

Submit a Copy To Appropriate District  
Office  
District I – (575) 393-6161  
1625 N. French Dr., Hobbs, NM 88240  
District II – (575) 748-1283  
811 S. First St., Artesia, NM 88210  
District III – (505) 334-6178  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV – (505) 476-3460  
1220 S. St. Francis Dr., Santa Fe, NM  
87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised July 18, 2013

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

WELL API NO. 30-045-31606
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. E6597-2
7. Lease Name or Unit Agreement Name Central Bisti SWD
8. Well Number: 161
9. OGRID Number: 371838
10. Pool name or Wildcat: Entrada
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6233' GL

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other	
2. Name of Operator DJR Operating, LLC	
3. Address of Operator 1 Road 3263, Aztec, NM 87410	
4. Well Location Unit Letter B _____ : 1067 _____ feet from the _____ North _____ line and 2286 _____ feet from the _____ East _____ line Section 16 Township 25N Range 12W NMPM San Juan County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 6233' GL	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: <input checked="" type="checkbox"/>		OTHER: Recompletion/Conversion to Water Well <input checked="" type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

DJR is proposing to convert the Central Bisti 161 SWD (saltwater disposal) to an Entrada WSW (water supply well). Attached are the before and after conversion wellbore diagrams. The wellbore does not have plugged perforations. The Entrada zone in the well being converted to a WSW does not produce oil and gas. Although the well was permitted and authorized as a SWD, it was never injected into nor will it ever be used as a SWD.

Attached are the following:

- Submittals to the State Engineer's Office converting the well to a WSW.
- Recompletion Procedure
- Before and After Wellbore Diagrams
- Affidavit of Responsibility-Conversion to Water Well with attached letter

Spud Date: 02/17/2005

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Shaw-Marie Ford TITLE Regulatory Specialist DATE 01/23/2023

Type or print name Shaw-Marie Ford E-mail address: sford@djrlc.com PHONE: 505-716-3297

**For State Use Only**

APPROVED BY: John Garcia TITLE Petroleum Specialist Supervisor DATE 1/24/2023

Conditions of Approval (if any):



January 23, 2023

New Mexico Oil Conservation Division  
1220 S St Francis Dr  
Santa Fe, NM 87505  
Attn: Mr. Brandon Powell

Re: Conversion to Water Well – Central Bisti SWD No. 161

Dear Mr. Powell:

DJR Operating, LLC (DJR) is attaching and making this letter as part of the Affidavit of Responsibility-Conversion to Water Well as required by the New Mexico Oil Conservation Division (NMOCD) for the Central Bisti 161 well. This letter is being attached to the affidavit to further explain why statements contained in Paragraph 4 and the information requested to be inserted are not applicable.

As you are aware, DJR is in the process of converting this well to a water supply well, which conversion is being permitted and authorized through the State Engineer's Office. The well was intended to be, and is currently designated as, a disposal well, but has never been used as such. Once approval of the State Engineer's Office is received to operate the well as a water supply well, DJR will commence to use the well for this purpose in perpetuity.

In the pre-printed portions of Paragraph 4 of the affidavit, it states that the wellbore will be transferred to the landowner. As explained above, this will not be the case. DJR will continue to operate the well as a water supply well and has no plans to transfer the wellbore to the landowner. Therefore, Paragraph 4 of the affidavit cannot be attested to and completed for these reasons. DJR has completed the remaining portions of the affidavit for your information and ultimate approval. It should be noted that DJR has an agreement with the landowner in the form of a Memorandum of Surface Use and Compensation Agreement which has been recorded in San Juan County, New Mexico.

Should you have any further questions, please contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Dave Brown', is written over a faint, larger signature.

Dave Brown  
Government and Regulatory Affairs Manager

1 Road 3263  
Aztec, NM 87410

Phone (505)-632-3476  
Fax (505)-632-8151

**NEW MEXICO OIL CONSERVATION DIVISION  
SANTA FE, NEW MEXICO**

**AFFIDAVIT OF RESPONSIBILITY  
CONVERSION TO WATER WELL**

STATE OF New Mexico )  
County of San Juan )

David R. Brown, being first duly sworn according to law, upon his oath  
deposes and says:

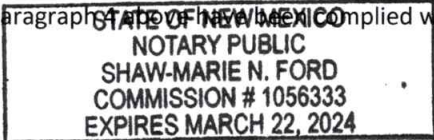
1. That he is Regulatory and Government Affairs Manager of DJR Operating, LLC  
(Title) (Operator)  
whose address is: 1 Road 3263. Aztec, NM 87410

2. That DJR Operating, LLC is the operator of a well drilled on land belonging to  
(Operator)  
Western Refining Southwest, LLC, whose address is Box 592809 TXI-047, San Antonio, TX 78259,  
(Landowner)  
said well being drilled to test for hydrocarbons and/or carbon dioxide gas and described as the  
Central Bisti SWD No. 161, being located 1,067 feet from the north line and 2,286 feet from the east line of Section 16  
Township 25N, Range 12W, NMPM, San Juan County, New Mexico.

3. That said well was drilled to a total depth of 7,112 feet, and that casing has been set and cemented as follows:  
9 5/8" surface casing set at 416', cement to surface and 7" 23# N-80 set at 7106'

4. That operator and landowner have made an agreement whereby operator (is) (is not) to back fill pits, level  
location, and clear it of all junk. The agreement further provides that the operator is to plug said well back to a plugged-back  
total depth of N/A feet and transfer well to landowner for his use as a water well. Operator will leave casing in the  
well as follows:  
See Attached Letter

5. That when operator has complied with the provisions of Paragraph 4 above, it will so notify the Oil Conservation  
Division of the State of New Mexico on Form C-103, together with a signed statement from the landowner that the provisions of  
Paragraph 4 of the New Mexico Oil Conservation Act have been complied with to his satisfaction.



David R. Brown DJR Operating  
(Operator)

By \_\_\_\_\_

Subscribed and sworn to before me this 20th day of January, A.D. 2023

Shaw-Marie N. Ford  
Notary Public in and for the County of San Juan

STATE OF \_\_\_\_\_ )  
County of \_\_\_\_\_ )

\_\_\_\_\_, being first duly sworn according to law, upon his oath  
deposes and says that when the provisions of Paragraphs 4 and 5 above have been complied with, he will accept the above-  
described well for his use as a water well, and that he will assume all responsibility for the well, the location, and the conversion of  
the well to a water well.

\_\_\_\_\_  
(Landowner)  
Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, A.D. 20\_\_\_\_

Notary Public in and for the County of \_\_\_\_\_





**Re-Completion Procedure  
Central Bisti 161 WSW  
San Juan County, New Mexico  
Permit Reference # SJ-4387**

**Surface Location**

Sec 16 T25N R12W  
Ground Elevation 6233' MSL

**SHL Geographical Coordinates (NAD-83)**

Latitude 36.4055099° N  
Longitude 108.1156464° W

**Directional Information**

Well is vertical and drilled to a total depth of 7112'

**Well objectives**

This vertical well will be converted to an Entrada water well and will be used to provide frac water. This procedure covers cased hole evaluation of the 7" long string, pressure test of the long string and testing the Entrada zone, and installation of an ESP.

**Bottom Hole temperature and pressure**

The temperature at TD is 168°F. The reservoir pressure in the Entrada is anticipated to be 3,814 psi.

