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 <u>3160-3</u> APD form.

Operator Signature Date: 1/14/2020 **Operator:** DJR **Well Name and Number:** Nageezi Unit WDW 1

API#:30-045-38204, Section: 34, Township: 24N, Range: 9 W

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

⊠ Notify Aztec OCD 24hrs prior to casing & cement.

 \boxtimes If cement doesn't 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

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

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

 \Box 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

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

□ Submit Gas Capture Plan form prior to spudding or initiating recompletion operations

Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84

 \boxtimes 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. Operator to submit well name change and pool change.

More Hall

NMOCD Approved by Signature

2/10/2021

Date

OCD Received 6/24/2020

FORM APPRO OMB No. 1004- Expires: January 3	VED 0137 1, 2018				
ase Serial No.					
M012374					
ndian, Allotee or Tribe	e Name				
Jnit or CA Agreement, M 132981A	, Name and No.				
ase Name and Well No).				
EEZI UNIT WDW					
I Well No.					
eld and Pool, or Explo	oratory				
at SWD;Entrada					
ec., T. R. M. or Blk. an	d Survey or Area				
34/124N/R9VV/NMP					
ounty or Parish JUAN	13. State NM				
cing Unit dedicated to this well					
M/BIA Bond No. in file					
VMB001464					
23. Estimated duration 10 days					
ic Fracturing rule per 4	43 CFR 3162.3-3				
s covered by an existing	g bond on file (see				
and/or plans as may be	requested by the				
Name (Printed/Typed) Date SHAW N / Ph: (505) 632-3476 01/14/2020					
Date					
Richard Fields / Ph: (505) 564-7612 06/01/2020					
Fild Manager					
ubject lease which wo	uld entitle the				
ly to make to any depa tion.	artment or agency				
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PROVED A Approval Date: 06/01/2020

*(Instructions on page 2)

(Continued on page 2)

KP

3. A Surface Use Plan (if the location is on National Forest System Lan SUPO must be filed with the appropriate Forest Service Office).	nds, the	 Operator certification. Such other site specific information and/or plans as BLM. 	s may be requested by the	
25. Signature	Name (Printed/Typed)		Date	
(Electronic Submission)	SHAV	VN / Ph: (505) 632-3476	01/14/2020	
Title Regulatory Specialist				
Approved by (Signature)	Name	(Printed/Typed)	Date	
(Electronic Submission)	Richard Fields / Ph: (505) 564-7612 06/01/20		06/01/2020	
Title	Office			
Field Manager	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 i of the United States any false, fictitious or fraudulent statements or rep	t a crime resentat	e for any person knowingly and willfully to make to ions as to any matter within its jurisdiction.	any department or agency	



Attachment to Application for Permit to Drill Drilling program

DJR Operating, LLC

1600 N. Broadway Suite 1960 Denver, CO 80202 U.S.A

Nageezi Unit WDW No. 1

Surface Location: 1035' FNL & 998' FWL Section 34, T24N, R9W Ungraded GL Elev: 6884' San Juan County, NM

Drilling program written in compliance with onshore Oil and Gas Order No. 1, (001 III.D.3, effective May 2007) and Onshore Order No. 2 Dated November 18,1988

1. Geological Name of Surface Formation / Estimate Formation Top

The following table identifies the geologic markers and formation tops (depth in feet from surface) based on open hole logs from off set wells in the area.

Formation Tops	Subsea	TVD	MD	O/G/W	Pressure	KB>>	6830
Ojo Alamo	6215	615	615	W	normal		
Kirtland	6050	780	780	W	normal		
Fruitland	5865	965	965	G/W	sub-normal		
Pictured Cliffs	5495	1335	1335	G/W	sub-normal	_	
Lewis	5385	1445	1445	G/W	normal		
Chacra	4815	2015	2015	G/W	normal		
Cliff House	3985	2845	2845	G/W	sub-normal		
Menefee	3945	2885	2885	G/W	normal		
Point Lookout	3075	3755	3755	G/W	normal		
Mancos	2915	3915	3915	O/G	normal		
Gallup	2175	4655	4655	O/G	normal		
Greenhorn	1245	5585	5585	O/G/W	normal		
Dakota	1145	5685	5685	O/G/W	normal		
Todilto	115	6715	6715	G/W	normal		
Entrada	55	6775	6775	W	normal	-	
Total Depth		6970	6970				
Surface: Nacimiento			-				
Oil & Gas Zones: Oil & gas	can be expec	ted from n	nultiple zo	nes in the	wellbore,		
target is the Entrada whic	h is expected	to be wate	er bearing				
Pressure: Normal or sub-r	normal pressu	ire expecte	ed (0.43 psi	/ft or less	5)		
Maximum BH pressure	2913.25						_
No H2S expected							

Formation Tops	Subsea	TVD	MD	O/G/W	Pressure	KB>>	6830
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Maximum BH pressure	2913.25	_					
No H2S expected							

2. Estimated Depth of all Zones Anticipated to Have Fluid Occurrences (Oil, Gas, Water)

All formations listed in the table above may expected to contain some water, but historically oil and gas zones can be expected in the zones labeled O/G/W (oil/gas/water).

3. Pressure Control Equipment

a. Blowout Preventer (BOP) Equipment

DEPTH INTERVAL	BOP EQUIPMENT
0-500'	No Pressure control Required
500' – 6970'	11" 3000 psi double ram type BOP

Drilling spool to accommodate choke and kill lines with choke manifold rated to 2000 psi.

