

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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address DJR Operating, LLC 1 Road 3263 Aztec, NM 87410		² OGRID Number 371838	
		³ Reason for Filing Code/ Effective Date RT	
⁴ API Number 30-043-21341	⁵ Pool Name Alamito N; Mancos (Oil)		⁶ Pool Code 98174
⁷ Property Code 325267	⁸ Property Name North Alamito Unit		⁹ Well Number 523H

II. 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
L	31	23N	7W		1996’	South	694’	West	Sandoval

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	5	22N	7W		597’	South	2222’	West	Sandoval
¹² Lse Code F	¹³ Producing Method Code F	¹⁴ Gas Connection Date TBD	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
248440	Western Refining Company, LP 6500 Townbridge Drive, El Paso, TX 79905	O
151618	Enterprise Field Services, LLC Post Office Box 4503, Houston, TX 77001	G
	~Gas will be flared during flowback & until N2 & O2 is cleaned from the wellbore~	

IV. Well Completion Data

²¹ Spud Date 03/05/20	²² Ready Date 04/11/2021	²³ TD 14,460’ MD 5,040’ TVD	²⁴ PBTD 14,442’ MD 5,040’ TVD	²⁵ Perforations 5,877’-14,387’ MD 5,040’-5,054’ TVD Frac Sleeve @ 14,420’	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
12.25	9.625” 36# J55	380’	109		
8.75	7” 26# J55	5,406’	Lead: 386 Tail: 240		
6.125	4.5” 11.6# P110	TOL: 5,085’ BOL: 14,456’	785		

V. Well Test Data

³¹ Date New Oil	³² Gas Delivery Date	³³ Test Date	³⁴ Test Length	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil	³⁹ Water	⁴⁰ Gas		⁴¹ Test Method

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Shaw-Marie Ford</i>	OIL CONSERVATION DIVISION Approved by: <i>Amy Kunsch</i>
Printed name: Shaw-Marie Ford	Title: Data Compliance Manager
Title: Regulatory Specialist	Approval Date: 4/9/21
E-mail Address: sford@djrlc.com	
Date: 02/05/2021	Phone: 505-716-3297

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: (505) 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, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

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

Submit one copy to appropriate
District Office

☐ AMENDED REPORT
☒ AS-DRILLED
Prelim Information Only

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21341	² Pool Code 98174	³ Pool Name NORTH ALAMITO UNIT MANCOS OIL POOL
⁴ Property Code 325267	⁵ Property Name NORTH ALAMITO UNIT	⁶ Well Number 523H
⁷ OGRID No. 371838	⁸ Operator Name DJR OPERATING, LLC	⁹ Elevation 6964'

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
L	31	23N	7W	3	1996'	SOUTH	694'	WEST	SANDOVAL

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
N	5	22N	7W		597'	SOUTH	2222'	WEST	SANDOVAL

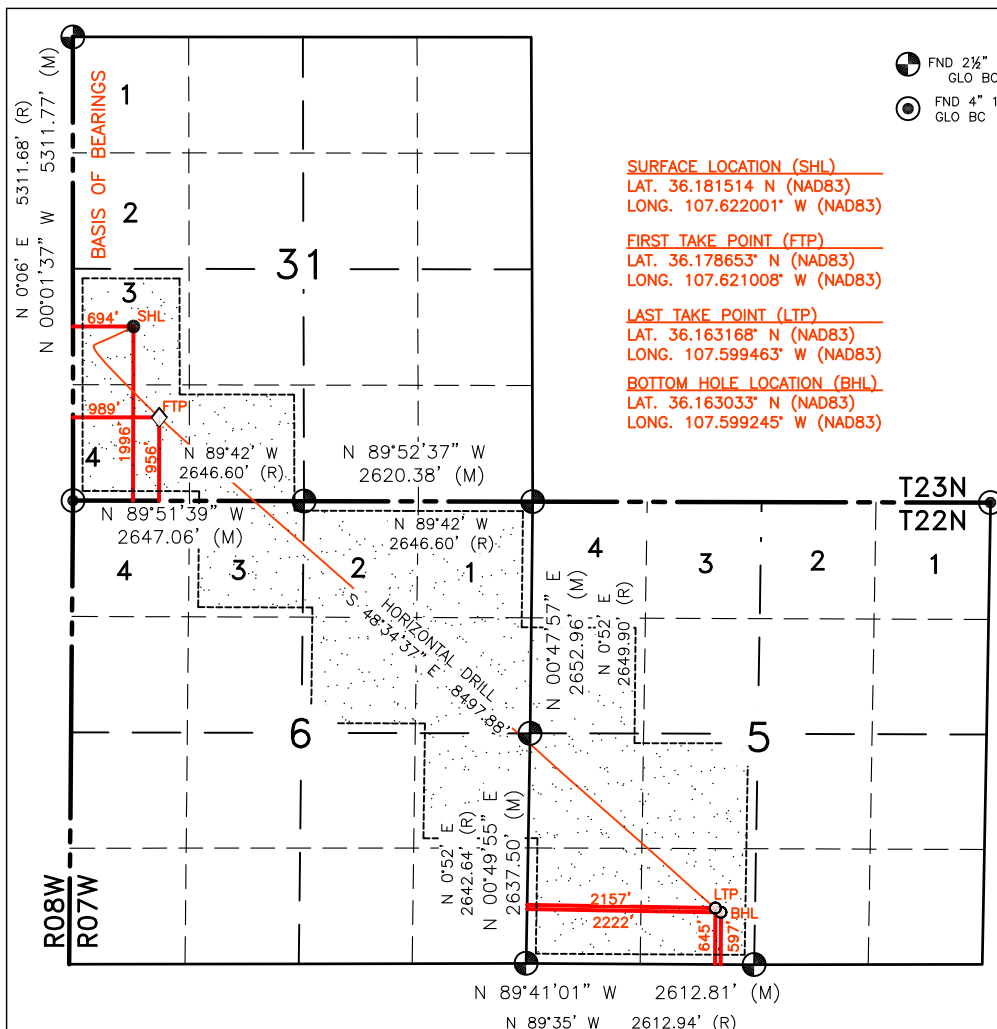
¹² Dedicated Acres
SEC. 31: LOT 3, LOT 4 & SE/SW (121.32 AC.);
SEC. 6: LOT 1, LOT 2, LOT 3, SE/NE, SW/NE &
NE/SE (240.45 AC.); SEC. 5: SW/4 & SW/NW
(200 AC.) = 561.77 ACRES TOTAL