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

Name	MD (ft)	Lithology	Pore fluid	Expected Pore Pressure (ppg)
Ojo Alamo	348	Sd	W	8.3
Kirtland	447	Sh	W	8.3
Fruitland	741	C	G/W	8.3
Pictured Cliffs	1110	Sd	G/W	8.3
Lewis	1269	Sh	G/W	
Chacra	1855	Sd	G/W	8.3
Cliff House	2511			
Menefee	2519	Sd, C	G/W	8.3
Point Lookout	3557	Sd	G/W	8.3
Mancos	3737	Sh	O/G	
Gallup	4595	Slt	O/G	6.6
Greenhorn	5465	Slt	O/G/W	6.6
Dakota	5545	Sd	O/G/W	6.6
Todilto	6709	Sd	G/W	6.6
Entrada	6781	Sd	W	8.3
Entrada Base	6946	Sd	W	8.3



## Well Design

Casing OD	Hole Size	Weight (#/ft)	Grade	Coupling	MD Top	MD Bottom	Top of Cement (MD)
9 5/8"	12 1/4"	36.0	J-55	STC	surf	416	surface
7"	8 3/4"	23.0	N-80	LTC	surf	7106	surface
3 1/2"	Tubing	9.3	L-80	LTC	surf	2500	None

Note: 3 1/2" tubing will be coated (internally)

## Casing & Tubing Data

OD	ID	Capacity (bbl/ft)	Burst	Collapse
9 5/8"	8.921	0.0773	5120	2370
7"	6.366	0.0394	6340	3830
3 1/2"	2.992	0.00870	10159	10533

### 7" Long String – Additional details

Production casing (7" 23#, N-80) was set a 7106' in a 7112' deep 8 3/4" hole and cemented to the surface. Lead with slurry of 800 sx 50/50 standard poz and circulated 70 bbls to the surface. Tailed with 450 sx 65/35 standard poz and circulated 40 bbls to the surface. Pressure tested to 1500 psi.

After pumping the cement job, well was logged with radial CBL and submitted to the State. CBL shows TOC at surface. Additionally, the well was perforated from 6,785' to 6,940'. After the well was perforated, it was swabbed to get water sample from the Entrada formation.

### Wellhead and BOPE

A 7-1/16" 5M BOP configured with blind rams, pipe rams and an annular will be installed. The stack will be tested to 3500 psi. A lubricator will be required while conducting cased hole logging and perforating activities. The lubricator will be tested to 2500 psi.

### Procedure

1. MIRU workover rig with base beam.
2. NU 7-1/16" 5M BOP with blind rams, pipe rams and annular. Test BOP to 3500 psi for 30 minutes – do not test against the 7" casing and ensure the wing valve is open during test. Fill pit with freshwater treated with biocide. Bomb tanks.
3. MIRU. TOOH with existing packer at 5,005'. TIH with 6-3/4" bit and 7" casing scraper on 2-7/8" work string. Work scraper across future packer setting depth at 6,700 ft MD. Continue to TIH and tag COTD at 7,016 ft.
4. POOH with bit, scraper, and 2-7/8" work string. Stand back tubing.
5. Rig up lubricator and pack-off, test to 2500 psi.
6. Run Temp/Radial CBL/GR/Casing Inspection log from COTD to surface.



7. POOH with Wireline
8. RIH with Weatherford weight-set retrievable packer with 2.313" x nipple above the packer. Set packer at  $\pm 6,700$  ft MD (do not set packer in casing coupling). Test backside of packer to 1500 psi for 30 minutes.
9. Break down Entrada perforations using 150 bbls of treated freshwater. Perform Step Rate injection test as follows. Note: limit on injection pressure is 2500 psi regardless of rate.
  - a. Ramp pump up to 10 bpm or maximum rig pump output.
  - b. Allow injection pressure to stabilize at each rate before stepping down injection rate
  - c. Step down rate three times from (a)
  - d. After last rate, shut down pump and monitor and record pressure for 1-hour.
10. At conclusion of water sampling, shut down and observe tubing dead. Unseat packer, check well for flow and POOH. Keep hole full while tripping out. Lay down tubing and packer.
11. Rig up and run 2,500 ft 3-1/2" 9.2 # L-80 LTC tubing +LTC to EUE XO + ESP + de-sander + 7 jts of 2 7/8" 8rd EUE tailpipe. Band ESP every 3 ft above and 3 ft below each coupling. Land tubing in hanger with pump at  $\pm 2,798$  ft MD. Check cable continuity periodically while TIH.
12. Nipple down and set out BOP.
13. Install ESP penetrator and nipple up x-mas tree (one master valve, flow cross with 1" with 2" 1502 outlet and 2-2" 1502 ball valves. Test seals to 3,000 psi.
14. Shoot fluid Levels on 7" casing and check with ESP head pressure to correlate water levels.

**Objective: Perform an aquifer test on the well. Begin with a step-rate test to confirm stable production is possible at desired rate, produce well at a constant rate for a 24-hour period, and monitor well recovery after stopping the pumps (water level and high-frequency pressure data).**

15. Ensure adequate storage on location for 40,000 bbls of produced water. Install one G-Tank on location.
16. Ensure 3" Coriolis flowmeter is installed with capability of recording one-second data during all producing intervals.
17. Start up generator, VSD, and power-up ESP.
18. Record pressure with the ESP inlet transducer at one-minute sampling during the duration of all well-testing procedures. Begin pressure-monitoring starting with power-up and record inlet pressure for 30-minutes prior to pumping.
19. Ensure accurate fluid density measurements so water level in the well can be calculated from the ESP inlet transducer pressure data.
  - a. Use hydrometer on site and record density measurements
20. Collect one gallon water samples each hour during all flow testing. Use distilled water jugs.



21. Start step-rate test using the following flow-schedule as a guide. Record actual discharge rate with the Coriolis meter and all pressure data using the ESP inlet transducer.

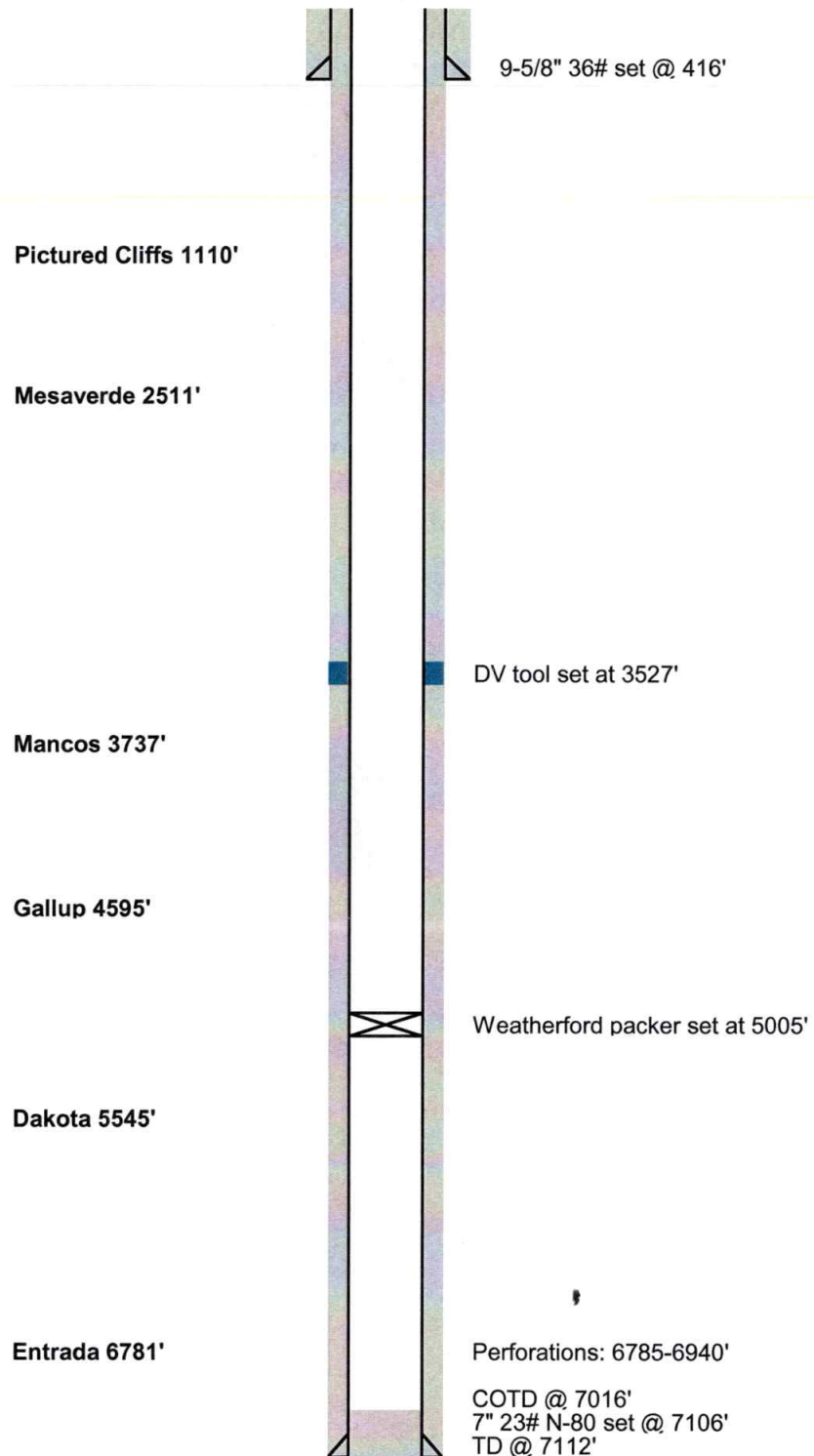
Discharge Rate (gpm)	Start (minutes)	End (minutes)
240	0	60
360	60	120
480	120	180
600	180	240