- b. Ancillary Equipment
 - i. Upper Kelly cock and lower Kelley cock will be installed while drilling.
 - ii. Inside BOP or stab in valve will always be available in open position on rig floor
 - iii. Safety valves and subs to fit all string connections in use.
- c. Choke Manifold

Refer to BOP diagram for detailed schematics for each hole section.

d. BOP Testing

- i. Initial 11" 3K BOP stack will be installed in casing head after setting 9.625" casing.
- ii. The BLM and NMOCD will be notified 24 hours in advance of all BOP pressure tests.
- iii. Pressure tests will be conducted on the BOP stack using a test plug and independent test company after nipple up.
- iv. Subsequent BOP tests will be conducted a minimum of every 30 days. A new test will be conducted each time the stack is altered.
- v. All BOP and manifold tests will be in accordance with the requirements of Onshore Order No. 2.

e. BOP Test Pressures

11" BOP			
Pressure Test	Ram Test	Manifold Test	
High Pressure	3000 psi	3000 psi	
Low Pressure	250 psi	250 psi	

4. Proposed Bit and Casing Program

a. Bit Program

12 1/4" Surface Hole = Surface to 500'

8-3/4" hole = 500' to 6970' = Production casing point

Casing Program - all casing stings are new casing

Casing & Hole Size	Weight	Grade	Coupling	Setting Depth (MD)	Comments
9-5/8" (12 1/4")	36 ppf	J-55	ST&C	0' - 500'	New casing. Cement to surface.
7" (8-3/4")	26 ppf	N-80	LT&C	0' - 6970' MD	New Casing. Cement to surface.
				DV tool at ~ 3865' (3915-50)'	

Casing strings below the conductor casing will be tested to .22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield.

Minimum	casing design factors used	:	Collapse -	1	.125
			Burst -	1	.0
			Jt. Strength -	1	.60

Surface casing shall have a minimum of 1 centralizer per joint on the bottom three (3) joints, starting with the shoe joint for a total of (4) minimum centralizers. Centralizers will be placed 10' above the shoe on the shoe joint, on the 1st, 2nd and 3rd casing collars then every other joint to surface.

The production casing will be centralized using 1 centralizer on the first 10 jts and then every 4th joint to the surface. The stage tool will have turbolizers placed on the joint above and below.

5. PROPOSED CEMENTING PROGRAM

The proposed cementing program has been designed to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water shall be reported.

a) The proposed cementing program is as follows:

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a pre-flush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

Surface Casing Single Stage Job – (0-500'):

Excess – 125% over gauge hole – 12-1/4" hole and 9-5/8" casing – 0.3132 ft/ft Top of Cement - Surface

Lead: 253 sx (352 cf) of Type III w/ 2% bwoc Calcium Chloride, 0.25 lbs/sx CelloFlake, 59.2% Fresh Water. 14.6 ppg, yield 1.39 cf/sx – 0.3132 ft3/ft

Total sacks of surface cement pumped = 253 sx

Production Casing - Two Stage Job - (0-6970'MD):

Excess – 50% over gauge hole – 8-3/4" hole and 7" casing - DV tool at 3865' (50' above Mancos) – 0.1503 ft3/ft

Top of Cement - Surface.

1st Stage – (6970' – 3865') 1st Stage Lead (6470' – 3865') – 295 sx (587 cf) Premium Lite High Strength FM, 0.25% lbs/sx CelloFlake, 0.3% bwoc CD-32, 6.25 lbs/sx LCM-1, 1% bwoc FL-52A, 98% Fresh Water – 12.5 ppg, yield 1.99 cf/sx

1st Stage Tail – (6970'-6470') -82 sx (113 cf) Type III, 1% bwoc Calcium Chloride, 0.25 lbs/sx Cello Flake, 0.2% bwoc FL-52A, 58.9% Fresh Water – 14.6 ppg, yield 1.38 cf/sx

Circulate minimum 4 hrs between stages

2nd Stage - (3865'- 0)

2nd Stage Lead (3365' – 0') – 381 sx (759 cf) Premium Lite High Strength FM, 0.25% lbs/sx CelloFlake, 0.3% bwoc CD-32, 6.25 lbs/sx LCM-1, 1% bwoc FL-52A, 98% Fresh Water – 12.5 ppg, yield 1.99 cf/sx

2nd Stage Tail – (3865'- 3365') -82 sx (113 cf) Type III, 1% bwoc Calcium Chloride, 0.25 lbs/sx Cello Flake, 0.2% bwoc FL-52A, 58.9% Fresh Water – 14.6 ppg, yield 1.38 cf/sx

Total sacks of production cement pumped = 840 sx

Cement volumes are minimums and may be adjusted based on caliper log results.

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and State of New Mexico Oil & Gas Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected.

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

6. Proposed Drilling Fluid Program

Hole Size (in)	TVD (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
12 1/4"	0-500'	Fresh Mud LSND	8.8 - 9.0	45 - 100	6 or less
8-3/4"	500' - 6970'	Fresh Mud LSND	8.8- 9.8	45 - 100	6 or less

a. Mud type and properties

i. A closed loop mud system will be used per NMOCD requirements.

ii. Enough barite will be kept onsite to weight mud sufficiently to contain any unexpected pressures.

b) Monitoring

Mud volume and flow will be monitored visually.

