	4,602.0	341.6	-382.8	513.0	6.85	6.85	0.00
Gallup A									
4,850.0	69.83	311.74	4,615.7	364.8	-408.9	548.0	6.85	6.85	0.00
4,900.0	73.26	311.74	4,631.6	396.4	-444.2	595.4	6.85	6.85	0.00
4,950.0	76.68	311.74	4,644.5	428.6	-480.3	643.7	6.85	6.85	0.00
5,000.0	80.11	311.74	4,654.6	461.2	-516.8	692.6	6.85	6.85	0.00
5,050.0	83.54	311.74	4,661.7	494.1	-553.7	742.1	6.85	6.85	0.00
5,100.0	86.96	311.74	4,665.8	527.3	-590.9	791.9	6.85	6.85	0.00
5,144.4	90.00	311.74	4,667.0	556.8	-624.0	836.3	6.85	6.85	0.00
Gallup B									
5,200.0	90.00	311.73	4,667.0	593.9	-665.5	891.9	0.02	0.00	-0.02
5,204.0	90.00	311.73	4,667.0	596.5	-668.5	895.9	0.00	0.00	0.00
First take point									
5,300.0	90.00	311.71	4,667.0	660.4	-740.1	991.9	0.02	0.00	-0.02
5,400.0	90.00	311.69	4,667.0	726.9	-814.8	1,091.9	0.02	0.00	-0.02
5,500.0	90.00	311.67	4,667.0	793.4	-889.5	1,191.9	0.02	0.00	-0.02
5,600.0	90.00	311.65	4,667.0	859.9	-964.2	1,291.9	0.02	0.00	-0.02
5,700.0	90.00	311.63	4,667.0	926.4	-1,038.9	1,391.9	0.02	0.00	-0.02
5,800.0	90.00	311.61	4,667.0	992.8	-1,113.7	1,491.9	0.02	0.00	-0.02
5,900.0	90.00	311.60	4,667.0	1,059.2	-1,188.4	1,591.9	0.02	0.00	-0.02
6,000.0	90.00	311.58	4,667.0	1,125.6	-1,263.2	1,691.9	0.02	0.00	-0.02
6,100.0	90.00	311.56	4,667.0	1,191.9	-1,338.1	1,791.9	0.02	0.00	-0.02
6,200.0	90.00	311.54	4,667.0	1,258.2	-1,412.9	1,891.9	0.02	0.00	-0.02
6,300.0	90.00	311.52	4,667.0	1,324.5	-1,487.8	1,991.9	0.02	0.00	-0.02
6,400.0	90.00	311.50	4,667.0	1,390.8	-1,562.7	2,091.9	0.02	0.00	-0.02
6,500.0	90.00	311.48	4,667.0	1,457.0	-1,637.6	2,191.8	0.02	0.00	-0.02
6,600.0	90.00	311.46	4,667.0	1,523.3	-1,712.5	2,291.8	0.02	0.00	-0.02
6,700.0	90.00	311.44	4,667.0	1,589.5	-1,787.5	2,391.8	0.02	0.00	-0.02
6,800.0	90.00	311.42	4,667.0	1,655.6	-1,862.4	2,491.8	0.02	0.00	-0.02
6,900.0	90.00	311.40	4,667.0	1,721.8	-1,937.4	2,591.8	0.02	0.00	-0.02
7,000.0	90.00	311.38	4,667.0	1,787.9	-2,012.5	2,691.8	0.02	0.00	-0.02
7,100.0	90.00	311.36	4,667.0	1,854.0	-2,087.5	2,791.8	0.02	0.00	-0.02
7,200.0	90.00	311.34	4,667.0	1,920.0	-2,162.6	2,891.8	0.02	0.00	-0.02
7,300.0	90.00	311.32	4,667.0	1,986.1	-2,237.7	2,991.8	0.02	0.00	-0.02
7,400.0	90.00	311.30	4,667.0	2,052.1	-2,312.8	3,091.8	0.02	0.00	-0.02
7,500.0	90.00	311.28	4,667.0	2,118.1	-2,387.9	3,191.8	0.02	0.00	-0.02
7,600.0	90.00	311.26	4,666.9	2,184.0	-2,463.1	3,291.8	0.02	0.00	-0.02
7,700.0	90.00	311.24	4,666.9	2,250.0	-2,538.3	3,391.8	0.02	0.00	-0.02
7,800.0	90.00	311.22	4,666.9	2,315.9	-2,613.5	3,491.8	0.02	0.00	-0.02
7,900.0	90.00	311.20	4,666.9	2,381.8	-2,688.7	3,591.8	0.02	0.00	-0.02
8,000.0	90.00	311.18	4,666.9	2,447.6	-2,764.0	3,691.8	0.02	0.00	-0.02

Database: EDM
Company: DJR Operating
Project: Proposed Carson Unit
Site: WC 21-2
Well: Slot 1
Wellbore: Carson 615H
Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,100.0	90.00	311.16	4,666.9	2,513.5	-2,839.2	3,791.8	0.02	0.00	-0.02
8,200.0	90.00	311.14	4,666.9	2,579.3	-2,914.5	3,891.8	0.02	0.00	-0.02
8,300.0	90.00	311.12	4,666.9	2,645.0	-2,989.8	3,991.8	0.02	0.00	-0.02
8,400.0	90.00	311.10	4,666.9	2,710.8	-3,065.2	4,091.8	0.02	0.00	-0.02
8,500.0	90.00	311.08	4,666.9	2,776.5	-3,140.6	4,191.8	0.02	0.00	-0.02
8,600.0	90.00	311.06	4,666.9	2,842.2	-3,215.9	4,291.8	0.02	0.00	-0.02
8,700.0	90.00	311.04	4,666.9	2,907.9	-3,291.3	4,391.8	0.02	0.00	-0.02
8,800.0	90.00	311.02	4,666.9	2,973.6	-3,366.8	4,491.8	0.02	0.00	-0.02
8,900.0	90.00	311.00	4,666.9	3,039.2	-3,442.2	4,591.8	0.02	0.00	-0.02
9,000.0	90.00	310.98	4,666.9	3,104.8	-3,517.7	4,691.8	0.02	0.00	-0.02
9,100.0	90.00	310.97	4,666.9	3,170.3	-3,593.2	4,791.8	0.02	0.00	-0.02
9,200.0	90.00	310.95	4,666.9	3,235.9	-3,668.7	4,891.8	0.02	0.00	-0.02
9,300.0	90.00	310.93	4,666.9	3,301.4	-3,744.3	4,991.8	0.02	0.00	-0.02
9,400.0	90.00	310.91	4,666.9	3,366.9	-3,819.8	5,091.8	0.02	0.00	-0.02
9,500.0	90.00	310.89	4,666.9	3,432.4	-3,895.4	5,191.8	0.02	0.00	-0.02
9,600.0	90.00	310.87	4,666.9	3,497.8	-3,971.0	5,291.8	0.02	0.00	-0.02
9,700.0	90.00	310.85	4,667.0	3,563.2	-4,046.7	5,391.8	0.02	0.00	-0.02
9,800.0	90.00	310.83	4,667.0	3,628.6	-4,122.3	5,491.8	0.02	0.00	-0.02
9,900.0	90.00	310.81	4,667.0	3,694.0	-4,198.0	5,591.8	0.02	0.00	-0.02
10,000.0	90.00	310.79	4,667.0	3,759.3	-4,273.7	5,691.8	0.02	0.00	-0.02
10,100.0	90.00	310.77	4,667.0	3,824.7	-4,349.4	5,791.8	0.02	0.00	-0.02
10,200.0	90.00	310.75	4,667.0	3,889.9	-4,425.2	5,891.8	0.02	0.00	-0.02
10,300.0	90.00	310.73	4,667.0	3,955.2	-4,501.0	5,991.8	0.02	0.00	-0.02
10,400.0	90.00	310.71	4,667.0	4,020.4	-4,576.8	6,091.8	0.02	0.00	-0.02
10,500.0	90.00	310.69	4,667.0	4,085.6	-4,652.6	6,191.8	0.02	0.00	-0.02
10,600.0	90.00	310.67	4,667.0	4,150.8	-4,728.4	6,291.8	0.02	0.00	-0.02
10,700.0	90.00	310.65	4,667.0	4,216.0	-4,804.3	6,391.8	0.02	0.00	-0.02
10,800.0	90.00	310.63	4,667.0	4,281.1	-4,880.1	6,491.8	0.02	0.00	-0.02
10,900.0	90.00	310.61	4,667.0	4,346.2	-4,956.0	6,591.8	0.02	0.00	-0.02
11,000.0	90.00	310.59	4,667.0	4,411.3	-5,032.0	6,691.8	0.02	0.00	-0.02
11,100.0	90.00	310.57	4,667.0	4,476.4	-5,107.9	6,791.8	0.02	0.00	-0.02
11,200.0	90.00	310.55	4,667.0	4,541.4	-5,183.9	6,891.8	0.02	0.00	-0.02
11,300.0	90.00	310.53	4,667.0	4,606.4	-5,259.9	6,991.8	0.02	0.00	-0.02
11,400.0	90.00	310.51	4,667.0	4,671.4	-5,335.9	7,091.8	0.02	0.00	-0.02
11,500.0	90.00	310.49	4,667.0	4,736.3	-5,411.9	7,191.8	0.02	0.00	-0.02
11,600.0	90.00	310.47	4,667.0	4,801.2	-5,488.0	7,291.8	0.02	0.00	-0.02
11,700.0	90.00	310.45	4,667.0	4,866.1	-5,564.1	7,391.8	0.02	0.00	-0.02
11,800.0	90.00	310.43	4,667.0	4,931.0	-5,640.2	7,491.7	0.02	0.00	-0.02
11,900.0	90.00	310.41	4,667.0	4,995.8	-5,716.3	7,591.7	0.02	0.00	-0.02
11,994.0	90.00	310.40	4,667.0	5,056.8	-5,787.9	7,685.7	0.02	0.00	-0.02
Last take point									
12,000.0	90.00	310.39	4,667.0	5,060.6	-5,792.5	7,691.7	0.02	0.00	-0.02
12,054.4	90.00	310.38	4,667.0	5,095.9	-5,833.9	7,746.2	0.02	0.00	-0.02

Database: EDM
Company: DJR Operating
Project: Proposed Carson Unit
Site: WC 21-2
Well: Slot 1
Wellbore: Carson 615H
Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature

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
615 B Heel rev 1 - plan hits target center - Circle (radius 50.0)	0.00	0.00	4,667.0	556.8	-624.0	1,958,672	2,637,177	36.38252673	-108.12521057
615 B Toe - plan hits target center - Circle (radius 100.0)	0.00	0.00	4,667.0	5,095.9	-5,833.9	1,963,226	2,631,981	36.39499397	-108.14291320

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
3,810.7	3,810.7	Intermediate casing	7.000	8.750

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
25.0	25.0	Kirtland			
943.0	943.0	Fruitland			
1,190.0	1,190.0	Picture Cliffs			
1,289.0	1,289.0	Lewis			
1,952.0	1,952.0	Chacra			
2,518.0	2,518.0	Menefee			
3,576.0	3,576.0	Point Lookout			
3,745.0	3,745.0	Mancos			
4,403.8	4,360.0	Mancos Silt			
4,812.5	4,602.0	Gallup A			
5,144.4	4,667.0	Gallup B			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,204.0	4,667.0	596.5	-668.5	First take point
11,994.0	4,667.0	5,056.8	-5,787.9	Last take point

DJR Operating

Proposed Carson Unit

WC 21-2

Slot 1

Carson 615H

Lateral plan

Anticollision Report

31 July, 2018



Company:	DJR Operating	Local Co-ordinate Reference:	Well Slot 1
Project:	Proposed Carson Unit	TVD Reference:	Rig @ 6370.0usft (Rig TBD)
Reference Site:	WC 21-2	MD Reference:	Rig @ 6370.0usft (Rig TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Slot 1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Carson 615H	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 7/31/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	3,830.7	Pilot hole (Carson 615)	MWD+IGRF	OWSG MWD + IGRF or WMM
3,830.7	12,054.4	Lateral plan (Carson 615H)	MWD+IGRF	OWSG MWD + IGRF or WMM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
WC 21-2						
Bisti Coal 21 Com 2 - Original drilling - Original drilling	1,329.6	1,304.6	218.2	209.2	24.152	CC, ES, SF
Slot 1 - Carson 615 - Pilot hole	4,150.0	4,142.3	60.2	58.6	37.705	CC, ES, SF
Slot 2 - Carson 617H - Lateral plan	647.4	647.7	16.9	12.7	4.047	CC, ES
Slot 2 - Carson 617H - Lateral plan	12,054.4	12,485.7	581.6	192.3	1.494	Level 3, SF
Slot 4 - Carson 584H - Lateral plan	500.0	500.0	60.0	56.8	19.012	CC, ES
Slot 4 - Carson 584H - Lateral plan	900.0	893.8	76.4	70.4	12.722	SF
Slot 5 - Carson 611H - Lateral plan	801.7	802.9	75.8	70.5	14.188	CC, ES
Slot 5 - Carson 611H - Lateral plan	12,054.4	12,561.7	1,193.0	799.7	3.033	SF
Slot 6 - Carson 613H - Lateral plan	1,426.7	1,431.0	77.4	67.5	7.809	CC, ES
Slot 6 - Carson 613H - Lateral plan	12,000.0	12,504.7	627.8	241.9	1.627	SF

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)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning	
				Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.06	218.2	0.2	219.6					
100.0	100.0	75.0	75.0	0.1	0.1	0.06	218.2	0.2	218.2	217.9	0.28	785.178		
200.0	200.0	175.0	175.0	0.5	0.4	0.06	218.2	0.2	218.2	217.3	0.94	231.006		
300.0	300.0	275.0	275.0	0.9	0.8	0.06	218.2	0.2	218.2	216.6	1.66	131.331		
400.0	400.0	375.0	375.0	1.2	1.2	0.06	218.2	0.2	218.2	215.8	2.38	91.745		
500.0	500.0	475.2	475.1	1.6	1.5	0.06	218.5	0.2	218.5	215.4	3.10	70.574		
600.0	600.0	575.3	575.3	1.9	1.9	0.06	218.4	0.2	218.4	214.6	3.81	57.267		
700.0	700.0	675.0	675.0	2.3	2.2	0.06	218.2	0.2	218.2	213.7	4.53	48.178		
800.0	800.0	775.0	775.0	2.7	2.6	0.06	218.2	0.2	218.2	213.0	5.25	41.595		
900.0	900.0	875.0	875.0	3.0	3.0	0.06	218.2	0.2	218.2	212.3	5.96	36.594		
1,000.0	1,000.0	975.0	975.0	3.4	3.3	0.06	218.2	0.2	218.2	211.5	6.68	32.666		
1,100.0	1,100.0	1,075.1	1,075.1	3.7	3.7	0.06	218.5	0.2	218.5	211.1	7.40	29.541		
1,200.0	1,200.0	1,175.3	1,175.3	4.1	4.0	0.06	218.4	0.2	218.4	210.3	8.12	26.917		
1,300.0	1,300.0	1,275.4	1,275.4	4.4	4.4	0.06	218.3	0.2	218.3	209.4	8.83	24.712		
1,329.6	1,329.6	1,304.6	1,304.6	4.6	4.5	0.06	218.2	0.2	218.2	209.2	9.04	24.152	CC, ES, SF	
1,400.0	1,400.0	1,330.0	1,330.0	4.8	4.5	0.06	218.2	0.2	222.8	213.6	9.21	24.183		