22. Well will be shut-in two days to monitor pressures.
23. Shoot Fluid Levels on 7" casing and check against ESP head pressure.
24. Secure well and location.



**Wellbore Diagram  
Central Bisti SWD 161  
NE/4, Sec 16, T25N, R12W  
San Juan, County, NM  
API: 30-045-31606**

Before

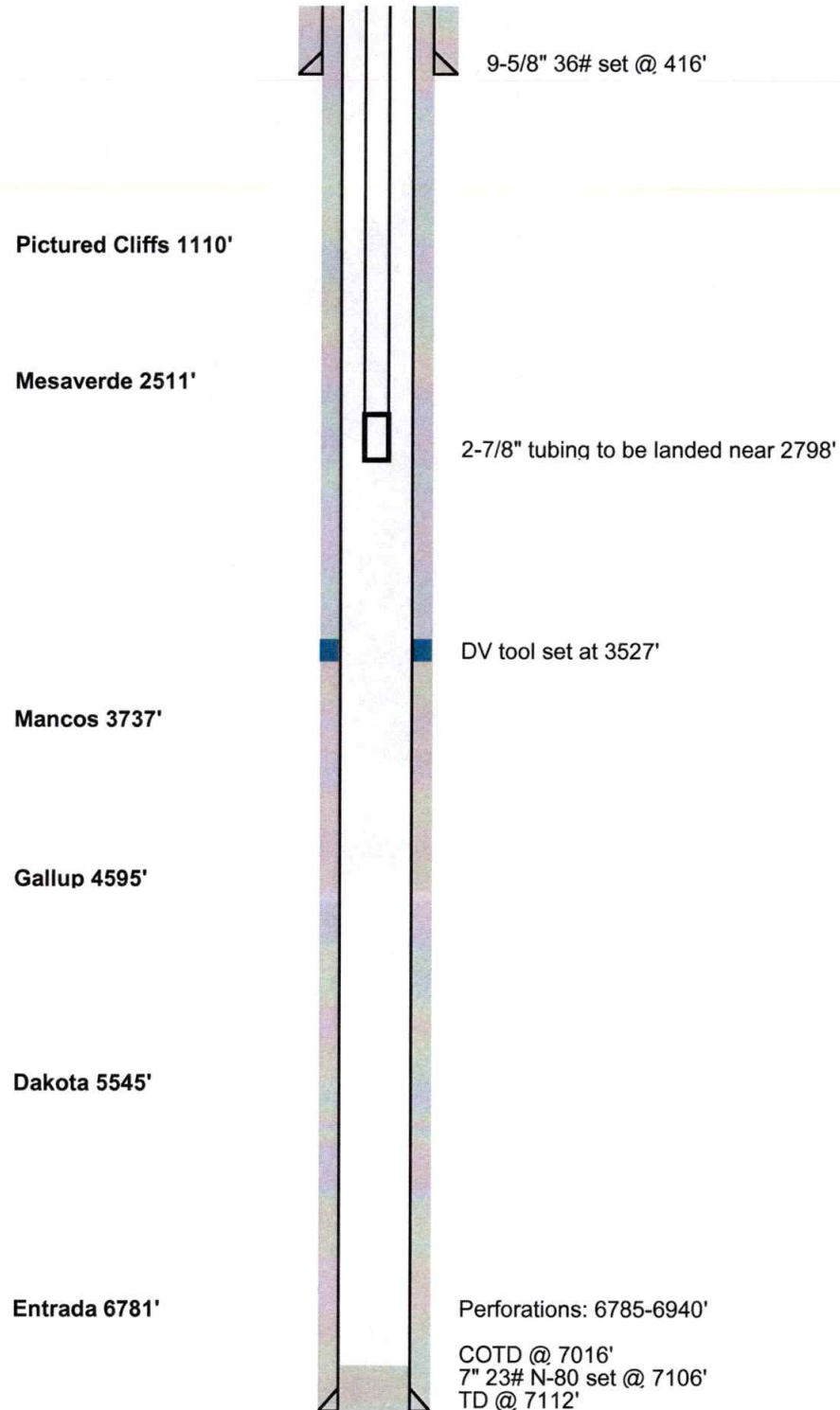






Wellbore Diagram  
Central Bisti SWD 161  
NE/4, Sec 16, T25N, R12W  
San Juan, County, NM  
API: 30-045-31606

After





## ARTESIAN WELL PLAN OF OPERATIONS

(for new well construction and repairs)



An Artesian Well Plan of Operations shall be filed with and approved by the Office of the State Engineer prior to commencing the drilling or repairing of an artesian well.

A detailed diagram of the proposed artesian well shall be attached to this plan.

**I. FILING FEE:** There is no filing fee for this form.

**II. GENERAL / WELL OWNERSHIP:**

Office of the State Engineer POD Number (Well Number) for well (if known): Central Blstl 161 WSW  
 Name of well owner: DJR Nominee Corporation  
 Mailing address: 1700 Lincoln St. Suite 2800  
 City: Denver State: CO Zip code: 80203  
 Phone number: 1-303-595-7430 E-mail: nli@djrlc.com

**III. WELL DRILLER INFORMATION:**

Well Driller contracted to provide drilling services: Bearcat Drilling  
 New Mexico Well Driller License No.: See Section V Expiration Date: \_\_\_\_\_

**IV. WELL INFORMATION:**

- 1) Will this well be used for any type of monitoring program? No If yes, please describe in section V; applicant should be familiar with the need for specialty materials or design required for the monitoring program.
- 2) Will the well tap or penetrate brackish, saline, or otherwise poor quality water? Yes If yes, please provide additional detail in section V.
- 3) Depth of top of the anticipated artesian aquifer: 6,781 feet below ground level (bgl).
- 4) Is a flowing artesian head anticipated? Yes
- 5) Will a pitless adapter be installed in the well? No
- 6) GPS Well Location: Latitude: 36 deg, 24 min, 20 sec  
 Longitude: 108 deg, 6 min, 56 sec, NAD 83
- 7) Will permanent surface casing be installed? Yes If yes, provide details below. (Note: surface casing is shallow casing generally set above the confining unit overlying the artesian aquifer and is considered optional).
  - a) Diameter of borehole to be drilled for the surface casing: 12 1/4 inches.
  - b) Proposed surface casing depth: 416 feet below ground level.