¹³ Joint or Infill¹⁴ Consolidation Code¹⁵ Order No.

R-14081, R-14081A

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

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17 OPERATOR CERTIFICATION

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

Shaw-Marie Ford 4/8/21
Signature Date

Shaw-Marie Ford

Printed Name

sford@djrlc.com

E-mail Address

SURVEYOR CERTIFICATION

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

JANUARY 29, 2021

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

11393

**Directional Survey Certification**

2948 I-70 Business Loop
Grand Junction, CO 81504
(970)-245-9447 Fax (970)-245-9454

Operator	DJR Operating
Well Name & No.	North Alamito L31 2307 523H
County & State	San Juan, NM
SDI Job No.	OP.024324
Rig	Aztec 920

I, Janie Collins, having personal knowledge of all the facts, hereby certify that the attached directional survey run from a measured depth of 444 feet to a measured depth of 14,460 feet is true and correct as determined from all available records.

A handwritten signature in blue ink, appearing to read 'Janie Collins', written over a horizontal line.

Signature

30-Mar-20

Date

Janie Collins

Colorado District Well Planner
Scientific Drilling International



Scientific Drilling, Intl Survey Report

Company:	DJR Operating	Local Co-ordinate Reference:	Well NAU 523H
Project:	North Alamito Unit	TVD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Site:	L31 2307	MD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Well:	NAU 523H	North Reference:	True
Wellbore:	Original drilling	Survey Calculation Method:	Minimum Curvature
Design:	Original drilling	Database:	Grand Junction

Project	North Alamito 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		L31 2307			
Site Position:		Northing:		1,885,429.49 usft	
From:		Easting:		2,785,438.72 usft	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
Lat/Long		0.00 usft		36.1814960	
		13.20 in		-107.6220650	
				0.12 °	

Well	NAU 523H					
Well Position	+N/-S	0.00 usft	Northing:	1,885,436.09 usft	Latitude:	36.1815140
	+E/-W	0.00 usft	Easting:	2,785,457.59 usft	Longitude:	-107.6220010
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	6,964.00 usft

Wellbore	Original drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/7/2019	8.95	62.86	49,531.41085806

Design	Original drilling				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	134.833	

Survey Program	Date	3/30/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
444.00	4,291.00	Survey #1 - Surface MWD Survey (Original)	MWD+HDGM	OWSG MWD + HDGM	
4,354.00	5,364.00	Survey #2 - Curve MWD Survey (Original)	MWD+HDGM	OWSG MWD + HDGM	
5,435.00	14,460.00	Survey #3 - Lateral MWD Survey (Original)	MWD+HDGM	OWSG MWD + HDGM	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
444.00	2.40	187.650	443.87	-9.22	-1.24	5.62	0.54	0.54	0.00	
506.00	3.92	209.270	505.78	-12.35	-2.45	6.97	3.07	2.45	34.87	
566.00	5.88	222.250	565.56	-16.42	-5.52	7.66	3.73	3.27	21.63	
627.00	6.40	224.000	626.21	-21.17	-9.98	7.85	0.91	0.85	2.87	
687.00	7.35	238.230	685.78	-25.60	-15.57	7.01	3.24	1.58	23.72	
748.00	8.24	247.260	746.22	-29.34	-22.91	4.44	2.48	1.46	14.80	
809.00	8.43	250.090	806.57	-32.56	-31.15	0.86	0.74	0.31	4.64	
869.00	8.47	248.480	865.92	-35.68	-39.40	-2.79	0.40	0.07	-2.68	



Scientific Drilling, Intl Survey Report

Company:	DJR Operating	Local Co-ordinate Reference:	Well NAU 523H
Project:	North Alamito Unit	TVD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Site:	L31 2307	MD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Well:	NAU 523H	North Reference:	True
Wellbore:	Original drilling	Survey Calculation Method:	Minimum Curvature
Design:	Original drilling	Database:	Grand Junction