7. Formation Evaluation Program

Cores	None anticipated
Testing	None anticipated
Sampling	None anticipated
Surveys	Deviation surveys only
Log	DIL-GR-SP, FDC-CNL-GR-Caliper from 6970' to minimum logging
program	depths

8. Drilling Conditions

a. Anticipated abnormal pressures or temperatures.

i. No abnormal pressures or temperatures or other hazards are anticipated.

ii. Maximum bottom hole pressure equals approximately 2913 psig (pounds per square inch gauge)*

- * Max mud wt x $0.052 \times TD = A$ (bottom hole pressure) 9 x $0.052 \times 6970' = 3261$ psig
- ** Maximum surface pressure = A (0.22 x TD)3261 - (0.22 x 6970) = 1728 psig
 - b. Hydrogen Sulfide (H2S)

H2S has not been an issue on the wells drilled in the immediate area so at this time no H2S monitoring is proposed for this well.

9. Other Information

a. Drilling Schedule

Activity	Date
Location Construction	November 2019
Spud	November 2019
Total Duration	14 days drilling time
	10 days completion time

CONDITIONS OF APPROVAL

Nageezi Unit WDW and CLF

DOI-BLM-NM-F010-2020-0022-EA

March 2020

Construction & Reclamation Notification: The operator or their contractor will contact the Bureau of Land Management Farmington Field Office (BLM-FFO), Surface and Environmental Protection Staff, (505) 564-7600 at least 48 hours prior to any construction or reclamation on this project

Weather: No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 6 inches deep, the soil shall be deemed too wet.

Culverts: Silt traps/bell holes will be built at the upstream end of all culvert locations. The features must be maintained throughout their life span. Armoring may be required for culverts that experience negative erosional impacts. The approved minimum culvert diameter is 24 inches.

Grazing Permittee Notification: The operator will notify the grazing lease operator(s) at least ten business days prior to beginning any construction activity to ensure there will be no conflicts between construction activities and livestock grazing operations. The operator is in no way obligated to cease or delay construction unless directed by the AO. Any range improvement (fences, pipelines, ponds, etc.) disturbed by construction activities will be repaired immediately following construction and will be repaired to the condition the improvement was in prior to disturbance.

Air Quality: Operator must control fugitive dust and particulate matter through the use of freshwater spraying during construction and reclamation of the proposed action disturbance.

Groundwater Quality and Quantity: Operator shall only use freshwater and/or magnesium chloride for dust abatement purposes. Operator shall not discharge any water used in drilling of the wellbore to the surface of the location.

Paleontology: Any paleontological resource discovered by the Operator, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant scientific values. The Holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Holder.

Public Safety: The Operator will instruct employees and contractors to obey all speed limits, traffic laws, and to use caution while driving when school busses, school bus stops, and children are present.

Wildlife: Migratory Bird Nest Survey: For any construction activities that exceed 4.0 acres of ground disturbance from 5/15 to 7/31 within the same lease, a migratory bird nest survey is required prior to any new ground disturbance.

Approval Date: 06/01/2020

Nest surveys will be conducted within 48 hours of scheduled construction by BLM/FFO personnel or approved biologist. Any active nests will require a disturbance buffer to eliminate impacts to nesting birds. Active nests will not be disturbed.

Applicant will adhere to timing limitations and management measures if any new raptor nests are discovered within the project area. (See next page)

These timing limitations are species specific depending on the raptor that is discovered. The following timing limitations may apply:

Raptor Species of Nest	Timing Limitation
Discovered	
Bald Eagle	March 1-June 30
Burrowing Owl	April 1-August 15
Golden Eagle	February 1-June 30
Other Raptors	March 1- June 30

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DJR Operating, LLC

1600 N. Broadway Suite 1960 Denver, CO 80202 U.S.A

Nageezi Unit WDW No. 1

Surface Location: 1035' FNL & 998' FWL Section 34, T24N, R9W Ungraded GL Elev: 6884' San Juan County, NM

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Surface: Nacimiento							
Oil & Gas Zones: Oil & gas car							
target is the Entrada which is							
Pressure: Normal or sub-nor	mal pressu	re expecte	d (0.43 psi	/ft or less)			
Maximum BH pressure	2913.25						
No H2S expected							

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DEPTH INTERVAL	BOP EQUIPMENT
0-500'	No Pressure control Required
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Drilling spool to accommodate choke and kill lines with choke manifold rated to 2000 psi.

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e. BOP Test Pressures

11" BOP			
Pressure Test	Ram Test	Manifold Test	
High Pressure	3000 psi	3000 psi	
Low Pressure	250 psi	250 psi	

4. Proposed Bit and Casing Program

a. Bit Program

12 1/4" Surface Hole = Surface to 500'

8-3/4" hole = 500' to 6970' = Production casing point

Casing Program – all casing stings are new casing

Casing & Hole Size	Weight	Grade	Coupling	Setting Depth (MD)	Comments
9-5/8" (12 1/4")	36 ppf	J-55	ST&C	0' - 500'	New casing. Cement to surface.
7" (8-3/4")	26 ppf	N-80	LT&C	0' - 6970' MD	New Casing. Cement to surface.
				DV tool at ~ 3865' (3915-50)'	

Casing strings below the conductor casing will be tested to .22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield.

Minimum casing design factors used:	Collapse -	1.125
	Burst -	1.0
	Jt. Strength -	1.60

Surface casing shall have a minimum of 1 centralizer per joint on the bottom three (3) joints, starting with the shoe joint for a total of (4) minimum centralizers. Centralizers will be placed 10' above the shoe on the shoe joint, on the 1st, 2nd and 3rd casing collars then every other joint to surface.