- c) Surface casing material, grade: Steel J-55 36#/ft
- d) Inside diameter (ID): 8.92 inches.
- e) Outside diameter (OD): 9 5/8 inches.
- f) Wall thickness: 0.352 inches.
- g) Casing joint connection type (note whether welded, glued, coupled, etc. If coupled, include outside diameter OD and the length in inches, and also the number of threads per inch.):  
Coupled. OD 10.625", length 7-3/4", 8 threads per inch
- h) Interval of proposed surface casing annular sanitary seal: 0 to 427 feet below ground level.
- i) Surface casing sanitary seal material:  
Cement

8) Artesian casing ( Note: artesian casing shall be set adequately into the confining unit overlying the artesian aquifer; in some designs this may also be the production casing; NMOSE inspection requirements apply to installing, grouting and testing the artesian casing):

- a) Diameter of borehole to be drilled for the artesian casing: 8 3/4 inches.
- b) Proposed artesian casing depth: 7,106 feet below ground level.
- c) Artesian casing material, grade: Steel N-80 23#/ft
- d) Inside diameter (ID): 6.36 inches.
- e) Outside diameter (OD): 7 inches.
- f) Wall thickness: 0.316 inches.
- g) Casing joint connection type (note whether welded, glued, coupled, etc. If coupled, include outside diameter (OD) and the length in inches, and also the number of threads per inch.)  
Coupled, OD 7.656", length 10-1/2", 8 threads per inch
- h) Type and spacing of artesian casing centralizers:  
Weatherford centralizers. 1 centralizer on 1st joint, 13 centralizers spaced every other joint for next 23 joints, then 2 centralizers spaced every other joint for the next 53 joints.
- i) Manufacturer and model of float shoe: Weatherford float shoe. Model not available.
- j) Method of annular grout placement: check one      Pressure Grout ☒      Tremmie Pipe ☐
- k) Interval of proposed annular grout: 0 to 7112 feet below ground level.
- l) Proposed annular grout mix: 5.25 to 9.61 gallons of water per 94 pound sack of Portland cement.
- m) Cement type proposed: See Section 8)q) below
- n) Theoretical volume of annular grout required: 1076 cubic feet
- o) Will the grout be: ☐ batch-mixed and delivered to the site  
☒ mixed on site
- p) Grout additives requested, and percent by dry weight relative to cement: (See AWWA Standard A100-06 or Halliburton red book; common additives: calcium chloride, bentonite solution, pozzolan ash):

Cement additives: Stage 1: 2% gel; 0.6% Halad-9; 0.1% HR-5; 5# gilsonite; 1/4# Flocele. Stage 2: 6% gel; 5# gilsonite; 1/4# Flocele; 2% CaCl<sub>2</sub>.

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STATE ENGINEER OFFICE  
AZTEC, NEW MEXICO



## q) Additional notes and calculations:

Section 8)m) Cement as pumped: Stage 1: 800 sks 50/50/std/Poz + additives; 5.25 gal/sk; 1.32 cu. ft./sk. Stage 2: 450 sks 65/35/std Poz + additives; 9.61 gal/sk; 1.92 cu. ft./sk. Excess cement to surface on both stages.

## 9) Production casing (set through the artesian casing and into the artesian aquifer; may not be necessary if the artesian casing is used as the production casing):

a) Will you be using a production casing within the artesian casing? No If yes, provide a description of the following in section V:

- i. Diameter of borehole to be drilled for production casing; casing joint connection type - note whether coupled, welded, glued, etc.; proposed production casing depth; and inside diameter, outside diameter, wall thickness, casing material, and casing material grade of production casing.
- ii. List the proposed screened/ perforated interval(s) if you plan to use well screen or perforated casing.
- iii. List the vertical intervals and seal or fill material if the annulus between the production casing and artesian casing/borehole is to be sealed/ filled.

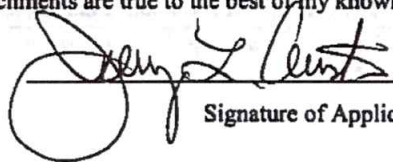
**V. ADDITIONAL INFORMATION:** List additional information below, or on separate sheet(s):

The Central Bisti 161 WSW is an existing, completed well. It was originally constructed to be a water disposal well but after initial water quality tests indicated a TDS below the 10,000 mg/L threshold it is now proposed to be a water supply well.

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**VI. SIGNATURE:**

I, \_\_\_\_\_, say that I have carefully read the foregoing Artesian Well Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Artesian Well Plan of Operations and attachments are true to the best of my knowledge and belief.



Signature of Applicant

3-19-2020

Date

\_\_\_\_\_  
Signature of Well driller\_\_\_\_\_  
Date



**VII. ACTION OF THE STATE ENGINEER:**

This Artesian Well Plan of Operations is:

- ☐ Approved subject to the attached conditions.  
☐ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_, State Engineer

By: \_\_\_\_\_

STATE ENGINEER OFFICE  
AZTEC, NEW MEXICO  
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### Pertinent Data Sheet

2/19/2019  
SHL

**Well Name:** Central Bisti 161 WSW  
**Footage:** 1067' FNL and 2286' FEL  
**Location:** Section 16, T25N, R12W  
**County:** San Juan County, NM  
**API#:** 30-045-31606  
**Lease:** E-6597-2

**Field:** Entrada **Elevation:** 6233' KB  
**Spud Date:** 2/17/05 **TD:** 7112' KB  
**Completion Date:** TBD **PBTD:** 7057'  
 (Weatherford packer at 5005' KB)

#### Casing Record:

Hole Size	Casing Size	Wt.	Grade	Depth Set	Cement
12-1/4"	9-5/8"	36#	J-55	416'	271 ft <sup>3</sup> (Circulated cement to surface)
8-3/4"	7"	23#	N-80	7106'	1920 ft <sup>3</sup> (Circulated cement to surface)

**Surface casing:** 271 ft<sup>3</sup>, 15.6 ppg, 1.18 ft<sup>3</sup>/sack

**Production casing:** Stage 1: 1056 ft<sup>3</sup>, 13.5 ppg, 1.32 ft<sup>3</sup>/sack. Circ. 70 bbls excess cement to surface.  
 Stage 2: 864 ft<sup>3</sup>, 12.4 ppg, 1.92 ft<sup>3</sup>/sack. Circ. 40 bbls excess cement to surface.  
 DV (stage) tool at 3527'.

