

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 3/19/2020

Operator: DJR **Well Name and Number:** Nageezi Unit 307H

API#: 30-045-38206 , **Section:** 2, **Township:** 23N, **Range:** 9 W

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

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

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

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

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

☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned

☒ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:

- A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
- A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
- A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C

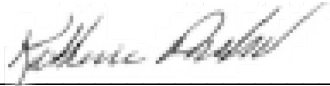
☒ Any change of plans must adhere to 19.15.7.14(A)(1). Field operation changes requiring immediate approval must be approved by the District Office prior to implementation.

☒ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the freshwater zone or zones and shall immediately set in cement the water protection string

☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84

☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.


NMOCD Approved by Signature

12/7/2020
Date

Form 3160-3 (June 2015)		FORM APPROVED OMB No. 1004-0137 Expires: January 31, 2018	
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT APPLICATION FOR PERMIT TO DRILL OR REENTER		5. Lease Serial No. NMNM012374	
		6. If Indian, Allottee or Tribe Name	
1a. Type of work: ☒ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name and No. NMNM 132981A	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other		8. Lease Name and Well No. NAGEEZI UNIT 307H	
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☒ Multiple Zone		9. API Well No. 30-045-38206	
2. Name of Operator DJR OPERATING LLC		10. Field and Pool, or Exploratory NAGEEZI UNIT HZ OIL POOL/NAGEEZI	
3a. Address 1700 LINCOLN STREET, SUITE 2800, DENVER, CO 802	3b. Phone No. (include area code) (505) 632-3476	11. Sec., T. R. M. or Blk. and Survey or Area SEC 02/T23N/R9W/NMP	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NWNE / 38 FNL / 1476 FEL / LAT 36.263259 / LONG -107.754839 At proposed prod. zone NESW / 2262 FSL / 1966 FWL / LAT 36.284072 / LONG -107.778859			
14. Distance in miles and direction from nearest town or post office* 38 miles		12. County or Parish SAN JUAN	13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease 2240	17. Spacing Unit dedicated to this well 640.0	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 5224 feet / 14971 feet	20. BLM/BIA Bond No. in file FED: NMB001464	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6982 feet	22. Approximate date work will start* 07/22/2020	23. Estimated duration 10 days	
24. Attachments			
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)			
1. Well plat certified by a registered surveyor.		4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).	
2. A Drilling Plan.		5. Operator certification.	
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).		6. Such other site specific information and/or plans as may be requested by the BLM.	
25. Signature (Electronic Submission)	Name (Printed/Typed) SHAW N / Ph: (505) 632-3476	Date 03/19/2020	
Title Regulatory Specialist			
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) RICHARD FIELDS / Ph: (505) 564-7612	Date 11/19/2020	
Title Field Manager			
Office Farmington Field Office			
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.			
Conditions of approval, if any, are attached.			
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.			



(Continued on page 2)

*(Instructions on page 2)

AV

DISTRICT I
1626 N. French Dr., Hobbs, N.M. 88240
Phone: (505) 398-6161 Fax: (505) 398-0720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (505) 748-1883 Fax: (505) 748-0720

DISTRICT III
1000 Rio Bravo Rd., Artesia, N.M. 87410
Phone: (505) 834-6178 Fax: (505) 834-6170

DISTRICT IV
1820 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 478-8460 Fax: (505) 478-8468

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-38206	² Pool Code 98080	³ Pool Name NAGEEZI UNIT MANCOS OIL POOL
⁴ Property Code 325268	⁵ Property Name NAGEEZI UNIT	⁶ Well Number 307H
⁷ OGRID No. 371838	⁸ Operator Name DJR OPERATING, LLC	⁹ Elevation 6982'

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
B	2	23N	9W	2	38'	NORTH	1476'	EAST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	27	24N	9W		2262'	SOUTH	1966'	WEST	SAN JUAN

¹² Dedicated Acres PENETRATED SPACING UNIT: SEC 33: SW/SE, NW/SE, SE/SW, NE/SW, NW/SW, SE/NW, SW/NW & NW/NW (320 AC.); SEC 34: SE/NE, NE/NE & NW/NE (120 AC.); SEC 27: SE/SE, SW/SE, NW/SE, SE/SW & NE/SW (200 AC.) = 640 ACRES TOTAL	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. R-13856 R-13856A
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16 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 unless 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 is a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Shaw-Marie Ford</i> 5/26/20 Signature Date Shaw-Marie Ford Printed Name sford@djrlc.com E-mail Address SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. JULY 2, 2019 Date of Survey Signature and Seal of Professional Surveyor: HENRY P. BROADHURST NEW MEXICO 11393 PROFESSIONAL SURVEYOR 05/26/2020 Certificate Number 11393	18 FND 2" BC GLO 1933 FND 1/4" REBAR SHL LAT. 36.263259° N (NAD83) LONG. 107.754839° W (NAD83) KOP LAT. 36.264163° N (NAD83) LONG. 107.755075° W (NAD83) PPP LAT. 36.265452° N (NAD83) LONG. 107.756502° W (NAD83) EXIT/BHL LAT. 36.284072° N (NAD83) LONG. 107.778859° W (NAD83) BASIS OF BEARINGS S 89°26'01" W 2596.57' (M) S 89°31' W 2597.10' (R)
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DISTRICT I

1625 W. French Dr., Hobbs, N.M. 88240
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DISTRICT II

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DISTRICT III

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1880 S. St. Francis Dr., Santa Fe, NM 87505
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Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

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Santa Fe, NM 87505

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Revised August 1, 2011

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District Office

☐ AMENDED REPORT

DJR OPERATING, LLC
NAGEEZI UNIT #307H

N/4 CORNER SEC 2
LAT. 36.263339° N (NAD83)
LONG. 107.758653° W (NAD83)

NE CORNER SEC 2
LAT. 36.263404° N (NAD83)
LONG. 107.749845° W (NAD83)

E/4 CORNER SEC 2
LAT. 36.255875° N (NAD83)
LONG. 107.749309° W (NAD83)

NW CORNER SEC 2
LAT. 36.263283° N (NAD83)
LONG. 107.767432° W (NAD83)

E/4 CORNER SEC 34
LAT. 36.270553° N (NAD83)
LONG. 107.767471° W (NAD83)

NE CORNER SEC 34
LAT. 36.277862° N (NAD83)
LONG. 107.767958° W (NAD83)

N/4 CORNER SEC 34
LAT. 36.277868° N (NAD83)
LONG. 107.776880° W (NAD83)

NW CORNER SEC 34
LAT. 36.277829° N (NAD83)
LONG. 107.785353° W (NAD83)

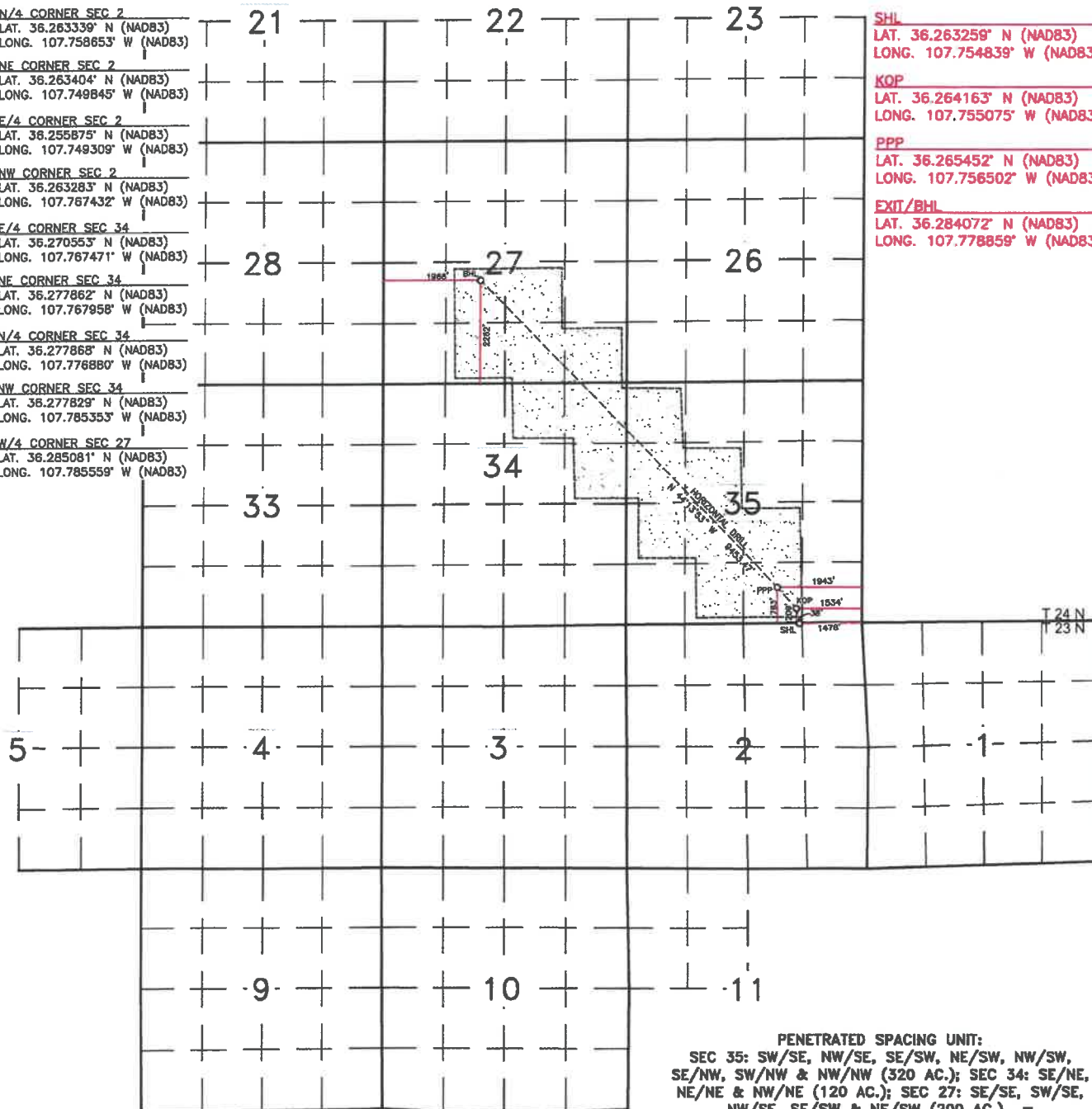
W/4 CORNER SEC 27
LAT. 36.285081° N (NAD83)
LONG. 107.785559° W (NAD83)