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
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+HGRF											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				
1,500.0	1,500.0	1,330.0	1,330.0	5.2	4.5	0.06	218.2	0.2	262.0	253.3	8.66	30.255
1,600.0	1,600.0	1,330.0	1,330.0	5.5	4.5	0.06	218.2	0.2	328.1	320.2	7.93	41.352
1,700.0	1,700.0	1,330.0	1,330.0	5.9	4.5	0.06	218.2	0.2	408.2	400.8	7.41	55.070
1,800.0	1,800.0	1,330.0	1,330.0	6.2	4.5	0.06	218.2	0.2	495.6	488.5	7.09	69.897
1,900.0	1,900.0	1,330.0	1,330.0	6.6	4.5	0.06	218.2	0.2	587.1	580.2	6.90	85.036
2,000.0	2,000.0	1,330.0	1,330.0	7.0	4.5	0.06	218.2	0.2	680.9	674.1	6.80	100.095
2,100.0	2,100.0	1,330.0	1,330.0	7.3	4.5	0.06	218.2	0.2	776.3	769.6	6.76	114.876
2,200.0	2,200.0	1,330.0	1,330.0	7.7	4.5	0.06	218.2	0.2	872.7	866.0	6.75	129.280
2,300.0	2,300.0	1,330.0	1,330.0	8.0	4.5	0.06	218.2	0.2	969.9	963.1	6.77	143.256
2,400.0	2,400.0	1,330.0	1,330.0	8.4	4.5	0.06	218.2	0.2	1,067.6	1,060.7	6.81	156.779
2,500.0	2,500.0	1,330.0	1,330.0	8.7	4.5	0.06	218.2	0.2	1,165.6	1,158.8	6.86	169.838
2,600.0	2,600.0	1,330.0	1,330.0	9.1	4.5	0.06	218.2	0.2	1,264.0	1,257.1	6.93	182.429
2,700.0	2,700.0	1,330.0	1,330.0	9.5	4.5	0.06	218.2	0.2	1,362.6	1,355.6	7.00	194.555
2,800.0	2,800.0	1,330.0	1,330.0	9.8	4.5	0.06	218.2	0.2	1,461.4	1,454.3	7.09	206.220
2,900.0	2,900.0	1,330.0	1,330.0	10.2	4.5	0.06	218.2	0.2	1,560.3	1,553.2	7.18	217.431
3,000.0	3,000.0	1,330.0	1,330.0	10.5	4.5	0.06	218.2	0.2	1,659.4	1,652.2	7.27	228.196
3,100.0	3,100.0	1,330.0	1,330.0	10.9	4.5	0.06	218.2	0.2	1,758.6	1,751.2	7.37	238.526
3,200.0	3,200.0	1,330.0	1,330.0	11.3	4.5	0.06	218.2	0.2	1,857.9	1,850.4	7.48	248.429
3,300.0	3,300.0	1,330.0	1,330.0	11.6	4.5	0.06	218.2	0.2	1,957.2	1,949.6	7.59	257.916
3,400.0	3,400.0	1,330.0	1,330.0	12.0	4.5	0.06	218.2	0.2	2,056.6	2,048.9	7.70	266.998
3,500.0	3,500.0	1,330.0	1,330.0	12.3	4.5	0.06	218.2	0.2	2,156.1	2,148.3	7.82	275.685
3,600.0	3,600.0	1,330.0	1,330.0	12.7	4.5	0.06	218.2	0.2	2,255.6	2,247.7	7.94	283.989
3,700.0	3,700.0	1,330.0	1,330.0	13.0	4.5	0.06	218.2	0.2	2,355.1	2,347.1	8.07	291.921
3,800.0	3,800.0	1,330.0	1,330.0	13.4	4.5	0.06	218.2	0.2	2,454.7	2,446.5	8.20	299.492
3,830.7	3,830.7	1,330.0	1,330.0	13.5	4.5	0.06	218.2	0.2	2,485.3	2,477.1	8.24	301.745
3,850.0	3,850.0	1,330.0	1,330.0	13.6	4.5	38.84	218.2	0.2	2,504.5	2,496.3	8.26	303.300
3,900.0	3,899.9	1,330.0	1,330.0	13.6	4.5	24.82	218.2	0.2	2,554.1	2,545.8	8.31	307.173
3,950.0	3,949.6	1,330.0	1,330.0	13.6	4.5	17.92	218.2	0.2	2,603.3	2,594.9	8.37	311.115
4,000.0	3,998.8	1,330.0	1,330.0	13.6	4.5	13.93	218.2	0.2	2,652.0	2,643.6	8.42	315.059
4,050.0	4,047.5	1,330.0	1,330.0	13.6	4.5	11.37	218.2	0.2	2,700.0	2,691.5	8.46	318.963
4,100.0	4,095.4	1,330.0	1,330.0	13.6	4.5	9.59	218.2	0.2	2,747.1	2,738.6	8.51	322.779
4,150.0	4,142.3	1,330.0	1,330.0	13.6	4.5	8.30	218.2	0.2	2,793.4	2,784.8	8.56	326.459
4,200.0	4,188.1	1,330.0	1,330.0	13.7	4.5	7.32	218.2	0.2	2,838.6	2,829.9	8.60	329.949
4,250.0	4,232.7	1,330.0	1,330.0	13.8	4.5	6.55	218.2	0.2	2,882.6	2,873.9	8.65	333.194
4,300.0	4,275.8	1,330.0	1,330.0	13.9	4.5	5.93	218.2	0.2	2,925.4	2,916.7	8.70	336.134
4,350.0	4,317.3	1,330.0	1,330.0	14.0	4.5	5.43	218.2	0.2	2,966.8	2,958.0	8.76	338.709
4,400.0	4,357.0	1,330.0	1,330.0	14.2	4.5	5.01	218.2	0.2	3,006.8	2,997.9	8.82	340.857
4,450.0	4,394.9	1,330.0	1,330.0	14.4	4.5	4.67	218.2	0.2	3,045.2	3,036.3	8.89	342.520
4,500.0	4,430.8	1,330.0	1,330.0	14.7	4.5	4.37	218.2	0.2	3,082.1	3,073.1	8.97	343.641
4,550.0	4,464.5	1,330.0	1,330.0	15.1	4.5	4.12	218.2	0.2	3,117.2	3,108.2	9.06	344.172
4,600.0	4,496.0	1,330.0	1,330.0	15.5	4.5	3.91	218.2	0.2	3,150.6	3,141.5	9.16	344.071
4,650.0	4,525.1	1,330.0	1,330.0	15.9	4.5	3.72	218.2	0.2	3,182.3	3,173.0	9.27	343.311
4,700.0	4,551.7	1,330.0	1,330.0	16.5	4.5	3.56	218.2	0.2	3,212.0	3,202.6	9.40	341.876
4,750.0	4,575.7	1,330.0	1,330.0	17.1	4.5	3.42	218.2	0.2	3,239.9	3,230.3	9.54	339.768
4,800.0	4,597.1	1,330.0	1,330.0	17.8	4.5	3.30	218.2	0.2	3,265.7	3,256.0	9.69	337.003
4,850.0	4,615.7	1,330.0	1,330.0	18.5	4.5	3.19	218.2	0.2	3,289.6	3,279.7	9.86	333.612
4,900.0	4,631.6	1,330.0	1,330.0	19.3	4.5	3.10	218.2	0.2	3,311.4	3,301.3	10.05	329.640
4,950.0	4,644.5	1,330.0	1,330.0	20.2	4.5	3.02	218.2	0.2	3,331.1	3,320.8	10.24	325.144
5,000.0	4,654.6	1,330.0	1,330.0	21.1	4.5	2.96	218.2	0.2	3,348.7	3,338.2	10.46	320.190
5,050.0	4,661.7	1,330.0	1,330.0	22.0	4.5	2.90	218.2	0.2	3,364.1	3,353.4	10.68	314.845
5,100.0	4,665.8	1,330.0	1,330.0	23.0	4.5	2.85	218.2	0.2	3,377.4	3,366.4	10.92	309.184
5,144.4	4,667.0	1,330.0	1,330.0	23.9	4.5	2.82	218.2	0.2	3,387.3	3,376.1	11.14	303.964

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
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+HGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
5,200.0	4,667.0	1,330.0	1,330.0	25.1	4.5	2.81	218.2	0.2	3,399.1	3,387.6	11.44	297.236		
5,300.0	4,667.0	1,330.0	1,330.0	27.2	4.5	2.81	218.2	0.2	3,422.4	3,410.4	11.99	285.448		
5,400.0	4,667.0	1,330.0	1,330.0	29.4	4.5	2.80	218.2	0.2	3,448.5	3,436.0	12.57	274.438		
5,500.0	4,667.0	1,330.0	1,330.0	31.6	4.5	2.80	218.2	0.2	3,477.3	3,464.2	13.16	264.312		
5,600.0	4,667.0	1,330.0	1,330.0	33.9	4.5	2.79	218.2	0.2	3,508.7	3,495.0	13.75	255.102		
5,700.0	4,667.0	1,330.0	1,330.0	36.2	4.5	2.79	218.2	0.2	3,542.7	3,528.3	14.35	246.794		
5,800.0	4,667.0	1,330.0	1,330.0	38.5	4.5	2.78	218.2	0.2	3,579.1	3,564.2	14.95	239.348		
5,900.0	4,667.0	1,330.0	1,330.0	40.9	4.5	2.77	218.2	0.2	3,617.9	3,602.4	15.55	232.709		
6,000.0	4,667.0	1,330.0	1,330.0	43.3	4.5	2.76	218.2	0.2	3,659.1	3,643.0	16.13	226.816		
6,100.0	4,667.0	1,330.0	1,330.0	45.7	4.5	2.75	218.2	0.2	3,702.5	3,685.8	16.71	221.606		
6,200.0	4,667.0	1,330.0	1,330.0	48.1	4.5	2.74	218.2	0.2	3,748.0	3,730.8	17.27	217.020		
6,300.0	4,667.0	1,330.0	1,330.0	50.5	4.5	2.73	218.2	0.2	3,795.7	3,777.9	17.82	213.001		
6,400.0	4,667.0	1,330.0	1,330.0	53.0	4.5	2.72	218.2	0.2	3,845.4	3,827.0	18.36	209.495		
6,500.0	4,667.0	1,330.0	1,330.0	55.4	4.5	2.71	218.2	0.2	3,897.0	3,878.1	18.88	206.457		
6,600.0	4,667.0	1,330.0	1,330.0	57.9	4.5	2.69	218.2	0.2	3,950.4	3,931.0	19.38	203.841		
6,700.0	4,667.0	1,330.0	1,330.0	60.3	4.5	2.68	218.2	0.2	4,005.7	3,985.8	19.87	201.608		
6,800.0	4,667.0	1,330.0	1,330.0	62.8	4.5	2.67	218.2	0.2	4,062.6	4,042.3	20.34	199.724		
6,900.0	4,667.0	1,330.0	1,330.0	65.3	4.5	2.65	218.2	0.2	4,121.2	4,100.4	20.80	198.157		
7,000.0	4,667.0	1,330.0	1,330.0	67.8	4.5	2.64	218.2	0.2	4,181.4	4,160.1	21.24	196.878		
7,100.0	4,667.0	1,330.0	1,330.0	70.2	4.5	2.62	218.2	0.2	4,243.1	4,221.4	21.66	195.861		
7,200.0	4,667.0	1,330.0	1,330.0	72.7	4.5	2.61	218.2	0.2	4,306.2	4,284.1	22.07	195.084		
7,300.0	4,667.0	1,330.0	1,330.0	75.2	4.5	2.59	218.2	0.2	4,370.7	4,348.2	22.47	194.526		
7,400.0	4,667.0	1,330.0	1,330.0	77.7	4.5	2.57	218.2	0.2	4,436.5	4,413.6	22.85	194.169		
7,500.0	4,667.0	1,330.0	1,330.0	80.2	4.5	2.56	218.2	0.2	4,503.5	4,480.3	23.21	193.995		
7,600.0	4,666.9	1,330.0	1,330.0	82.7	4.5	2.54	218.2	0.2	4,571.8	4,548.2	23.57	193.991		
7,700.0	4,666.9	1,330.0	1,330.0	85.2	4.5	2.52	218.2	0.2	4,641.2	4,617.3	23.91	194.141		
7,800.0	4,666.9	1,330.0	1,330.0	87.7	4.5	2.50	218.2	0.2	4,711.8	4,687.5	24.23	194.434		
7,900.0	4,666.9	1,330.0	1,330.0	90.2	4.5	2.48	218.2	0.2	4,783.3	4,758.8	24.55	194.859		
8,000.0	4,666.9	1,330.0	1,330.0	92.7	4.5	2.46	218.2	0.2	4,855.9	4,831.1	24.85	195.405		
8,100.0	4,666.9	1,330.0	1,330.0	95.3	4.5	2.44	218.2	0.2	4,929.5	4,904.3	25.14	196.063		
8,200.0	4,666.9	1,330.0	1,330.0	97.8	4.5	2.41	218.2	0.2	5,003.9	4,978.5	25.42	196.825		
8,300.0	4,666.9	1,330.0	1,330.0	100.3	4.5	2.39	218.2	0.2	5,079.3	5,053.6	25.69	197.683		
8,400.0	4,666.9	1,330.0	1,330.0	102.8	4.5	2.37	218.2	0.2	5,155.5	5,129.5	25.96	198.629		
8,500.0	4,666.9	1,330.0	1,330.0	105.3	4.5	2.35	218.2	0.2	5,232.4	5,206.2	26.21	199.659		
8,600.0	4,666.9	1,330.0	1,330.0	107.8	4.5	2.32	218.2	0.2	5,310.2	5,283.7	26.45	200.764		
8,700.0	4,666.9	1,330.0	1,330.0	110.4	4.5	2.30	218.2	0.2	5,388.7	5,362.0	26.68	201.941		
8,800.0	4,666.9	1,330.0	1,330.0	112.9	4.5	2.27	218.2	0.2	5,467.9	5,441.0	26.91	203.185		
8,900.0	4,666.9	1,330.0	1,330.0	115.4	4.5	2.24	218.2	0.2	5,547.7	5,520.6	27.13	204.489		
9,000.0	4,666.9	1,330.0	1,330.0	117.9	4.5	2.22	218.2	0.2	5,628.2	5,600.9	27.34	205.851		
9,100.0	4,666.9	1,330.0	1,330.0	120.4	4.5	2.19	218.2	0.2	5,709.4	5,681.8	27.55	207.266		
9,200.0	4,666.9	1,330.0	1,330.0	123.0	4.5	2.16	218.2	0.2	5,791.1	5,763.3	27.74	208.730		
9,300.0	4,666.9	1,330.0	1,330.0	125.5	4.5	2.13	218.2	0.2	5,873.4	5,845.4	27.94	210.241		
9,400.0	4,666.9	1,330.0	1,330.0	128.0	4.5	2.11	218.2	0.2	5,956.2	5,928.1	28.12	211.795		
9,500.0	4,666.9	1,330.0	1,330.0	130.5	4.5	2.08	218.2	0.2	6,039.5	6,011.2	28.30	213.389		
9,600.0	4,666.9	1,330.0	1,330.0	133.1	4.5	2.05	218.2	0.2	6,123.4	6,094.9	28.48	215.021		
9,700.0	4,667.0	1,330.0	1,330.0	135.6	4.5	2.01	218.2	0.2	6,207.7	6,179.1	28.65	216.687		
9,800.0	4,667.0	1,330.0	1,330.0	138.1	4.5	1.98	218.2	0.2	6,292.5	6,263.7	28.81	218.386		
9,900.0	4,667.0	1,330.0	1,330.0	140.7	4.5	1.95	218.2	0.2	6,377.7	6,348.8	28.97	220.115		
10,000.0	4,667.0	1,330.0	1,330.0	143.2	4.5	1.92	218.2	0.2	6,463.4	6,434.2	29.13	221.872		
10,100.0	4,667.0	1,330.0	1,330.0	145.7	4.5	1.88	218.2	0.2	6,549.4	6,520.2	29.28	223.656		
10,200.0	4,667.0	1,330.0	1,330.0	148.3	4.5	1.85	218.2	0.2	6,635.9	6,606.5	29.43	225.464		
10,300.0	4,667.0	1,330.0	1,330.0	150.8	4.5	1.82	218.2	0.2	6,722.7	6,693.1	29.58	227.294		

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,400.0	4,667.0	1,330.0	1,330.0	153.3	4.5	1.78	218.2	0.2	6,809.9	6,780.2	29.72	229.146		
10,500.0	4,667.0	1,330.0	1,330.0	155.9	4.5	1.75	218.2	0.2	6,897.4	6,867.6	29.86	231.018		
10,600.0	4,667.0	1,330.0	1,330.0	158.4	4.5	1.71	218.2	0.2	6,985.3	6,955.3	29.99	232.907		
10,700.0	4,667.0	1,330.0	1,330.0	160.9	4.5	1.67	218.2	0.2	7,073.5	7,043.4	30.12	234.814		
10,800.0	4,667.0	1,330.0	1,330.0	163.5	4.5	1.64	218.2	0.2	7,162.0	7,131.8	30.25	236.736		
10,900.0	4,667.0	1,330.0	1,330.0	166.0	4.5	1.60	218.2	0.2	7,250.8	7,220.4	30.38	238.672		
11,000.0	4,667.0	1,330.0	1,330.0	168.5	4.5	1.56	218.2	0.2	7,339.9	7,309.4	30.50	240.622		
11,100.0	4,667.0	1,330.0	1,330.0	171.1	4.5	1.52	218.2	0.2	7,429.3	7,398.6	30.63	242.583		
11,200.0	4,667.0	1,330.0	1,330.0	173.6	4.5	1.48	218.2	0.2	7,518.9	7,488.2	30.75	244.556		
11,300.0	4,667.0	1,330.0	1,330.0	176.2	4.5	1.44	218.2	0.2	7,608.8	7,577.9	30.86	246.540		
11,400.0	4,667.0	1,330.0	1,330.0	178.7	4.5	1.40	218.2	0.2	7,699.0	7,668.0	30.98	248.532		
11,500.0	4,667.0	1,330.0	1,330.0	181.2	4.5	1.36	218.2	0.2	7,789.3	7,758.3	31.09	250.533		
11,600.0	4,667.0	1,330.0	1,330.0	183.8	4.5	1.31	218.2	0.2	7,880.0	7,848.8	31.20	252.542		
11,700.0	4,667.0	1,330.0	1,330.0	186.3	4.5	1.27	218.2	0.2	7,970.8	7,939.5	31.31	254.558		
11,800.0	4,667.0	1,330.0	1,330.0	188.9	4.5	1.23	218.2	0.2	8,061.9	8,030.5	31.42	256.579		
11,900.0	4,667.0	1,330.0	1,330.0	191.4	4.5	1.18	218.2	0.2	8,153.1	8,121.6	31.53	258.607		
12,000.0	4,667.0	1,330.0	1,330.0	193.9	4.5	1.14	218.2	0.2	8,244.6	8,213.0	31.63	260.639		
12,054.4	4,667.0	1,330.0	1,330.0	195.3	4.5	1.12	218.2	0.2	8,294.5	8,262.8	31.69	261.747		