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
931.00	8.50	249.890	927.24	-38.93	-47.95	-6.56	0.34	0.05	2.27	
991.00	8.87	248.720	986.55	-42.13	-56.42	-10.31	0.68	0.62	-1.95	
1,052.00	9.08	247.460	1,046.81	-45.68	-65.25	-14.06	0.47	0.34	-2.07	
1,112.00	8.85	255.360	1,106.08	-48.66	-74.09	-18.23	2.09	-0.38	13.17	
1,173.00	8.44	258.020	1,166.38	-50.78	-83.01	-23.06	0.94	-0.67	4.36	
1,233.00	7.11	254.550	1,225.83	-52.68	-90.89	-27.32	2.35	-2.22	-5.78	
1,294.00	6.41	251.430	1,286.41	-54.77	-97.76	-30.71	1.30	-1.15	-5.11	
1,355.00	6.60	251.110	1,347.01	-56.99	-104.30	-33.79	0.32	0.31	-0.52	
1,417.00	6.34	247.290	1,408.62	-59.47	-110.83	-36.67	0.81	-0.42	-6.16	
1,477.00	6.38	242.760	1,468.25	-62.27	-116.85	-38.96	0.84	0.07	-7.55	
1,538.00	6.77	247.470	1,528.85	-65.20	-123.19	-41.39	1.09	0.64	7.72	
1,598.00	6.58	242.870	1,588.44	-68.12	-129.51	-43.82	0.95	-0.32	-7.67	
1,658.00	6.48	233.920	1,648.06	-71.68	-135.31	-45.42	1.70	-0.17	-14.92	
1,720.00	7.13	240.720	1,709.62	-75.63	-141.49	-47.02	1.67	1.05	10.97	
1,781.00	8.60	247.760	1,770.05	-79.20	-149.02	-49.84	2.88	2.41	11.54	
1,842.00	8.29	248.210	1,830.38	-82.56	-157.32	-53.36	0.52	-0.51	0.74	
1,905.00	8.41	246.570	1,892.72	-86.08	-165.77	-56.87	0.42	0.19	-2.60	
1,968.00	8.04	247.100	1,955.07	-89.63	-174.05	-60.24	0.60	-0.59	0.84	
2,031.00	8.27	245.410	2,017.43	-93.23	-182.23	-63.50	0.53	0.37	-2.68	
2,094.00	8.04	245.160	2,079.79	-96.96	-190.35	-66.63	0.37	-0.37	-0.40	
2,157.00	8.09	241.740	2,142.17	-100.91	-198.25	-69.45	0.77	0.08	-5.43	
2,220.00	8.29	241.370	2,204.53	-105.19	-206.14	-72.03	0.33	0.32	-0.59	
2,283.00	8.58	244.420	2,266.85	-109.39	-214.37	-74.90	0.85	0.46	4.84	
2,347.00	8.79	245.860	2,330.11	-113.45	-223.14	-78.25	0.47	0.33	2.25	
2,410.00	9.18	244.850	2,392.34	-117.56	-232.08	-81.70	0.67	0.62	-1.60	
2,473.00	9.40	245.160	2,454.51	-121.86	-241.30	-85.21	0.36	0.35	0.49	
2,536.00	9.50	250.120	2,516.66	-125.79	-250.86	-89.21	1.30	0.16	7.87	
2,599.00	8.81	247.940	2,578.86	-129.37	-260.22	-93.33	1.23	-1.10	-3.46	
2,662.00	8.64	246.610	2,641.13	-133.06	-269.03	-96.98	0.42	-0.27	-2.11	
2,726.00	7.68	252.030	2,704.48	-136.28	-277.51	-100.72	1.92	-1.50	8.47	
2,789.00	7.71	252.130	2,766.91	-138.88	-285.54	-104.58	0.05	0.05	0.16	
2,852.00	6.41	251.690	2,829.43	-141.28	-292.90	-108.10	2.07	-2.06	-0.70	
2,915.00	6.25	249.120	2,892.05	-143.61	-299.44	-111.10	0.52	-0.25	-4.08	
2,978.00	6.23	248.260	2,954.68	-146.10	-305.82	-113.87	0.15	-0.03	-1.37	
3,041.00	5.92	245.720	3,017.32	-148.70	-311.96	-116.39	0.65	-0.49	-4.03	
3,105.00	5.73	239.700	3,080.99	-151.67	-317.72	-118.39	1.00	-0.30	-9.41	
3,168.00	5.80	236.800	3,143.68	-155.00	-323.10	-119.85	0.48	0.11	-4.60	
3,231.00	6.38	243.110	3,206.32	-158.32	-328.89	-121.61	1.40	0.92	10.02	
3,294.00	6.46	245.370	3,268.92	-161.38	-335.23	-123.95	0.42	0.13	3.59	
3,358.00	6.70	243.920	3,332.50	-164.53	-341.86	-126.44	0.46	0.38	-2.27	
3,420.00	6.64	242.890	3,394.08	-167.75	-348.30	-128.73	0.22	-0.10	-1.66	
3,484.00	6.48	241.610	3,457.66	-171.15	-354.77	-130.92	0.34	-0.25	-2.00	
3,547.00	6.61	240.650	3,520.25	-174.62	-361.06	-132.93	0.27	0.21	-1.52	



