

Initial Application Part I

Received 11/5/20

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

IW1Y4-201105-C-1080

Revised March 23, 2017

RECEIVED: 11/5/20	REVIEWER:	TYPE: SWD	APP NO: pBL2031450338
-------------------	-----------	-----------	-----------------------

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505

**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: DJR Operating, LLC **OGRID Number:** 371838
Well Name: North Alamo Unit SWD #001 **API:** 30-045-38185
Pool: SWD; Entrada **Pool Code:** 96436

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

- 1) **TYPE OF APPLICATION:** Check those which apply for [A]
 A. Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

SWD-2402

- B. Check one only for [I] or [II]
 [I] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
 [II] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☒ IPI ☐ EOR ☐ PPR

- 2) **NOTIFICATION REQUIRED TO:** Check those which apply.

- A. ☒ Offset operators or lease holders
 B. ☐ Royalty, overriding royalty owners, revenue owners
 C. ☒ Application requires published notice
 D. ☒ Notification and/or concurrent approval by SLO
 E. ☐ Notification and/or concurrent approval by BLM
 F. ☒ Surface owner
 G. ☒ For all of the above, proof of notification or publication is attached, and/or,
 H. ☐ No notice required

FOR OCD ONLY

- ☐ Notice Complete
☐ Application Content Complete

- 3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Dave Brown

Print or Type Name

Signature

November 5, 2020

Date

303-887-3695

Phone Number

dbrown@djrlc.com

e-mail Address



August 15, 2019

Mr. Will Jones
New Mexico Oil Conservation Division – Engineering Bureau
1200 South St. Francis St.
Santa Fe, NM 87505

Re: Application for North Alamito WDW #1, San Juan Co., NM

Dear Mr. Jones:

Enclosed is DJR Operating, LLC's application for disposal of produced water in the North Alamito WDW #1. In fulfilling the requirements of the application, the following materials are provided herein.

1. Form C-108, Application for Authorization to Inject
2. Tabular and schematic data on proposed injection well
3. Two-mile radius map identifying all wells with a one-half mile radius drawn around the proposed injection well
4. Data sheet of all wells within 2-miles of proposed injection well, highlighting those wells inside one-half mile radius of the proposed injection well
5. Lease and surface owner maps identifying all lessees and surface owners within a two-mile radius with one-half mile radius drawn around the proposed injection well
6. Operations plan for proposed injection well
7. Water analysis of produced water to be disposed in injection well
8. Required geologic, stimulation, logging, test and fresh water data from nearby wells
9. Signed statement of geologic and engineering data
10. Proof of notice in the form of notification letters sent to offsetting operators and surface owners and a copy of the Affidavit of Publication of the notice as it appeared in the Farmington Daily Times.

If you have questions or require additional information, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ningning Li', with a stylized flourish at the end.

Ningning Li
Completions Manager


Attachments

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance ☒ Disposal Storage
Application qualifies for administrative approval? Yes No
- II. OPERATOR: DJR Operating, LLC
ADDRESS: 1 Road 3263, Aztec, NM 87410
CONTACT PARTY: Dave Brown PHONE: 303-887-3695
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☒ Yes No
If yes, give the Division order number authorizing the project: SWD-2255
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: Dave Brown TITLE: Manager, Regulatory & Government Affairs
SIGNATURE:  DATE: 11/04/2020
E-MAIL ADDRESS: dbrown@djrlc.com
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.
Please show the date and circumstances of the earlier submittal: August 23, 2019; Original Application

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

Side 2

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Amended Application for Authorization to Inject

DJR Operating, LLC

North Alamito Unit SWD #001

Administrative Order SWD-2255

General Information

DJR Operating, LLC has made an application for administrative approval to dispose of produced water by underground injection which was approved on April 9, 2020. The North Alamito Unit SWD #001 well is located 908' FNL & 1176' FEL in Section 1, Township 22 North, Range 8 West, San Juan County, New Mexico. Produced water will be injected into the Entrada Sandstone. The maximum injection pressure will be 1380 psi and the maximum injection rate will be 6000 barrels of water daily.

As of November 3, 2020, the well has been drilled to 7282' TVD and perforated from 6950' to 7110'. A permanent packer has been set at 6845'. A 72-hour flow rate pressure test is underway and then a Mechanical Integrity Test will be performed. The lab result of the Entrada Sandstone Formation water taken from the North Alamito Unit SWD #001 indicated a TDS of 13,200 mg/L.

Application for Authorization to Inject**DJR Operating, LLC****North Alamito WDW #1****Part III. Well Data****A. Tabular Information**

1. Name: North Alamito WDW #1

Location: 908' FNL & 1176' FEL
Sec. 1, T22N, R8W
San Juan County, NM

2. Surface Casing:

9-5/8 in, 36 lb, J-55 set at 500 ft, ST&C coupling, Cemented with 253 sx (352 cu ft). Circulate cement to surface, Hole size – 12-1/4 in.

Production Casing:

7 in, 26 lb, N-80 (7070 ft) set at 7070 ft., LT&C coupling, Cement in two stages with stage tool (DV) at 3795 ft using 739 cu ft (626 cu ft 1st stage and 113 cu ft in 1st tail) in first stage and 739 (626 2nd stage and 113 in 2nd tail) cubic ft in second stage. Hole size – 8-3/4 in.

Injection Tubing:

3-1/2 in J-55 EUE 9.3 lb/ft Internally Coated Tubing set at 6885 ft.

Packer:

7 in by 3 ½ in AS1-X packer 10K nickel coated, will be set in tension at 6825 ft or 50 ft above the upper most perforation.

B. Additional Information

1. Injection Interval: Entrada Sandstone
2. The injection interval (Entrada 6875' – 7070') will be perforated.
3. The well (North Alamito WDW #1) will be drilled for the purpose of injection into the Entrada Sandstone.
4. Only the injection interval is to be perforated.
5. Fruitland Coal / Pictured Cliffs Sandstone-Approx. 1025' – 1459', Gallup-Approx. 4515'-5624' and Dakota Sandstone-Approx. 5775'.