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
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		Offset		Semi Major Axis		Highside Depth (usft)	Distance		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)										
3,830.7	3,830.7	3,830.7	3,830.7	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.00	N/A	
3,832.8	3,832.8	3,832.8	3,832.8	0.0	0.0	-180.00	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.182 Level 1	
3,850.0	3,850.0	3,850.0	3,850.0	0.1	0.1	180.00	0.0	0.0	0.0	0.2	0.1	0.13	1.650		
3,900.0	3,899.9	3,899.9	3,899.9	0.1	0.2	180.00	0.0	0.0	0.0	2.9	2.5	0.37	7.764		
3,950.0	3,949.6	3,949.6	3,949.6	0.2	0.4	180.00	0.0	0.0	0.0	8.5	7.9	0.63	13.549		
4,000.0	3,998.8	3,998.8	3,998.8	0.2	0.6	180.00	0.0	0.0	0.0	17.1	16.2	0.85	20.173		
4,050.0	4,047.5	4,047.5	4,047.5	0.2	0.8	180.00	0.0	0.0	0.0	28.6	27.6	0.99	28.806		
4,100.0	4,095.4	4,095.4	4,095.4	0.2	0.9	180.00	0.0	0.0	0.0	43.0	41.9	1.14	37.861		
4,150.0	4,142.3	4,142.3	4,142.3	0.5	1.1	180.00	0.0	0.0	0.0	60.2	58.6	1.60	37.705 CC, ES, SF		
4,200.0	4,188.1	4,188.1	4,188.1	0.8	1.3	180.00	0.0	0.0	0.0	80.2	78.2	2.05	39.045		
4,250.0	4,232.7	4,232.7	4,232.7	1.1	1.4	180.00	0.0	0.0	0.0	102.9	100.4	2.54	40.534		
4,300.0	4,275.8	4,275.8	4,275.8	1.5	1.6	180.00	0.0	0.0	0.0	128.3	125.2	3.06	41.959		
4,350.0	4,317.3	4,317.3	4,317.3	1.9	1.7	180.00	0.0	0.0	0.0	156.1	152.5	3.61	43.267		
4,400.0	4,357.0	4,357.0	4,357.0	2.4	1.9	180.00	0.0	0.0	0.0	186.4	182.2	4.19	44.452		
4,450.0	4,394.9	4,394.9	4,394.9	2.9	2.0	180.00	0.0	0.0	0.0	219.0	214.2	4.81	45.522		
4,500.0	4,430.8	4,430.8	4,430.8	3.5	2.2	180.00	0.0	0.0	0.0	253.8	248.4	5.46	46.492		
4,550.0	4,464.5	4,464.5	4,464.5	4.1	2.3	180.00	0.0	0.0	0.0	290.7	284.6	6.14	47.379		
4,600.0	4,496.0	4,496.0	4,496.0	4.8	2.4	180.00	0.0	0.0	0.0	329.6	322.7	6.84	48.200		
4,650.0	4,525.1	4,525.1	4,525.1	5.5	2.5	180.00	0.0	0.0	0.0	370.2	362.7	7.56	48.971		
4,700.0	4,551.7	4,551.7	4,551.7	6.3	2.6	180.00	0.0	0.0	0.0	412.6	404.3	8.30	49.705		
4,750.0	4,575.7	4,575.7	4,575.7	7.1	2.7	180.00	0.0	0.0	0.0	456.4	447.3	9.05	50.417		
4,800.0	4,597.1	4,597.1	4,597.1	8.0	2.7	180.00	0.0	0.0	0.0	501.6	491.8	9.81	51.115		
4,850.0	4,615.7	4,615.7	4,615.7	8.9	2.8	180.00	0.0	0.0	0.0	548.0	537.4	10.58	51.809		
4,900.0	4,631.6	4,631.6	4,631.6	9.8	2.9	180.00	0.0	0.0	0.0	595.4	584.1	11.34	52.506		
4,950.0	4,644.5	4,644.5	4,644.5	10.8	2.9	180.00	0.0	0.0	0.0	643.7	631.6	12.10	53.212		
5,000.0	4,654.6	4,654.6	4,654.6	11.8	3.0	180.00	0.0	0.0	0.0	692.7	679.8	12.84	53.931		
5,050.0	4,661.7	4,661.7	4,661.7	12.8	3.0	180.00	0.0	0.0	0.0	742.1	728.6	13.58	54.666		
5,100.0	4,665.8	4,665.8	4,665.8	13.9	3.0	180.00	0.0	0.0	0.0	792.0	777.7	14.29	55.418		
5,144.4	4,667.0	4,667.0	4,667.0	14.8	3.0	0.00	0.0	0.0	0.0	836.3	821.4	14.91	56.103		
5,200.0	4,667.0	4,667.0	4,667.0	16.0	3.0	-80.45	0.0	0.0	0.0	891.9	876.3	15.66	56.960		
5,300.0	4,667.0	4,667.0	4,667.0	18.2	3.0	-86.49	0.0	0.0	0.0	991.9	975.0	16.97	58.463		
5,400.0	4,667.0	4,667.0	4,667.0	20.4	3.0	-87.84	0.0	0.0	0.0	1,091.9	1,073.7	18.22	59.936		
5,500.0	4,667.0	4,667.0	4,667.0	22.7	3.0	-88.44	0.0	0.0	0.0	1,191.9	1,172.5	19.42	61.386		
5,600.0	4,667.0	4,667.0	4,667.0	25.0	3.0	-88.78	0.0	0.0	0.0	1,291.9	1,271.4	20.57	62.815		
5,700.0	4,667.0	4,667.0	4,667.0	27.3	3.0	-89.00	0.0	0.0	0.0	1,391.9	1,370.3	21.67	64.225		
5,800.0	4,667.0	4,667.0	4,667.0	29.6	3.0	-89.16	0.0	0.0	0.0	1,491.9	1,469.2	22.74	65.617		
5,900.0	4,667.0	4,667.0	4,667.0	32.0	3.0	-89.28	0.0	0.0	0.0	1,591.9	1,568.2	23.76	66.991		
6,000.0	4,667.0	4,667.0	4,667.0	34.4	3.0	-89.38	0.0	0.0	0.0	1,691.9	1,667.2	24.75	68.348		
6,100.0	4,667.0	4,667.0	4,667.0	36.8	3.0	-89.46	0.0	0.0	0.0	1,791.9	1,766.2	25.71	69.688		
6,200.0	4,667.0	4,667.0	4,667.0	39.2	3.0	-89.52	0.0	0.0	0.0	1,891.9	1,865.3	26.64	71.011		
6,300.0	4,667.0	4,667.0	4,667.0	41.6	3.0	-89.57	0.0	0.0	0.0	1,991.9	1,964.4	27.54	72.317		
6,400.0	4,667.0	4,667.0	4,667.0	44.0	3.0	-89.62	0.0	0.0	0.0	2,091.9	2,063.5	28.42	73.608		
6,500.0	4,667.0	4,667.0	4,667.0	46.4	3.0	-89.66	0.0	0.0	0.0	2,191.9	2,162.7	29.27	74.883		
6,600.0	4,667.0	4,667.0	4,667.0	48.9	3.0	-89.69	0.0	0.0	0.0	2,291.9	2,261.8	30.10	76.143		
6,700.0	4,667.0	4,667.0	4,667.0	51.3	3.0	-89.72	0.0	0.0	0.0	2,391.9	2,361.0	30.91	77.387		
6,800.0	4,667.0	4,667.0	4,667.0	53.8	3.0	-89.75	0.0	0.0	0.0	2,491.9	2,460.2	31.70	78.617		
6,900.0	4,667.0	4,667.0	4,667.0	56.2	3.0	-89.78	0.0	0.0	0.0	2,591.9	2,559.5	32.47	79.833		
7,000.0	4,667.0	4,667.0	4,667.0	58.7	3.0	-89.80	0.0	0.0	0.0	2,691.9	2,658.7	33.22	81.034		
7,100.0	4,667.0	4,667.0	4,667.0	61.2	3.0	-89.82	0.0	0.0	0.0	2,791.9	2,758.0	33.96	82.223		
7,200.0	4,667.0	4,667.0	4,667.0	63.6	3.0	-89.84	0.0	0.0	0.0	2,891.9	2,857.3	34.68	83.398		
7,300.0	4,667.0	4,667.0	4,667.0	66.1	3.0	-89.86	0.0	0.0	0.0	2,991.9	2,956.6	35.38	84.560		
7,400.0	4,667.0	4,667.0	4,667.0	68.6	3.0	-89.87	0.0	0.0	0.0	3,091.9	3,055.9	36.07	85.710		

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

Anticollision Report



Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,500.0	4,667.0	4,667.0	4,667.0	71.1	3.0	-89.89	0.0	0.0	3,191.9	3,155.2	36.75	86.848		
7,600.0	4,666.9	4,666.9	4,666.9	73.6	3.0	-89.90	0.0	0.0	3,291.9	3,254.5	37.42	87.974		
7,700.0	4,666.9	4,666.9	4,666.9	76.0	3.0	-89.91	0.0	0.0	3,391.9	3,353.9	38.07	89.088		
7,800.0	4,666.9	4,666.9	4,666.9	78.5	3.0	-89.93	0.0	0.0	3,491.9	3,453.2	38.72	90.191		
7,900.0	4,666.9	4,666.9	4,666.9	81.0	3.0	-89.94	0.0	0.0	3,591.9	3,552.6	39.35	91.284		
8,000.0	4,666.9	4,666.9	4,666.9	83.5	3.0	-89.95	0.0	0.0	3,691.9	3,652.0	39.97	92.366		
8,100.0	4,666.9	4,666.9	4,666.9	86.0	3.0	-89.96	0.0	0.0	3,791.9	3,751.3	40.58	93.438		
8,200.0	4,666.9	4,666.9	4,666.9	88.5	3.0	-89.97	0.0	0.0	3,891.9	3,850.7	41.18	94.499		
8,300.0	4,666.9	4,666.9	4,666.9	91.1	3.0	-89.98	0.0	0.0	3,991.9	3,950.1	41.78	95.552		
8,400.0	4,666.9	4,666.9	4,666.9	93.6	3.0	-89.98	0.0	0.0	4,091.9	4,049.6	42.36	96.594		
8,500.0	4,666.9	4,666.9	4,666.9	96.1	3.0	-89.99	0.0	0.0	4,191.9	4,149.0	42.94	97.628		
8,600.0	4,666.9	4,666.9	4,666.9	98.6	3.0	-90.00	0.0	0.0	4,291.9	4,248.4	43.51	98.652		
8,700.0	4,666.9	4,666.9	4,666.9	101.1	3.0	-90.01	0.0	0.0	4,391.9	4,347.8	44.07	99.668		
8,800.0	4,666.9	4,666.9	4,666.9	103.6	3.0	-90.01	0.0	0.0	4,491.9	4,447.3	44.62	100.675		
8,900.0	4,666.9	4,666.9	4,666.9	106.1	3.0	-90.02	0.0	0.0	4,591.9	4,546.7	45.16	101.674		
9,000.0	4,666.9	4,666.9	4,666.9	108.6	3.0	-90.03	0.0	0.0	4,691.9	4,646.2	45.70	102.665		
9,100.0	4,666.9	4,666.9	4,666.9	111.2	3.0	-90.03	0.0	0.0	4,791.9	4,745.7	46.23	103.648		
9,200.0	4,666.9	4,666.9	4,666.9	113.7	3.0	-90.04	0.0	0.0	4,891.9	4,845.1	46.76	104.623		
9,300.0	4,666.9	4,666.9	4,666.9	116.2	3.0	-90.04	0.0	0.0	4,991.9	4,944.6	47.28	105.591		
9,400.0	4,666.9	4,666.9	4,666.9	118.7	3.0	-90.05	0.0	0.0	5,091.9	5,044.1	47.79	106.551		
9,500.0	4,666.9	4,666.9	4,666.9	121.2	3.0	-90.05	0.0	0.0	5,191.9	5,143.6	48.29	107.505		
9,600.0	4,666.9	4,666.9	4,666.9	123.8	3.0	-90.06	0.0	0.0	5,291.9	5,243.1	48.80	108.451		
9,700.0	4,667.0	4,667.0	4,667.0	126.3	3.0	-90.06	0.0	0.0	5,391.9	5,342.6	49.29	109.390		
9,800.0	4,667.0	4,667.0	4,667.0	128.8	3.0	-90.07	0.0	0.0	5,491.9	5,442.1	49.78	110.323		
9,900.0	4,667.0	4,667.0	4,667.0	131.3	3.0	-90.07	0.0	0.0	5,591.9	5,541.6	50.26	111.249		
10,000.0	4,667.0	4,667.0	4,667.0	133.9	3.0	-90.08	0.0	0.0	5,691.9	5,641.1	50.74	112.169		
10,100.0	4,667.0	4,667.0	4,667.0	136.4	3.0	-90.08	0.0	0.0	5,791.9	5,740.6	51.22	113.082		
10,200.0	4,667.0	4,667.0	4,667.0	138.9	3.0	-90.08	0.0	0.0	5,891.9	5,840.2	51.69	113.990		
10,300.0	4,667.0	4,667.0	4,667.0	141.4	3.0	-90.09	0.0	0.0	5,991.8	5,939.7	52.15	114.891		
10,400.0	4,667.0	4,667.0	4,667.0	144.0	3.0	-90.09	0.0	0.0	6,091.8	6,039.2	52.61	115.787		
10,500.0	4,667.0	4,667.0	4,667.0	146.5	3.0	-90.10	0.0	0.0	6,191.8	6,138.8	53.07	116.677		
10,600.0	4,667.0	4,667.0	4,667.0	149.0	3.0	-90.10	0.0	0.0	6,291.8	6,238.3	53.52	117.561		
10,700.0	4,667.0	4,667.0	4,667.0	151.6	3.0	-90.10	0.0	0.0	6,391.8	6,337.9	53.97	118.440		
10,800.0	4,667.0	4,667.0	4,667.0	154.1	3.0	-90.11	0.0	0.0	6,491.8	6,437.4	54.41	119.313		
10,900.0	4,667.0	4,667.0	4,667.0	156.6	3.0	-90.11	0.0	0.0	6,591.8	6,537.0	54.85	120.181		
11,000.0	4,667.0	4,667.0	4,667.0	159.2	3.0	-90.11	0.0	0.0	6,691.8	6,636.5	55.28	121.044		
11,100.0	4,667.0	4,667.0	4,667.0	161.7	3.0	-90.11	0.0	0.0	6,791.8	6,736.1	55.72	121.902		
11,200.0	4,667.0	4,667.0	4,667.0	164.2	3.0	-90.12	0.0	0.0	6,891.8	6,835.7	56.14	122.755		
11,300.0	4,667.0	4,667.0	4,667.0	166.8	3.0	-90.12	0.0	0.0	6,991.8	6,935.2	56.57	123.603		
11,400.0	4,667.0	4,667.0	4,667.0	169.3	3.0	-90.12	0.0	0.0	7,091.8	7,034.8	56.99	124.446		
11,500.0	4,667.0	4,667.0	4,667.0	171.8	3.0	-90.12	0.0	0.0	7,191.8	7,134.4	57.40	125.285		
11,600.0	4,667.0	4,667.0	4,667.0	174.4	3.0	-90.13	0.0	0.0	7,291.8	7,233.9	57.82	126.119		
11,700.0	4,667.0	4,667.0	4,667.0	176.9	3.0	-90.13	0.0	0.0	7,391.8	7,333.5	58.23	126.948		
11,800.0	4,667.0	4,667.0	4,667.0	179.5	3.0	-90.13	0.0	0.0	7,491.7	7,433.1	58.63	127.773		
11,900.0	4,667.0	4,667.0	4,667.0	182.0	3.0	-90.13	0.0	0.0	7,591.7	7,532.7	59.04	128.594		
12,000.0	4,667.0	4,667.0	4,667.0	184.5	3.0	-90.14	0.0	0.0	7,691.7	7,632.3	59.44	129.410		
12,054.4	4,667.0	4,667.0	4,667.0	185.9	3.0	-90.14	0.0	0.0	7,746.2	7,686.5	59.65	129.853		

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

Anticollision Report



Company: DJR Operating
 Project: Proposed Carson Unit
 Reference Site: WC 21-2
 Site Error: 0.0 usft
 Reference Well: Slot 1
 Well Error: 0.0 usft
 Reference Wellbore: Carson 615H
 Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
 TVD Reference: Rig @ 6370.0usft (Rig TBD)
 MD Reference: Rig @ 6370.0usft (Rig TBD)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: EDM
 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		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
0.0	0.0	0.0	0.0	0.0	0.0	-44.87	14.2	-14.1	20.0						
100.0	100.0	100.0	100.0	0.1	0.1	-44.87	14.2	-14.1	20.0	19.7	0.29	69.740			
200.0	200.0	200.0	200.0	0.5	0.5	-44.87	14.2	-14.1	20.0	19.0	1.00	19.926			
300.0	300.0	300.0	300.0	0.9	0.9	-44.87	14.2	-14.1	20.0	18.3	1.72	11.623			
400.0	400.0	400.0	400.0	1.2	1.2	-44.87	14.2	-14.1	20.0	17.6	2.44	8.205			
500.0	500.0	500.3	500.3	1.6	1.6	-49.32	12.5	-14.5	19.1	16.0	3.14	6.090			
600.0	600.0	600.4	600.3	1.9	1.9	-64.89	7.3	-15.7	17.3	13.5	3.84	4.509			
647.4	647.4	647.7	647.4	2.1	2.1	-77.23	3.7	-16.5	16.9	12.7	4.17	4.047 CC, ES			
700.0	700.0	700.0	699.5	2.3	2.3	-93.68	-1.1	-17.6	17.6	13.1	4.55	3.875			
800.0	800.0	798.9	797.6	2.7	2.6	-122.45	-12.9	-20.2	24.1	18.8	5.25	4.588			
900.0	900.0	897.4	895.0	3.0	3.0	-139.36	-27.4	-23.5	36.5	30.5	5.95	6.136			
1,000.0	1,000.0	996.2	992.5	3.4	3.5	-147.59	-42.4	-26.9	50.8	44.2	6.65	7.643			
1,100.0	1,100.0	1,094.9	1,090.1	3.7	3.9	-152.16	-57.5	-30.3	65.7	58.4	7.36	8.934			
1,200.0	1,200.0	1,193.7	1,187.7	4.1	4.3	-155.03	-72.5	-33.8	80.9	72.8	8.07	10.027			
1,300.0	1,300.0	1,292.5	1,285.2	4.4	4.8	-156.99	-87.5	-37.2	96.2	87.4	8.78	10.954			
1,400.0	1,400.0	1,391.3	1,382.8	4.8	5.2	-158.41	-102.5	-40.6	111.6	102.1	9.50	11.748			
1,500.0	1,500.0	1,490.1	1,480.4	5.2	5.6	-159.49	-117.5	-44.0	127.0	116.8	10.21	12.434			
1,600.0	1,600.0	1,588.8	1,578.0	5.5	6.1	-160.33	-132.5	-47.4	142.5	131.5	10.93	13.031			
1,700.0	1,700.0	1,687.6	1,675.5	5.9	6.5	-161.01	-147.5	-50.8	157.9	146.3	11.65	13.556			
1,800.0	1,800.0	1,786.4	1,773.1	6.2	7.0	-161.57	-162.6	-54.2	173.5	161.1	12.37	14.021			
1,900.0	1,900.0	1,885.2	1,870.7	6.6	7.5	-162.04	-177.6	-57.6	189.0	175.9	13.09	14.435			
2,000.0	2,000.0	1,983.9	1,968.2	7.0	7.9	-162.43	-192.6	-61.0	204.5	190.7	13.81	14.806			
2,100.0	2,100.0	2,082.7	2,065.8	7.3	8.4	-162.77	-207.6	-64.4	220.0	205.5	14.53	15.140			
2,200.0	2,200.0	2,181.5	2,163.4	7.7	8.8	-163.07	-222.6	-67.8	235.6	220.3	15.26	15.442			
2,300.0	2,300.0	2,280.3	2,260.9	8.0	9.3	-163.32	-237.6	-71.2	251.1	235.2	15.98	15.718			
2,400.0	2,400.0	2,379.1	2,358.5	8.4	9.7	-163.55	-252.7	-74.6	266.7	250.0	16.70	15.969			
2,500.0	2,500.0	2,477.8	2,456.1	8.7	10.2	-163.75	-267.7	-78.0	282.2	264.8	17.42	16.200			
2,600.0	2,600.0	2,576.6	2,553.7	9.1	10.7	-163.94	-282.7	-81.4	297.8	279.7	18.15	16.412			
2,700.0	2,700.0	2,675.4	2,651.2	9.5	11.1	-164.10	-297.7	-84.8	313.4	294.5	18.87	16.608			
2,800.0	2,800.0	2,774.2	2,748.8	9.8	11.6	-164.25	-312.7	-88.2	328.9	309.3	19.59	16.789			
2,900.0	2,900.0	2,872.9	2,846.4	10.2	12.0	-164.38	-327.7	-91.6	344.5	324.2	20.32	16.957			
3,000.0	3,000.0	2,971.7	2,943.9	10.5	12.5	-164.51	-342.8	-95.0	360.1	339.0	21.04	17.114			
3,100.0	3,100.0	3,070.5	3,041.5	10.9	13.0	-164.62	-357.8	-98.4	375.6	353.9	21.76	17.260			
3,200.0	3,200.0	3,169.3	3,139.1	11.3	13.4	-164.72	-372.8	-101.8	391.2	368.7	22.49	17.397			
3,300.0	3,300.0	3,268.1	3,236.6	11.6	13.9	-164.82	-387.8	-105.2	406.8	383.6	23.21	17.526			
3,400.0	3,400.0	3,366.8	3,334.2	12.0	14.3	-164.91	-402.8	-108.6	422.4	398.4	23.93	17.646			
3,500.0	3,500.0	3,465.6	3,431.8	12.3	14.8	-164.99	-417.8	-112.0	437.9	413.3	24.66	17.760			
3,600.0	3,600.0	3,564.4	3,529.4	12.7	15.3	-165.07	-432.8	-115.4	453.5	428.1	25.38	17.866			
3,700.0	3,700.0	3,663.2	3,626.9	13.0	15.7	-165.14	-447.9	-118.8	469.1	443.0	26.11	17.967			
3,800.0	3,800.0	3,761.9	3,724.5	13.4	16.2	-165.21	-462.9	-122.2	484.7	457.8	26.83	18.063			
3,830.7	3,830.7	3,792.3	3,754.5	13.5	16.3	-165.23	-467.5	-123.3	489.4	462.4	27.05	18.091			
3,850.0	3,850.0	3,811.3	3,773.3	13.6	16.4	-116.81	-470.4	-123.9	492.5	465.4	27.16	18.134			
3,900.0	3,899.9	3,860.4	3,821.8	13.6	16.6	-116.56	-477.8	-125.6	501.5	474.2	27.35	18.338			
3,950.0	3,949.6	3,909.1	3,869.8	13.6	16.9	-116.51	-485.2	-127.3	511.8	484.3	27.54	18.588			
4,000.0	3,998.8	3,957.1	3,917.2	13.6	17.1	-116.63	-492.5	-129.0	523.5	495.8	27.73	18.882			
4,050.0	4,047.5	4,004.3	3,963.9	13.6	17.3	-116.89	-499.7	-130.6	536.7	508.8	27.92	19.220			
4,100.0	4,095.4	4,055.3	4,014.2	13.6	17.5	-117.39	-507.4	-132.4	551.3	523.2	28.16	19.579			
4,150.0	4,142.3	4,132.6	4,090.9	13.6	17.9	-118.46	-515.5	-139.3	565.9	537.4	28.54	19.827			
4,200.0	4,188.1	4,214.5	4,171.4	13.7	18.2	-119.27	-518.1	-153.3	579.4	550.5	28.86	20.075			
4,250.0	4,232.7	4,300.6	4,254.5	13.8	18.4	-119.77	-514.1	-175.4	591.4	562.3	29.09	20.329			
4,300.0	4,275.8	4,390.4	4,338.1	13.9	18.6	-119.93	-502.7	-206.1	601.6	572.4	29.24	20.577			
4,350.0	4,317.3	4,483.0	4,419.5	14.0	18.8	-119.73	-483.3	-245.4	609.9	580.6	29.33	20.792			