SHL
LAT. 36.263259° N (NAD83)
LONG. 107.754839° W (NAD83)

KOP
LAT. 36.264163° N (NAD83)
LONG. 107.755075° W (NAD83)

PPP
LAT. 36.265452° N (NAD83)
LONG. 107.756502° W (NAD83)

EXIT/BHL
LAT. 36.284072° N (NAD83)
LONG. 107.778859° W (NAD83)



PENETRATED SPACING UNIT:
SEC 35: SW/SE, NW/SE, SE/SW, NE/SW, NW/SW,
SE/NW, SW/NW & NW/NW (320 AC.); SEC 34: SE/NE,
NE/NE & NW/NE (120 AC.); SEC 27: SE/SE, SW/SE,
NW/SE, SE/SW & NE/SW (200 AC.) =
640 ACRES TOTAL
9,135.51 ACRES - S/2 SEC 21-23; ALL 26-28, 33-35,
T24N, R9W; ALL SEC. 1-4, E/2 SEC. 5; ALL OF SEC. 9-10
& NW SEC. 11, T23N, R11W-UNDIVIDED UNIT

Rev 0



DRILLING PLAN Nageezi Unit 307H San Juan County, New Mexico

Surface Location

1476-ft FEL & 38-ft FNL
Sec 2 T23N R09W
Graded Elevation 6982' MSL
RKB Elevation 6996' (14' KB)

SHL Geographical Coordinates (NAD-83)

Latitude 36.2632590° N
Longitude 107.7548390° W

Kick Off Point for Horizontal Build Curve

4567-ft MD
4553-ft TVD

Local Coordinates (from SHL)

329-ft North
70-ft West

Heel Location (Pay zone entry)

1943-ft FEL & 763-ft FSL
Sec 35 T24N R9W

Heel Geographical Coordinates (NAD-83)

Latitude 36.2654521° N
Longitude 107.75650210° W

Bottom Hole Location (TD)

1966-ft FWL & 2262-ft FSL
Sec 27 T24N R9W

BHL Geographical Coordinates (NAD-83)

Latitude 36.2840721° N
Longitude 107.7788586° W

Well objectives

This well is planned as a 9450-ft lateral in the Gallup B sand.

Bottom Hole temperature and pressure

The temperature in the Gallup B horizontal objective is 141°F. Bottom hole pressure in the Gallup B is forecast to be 1985 psi.

Formation Tops (Sd = Sand; Sh = Shale; Siltstone = Slt, Coal = C; W = water; O = oil; G = gas; NP = no penetration)

Name	MD (ft)	TVD (ft)	Lithology	Pore fluid	Expected Pore Pressure (ppg)	Planned Mud Weight (ppg)
Ojo Alamo	877	875	Sd	W	8.3	8.4 – 8.8
Kirtland	964	964	Sh	-	8.3	8.4 – 8.8
Fruitland	1276	1276	C	G	8.3	9.0 - 9.5
Pictured Cliffs	1618	1618	Sd	W	8.3	9.0 - 9.5
Lewis	1713	1713	Sh	-		9.0 - 9.5
Chacra	2402	2402	Sd	-	8.3	9.0 - 9.5
Menefee	3114	3114	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	4088	4088	Sd	-	8.3	9.0 - 9.5
Mancos	4256	4256	Sh	-		9.0 - 9.5
Mancos Silt	4580	4580	Slt	O/G	6.6	9.0 - 9.5
Gallup A	5078	5078	Slt	O/G	6.6	9.0 - 9.5
Gallup B	5120	5120	Sd	O/G	6.6	8.8 - 9.0
Gallup C	NP	NP	Sd	O/G	6.6	8.8 - 9.0
Target	5517	5145	Sd	O/G	6.6	8.8 - 9.0

Casing Program

Casing OD	Hole Size	Weight (#/ft)	Grade	Coupling	MD Top	MD Bottom	TVD Top	TVD Bottom	Top of Cement
9-5/8"	12-1/4"	36	K-55	STC	surf	350	surf	350	surface
7"	8-3/4"	26	K-55	LTC	surf	5467	surf	5143	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	5189	14971	5060	5224	5189

Note: all casing will be new

Rev 0



Casing Design Load Cases

	Description	Casing String		
		9-5/8" Surface	7" Intermediate	4-1/2" Production Liner
Collapse	Full internal evacuation ¹	✓	✓	✓
	Cementing	✓	✓	✓
Burst	Pressure test	✓ ²	✓ ²	✓
	Gas kick		✓ ³	
	Fracture at shoe, 1/3 BHP at surface		✓ ⁴	
	Injection down casing			✓ ⁵
Axial	Dynamic load on casing coupling ⁶	✓	✓	✓
Axial	Overpull ⁷	✓	✓	✓

Note

- 1 Fluid level at shoe, air column to surface, pore pressure outside
- 2 Tested to 80% of minimum internal yield with freshwater inside, pore pressure outside
- 3 50 bbl kick at TD, 0.50 ppg intensity, 4" drill pipe, 9.0 ppg mud, fracture gradient at shoe
- 4 2060 psi BHP, 687 psi surface pressure, 12.5 ppg EMW shoe integrity
- 5 Surface stimulation pressure of 8000 psi on 8.3 ppg fluid column. Stimulation will be down frac string, so load does not apply to 7" intermediate casing.
- 6 Shock load from abrupt pipe deceleration, evaluated against coupling rating
- 7 Overpull values as follows: Surface casing 20,000 lbs, Intermediate & Production 100,000 lbs

Casing Design Factors

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

Cement Design

9-5/8" Surface Casing

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

7" Intermediate Casing

	Lead	Tail
Type	BJ Services	BJ Services
Planned top	III	Poz/G
Density (ppg)	Surface	4067-ft
Yield (cf/sx)	12.30	13.50
Mix water (gal/sx)	2.34	1.50
Volume (sx)	13.26	7.20
Volume (bbls)	407	231
Volume (cu.ft.)	170	62
Excess %	953	346
	50	50

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4-1/2" Production Liner

	BJ Services
Type	Poz/G
Planned top	5189-ft
Density (ppg)	13.3
Yield (cf/sx)	1.56
Mix water (gal/sx)	7.71
Volume (sx)	823
Volume (bbls)	229
Volume (cu.ft)	1286
Excess %	40

Wellhead & Pressure Control

The well head will be an 11" 5M multi-bowl system. A 3M BOPE conforming to Onshore Order #2 will be installed on the surface casing. The BOP and accumulator will meet API 16D and 16E respectively.

A PVT mud monitoring system and a trip tank will be rigged up and operational for all hole intervals. An electronic geograph will be employed to monitor and record drilling data (ROP, WOB, SPM, Pressure, RPM and torque).

Mud Program

Surface hole will be drilled with a fresh water, native mud system. In intermediate hole, a low weight 7% KCl LSND drilling fluid will be used, with KCl providing chemical stability for the young shales and clays present in the interval. In production hole a LSND system with polymer and lubricant additives is programmed. Sufficient drill water and mud additives will be on hand to maintain adequate pit volumes and maintain well control.

Hole Section	Fluid type	Interval (MD)	Density (ppg)	Funnel Viscosity	Yield Point	Fluid Loss (cc/30 min)
Surface	Fresh water spud mud	0 – 350	8.4 – 8.8	32 – 44	2 – 12	NC
Intermediate	7% KCl Low solids, non-dispersed	350 – 5467	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5467 – 14971	8.8 – 9.2	34 – 38	6 – 8	6 – 8

Cores, tests and logs

Wellbore surveying: Drift (inclination only) surveys will be obtained in surface hole. MWD directional surveys will be taken in intermediate and production hole.