Injection Well Data Sheet
Operator: DJR Operating LLC
Well Name and Number: North Alamito WDW No. 1

	WELL NAME: North Alamito Unit WDW #1 API NO: TVD: 7050'		STATE: New Mexico COUNTY: San Juan		LOCATION: 908' FNL & 1176' FEL ULA Sec 1 T22N R8W TARGET FORMATION: Entrada		
	CASING DATA and OTHER TOOLS						
		OD	WT/LF	GRADE	THREAD	TOP	EOC
	Srf Csg	9.625"	36.00 lb/ft	J-55	STC	0'	500'
	Prod Liner	7.00"	26.00 lb/ft	L-80	LT&C	0'	7070'
DV Tool					3795'		
Packer	7" by 3 1/2" AS 1-X 10K Nickel coated						
CEMENT							
			SX	WT.			
Surface	Tail only		253	14.6 ppg	25% Excess over gauge		
Production	Lead		314	12.5 ppg	50% Excess over gauge		
1st Stage	Tail		82	14.6 ppg			
2nd Stage	Lead		373	12.5 ppg			
2nd Stage	Tail		82	14.6 ppg			
Total			851				
Geology							
Formation	Tops	Subsea	TVD	MD	O/G/W	Pressure	
Ojo Alamo	6110		725	725	W	normal	
Kirtland	6070		765	765	W	normal	
Fruitland	5810		1025	1025	G/W	sub-normal	
Pictured Cliffs	5555		1280	1280	G/W	sub-normal	
Lewis	5375		1460	1460	G/W	normal	
Chacra	4800		2035	2035	G/W	normal	
Cliff House	4105		2730	2730	G/W	sub-normal	
Menefee	4070		2765	2765	G/W	normal	
Point Lookout	3160		3675	3675	G/W	normal	
Mancos	2990		3845	3845	O/G	normal	
Gallup	2320		4515	4515	O/G	normal	
Greenhorn	1210		5625	5625	O/G/W	normal	
Dakota	1060		5775	5775	O/G/W	normal	
Todilto	20		6815	6815	G/W	normal	
Entrada	-40		6875	6875	W	normal	
Total Depth	-235		7070	7070			
Tubing and Packer							
Size	Tubing Depth		Packer Depth				
3.500"	6855'		6825'				

INJECTION WELL DATA SHEET**Tubing Size:****Surface Casing:**

9-5/8 in, 36 lb, J-55 set at 500 ft, ST&C coupling, Cemented with 253 sx (352 cu ft). Circulate cement to surface, Hole size – 12-1/4 in.

Production Casing:

7 in, 26 lb, N-80 (7070 ft) set at 7070 ft., LT&C coupling, Cement in two stages with stage tool (DV) at 3795 ft using 739 cu ft (626 cu ft 1st stage and 113 cu ft in 1st tail) in first stage and 739 (626 2nd stage and 113 in 2nd tail) cubic ft in second stage. Hole size – 8-3/4 in.

Injection Tubing:

3-1/2 in J-55 EUE 9.3 lb/ft Internally Coated Tubing

Type of Packer:

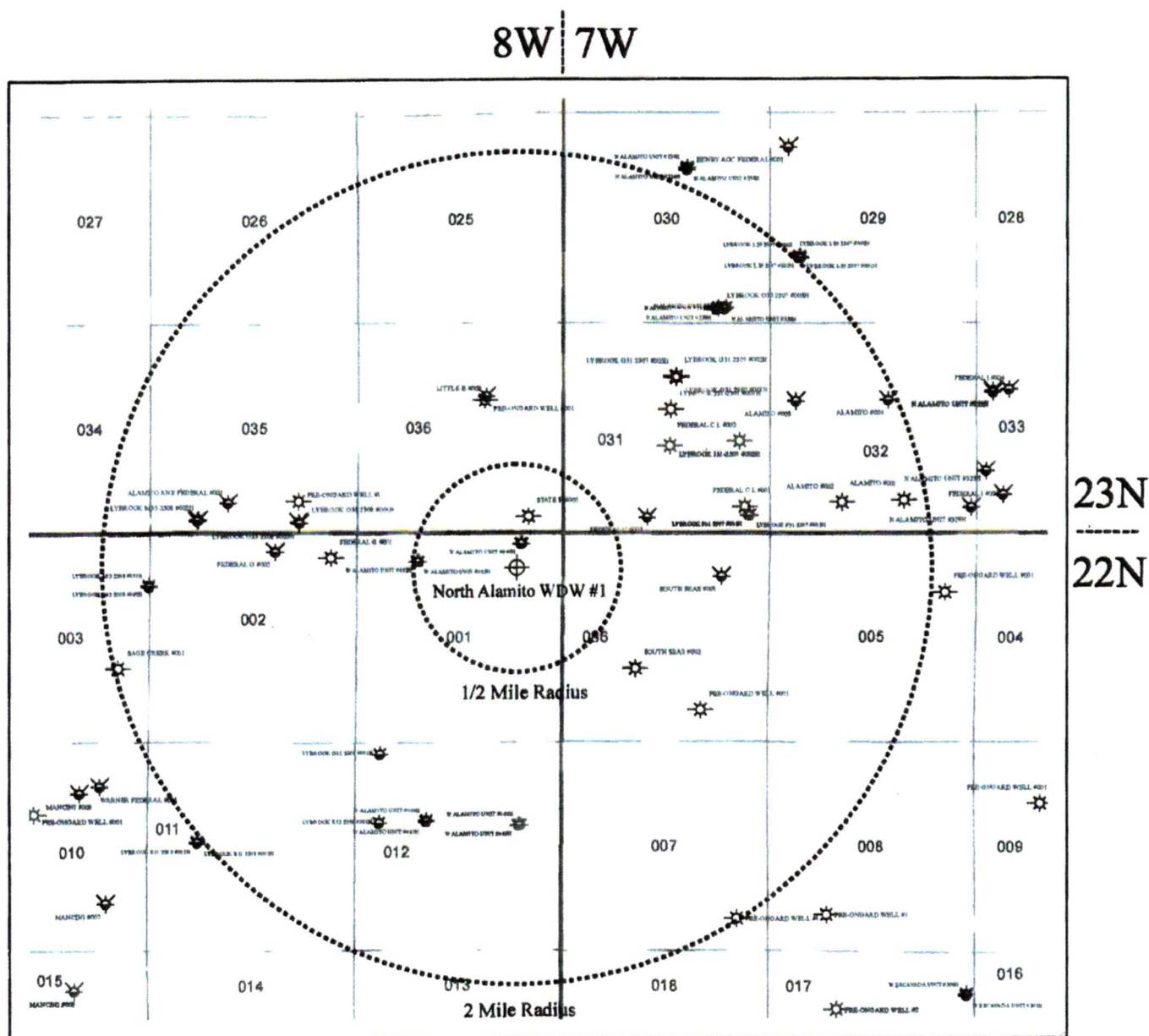
7 in by 3 1/2 in AS1-X packer 10K nickel coated,