Scientific Drilling, Intl Survey Report

Company:	DJR Operating	Local Co-ordinate Reference:	Well NAU 523H
Project:	North Alamito Unit	TVD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Site:	L31 2307	MD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Well:	NAU 523H	North Reference:	True
Wellbore:	Original drilling	Survey Calculation Method:	Minimum Curvature
Design:	Original drilling	Database:	Grand Junction

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,610.00	6.67	239.190	3,582.83	-178.27	-367.36	-134.83	0.28	0.10	-2.32	
3,673.00	6.72	238.270	3,645.40	-182.08	-373.64	-136.59	0.19	0.08	-1.46	
3,737.00	7.03	242.350	3,708.94	-185.87	-380.29	-138.64	0.90	0.48	6.38	
3,800.00	6.97	244.050	3,771.47	-189.33	-387.14	-141.06	0.34	-0.10	2.70	
3,863.00	7.35	246.590	3,833.98	-192.61	-394.28	-143.81	0.78	0.60	4.03	
3,926.00	7.80	250.870	3,896.43	-195.61	-402.02	-147.18	1.15	0.71	6.79	
3,989.00	7.66	251.110	3,958.86	-198.37	-410.03	-150.92	0.23	-0.22	0.38	
4,052.00	7.24	250.190	4,021.33	-201.07	-417.73	-154.48	0.69	-0.67	-1.46	
4,115.00	6.83	248.280	4,083.85	-203.80	-424.95	-157.67	0.75	-0.65	-3.03	
4,179.00	6.92	249.110	4,147.39	-206.59	-432.09	-160.77	0.21	0.14	1.30	
4,242.00	6.24	246.710	4,209.98	-209.29	-438.78	-163.60	1.16	-1.08	-3.81	
4,291.00	5.69	248.160	4,258.71	-211.25	-443.48	-165.56	1.16	-1.12	2.96	
4,354.00	6.08	241.240	4,321.38	-214.02	-449.30	-167.74	1.28	0.62	-10.98	
4,417.00	11.37	192.260	4,383.70	-221.71	-453.55	-165.33	13.77	8.40	-77.75	
4,481.00	16.97	164.370	4,445.80	-236.90	-452.38	-153.79	13.56	8.75	-43.58	
4,544.00	21.68	154.960	4,505.25	-256.31	-444.97	-134.85	8.94	7.48	-14.94	
4,607.00	23.73	148.440	4,563.37	-277.66	-433.40	-111.59	5.15	3.25	-10.35	
4,670.00	25.61	145.460	4,620.62	-299.68	-419.05	-85.89	3.58	2.98	-4.73	
4,733.00	26.92	142.470	4,677.12	-322.21	-402.64	-58.37	2.95	2.08	-4.75	
4,797.00	31.01	140.850	4,733.10	-346.49	-383.40	-27.60	6.51	6.39	-2.53	
4,859.00	35.59	141.210	4,784.91	-372.95	-362.00	6.23	7.39	7.39	0.58	
4,922.00	41.40	141.200	4,834.20	-403.50	-337.44	45.19	9.22	9.22	-0.02	
4,985.00	47.46	139.670	4,879.17	-437.46	-309.34	89.06	9.77	9.62	-2.43	
5,048.00	54.35	135.470	4,918.88	-473.46	-276.32	137.85	12.09	10.94	-6.67	
5,112.00	62.73	136.810	4,952.25	-512.80	-238.55	192.38	13.21	13.09	2.09	
5,175.00	66.25	135.350	4,979.38	-553.74	-199.11	249.21	5.97	5.59	-2.32	
5,238.00	71.41	136.410	5,002.13	-595.91	-158.23	307.93	8.34	8.19	1.68	
5,301.00	75.96	134.300	5,019.82	-638.90	-115.75	368.37	7.90	7.22	-3.35	
5,364.00	82.73	133.010	5,031.46	-681.61	-70.97	430.23	10.93	10.75	-2.05	
5,435.00	85.26	135.360	5,038.89	-730.82	-20.35	500.83	4.85	3.56	3.31	
5,497.00	84.45	134.450	5,044.45	-774.41	23.39	562.58	1.96	-1.31	-1.47	
5,560.00	86.13	134.140	5,049.63	-818.26	68.32	625.36	2.71	2.67	-0.49	
5,622.00	86.84	134.470	5,053.43	-861.48	112.61	687.24	1.26	1.15	0.53	
5,686.00	89.77	134.800	5,055.32	-906.42	158.13	751.20	4.61	4.58	0.52	
5,748.00	90.60	135.300	5,055.12	-950.30	201.93	813.20	1.56	1.34	0.81	
5,811.00	90.37	134.680	5,054.59	-994.84	246.48	876.20	1.05	-0.37	-0.98	
5,874.00	90.30	135.460	5,054.22	-1,039.44	290.97	939.20	1.24	-0.11	1.24	
5,937.00	89.87	135.290	5,054.12	-1,084.28	335.23	1,002.20	0.73	-0.68	-0.27	
6,000.00	89.97	134.060	5,054.21	-1,128.57	380.03	1,065.19	1.96	0.16	-1.95	
6,063.00	89.16	133.530	5,054.69	-1,172.17	425.50	1,128.18	1.54	-1.29	-0.84	
6,126.00	89.03	131.790	5,055.69	-1,214.86	471.82	1,191.13	2.77	-0.21	-2.76	
6,189.00	88.69	131.180	5,056.94	-1,256.58	519.01	1,254.00	1.11	-0.54	-0.97	
6,252.00	88.12	130.440	5,058.69	-1,297.74	566.67	1,316.82	1.48	-0.90	-1.17	