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Surface Casing Single Stage Job – (0-500'):

Excess – 125% over gauge hole – 12-1/4" hole and 9-5/8" casing – 0.3132 ft/ft **Top of Cement -** Surface

Lead: 253 sx (352 cf) of Type III w/ 2% bwoc Calcium Chloride, 0.25 lbs/sx CelloFlake, 59.2% Fresh Water. 14.6 ppg, yield 1.39 cf/sx - 0.3132 ft3/ft

Total sacks of surface cement pumped = 253 sx

Production Casing – Two Stage Job - (0-6970'MD):

Excess – 50% over gauge hole – 8-3/4" hole and 7" casing - DV tool at 3865' (50' above Mancos) – 0.1503 ft3/ft

Top of Cement – Surface.

1st Stage – (6970' – 3865')

1st Stage Lead (6470' – 3865') – 295 sx (587 cf) Premium Lite High Strength FM, 0.25% lbs/sx CelloFlake, 0.3% bwoc CD-32, 6.25 lbs/sx LCM-1, 1% bwoc FL-52A, 98% Fresh Water – 12.5 ppg, yield 1.99 cf/sx

1st **Stage Tail** – (**6970'-6470'**) **-82 sx** (113 cf) Type III, 1% bwoc Calcium Chloride, 0.25 lbs/sx Cello Flake, 0.2% bwoc FL-52A, 58.9% Fresh Water – 14.6 ppg, yield 1.38 cf/sx

Circulate minimum 4 hrs between stages

2nd Stage - (3865'- 0)

2nd Stage Lead (3365' – 0') – 381 sx (759 cf) Premium Lite High Strength FM, 0.25% lbs/sx CelloFlake, 0.3% bwoc CD-32, 6.25 lbs/sx LCM-1, 1% bwoc FL-52A, 98% Fresh Water – 12.5 ppg, yield 1.99 cf/sx

2nd Stage Tail – (**3865'- 3365'**) **-82 sx** (113 cf) Type III, 1% bwoc Calcium Chloride, 0.25 lbs/sx Cello Flake, 0.2% bwoc FL-52A, 58.9% Fresh Water – 14.6 ppg, yield 1.38 cf/sx

Total sacks of production cement pumped = 840 sx

Cement volumes are minimums and may be adjusted based on caliper log results.

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and State of New Mexico Oil & Gas Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected.

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

6. Proposed Drilling Fluid Program

Hole Size (in)	TVD (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
12 1/4"	0-500'	Fresh Mud LSND	8.8 - 9.0	45 - 100	6 or less
8-3/4"	500' - 6970'	Fresh Mud LSND	8.8- 9.8	45 - 100	6 or less

a. Mud type and properties

i. A closed loop mud system will be used per NMOCD requirements.

ii. Enough barite will be kept onsite to weight mud sufficiently to contain any unexpected pressures.

b) Monitoring

Mud volume and flow will be monitored visually.

7. Formation Evaluation Program

Cores	None anticipated
Testing	None anticipated
Sampling	None anticipated
Surveys	Deviation surveys only
Log	DIL-GR-SP, FDC-CNL-GR-Caliper from 6970' to minimum logging
program	depths

8. Drilling Conditions

a. Anticipated abnormal pressures or temperatures.

i. No abnormal pressures or temperatures or other hazards are anticipated.

ii. Maximum bottom hole pressure equals approximately 2913 psig (pounds per square inch gauge)*

- * Max mud wt x 0.052 x TD = A (bottom hole pressure) 9 x 0.052 x 6970' = 3261 psig
- ** Maximum surface pressure = A (0.22 x TD)3261 - (0.22 x 6970) = 1728 psig
 - b. Hydrogen Sulfide (H2S)

H2S has not been an issue on the wells drilled in the immediate area so at this time no H2S monitoring is proposed for this well.

9. Other Information

a. Drilling Schedule

Activity	Date
Location Construction	November 2019
Spud	November 2019
Total Duration	14 days drilling time
	10 days completion time

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

ORDER

GRANTING UIC PERMIT SWD-2263

DJR Operating, LLC ("Applicant") filed an Application for Authorization to Inject (Form C-108) ("Application") with the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division ("OCD") to inject produced water at the Applicant's **Nageezi Unit SWD** #1 ("Well"), as more fully described in Appendix A.

THE OCD FINDS THAT:

- 1. Applicant provided the information required by 19.15.26 NMAC and the Form C-108 for an application to inject produced water into a Class II Underground Injection Control ("UIC") well.
- 2. Applicant complied with the notice requirements of 19.15.26.8 NMAC.
- 3. No person filed a protest on the Application.
- 4. The Well will inject produced water into the Entrada formation.
- 5. The produced water injected into the Well will be confined by layers above and below the approved injection interval.
- 6. No other UIC wells which inject or that are authorized to inject produced water into the same approved injection interval are permitted within ½ mile of the Well.
- 7. Applicant affirmed in a sworn statement by a qualified person that it examined the available geologic and engineering data and found no evidence of open faults or other hydrologic connections between the approved injection interval and any underground sources of drinking water.
- 8. Applicant is in compliance with 19.15.5.9 NMAC.
- 9. Applicant agrees to the Terms and Conditions in the attached Permit.