Packer Setting Depth:

Set in tension at 6825 ft or 50 ft above the upper most perforation.

Other Type of Tubing/Casing Seal (If applicable): -NA-Additional Data

1. Is this a new well drilled for injection: X Yes No
If no, for what purpose was the well originally drilled?
2. Name of Injection Formation: Entrada Sandstone
3. Name of Field or Pool (If applicable): NA
4. Has the well ever been perforated in other zone(s) No
List all such Perforated intervals and give plugging detail, i.e. Sacks of cement or plug(s) used:
NA
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Fruitland Formation-1025', Picture Cliffs-1280', Mancos Shale-3845', Gallup Sandstone-4515', Dakota Sandstone-5775'



2 Mile Radius Map - Legend



1/2 Mile Radius

2 Mile Radius



Suspended, Cancelled, Plugged



New, Active



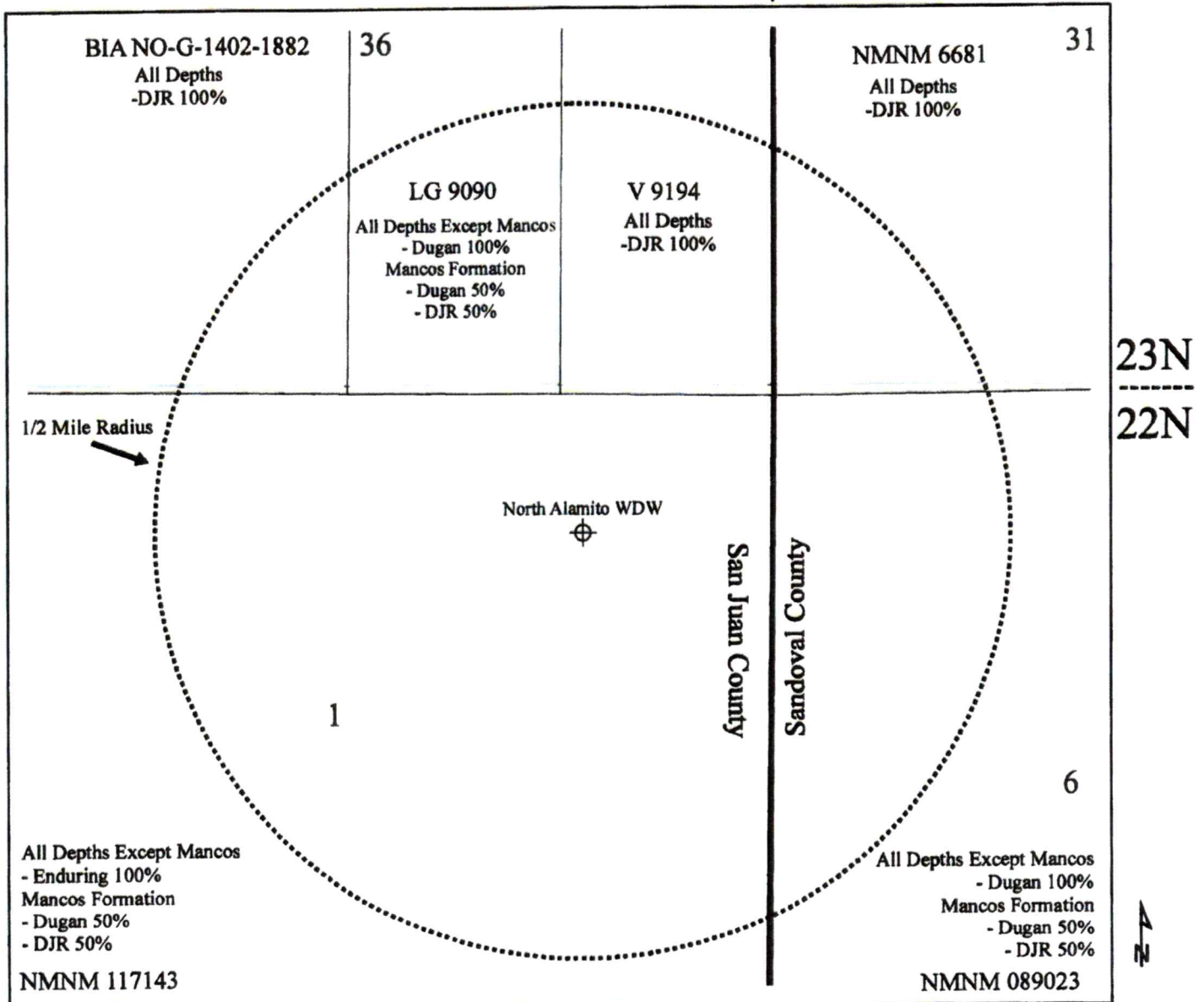
North Alamito Unit WDW

 DJR Operating, LLC

M-1

Township 22 North, Range 7 West
 Township 23 North, Range 7 West
 Sandoval County, NM
 Township 22 North, Range 8 West
 Township 23 North, Range 8 West
 San Juan County, NM