**Tubing Record:** None

**Rod Record:** None

**Logging Record:** Ind-GR, SD-DSN, CBL-GR-CCL

#### Formation Tops:

Pictured Cliffs 1117'  
 Mesaverde 1805'  
 Mancos 3781'  
 Gallup 4566'  
 Dakota 5519'  
 Morrison 5742'  
 Entrada 6781'

**Perforation Record:** 12-28-2018: Perforated 6785-6940'. 620x0.42" shots at 4 SPF.

**Completion Record:** None

**Injection Record:** None

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STATE ENGINEER OFFICE  
 AZTEC, NEW MEXICO

**DJR NOI**  
**ATTACHMENT A**

STATE ENGINEER OFFICE  
AZTEC, NEW MEXICO

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**Wright Water Engineers, Inc.**

1666 N. Main Avenue, Suite C  
Durango, Colorado 81301  
(970) 259-7411 TEL  
(970) 259-8758 FAX

www.wrightwater.com  
e-mail: pfoister@wrightwater.com

February 28, 2020

Via Email: [nli@djrlc.com](mailto:nli@djrlc.com)

Ningning Li  
Completions Manager, DJR Energy  
1600 Broadway, Suite 1960  
Denver, CO 80202

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STATE ENGINEER OFFICE  
AZTEC, NEW MEXICO

Re: Attachment A – Notice of Intention for the Central Bisti 161 Water Supply Well in the San Juan Basin

Dear Ningning:

This letter serves as Attachment A to the Notice of Intention (NOI) for the Central Bisti 161 Water Supply Well (WSW) located in the San Juan Basin (Table 1 and Figure 1). The Central Bisti 161 WSW was originally constructed as a disposal well, however after construction the water quality of the well narrowly did not meet the requirements for disposal. DJR is now converting this disposal well into a water supply well for oil and gas development uses.

The following is required to be included in Attachment A:

“a description of the target aquifer and overlying confining strata, geologic cross sections of the target aquifer and overlying confining strata, and a map showing the lateral extent and depth of the target aquifer and overlying confining strata. Also include any other studies that form the basis for the contention that the target aquifer meets the criteria of 72-12-25 NMSA, addressing total dissolved solids content of the target aquifer groundwater, and hydraulic separation of target aquifer from shallower aquifer systems and surface water.”  
- from description on NOI form

### Proposed Wells

The proposed well is located in San Juan county in northwest New Mexico (Figure 1 and Figure 2). This well targets the Entrada Sandstone confined aquifer from 6,781 feet to 6,940 feet in depth (Table 1). This depth to the top of the aquifer exceeds the criteria of a minimum depth of 2,500 feet defined in 72-12-25 NMSA. The total well depth is 7,112 feet. DJR derived these anticipated depths from correlating well logs of nearby completed wells. DJR plans on pumping an average maximum of 450 acre feet per year from the Central Bisti 161 WSW and from 6 other WSWs (POD Nos. SJ-4343 through SJ-4348) that source water from the Entrada Formation. The annual total of up to 2,700 acre feet is the limit of all 7 PODs combined to develop oil and gas wells in the San Juan Basin. The Central Bisti 161 WSW operates as an additional point of diversion for the water rights already filed in the six previously filed NOIs. It does not increase the total annual diversion beyond the 2,700 acre feet requested in the previously filed NOIs. During the well development program, DJR proposes to reinject 40 to 90 percent of water withdrawn back into the Entrada Formation.

DENVER  
(303) 480-1700 TEL (303) 480-1020 FAX

GLENWOOD SPRINGS  
(970) 945-7755 TEL (970) 945-9210 FAX



Ningning Li  
February 28, 2020  
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STATE ENGINEER OFFICE  
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### **Entrada Sandstone – Target Aquifer**

The targeted Entrada Sandstone aquifer is Jurassic in age and its thickness ranges from 60 to 350 feet per Kernodle, 1996. In the vicinity of the Central Bisti 161 WSW, the thickness is 159 feet based on well log analysis of the constructed Central Bisti 161 well. The Entrada Sandstone is described as a crossbedded, very fine- to medium-grained, silty, quartzose sandstone (Kernodle, 1996). The Chinle Formation, stratigraphically below the Entrada Sandstone (See Figure 3), acts as a lower confining unit, consisting of low hydraulic conductivity nonmarine deposits of claystone and shale, siltstone and sandstone (Kernodle, 1996).

### **Todilto Limestone – Overlying Confining Strata**

The Todilto Limestone conformably overlies the Entrada Sandstone and acts as a confining unit. Ridgley and Hatch (2013) state that “The Todilto Limestone Member is the source of the oil and small quantities of associated gas found in the Entrada; it is also the seal to migrating hydrocarbons.” The low hydraulic conductivity of the Todilto Limestone creates hydraulic separation between the Entrada Sandstone and aquifers above the Entrada such as the Morrison Formation.

### **Lateral Extent of Target Aquifer and Overlying Confining Strata**

The lateral extent of the Jurassic-aged Entrada Sandstone, Todilto Limestone and the Morrison Formation as shown on Figure 1 indicate that the proposed well location is near the middle of the San Juan Basin. These three individual geologic units have been grouped together for mapping at the regional scale on Figure 1. The proposed well location has been included on Figure 2 to show its relationship to the elevation of the top of the Todilto Limestone. Per Ridgley and Hatch (2013), the thickness of the Todilto Limestone is approximately 140 feet, therefore the top of the Entrada Sandstone is 140 feet below the contours shown on Figure 2.

### **Separation from Surface Water**

The Central Bisti 161 WSW is approximately 85 miles west of the eastern edge of the outcrop of the Entrada Sandstone (Figure 1). The Entrada Sandstone subcrops in limited areas beneath the alluvium of the Rio Gallina near the town of Gallina and to the north.

This subcrop area is interpreted by WWE as disconnected from the Entrada Sandstone within the rest of the San Juan Basin due to the north-south trending Gallina Fault. Figure 4 shows two cross sections from the Geology of the French Mesa Quadrangle map (Crouse et al, 1992). Included on the cross sections are the location of the Rio Gallina relative to the outcrop of the Entrada Sandstone, labeled Je, on Figure 4. The Rio Gallina is not positioned on top of the Entrada in either cross section. In the northern portion of the French Mesa Quadrangle, the Gallina Fault splays to the west and, in both cross sections A-A' and B-B', the Entrada Sandstone is truncated by north-south trending faults before it outcrops at the rim of the San Juan Basin. The sub-surface truncation disrupts the hydrogeologic connection within the Entrada Sandstone between surface water at the outcrop and the center of the basin on the west side of the Gallina Fault where the proposed well is located.

### **Total Dissolved Solids**

The Entrada Sandstone is a known target of injection wells in the vicinity of the proposed well (Figure 5). In order for an injection well to be permitted with the New Mexico Oil Conservation Division,





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TDS measurements must exceed 10,000 mg/L for the formation being targeted for injection. As such, each approved injection well would have had to demonstrate that the TDS from the Entrada Sandstone is elevated above 10,000 mg/L. Enduring Resources referred to water quality from the Cherokee & Pittsburg Gallo Wash No. 2 (C&P Gallo 2) water well water analysis for their NOI submitted in May, 2018. This analysis indicated a TDS of 10,630 mg/L from the Entrada Sandstone at this location (Figure 5).

Additionally, water quality results from the Central Bisti 161 water well collected on January 3, 2019 indicate that the measured TDS was 8,690 mg/L from the Entrada Sandstone (Appendix A). While this TDS value is not above the 10,000 mg/L threshold for a disposal well, it does exceed the 1,000 mg/L minimum threshold to meet the criteria of 72-12-25 NMSA. Given the existing water quality results from the Central Bisti 161 WSW and the proximity to other disposal wells with high TDS results, it is expected that groundwater with TDS exceeding 1,000 mg/L will be produced from the Entrada Sandstone by the proposed well.

Sincerely,  
WRIGHT WATER ENGINEERS, INC.