Logging while drilling: None in surface hole. MWD GR in intermediate and production hole.

Mud logging: a two-person mud logging unit with C1 – C4 gas analysis will be operational in intermediate and production hole.

Electric logging: No open hole electric logs are programmed. A cased hole GR/CCL will be run during completions for perforating depth control.

Cuttings and drilling fluids management

A closed loop, steel tank-based circulating system will be used. In addition to the rig solids control equipment, a dewatering centrifuge and chemical flocculation system will be operational to strip solids from the whole mud. All solids will be collected in 3-sided bins and will then be put into transports with a bucket loader. Drying agents will be used if necessary. The solids will be taken to a licensed commercial disposal facility. Whole mud will be dewatered back to drill water and used as make up for subsequent wells or hauled off for disposal. A diagram of the closed loop system is included.

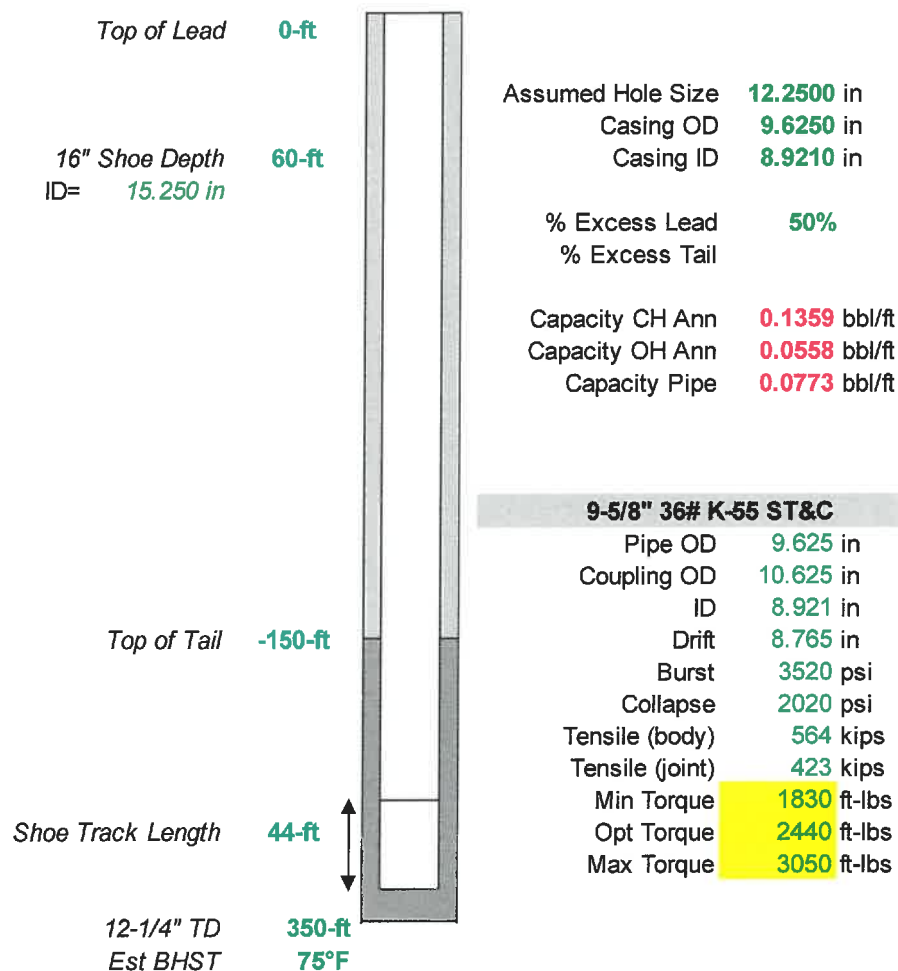
Completion

It is envisioned that this well will be completed with a multi-stage sand frac, using the plug and perf technique. After drilling out the plugs, the current plan is to install a 2-7/8" plunger-assisted gas lift tubing string. The stimulation and completion plan will be sundried at a later date.

Rev 0



9-5/8" Surface Casing & Cementing



Lead Slurry

Properties

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

Tail Slurry

Properties

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

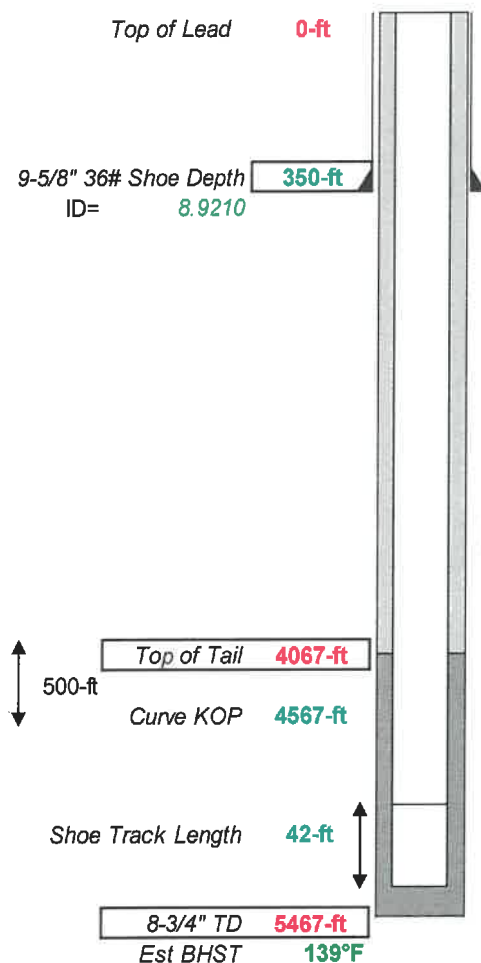
Volumes

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

Rev 0



7" Intermediate Casing & Cementing Nageezi Unit 307H



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

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

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

7" 26# K-55 LT&C

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

BJ Lead Slurry

Properties	
Type III	Density 12.30 ppg
BA-90 5 lb/sx%	Yield 2.3404 cf/sk
KCI 3.00%	Total Mix Fluid 13.26 gal/sk
GW-86 0.10%	Thickening Time 3:11 hr:min
FL-66 0.20%	Time to 50 psi (80°F) 5:10 hr:min
R-3 0.50%	24-hr UCA (80°F) 659 psi
FP-25 0.30%	

BJ Tail Slurry

Properties	
G+Pozz 50:50	Density 13.50 ppg
BA-90 3 lb/sx	Yield 1.4946 cf/sk
FL-66 0.40%	Total Mix Fluid 7.24 gal/sk
FP-25 0.30%	Thickening Time 3:26 hr:min
Sod. Met 0.50%	Time to 50 psi (135°F) 2:55 hr:min
Gyp 3.00%	Time to 500 psi (135°F) 6:40 hr:min

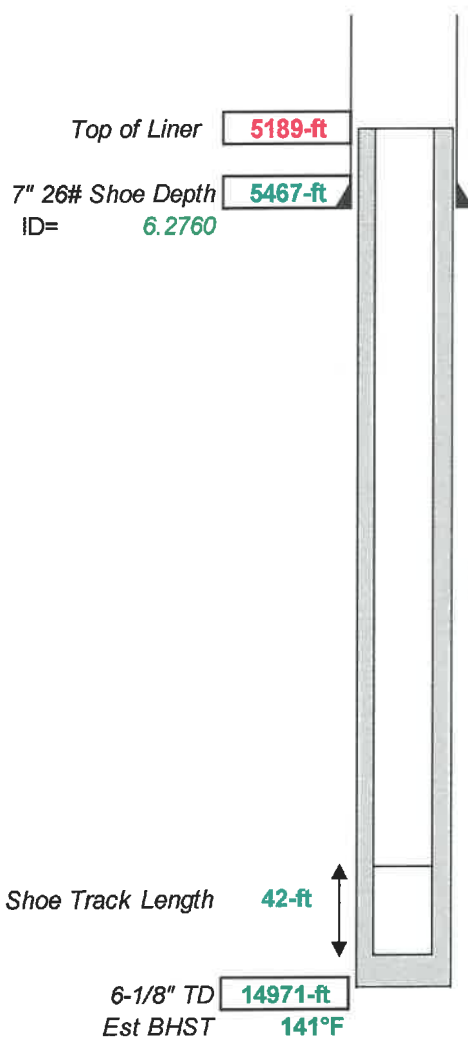
Volumes

Lead Volume	170 bbls	407 sx
Tail Volume	62 bbls	231 sx
Approx Displacement	208 bbls	
Total Volume	439 bbls	