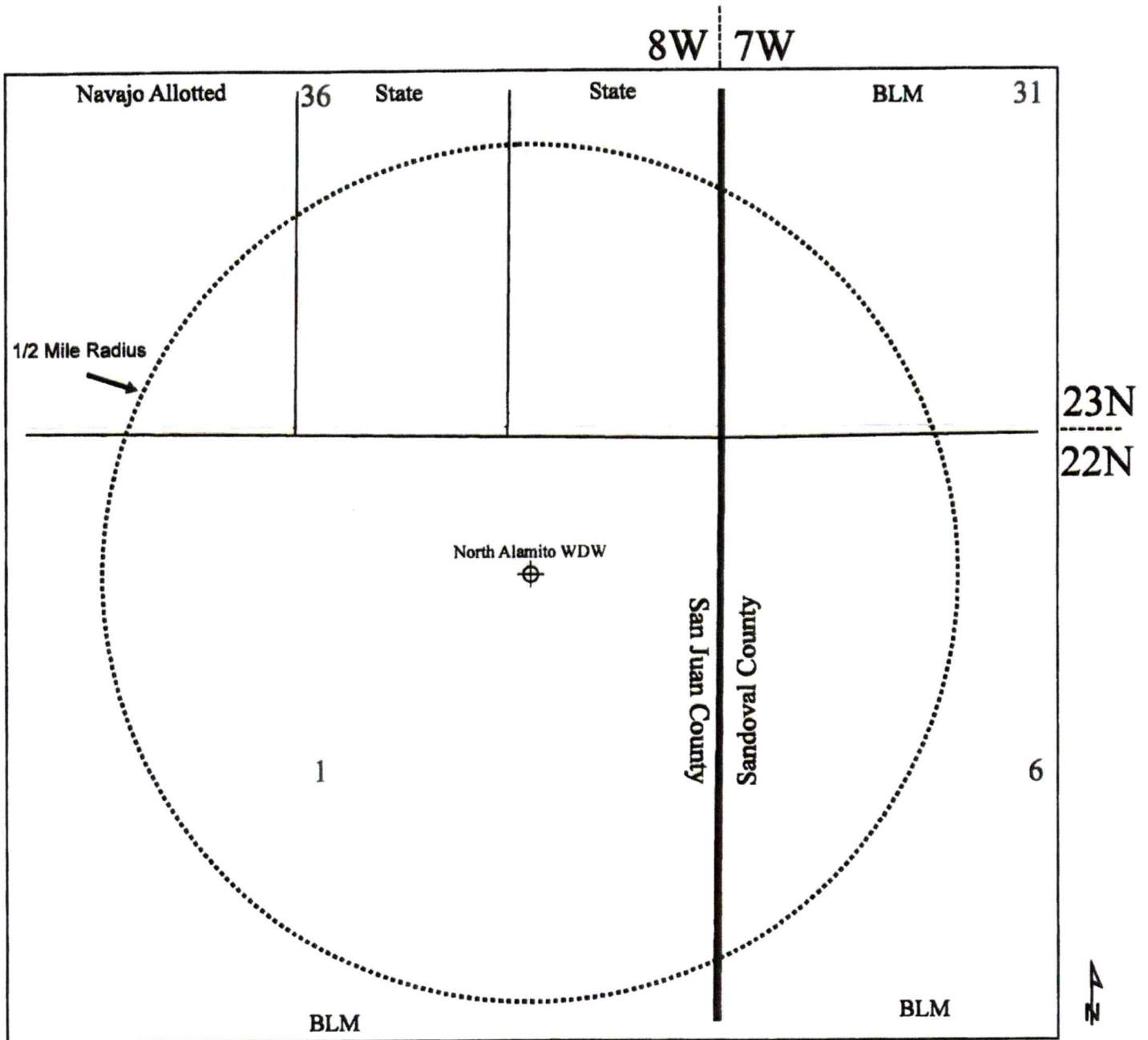
8W | 7W



 **DJR Operating, LLC**

C-108 Application to Inject
 North Alamito Unit WDW #1
 Part V. b.
 Lease Ownership Map

Township 22 North, Range 7 West
Township 23 North, Range 7 West
Sandoval County, NM
Township 22 North, Range 8 West
Township 23 North, Range 8 West
San Juan County, NM



C-108 Application to Inject
North Alamito Unit WDW #1
Part V. c.
Surface Ownership Map

 DJR Operating, LLC

Application for Authorization to Inject

DJR Operating, LLC

North Alamito WDW #1

Part VI. Data on Offset Wells

There are no wells within the ½ mile area of review which penetrate the proposed injection zone. There are also no plugged wells in the ½ mile radius of the proposed injection well.