By   
Peter Foster, P.E.  
Vice President and Project Manager

By   
Trevor Downing, P.G.  
Geologist

2020 MAR 19 PM 2:53

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**Attachments:**

Table 1 – Proposed Well Details  
Figure 1 – Proposed Well and San Juan Basin Geology  
Figure 2 – San Juan Basin Depth Contours  
Figure 3 – San Juan Basin Cross Section  
Figure 4 – Cross Sections from Geology of French Mesa Quadrangle  
Figure 5 – Proposed Well and Nearby Injection Wells

**Appendices:**

Appendix A – Central Bisti 161 Water Quality Report  
Appendix B – Central Bisti 161 Well Bore Diagram

Ningning Li  
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**References:**

Kernodle, 1996, USGS 95-4188 Report  
Ridgley and Hatch, 2013, Digital Data Series 69-F  
Crouse et al, Geology of French Mesa Quadrangle, 1992  
Enduring NOI, May 2018

PA191-014 DJR Energy\000\Notice of Intent\Central Bisti 161 WSW\Attachment A\Attachment A - DJR NOI for Bisti 161 WSW text.docx

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AZTEC, NEW MEXICO

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13:53:53

## TABLES

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**Table 1**  
**Proposed Water Supply Well Location**  
**DJR Energy - Central Bisti 161 NOI**

POD No.	Well Name	PLSS Location	Latitude	Longitude	Depth to top of Entrada (feet)	Depth to bottom of Entrada (feet)	Total Well Depth (feet)
1	Central Bisti 161 WSW	NE/4, Sec 16, T25N, R12W	36.4055089	108.1156464	6,781	6,940	7,112

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P:\161-014 DJR Energy\000\Engineering\NOI Well Table1  
Table 1 - Proposed Bisti Well Location.xlsx

Wright Water Engineers, Inc.  
2/25/2020

Des by: TMD  
Ckd by: PRF

File Number: SJ-4387  
(For OSE Use Only)

**NEW MEXICO OFFICE OF THE STATE ENGINEER**

**NOTICE OF INTENTION TO DRILL WELLS OR RECOMPLETE EXISTING WELLS  
TO APPROPRIATE NONPOTABLE GROUNDWATER FROM AN AQUIFER  
THE TOP OF WHICH IS AT A DEPTH OF 2500 FEET OR MORE  
PURSUANT TO NMSA 1978 §§ 72-12-26 and 27**

2020 MAR 19 PM 2:52

STATE ENGINEER OFFICE  
AZTEC, NEW MEXICO

**1. FILER OF NOTICE (required):**

Name: DJR Nominee Corporation Phone: 303-407-7390  
Contact: Ningning Li  
Address: 1700 Lincoln St. Ste 2800  
Denver, CO 80203

Party on whose behalf the notice is being filed; required if different from filer (required):

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_

**2. SOURCE OF WATER (required):**

Deep Nonpotable Underground Water Basin: San Juan Basin  
Target Aquifer(s): Entrada Sandstone  
Estimated depth to top of aquifer (feet) 6781  
Estimated total dissolved solids content (parts per million): >5,000

Please provide as "Attachment A" a description of the target aquifer and overlying confining strata, geologic cross sections of the target aquifer and overlying confining strata, and a map showing the lateral extent and depth of the target aquifer and overlying confining strata. Also include any other studies that form the basis for the contention that the target aquifer meets the criteria of 72-12-25 NMSA, addressing total dissolved solids content of the target aquifer groundwater, and hydraulic separation of target aquifer from shallower aquifer systems and surface water.

"Attachment A" is required for this form to be complete and the NOI accepted for filing by the state engineer.

**3. OWNER OF LAND ON WHICH WELL IS TO BE LOCATED (required):**

Name: BLM Phone: 505-564-7600

If not the same as the filer or appropriator, the access agreement(s) granting the filer and/or the appropriator the right of entry and permission to construct the well(s) for which this Notice of Intention (NOI) is being filed must be submitted as "Attachment(s) B" to this form for this form to be complete and the NOI accepted for filing by the state engineer.

**4. LOCATION OF WELL (A, B, or C required, D and E required if known):**

A. X = \_\_\_\_\_ feet, Y = SEE TABLE 1 feet, N.M. Coordinate System  
Zone in the \_\_\_\_\_ Grant.  
U.S.G.S. Quad Map \_\_\_\_\_

B. Latitude: \_\_\_\_\_ d \_\_\_\_\_ m \_\_\_\_\_ s Longitude: \_\_\_\_\_ d \_\_\_\_\_ m \_\_\_\_\_ s

C. East \_\_\_\_\_ (m), North \_\_\_\_\_ (m), UTM Zone 13, NAD \_\_\_\_\_ (27 or 83)

D. Tract No. \_\_\_\_\_, Map No. \_\_\_\_\_ of the \_\_\_\_\_ Hydrographic Survey

E. Lot No. \_\_\_\_\_, Block No. \_\_\_\_\_ of Unit/Tract \_\_\_\_\_ of the  
\_\_\_\_\_ Subdivision recorded in \_\_\_\_\_ County.

File Number: SJ-4387

Trn Number: \_\_\_\_\_

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**5. COMMON DESCRIPTION FOR LOCATION OF WELL (required):**

The proposed well(s) for which this NOI is filed is to be located in the county of San Juan.

Description by common landmarks:

Approximately 23 miles Northwest from the town of Nageezi, NM

**6. WELL INFORMATION (required):** Please see Table 1 and Figure 1 for map of locations

Proposed depth of well 7112' ft; Outside diameter of casing 9 5/8" inches.

Name of well driller and NMOSE license number N/A Well is already drilled as a SWD, proposal is to convert

Proposed production interval from \_\_\_\_\_ ft bgs to \_\_\_\_\_ ft bgs.

An artesian well plan of operations for well construction must be submitted for approval as "Attachment C" to this form for this form to be complete and the NOI accepted for filing by the state engineer.

**7. QUANTITY (required):**

Proposed pumping rate: 280 gallons per minute

Diversion amount: 450 acre-feet per annum

Consumptive use amount: 450 acre-feet per annum

**8. ESTIMATED DURATION OF THE PROPOSED DIVERSION (required):**

20 years based on estimated volume of 450 acre-feet.

**9. PURPOSE OF USE (required):**

Domestic: ☐ Livestock: ☐ Irrigation: ☐ Municipal: ☐ Commercial: ☐

Oil and gas exploration and production: ☒ Prospecting: ☐ Mining: ☐

Road construction: ☐ Agriculture: ☐ Generation of electricity: ☐

Industrial: ☒ Geothermal: ☐

Other (specify):

**10. PLACE OF USE (required):**

Within the land area with the following description:

### San Juan, Sandoval and Rio Arriba Counties

Subdivision	Section	Township	Range	Acres
SEE FIGURE 1				
			Total:	

**11. COMMON DESCRIPTION OF PLACE OF USE (required):**

County of: See Figure 1

Description by common landmarks: Within San Juan, Sandoval and Rio Arriba Counties

**12. OWNER OF LAND UPON WHICH WATER IS TO BE BENEFICIALLY USED (required):**

### BLM, Fee and Tribal Lands



13. **DATE (month and year) FOR PLACING WATER TO BENEFICIAL USE (required):**

September 2020

14. **ADDITIONAL INFORMATION:**

This Notice of Intent is to convert an existing water disposal well (Central Bisti WDW No. 161) API No. 30-045-316-6) to a deep water source well under NM Stat. 72-12-26. The well has been previously permitted as as WDW and was drilled and shown to produce water that meets the non-potability standard under statute (in excess of 1000 ppm tds). The applicant proposes to inject 40-60% of the water withdrawn back into the Entrada. The applicant will provide well logs and construction information on the well along with the filing.