Rev 0



4-1/2" Liner Cementing Nageezi Unit 307H

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

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

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

BJ Lead Slurry

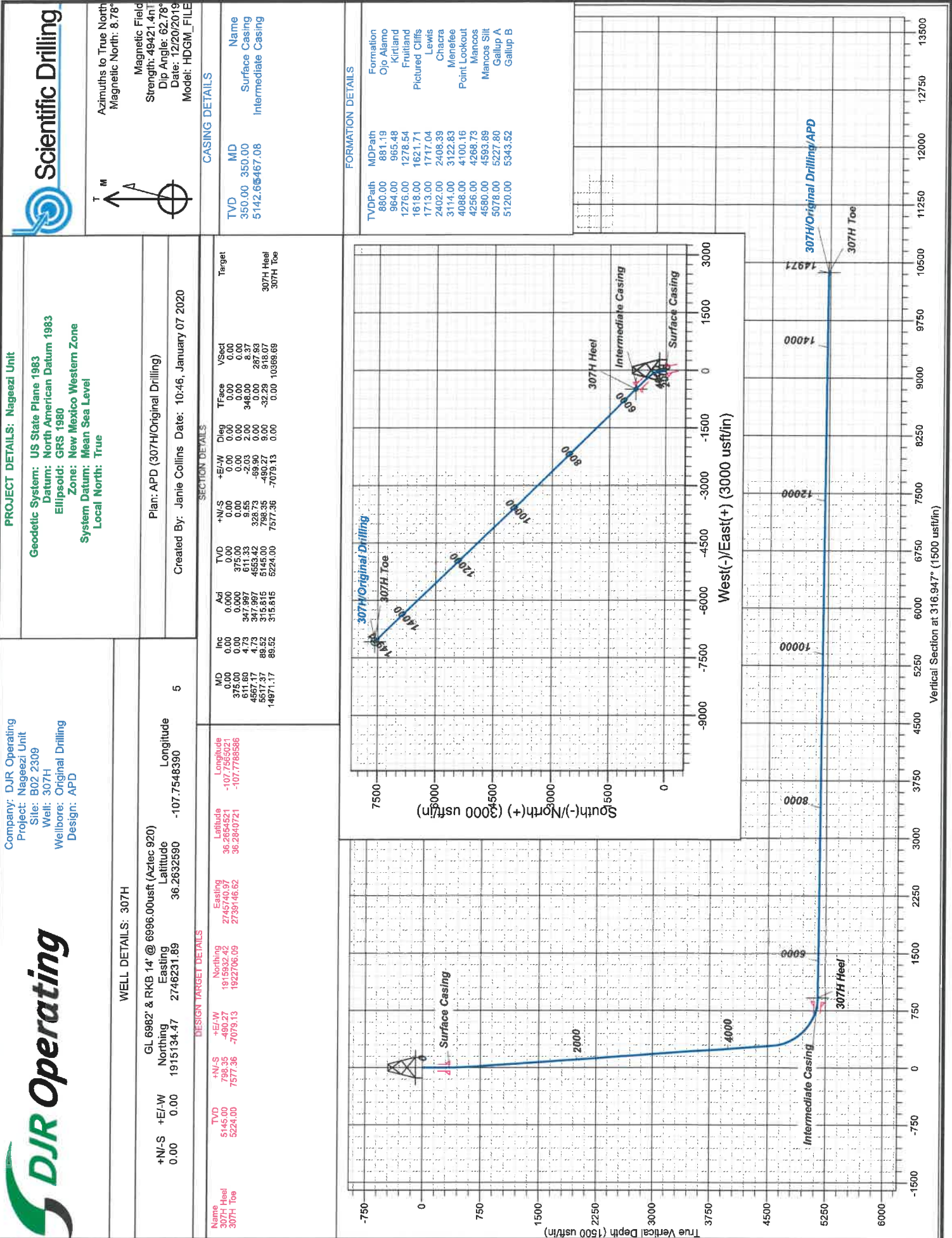
G+Pozz **50:50**
 BA-90 **3 lb/sx**
 GW-86 **0.10%**
 R-3 **0.40%**
 FP-25 **30.00%**
 FL-24 **0.40%**
 Gel **4.00%**

Properties

Density **13.30** ppg
 Yield **1.5629** cf/sk
 Total Mix Fluid **7.70** gal/sk
 Thickening Time **6:04** hr:min
 Time to 50 psi (147°F) **7:15** hr:min
 24-hr UCA (147°F) **1293** psi

Volumes

Lead Volume **229** bbls **823** sxApprox Displacement **162** bblsTotal Volume **391** bbls



WELL DETAILS: 307H

GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)

	+N-S	+E-W	Northing	Easting	Latitude	Longitude
+N-S	0.00	0.00	1915134.47	2746231.89	36.2632590	-107.7548390

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
307H Heel	5145.00	798.35	-490.27	1915932.42	2745740.97	36.2654521	-107.7555021
307H Toe	5224.00	7577.36	-7079.13	1922706.09	2739146.62	36.2840721	-107.7788586

SECTION DETAILS

	MD	Inc	Adj	TVD	+N-S	+E-W	Diep	TFace	VSed	Target
	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
	375.00	611.60	0.000	375.00	0.00	0.00	0.00	0.00	0.00	
	4567.17	4.73	347.997	611.33	8.55	-2.03	2.00	348.00	8.37	
	4871.37	88.52	315.815	4553.42	328.73	-69.90	0.00	0.00	287.93	307H Heel
	14971.17	89.52	315.815	5145.00	798.35	-490.27	0.00	-32.29	918.07	307H Toe
				5224.00	7577.36	-7079.13	0.00	0.00	10369.69	

FORMATION DETAILS

MDPath	Formation
880.00	Ojo Alamo
964.00	Kirtland
1276.00	Fruitland
1618.00	Pictured Cliffs
1713.00	Lewis
2402.00	Chacra
3114.00	Menefee
4088.00	Point Lookout
4256.00	Mancos
4580.00	Mancos Silt
5078.00	Gallup A
5120.00	Gallup B

CASING DETAILS

TVD	MD	Name
350.00	350.00	Surface Casing
5142.65	467.08	Intermediate Casing

WELL DETAILS: 307H

GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)

	+N-S	+E-W	Northing	Easting	Latitude	Longitude
+N-S	0.00	0.00	1915134.47	2746231.89	36.2632590	-107.7548390

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
307H Heel	5145.00	798.35	-490.27	1915932.42	2745740.97	36.2654521	-107.7555021
307H Toe	5224.00	7577.36	-7079.13	1922706.09	2739146.62	36.2840721	-107.7788586

SECTION DETAILS

	MD	Inc	Adj	TVD	+N-S	+E-W	Diep	TFace	VSed	Target
	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
	375.00	611.60	0.000	375.00	0.00	0.00	0.00	0.00	0.00	
	4567.17	4.73	347.997	611.33	8.55	-2.03	2.00	348.00	8.37	
	4871.37	88.52	315.815	4553.42	328.73	-69.90	0.00	0.00	287.93	307H Heel
	14971.17	89.52	315.815	5145.00	798.35	-490.27	0.00	-32.29	918.07	307H Toe
				5224.00	7577.36	-7079.13	0.00	0.00	10369.69	

FORMATION DETAILS

MDPath	Formation
880.00	Ojo Alamo
964.00	Kirtland
1276.00	Fruitland
1618.00	Pictured Cliffs
1713.00	Lewis
2402.00	Chacra
3114.00	Menefee
4088.00	Point Lookout
4256.00	Mancos
4580.00	Mancos Silt
5078.00	Gallup A
5120.00	Gallup B

CASING DETAILS

TVD	MD	Name
350.00	350.00	Surface Casing
5142.65	467.08	Intermediate Casing

WELL DETAILS: 307H

GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)

	+N-S	+E-W	Northing	Easting	Latitude	Longitude
+N-S	0.00	0.00	1915134.47	2746231.89	36.2632590	-107.7548390

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
307H Heel	5145.00	798.35	-490.27	1915932.42	2745740.97	36.2654521	-107.7555021
307H Toe	5224.00	7577.36	-7079.13	1922706.09	2739146.62	36.2840721	-107.7788586

SECTION DETAILS

	MD	Inc	Adj	TVD	+N-S	+E-W	Diep	TFace	VSed	Target
	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
	375.00	611.60	0.000	375.00	0.00	0.00	0.00	0.00	0.00	
	4567.17	4.73	347.997	611.33	8.55	-2.03	2.00	348.00	8.37	
	4871.37	88.52	315.815	4553.42	328.73	-69.90	0.00	0.00	287.93	307H Heel
	14971.17	89.52	315.815	5145.00	798.35	-490.27	0.00	-32.29	918.07	307H Toe
				5224.00	7577.36	-7079.13	0.00	0.00	10369.69	

FORMATION DETAILS

MDPath	Formation
880.00	Ojo Alamo
964.00	Kirtland
1276.00	Fruitland
1618.00	Pictured Cliffs
1713.00	Lewis
2402.00	Chacra
3114.00	Menefee
4088.00	Point Lookout
4256.00	Mancos
4580.00	Mancos Silt
5078.00	Gallup A
5120.00	Gallup B

CASING DETAILS

TVD	MD	Name
350.00	350.00	Surface Casing
5142.65	467.08	Intermediate Casing

WELL DETAILS: 307H

GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)

	+N-S	+E-W	Northing	Easting	Latitude	Longitude
+N-S	0.00	0.00	1915134.47	2746231.89	36.2632590	-107.7548390