Scientific Drilling, Intl Survey Report

Company:	DJR Operating	Local Co-ordinate Reference:	Well NAU 523H
Project:	North Alamito Unit	TVD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Site:	L31 2307	MD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Well:	NAU 523H	North Reference:	True
Wellbore:	Original drilling	Survey Calculation Method:	Minimum Curvature
Design:	Original drilling	Database:	Grand Junction

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,314.00	89.23	130.030	5,060.13	-1,337.77	613.99	1,378.61	1.91	1.79	-0.66
6,377.00	88.59	130.420	5,061.33	-1,378.45	662.08	1,441.39	1.19	-1.02	0.62
6,440.00	89.46	130.430	5,062.40	-1,419.30	710.03	1,504.20	1.38	1.38	0.02
6,503.00	88.89	130.890	5,063.30	-1,460.34	757.82	1,567.02	1.16	-0.90	0.73
6,566.00	89.73	129.530	5,064.06	-1,501.01	805.93	1,629.81	2.54	1.33	-2.16
6,628.00	90.81	130.980	5,063.77	-1,541.07	853.24	1,691.61	2.92	1.74	2.34
6,691.00	89.06	129.480	5,063.84	-1,581.76	901.34	1,754.40	3.66	-2.78	-2.38
6,754.00	90.00	130.640	5,064.36	-1,622.30	949.55	1,817.18	2.37	1.49	1.84
6,817.00	92.32	132.520	5,063.08	-1,664.10	996.66	1,880.06	4.74	3.68	2.98
6,880.00	91.58	131.820	5,060.94	-1,706.37	1,043.33	1,942.95	1.62	-1.17	-1.11
6,942.00	90.97	131.320	5,059.56	-1,747.50	1,089.70	2,004.84	1.27	-0.98	-0.81
7,004.00	90.64	130.790	5,058.69	-1,788.21	1,136.45	2,066.70	1.01	-0.53	-0.85
7,067.00	89.70	130.030	5,058.50	-1,829.05	1,184.42	2,129.51	1.92	-1.49	-1.21
7,130.00	89.63	129.810	5,058.87	-1,869.48	1,232.73	2,192.27	0.37	-0.11	-0.35
7,193.00	89.83	129.950	5,059.17	-1,909.87	1,281.08	2,255.04	0.39	0.32	0.22
7,256.00	90.47	131.460	5,059.00	-1,950.96	1,328.84	2,317.87	2.60	1.02	2.40
7,319.00	90.67	131.510	5,058.38	-1,992.69	1,376.03	2,380.76	0.33	0.32	0.08
7,382.00	89.93	130.570	5,058.05	-2,034.05	1,423.55	2,443.62	1.90	-1.17	-1.49
7,445.00	89.33	129.710	5,058.45	-2,074.66	1,471.71	2,506.41	1.66	-0.95	-1.37
7,508.00	89.33	128.670	5,059.19	-2,114.47	1,520.53	2,569.10	1.65	0.00	-1.65
7,571.00	89.60	130.620	5,059.78	-2,154.66	1,569.04	2,631.83	3.12	0.43	3.10
7,634.00	90.34	130.710	5,059.81	-2,195.71	1,616.82	2,694.67	1.18	1.17	0.14
7,696.00	90.64	130.760	5,059.28	-2,236.17	1,663.80	2,756.51	0.49	0.48	0.08
7,759.00	90.40	130.440	5,058.71	-2,277.17	1,711.63	2,819.33	0.63	-0.38	-0.51
7,821.00	90.03	129.590	5,058.48	-2,317.03	1,759.12	2,881.11	1.50	-0.60	-1.37
7,884.00	91.01	130.980	5,057.90	-2,357.76	1,807.17	2,943.91	2.70	1.56	2.21
7,947.00	91.21	131.610	5,056.68	-2,399.33	1,854.50	3,006.78	1.05	0.32	1.00
8,009.00	90.30	132.460	5,055.87	-2,440.84	1,900.54	3,068.69	2.01	-1.47	1.37
8,072.00	89.13	132.880	5,056.18	-2,483.54	1,946.86	3,131.65	1.97	-1.86	0.67
8,135.00	88.92	131.820	5,057.25	-2,525.97	1,993.41	3,194.58	1.72	-0.33	-1.68
8,198.00	90.23	133.090	5,057.72	-2,568.50	2,039.89	3,257.52	2.90	2.08	2.02
8,261.00	90.67	133.620	5,057.23	-2,611.75	2,085.70	3,320.50	1.09	0.70	0.84
8,323.00	90.37	133.270	5,056.66	-2,654.38	2,130.71	3,382.48	0.74	-0.48	-0.56
8,386.00	90.27	133.410	5,056.31	-2,697.62	2,176.53	3,445.45	0.27	-0.16	0.22
8,449.00	90.07	132.750	5,056.12	-2,740.65	2,222.54	3,508.42	1.09	-0.32	-1.05
8,512.00	89.63	131.930	5,056.29	-2,783.08	2,269.11	3,571.36	1.48	-0.70	-1.30
8,575.00	89.16	132.330	5,056.95	-2,825.34	2,315.83	3,634.29	0.98	-0.75	0.63
8,638.00	88.69	132.090	5,058.14	-2,867.66	2,362.48	3,697.21	0.84	-0.75	-0.38
8,700.00	89.36	130.690	5,059.19	-2,908.64	2,408.99	3,759.09	2.50	1.08	-2.26
8,764.00	89.93	131.130	5,059.59	-2,950.55	2,457.36	3,822.94	1.13	0.89	0.69
8,827.00	89.33	130.370	5,059.99	-2,991.68	2,505.08	3,885.78	1.54	-0.95	-1.21
8,890.00	91.21	130.730	5,059.70	-3,032.63	2,552.95	3,948.60	3.04	2.98	0.57
8,952.00	91.68	131.580	5,058.13	-3,073.42	2,599.62	4,010.45	1.57	0.76	1.37
9,015.00	91.75	131.040	5,056.25	-3,114.99	2,646.92	4,073.30	0.86	0.11	-0.86