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,400.0	4,357.0	4,577.2	4,496.2	14.2	19.0	-119.16	-456.0	-292.8	616.1	586.6	29.44	20.928		
4,450.0	4,394.9	4,671.8	4,565.4	14.4	19.1	-118.22	-421.4	-346.9	620.1	590.4	29.64	20.918		
4,500.0	4,430.8	4,765.3	4,625.1	14.7	19.2	-116.94	-380.7	-406.1	622.0	592.0	30.05	20.702		
4,550.0	4,464.5	4,856.5	4,674.1	15.1	19.5	-115.35	-335.4	-468.2	622.0	591.2	30.72	20.249		
4,600.0	4,496.0	4,944.3	4,711.7	15.5	19.9	-113.50	-287.2	-531.3	620.2	588.4	31.72	19.549		
4,650.0	4,525.1	5,028.2	4,738.4	15.9	20.6	-111.45	-237.7	-593.4	616.9	583.9	33.06	18.662		
4,700.0	4,551.7	5,107.6	4,755.1	16.5	21.5	-109.25	-188.4	-653.3	612.5	577.9	34.68	17.665		
4,750.0	4,575.7	5,182.4	4,763.0	17.1	22.5	-106.94	-140.3	-710.0	607.3	570.9	36.43	16.671		
4,800.0	4,597.1	5,241.9	4,764.0	17.8	23.4	-105.03	-101.2	-754.9	601.8	563.5	38.29	15.718		
4,850.0	4,615.7	5,288.3	4,764.0	18.5	24.2	-103.71	-70.7	-789.8	597.3	557.2	40.09	14.899		
4,900.0	4,631.6	5,335.7	4,764.0	19.3	25.0	-102.51	-39.5	-825.5	594.0	552.1	41.96	14.159		
4,950.0	4,644.5	5,384.0	4,764.0	20.2	25.8	-101.47	-7.7	-861.8	591.8	547.9	43.86	13.491		
5,000.0	4,654.6	5,433.0	4,764.0	21.1	26.7	-100.62	24.5	-898.7	590.3	544.5	45.82	12.884		
5,050.0	4,661.7	5,482.4	4,764.0	22.0	27.6	-100.00	57.1	-935.9	589.5	541.7	47.80	12.333		
5,095.0	4,665.5	5,527.3	4,764.0	22.9	28.5	-99.63	86.6	-969.7	589.3	539.7	49.60	11.881		
5,100.0	4,665.8	5,532.2	4,764.0	23.0	28.6	-99.61	89.9	-973.4	589.3	539.5	49.80	11.833		
5,144.4	4,667.0	5,576.6	4,764.0	23.9	29.4	-99.47	119.1	-1,006.8	589.5	538.0	51.58	11.430		
5,200.0	4,667.0	5,632.2	4,764.0	25.1	30.5	-99.46	155.7	-1,048.7	590.1	536.2	53.83	10.961		
5,300.0	4,667.0	5,732.2	4,764.0	27.2	32.6	-99.45	221.5	-1,123.9	591.0	533.0	58.01	10.188		
5,400.0	4,667.0	5,832.2	4,764.0	29.4	34.7	-99.43	287.3	-1,199.2	591.9	529.6	62.31	9.500		
5,500.0	4,667.0	5,932.2	4,764.0	31.6	36.9	-99.42	353.2	-1,274.5	592.8	526.1	66.71	8.887		
5,600.0	4,667.0	6,032.1	4,764.0	33.9	39.1	-99.40	419.0	-1,349.7	593.7	522.5	71.20	8.339		
5,700.0	4,667.0	6,132.1	4,764.0	36.2	41.4	-99.39	484.8	-1,425.0	594.5	518.8	75.75	7.849		
5,800.0	4,667.0	6,232.1	4,764.0	38.5	43.6	-99.38	550.6	-1,500.3	595.3	515.0	80.35	7.409		
5,900.0	4,667.0	6,332.1	4,764.0	40.9	46.0	-99.37	616.4	-1,575.5	596.1	511.1	85.01	7.012		
6,000.0	4,667.0	6,432.1	4,764.0	43.3	48.3	-99.36	682.2	-1,650.8	596.8	507.1	89.70	6.653		
6,100.0	4,667.0	6,532.1	4,764.0	45.7	50.6	-99.35	748.0	-1,726.1	597.5	503.1	94.43	6.328		
6,200.0	4,667.0	6,632.0	4,764.0	48.1	53.0	-99.34	813.8	-1,801.4	598.2	499.0	99.18	6.031		
6,300.0	4,667.0	6,732.0	4,764.0	50.5	55.4	-99.33	879.6	-1,876.7	598.8	494.8	103.96	5.760		
6,400.0	4,667.0	6,832.0	4,764.0	53.0	57.8	-99.32	945.4	-1,951.9	599.4	490.6	108.77	5.511		
6,500.0	4,667.0	6,932.0	4,764.0	55.4	60.2	-99.31	1,011.2	-2,027.2	600.0	486.4	113.59	5.282		
6,600.0	4,667.0	7,032.0	4,764.0	57.9	62.6	-99.30	1,077.0	-2,102.5	600.5	482.1	118.43	5.071		
6,700.0	4,667.0	7,132.0	4,764.0	60.3	65.1	-99.29	1,142.8	-2,177.8	601.0	477.8	123.28	4.875		
6,800.0	4,667.0	7,232.0	4,764.0	62.8	67.5	-99.28	1,208.6	-2,253.1	601.5	473.4	128.15	4.694		
6,900.0	4,667.0	7,332.0	4,764.0	65.3	69.9	-99.28	1,274.4	-2,328.4	602.0	468.9	133.03	4.525		
7,000.0	4,667.0	7,431.9	4,764.0	67.8	72.4	-99.27	1,340.2	-2,403.7	602.4	464.4	137.92	4.368		
7,100.0	4,667.0	7,531.9	4,764.0	70.2	74.9	-99.27	1,406.0	-2,478.9	602.7	459.9	142.82	4.220		
7,200.0	4,667.0	7,631.9	4,764.0	72.7	77.3	-99.26	1,471.8	-2,554.2	603.1	455.4	147.72	4.083		
7,300.0	4,667.0	7,731.9	4,764.0	75.2	79.8	-99.26	1,537.6	-2,629.5	603.4	450.8	152.64	3.953		
7,400.0	4,667.0	7,831.9	4,764.0	77.7	82.3	-99.25	1,603.4	-2,704.8	603.7	446.1	157.56	3.832		
7,500.0	4,667.0	7,931.9	4,764.0	80.2	84.7	-99.25	1,669.2	-2,780.1	603.9	441.5	162.49	3.717		
7,600.0	4,666.9	8,031.9	4,764.0	82.7	87.2	-99.24	1,735.0	-2,855.4	604.2	436.7	167.42	3.609		
7,700.0	4,666.9	8,131.9	4,764.0	85.2	89.7	-99.24	1,800.7	-2,930.7	604.4	432.0	172.36	3.506		
7,800.0	4,666.9	8,231.8	4,764.0	87.7	92.2	-99.24	1,866.5	-3,006.0	604.5	427.2	177.30	3.409		
7,900.0	4,666.9	8,331.8	4,764.0	90.2	94.7	-99.24	1,932.3	-3,081.3	604.6	422.4	182.25	3.318		
8,000.0	4,666.9	8,431.8	4,764.0	92.7	97.2	-99.24	1,998.1	-3,156.6	604.7	417.5	187.20	3.230		
8,100.0	4,666.9	8,531.8	4,764.0	95.3	99.7	-99.23	2,063.9	-3,231.9	604.8	412.6	192.16	3.147		
8,200.0	4,666.9	8,631.8	4,764.0	97.8	102.2	-99.23	2,129.6	-3,307.2	604.8	407.7	197.12	3.068		
8,300.0	4,666.9	8,731.8	4,764.0	100.3	104.6	-99.23	2,195.4	-3,382.5	604.8	402.7	202.08	2.993		
8,400.0	4,666.9	8,831.8	4,764.0	102.8	107.2	-99.23	2,261.2	-3,457.9	604.8	397.7	207.05	2.921		
8,500.0	4,666.9	8,931.8	4,764.0	105.3	109.7	-99.24	2,327.0	-3,533.2	604.7	392.7	212.02	2.852		
8,600.0	4,666.9	9,031.7	4,764.0	107.8	112.2	-99.24	2,392.7	-3,608.5	604.6	387.6	216.99	2.786		

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

Anticollision Report



Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
8,700.0	4,666.9	9,131.7	4,764.0	110.4	114.7	-99.24	2,458.5	-3,683.8	604.5	382.5	221.96	2.723		
8,800.0	4,666.9	9,231.7	4,764.0	112.9	117.2	-99.24	2,524.3	-3,759.1	604.3	377.4	226.93	2.663		
8,900.0	4,666.9	9,331.7	4,764.0	115.4	119.7	-99.24	2,590.0	-3,834.4	604.1	372.2	231.91	2.605		
9,000.0	4,666.9	9,431.7	4,764.0	117.9	122.2	-99.25	2,655.8	-3,909.7	603.9	367.0	236.89	2.549		
9,100.0	4,666.9	9,531.7	4,764.0	120.4	124.7	-99.25	2,721.5	-3,985.1	603.6	361.8	241.87	2.496		
9,200.0	4,666.9	9,631.7	4,764.0	123.0	127.2	-99.26	2,787.3	-4,060.4	603.4	356.5	246.85	2.444		
9,300.0	4,666.9	9,731.7	4,764.0	125.5	129.7	-99.26	2,853.1	-4,135.7	603.0	351.2	251.83	2.395		
9,400.0	4,666.9	9,831.6	4,764.0	128.0	132.2	-99.27	2,918.8	-4,211.0	602.7	345.9	256.82	2.347		
9,500.0	4,666.9	9,931.6	4,764.0	130.5	134.8	-99.27	2,984.6	-4,286.3	602.3	340.5	261.80	2.301		
9,600.0	4,666.9	10,031.6	4,764.0	133.1	137.3	-99.28	3,050.3	-4,361.7	601.9	335.1	266.79	2.256		
9,700.0	4,667.0	10,131.6	4,764.0	135.6	139.8	-99.29	3,116.1	-4,437.0	601.4	329.6	271.78	2.213		
9,800.0	4,667.0	10,231.6	4,764.0	138.1	142.3	-99.29	3,181.8	-4,512.3	600.9	324.2	276.77	2.171		
9,900.0	4,667.0	10,331.6	4,764.0	140.7	144.8	-99.30	3,247.6	-4,587.7	600.4	318.7	281.76	2.131		
10,000.0	4,667.0	10,431.6	4,764.0	143.2	147.3	-99.31	3,313.3	-4,663.0	599.9	313.1	286.75	2.092		
10,100.0	4,667.0	10,531.5	4,764.0	145.7	149.9	-99.32	3,379.1	-4,738.3	599.3	307.6	291.74	2.054		
10,200.0	4,667.0	10,631.5	4,764.0	148.3	152.4	-99.33	3,444.8	-4,813.6	598.7	302.0	296.73	2.018		
10,300.0	4,667.0	10,731.5	4,764.0	150.8	154.9	-99.34	3,510.6	-4,889.0	598.1	296.3	301.72	1.982		
10,400.0	4,667.0	10,831.5	4,764.0	153.3	157.4	-99.35	3,576.3	-4,964.3	597.4	290.7	306.71	1.948		
10,500.0	4,667.0	10,931.5	4,764.0	155.9	160.0	-99.36	3,642.0	-5,039.6	596.7	285.0	311.70	1.914		
10,600.0	4,667.0	11,031.5	4,764.0	158.4	162.5	-99.37	3,707.8	-5,115.0	595.9	279.2	316.70	1.882		
10,700.0	4,667.0	11,131.5	4,764.0	160.9	165.0	-99.38	3,773.5	-5,190.3	595.2	273.5	321.69	1.850		
10,800.0	4,667.0	11,231.4	4,764.0	163.5	167.5	-99.40	3,839.2	-5,265.7	594.4	267.7	326.68	1.819		
10,900.0	4,667.0	11,331.4	4,764.0	166.0	170.1	-99.41	3,905.0	-5,341.0	593.5	261.9	331.68	1.790		
11,000.0	4,667.0	11,431.4	4,764.0	168.5	172.6	-99.42	3,970.7	-5,416.3	592.7	256.0	336.67	1.760		
11,100.0	4,667.0	11,531.4	4,764.0	171.1	175.1	-99.44	4,036.4	-5,491.7	591.8	250.1	341.66	1.732		
11,200.0	4,667.0	11,631.4	4,764.0	173.6	177.6	-99.45	4,102.2	-5,567.0	590.9	244.2	346.66	1.704		
11,300.0	4,667.0	11,731.4	4,764.0	176.2	180.2	-99.47	4,167.9	-5,642.4	589.9	238.2	351.65	1.678		
11,400.0	4,667.0	11,831.3	4,764.0	178.7	182.7	-99.48	4,233.6	-5,717.7	588.9	232.3	356.64	1.651		
11,500.0	4,667.0	11,931.3	4,764.0	181.2	185.2	-99.50	4,299.3	-5,793.1	587.9	226.2	361.64	1.626		
11,600.0	4,667.0	12,031.3	4,764.0	183.8	187.7	-99.52	4,365.1	-5,868.4	586.8	220.2	366.63	1.601		
11,700.0	4,667.0	12,131.3	4,764.0	186.3	190.3	-99.53	4,430.8	-5,943.8	585.7	214.1	371.62	1.576		
11,800.0	4,667.0	12,231.3	4,764.0	188.9	192.8	-99.55	4,496.5	-6,019.1	584.6	208.0	376.61	1.552		
11,900.0	4,667.0	12,331.3	4,764.0	191.4	195.3	-99.57	4,562.2	-6,094.5	583.5	201.9	381.60	1.529		
12,000.0	4,667.0	12,431.2	4,764.0	193.9	197.9	-99.59	4,627.9	-6,169.8	582.3	195.7	386.59	1.506		
12,054.4	4,667.0	12,485.7	4,764.0	195.3	199.2	-99.60	4,663.7	-6,210.9	581.6	192.3	389.31	1.494 Level 3, SF		