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
307H Heel	5145.00	798.35	-490.27	1915932.42	2745740.97	36.2654521	-107.7555021
307H Toe	5224.00	7577.36	-7079.13	1922706.09	2739146.62	36.2840721	-107.7788586

SECTION DETAILS

	MD	Inc	Adj	TVD	+N-S	+E-W	Diep	TFace	VSed	Target
	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
	375.00	611.60	0.000	375.00	0.00	0.00	0.00	0.00	0.00	
	4567.17	4.73	347.997	611.33	8.55	-2.03	2.00	348.00	8.37	
	4871.37	88.52	315.815	4553.42	328.73	-69.90	0.00	0.00	287.93	307H Heel
	14971.17	89.52	315.815	5145.00	798.35	-490.27	0.00	-32.29	918.07	307H Toe
				5224.00	7577.36	-7079.13	0.00	0.00	10369.69	



DJR Operating

Nageezi Unit

B02 2309

307H - Slot 5

Original Drilling

Plan: APD

Standard Planning Report

07 January, 2020



www.scientificdrilling.com



Scientific Drilling, Intl
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 307H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Site:	B02 2309	North Reference:	True
Well:	307H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Project	Nageezi Unit		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	B02 2309			
Site Position:		Northing:	1,915,079.49 usft	Latitude: 36.2631080
From:	Map	Easting:	2,746,207.76 usft	Longitude: -107.7549210
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: 0.05 °

Well	307H - Slot 5			
Well Position	+N/-S	54.96 usft	Northing:	1,915,134.47 usft
	+E/-W	24.17 usft	Easting:	2,746,231.89 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:	Ground Level: 6,982.00 usft

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	12/20/2019	8.78	62.78	49,421.40000000

Design	APD			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	316.947

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
375.00	0.00	0.000	375.00	0.00	0.00	0.00	0.00	0.00	0.00	
611.60	4.73	347.997	611.33	9.55	-2.03	2.00	2.00	0.00	348.00	
4,567.17	4.73	347.997	4,553.42	328.73	-69.90	0.00	0.00	0.00	0.00	
5,517.37	89.52	315.815	5,145.00	798.35	-490.27	9.00	8.92	-3.39	-32.29	307H Heel
14,971.17	89.52	315.815	5,224.00	7,577.36	-7,079.13	0.00	0.00	0.00	0.00	307H Toe



Scientific Drilling, Intl
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 307H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Site:	B02 2309	North Reference:	True
Well:	307H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned 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
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
375.00	0.00	0.000	375.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.50	347.997	400.00	0.11	-0.02	0.09	2.00	2.00	0.00
500.00	2.50	347.997	499.96	2.67	-0.57	2.34	2.00	2.00	0.00
600.00	4.50	347.997	599.77	8.64	-1.84	7.57	2.00	2.00	0.00
611.60	4.73	347.997	611.33	9.55	-2.03	8.37	2.00	2.00	0.00
700.00	4.73	347.997	699.43	16.68	-3.55	14.61	0.00	0.00	0.00
800.00	4.73	347.997	799.09	24.75	-5.26	21.68	0.00	0.00	0.00
900.00	4.73	347.997	898.75	32.82	-6.98	28.75	0.00	0.00	0.00
1,000.00	4.73	347.997	998.41	40.89	-8.69	35.82	0.00	0.00	0.00
1,100.00	4.73	347.997	1,098.07	48.96	-10.41	42.88	0.00	0.00	0.00
1,200.00	4.73	347.997	1,197.73	57.03	-12.13	49.95	0.00	0.00	0.00
1,300.00	4.73	347.997	1,297.38	65.10	-13.84	57.02	0.00	0.00	0.00
1,400.00	4.73	347.997	1,397.04	73.17	-15.56	64.09	0.00	0.00	0.00
1,500.00	4.73	347.997	1,496.70	81.24	-17.27	71.15	0.00	0.00	0.00
1,600.00	4.73	347.997	1,596.36	89.31	-18.99	78.22	0.00	0.00	0.00
1,700.00	4.73	347.997	1,696.02	97.38	-20.70	85.29	0.00	0.00	0.00
1,800.00	4.73	347.997	1,795.68	105.45	-22.42	92.36	0.00	0.00	0.00
1,900.00	4.73	347.997	1,895.34	113.51	-24.14	99.42	0.00	0.00	0.00
2,000.00	4.73	347.997	1,995.00	121.58	-25.85	106.49	0.00	0.00	0.00
2,100.00	4.73	347.997	2,094.66	129.65	-27.57	113.56	0.00	0.00	0.00
2,200.00	4.73	347.997	2,194.32	137.72	-29.28	120.63	0.00	0.00	0.00
2,300.00	4.73	347.997	2,293.98	145.79	-31.00	127.69	0.00	0.00	0.00
2,400.00	4.73	347.997	2,393.64	153.86	-32.71	134.76	0.00	0.00	0.00
2,500.00	4.73	347.997	2,493.29	161.93	-34.43	141.83	0.00	0.00	0.00
2,600.00	4.73	347.997	2,592.95	170.00	-36.15	148.90	0.00	0.00	0.00
2,700.00	4.73	347.997	2,692.61	178.07	-37.86	155.96	0.00	0.00	0.00
2,800.00	4.73	347.997	2,792.27	186.14	-39.58	163.03	0.00	0.00	0.00
2,900.00	4.73	347.997	2,891.93	194.21	-41.29	170.10	0.00	0.00	0.00
3,000.00	4.73	347.997	2,991.59	202.28	-43.01	177.17	0.00	0.00	0.00
3,100.00	4.73	347.997	3,091.25	210.34	-44.72	184.23	0.00	0.00	0.00
3,200.00	4.73	347.997	3,190.91	218.41	-46.44	191.30	0.00	0.00	0.00
3,300.00	4.73	347.997	3,290.57	226.48	-48.15	198.37	0.00	0.00	0.00
3,400.00	4.73	347.997	3,390.23	234.55	-49.87	205.44	0.00	0.00	0.00
3,500.00	4.73	347.997	3,489.89	242.62	-51.59	212.50	0.00	0.00	0.00
3,600.00	4.73	347.997	3,589.55	250.69	-53.30	219.57	0.00	0.00	0.00
3,700.00	4.73	347.997	3,689.20	258.76	-55.02	226.64	0.00	0.00	0.00
3,800.00	4.73	347.997	3,788.86	266.83	-56.73	233.71	0.00	0.00	0.00
3,900.00	4.73	347.997	3,888.52	274.90	-58.45	240.78	0.00	0.00	0.00
4,000.00	4.73	347.997	3,988.18	282.97	-60.16	247.84	0.00	0.00	0.00
4,100.00	4.73	347.997	4,087.84	291.04	-61.88	254.91	0.00	0.00	0.00
4,200.00	4.73	347.997	4,187.50	299.10	-63.60	261.98	0.00	0.00	0.00
4,300.00	4.73	347.997	4,287.16	307.17	-65.31	269.05	0.00	0.00	0.00
4,400.00	4.73	347.997	4,386.82	315.24	-67.03	276.11	0.00	0.00	0.00
4,500.00	4.73	347.997	4,486.48	323.31	-68.74	283.18	0.00	0.00	0.00
4,567.17	4.73	347.997	4,553.42	328.73	-69.90	287.93	0.00	0.00	0.00
4,600.00	7.40	335.650	4,586.06	331.98	-71.05	291.09	9.00	8.13	-37.61
4,700.00	16.15	324.555	4,683.87	349.22	-81.79	311.02	9.00	8.75	-11.10
4,800.00	25.08	321.203	4,777.38	377.12	-103.18	346.01	9.00	8.93	-3.35