15. **ADDITIONAL STATE ENGINEER REQUIREMENTS ON THE APPROPRIATION OF WATER FROM A WELL DRILLED UNDER THIS NOI:**

- a. Driller's well record must be filed with the state engineer no later than twenty (20) days after the completion of well drilling in accordance with 19.27.4 NMAC and § 72-13-5 NMSA.
- b. A representative sample of deep aquifer water collected in a manner acceptable to the state engineer shall be analyzed for total dissolved solids (TDS) in parts per million, including concentrations of common anions and cations that constitute common components of measured TDS. All analyses shall be performed by a certified laboratory. Analytical results including description of sampling protocol and sample chain of custody shall be submitted to the state engineer within 20 days of analysis. Specific analyses for radionuclides, arsenic, and other parameters of interest may be requested in anticipation of cooperative agency concerns regarding use and treatment of well water as well as disposition of waste streams. These additional analyses may also aid in establishing hydraulic separation of the aquifer. The state engineer may require additional information in order to validate the aquifer depth and water quality.
- c. Prior to pump testing or appropriating any water from the well drilled under this NOI, the filer shall submit to the state engineer copies of all required permits for discharge of water on the land surface or re-injection of the water or wastewater issued by the NM Environment Department or any other state or federal agency having jurisdiction over such disposal.
- d. Prior to any diversion of water from the well drilled under this NOI, the well shall be equipped with a functioning totalizing meter acceptable to the State Engineer, installed at the well head before the first supply line branch. The filer shall notify the Office of the State Engineer in writing of the make, model, serial number, the initial reading, and the date of installation of the totalizing meter.
- e. Records of the amount of water diverted from the well drilled under this NOI shall be submitted to the Office of the State Engineer on or before the 10th day of January, April, July, and October for the three preceding calendar months.
- f. Water shall be sampled and analyzed for total dissolved solids on a quarterly basis in a manner acceptable to the Office of the State Engineer. Results shall be submitted to the Office of the State Engineer within 20 days of analysis.
- g. Pursuant to § 72-8-1 NMSA, the state engineer and his representatives shall be allowed entry upon private property for the performance of their respective duties, including access to the well for meter reading, water level measurement, and water quality sampling.
- h. Pursuant to §§ 72-13-8 and 72-13-9 NMSA, water diverted shall be conserved and conducted in such a manner so as to prevent waste.

16. **ONLY THOSE APPROPRIATIONS FROM AQUIFERS DETERMINED BY THE STATE ENGINEER TO BE 2500 FEET IN DEPTH OR GREATER THAT CONTAIN NON-POTABLE WATER (1000 PPM OR GREATER DISSOLVED SOLIDS) NOT HYDROLOGICALLY CONNECTED TO ANY OTHER SOURCE OF WATER WILL BE RECOGNIZED AS VALID WATER RIGHTS.**STATE ENGINEER OFFICE  
AZTEC, NEW MEXICO

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Trn Number:

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## I. ACKNOWLEDGMENT

## ACKNOWLEDGMENT FOR CORPORATION

I, Jeremy L. Austin, affirm that the foregoing statements are true to the best of my knowledge and belief.

By: 

Signature of Officer

State of New Mexico )  
County of San Juan ) ss.

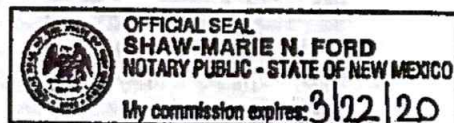
This instrument was acknowledged before me on 03/19/2020  
(date)

by Jeremy L. Austin as Vice President  
(Name of Officer) (Title of Officer)

of DJR Nominee Corp. a New Mexico corporation, on behalf of said corporation.  
(Name of Corporation Acknowledging) (State of Corporation)

My commission expires 03/22/2020

Shaw-Marie N. Ford  
Notary Public



## ACKNOWLEDGEMENT FOR INDIVIDUAL

(I, We) \_\_\_\_\_ affirm that the foregoing statements are true to the best of my knowledge and belief.

Applicant Signature \_\_\_\_\_

Applicant Signature \_\_\_\_\_

State of ( )

County of ( ) ss.

This instrument was acknowledged before me on \_\_\_\_\_  
(date)

by \_\_\_\_\_  
(Name of Applicant)

My commission expires \_\_\_\_\_

Notary Public \_\_\_\_\_

2020 MAR 19 PM 2:52

STATE ENGINEER OFFICE  
AZTEC, NEW MEXICOFile Number: SJ-4387

Trn Number: \_\_\_\_\_

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Version: Jan 12, 2010

**NEW MEXICO OFFICE OF THE STATE ENGINEER**  
**INSTRUCTIONS - NOTICE OF INTENTION TO DRILL WELLS OR RECOMPLETE EXISTING WELLS**  
**TO APPROPRIATE NONPOTABLE GROUNDWATER FROM AN AQUIFER THE TOP OF WHICH IS AT**  
**A DEPTH OF 2500 FEET OR MORE PURSUANT TO NMSA 1978 §§ 72-12-26 and 27:**

- a. This form should not be used for an appropriation from a nonpotable deep underground water basin declared by the state engineer unless it is for one of the following specific uses: oil and gas exploration and production, prospecting, mining, road construction, agriculture, generation of electricity, industrial, or geothermal.
- b. Completion of sections 1 through 13 of this Notice of Intention (NOI) form is required.
- c. An NOI is reviewed for completeness and compliance with §§ 72-12-26 and 27. If incomplete or noncompliant the NOI will not be accepted for filing and it will be returned with a statement of deficiencies.
- d. A completed and compliant NOI shall be filed in triplicate at the appropriate OSE District Office with a \$25 filing fee. A separate NOI must be submitted for each proposed well.
- e. Upon filing of an NOI with the state engineer, the filer shall cause the NOI to be published in the county in which the proposed well is to be located once a week for three consecutive weeks as required by § 72-12-26. The published notice shall also include: *Any person may bring an action in the district court of the county in which any such well is situated for damages or for injunctive relief with respect to any claimed impairment of existing water rights due to an appropriation of nonpotable water under 72-12-25 to 72-12-28 NMSA 1978. Applications to appropriate nonpotable water under § 72-12-28 are not subject to protest or hearing before the State Engineer.*
- f. Pursuant to § 72-12-26, drilling of a well may not commence prior to the tenth day after the last date the notice was published. Affidavit of publication shall be filed with the Office of the State Engineer within 10 days of publication.
- g. The well shall be drilled in accordance with 19.27.4 NMAC by a driller licensed in the State of New Mexico from surface through an appreciable portion of the first confining unit overlying the deep artesian aquifer.
- h. The well shall be set back a minimum of 50 feet from an existing well of other ownership unless a variance has been granted by the state engineer. The well shall be set back from potential sources of contamination in accordance with rules and regulations of the New Mexico Environment Department.
- i. The Office of the State Engineer requires that the well be drilled under a valid state engineer permit. An exploratory permit may be used for this purpose and will be issued by the state engineer for drilling a well only upon proof that the foregoing conditions have been satisfied.
- j. A state engineer approved artesian well plan of operations for well construction must be adhered to during drilling and shall specify construction of the interval from ground surface down through an appreciable portion of the first confining layer that is found below a depth of 2500 feet. This shall be a condition to the state engineer permit required to drill the well.

**LINE BY LINE INSTRUCTIONS**

1. Required; name, contact, phone, and address required for the person proposing to drill wells or recomplete existing wells to appropriate nonpotable deep water.
2. Required;
3. Required; access agreements are required for all public and private lands listed as the drill site not owned by the filer or appropriator and shall be submitted with the NOI and are required for the NOI to be complete and accepted for filing.
4. A, B, or C required specifying point location; and D and E are required if known.
5. Required; describe well location by county in which it is to be drilled and by commonly known landmarks.
6. Required; An artesian well plan of operations for well construction must be submitted for approval as "Attachment C" to this form for this form to be complete and the NOI accepted for filing by the state engineer. The proposed well shall be drilled by an NM OSE licensed well driller.
7. Required; state assumptions made regarding well pumping schedule.
8. Required; estimate the number of years that water will be diverted and placed to beneficial use; estimate the volume of groundwater that this is based upon.
9. Required; specify all proposed purpose(s) of use.
10. Required; attach additional pages if necessary.
11. Required; describe place of use by county and using commonly known landmarks.
12. Required; describe when the application of water to beneficial use will begin.
13. Use this space and attach additional pages for additional information related to the proposed appropriation.