North Alamito WDW #1 - Data Sheet of All Wells Within 2 miles

API	Well Name	Well Number	Type	Mineral Owner	Surface Owner	Status	Sec	Township	Range	OCD Unit Letter	Last Production	Spud Date	Plugged On	Current Operator
30-043-21229	LYBROOK P31 2307	#001H	Gas	Federal		New	31	23N	07W	P	1/1800			[371838] DIR OPERATING, LLC
30-043-21228	LYBROOK P31 2307	#003H	Gas	Federal		New	31	23N	07W	P	1/1800			[371838] DIR OPERATING, LLC
30-043-21217	LYBROOK G31 2307	#001H	Gas	Federal	Navejo	Plugged, Site Released	31	23N	07W	G	1/1800		12/9/2015	[282327] ENCANA OIL & GAS (USA) INC.
30-043-21216	LYBROOK G31 2307	#002H	Gas	Federal		Plugged, Site Released	31	23N	07W	G	1/1800		12/9/2015	[282327] ENCANA OIL & GAS (USA) INC.
30-043-21215	LYBROOK G31 2307	#003H	Gas	Federal		Plugged, Site Released	31	23N	07W	G	1/1800		12/9/2015	[282327] ENCANA OIL & GAS (USA) INC.
30-043-21214	LYBROOK J31 2307	#001H	Gas	Federal	Navejo	Plugged, Site Released	31	23N	07W	J	1/1800		12/9/2015	[282327] ENCANA OIL & GAS (USA) INC.
30-043-21213	LYBROOK J31 2307	#002H	Gas	Federal	Navejo	Plugged, Site Released	31	23N	07W	J	1/1800		12/9/2015	[282327] ENCANA OIL & GAS (USA) INC.
30-043-20826	FEDERAL C	#003	Oil	Federal		Active	31	23N	07W	N		May-19	7/12/1988	[372834] EPIC ENERGY, L.L.C.
30-043-05164	FEDERAL C L	#001	Oil	Federal		Plugged, Site Released	31	23N	07W	P		Apr-04	7/26/1978	[23846] QEP ENERGY COMPANY
30-043-20081	FEDERAL C L	#002	Oil	Federal		Plugged, Site Released	31	23N	07W	I		Feb-95	7/26/1978	[23846] QEP ENERGY COMPANY
30-043-21295	N ALAMITO UNIT	#234H	Oil	Federal	Indian	New	30	23N	07W	G	1/1800			[371838] DIR OPERATING, LLC
30-043-21236	N ALAMITO UNIT	#235H	Oil	Federal	Indian	New	30	23N	07W	G	1/1800			[371838] DIR OPERATING, LLC
30-043-21237	N ALAMITO UNIT	#236H	Oil	Federal	Indian	New	30	23N	07W	G	1/1800			[371838] DIR OPERATING, LLC
30-043-21211	N ALAMITO UNIT	#238H	Oil	Federal	Indian	New	30	23N	07W	O	1/1800			[371838] DIR OPERATING, LLC
30-043-21210	N ALAMITO UNIT	#239H	Oil	Federal	Indian	New	30	23N	07W	O	1/1800			[371838] DIR OPERATING, LLC
30-043-21267	N ALAMITO UNIT	#240H	Oil	Federal	Indian	New	30	23N	07W	P	1/1800			[371838] DIR OPERATING, LLC
30-043-21268	N ALAMITO UNIT	#241H	Oil	Federal	Indian	New	30	23N	07W	O	1/1800			[371838] DIR OPERATING, LLC
30-043-21198	N ALAMITO UNIT	#328H	Oil	State		Active	32	23N	07W	P		Jun-19	9/3/2014	[371838] DIR OPERATING, LLC
30-043-20814	ALAMITO	#003	Oil	State		Active	32	23N	07W	E		May-19	8/21/1987	[372834] EPIC ENERGY, L.L.C.
30-043-20815	ALAMITO	#004	Oil	State		Active	32	23N	07W	G		May-19	8/28/1987	[372834] EPIC ENERGY, L.L.C.
30-043-20807	ALAMITO	#001	Gas	State		Plugged, Site Released	32	23N	07W	O		Aug-89	8/16/1986	[23846] QEP ENERGY COMPANY
30-043-20816	ALAMITO	#002	Oil	State		Plugged, Site Released	32	23N	07W	N		Feb-05	5/12/2011	[23846] QEP ENERGY COMPANY
30-045-35713	W ALAMITO UNIT	#460H	Oil	Federal	Indian	New	1	22N	08W	A	1/1800			[372286] ENDURING RESOURCES, LLC
30-045-35714	W ALAMITO UNIT	#461H	Oil	Federal	Indian	New	1	22N	08W	A	1/1800			[372286] ENDURING RESOURCES, LLC
30-045-35715	W ALAMITO UNIT	#462H	Oil	Federal	Indian	New	1	22N	08W	C	1/1800			[372286] ENDURING RESOURCES, LLC
30-045-35716	W ALAMITO UNIT	#463H	Oil	Federal	Indian	New	1	22N	08W	C	1/1800			[372286] ENDURING RESOURCES, LLC
30-045-26912	FEDERAL G	#002	Oil	Federal		Active	2	22N	08W	B		May-19	7/5/1988	[372834] EPIC ENERGY, L.L.C.
30-045-05067	FEDERAL G	#001	Oil	Federal		Plugged, Site Released	2	22N	08W	A		Jun-09	7/24/1978	[23846] QEP ENERGY COMPANY
30-045-35669	LYBROOK A03 2208	#001H	Gas	Federal	Indian	New	3	22N	08W	A	1/1800			[371838] DIR OPERATING, LLC
30-045-35668	LYBROOK A03 2208	#002H	Gas	Federal	Indian	New	3	22N	08W	A	1/1800			[371838] DIR OPERATING, LLC
30-045-26757	SAGE CREEK	#001	Oil	Federal		Plugged, Site Released	3	22N	08W	I		Feb-03	10/8/1986	[6515] DUGAN PRODUCTION CORP
30-045-34429	SATCHMO COM	#001	Gas	Federal		Active	3	22N	08W	N		May-19	12/12/2007	[6515] DUGAN PRODUCTION CORP
30-045-35670	LYBROOK D12 2208	#001H	Gas	Federal	Indian	New	12	22N	08W	D	1/1800			[371838] DIR OPERATING, LLC
30-045-35664	LYBROOK E12 2208	#001H	Gas	Federal		New	12	22N	08W	E	1/1800			[371838] DIR OPERATING, LLC
30-045-35717	W ALAMITO UNIT	#464H	Oil	Federal	Indian	New	12	22N	08W	H	1/1800			[372286] ENDURING RESOURCES, LLC
30-045-35718	W ALAMITO UNIT	#465H	Oil	Federal	Indian	New	12	22N	08W	H	1/1800			[372286] ENDURING RESOURCES, LLC
30-045-35719	W ALAMITO UNIT	#466H	Oil	Federal	Indian	New	12	22N	08W	F	1/1800			[372286] ENDURING RESOURCES, LLC
30-045-35720	W ALAMITO UNIT	#467H	Oil	Federal	Indian	New	12	22N	08W	F	1/1800			[372286] ENDURING RESOURCES, LLC
30-045-35526	LYBROOK M35 2308	#001H	Oil	Federal		Active	35	23N	08W	M		19-Jun	9/25/2014	[371838] DIR OPERATING, LLC
30-045-35527	LYBROOK M35 2308	#002H	Oil	Federal		Active	35	23N	08W	N		19-Jun	10/6/2014	[371838] DIR OPERATING, LLC
30-045-35528	LYBROOK O35 2308	#001H	Oil	Federal	Indian	Active	35	23N	08W	O		19-Jun	10/27/2014	[371838] DIR OPERATING, LLC
30-045-35525	LYBROOK O35 2308	#001H	Oil	Federal		Active	35	23N	08W	O		19-Jun	10/15/2014	[371838] DIR OPERATING, LLC
30-045-35524	LYBROOK O35 2308	#002H	Oil	Federal		Active	35	23N	08W	O		19-May	10/2/1993	[6515] DUGAN PRODUCTION CORP
30-045-28989	ALAMITO ANR FEDER	#001	Oil	Federal		Active	36	23N	08W	G		19-May	11/23/1990	[6515] DUGAN PRODUCTION CORP
30-045-28333	LITTLE B	#002	Gas	State		Active	36	23N	08W	P		9-May	5/23/1992	[282327] ENCANA OIL & GAS (USA) INC.
30-045-28665	STATE K	#001	Oil	State		Plugged, Site Released	36	23N	08W	P	1/1800		6/29/2009	[282327] ENCANA OIL & GAS (USA) INC.
30-045-27855	PRE-ONGARD WELL	#001	Gas	State		Active	36	23N	08W	G		12/31/1901	[214263] PRE-ONGARD WELL OPERATOR	
30-045-20897	SOUTH SEAS	#001	Gas	Federal		Active	6	22N	07W	A		19-May	7/30/1993	[6515] DUGAN PRODUCTION CORP
30-045-20914	SOUTH SEAS	#002	Gas	Federal		Plugged, Site Released	6	22N	07W	K		3/6/2012	[6515] DUGAN PRODUCTION CORP	
30-043-20361	PRE-ONGARD WELL	#001	Oil	Federal		Plugged, Site Released	6	22N	07W	Q	1/1800		8/25/1979	[214263] PRE-ONGARD WELL OPERATOR