Scientific Drilling, Intl Survey Report

Company:	DJR Operating	Local Co-ordinate Reference:	Well NAU 523H
Project:	North Alamito Unit	TVD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Site:	L31 2307	MD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Well:	NAU 523H	North Reference:	True
Wellbore:	Original drilling	Survey Calculation Method:	Minimum Curvature
Design:	Original drilling	Database:	Grand Junction

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,077.00	91.68	130.990	5,054.39	-3,155.66	2,693.68	4,135.13	0.14	-0.11	-0.08
9,140.00	88.79	128.280	5,054.13	-3,195.84	2,742.18	4,197.86	6.29	-4.59	-4.30
9,202.00	88.93	130.310	5,055.37	-3,235.09	2,790.15	4,259.56	3.28	0.23	3.27
9,265.00	88.86	131.430	5,056.58	-3,276.31	2,837.78	4,322.39	1.78	-0.11	1.78
9,328.00	88.62	131.450	5,057.97	-3,317.99	2,885.00	4,385.27	0.38	-0.38	0.03
9,390.00	90.64	130.410	5,058.37	-3,358.61	2,931.84	4,447.12	3.66	3.26	-1.68
9,453.00	90.77	131.400	5,057.59	-3,399.86	2,979.45	4,509.97	1.58	0.21	1.57
9,516.00	90.81	130.970	5,056.72	-3,441.34	3,026.86	4,572.83	0.69	0.06	-0.68
9,580.00	88.56	129.050	5,057.08	-3,482.48	3,075.87	4,636.60	4.62	-3.52	-3.00
9,641.00	89.03	129.780	5,058.36	-3,521.20	3,122.99	4,697.31	1.42	0.77	1.20
9,701.00	89.73	130.880	5,059.01	-3,560.03	3,168.72	4,757.12	2.17	1.17	1.83
9,762.00	89.33	130.390	5,059.51	-3,599.75	3,215.01	4,817.95	1.04	-0.66	-0.80
9,822.00	89.50	131.530	5,060.12	-3,639.08	3,260.32	4,877.81	1.92	0.28	1.90
9,883.00	90.00	133.070	5,060.39	-3,680.14	3,305.44	4,938.75	2.65	0.82	2.52
9,943.00	91.68	134.070	5,059.51	-3,721.48	3,348.90	4,998.73	3.26	2.80	1.67
10,004.00	92.35	134.450	5,057.36	-3,764.03	3,392.56	5,059.69	1.26	1.10	0.62
10,064.00	92.35	134.450	5,054.90	-3,806.01	3,435.36	5,119.63	0.00	0.00	0.00
10,125.00	91.95	133.810	5,052.61	-3,848.46	3,479.11	5,180.59	1.24	-0.66	-1.05
10,186.00	91.95	133.940	5,050.54	-3,890.71	3,523.06	5,241.54	0.21	0.00	0.21
10,246.00	91.17	133.350	5,048.91	-3,932.10	3,566.46	5,301.51	1.63	-1.30	-0.98
10,307.00	91.28	132.850	5,047.60	-3,973.77	3,610.99	5,362.46	0.84	0.18	-0.82
10,368.00	90.17	132.070	5,046.83	-4,014.95	3,655.98	5,423.41	2.22	-1.82	-1.28
10,429.00	89.97	131.930	5,046.76	-4,055.77	3,701.32	5,484.33	0.40	-0.33	-0.23
10,491.00	89.80	131.880	5,046.88	-4,097.18	3,747.46	5,546.25	0.29	-0.27	-0.08
10,551.00	89.87	130.750	5,047.05	-4,136.79	3,792.52	5,606.14	1.89	0.12	-1.88
10,612.00	89.97	130.490	5,047.14	-4,176.50	3,838.83	5,666.97	0.46	0.16	-0.43
10,673.00	89.90	130.120	5,047.21	-4,215.96	3,885.34	5,727.78	0.62	-0.11	-0.61
10,733.00	89.73	129.890	5,047.40	-4,254.53	3,931.30	5,787.57	0.48	-0.28	-0.38
10,794.00	89.40	129.890	5,047.86	-4,293.65	3,978.11	5,848.34	0.54	-0.54	0.00
10,854.00	89.29	129.760	5,048.55	-4,332.07	4,024.18	5,908.11	0.28	-0.18	-0.22
10,913.00	89.02	130.070	5,049.42	-4,369.93	4,069.43	5,966.88	0.70	-0.46	0.53
10,973.00	88.83	130.040	5,050.55	-4,408.53	4,115.35	6,026.66	0.32	-0.32	-0.05
11,034.00	88.42	129.610	5,052.01	-4,447.59	4,162.18	6,087.41	0.97	-0.67	-0.70
11,095.00	88.59	128.700	5,053.60	-4,486.09	4,209.47	6,148.09	1.52	0.28	-1.49
11,156.00	88.86	128.180	5,054.96	-4,524.00	4,257.24	6,208.70	0.96	0.44	-0.85
11,217.00	88.46	129.250	5,056.38	-4,562.14	4,304.82	6,269.33	1.87	-0.66	1.75
11,276.00	88.56	130.430	5,057.92	-4,599.93	4,350.10	6,328.09	2.01	0.17	2.00
11,336.00	89.50	132.550	5,058.93	-4,639.67	4,395.04	6,387.97	3.86	1.57	3.53
11,398.00	90.50	132.910	5,058.93	-4,681.74	4,440.58	6,449.93	1.71	1.61	0.58
11,458.00	90.37	133.440	5,058.48	-4,722.79	4,484.34	6,509.90	0.91	-0.22	0.88
11,519.00	90.07	132.990	5,058.24	-4,764.56	4,528.79	6,570.88	0.89	-0.49	-0.74
11,580.00	89.70	133.500	5,058.37	-4,806.35	4,573.23	6,631.85	1.03	-0.61	0.84
11,641.00	90.13	133.690	5,058.46	-4,848.42	4,617.40	6,692.84	0.77	0.70	0.31