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design WC 21-2 - Slot 4 - Carson 584H - Lateral plan													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	-44.87	42.5	-42.3	60.0					
100.0	100.0	100.0	100.0	0.1	0.1	-44.87	42.5	-42.3	60.0	59.7	0.29	209.128		
200.0	200.0	200.0	200.0	0.5	0.5	-44.87	42.5	-42.3	60.0	59.0	1.00	59.751		
300.0	300.0	300.0	300.0	0.9	0.9	-44.87	42.5	-42.3	60.0	58.3	1.72	34.855		
400.0	400.0	400.0	400.0	1.2	1.2	-44.87	42.5	-42.3	60.0	57.5	2.44	24.603		
500.0	500.0	500.0	500.0	1.6	1.6	-44.87	42.5	-42.3	60.0	56.8	3.15	19.012 CC, ES		
600.0	600.0	599.0	599.0	1.9	1.9	-43.43	44.1	-41.8	60.8	56.9	3.87	15.713		
700.0	700.0	697.8	697.7	2.3	2.3	-39.34	49.0	-40.2	63.4	58.8	4.58	13.837		
800.0	800.0	796.1	795.6	2.7	2.6	-33.32	57.0	-37.5	68.4	63.1	5.29	12.914		
900.0	900.0	893.8	892.5	3.0	3.0	-26.36	68.1	-33.8	76.4	70.4	6.01	12.722 SF		
1,000.0	1,000.0	990.5	988.1	3.4	3.4	-19.47	82.2	-29.1	88.0	81.3	6.71	13.119		
1,100.0	1,100.0	1,086.1	1,082.0	3.7	3.8	-13.29	99.2	-23.4	103.5	96.1	7.40	13.982		
1,200.0	1,200.0	1,180.4	1,174.0	4.1	4.3	-8.09	118.8	-16.9	122.8	114.7	8.08	15.197		
1,300.0	1,300.0	1,273.2	1,263.9	4.4	4.7	-3.87	140.9	-9.5	145.8	137.0	8.73	16.691		
1,400.0	1,400.0	1,368.6	1,355.7	4.8	5.2	-0.46	165.5	-1.3	171.3	161.9	9.43	18.170		
1,500.0	1,500.0	1,464.8	1,448.2	5.2	5.8	2.09	190.4	7.0	197.4	187.3	10.14	19.465		
1,600.0	1,600.0	1,561.1	1,540.8	5.5	6.3	4.05	215.2	15.2	223.7	212.9	10.86	20.610		
1,700.0	1,700.0	1,657.3	1,633.4	5.9	6.9	5.59	240.1	23.5	250.3	238.7	11.57	21.625		
1,800.0	1,800.0	1,753.5	1,726.0	6.2	7.4	6.84	265.0	31.8	276.9	264.6	12.29	22.529		
1,900.0	1,900.0	1,849.7	1,818.6	6.6	8.0	7.87	289.8	40.1	303.7	290.7	13.01	23.337		
2,000.0	2,000.0	1,945.9	1,911.2	7.0	8.5	8.74	314.7	48.4	330.6	316.8	13.74	24.062		
2,100.0	2,100.0	2,042.1	2,003.7	7.3	9.1	9.47	339.6	56.7	357.5	343.0	14.46	24.717		
2,200.0	2,200.0	2,138.4	2,096.3	7.7	9.7	10.10	364.4	64.9	384.4	369.2	15.19	25.310		
2,300.0	2,300.0	2,234.6	2,188.9	8.0	10.3	10.65	389.3	73.2	411.4	395.5	15.92	25.849		
2,400.0	2,400.0	2,330.8	2,281.5	8.4	10.9	11.13	414.2	81.5	438.4	421.8	16.64	26.341		
2,500.0	2,500.0	2,427.0	2,374.1	8.7	11.4	11.56	439.0	89.8	465.5	448.1	17.37	26.793		
2,600.0	2,600.0	2,523.2	2,466.6	9.1	12.0	11.94	463.9	98.1	492.5	474.4	18.10	27.207		
2,700.0	2,700.0	2,619.5	2,559.2	9.5	12.6	12.28	488.8	106.4	519.6	500.8	18.83	27.590		
2,800.0	2,800.0	2,715.7	2,651.8	9.8	13.2	12.58	513.6	114.6	546.7	527.2	19.57	27.944		
2,900.0	2,900.0	2,811.9	2,744.4	10.2	13.8	12.86	538.5	122.9	573.8	553.5	20.30	28.272		
3,000.0	3,000.0	2,908.1	2,837.0	10.5	14.4	13.11	563.3	131.2	601.0	579.9	21.03	28.577		
3,100.0	3,100.0	3,004.3	2,929.5	10.9	14.9	13.34	588.2	139.5	628.1	606.3	21.76	28.862		
3,200.0	3,200.0	3,100.6	3,022.1	11.3	15.5	13.55	613.1	147.8	655.2	632.7	22.50	29.128		
3,300.0	3,300.0	3,196.8	3,114.7	11.6	16.1	13.75	637.9	156.1	682.4	659.2	23.23	29.376		
3,400.0	3,400.0	3,293.0	3,207.3	12.0	16.7	13.93	662.8	164.3	709.5	685.6	23.96	29.610		
3,500.0	3,500.0	3,389.2	3,299.9	12.3	17.3	14.09	687.7	172.6	736.7	712.0	24.70	29.829		
3,600.0	3,600.0	3,485.4	3,392.4	12.7	17.9	14.25	712.5	180.9	763.9	738.4	25.43	30.036		
3,700.0	3,700.0	3,581.6	3,485.0	13.0	18.5	14.39	737.4	189.2	791.1	764.9	26.17	30.230		
3,800.0	3,800.0	3,677.9	3,577.6	13.4	19.1	14.52	762.3	197.5	818.2	791.3	26.90	30.414		
3,830.7	3,830.7	3,707.4	3,606.0	13.5	19.3	14.56	769.9	200.0	826.6	799.4	27.13	30.469		
3,850.0	3,850.0	3,726.0	3,623.9	13.6	19.4	62.53	774.7	201.6	831.7	804.5	27.24	30.539		
3,900.0	3,899.9	3,774.3	3,670.4	13.6	19.7	61.98	787.2	205.8	844.1	816.7	27.43	30.775		
3,950.0	3,949.6	3,822.7	3,717.0	13.6	20.0	61.69	799.7	209.9	855.2	827.6	27.62	30.959		
4,000.0	3,998.8	3,871.0	3,763.5	13.6	20.3	61.65	812.2	214.1	865.0	837.1	27.82	31.090		
4,050.0	4,047.5	3,919.1	3,809.7	13.6	20.6	61.85	824.6	218.2	873.4	845.4	28.02	31.169		
4,100.0	4,095.4	3,966.7	3,855.5	13.6	20.8	62.25	836.9	222.3	880.7	852.4	28.23	31.194		
4,150.0	4,142.3	4,013.7	3,900.8	13.6	21.1	62.86	849.1	226.4	886.8	858.3	28.45	31.165		
4,200.0	4,188.1	4,060.0	3,945.2	13.7	21.4	63.65	861.0	230.4	891.9	863.2	28.69	31.082		
4,250.0	4,232.7	4,107.2	3,990.7	13.8	21.7	64.66	873.2	234.5	896.1	867.1	28.98	30.924		
4,300.0	4,275.8	4,184.1	4,065.0	13.9	22.2	67.04	889.8	245.0	898.6	869.1	29.52	30.438		
4,350.0	4,317.3	4,247.8	4,126.5	14.0	22.5	69.60	898.8	259.0	899.6	869.6	30.00	29.989		
4,400.0	4,357.0	4,298.8	4,175.1	14.2	22.7	71.99	903.0	273.6	900.1	869.6	30.44	29.565		

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

Company: DJR Operating
 Project: Proposed Carson Unit
 Reference Site: WC 21-2
 Site Error: 0.0 usft
 Reference Well: Slot 1
 Well Error: 0.0 usft
 Reference Wellbore: Carson 615H
 Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
 TVD Reference: Rig @ 6370.0usft (Rig TBD)
 MD Reference: Rig @ 6370.0usft (Rig TBD)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM
 Offset TVD Reference: Offset Datum

Offset Design WC 21-2 - Slot 4 - Carson 584H - Lateral plan														Offset Site Error:	0.0 usft
Survey Program: 0-MWD+GRF														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
4,450.0	4,394.9	4,338.4	4,212.4	14.4	22.9	74.02	904.4	286.9	900.8	869.9	30.89	29.161			
4,500.0	4,430.8	4,368.6	4,240.4	14.7	23.0	75.60	904.2	298.2	902.5	871.2	31.37	28.775			
4,550.0	4,464.5	4,391.1	4,261.0	15.1	23.1	76.71	903.5	307.3	905.7	873.8	31.88	28.410			
4,600.0	4,496.0	4,407.3	4,275.7	15.5	23.1	77.37	902.6	314.1	910.5	878.0	32.43	28.071			
4,650.0	4,525.1	4,418.5	4,285.7	15.9	23.2	77.61	901.9	318.9	917.1	884.1	33.03	27.763			
4,700.0	4,551.7	4,425.5	4,292.0	16.5	23.2	77.46	901.4	322.1	925.7	892.0	33.68	27.488			
4,750.0	4,575.7	4,429.2	4,295.2	17.1	23.2	76.98	901.0	323.7	936.2	901.9	34.36	27.248			
4,800.0	4,597.1	4,430.1	4,296.1	17.8	23.2	76.18	901.0	324.2	948.6	913.5	35.08	27.045			
4,850.0	4,615.7	4,428.8	4,294.9	18.5	23.2	75.12	901.1	323.6	962.8	926.9	35.82	26.881			
4,900.0	4,631.6	4,425.6	4,292.0	19.3	23.2	73.83	901.3	322.1	978.5	942.0	36.57	26.755			
4,950.0	4,644.5	4,420.8	4,287.8	20.2	23.2	72.33	901.7	320.0	995.8	958.4	37.34	26.668			
5,000.0	4,654.6	4,414.6	4,282.3	21.1	23.2	70.66	902.2	317.3	1,014.3	976.2	38.11	26.617			
5,050.0	4,661.7	4,400.0	4,269.1	22.0	23.1	68.43	903.1	311.0	1,034.0	995.2	38.78	26.663			
5,100.0	4,665.8	4,400.0	4,269.1	23.0	23.1	67.01	903.1	311.0	1,054.5	1,014.9	39.63	26.611			
5,144.4	4,667.0	4,400.0	4,269.1	23.9	23.1	65.69	903.1	311.0	1,073.5	1,033.1	40.37	26.591			
5,200.0	4,667.0	4,381.0	4,251.8	25.1	23.0	64.64	903.9	303.1	1,098.5	1,057.5	41.03	26.773			
5,300.0	4,667.0	4,365.1	4,237.2	27.2	23.0	63.76	904.3	296.9	1,148.7	1,106.4	42.31	27.152			
5,400.0	4,667.0	4,350.0	4,223.2	29.4	22.9	62.92	904.4	291.2	1,204.8	1,161.4	43.40	27.759			
5,450.0	4,667.0	4,350.0	4,223.2	31.6	22.9	62.92	904.4	291.2	1,266.2	1,221.7	44.51	28.450			
5,500.0	4,667.0	4,328.8	4,203.4	33.9	22.8	61.74	904.2	283.6	1,331.8	1,286.6	45.16	29.491			
5,700.0	4,667.0	4,319.5	4,194.7	36.2	22.8	61.22	903.9	280.4	1,401.5	1,355.6	45.83	30.583			
5,800.0	4,667.0	4,300.0	4,176.3	38.5	22.7	60.13	903.1	274.0	1,474.6	1,428.4	46.23	31.898			
5,900.0	4,667.0	4,300.0	4,176.3	40.9	22.7	60.12	903.1	274.0	1,550.4	1,503.7	46.78	33.140			
6,000.0	4,667.0	4,300.0	4,176.3	43.3	22.7	60.11	903.1	274.0	1,628.9	1,581.7	47.25	34.477			
6,100.0	4,667.0	4,300.0	4,176.3	45.7	22.7	60.09	903.1	274.0	1,709.7	1,662.0	47.63	35.893			
6,200.0	4,667.0	4,300.0	4,176.3	48.1	22.7	60.08	903.1	274.0	1,792.4	1,744.4	47.95	37.378			
6,300.0	4,667.0	4,280.6	4,157.8	50.5	22.6	59.00	901.9	268.1	1,876.4	1,828.4	47.98	39.110			
6,400.0	4,667.0	4,276.0	4,153.4	53.0	22.6	58.73	901.5	266.7	1,962.1	1,913.9	48.15	40.750			
6,500.0	4,667.0	4,271.7	4,149.3	55.4	22.6	58.48	901.2	265.5	2,049.1	2,000.8	48.29	42.432			
6,600.0	4,667.0	4,250.0	4,128.6	57.9	22.5	57.27	899.1	259.6	2,137.4	2,089.3	48.18	44.360			
6,700.0	4,667.0	4,250.0	4,128.6	60.3	22.5	57.25	899.1	259.6	2,226.4	2,178.1	48.33	46.068			
6,800.0	4,667.0	4,250.0	4,128.6	62.8	22.5	57.23	899.1	259.6	2,316.3	2,267.9	48.45	47.806			
6,900.0	4,667.0	4,250.0	4,128.6	65.3	22.5	57.21	899.1	259.6	2,407.0	2,358.4	48.56	49.570			
7,000.0	4,667.0	4,250.0	4,128.6	67.8	22.5	57.18	899.1	259.6	2,498.4	2,449.8	48.65	51.356			
7,100.0	4,667.0	4,250.0	4,128.6	70.2	22.5	57.16	899.1	259.6	2,590.5	2,541.8	48.73	53.161			
7,200.0	4,667.0	4,250.0	4,128.6	72.7	22.5	57.13	899.1	259.6	2,683.1	2,634.3	48.80	54.985			
7,300.0	4,667.0	4,250.0	4,128.6	75.2	22.5	57.11	899.1	259.6	2,776.3	2,727.4	48.86	56.823			
7,400.0	4,667.0	4,250.0	4,128.6	77.7	22.5	57.08	899.1	259.6	2,869.9	2,821.0	48.91	58.675			
7,500.0	4,667.0	4,250.0	4,128.6	80.2	22.5	57.05	899.1	259.6	2,964.0	2,915.0	48.96	60.538			
7,600.0	4,666.9	4,250.0	4,128.6	82.7	22.5	57.02	899.1	259.6	3,058.4	3,009.4	49.00	62.412			
7,700.0	4,666.9	4,250.0	4,128.6	85.2	22.5	56.99	899.1	259.6	3,153.2	3,104.2	49.04	64.295			
7,800.0	4,666.9	4,250.0	4,128.6	87.7	22.5	56.95	899.1	259.6	3,248.3	3,199.3	49.08	66.186			
7,900.0	4,666.9	4,250.0	4,128.6	90.2	22.5	56.92	899.1	259.6	3,343.8	3,294.6	49.11	68.084			
8,000.0	4,666.9	4,250.0	4,128.6	92.7	22.5	56.88	899.1	259.6	3,439.4	3,390.3	49.14	69.987			
8,100.0	4,666.9	4,250.0	4,128.6	95.3	22.5	56.85	899.1	259.6	3,535.4	3,486.2	49.17	71.896			
8,200.0	4,666.9	4,250.0	4,128.6	97.8	22.5	56.81	899.1	259.6	3,631.5	3,582.3	49.20	73.810			
8,300.0	4,666.9	4,250.0	4,128.6	100.3	22.5	56.77	899.1	259.6	3,727.9	3,678.7	49.23	75.727			
8,400.0	4,666.9	4,227.6	4,107.0	102.8	22.4	55.51	896.4	254.1	3,824.0	3,775.0	49.00	78.041			
8,500.0	4,666.9	4,226.3	4,105.8	105.3	22.4	55.40	896.3	253.8	3,920.7	3,871.7	49.01	79.995			
8,600.0	4,666.9	4,225.1	4,104.6	107.8	22.4	55.29	896.1	253.5	4,017.5	3,968.5	49.02	81.951			
8,700.0	4,666.9	4,223.9	4,103.4	110.4	22.4	55.18	895.9	253.2	4,114.5	4,065.5	49.04	83.908			
8,800.0	4,666.9	4,222.7	4,102.3	112.9	22.4	55.07	895.8	253.0	4,211.7	4,162.6	49.05	85.867			

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design WC 21-2 - Slot 4 - Carson 584H - Lateral plan												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,900.0	4,666.9	4,200.0	4,080.4	115.4	22.2	53.79	892.4	248.1	4,309.4	4,260.6	48.82	88.275	
9,000.0	4,666.9	4,200.0	4,080.4	117.9	22.2	53.74	892.4	248.1	4,406.8	4,357.9	48.84	90.220	
9,100.0	4,666.9	4,200.0	4,080.4	120.4	22.2	53.69	892.4	248.1	4,504.3	4,455.4	48.87	92.165	
9,200.0	4,666.9	4,200.0	4,080.4	123.0	22.2	53.64	892.4	248.1	4,601.9	4,553.0	48.90	94.111	
9,300.0	4,666.9	4,200.0	4,080.4	125.5	22.2	53.59	892.4	248.1	4,699.6	4,650.7	48.93	96.055	
9,400.0	4,666.9	4,200.0	4,080.4	128.0	22.2	53.53	892.4	248.1	4,797.4	4,748.4	48.95	97.999	
9,500.0	4,666.9	4,200.0	4,080.4	130.5	22.2	53.48	892.4	248.1	4,895.3	4,846.3	48.98	99.943	
9,600.0	4,666.9	4,200.0	4,080.4	133.1	22.2	53.42	892.4	248.1	4,993.3	4,944.3	49.01	101.884	
9,700.0	4,667.0	4,200.0	4,080.4	135.6	22.2	53.36	892.4	248.1	5,091.4	5,042.3	49.04	103.825	
9,800.0	4,667.0	4,200.0	4,080.4	138.1	22.2	53.30	892.4	248.1	5,189.5	5,140.5	49.07	105.763	
9,900.0	4,667.0	4,200.0	4,080.4	140.7	22.2	53.24	892.4	248.1	5,287.8	5,238.7	49.10	107.700	
10,000.0	4,667.0	4,200.0	4,080.4	143.2	22.2	53.17	892.4	248.1	5,386.1	5,336.9	49.13	109.634	
10,100.0	4,667.0	4,200.0	4,080.4	145.7	22.2	53.11	892.4	248.1	5,484.4	5,435.3	49.16	111.566	
10,200.0	4,667.0	4,200.0	4,080.4	148.3	22.2	53.04	892.4	248.1	5,582.9	5,533.7	49.19	113.496	
10,300.0	4,667.0	4,200.0	4,080.4	150.8	22.2	52.98	892.4	248.1	5,681.4	5,632.1	49.22	115.423	
10,400.0	4,667.0	4,200.0	4,080.4	153.3	22.2	52.91	892.4	248.1	5,779.9	5,730.7	49.25	117.347	
10,500.0	4,667.0	4,200.0	4,080.4	155.9	22.2	52.84	892.4	248.1	5,878.5	5,829.2	49.29	119.268	
10,600.0	4,667.0	4,200.0	4,080.4	158.4	22.2	52.77	892.4	248.1	5,977.2	5,927.8	49.32	121.186	
10,700.0	4,667.0	4,200.0	4,080.4	160.9	22.2	52.69	892.4	248.1	6,075.9	6,026.5	49.36	123.101	
10,800.0	4,667.0	4,200.0	4,080.4	163.5	22.2	52.62	892.4	248.1	6,174.6	6,125.2	49.39	125.012	
10,900.0	4,667.0	4,200.0	4,080.4	166.0	22.2	52.54	892.4	248.1	6,273.4	6,224.0	49.43	126.920	
11,000.0	4,667.0	4,200.0	4,080.4	168.5	22.2	52.47	892.4	248.1	6,372.2	6,322.8	49.46	128.824	
11,100.0	4,667.0	4,200.0	4,080.4	171.1	22.2	52.39	892.4	248.1	6,471.1	6,421.6	49.50	130.725	
11,200.0	4,667.0	4,200.0	4,080.4	173.6	22.2	52.31	892.4	248.1	6,570.0	6,520.5	49.54	132.621	
11,300.0	4,667.0	4,200.0	4,080.4	176.2	22.2	52.23	892.4	248.1	6,669.0	6,619.4	49.58	134.514	
11,400.0	4,667.0	4,200.0	4,080.4	178.7	22.2	52.14	892.4	248.1	6,767.9	6,718.3	49.62	136.402	
11,500.0	4,667.0	4,200.0	4,080.4	181.2	22.2	52.06	892.4	248.1	6,867.0	6,817.3	49.66	138.287	
11,600.0	4,667.0	4,200.0	4,080.4	183.8	22.2	51.97	892.4	248.1	6,966.0	6,916.3	49.70	140.167	
11,700.0	4,667.0	4,200.0	4,080.4	186.3	22.2	51.88	892.4	248.1	7,065.1	7,015.3	49.74	142.042	
11,800.0	4,667.0	4,200.0	4,080.4	188.9	22.2	51.79	892.4	248.1	7,164.2	7,114.4	49.78	143.914	
11,900.0	4,667.0	4,200.0	4,080.4	191.4	22.2	51.70	892.4	248.1	7,263.3	7,213.5	49.82	145.781	
12,000.0	4,667.0	4,200.0	4,080.4	193.9	22.2	51.61	892.4	248.1	7,362.5	7,312.6	49.87	147.643	
12,054.4	4,667.0	4,200.0	4,080.4	195.3	22.2	51.55	892.4	248.1	7,416.5	7,366.6	49.89	148.655	