Scientific Drilling, Intl

Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 307H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Site:	B02 2309	North Reference:	True
Well:	307H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned 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)
4,900.00	34.04	319.538	4,864.28	415.01	-134.68	395.20	9.00	8.96	-1.67
5,000.00	43.02	318.504	4,942.43	461.95	-175.53	457.39	9.00	8.98	-1.03
5,100.00	52.00	317.769	5,009.91	516.79	-224.72	531.04	9.00	8.98	-0.73
5,200.00	60.99	317.196	5,065.05	578.17	-281.03	614.33	9.00	8.99	-0.57
5,300.00	69.98	316.715	5,106.51	644.58	-343.08	705.22	9.00	8.99	-0.48
5,400.00	78.97	316.287	5,133.25	714.40	-409.34	801.47	9.00	8.99	-0.43
5,500.00	87.96	315.864	5,144.62	785.89	-478.18	900.71	9.00	8.99	-0.40
5,517.37	89.52	315.815	5,145.00	798.35	-490.27	918.07	9.00	8.99	-0.40
5,600.00	89.52	315.815	5,145.69	857.60	-547.86	1,000.68	0.00	0.00	0.00
5,700.00	89.52	315.815	5,146.53	929.31	-617.56	1,100.66	0.00	0.00	0.00
5,800.00	89.52	315.815	5,147.36	1,001.01	-687.25	1,200.63	0.00	0.00	0.00
5,900.00	89.52	315.815	5,148.20	1,072.72	-756.95	1,300.61	0.00	0.00	0.00
6,000.00	89.52	315.815	5,149.03	1,144.43	-826.64	1,400.59	0.00	0.00	0.00
6,100.00	89.52	315.815	5,149.87	1,216.14	-896.34	1,500.56	0.00	0.00	0.00
6,200.00	89.52	315.815	5,150.70	1,287.84	-966.03	1,600.54	0.00	0.00	0.00
6,300.00	89.52	315.815	5,151.54	1,359.55	-1,035.73	1,700.52	0.00	0.00	0.00
6,400.00	89.52	315.815	5,152.38	1,431.26	-1,105.42	1,800.50	0.00	0.00	0.00
6,500.00	89.52	315.815	5,153.21	1,502.96	-1,175.12	1,900.47	0.00	0.00	0.00
6,600.00	89.52	315.815	5,154.05	1,574.67	-1,244.82	2,000.45	0.00	0.00	0.00
6,700.00	89.52	315.815	5,154.88	1,646.38	-1,314.51	2,100.43	0.00	0.00	0.00
6,800.00	89.52	315.815	5,155.72	1,718.08	-1,384.21	2,200.40	0.00	0.00	0.00
6,900.00	89.52	315.815	5,156.55	1,789.79	-1,453.90	2,300.38	0.00	0.00	0.00
7,000.00	89.52	315.815	5,157.39	1,861.50	-1,523.60	2,400.36	0.00	0.00	0.00
7,100.00	89.52	315.815	5,158.23	1,933.20	-1,593.29	2,500.33	0.00	0.00	0.00
7,200.00	89.52	315.815	5,159.06	2,004.91	-1,662.99	2,600.31	0.00	0.00	0.00
7,300.00	89.52	315.815	5,159.90	2,076.62	-1,732.68	2,700.29	0.00	0.00	0.00
7,400.00	89.52	315.815	5,160.73	2,148.32	-1,802.38	2,800.27	0.00	0.00	0.00
7,500.00	89.52	315.815	5,161.57	2,220.03	-1,872.07	2,900.24	0.00	0.00	0.00
7,600.00	89.52	315.815	5,162.40	2,291.74	-1,941.77	3,000.22	0.00	0.00	0.00
7,700.00	89.52	315.815	5,163.24	2,363.44	-2,011.46	3,100.20	0.00	0.00	0.00
7,800.00	89.52	315.815	5,164.07	2,435.15	-2,081.16	3,200.17	0.00	0.00	0.00
7,900.00	89.52	315.815	5,164.91	2,506.86	-2,150.86	3,300.15	0.00	0.00	0.00
8,000.00	89.52	315.815	5,165.75	2,578.56	-2,220.55	3,400.13	0.00	0.00	0.00
8,100.00	89.52	315.815	5,166.58	2,650.27	-2,290.25	3,500.10	0.00	0.00	0.00
8,200.00	89.52	315.815	5,167.42	2,721.98	-2,359.94	3,600.08	0.00	0.00	0.00
8,300.00	89.52	315.815	5,168.25	2,793.68	-2,429.64	3,700.06	0.00	0.00	0.00
8,400.00	89.52	315.815	5,169.09	2,865.39	-2,499.33	3,800.04	0.00	0.00	0.00
8,500.00	89.52	315.815	5,169.92	2,937.10	-2,569.03	3,900.01	0.00	0.00	0.00
8,600.00	89.52	315.815	5,170.76	3,008.80	-2,638.72	3,999.99	0.00	0.00	0.00
8,700.00	89.52	315.815	5,171.60	3,080.51	-2,708.42	4,099.97	0.00	0.00	0.00
8,800.00	89.52	315.815	5,172.43	3,152.22	-2,778.11	4,199.94	0.00	0.00	0.00
8,900.00	89.52	315.815	5,173.27	3,223.92	-2,847.81	4,299.92	0.00	0.00	0.00
9,000.00	89.52	315.815	5,174.10	3,295.63	-2,917.50	4,399.90	0.00	0.00	0.00
9,100.00	89.52	315.815	5,174.94	3,367.34	-2,987.20	4,499.87	0.00	0.00	0.00
9,200.00	89.52	315.815	5,175.77	3,439.04	-3,056.90	4,599.85	0.00	0.00	0.00
9,300.00	89.52	315.815	5,176.61	3,510.75	-3,126.59	4,699.83	0.00	0.00	0.00
9,400.00	89.52	315.815	5,177.45	3,582.46	-3,196.29	4,799.81	0.00	0.00	0.00
9,500.00	89.52	315.815	5,178.28	3,654.16	-3,265.98	4,899.78	0.00	0.00	0.00
9,600.00	89.52	315.815	5,179.12	3,725.87	-3,335.68	4,999.76	0.00	0.00	0.00
9,700.00	89.52	315.815	5,179.95	3,797.58	-3,405.37	5,099.74	0.00	0.00	0.00
9,800.00	89.52	315.815	5,180.79	3,869.28	-3,475.07	5,199.71	0.00	0.00	0.00
9,900.00	89.52	315.815	5,181.62	3,940.99	-3,544.76	5,299.69	0.00	0.00	0.00



Scientific Drilling, Intl
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 307H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Site:	B02 2309	North Reference:	True
Well:	307H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

Planned 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)
10,000.00	89.52	315.815	5,182.46	4,012.70	-3,614.46	5,399.67	0.00	0.00	0.00
10,100.00	89.52	315.815	5,183.29	4,084.40	-3,684.15	5,499.64	0.00	0.00	0.00
10,200.00	89.52	315.815	5,184.13	4,156.11	-3,753.85	5,599.62	0.00	0.00	0.00
10,300.00	89.52	315.815	5,184.97	4,227.82	-3,823.55	5,699.60	0.00	0.00	0.00
10,400.00	89.52	315.815	5,185.80	4,299.52	-3,893.24	5,799.58	0.00	0.00	0.00
10,500.00	89.52	315.815	5,186.64	4,371.23	-3,962.94	5,899.55	0.00	0.00	0.00
10,600.00	89.52	315.815	5,187.47	4,442.94	-4,032.63	5,999.53	0.00	0.00	0.00
10,700.00	89.52	315.815	5,188.31	4,514.64	-4,102.33	6,099.51	0.00	0.00	0.00
10,800.00	89.52	315.815	5,189.14	4,586.35	-4,172.02	6,199.48	0.00	0.00	0.00
10,900.00	89.52	315.815	5,189.98	4,658.06	-4,241.72	6,299.46	0.00	0.00	0.00
11,000.00	89.52	315.815	5,190.82	4,729.76	-4,311.41	6,399.44	0.00	0.00	0.00
11,100.00	89.52	315.815	5,191.65	4,801.47	-4,381.11	6,499.41	0.00	0.00	0.00
11,200.00	89.52	315.815	5,192.49	4,873.18	-4,450.80	6,599.39	0.00	0.00	0.00
11,300.00	89.52	315.815	5,193.32	4,944.88	-4,520.50	6,699.37	0.00	0.00	0.00
11,400.00	89.52	315.815	5,194.16	5,016.59	-4,590.19	6,799.35	0.00	0.00	0.00
11,500.00	89.52	315.815	5,194.99	5,088.30	-4,659.89	6,899.32	0.00	0.00	0.00
11,600.00	89.52	315.815	5,195.83	5,160.00	-4,729.59	6,999.30	0.00	0.00	0.00
11,700.00	89.52	315.815	5,196.66	5,231.71	-4,799.28	7,099.28	0.00	0.00	0.00
11,800.00	89.52	315.815	5,197.50	5,303.42	-4,868.98	7,199.25	0.00	0.00	0.00
11,900.00	89.52	315.815	5,198.34	5,375.12	-4,938.67	7,299.23	0.00	0.00	0.00
12,000.00	89.52	315.815	5,199.17	5,446.83	-5,008.37	7,399.21	0.00	0.00	0.00
12,100.00	89.52	315.815	5,200.01	5,518.54	-5,078.06	7,499.18	0.00	0.00	0.00
12,200.00	89.52	315.815	5,200.84	5,590.24	-5,147.76	7,599.16	0.00	0.00	0.00
12,300.00	89.52	315.815	5,201.68	5,661.95	-5,217.45	7,699.14	0.00	0.00	0.00
12,400.00	89.52	315.815	5,202.51	5,733.66	-5,287.15	7,799.11	0.00	0.00	0.00
12,500.00	89.52	315.815	5,203.35	5,805.36	-5,356.84	7,899.09	0.00	0.00	0.00
12,600.00	89.52	315.815	5,204.19	5,877.07	-5,426.54	7,999.07	0.00	0.00	0.00
12,700.00	89.52	315.815	5,205.02	5,948.78	-5,496.23	8,099.05	0.00	0.00	0.00
12,800.00	89.52	315.815	5,205.86	6,020.48	-5,565.93	8,199.02	0.00	0.00	0.00
12,900.00	89.52	315.815	5,206.69	6,092.19	-5,635.63	8,299.00	0.00	0.00	0.00
13,000.00	89.52	315.815	5,207.53	6,163.90	-5,705.32	8,398.98	0.00	0.00	0.00
13,100.00	89.52	315.815	5,208.36	6,235.61	-5,775.02	8,498.95	0.00	0.00	0.00
13,200.00	89.52	315.815	5,209.20	6,307.31	-5,844.71	8,598.93	0.00	0.00	0.00
13,300.00	89.52	315.815	5,210.04	6,379.02	-5,914.41	8,698.91	0.00	0.00	0.00
13,400.00	89.52	315.815	5,210.87	6,450.73	-5,984.10	8,798.88	0.00	0.00	0.00
13,500.00	89.52	315.815	5,211.71	6,522.43	-6,053.80	8,898.86	0.00	0.00	0.00
13,600.00	89.52	315.815	5,212.54	6,594.14	-6,123.49	8,998.84	0.00	0.00	0.00
13,700.00	89.52	315.815	5,213.38	6,665.85	-6,193.19	9,098.82	0.00	0.00	0.00
13,800.00	89.52	315.815	5,214.21	6,737.55	-6,262.88	9,198.79	0.00	0.00	0.00
13,900.00	89.52	315.815	5,215.05	6,809.26	-6,332.58	9,298.77	0.00	0.00	0.00
14,000.00	89.52	315.815	5,215.88	6,880.97	-6,402.28	9,398.75	0.00	0.00	0.00
14,100.00	89.52	315.815	5,216.72	6,952.67	-6,471.97	9,498.72	0.00	0.00	0.00
14,200.00	89.52	315.815	5,217.56	7,024.38	-6,541.67	9,598.70	0.00	0.00	0.00
14,300.00	89.52	315.815	5,218.39	7,096.09	-6,611.36	9,698.68	0.00	0.00	0.00
14,400.00	89.52	315.815	5,219.23	7,167.79	-6,681.06	9,798.65	0.00	0.00	0.00
14,500.00	89.52	315.815	5,220.06	7,239.50	-6,750.75	9,898.63	0.00	0.00	0.00
14,600.00	89.52	315.815	5,220.90	7,311.21	-6,820.45	9,998.61	0.00	0.00	0.00
14,700.00	89.52	315.815	5,221.73	7,382.91	-6,890.14	10,098.59	0.00	0.00	0.00
14,800.00	89.52	315.815	5,222.57	7,454.62	-6,959.84	10,198.56	0.00	0.00	0.00
14,900.00	89.52	315.815	5,223.41	7,526.33	-7,029.53	10,298.54	0.00	0.00	0.00
14,971.17	89.52	315.815	5,224.00	7,577.36	-7,079.13	10,369.69	0.00	0.00	0.00