THE DIVISION CONCLUDES THAT:

- 1. OCD has authority under the Oil and Gas Act, NMSA 1978, §§70-2-1 *et seq.*, and its implementing regulations, 19.15.1 *et seq.* NMAC, and under the federal Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*, and its implementing regulations, 40 CFR 144 *et seq.*, to issue this permit for an UIC Class II injection well. *See* 40 CFR 147.1600.
- 2. Based on the information and representations provided in the Application, the proposed injection, if conducted in accordance with the Application and the terms and conditions of the attached Permit, (a) will not result in waste of oil and gas; (b) will not adversely affect correlative rights; (c) will protect underground sources of drinking water; and (d) will protect the public health and environment.
- 3. Applicant is authorized to inject subject to the terms and conditions of the Permit.
- 4. This Order amends footages on C-102 and latitude in Order dated 02/01/2021

IT IS THEREFORE ORDERED THAT:

The Applicant be granted UIC Permit SWD-2263 for the Nageezi Unit SWD #1.



Date: <u>April 28, 2021</u>

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

UIC CLASS II PERMIT SWD- 2263

APPENDIX A – AUTHORIZED INJECTION

Permittee: DJR Operating LLC

OGRID No.:371838

Well name: Nageezi Unit SWD #1

Surface location: 1035 FNL, 998 FWL, D, S34, T24N, R9W. 36.275001, -107.781969 NAD 83

Bottom hole location (if different): Vertical Well

Type of completion: perforated casing

Type of injection: Unit only—disposal from unit wells

Injection fluid: Class II UIC fluid

Injection interval: 6775 to 6970 feet

Injection interval thickness (feet): 195 feet

Confining layer(s): Above: Todilto Limestone, Mancos Shale, Lewis Shale. Below: Chinle formation

Prohibited injection interval(s): confining layers including lost circulation intervals that are connected

Liner, tubing, and packer set: tubing set at 6785 ft (3 $^{1\!/_2}$ in); Packer set at 6725 ft, internally coated

Maximum daily injection rate: 6000 BWPD

Maximum surface injection pressure: 1355 psi

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

UIC CLASS II PERMIT SWD- 2263

Pursuant to the Oil and Gas Act, NMSA 1978, §§70-2-1 *et seq.*, ("Act") and its implementing regulations, 19.15.1 *et seq.* NMAC, ("Rules") and the federal Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*, and its implementing regulations, 40 CFR 144 *et seq.*, the Oil Conservation Division ("OCD") issues this Permit to DJR Operating, LLC ("Permittee") to authorize the construction and operation of a well to inject produced water at the location and under the terms and conditions specified in this Permit and Appendix A.

I. GENERAL CONDITIONS

A. AUTHORIZATION

1. Scope of Permit. This Permit authorizes the injection of produced water into the well described on Appendix A ("Well"). Any injection not specifically authorized by this Permit is prohibited. Permittee shall be the "operator" of the Well as defined in 19.15.2.7(O)(5) NMAC.

a. Injection is limited to the approved injection interval described in Appendix A. Permittee shall not allow the movement of fluid containing any contaminant into an underground source of drinking water ("USDW") if the presence of that contaminant may cause a violation of a Primary Drinking Water Regulation adopted pursuant to 40 CFR Part 142 or that may adversely affect the health of any person. [40 CFR 144.12(a)]

b. The wellhead injection pressure for the Well shall not exceed the value identified in Appendix A.

c. Permittee shall not commence to drill, convert, or recomplete the Well until receiving this approval and until OCD approves a Form C-101 Application for Permit to Drill ("APD") pursuant to 19.15.14 NMAC or receives an approved federal Form 3160-3 APD for the Well. [40 CFR 144.11; 19.15.14.8 and 19.15.26.8 NMAC]

d. Permittee shall not commence injection into the Well until the Permittee complies with the conditions in Section I. C. of this Permit.

e. This Permit authorizes injection of any UIC Class II fluid or oil field waste defined in 19.15.2.7(E)(6) NMAC.

f. This Permit does not authorize injection for an enhanced oil recovery project as defined in 19.15.2.7(E)(2) NMAC.

2. Notice of Commencement. Permittee shall provide written notice on Form C-103 to OCD Engineering Bureau no later than two (2) business days following the date on which injection commenced into the Well. [19.15.26.12(B) NMAC]

3. **Termination.** Unless terminated sooner, this Permit shall remain in effect for a term of twenty (20) years beginning on the date of issuance. Permittee may submit an application for a new permit prior to the expiration of this Permit. If Permittee submits an application for a new permit, then the terms and conditions of this Permit shall remain in effect until OCD denies the application or grants a new permit.

a. This Permit shall terminate one (1) year after the date of issuance if Permittee has not commenced injection into the Well, provided, however, that OCD may grant a single extension of no longer than one (1) year for good cause shown. Permittee shall submit a written request for an extension to OCD Engineering Bureau no later than thirty (30) days prior to the deadline for commencing injection.

b. One (1) year after the last date of reported injection into the Well, OCD shall consider the Well abandoned, the authority to inject pursuant to this Permit shall terminate automatically, and Permittee shall plug and abandon the Well as provided in Section I. E. of this Permit. Upon receipt of a written request by the Permittee no later than one year after the last date of reported injection into the Well, OCD may grant an extension for good cause. [19.15.26.12(C) NMAC]

B. DUTIES AND REQUIREMENTS

1. Duty to Comply with Permit. Permittee shall comply with the terms and conditions of this Permit. Any noncompliance with the terms and conditions of this Permit, or of any provision of the Act, Rules or an Order issued by OCD or the Oil Conservation Commission, shall constitute a violation of law and is grounds for an enforcement action, including revocation of this Permit and civil and criminal penalties. Compliance with this Permit does not relieve Permittee of the obligation to comply with any other applicable law, or to exercise due care for the protection of fresh water, public health and safety and the environment. The contents of the Application and Appendix A shall be enforceable terms and conditions of this Permit. [40 CFR 144.51(a); 19.15.5 NMAC]