* Wells in bold type are located within the 1/2 Mile Area of Review

Application for Authorization to Inject

DJR Operating, LLC

North Alamito Unit WDW #1

Well Details located within the ½ mile Area of Review. Based on information gathered from NMOCD records.

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration**OCD Permitting**

Home Wells Well Details

30-045-35717 W ALAMITO UNIT #464H [321257]**General Well Information**

Operator:	[372286] ENDURING RESOURCES, LLC		
Status:	New	Direction:	Horizontal
Well Type:	Oil	Multi-Lateral:	No
Work Type:	New	Mineral Owner:	Federal
		Surface Owner:	Indian
Surface Location:	H-12-22N-08W 2091 FNL 1046 FEL		
Lat/Long:	36.155705,-107.628169 NAD83		
GL Elevation:	6803		
KB Elevation:		Sing/Mult Compl:	Single
DF Elevation:		Potash Waiver:	False

Proposed Formation and/or Notes

AMW HS/104 DS/PLAT/NSL

Depths

Proposed:	13017	True Vertical Depth:	0
Measured Vertical Depth:	0	Plugback Measured:	0

Formation Tops

Formation	Top	Producing	Method Obtained
-----------	-----	-----------	-----------------

Event Dates

Initial APD Approval:	02/12/2016		
Most Recent APD Approval:	04/19/2018	Current APD Expiration:	01/29/2020
APD Cancellation:			
APD Extension Approval:	12/13/2017		
Spud:		Gas Capture Plan Received:	
Approved Temporary		TA Expiration:	
Abandonment:			
Shut In:			
Plug and Abandoned Intent		PNR Expiration:	
Received:		Last MIT/BHT:	
Well Plugged:			
Site Release:			
Last Inspection:			

History

Effective Date	Property	Well Number	Operator	C-101 Work Type	Well Type	Well Status	Apd Cancelled	Plug Date
----------------	----------	-------------	----------	-----------------	-----------	-------------	---------------	-----------

Quick Links

- [General Well Information](#)
- [History](#)
- [Comments](#)
- [Operator](#)
- [Pits](#)
- [Casing](#)
- [Well Completions](#)
- [Financial Assurance](#)
- [Compliance](#)
- [Complaints, Incidents and Spills](#)
- [Orders](#)
- [Production](#)
- [Transporters](#)
- [Points of Disposition](#)

Associated Images

- [Well Files](#)
- [Well Logs](#)
- [Administrative Orders](#)

New Searches

- [New Well Search](#)

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

02/12/2016	[315082] W ALAMITO UNIT	#464H	[120782] WPX ENERGY PRODUCTION, LLC	New	Oil	New		
------------	-------------------------------	-------	--	-----	-----	-----	--	--

Comments

Operator

General Contact Information

Company: [372286] ENDURING RESOURCES, LLC Main Phone: 303-350-5716
Address: 1050 17TH STREET, SUITE 2500 Main Fax: 303-573-0461
DENVER, CO 80265
Country: U.S.A.