Scientific Drilling, Intl Survey Report

Company:	DJR Operating	Local Co-ordinate Reference:	Well NAU 523H
Project:	North Alamito Unit	TVD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Site:	L31 2307	MD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Well:	NAU 523H	North Reference:	True
Wellbore:	Original drilling	Survey Calculation Method:	Minimum Curvature
Design:	Original drilling	Database:	Grand Junction

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,701.00	89.80	132.710	5,058.49	-4,889.49	4,661.14	6,752.81	1.72	-0.55	-1.63
11,762.00	89.03	131.580	5,059.12	-4,930.42	4,706.37	6,813.74	2.24	-1.26	-1.85
11,823.00	89.13	130.670	5,060.10	-4,970.53	4,752.31	6,874.61	1.50	0.16	-1.49
11,884.00	89.56	132.680	5,060.79	-5,011.08	4,797.87	6,935.51	3.37	0.70	3.30
11,945.00	91.21	133.840	5,060.38	-5,052.89	4,842.29	6,996.48	3.31	2.70	1.90
12,006.00	91.04	133.500	5,059.19	-5,095.00	4,886.40	7,057.45	0.62	-0.28	-0.56
12,067.00	90.87	133.130	5,058.17	-5,136.84	4,930.78	7,118.42	0.67	-0.28	-0.61
12,128.00	91.81	132.980	5,056.74	-5,178.47	4,975.34	7,179.38	1.56	1.54	-0.25
12,188.00	92.22	133.190	5,054.63	-5,219.43	5,019.13	7,239.31	0.77	0.68	0.35
12,250.00	90.74	131.800	5,053.03	-5,261.30	5,064.83	7,301.24	3.27	-2.39	-2.24
12,311.00	90.67	131.810	5,052.28	-5,301.96	5,110.30	7,362.15	0.12	-0.11	0.02
12,373.00	90.13	131.120	5,051.85	-5,343.01	5,156.75	7,424.04	1.41	-0.87	-1.11
12,434.00	89.80	130.850	5,051.89	-5,383.02	5,202.80	7,484.90	0.70	-0.54	-0.44
12,494.00	90.00	130.840	5,051.99	-5,422.26	5,248.19	7,544.76	0.33	0.33	-0.02
12,555.00	91.58	131.330	5,051.15	-5,462.34	5,294.16	7,605.62	2.71	2.59	0.80
12,616.00	91.31	131.340	5,049.61	-5,502.62	5,339.95	7,666.48	0.44	-0.44	0.02
12,677.00	89.29	129.160	5,049.29	-5,542.02	5,386.50	7,727.28	4.87	-3.31	-3.57
12,738.00	88.89	128.480	5,050.26	-5,580.26	5,434.02	7,787.94	1.29	-0.66	-1.11
12,800.00	88.96	128.540	5,051.42	-5,618.86	5,482.53	7,849.55	0.15	0.11	0.10
12,861.00	89.36	129.700	5,052.32	-5,657.34	5,529.85	7,910.24	2.01	0.66	1.90
12,922.00	89.40	130.320	5,052.98	-5,696.55	5,576.57	7,971.02	1.02	0.07	1.02
12,983.00	89.56	129.960	5,053.53	-5,735.88	5,623.20	8,031.81	0.65	0.26	-0.59
13,043.00	89.40	128.980	5,054.08	-5,774.02	5,669.51	8,091.55	1.65	-0.27	-1.63
13,103.00	89.09	128.680	5,054.87	-5,811.63	5,716.25	8,151.21	0.72	-0.52	-0.50
13,164.00	88.69	128.350	5,056.05	-5,849.61	5,763.97	8,211.83	0.85	-0.66	-0.54
13,225.00	88.29	130.740	5,057.66	-5,888.43	5,810.99	8,272.54	3.97	-0.66	3.92
13,287.00	88.52	130.100	5,059.38	-5,928.62	5,858.17	8,334.34	1.10	0.37	-1.03
13,348.00	89.40	132.390	5,060.49	-5,968.82	5,904.02	8,395.20	4.02	1.44	3.75
13,409.00	89.97	133.920	5,060.83	-6,010.54	5,948.52	8,456.17	2.68	0.93	2.51
13,469.00	91.07	134.490	5,060.28	-6,052.37	5,991.53	8,516.17	2.06	1.83	0.95