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design WC 21-2 - Slot 5 - Carson 611H - Lateral plan											Offset Site Error: 0.0 usft		
Survey Program: 0-MWD+IGRF											Offset Well Error: 0.0 usft		
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
0.0	0.0	0.0	0.0	0.0	0.0	-44.85	56.7	-56.4	80.0				
100.0	100.0	100.0	100.0	0.1	0.1	-44.85	56.7	-56.4	80.0	79.7	0.29	279.063	
200.0	200.0	200.0	200.0	0.5	0.5	-44.85	56.7	-56.4	80.0	79.0	1.00	79.732	
300.0	300.0	300.0	300.0	0.9	0.9	-44.85	56.7	-56.4	80.0	78.3	1.72	46.511	
400.0	400.0	400.0	400.0	1.2	1.2	-44.85	56.7	-56.4	80.0	77.6	2.44	32.831	
500.0	500.0	500.7	500.7	1.6	1.6	-44.08	57.2	-55.4	79.7	76.5	3.15	25.266	
600.0	600.0	601.4	601.3	1.9	1.9	-40.87	59.3	-51.3	78.4	74.5	3.87	20.266	
700.0	700.0	701.6	701.2	2.3	2.3	-35.02	62.9	-44.0	76.8	72.2	4.59	16.713	
800.0	800.0	801.2	800.0	2.7	2.7	-26.41	67.9	-33.7	75.8	70.5	5.33	14.223	
801.7	801.7	802.9	801.7	2.7	2.7	-26.23	68.0	-33.5	75.8	70.5	5.35	14.188 CC, ES	
900.0	900.0	900.0	897.8	3.0	3.1	-15.36	74.5	-20.5	77.3	71.2	6.09	12.685	
1,000.0	1,000.0	997.3	993.4	3.4	3.5	-3.09	82.4	-4.4	82.7	75.9	6.85	12.080	
1,100.0	1,100.0	1,093.4	1,087.2	3.7	4.0	8.83	91.6	14.2	93.5	86.0	7.59	12.331	
1,200.0	1,200.0	1,188.1	1,178.9	4.1	4.5	19.13	102.0	35.4	110.0	101.7	8.28	13.281	
1,300.0	1,300.0	1,281.6	1,268.7	4.4	5.0	27.40	113.6	58.9	131.7	122.7	8.95	14.719	
1,400.0	1,400.0	1,377.3	1,360.2	4.8	5.5	33.67	125.9	83.8	156.4	146.7	9.64	16.219	
1,500.0	1,500.0	1,473.0	1,451.8	5.2	6.1	38.22	138.2	108.8	182.4	172.0	10.34	17.639	
1,600.0	1,600.0	1,568.6	1,543.3	5.5	6.7	41.64	150.5	133.8	209.2	198.1	11.04	18.945	
1,700.0	1,700.0	1,664.3	1,634.8	5.9	7.3	44.28	162.8	158.7	236.5	224.8	11.75	20.132	
1,800.0	1,800.0	1,760.0	1,726.4	6.2	7.9	46.38	175.1	183.7	264.2	251.8	12.46	21.208	
1,900.0	1,900.0	1,855.7	1,817.9	6.6	8.5	48.07	187.4	208.7	292.2	279.0	13.17	22.182	
2,000.0	2,000.0	1,951.3	1,909.5	7.0	9.1	49.48	199.7	233.6	320.4	306.5	13.89	23.065	
2,100.0	2,100.0	2,047.0	2,001.0	7.3	9.8	50.66	212.0	258.6	348.7	334.1	14.61	23.868	
2,200.0	2,200.0	2,142.7	2,092.5	7.7	10.4	51.66	224.3	283.5	377.2	361.8	15.33	24.599	
2,300.0	2,300.0	2,238.4	2,184.1	8.0	11.0	52.52	236.6	308.5	405.7	389.6	16.06	25.267	
2,400.0	2,400.0	2,334.0	2,275.6	8.4	11.6	53.26	248.9	333.5	434.3	417.5	16.78	25.879	
2,500.0	2,500.0	2,429.7	2,367.1	8.7	12.3	53.92	261.2	358.4	463.0	445.5	17.51	26.441	
2,600.0	2,600.0	2,525.4	2,458.7	9.1	12.9	54.50	273.5	383.4	491.7	473.5	18.24	26.960	
2,700.0	2,700.0	2,621.1	2,550.2	9.5	13.5	55.01	285.8	408.4	520.5	501.5	18.97	27.439	
2,800.0	2,800.0	2,716.7	2,641.8	9.8	14.1	55.47	298.1	433.3	549.3	529.6	19.70	27.884	
2,900.0	2,900.0	2,812.4	2,733.3	10.2	14.8	55.89	310.4	458.3	578.1	557.7	20.43	28.296	
3,000.0	3,000.0	2,908.1	2,824.8	10.5	15.4	56.27	322.7	483.3	606.9	585.8	21.16	28.681	
3,100.0	3,100.0	3,003.8	2,916.4	10.9	16.0	56.61	335.0	508.2	635.8	613.9	21.89	29.039	
3,200.0	3,200.0	3,099.4	3,007.9	11.3	16.7	56.92	347.3	533.2	664.7	642.1	22.63	29.375	
3,300.0	3,300.0	3,195.1	3,099.4	11.6	17.3	57.21	359.6	558.2	693.6	670.2	23.36	29.689	
3,400.0	3,400.0	3,290.8	3,191.0	12.0	17.9	57.47	371.9	583.1	722.5	698.4	24.10	29.985	
3,500.0	3,500.0	3,386.5	3,282.5	12.3	18.6	57.71	384.2	608.1	751.5	726.6	24.83	30.262	
3,600.0	3,600.0	3,482.1	3,374.1	12.7	19.2	57.94	396.5	633.0	780.4	754.8	25.57	30.524	
3,700.0	3,700.0	3,577.8	3,465.6	13.0	19.8	58.15	408.8	658.0	809.4	783.1	26.30	30.771	
3,800.0	3,800.0	3,673.5	3,557.1	13.4	20.5	58.34	421.1	683.0	838.3	811.3	27.04	31.004	
3,830.7	3,830.7	3,702.9	3,585.2	13.5	20.6	58.40	424.9	690.6	847.2	820.0	27.27	31.073	
3,850.0	3,850.0	3,721.3	3,602.9	13.6	20.8	106.32	427.3	695.4	852.9	825.5	27.38	31.154	
3,900.0	3,899.9	3,768.8	3,648.3	13.6	21.1	105.53	433.4	707.8	868.1	840.5	27.57	31.486	
3,950.0	3,949.6	3,815.7	3,693.2	13.6	21.4	104.86	439.4	720.1	884.1	856.3	27.76	31.845	
4,000.0	3,998.8	3,861.9	3,737.4	13.6	21.7	104.29	445.4	732.1	900.9	872.9	27.95	32.231	
4,050.0	4,047.5	3,907.2	3,780.7	13.6	22.0	103.81	451.2	743.9	918.5	890.3	28.14	32.640	
4,100.0	4,095.4	3,951.4	3,823.0	13.6	22.3	103.38	456.9	755.5	936.9	908.6	28.33	33.069	
4,150.0	4,142.3	3,994.4	3,864.2	13.6	22.6	103.00	462.4	766.7	956.3	927.7	28.53	33.514	
4,200.0	4,188.1	4,036.1	3,904.0	13.7	22.9	102.62	467.8	777.6	976.6	947.8	28.75	33.970	
4,250.0	4,232.7	4,076.2	3,942.4	13.8	23.1	102.23	472.9	788.1	997.9	968.9	28.98	34.432	
4,300.0	4,275.8	4,114.7	3,979.3	13.9	23.4	101.81	477.9	798.1	1,020.2	991.0	29.24	34.895	
4,350.0	4,317.3	4,186.3	4,048.0	14.0	23.8	102.40	489.4	814.3	1,042.8	1,013.0	29.78	35.019	

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design WC 21-2 - Slot 5 - Carson 611H - Lateral plan													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,400.0	4,357.0	4,352.6	4,206.4	14.2	24.7	104.93	535.7	829.7	1,063.3	1,032.5	30.78	34.545		
4,450.0	4,394.9	4,527.1	4,361.4	14.4	25.2	105.93	612.2	810.0	1,079.9	1,048.4	31.47	34.315		
4,500.0	4,430.8	4,687.1	4,483.3	14.7	25.6	105.41	702.6	760.9	1,091.1	1,059.1	32.04	34.057		
4,550.0	4,464.5	4,886.7	4,597.2	15.1	25.8	103.29	833.2	663.6	1,096.4	1,063.5	32.97	33.258		
4,600.0	4,496.0	5,092.6	4,659.4	15.5	26.0	99.23	976.3	530.7	1,096.7	1,061.9	34.82	31.500		
4,650.0	4,525.1	5,205.3	4,667.0	15.9	26.3	96.31	1,053.0	448.6	1,093.6	1,057.0	36.64	29.846		
4,700.0	4,551.7	5,247.7	4,667.0	16.5	26.5	95.34	1,081.3	417.2	1,090.6	1,052.7	37.98	28.716		
4,750.0	4,575.7	5,291.5	4,667.0	17.1	26.7	94.38	1,110.6	384.6	1,088.5	1,049.2	39.34	27.670		
4,800.0	4,597.1	5,336.7	4,667.0	17.8	27.0	93.46	1,140.8	350.9	1,087.1	1,046.2	40.89	26.588		
4,850.0	4,615.7	5,383.1	4,667.0	18.5	27.4	92.61	1,171.8	316.4	1,086.2	1,043.8	42.44	25.593		
4,900.0	4,631.6	5,430.5	4,667.0	19.3	27.9	91.85	1,203.5	281.2	1,085.8	1,041.5	44.27	24.528		
4,950.0	4,644.5	5,478.8	4,667.0	20.2	28.5	91.20	1,235.8	245.3	1,085.6	1,039.8	45.78	23.712		
4,968.9	4,648.7	5,497.3	4,667.0	20.5	28.7	90.99	1,248.1	231.5	1,085.6	1,039.1	46.50	23.347		
5,000.0	4,654.6	5,527.8	4,667.0	21.1	29.2	90.68	1,268.5	208.8	1,085.6	1,038.0	47.60	22.805		
5,050.0	4,661.7	5,577.2	4,667.0	22.0	29.9	90.30	1,301.6	172.0	1,085.7	1,036.2	49.50	21.935		
5,100.0	4,665.8	5,627.1	4,667.0	23.0	30.7	90.07	1,334.9	135.0	1,085.9	1,034.4	51.46	21.101		
5,144.4	4,667.0	5,671.4	4,667.0	23.9	31.4	90.00	1,364.6	102.0	1,086.0	1,032.8	53.22	20.409		
5,200.0	4,667.0	5,727.0	4,667.0	25.1	32.4	90.00	1,401.7	60.6	1,086.2	1,030.8	55.46	19.584		
5,300.0	4,667.0	5,827.0	4,667.0	27.2	34.3	90.00	1,468.6	-13.7	1,086.6	1,027.0	59.62	18.225		
5,400.0	4,667.0	5,927.0	4,667.0	29.4	36.3	90.00	1,535.4	-88.1	1,087.1	1,023.2	63.91	17.008		
5,500.0	4,667.0	6,027.0	4,667.0	31.6	38.3	90.00	1,602.3	-162.5	1,087.5	1,019.2	68.31	15.921		
5,600.0	4,667.0	6,127.0	4,667.0	33.9	40.4	90.00	1,669.1	-236.9	1,088.0	1,015.2	72.79	14.947		
5,700.0	4,667.0	6,227.0	4,667.0	36.2	42.6	90.00	1,736.0	-311.2	1,088.6	1,011.2	77.35	14.074		
5,800.0	4,667.0	6,327.0	4,667.0	38.5	44.8	90.00	1,802.8	-385.6	1,089.1	1,007.2	81.96	13.289		
5,900.0	4,667.0	6,427.0	4,667.0	40.9	47.0	90.00	1,869.7	-460.0	1,089.7	1,003.1	86.63	12.580		
6,000.0	4,667.0	6,527.0	4,667.0	43.3	49.3	90.00	1,936.5	-534.4	1,090.4	999.0	91.33	11.939		
6,100.0	4,667.0	6,627.0	4,667.0	45.7	51.6	90.00	2,003.4	-608.7	1,091.0	995.0	96.08	11.356		
6,200.0	4,667.0	6,727.0	4,667.0	48.1	53.9	90.00	2,070.2	-683.1	1,091.8	990.9	100.85	10.825		
6,300.0	4,667.0	6,827.0	4,667.0	50.5	56.2	90.00	2,137.0	-757.5	1,092.5	986.8	105.65	10.340		
6,400.0	4,667.0	6,927.0	4,667.0	53.0	58.6	90.00	2,203.9	-831.8	1,093.3	982.8	110.48	9.896		
6,500.0	4,667.0	7,027.0	4,667.0	55.4	60.9	90.00	2,270.7	-906.2	1,094.1	978.7	115.33	9.487		
6,600.0	4,667.0	7,127.0	4,667.0	57.9	63.3	90.00	2,337.6	-980.6	1,094.9	974.7	120.19	9.110		
6,700.0	4,667.0	7,227.0	4,667.0	60.3	65.7	90.00	2,404.4	-1,054.9	1,095.8	970.7	125.07	8.761		
6,800.0	4,667.0	7,327.0	4,667.0	62.8	68.1	90.00	2,471.3	-1,129.3	1,096.7	966.7	129.97	8.438		
6,900.0	4,667.0	7,427.0	4,667.0	65.3	70.5	90.00	2,538.1	-1,203.7	1,097.6	962.8	134.88	8.138		
7,000.0	4,667.0	7,527.0	4,667.0	67.8	72.9	90.00	2,605.0	-1,278.1	1,098.6	958.8	139.80	7.859		
7,100.0	4,667.0	7,627.0	4,667.0	70.2	75.3	90.00	2,671.8	-1,352.4	1,099.6	954.9	144.73	7.598		
7,200.0	4,667.0	7,727.0	4,667.0	72.7	77.8	90.00	2,738.7	-1,426.8	1,100.7	951.0	149.67	7.354		
7,300.0	4,667.0	7,827.0	4,667.0	75.2	80.2	90.00	2,805.5	-1,501.2	1,101.8	947.2	154.62	7.126		
7,400.0	4,667.0	7,927.0	4,667.0	77.7	82.6	90.00	2,872.3	-1,575.5	1,102.9	943.3	159.58	6.911		
7,500.0	4,667.0	8,027.0	4,667.0	80.2	85.1	90.00	2,939.2	-1,649.9	1,104.0	939.5	164.54	6.710		
7,600.0	4,666.9	8,127.0	4,667.0	82.7	87.5	90.00	3,006.0	-1,724.3	1,105.2	935.7	169.51	6.520		
7,700.0	4,666.9	8,227.0	4,667.0	85.2	90.0	90.00	3,072.9	-1,798.6	1,106.4	932.0	174.49	6.341		
7,800.0	4,666.9	8,326.9	4,667.0	87.7	92.5	90.00	3,139.7	-1,873.0	1,107.7	928.2	179.47	6.172		
7,900.0	4,666.9	8,426.9	4,667.0	90.2	94.9	90.00	3,206.6	-1,947.4	1,109.0	924.5	184.45	6.012		
8,000.0	4,666.9	8,526.9	4,667.0	92.7	97.4	90.00	3,273.4	-2,021.7	1,110.3	920.9	189.44	5.861		
8,100.0	4,666.9	8,626.9	4,667.0	95.3	99.8	90.00	3,340.2	-2,096.1	1,111.7	917.2	194.44	5.717		
8,200.0	4,666.9	8,726.9	4,667.0	97.8	102.3	90.00	3,407.1	-2,170.5	1,113.1	913.6	199.44	5.581		
8,300.0	4,666.9	8,826.9	4,667.0	100.3	104.8	90.00	3,473.9	-2,244.8	1,114.5	910.0	204.44	5.451		
8,400.0	4,666.9	8,926.9	4,667.0	102.8	107.3	90.00	3,540.8	-2,319.2	1,116.0	906.5	209.45	5.328		
8,500.0	4,666.9	9,026.9	4,667.0	105.3	109.8	90.00	3,607.6	-2,393.6	1,117.4	903.0	214.46	5.211		
8,600.0	4,666.9	9,126.9	4,667.0	107.8	112.2	90.00	3,674.4	-2,467.9	1,119.0	899.5	219.47	5.098		