2. Duty to Halt or Reduce Activity to Avoid Permit Violations. Permittee shall halt or reduce injection to avoid a violation of this Permit or other applicable law. It shall not be a defense in an enforcement action for Permittee to assert that it would have been necessary to halt or reduce injection in order to maintain compliance with this Permit. [40 CFR 144.51(c)]

3. Duty to Mitigate Adverse Effects. Permittee shall take all reasonable steps to minimize, mitigate and correct any waste or effect on correlative rights, public health, or the environment resulting from noncompliance with the terms and conditions of this Permit. [40 CFR 144.51(d)]

4. Duty to Operate and Maintain Well and Facilities. Permittee shall operate and maintain the Well and associated facilities in compliance with the terms and conditions of this Permit. [40 CFR 144.51(e)]

5. Duty to Provide Information. In addition to any other applicable requirement, Permittee shall provide to OCD by the date and on the terms specified by OCD any information which OCD requests for the purpose of determining whether Permittee is complying with the terms and conditions of this Permit. [40 CFR 144.51(h)]

6. Private Property. This Permit does not convey a property right or authorize an injury to any person or property, an invasion of private rights, or an infringement of state or local law or regulations. [40 CFR 144.51(g)]

7. Inspection and Entry. Permittee shall allow OCD's authorized representative(s) to enter upon the Permittee's premises where the Well is located and where records are kept for the purposes of this Permit at reasonable times and upon the presentation of credentials to:

- a. Inspect the Well and associated facilities;
- b. Have access to and copy any record required by this Permit;

c. Observe any action, test, practice, sampling, measurement or operation of the Well and associated facilities; and

d. Obtain a sample, measure, and monitor any fluid, material or parameter as necessary to determine compliance with the terms and conditions of this Permit. [40 CFR 144.51(i)]

8. Certification Requirement. Permittee shall sign and certify the truth and accuracy of all reports, records, and documents required by this Permit or requested by OCD. [40 CFR 144.51(k)]

9. Financial Assurance. Permittee shall provide and maintain financial assurance for the Well in the amount specified by OCD until the Well has been plugged and abandoned and the financial assurance has been released by OCD. [40 CFR 144.52; 19.15.8.12 NMAC]

C. PRIOR TO COMMENCING INJECTION

1. Construction Requirements.

a. Permittee shall construct the Well as described in the Application, Appendix A and as required by the Special Conditions.

b. Permittee shall construct and operate the Well in a manner that ensures the injected fluid enters only the approved injection interval and is not permitted to escape to other formations or onto the surface.

2. Tests and Reports. Permittee shall complete the following actions prior to commencing injection in the Well.

a. Permittee shall obtain and comply with the terms and conditions of an approved APD prior to commencing drilling of the Well, or other OCD approval, as applicable, prior to converting or recompleting the Well. If the APD is approved by the OCD, the Well shall be subject to the construction, testing, and reporting requirements of 19.15.16 NMAC.

b. Permittee shall circulate to surface the cement for the surface and intermediate casings. If cement does not circulate on any casing string, Permittee shall run a cement bond log ("CBL") to determine the top of cement, then notify the appropriate OCD district office and submit the CBL prior to continuing with any further cementing on the Well. If the cement did not tie back into next higher casing shoe, Permittee shall perform remedial cement action to bring the cement to a minimum of two hundred (200) feet above the next higher casing shoe.

c. If a liner is approved for the construction of the Well, Permittee shall run and submit to the appropriate OCD district office a CBL for the liner to demonstrate placement cement and the cement bond with the tie-in for the casing string.

d. Permittee shall submit to the appropriate OCD district office the mudlog, geophysical logs, and a summary of depths (picks) for the contacts of the formations demonstrating that only the permitted formation is open for injection. OCD may amend this Permit to specify the depth of the approved injection interval within the stratigraphic interval requested in the application. If Permittee detects a hydrocarbon show during the drilling of the Well, it shall notify OCD Engineering Bureau and obtain written approval prior to commencing injection into the Well.

e. Permittee shall obtain and submit to the appropriate OCD district office on a Form C-103 a calculated or measured static bottom-hole pressure measurement representative of the completion in the approved injection interval.

f. Permittee shall conduct an initial mechanical integrity test ("MIT") on the Well in compliance with the terms and conditions of this Permit and 19.15.26 NMAC, and shall not commence injection into the Well until the results of the initial MIT have been approved by the appropriate OCD district office. [19.15.26.11(A) NMAC]

g. OCD retains authority to require a wireline verification of the completion and packer setting depths in this Well. [19.15.26.11(A) NMAC]

D. OPERATION

1. **Operation and Maintenance.**

a. Permittee shall equip, operate, monitor and maintain the Well to facilitate periodic testing, assure mechanical integrity, and prevent significant leaks in the tubular goods and packing materials used and significant fluid movements through vertical channels adjacent to the well bore. [19.15.26.10(A) NMAC]

b. Permittee shall operate and maintain the Well and associated facilities in a manner that confines the injected fluid to the approved injection interval and prevents surface damage and pollution by leaks, breaks and spills. [19.15.26.10(B) NMAC]

c. OCD may authorize an increase in the maximum surface injection pressure upon a showing by the Permittee that such higher pressure will not result in the migration of the disposed fluid from the approved injection interval or induced seismicity. Such proper showing shall be demonstrated by sufficient evidence, including an acceptable step-rate test.

d. If OCD has reason to believe that operation of the Well may have caused or determined to be contributing to seismic activity, Permittee shall, upon OCD's written request:

i. Take immediate corrective action, which could include testing and evaluating of the injection interval and confining layers; suspending or reducing of the rate of injection or maximum surface injection pressure, or both; and providing increased monitoring of the Well's operation; and

ii. Submit a remedial work plan or an application to modify the Permit to implement the corrective action, plug back the injection interval, or incorporate another modification required by OCD.