13,529.00	92.08	134.750	5,058.63	-6,094.50	6,034.22	8,576.14	1.74	1.68	0.43
13,590.00	91.14	134.010	5,056.92	-6,137.15	6,077.80	8,637.11	1.96	-1.54	-1.21
13,650.00	90.77	133.280	5,055.92	-6,178.55	6,121.21	8,697.09	1.36	-0.62	-1.22
13,712.00	90.57	133.090	5,055.19	-6,220.98	6,166.42	8,759.06	0.44	-0.32	-0.31
13,773.00	90.40	132.870	5,054.68	-6,262.57	6,211.04	8,820.03	0.46	-0.28	-0.36
13,834.00	90.37	132.040	5,054.27	-6,303.74	6,256.05	8,880.97	1.36	-0.05	-1.36
13,894.00	90.13	132.210	5,054.00	-6,343.98	6,300.55	8,940.91	0.49	-0.40	0.28
13,955.00	89.77	131.610	5,054.06	-6,384.73	6,345.94	9,001.83	1.15	-0.59	-0.98
14,015.00	88.26	131.760	5,055.09	-6,424.63	6,390.74	9,061.73	2.53	-2.52	0.25
14,076.00	91.55	132.440	5,055.19	-6,465.52	6,436.00	9,122.65	5.51	5.39	1.11
14,136.00	92.48	133.380	5,053.08	-6,506.34	6,479.91	9,182.58	2.20	1.55	1.57
14,197.00	92.42	133.320	5,050.47	-6,548.18	6,524.23	9,243.50	0.14	-0.10	-0.10
14,258.00	92.55	133.320	5,047.83	-6,589.99	6,568.57	9,304.42	0.21	0.21	0.00



Scientific Drilling, Intl
Survey Report

Company:	DJR Operating	Local Co-ordinate Reference:	Well NAU 523H
Project:	North Alamito Unit	TVD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Site:	L31 2307	MD Reference:	GL 6964' & RKB 14' @ 6978.00usft (Aztec 920)
Well:	NAU 523H	North Reference:	True
Wellbore:	Original drilling	Survey Calculation Method:	Minimum Curvature
Design:	Original drilling	Database:	Grand Junction

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,318.00	92.01	132.930	5,045.44	-6,630.97	6,612.33	9,364.35	1.11	-0.90	-0.65	
14,380.00	91.68	132.320	5,043.45	-6,672.93	6,657.92	9,426.27	1.12	-0.53	-0.98	
14,410.00	92.22	132.300	5,042.42	-6,693.12	6,680.09	9,456.22	1.80	1.80	-0.07	
14,460.00	92.22	132.300	5,040.49	-6,726.74	6,717.05	9,506.13	0.00	0.00	0.00	

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
444.00	443.87	-9.22	-1.24	First SDI Surface MWD Survey	
4,291.00	4,258.71	-211.25	-443.48	Last SDI Surface MWD Survey	
4,354.00	4,321.38	-214.02	-449.30	First SDI Curve MWD Survey	
5,364.00	5,031.46	-681.61	-70.97	Last SDI Curve MWD Survey	
5,435.00	5,038.89	-730.82	-20.35	First SDI Lateral MWD Survey	
14,410.00	5,042.42	-6,693.12	6,680.09	Last SDI Lateral MWD Survey	
14,460.00	5,040.49	-6,726.74	6,717.05	Projection to TD	

Checked By: _____	Approved By: _____	Date: _____
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District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
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District III
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District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 23530

CONDITIONS OF APPROVAL

Operator:	DJR OPERATING, LLC	1 Road 3263	Aztec, NM87410	OGRID:	371838	Action Number:	23530	Action Type:	C-104C
OCD Reviewer									Condition
ahvermersch									None