Central Contact

Name: Travis Whitham Phone Number: 303-350-5716
Title: Landman Cell Number: 719-686-5521
E-Mail Address: twitham@enduringresources.com Fax Number: 303-573-0461

Aztec Contact

Name: Andrea Felix Phone Number: 505-636-9741
Title: Regulatory Manager Cell Number: 505-386-8205
E-Mail Address: afelix@enduringresources.com Fax Number:

Pits

No Pits Found

Casing

No Casing Found

Well Completions

[98163] ALAMITO MANCOS W

Status: New, Not Drilled Last Produced:
Bottomhole Location: P-13-22N-08W 330 FSL 550 FEL
Lat/Long:
Acreage: 240 13-22N-08W Units: A H I P
12-22N-08W Units: I P
DHC: Consolidation Code:
Production Method:

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

Gas-Oil Ratio: 0 Kcf / bbl Oil Gravity: 0.0 Corr. API
 Disposition of Gas: Water Volume: 0.0 bbls

Perforations

Date	Top Measured Depth (Where Completion Enters Formation)	Bottom Measured Depth (End of Lateral)	Top Vertical Depth	Bottom Vertical Depth
------	--	--	--------------------	--------------------------

Notes

Event Dates

Initial Effective/Approval:	02/12/2016	TA Expiration:	
Most Recent Approval:	04/19/2018	Confidential Until:	
Confidential Requested On:		Test Allowable End:	
Test Allowable Approval:		DHC:	
TD Reached:		Rig Released:	
Deviation Report Received:	No	Logs Received:	No
Directional Survey Run:	No	Closure Pit Plat Received:	
Directional Survey Received:	No	First Gas Production:	
First Oil Production:		Completion Report Received:	
First Injection:		New Well C-104 Approval:	
Ready to Produce:		Revoked Until:	
C-104 Approval:			
Plug Back:			
Authorization Revoked Start:			

Well Completion History

Effective Date	Property	Well Number	Operator	Completion Status	TA Expiration Date
04/19/2018	[321257] W ALAMITO UNIT	#464H	[372286] ENDURING RESOURCES, LLC	New, Not Drilled	
02/12/2016	[315082] W ALAMITO UNIT	#464H	[120782] WPX ENERGY PRODUCTION, LLC	New, Not Drilled	

Financial Assurance

Effective	Bond Type	Base	Balance	Issuer	Cash/Surety	Cancellation Date
06/30/2017	Blanket	250000	250000	RLI INSURANCE COMPANY	Surety	

Requests to release bonds must be submitted in writing. You may send an e-mail to Denise.Gallegos@state.nm.us or fax a letter to (505) 476-3453.

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports ([Inactive Well Report](#), [Financial Assurance Report](#)).

Also note that some compliance issues are addressed at the operator level so not listed under each well.

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

[Wells](#) [Operator Data](#) [Submit Form](#) [Fee Application](#) [Administration](#)

report may be recorded here as a split, information related to the abatement plans, remediation plans and ground water impact information are not yet part of this application.

Orders

No Orders Found

Production / Injection

Earliest Production in OCD Records:

Last

[Show All Production](#)[Export to Excel](#)

Time Frame	Production				Injection				
	Oil(BBLS)	Gas(MCF)	Water(BBLS)	Days	Water(BBLS)	Co2(MCF)	Gas(MCF)	Other	Pressure
				P/I					
Grand Total:	0	0	0	0	0	0	0	0	N/A

Transporters

Transporter	Product	Most Recent for Property
-------------	---------	--------------------------

Points of Disposition

ID	Type	Description	Pool(s)
----	------	-------------	---------

New Mexico Energy, Minerals and Natural Resources Department | Copyright 2012
1220 South St. Francis Drive | Santa Fe, NM 87505 | P: (505) 476-3200 | F: (505) 476-3220

[EMNRD Home](#) [OCD Main Page](#) [OCD Rules](#) [Help](#)

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration**OCD Permitting**

Home Wells Well Details

30-045-35718 W ALAMITO UNIT #465H [321257]**General Well Information**

Operator: [372286] ENDURING RESOURCES, LLC
 Status: New Direction: Horizontal
 Well Type: Oil Multi-Lateral: No
 Work Type: New Mineral Owner: Federal
 Surface Owner: Indian
 Surface Location: H-12-22N-08W 2089 FNL 1086 FEL
 Lat/Long: 36.155708,-107.628305 NAD83
 GL Elevation: 6803
 KB Elevation: Sing/Mult Compl: Single
 DF Elevation: Potash Waiver: False

Proposed Formation and/or Notes

AMW HD/104 DS/PLAT/NSL

Depths

Proposed: 13015 True Vertical Depth: 0
 Measured Vertical Depth: 0 Plugback Measured: 0

Formation Tops

Formation	Top	Producing	Method Obtained
-----------	-----	-----------	-----------------

Event Dates

Initial APD Approval: 02/12/2016
 Most Recent APD Approval: 04/19/2018 Current APD Expiration: 01/29/2020
 APD Cancellation:
 APD Extension Approval: 12/13/2017
 Spud: Gas Capture Plan Received:
 Approved Temporary TA Expiration:
 Abandonment:
 Shut In: PNR Expiration:
 Plug and Abandoned Intent Last MIT/BHT:
 Received:
 Well Plugged:
 Site Release:
 Last Inspection:

History

Effective Date	Property	Well Number	Operator	C-101 Work Type	Well Type	Well Status	Apd Cancelled	Plug Date
----------------	----------	-------------	----------	-----------------	-----------	-------------	---------------	-----------

Quick Links

- [General Well Information](#)
- [History](#)
- [Comments](#)
- [Operator](#)
- [Pits](#)
- [Casing](#)
- [Well Completions](#)
- [Financial Assurance](#)
- [Compliance](#)
- [Complaints, Incidents and Spills](#)
- [Orders](#)
- [Production](#)
- [Transporters](#)
- [Points of Disposition](#)

Associated Images

- [Well Files](#)
- [Well Logs](#)
- [Administrative Orders](#)

New Searches

- [New Well Search](#)

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

02/12/2016	[315082] W ALAMITO UNIT	#465H	[120782] WPX ENERGY PRODUCTION, LLC	New	Oil	New		
------------	-------------------------------	-------	--	-----	-----	-----	--	--

Comments**Operator****General Contact Information**

Company: [372286] ENDURING RESOURCES, LLC Main Phone: 303-350-5716
 Address: 1050 17TH STREET, SUITE 2500 Main Fax: 303-573-0461
 DENVER, CO 80265
 Country: U.S.A.