OCD may approve the remedial work plan, modify the Permit or issue an emergency order or temporary cessation order as it deems necessary.

2. **Pressure Limiting Device**.

a. The Well shall be equipped with a pressure limiting device, which is in workable condition and can be tested for proper calibration at the well site, that shall limit surface tubing pressure to the maximum surface injection pressure specified in Appendix A. b. Permittee shall test the pressure limiting device and all gauges and other metering requirement to ensure their accuracy and proper function no less than every five (5) years.

3. Mechanical Integrity. Permittee shall conduct a MIT prior to commencing injection, at least every five (5) years after the date of the previous MIT, and whenever the tubing is removed or replaced, the packer is reset, mechanical integrity is lost, Permittee proposes to transfer the Well, or requested by OCD.

a. MITs shall be conducted in accordance with 19.15.26 NMAC.

b. Permittee shall submit a sundry notice on Form C-103 of intent to install or replace injection equipment or conduct a MIT no later than three (3) business days prior to the event.

c. Permittee shall report the result of a MIT no later than two (2) business days after the test.

d. Permittee shall cease injection and shut-in the Well no later than twenty-four (24) hours after discovery if:

i. The Well fails a MIT; or

ii. Permittee observes conditions at the Well that indicate the mechanical failure of tubing, casing, or packer.

e. Permittee shall take all necessary actions to address the effects resulting from the loss of mechanical integrity in accordance with 19.15.26.10 NMAC.

f. Permittee shall conduct a successful MIT pursuant to 19.15.26.11 NMAC, including written approval from OCD prior to recommencing injection and the requirements contained in Section I G.3.

4. Additional Tests. Permittee shall conduct any additional test requested by OCD, including but not limited to step-rate tests, tracer surveys, injection surveys, noise logs, temperature logs, and casing integrity logs [19.15.26.11(A)(3) NMAC]

5. Records.

a. Permittee shall retain a copy of each record required by this Permit for a period of at least five (5) years and shall furnish a copy to OCD upon request. [40 CFR 144.51(h)]

b. Permittee shall retain a record of each test, sample, measurement, and certification of accuracy and function collected for the Well, including:

i. Date, location, and time of sample, measurement or calibration;

ii. Person who conducted the sample event, -measurement or calibration;

iii. Calibration of gauge or other equipment in accordance with the manufacturer's specifications;

- iv. Description of method and procedures;
- v. Description of handling and custody procedures; and
- vi. Result of the analysis.

E. PLUGGING AND ABANDONMENT

1. Upon the termination of this Permit, Permittee shall plug and abandon the Well and restore and remediate the location in accordance with 19.15.25 NMAC.

2. If Permittee has received an extension pursuant to Section I. A. 2. b., Permittee shall apply for approved temporary abandonment pursuant to 19.15.25 NMAC.

3. If this Permit expires pursuant to 19.15.26.12 NMAC and OCD has not issued a new permit, then Permittee shall plug and abandon the Well and restore and remediate the location in accordance with 19.15.25 NMAC.

4. Permittee's temporary abandonment of the Well shall not toll the abandonment of injection in accordance with 19.15.26.12(C) NMAC.

F. **REPORTING**

1. Monthly Reports. Permittee shall submit a report using Form C-115 using the OCD's web-based online application on or before the 15th day of the second month following the month of injection, or if such day falls on a weekend or holiday, the first workday following the 15th, with the number of days of operation, injection volume, and injection pressure. [19.15.26.13 NMAC; 19.15.7.24 NMAC]

2. Corrections. Permittee shall promptly disclose to OCD any incorrect information in the Application or any record required by this Permit and submit corrected information. [40 CFR 144.51(h)(8)]

G. CORRECTIVE ACTION

1. Releases. Permittee shall report any unauthorized release of injection fluid at the Well or associated facilities in accordance with 19.15.29 and 19.15.30 NMAC.

2. Failures and Noncompliance. Permittee shall report the following incidents to appropriate OCD district office verbally and by e-mail no later than 24 hours after such incident:

a. Any mechanical integrity failures identified in Section I. D. 3. d;

b. The migration of injection fluid from the injection interval [19.15.26.10 NMAC]; or

c. A malfunction of the Well or associated facilities that may cause waste or affect the public health or environment, including: (a) monitoring or other information which indicates that a contaminant may affect a USDW; or (b) noncompliance or malfunction which may cause the migration of injection fluid into or between USDWs. [40 CFR 144.51(l)(6)]

3. Corrective Action. Permittee shall submit a written report describing the incident in Sections I.G.1 or I.G.2, including a corrective active plan, no later than five (5) calendar days after discovery of the incident. [40 CFR 144.51(l)(6)] For an unauthorized release, Permittee also shall comply with the site assessment, characterization and remediation requirements of 19.15.29 and 19.15.30 NMAC.