Scientific Drilling, Intl
Planning Report



Database:	Grand Junction	Local Co-ordinate Reference:	Well 307H - Slot 5
Company:	DJR Operating	TVD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Project:	Nageezi Unit	MD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Site:	B02 2309	North Reference:	True
Well:	307H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD		

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
307H Heel - plan hits target center - Circle (radius 50.00)	0.00	0.000	5,145.00	798.35	-490.27	1,915,932.42	2,745,740.97	36.2654521	-107.7565021
307H Toe - plan hits target center - Circle (radius 100.00)	0.00	0.000	5,224.00	7,577.36	-7,079.13	1,922,706.09	2,739,146.62	36.2840721	-107.7788586

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
350.00	350.00	Surface Casing	9.62	12.25
5,467.08	5,142.60	Intermediate Casing	7.00	8.75

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
881.19	880.00	Ojo Alamo		0.00	0.000
965.48	964.00	Kirtland		0.00	0.000
1,278.54	1,276.00	Fruitland		0.00	0.000
1,621.71	1,618.00	Pictured Cliffs		0.00	0.000
1,717.04	1,713.00	Lewis		0.00	0.000
2,408.39	2,402.00	Chacra		0.00	0.000
3,122.83	3,114.00	Menefee		0.00	0.000
4,100.16	4,088.00	Point Lookout		0.00	0.000
4,268.73	4,256.00	Mancos		0.00	0.000
4,593.89	4,580.00	Mancos Silt		0.00	0.000
5,227.80	5,078.00	Gallup A		0.00	0.000
5,343.52	5,120.00	Gallup B		0.00	0.000



DJR Operating

**Nageezi Unit
B02 2309
307H**

**Original Drilling
APD**

Anticollision Report

07 January, 2020



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Scientific Drilling, Intl

Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 307H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Reference Site:	B02 2309	MD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	307H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date	1/7/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	14,971.17	APD (Original Drilling)	MWD+IGRF	OWSG MWD + IGRF or WMM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Separation Factor	Warning	
Offset Well - Wellbore - Design						
B02 2309						
305H - Original Drilling - APD	300.00	300.00	60.04	58.30	34.464 CC	
305H - Original Drilling - APD	400.00	399.53	60.23	57.78	24.550 ES	
305H - Original Drilling - APD	14,400.00	15,148.83	636.59	170.33	1.365 Level 3, SF	
306H - Original Drilling - APD	300.00	300.00	40.18	38.44	23.064 CC	
306H - Original Drilling - APD	400.00	400.00	40.27	37.81	16.376 ES	
306H - Original Drilling - APD	4,700.00	4,688.48	326.42	291.40	9.320 SF	
622H - Original Drilling - APD	945.91	947.95	15.37	8.79	2.338 CC, ES	
622H - Original Drilling - APD	1,000.00	1,001.80	16.22	9.23	2.320 SF	

Offset Design B02 2309 - 305H - Original Drilling - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF												Offset Well Error:	0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-156.26	-54.96	-24.17	80.04				
100.00	100.00	100.00	100.00	0.15	0.15	-156.26	-54.96	-24.17	80.04	59.73	0.31	194.781	
200.00	200.00	200.00	200.00	0.51	0.51	-156.26	-54.96	-24.17	80.04	59.02	1.03	58.565	
300.00	300.00	300.00	300.00	0.87	0.87	-156.26	-54.96	-24.17	80.04	58.30	1.74	34.464 CC	
300.01	300.01	300.01	300.01	0.87	0.87	-156.26	-54.96	-24.17	80.04	58.30	1.74	34.462	
400.00	400.00	399.53	399.53	1.23	1.22	-144.35	-55.07	-24.17	80.23	57.78	2.45	24.550 ES	
500.00	499.96	497.43	497.39	1.59	1.55	-146.53	-57.58	-24.16	84.75	61.61	3.14	20.610	
600.00	599.77	594.47	594.25	1.95	1.89	-150.57	-63.36	-24.11	75.57	71.73	3.84	18.663	
700.00	699.43	691.70	691.09	2.32	2.24	-154.73	-72.05	-24.05	91.45	86.91	4.54	20.124	
800.00	799.09	790.16	789.12	2.70	2.61	-157.75	-81.27	-23.98	108.13	102.88	5.25	20.613	
900.00	898.75	888.63	887.16	3.08	2.98	-159.96	-90.50	-23.91	125.02	119.07	5.95	21.011	
1,000.00	998.41	987.09	985.19	3.46	3.37	-161.65	-99.72	-23.84	142.05	135.39	6.66	21.337	
1,100.00	1,098.07	1,085.55	1,083.22	3.84	3.75	-162.97	-108.95	-23.78	159.17	151.80	7.36	21.611	
1,200.00	1,197.73	1,184.02	1,181.25	4.22	4.14	-164.04	-118.17	-23.71	176.36	168.28	8.08	21.838	
1,300.00	1,297.38	1,282.48	1,279.28	4.61	4.53	-164.92	-127.40	-23.64	193.60	184.81	8.79	22.032	
1,400.00	1,397.04	1,380.94	1,377.31	4.99	4.91	-165.65	-136.62	-23.57	210.87	201.37	9.50	22.198	
1,500.00	1,496.70	1,479.41	1,475.34	5.38	5.31	-166.27	-145.85	-23.50	228.17	217.96	10.21	22.343	