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design WC 21-2 - Slot 5 - Carson 611H - Lateral plan													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
8,700.0	4,666.9	9,226.9	4,667.0	110.4	114.7	90.00	3,741.3	-2,542.3	1,120.5	896.1	224.49	4.992		
8,800.0	4,666.9	9,326.8	4,667.0	112.9	117.2	90.00	3,808.1	-2,616.7	1,122.1	892.6	229.51	4.889		
8,900.0	4,666.9	9,426.8	4,667.0	115.4	119.7	90.00	3,875.0	-2,691.0	1,123.8	889.2	234.53	4.792		
9,000.0	4,666.9	9,526.8	4,667.0	117.9	122.2	90.00	3,941.8	-2,765.4	1,125.4	885.9	239.55	4.698		
9,100.0	4,666.9	9,626.8	4,667.0	120.4	124.7	90.00	4,008.6	-2,839.7	1,127.1	882.6	244.58	4.609		
9,200.0	4,666.9	9,726.8	4,667.0	123.0	127.2	90.00	4,075.5	-2,914.1	1,128.9	879.3	249.60	4.523		
9,300.0	4,666.9	9,826.8	4,667.0	125.5	129.7	90.00	4,142.3	-2,988.5	1,130.6	876.0	254.63	4.440		
9,400.0	4,666.9	9,926.8	4,667.0	128.0	132.2	90.00	4,209.1	-3,062.8	1,132.4	872.8	259.67	4.361		
9,500.0	4,666.9	10,026.7	4,667.0	130.5	134.7	90.00	4,276.0	-3,137.2	1,134.3	869.6	264.70	4.285		
9,600.0	4,666.9	10,126.7	4,667.0	133.1	137.2	90.00	4,342.8	-3,211.5	1,136.2	866.4	269.73	4.212		
9,700.0	4,667.0	10,226.7	4,667.0	135.6	139.7	90.00	4,409.7	-3,285.9	1,138.1	863.3	274.77	4.142		
9,800.0	4,667.0	10,326.7	4,667.0	138.1	142.2	90.00	4,476.5	-3,360.3	1,140.0	860.2	279.81	4.074		
9,900.0	4,667.0	10,426.7	4,667.0	140.7	144.7	90.00	4,543.3	-3,434.6	1,142.0	857.1	284.85	4.009		
10,000.0	4,667.0	10,526.6	4,667.0	143.2	147.2	90.00	4,610.2	-3,509.0	1,144.0	854.1	289.89	3.946		
10,100.0	4,667.0	10,626.6	4,667.0	145.7	149.7	90.00	4,677.0	-3,583.3	1,146.0	851.1	294.93	3.886		
10,200.0	4,667.0	10,726.6	4,667.0	148.3	152.2	90.00	4,743.8	-3,657.7	1,148.1	848.1	299.98	3.827		
10,300.0	4,667.0	10,826.6	4,667.0	150.8	154.7	90.00	4,810.7	-3,732.1	1,150.2	845.2	305.02	3.771		
10,400.0	4,667.0	10,926.6	4,667.0	153.3	157.2	90.00	4,877.5	-3,806.4	1,152.4	842.3	310.07	3.717		
10,500.0	4,667.0	11,026.5	4,667.0	155.9	159.7	90.00	4,944.3	-3,880.8	1,154.6	839.4	315.11	3.664		
10,600.0	4,667.0	11,126.5	4,667.0	158.4	162.2	90.00	5,011.2	-3,955.1	1,156.8	836.6	320.16	3.613		
10,700.0	4,667.0	11,226.5	4,667.0	160.9	164.7	90.00	5,078.0	-4,029.5	1,159.0	833.8	325.21	3.564		
10,800.0	4,667.0	11,326.5	4,667.0	163.5	167.2	90.00	5,144.8	-4,103.8	1,161.3	831.1	330.26	3.516		
10,900.0	4,667.0	11,426.4	4,667.0	166.0	169.7	90.00	5,211.6	-4,178.2	1,163.6	828.3	335.31	3.470		
11,000.0	4,667.0	11,526.4	4,667.0	168.5	172.2	90.00	5,278.5	-4,252.5	1,166.0	825.6	340.36	3.426		
11,100.0	4,667.0	11,626.4	4,667.0	171.1	174.7	90.00	5,345.3	-4,326.9	1,168.4	823.0	345.42	3.383		
11,200.0	4,667.0	11,726.3	4,667.0	173.6	177.2	90.00	5,412.1	-4,401.2	1,170.8	820.3	350.47	3.341		
11,300.0	4,667.0	11,826.3	4,667.0	176.2	179.8	90.00	5,479.0	-4,475.6	1,173.3	817.7	355.53	3.300		
11,400.0	4,667.0	11,926.3	4,667.0	178.7	182.3	90.00	5,545.8	-4,549.9	1,175.7	815.2	360.58	3.261		
11,500.0	4,667.0	12,026.2	4,667.0	181.2	184.8	90.00	5,612.6	-4,624.3	1,178.3	812.6	365.64	3.223		
11,600.0	4,667.0	12,126.2	4,667.0	183.8	187.3	90.00	5,679.4	-4,698.6	1,180.8	810.1	370.70	3.185		
11,700.0	4,667.0	12,226.2	4,667.0	186.3	189.8	90.00	5,746.3	-4,773.0	1,183.4	807.7	375.75	3.149		
11,800.0	4,667.0	12,326.1	4,667.0	188.9	192.3	90.00	5,813.1	-4,847.3	1,186.1	805.2	380.81	3.115		
11,900.0	4,667.0	12,426.1	4,667.0	191.4	194.8	90.00	5,879.9	-4,921.7	1,188.7	802.8	385.87	3.081		
12,000.0	4,667.0	12,526.1	4,667.0	193.9	197.4	90.00	5,946.7	-4,996.0	1,191.4	800.5	390.93	3.048		
12,054.4	4,667.0	12,561.7	4,667.0	195.3	198.2	90.00	5,970.6	-5,022.5	1,193.0	799.7	393.30	3.033 SF		

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design WC 21-2 - Slot 6 - Carson 613H - Lateral plan													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IGRF													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Tooface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	-44.87	70.9	-70.5	100.0					
100.0	100.0	100.0	100.0	0.1	0.1	-44.87	70.9	-70.5	100.0	99.7	0.29	348.656		
200.0	200.0	200.0	200.0	0.5	0.5	-44.87	70.9	-70.5	100.0	99.0	1.00	99.616		
300.0	300.0	300.0	300.0	0.9	0.9	-44.87	70.9	-70.5	100.0	98.3	1.72	58.109		
400.0	400.0	400.0	400.0	1.2	1.2	-44.87	70.9	-70.5	100.0	97.5	2.44	41.018		
500.0	500.0	500.0	500.0	1.6	1.6	-44.87	70.9	-70.5	100.0	96.8	3.15	31.696		
600.0	600.0	600.0	600.0	1.9	1.9	-44.87	70.9	-70.5	100.0	96.1	3.87	25.826		
700.0	700.0	700.0	700.0	2.3	2.3	-44.87	70.9	-70.5	100.0	95.4	4.59	21.791		
800.0	800.0	800.0	800.0	2.7	2.7	-44.87	70.9	-70.5	100.0	94.7	5.31	18.846		
900.0	900.0	901.8	901.8	3.0	3.0	-44.35	71.0	-69.4	99.3	93.2	6.02	16.485		
1,000.0	1,000.0	1,003.8	1,003.7	3.4	3.4	-42.16	71.4	-64.7	96.4	89.7	6.73	14.325		
1,100.0	1,100.0	1,105.4	1,104.9	3.7	3.7	-37.98	72.2	-56.4	91.8	84.3	7.45	12.328		
1,200.0	1,200.0	1,206.2	1,205.1	4.1	4.1	-31.33	73.4	-44.7	86.1	77.9	8.17	10.532		
1,300.0	1,300.0	1,306.1	1,303.8	4.4	4.5	-21.57	74.9	-29.6	80.6	71.7	8.92	9.032		
1,400.0	1,400.0	1,404.7	1,400.9	4.8	4.9	-9.05	76.6	-12.2	77.5	67.8	9.70	7.993		
1,426.7	1,426.7	1,431.0	1,426.7	4.9	5.0	-5.58	77.0	-7.5	77.4	67.5	9.91	7.809 CC, ES		
1,500.0	1,500.0	1,503.1	1,497.7	5.2	5.3	3.87	78.3	5.3	78.5	68.0	10.47	7.493		
1,600.0	1,600.0	1,601.5	1,594.5	5.5	5.7	15.90	80.0	22.8	83.3	72.1	11.23	7.424		
1,700.0	1,700.0	1,699.9	1,691.3	5.9	6.2	26.25	81.7	40.3	91.5	79.5	11.95	7.655		
1,800.0	1,800.0	1,798.3	1,788.1	6.2	6.6	34.71	83.4	57.8	102.1	89.5	12.66	8.070		
1,900.0	1,900.0	1,896.7	1,884.9	6.6	7.1	41.49	85.1	75.3	114.6	101.3	13.36	8.581		
2,000.0	2,000.0	1,995.1	1,981.7	7.0	7.5	46.90	86.8	92.8	128.4	114.3	14.05	9.134		
2,100.0	2,100.0	2,093.5	2,078.5	7.3	8.0	51.24	88.5	110.2	143.0	128.3	14.75	9.697		
2,200.0	2,200.0	2,191.9	2,175.3	7.7	8.5	54.77	90.2	127.7	158.3	142.9	15.45	10.249		
2,300.0	2,300.0	2,290.3	2,272.1	8.0	8.9	57.67	91.9	145.2	174.1	158.0	16.15	10.782		
2,400.0	2,400.0	2,388.7	2,368.9	8.4	9.4	60.08	93.6	162.7	190.3	173.4	16.85	11.291		
2,500.0	2,500.0	2,487.1	2,465.8	8.7	9.9	62.12	95.3	180.2	206.7	189.2	17.56	11.772		
2,600.0	2,600.0	2,585.4	2,562.6	9.1	10.3	63.85	97.1	197.7	223.4	205.1	18.27	12.227		
2,700.0	2,700.0	2,683.8	2,659.4	9.5	10.8	65.35	98.8	215.2	240.2	221.3	18.98	12.656		
2,800.0	2,800.0	2,782.2	2,756.2	9.8	11.3	66.65	100.5	232.7	257.2	237.5	19.69	13.060		
2,900.0	2,900.0	2,880.6	2,853.0	10.2	11.8	67.78	102.2	250.2	274.3	253.9	20.41	13.440		
3,000.0	3,000.0	2,979.0	2,949.8	10.5	12.2	68.79	103.9	267.7	291.5	270.4	21.12	13.798		
3,100.0	3,100.0	3,077.4	3,046.6	10.9	12.7	69.68	105.6	285.2	308.7	286.9	21.84	14.136		
3,200.0	3,200.0	3,175.8	3,143.4	11.3	13.2	70.48	107.3	302.7	326.1	303.5	22.56	14.454		
3,300.0	3,300.0	3,274.2	3,240.2	11.6	13.7	71.20	109.0	320.1	343.4	320.2	23.28	14.755		
3,400.0	3,400.0	3,372.6	3,337.0	12.0	14.1	71.84	110.7	337.6	360.9	336.9	24.00	15.039		
3,500.0	3,500.0	3,471.0	3,433.9	12.3	14.6	72.43	112.4	355.1	378.3	353.6	24.72	15.308		
3,600.0	3,600.0	3,569.4	3,530.7	12.7	15.1	72.97	114.1	372.6	395.8	370.4	25.44	15.562		
3,700.0	3,700.0	3,667.8	3,627.5	13.0	15.6	73.46	115.8	390.1	413.4	387.2	26.16	15.803		
3,800.0	3,800.0	3,766.1	3,724.3	13.4	16.1	73.91	117.6	407.6	430.9	404.0	26.88	16.033		
3,830.7	3,830.7	3,796.4	3,754.0	13.5	16.2	74.04	118.1	413.0	436.3	409.2	27.10	16.101		
3,850.0	3,850.0	3,815.3	3,772.7	13.6	16.3	122.20	118.4	416.3	439.8	412.6	27.21	16.167		
3,900.0	3,899.9	3,864.1	3,820.7	13.6	16.5	122.09	119.3	425.0	450.0	422.6	27.39	16.432		
3,950.0	3,949.6	3,912.3	3,868.1	13.6	16.8	122.17	120.1	433.6	461.8	434.3	27.57	16.754		
4,000.0	3,998.8	3,959.7	3,914.7	13.6	17.0	122.40	120.9	442.0	475.3	447.5	27.74	17.133		
4,050.0	4,047.5	4,006.2	3,960.5	13.6	17.2	122.75	121.7	450.3	490.4	462.5	27.92	17.569		
4,100.0	4,095.4	4,051.6	4,005.1	13.6	17.5	123.17	122.5	458.3	507.4	479.3	28.09	18.062		
4,150.0	4,142.3	4,095.6	4,048.5	13.6	17.7	123.62	123.3	466.2	526.3	498.0	28.28	18.612		
4,200.0	4,188.1	4,179.8	4,131.7	13.7	18.0	125.40	127.8	477.9	545.8	517.0	28.73	18.994		
4,250.0	4,232.7	4,285.0	4,235.5	13.8	18.4	127.02	143.8	480.9	562.8	533.7	29.07	19.361		
4,300.0	4,275.8	4,401.6	4,347.1	13.9	18.6	127.90	174.5	469.2	576.3	547.2	29.09	19.808		
4,350.0	4,317.3	4,526.6	4,458.8	14.0	18.8	127.87	221.6	439.3	585.5	556.7	28.81	20.324		

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design WC 21-2 - Slot 6 - Carson 613H - Lateral plan														Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IGRF														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
4,400.0	4,357.0	4,655.3	4,560.7	14.2	18.8	126.82	283.3	391.2	590.0	561.6	28.40	20.776			
4,450.0	4,394.9	4,781.5	4,643.7	14.4	18.8	124.82	354.6	328.8	589.7	561.5	28.20	20.910			
4,500.0	4,430.8	4,899.9	4,703.4	14.7	18.7	122.04	428.7	258.6	585.2	556.7	28.53	20.511			
4,550.0	4,464.5	5,007.3	4,740.6	15.1	18.9	118.75	499.7	187.3	577.4	547.8	29.54	19.548			
4,600.0	4,496.0	5,102.7	4,759.2	15.5	20.0	115.20	564.2	119.6	567.2	536.1	31.03	18.277			
4,650.0	4,525.1	5,186.9	4,764.0	15.9	21.1	111.57	620.8	57.7	555.6	522.7	32.91	16.884			
4,700.0	4,551.7	5,226.5	4,764.0	16.5	21.6	110.17	647.4	28.2	544.9	510.3	34.55	15.773			
4,750.0	4,575.7	5,270.3	4,764.0	17.1	22.3	108.59	676.7	-4.3	536.2	499.9	36.27	14.782			
4,800.0	4,597.1	5,315.5	4,764.0	17.8	23.0	107.04	707.0	-37.9	529.3	491.2	38.06	13.908			
4,850.0	4,615.7	5,361.9	4,764.0	18.5	23.7	105.58	738.1	-72.3	523.9	484.0	39.90	13.132			
4,900.0	4,631.6	5,409.3	4,764.0	19.3	24.5	104.24	769.8	-107.6	519.9	478.2	41.78	12.445			
4,950.0	4,644.5	5,457.6	4,764.0	20.2	25.4	103.08	802.1	-143.4	517.0	473.3	43.71	11.830			
5,000.0	4,654.6	5,506.6	4,764.0	21.1	26.3	102.14	834.9	-179.8	515.0	469.4	45.65	11.282			
5,050.0	4,661.7	5,556.1	4,764.0	22.0	27.2	101.45	868.1	-216.5	513.8	466.2	47.63	10.788			
5,100.0	4,665.8	5,605.9	4,764.0	23.0	28.1	101.03	901.4	-253.5	513.3	463.7	49.60	10.348			
5,121.9	4,666.7	5,627.8	4,764.0	23.5	28.6	100.93	916.1	-269.8	513.2	462.7	50.48	10.167			
5,144.4	4,667.0	5,650.2	4,764.0	23.9	29.0	100.89	931.2	-286.5	513.3	461.9	51.36	9.993			
5,200.0	4,667.0	5,705.9	4,764.0	25.1	30.1	100.89	968.4	-327.8	513.6	460.0	53.58	9.586			
5,300.0	4,667.0	5,805.9	4,764.0	27.2	32.1	100.88	1,035.4	-402.1	514.1	456.4	57.69	8.912			
5,400.0	4,667.0	5,905.9	4,764.0	29.4	34.3	100.86	1,102.3	-476.3	514.7	452.8	61.93	8.311			
5,500.0	4,667.0	6,005.9	4,764.0	31.6	36.4	100.85	1,169.3	-550.6	515.3	449.0	66.27	7.775			
5,600.0	4,667.0	6,105.9	4,764.0	33.9	38.6	100.84	1,236.3	-624.8	515.9	445.2	70.70	7.297			
5,700.0	4,667.0	6,205.9	4,764.0	36.2	40.9	100.82	1,303.2	-699.1	516.6	441.4	75.20	6.870			
5,800.0	4,667.0	6,305.8	4,764.0	38.5	43.1	100.81	1,370.2	-773.4	517.3	437.6	79.76	6.486			
5,900.0	4,667.0	6,405.8	4,764.0	40.9	45.4	100.79	1,437.1	-847.6	518.1	433.7	84.37	6.141			
6,000.0	4,667.0	6,505.8	4,764.0	43.3	47.8	100.78	1,504.1	-921.9	518.9	429.8	89.02	5.829			
6,100.0	4,667.0	6,605.8	4,764.0	45.7	50.1	100.76	1,571.1	-996.2	519.7	426.0	93.70	5.546			
6,200.0	4,667.0	6,705.8	4,764.0	48.1	52.5	100.74	1,638.0	-1,070.4	520.5	422.1	98.42	5.289			
6,300.0	4,667.0	6,805.8	4,764.0	50.5	54.8	100.73	1,705.0	-1,144.7	521.4	418.3	103.16	5.054			
6,400.0	4,667.0	6,905.8	4,764.0	53.0	57.2	100.71	1,772.0	-1,219.0	522.3	414.4	107.93	4.840			
6,500.0	4,667.0	7,005.8	4,764.0	55.4	59.6	100.69	1,838.9	-1,293.2	523.3	410.6	112.71	4.643			
6,600.0	4,667.0	7,105.8	4,764.0	57.9	62.0	100.67	1,905.9	-1,367.5	524.3	406.7	117.51	4.461			
6,700.0	4,667.0	7,205.8	4,764.0	60.3	64.5	100.65	1,972.8	-1,441.8	525.3	402.9	122.33	4.294			
6,800.0	4,667.0	7,305.8	4,764.0	62.8	66.9	100.62	2,039.8	-1,516.0	526.3	399.2	127.17	4.139			
6,900.0	4,667.0	7,405.8	4,764.0	65.3	69.3	100.60	2,106.8	-1,590.3	527.4	395.4	132.02	3.995			
7,000.0	4,667.0	7,505.8	4,764.0	67.8	71.8	100.58	2,173.7	-1,664.5	528.5	391.7	136.87	3.861			
7,100.0	4,667.0	7,605.8	4,764.0	70.2	74.2	100.56	2,240.7	-1,738.8	529.7	387.9	141.74	3.737			
7,200.0	4,667.0	7,705.8	4,764.0	72.7	76.7	100.53	2,307.7	-1,813.1	530.9	384.3	146.62	3.621			
7,300.0	4,667.0	7,805.8	4,764.0	75.2	79.1	100.51	2,374.6	-1,887.3	532.1	380.6	151.51	3.512			
7,400.0	4,667.0	7,905.8	4,764.0	77.7	81.6	100.48	2,441.6	-1,961.6	533.4	376.9	156.41	3.410			
7,500.0	4,667.0	8,005.8	4,764.0	80.2	84.0	100.46	2,508.5	-2,035.8	534.6	373.3	161.31	3.314			
7,600.0	4,666.9	8,105.7	4,764.0	82.7	86.5	100.43	2,575.5	-2,110.1	536.0	369.7	166.22	3.224			
7,700.0	4,666.9	8,205.7	4,764.0	85.2	89.0	100.41	2,642.5	-2,184.4	537.3	366.2	171.14	3.140			
7,800.0	4,666.9	8,305.7	4,764.0	87.7	91.5	100.38	2,709.4	-2,258.6	538.7	362.6	176.07	3.060			
7,900.0	4,666.9	8,405.7	4,764.0	90.2	93.9	100.35	2,776.4	-2,332.9	540.1	359.1	181.00	2.984			
8,000.0	4,666.9	8,505.7	4,764.0	92.7	96.4	100.32	2,843.3	-2,407.1	541.6	355.7	185.93	2.913			
8,100.0	4,666.9	8,605.7	4,764.0	95.3	98.9	100.30	2,910.3	-2,481.4	543.1	352.2	190.87	2.845			
8,200.0	4,666.9	8,705.7	4,764.0	97.8	101.4	100.27	2,977.3	-2,555.7	544.6	348.8	195.82	2.781			
8,300.0	4,666.9	8,805.7	4,764.0	100.3	103.9	100.24	3,044.2	-2,629.9	546.2	345.4	200.77	2.720			
8,400.0	4,666.9	8,905.7	4,764.0	102.8	106.4	100.21	3,111.2	-2,704.2	547.8	342.0	205.72	2.663			
8,500.0	4,666.9	9,005.6	4,764.0	105.3	108.9	100.18	3,178.1	-2,778.4	549.4	338.7	210.68	2.608			
8,600.0	4,666.9	9,105.6	4,764.0	107.8	111.3	100.15	3,245.1	-2,852.7	551.1	335.4	215.64	2.555			