4. **Restriction or Shut-In.** OCD may restrict the injected volume and pressure or shut-in the Well if OCD determines that the Well has failed or may fail to confine the injected fluid to the approved injection interval or has caused induced seismicity until OCD determines that Permittee has identified and corrected the failure. [19.15.26.10(E) NMAC]

H. PERMIT CHANGES

1. Transfer. This Permit shall not be transferred without the prior written approval of OCD. Permittee shall file Form C-145 for a proposed transfer of the Well. OCD may require, as a condition of approving the transfer, that this Permit be amended to ensure compliance and consistency with applicable law. If the Well has not been spud prior to the transfer, the OCD may require that the new operator reapply and submit to the OCD a new Form C-108 prior to constructing and injecting into the well. [19.15.26.15 NMAC; 19.15.9.9 NMAC]

2. Insolvency. Permittee shall notify OCD Engineering Bureau of the commencement of a voluntary or involuntary proceeding in bankruptcy which names Permittee or an entity which operates the Well on behalf of Permittee as a debtor no later than ten (10) business days after the commencement of the proceeding.

or

3. OCD Authority to Modify Permit and Issue Orders

a. The OCD may amend, suspend, or revoke this Permit after notice and an opportunity for hearing if it determines that:

i. The Permit contains a material mistake;

ii. Permittee made an incorrect statement on which OCD relied to establish a term or condition of the Permit or grant this Permit;

iii. this Permit must be amended to ensure compliance and consistency with applicable law, including a change to the financial assurance requirements;

iv. The Well's operation may affect the water quality of fresh water;

v. Injected fluid is escaping from the approved injection interval;

vi. Injection may be caused or contributed to seismic activity:

vii. Injection may cause or contribute to the waste of oil, gas or potash resources or affect correlative rights, public health, or the environment.

b. OCD retains jurisdiction to enter such orders as it deems necessary to prevent waste and to protect correlative rights, protect public health, and the environment.

c. OCD retains jurisdiction to review this Permit as necessary and no less than once every five (5) years, and may determine whether this Permit should be modified, revoked and reissued, or terminated. [40 CFR 144.36(a)]

4. **Permittee Request to Modify Permit**. Permittee may apply to modify the terms of this Permit.

a. **Minor Modifications**. OCD may make a minor modification to this Permit without notice and an opportunity for hearing for:

- i. Non-substantive changes such as correction of typographical errors;
- ii. Requirements for more frequent monitoring or reporting;

- iii. Changes to the Well construction requirements provided that any alteration shall comply with the conditions of the Permit and does not change the Area of Review considered in the application for the Permit;
- iv. Amendments to the plugging and abandonment plan;
- v. Changes in the types of fluids injected which are consistent with sources listed in the application for the Permit and do not change the classification of the Well;
- vi. Corrections of the actual injection interval if within the approved formation; or
- vii. Transfer of a Permit for a Well that has been spud. [40 CFR 144.41]

b. **Major Modifications.** OCD shall require notice and an opportunity for hearing for any modification that is not minor. For such modifications, Permittee shall submit Form C-108 and comply with the notice requirements of 19.15.26 NMAC.

II. SPECIAL CONDITIONS

Permittee shall comply with the following special conditions:

- 1. The Permittee shall submit a CBL of the intermediate casing to the OCD District III Office prior to commencing disposal.
- 2. The operator shall obtain a water sample for analysis of general water chemistry (including major cations, major anions, and Total Dissolved Solids (TDS)). The Division's District III office shall be noticed prior to this test and given the opportunity to witness the test. The operator shall supply the results of the water sample to Division's District III office and Santa Fe engineering bureau office prior to commencing injection. If the analysis of the sample is found to contain a TDS concentration of 10,000 milligrams per liter or less, the injection authority under this Order shall be suspended <u>ipso facto</u>.

III. ATTACHMENT

Well Completion Diagram as Provided in the Application

3-sided solids bin Steel pit Shakers • solids Steel pit Pump suction 3-sided solids bin Steel pit Dewatering centrifuge solids Steel pit suction 0 Drill water tanks Pump

Closed Loop Mud System

Flowline

Pump suction



Released to Imaging: 5/21/2021 1:05:03 PM

COMMENTS

Action 26333

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

	COMMENTS							
Operator				OGRID:		Action Number:	Action Type:	
	DJR OPERATING, LLC	1 Road 3263	Aztec, NM87410	37	1838	26333	FORM 3160-3	
Created I	Зу	Comment				Comment Date		
kpickford		KM SWD-2263				05/19/2021		
kpickford		KP GEO Review 5/19/	2021			05/19/2021		

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 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410

Phone:(505) 334-6178 Fax:(505) 334-6170 <u>District IV</u> 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

CONDITIONS

Action 26333

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 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410

Phone:(505) 334-6178 Fax:(505) 334-6170 <u>District IV</u> 1220 S. St Francis Dr., Santa Fe, NM 87505

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 OF APPROVAL

Operator:				OGRID:	Action Number:	Action Type:		
	DJR OPERATING, LLC	1 Road 3263	Aztec, NM87410	371838	26333	FORM 3160-3		
OCD	Condition							
Reviewer								
kpickford	1 Must adhere to design and other specifications contained in SWD permit 2263.							
kpickford	ford Notify OCD 24 hours prior to casing & cement							
kpickford	Once the well is spud, to preven shall immediately set in cement	t ground water contamina the water protection strin	tion through whole or partial conduit g	is from the surface, the operator shall drill w	vithout interruption through	the fresh water zone or zones and		
kpickford	Oil base muds are not to be use contained in a steel closed loop	d until fresh water zones system	are cased and cemented providing i	solation from the oil or diesel. This includes	synthetic oils. Oil based n	nud, drilling fluids and solids must be		