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



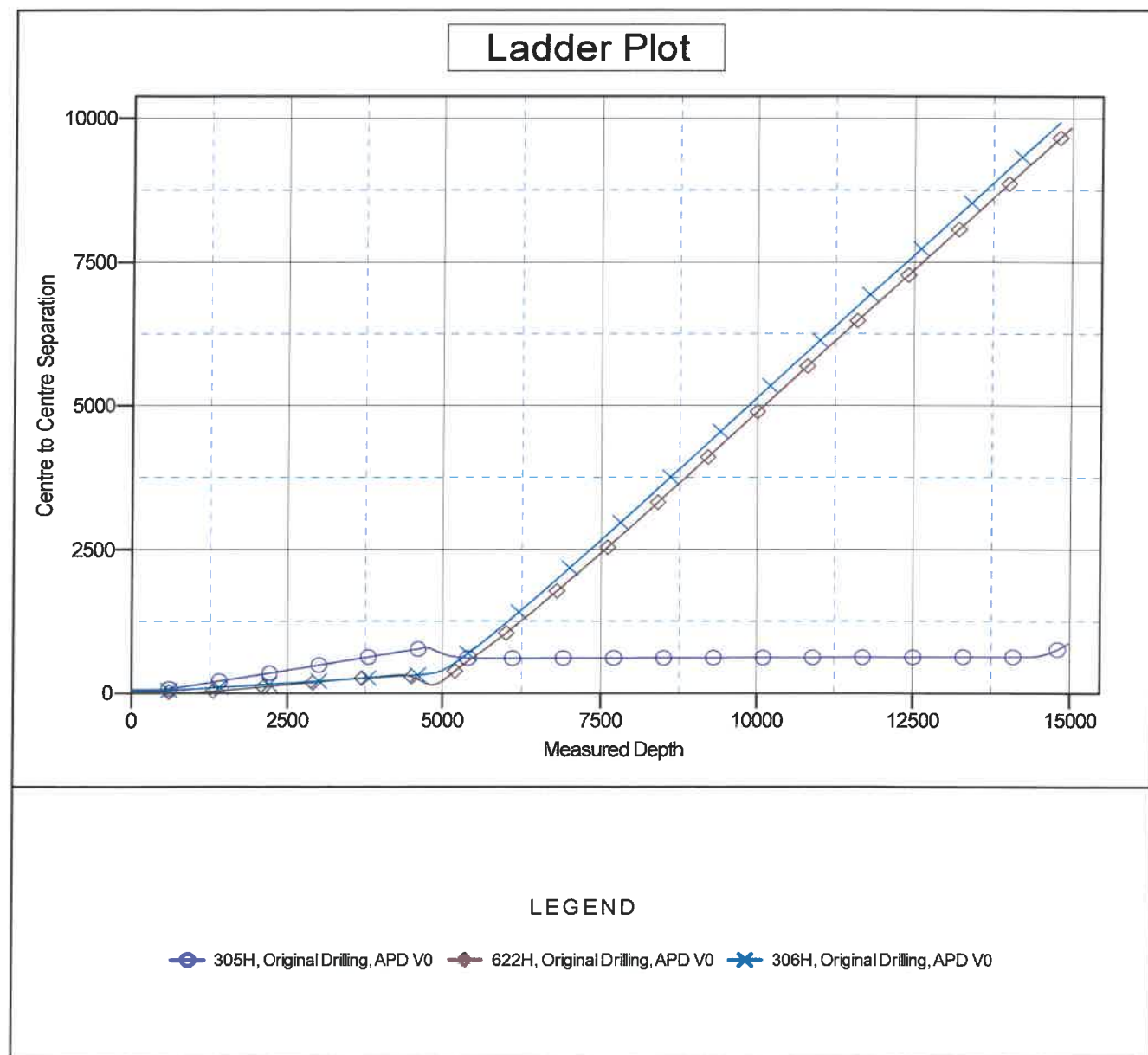
Scientific Drilling, Intl
Anticollision Report



Company:	DJR Operating	Local Co-ordinate Reference:	Well 307H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Reference Site:	B02 2309	MD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	307H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6982' & RKB 14' @ 6996.00usft (A)
Offset Depths are relative to Offset Datum
Central Meridian is -107.8333334

Coordinates are relative to: 307H - Slot 5
Coordinate System is US State Plane 1983, New Mexico Western Zone
Grid Convergence at Surface is: 0.05°



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

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COMPASS 5000.15 Build 91D



Scientific Drilling, Intl
Anticollision Report

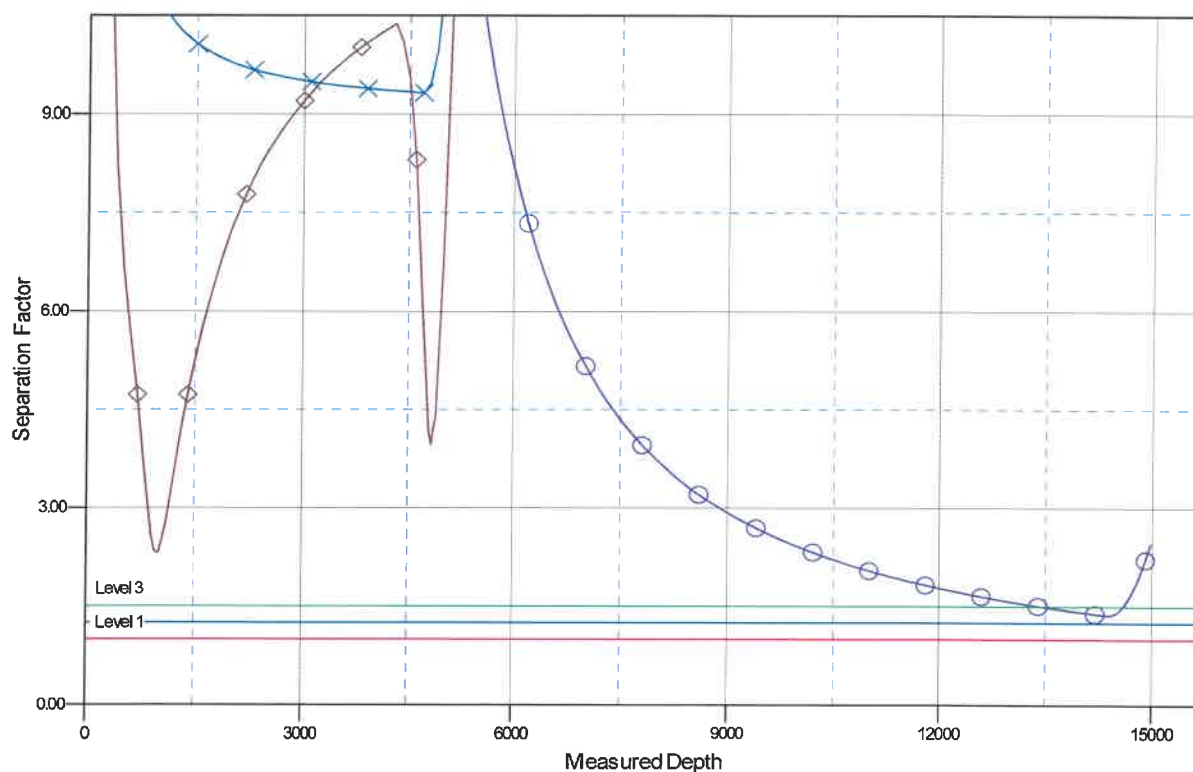


Company:	DJR Operating	Local Co-ordinate Reference:	Well 307H - Slot 5
Project:	Nageezi Unit	TVD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Reference Site:	B02 2309	MD Reference:	GL 6982' & RKB 14' @ 6996.00usft (Aztec 920)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	307H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	Grand Junction
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 6982' & RKB 14' @ 6996.00usft (A)
Offset Depths are relative to Offset Datum
Central Meridian is -107.8333334

Coordinates are relative to: 307H - Slot 5
Coordinate System is US State Plane 1983, New Mexico Western Zone
Grid Convergence at Surface is: 0.05°

Separation Factor Plot



LEGEND

—○— 305H, Original Drilling, APD V0 —◇— 622H, Original Drilling, APD V0 —×— 306H, Original Drilling, APD V0

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

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

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

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: 2/4/2020

☒ Original

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

☐ Amended - Reason for Amendment: _____

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Nageezi Unit 305H	Pending	NWNE, Section 2, T23N, R9W	93' FNL, 1503' FEL	975	Flared	
Nageezi Unit 306H	Pending	NWNE, Section 2, T23N, R9W	75' FNL, 1494' FEL	650	Flared	
Nageezi Unit 307H	Pending	NWNE, Section 2, T23N, R9W	38' FNL, 1476' FEL	850	Flared	
Nageezi Unit 622H	Pending	NWNE, Section 2, T23N, R9W	57' FNL, 1485' FEL	644	Flared	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Enterprise Field Services, LLC (Enterprise) and will be connected to Enterprise's low/high pressure gathering system located in San Juan County, New Mexico. It will require approximately 11,322' of pipeline to connect the facility to DJR Operating LLC. low/high pressure Escrito Trunk in Sec. 3, T23N, R9W which ties into Enterprise's existing pipeline in Section 12, T24N, R10W. DJR Operating LLC. provides (periodically) to Enterprise a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, DJR Operating LLC. and Enterprise have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at the Chaco Processing Plant located in Sec. 16, Twn 26N, Rng 12W, San Juan County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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

District I

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

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
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COMMENTS

Action 15741

COMMENTS

Operator:	DJR OPERATING, LLC	1 Road 3263	Aztec, NM87410	OGRID:	371838	Action Number:	15741	Action Type:	FORM 3160-3
Created By	Comment						Comment Date		
ahvermersch	See attached letter for OCD COA's						01/26/2021		

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CONDITIONS

Action 15741

CONDITIONS OF APPROVAL

Operator: DJR OPERATING, LLC 1 Road 3263 Aztec, NM87410				OGRID: 371838	Action Number: 15741	Action Type: FORM 3160-3
OCD Reviewer				Condition		
ahvermersch				None		