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

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Offset Design WC 21-2 - Slot 6 - Carson 613H - Lateral plan													Offset Site Error: 0.0 usft	
Survey Program: 0-MWD+IGRF													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
8,700.0	4,666.9	9,205.6	4,764.0	110.4	113.8	100.11	3,312.0	-2,926.9	552.8	332.1	220.61	2.506		
8,800.0	4,666.9	9,305.6	4,764.0	112.9	116.3	100.08	3,379.0	-3,001.2	554.5	328.9	225.58	2.458		
8,900.0	4,666.9	9,405.6	4,764.0	115.4	118.8	100.05	3,445.9	-3,075.5	556.2	325.7	230.55	2.413		
9,000.0	4,666.9	9,505.6	4,764.0	117.9	121.3	100.02	3,512.9	-3,149.7	558.0	322.5	235.52	2.369		
9,100.0	4,666.9	9,605.5	4,764.0	120.4	123.8	99.98	3,579.9	-3,224.0	559.9	319.4	240.50	2.328		
9,200.0	4,666.9	9,705.5	4,764.0	123.0	126.3	99.95	3,646.8	-3,298.2	561.7	316.3	245.49	2.288		
9,300.0	4,666.9	9,805.5	4,764.0	125.5	128.8	99.92	3,713.8	-3,372.5	563.6	313.2	250.47	2.250		
9,400.0	4,666.9	9,905.5	4,764.0	128.0	131.3	99.88	3,780.7	-3,446.7	565.6	310.1	255.46	2.214		
9,500.0	4,666.9	10,005.5	4,764.0	130.5	133.8	99.85	3,847.7	-3,521.0	567.5	307.1	260.45	2.179		
9,600.0	4,666.9	10,105.5	4,764.0	133.1	136.4	99.81	3,914.6	-3,595.2	569.5	304.1	265.45	2.146		
9,700.0	4,667.0	10,205.4	4,764.0	135.6	138.9	99.78	3,981.6	-3,669.5	571.6	301.1	270.44	2.113		
9,800.0	4,667.0	10,305.4	4,764.0	138.1	141.4	99.74	4,048.5	-3,743.7	573.6	298.2	275.44	2.083		
9,900.0	4,667.0	10,405.4	4,764.0	140.7	143.9	99.71	4,115.5	-3,818.0	575.8	295.3	280.44	2.053		
10,000.0	4,667.0	10,505.4	4,764.0	143.2	146.4	99.67	4,182.4	-3,892.2	577.9	292.4	285.45	2.025		
10,100.0	4,667.0	10,605.3	4,764.0	145.7	148.9	99.63	4,249.4	-3,966.5	580.1	289.6	290.45	1.997		
10,200.0	4,667.0	10,705.3	4,764.0	148.3	151.4	99.60	4,316.3	-4,040.7	582.3	286.8	295.46	1.971		
10,300.0	4,667.0	10,805.3	4,764.0	150.8	153.9	99.56	4,383.3	-4,115.0	584.5	284.0	300.47	1.945		
10,400.0	4,667.0	10,905.3	4,764.0	153.3	156.4	99.52	4,450.2	-4,189.2	586.8	281.3	305.49	1.921		
10,500.0	4,667.0	11,005.2	4,764.0	155.9	158.9	99.48	4,517.2	-4,263.5	589.1	278.6	310.50	1.897		
10,600.0	4,667.0	11,105.2	4,764.0	158.4	161.4	99.45	4,584.1	-4,337.7	591.4	275.9	315.52	1.874		
10,700.0	4,667.0	11,205.2	4,764.0	160.9	164.0	99.41	4,651.1	-4,412.0	593.8	273.3	320.54	1.853		
10,800.0	4,667.0	11,305.1	4,764.0	163.5	166.5	99.37	4,718.0	-4,486.2	596.2	270.7	325.56	1.831		
10,900.0	4,667.0	11,405.1	4,764.0	166.0	169.0	99.33	4,785.0	-4,560.4	598.7	268.1	330.58	1.811		
11,000.0	4,667.0	11,505.1	4,764.0	168.5	171.5	99.29	4,851.9	-4,634.7	601.1	265.5	335.61	1.791		
11,100.0	4,667.0	11,605.1	4,764.0	171.1	174.0	99.25	4,918.8	-4,708.9	603.7	263.0	340.64	1.772		
11,200.0	4,667.0	11,705.0	4,764.0	173.6	176.5	99.21	4,985.8	-4,783.2	606.2	260.5	345.67	1.754		
11,300.0	4,667.0	11,805.0	4,764.0	176.2	179.0	99.17	5,052.7	-4,857.4	608.8	258.1	350.70	1.736		
11,400.0	4,667.0	11,904.9	4,764.0	178.7	181.6	99.13	5,119.7	-4,931.7	611.4	255.7	355.73	1.719		
11,500.0	4,667.0	12,004.9	4,764.0	181.2	184.1	99.09	5,186.6	-5,005.9	614.1	253.3	360.77	1.702		
11,600.0	4,667.0	12,104.9	4,764.0	183.8	186.6	99.05	5,253.6	-5,080.1	616.7	250.9	365.80	1.686		
11,700.0	4,667.0	12,204.8	4,764.0	186.3	189.1	99.01	5,320.5	-5,154.4	619.5	248.6	370.84	1.670		
11,800.0	4,667.0	12,304.8	4,764.0	188.9	191.6	98.97	5,387.4	-5,228.6	622.2	246.3	375.88	1.655		
11,900.0	4,667.0	12,404.8	4,764.0	191.4	194.1	98.93	5,454.4	-5,302.8	625.0	244.1	380.92	1.641		
12,000.0	4,667.0	12,504.7	4,764.0	193.9	196.7	98.89	5,521.3	-5,377.1	627.8	241.9	385.96	1.627 SF		
12,054.4	4,667.0	12,508.3	4,764.0	195.3	196.7	98.89	5,523.7	-5,379.7	631.4	245.0	386.41	1.634		

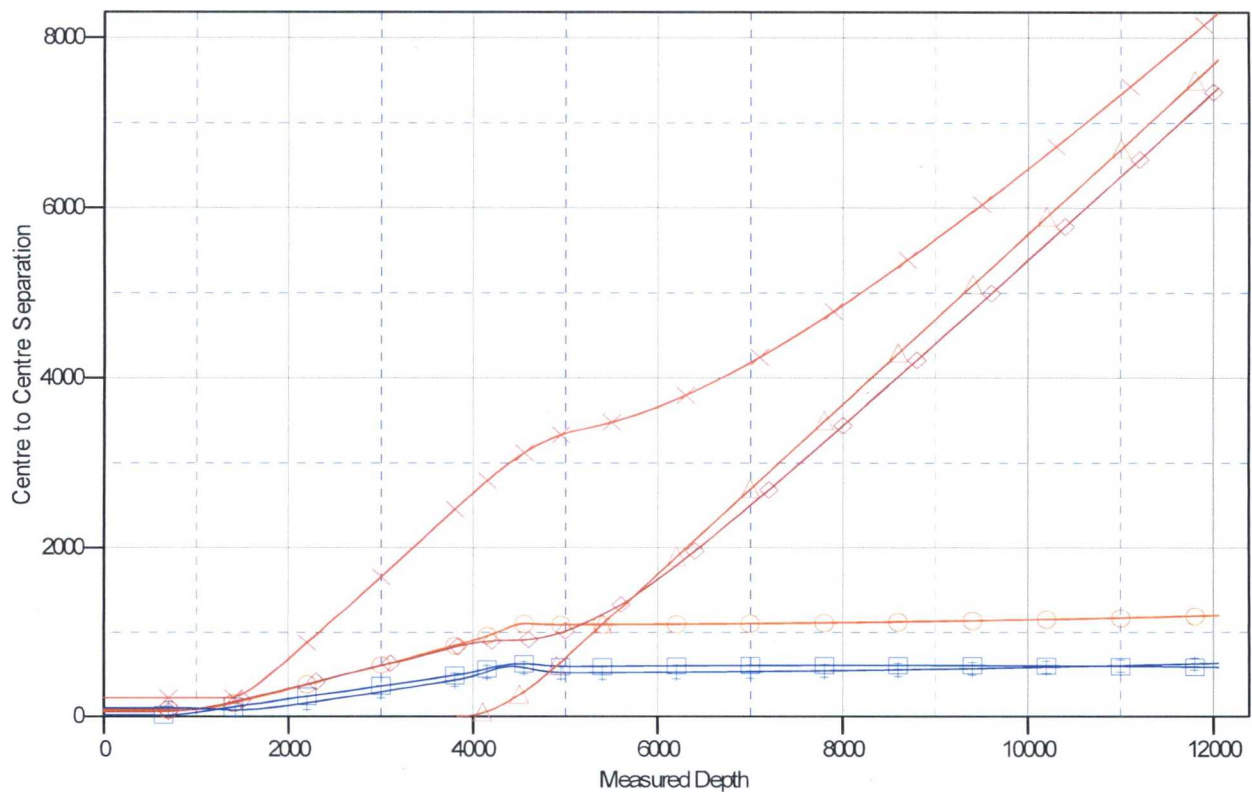
Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Reference Depths are relative to Rig @ 6370.0usft (Rig TBD)
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.83333333

Coordinates are relative to: Slot 1
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: -0.17°

Ladder Plot



LEGEND

 Slot 5, Carson 611H, Lateral plan V 0
 Slot 4, Carson 564H, Lateral plan V 0

 Slot 6, Carson 613H, Lateral plan V 0
 Slot 2, Carson 617H, Lateral plan V 0

 Slot 1, Carson 615H, Pilot hole V 0

Company: DJR Operating
Project: Proposed Carson Unit
Reference Site: WC 21-2
Site Error: 0.0 usft
Reference Well: Slot 1
Well Error: 0.0 usft
Reference Wellbore: Carson 615H
Reference Design: Lateral plan

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM
Offset TVD Reference: Offset Datum

Reference Depths are relative to Rig @ 6370.0usft (Rig TBD)

Offset Depths are relative to Offset Datum

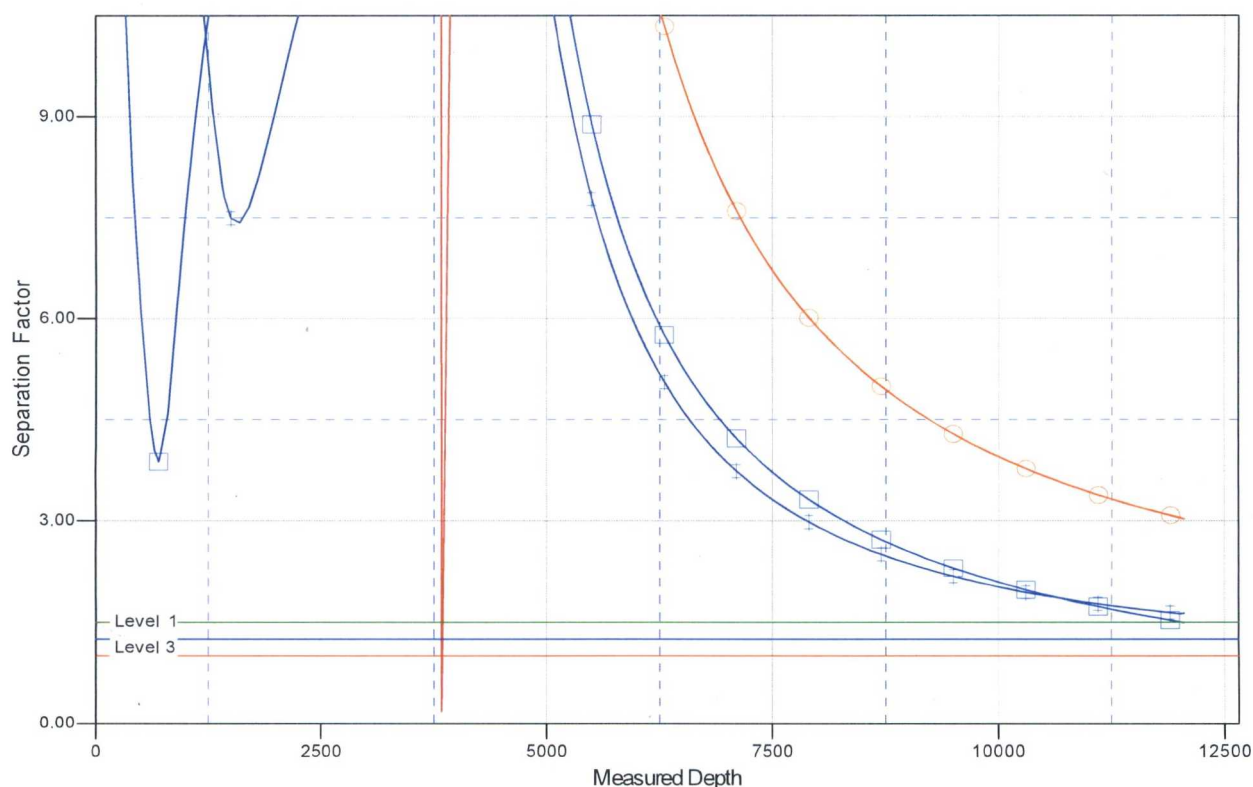
Central Meridian is -107.8333333

Coordinates are relative to: Slot 1

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

Grid Convergence at Surface is: -0.17°

Separation Factor Plot



LEGEND

 Slot 5, Carson 611H, Lateral plan V 0
 Slot 4, Carson 584H, Lateral plan V 0

 Slot 6, Carson 613H, Lateral plan V 0
 Bish Coal 21 Com 2, Original drilling g. Original drilling V 0

 Slot 2, Carson 617H, Lateral plan V 0
 Slot 1, Carson 615, Pilot hole V 0

DJR Operating

Proposed Carson Unit

WC 21-2

Slot 1

Carson 615

Plan: Pilot hole

Standard Planning Report

31 July, 2018



Database:	EDM	Local Co-ordinate Reference:	Well Slot 1
Company:	DJR Operating	TVD Reference:	Rig @ 6370.0usft (Rig TBD)
Project:	Proposed Carson Unit	MD Reference:	Rig @ 6370.0usft (Rig TBD)
Site:	WC 21-2	North Reference:	True
Well:	Slot 1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Carson 615		
Design:	Pilot hole		

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 1					
Well Position	+N/-S	-99.2 usft	Northing:	1,958,113 usft	Latitude:	36.38099715
	+E/-W	98.8 usft	Easting:	2,637,799 usft	Longitude:	-108.12309066
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	6,350.0 usft

Wellbore	Carson 615				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/30/2018	9.26	62.95	49,665.05558293

Design	Pilot hole			
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	0.00

Plan Survey Tool Program	Date	7/30/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	4,999.0	Pilot hole (Carson 615)	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	
4,999.0	0.00	0.00	4,999.0	0.0	0.0	0.00	0.00	0.00	0.00	

Database: EDM
Company: DJR Operating
Project: Proposed Carson Unit
Site: WC 21-2
Well: Slot 1
Wellbore: Carson 615
Design: Pilot hole

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
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
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
943.0	0.00	0.00	943.0	0.0	0.0	0.0	0.00	0.00	0.00
Fruitland									
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,190.0	0.00	0.00	1,190.0	0.0	0.0	0.0	0.00	0.00	0.00
Picture Cliffs									
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,289.0	0.00	0.00	1,289.0	0.0	0.0	0.0	0.00	0.00	0.00
Lewis									
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,952.0	0.00	0.00	1,952.0	0.0	0.0	0.0	0.00	0.00	0.00
Chacra									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,518.0	0.00	0.00	2,518.0	0.0	0.0	0.0	0.00	0.00	0.00
Menefee									
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,576.0	0.00	0.00	3,576.0	0.0	0.0	0.0	0.00	0.00	0.00
Point Lookout									
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00

Database: EDM
Company: DJR Operating
Project: Proposed Carson Unit
Site: WC 21-2
Well: Slot 1
Wellbore: Carson 615
Design: Pilot hole

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Slot 1
 Rig @ 6370.0usft (Rig TBD)
 Rig @ 6370.0usft (Rig TBD)
 True
 Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,745.0	0.00	0.00	3,745.0	0.0	0.0	0.0	0.00	0.00	0.00
Mancos									
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,810.7	0.00	0.00	3,810.7	0.0	0.0	0.0	0.00	0.00	0.00
Intermediate casing									
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,360.0	0.00	0.00	4,360.0	0.0	0.0	0.0	0.00	0.00	0.00
Mancos Silt									
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,602.0	0.00	0.00	4,602.0	0.0	0.0	0.0	0.00	0.00	0.00
Gallup A									
4,667.0	0.00	0.00	4,667.0	0.0	0.0	0.0	0.00	0.00	0.00
Gallup B									
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,764.0	0.00	0.00	4,764.0	0.0	0.0	0.0	0.00	0.00	0.00
Gallup C									
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,899.0	0.00	0.00	4,899.0	0.0	0.0	0.0	0.00	0.00	0.00
Lower Mancos									
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,999.0	0.00	0.00	4,999.0	0.0	0.0	0.0	0.00	0.00	0.00

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
3,810.7	3,810.7	Intermediate casing	7.000	8.750

Database: EDM
Company: DJR Operating
Project: Proposed Carson Unit
Site: WC 21-2
Well: Slot 1
Wellbore: Carson 615
Design: Pilot hole

Local Co-ordinate Reference: Well Slot 1
TVD Reference: Rig @ 6370.0usft (Rig TBD)
MD Reference: Rig @ 6370.0usft (Rig TBD)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
25.0	25.0	Kirtland	Shale			
943.0	943.0	Fruitland	Coal			
1,190.0	1,190.0	Picture Cliffs	Sand			
1,289.0	1,289.0	Lewis	Shale			
1,952.0	1,952.0	Chacra	Sand			
2,518.0	2,518.0	Menefee	Sandstone, Shaly			
3,576.0	3,576.0	Point Lookout	Sand			
3,745.0	3,745.0	Mancos	Shale			
4,360.0	4,360.0	Mancos Silt	Shale, Silty			
4,602.0	4,602.0	Gallup A	Sand			
4,667.0	4,667.0	Gallup B	Sand			
4,764.0	4,764.0	Gallup C	Sand			
4,899.0	4,899.0	Lower Mancos	Shale			