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Assistance in preparing the notice for publication is available. This Notice of Intention form should be addressed to the **Office of the State Engineer** at the district office determined by the proposed well location:

District No. 1. 5550 San Antonio Dr. NE, Albuquerque, NM 87109; Phone # 505-383-4000

District No. 2. 1900 West Second St., Roswell, NM 88201; Phone # 575-622-6521

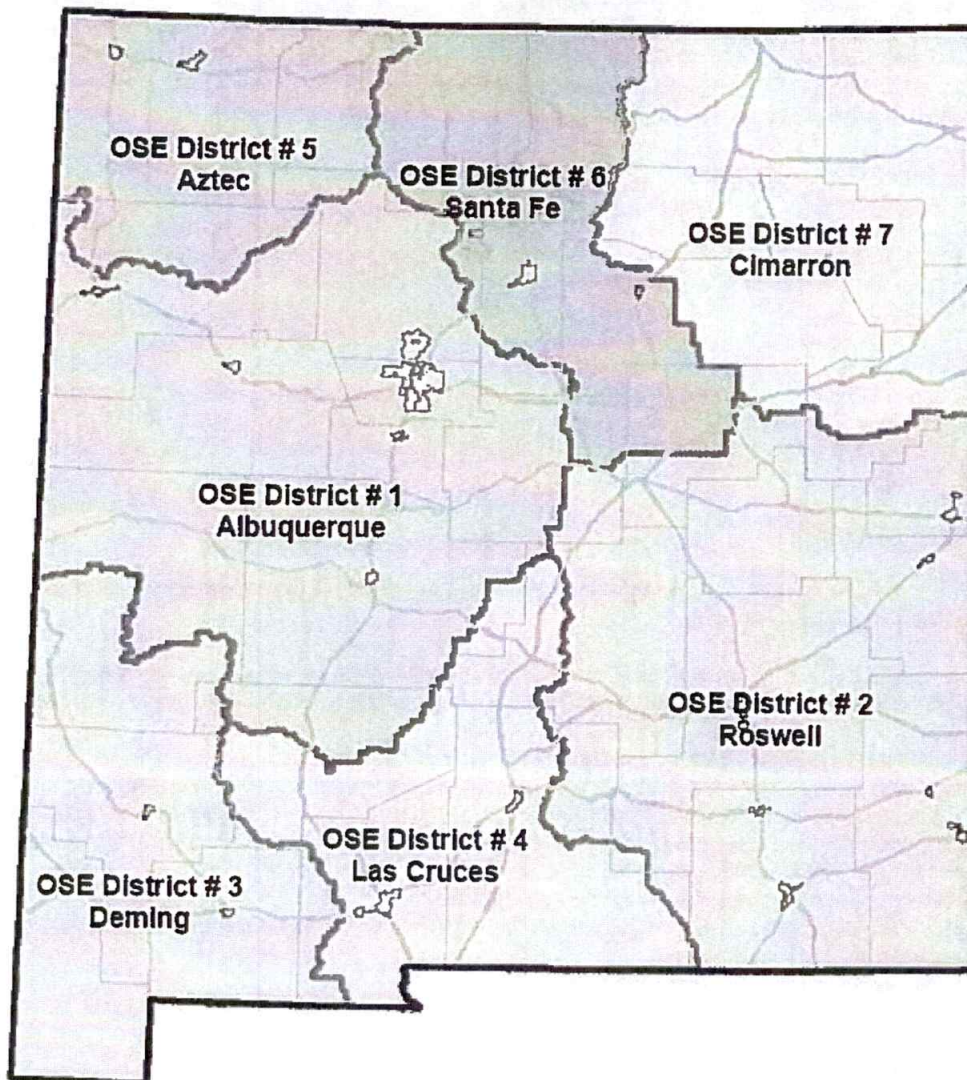
District No. 3. P.O. Box 844, Deming, NM 88031; Phone # 575-546-2851

District No. 4. 1680 Hickory Loop, Suite J, Las Cruces, NM 88005; Phone # 575-524-6161

District No. 5. 100 Gossett Drive, Suite A, Aztec, NM 87410; Phone # 505-334-4571

District No. 6. P.O. Box 25102, Santa Fe, NM 87504-5102; Phone # 505-827-6120

District No. 7. P.O. Box 481, Cimarron, NM 87714; Phone # 575-376-2918



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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 1901107

Date Reported:

CLIENT: DJR Operating

Client Sample ID: DJRSWD 161

Project: Central Bisti SWD 161

Collection Date: 1/3/2019 3:00:00 PM

Lab ID: 1901107-001

Matrix: AQUEOUS

Received Date: 1/4/2019 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>SM2340B: HARDNESS</b>							Analyst: bcv
Hardness (As CaCO <sub>3</sub> )	570	6.6		mg/L	1	1/7/2019 12:29:00 PM	R56818
<b>SPECIFIC GRAVITY</b>							Analyst: JRR
Specific Gravity	1.001	0			1	1/8/2019 10:12:00 AM	R56827
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: MRA
Chloride	640	100	*	mg/L	200	1/8/2019 8:25:59 PM	R56829
Sulfate	5100	100	*	mg/L	200	1/8/2019 8:25:59 PM	R56829
<b>SM2510B: SPECIFIC CONDUCTANCE</b>							Analyst: JRR
Conductivity	13000	25		µmhos/c	5	1/8/2019 4:32:08 PM	R56849
<b>SM2320B: ALKALINITY</b>							Analyst: JRR
Bicarbonate (As CaCO <sub>3</sub> )	110.4	20.00		mg/L Ca	1	1/8/2019 2:15:10 PM	R56849
Carbonate (As CaCO <sub>3</sub> )	ND	2.000		mg/L Ca	1	1/8/2019 2:15:10 PM	R56849
Total Alkalinity (as CaCO <sub>3</sub> )	110.4	20.00		mg/L Ca	1	1/8/2019 2:15:10 PM	R56849
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: KS
Total Dissolved Solids	8690	40.0	*D	mg/L	1	1/7/2019 2:27:00 PM	42462
<b>SM4500-H+B / 9040C: PH</b>							Analyst: JRR
pH	7.99		H	pH units	1	1/8/2019 2:15:10 PM	R56849
<b>EPA METHOD 200.7: DISSOLVED METALS</b>							Analyst: bcv
Calcium	220	5.0		mg/L	5	1/7/2019 3:34:39 PM	B56818
Iron	0.095	0.020		mg/L	1	1/7/2019 3:32:18 PM	B56818
Magnesium	5.6	1.0		mg/L	1	1/7/2019 3:32:18 PM	B56818
Potassium	24	1.0		mg/L	1	1/7/2019 3:32:18 PM	B56818
Sodium	2700	50		mg/L	50	1/7/2019 5:22:08 PM	B56818

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL	Practical Quantitative Limit	RL Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

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STATE ENGINEER OFFICE  
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**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
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  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 178507

CONDITIONS

Operator:  DJR OPERATING, LLC 1 Road 3263 Aztec, NM 87410	OGRID:  371838
	Action Number:  178507
	Action Type:  [C-103] Sub. General Sundry (C-103Z)

CONDITIONS

Created By	Condition	Condition Date
jagarcia	This well is approved for conversion to a water well and must solely be used as a water well.	1/24/2023
jagarcia	This well may never be converted back to a SWD or Injection well	1/24/2023