Central Contact

Name: Travis Whitham Phone Number: 303-350-5716
 Title: Landman Cell Number: 719-688-5521
 E-Mail Address: twitham@enduringresources.com Fax Number: 303-573-0461

Aztec Contact

Name: Andrea Felix Phone Number: 505-636-9741
 Title: Regulatory Manager Cell Number: 505-386-8205
 E-Mail Address: afelix@enduringresources.com Fax Number:

Pits

No Pits Found

Casing

No Casing Found

Well Completions**[98163] ALAMITO MANCOS W**

Status: New, Not Drilled Last Produced:
 Bottomhole Location: O-13-22N-08W 330 FSL 1800 FEL
 Lat/Long:
 Acreage: 240 13-22N-08W Units: B G J O
 12-22N-08W Units: J O
 DHC: Consolidation Code:
 Production Method:

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

Gas-Oil Ratio: 0 Kcf / bbl Oil Gravity: 0.0 Corr. API
Disposition of Gas: Water Volume: 0.0 bbls

Perforations

Date	Top Measured Depth (Where Completion Enters Formation)	Bottom Measured Depth (End of Lateral)	Top Vertical Depth	Bottom Vertical Depth
------	--	--	--------------------	--------------------------

Notes

Event Dates

Initial Effective/Approval: 02/12/2016
Most Recent Approval: 04/19/2018
Confidential Requested On:
Test Allowable Approval:
TD Reached:
Deviation Report Received: No
Directional Survey Run: No
Directional Survey Received: No
First Oil Production:
First Injection:
Ready to Produce:
C-104 Approval:
Plug Back:
Authorization Revoked Start:

TA Expiration:
Confidential Until:
Test Allowable End:
DHC:
Rig Released:
Logs Received: No
Closure Pit Plat Received:
First Gas Production:
Completion Report Received:
New Well C-104 Approval:
Revoked Until:

Well Completion History

Effective Date	Property	Well Number	Operator	Completion Status	TA Expiration Date
04/19/2018	[321257] W ALAMITO UNIT	#465H	[372286] ENDURING RESOURCES, LLC	New, Not Drilled	
02/12/2016	[315082] W ALAMITO UNIT	#465H	[120782] WPX ENERGY PRODUCTION, LLC	New, Not Drilled	

Financial Assurance

Effective	Bond Type	Base	Balance	Issuer	Cash/Surety	Cancellation Date
06/30/2017	Blanket	250000	250000	RLI INSURANCE COMPANY	Surety	

Requests to release bonds must be submitted in writing. You may send an e-mail to Denise.Gallegos@state.nm.us or fax a letter to (505) 476-3453.

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports ([Inactive Well Report](#), [Financial Assurance Report](#)).

Also note that some compliance issues are addressed at the operator level so not listed under each well.

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells

Operator Data

Submit Form

Fee Application

Administration

report may be recorded here as a Spm, information related to the abatement plans, remediation plans and ground water impact information are not yet part of this application.

Orders

No Orders Found

Production / Injection

Earliest Production in OCD Records:

Last

[Show All Production](#)[Export to Excel](#)

Production					Injection				
Time Frame	Oil(BBLS)	Gas(MCF)	Water(BBLS)	Days	Water(BBLS)	Co2(MCF)	Gas(MCF)	Other	Pressure
				P/I					
Grand Total:	0	0	0	0	0	0	0	0	N/A

Transporters

Transporter	Product	Most Recent for Property
-------------	---------	--------------------------

Points of Disposition

ID	Type	Description	Pool(s)
----	------	-------------	---------

New Mexico Energy, Minerals and Natural Resources Department | Copyright 2012
1220 South St. Francis Drive | Santa Fe, NM 87505 | P: (505) 476-3200 | F: (505) 476-3220

[EMNRD Home](#) [OCD Main Page](#) [OCD Rules](#) [Help](#)

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration**OCD Permitting**

Home Wells Well Details

30-045-35719 W ALAMITO UNIT #466H [321257]**General Well Information**

Operator:	[372286] ENDURING RESOURCES, LLC		
Status:	New	Direction:	Horizontal
Well Type:	Oil	Multi-Lateral:	No
Work Type:	New	Mineral Owner:	Federal
		Surface Owner:	Indian
Surface Location:	F-12-22N-08W	1944 FNL	1850 FWL
Lat/Long:	36.156096,-107.636207 NAD83		
GL Elevation:	6794		
KB Elevation:		Sing/Mult Compl:	Single
DF Elevation:		Potash Waiver:	False

Proposed Formation and/or Notes

WAM HD/104 DS/PLAT/NSL

Depths

Proposed:	12958	True Vertical Depth:	0
Measured Vertical Depth:	0	Plugback Measured:	0

Formation Tops

Formation	Top	Producing	Method Obtained
-----------	-----	-----------	-----------------

Event Dates

Initial APD Approval:	02/12/2016		
Most Recent APD Approval:	04/19/2018	Current APD Expiration:	02/03/2020
APD Cancellation:			
APD Extension Approval:	01/08/2018		
Spud:		Gas Capture Plan Received:	
Approved Temporary		TA Expiration:	
Abandonment:			
Shut In:			
Plug and Abandoned Intent		PNR Expiration:	
Received:		Last MIT/BHT:	
Well Plugged:			
Site Release:			
Last Inspection:			

History

Effective Date	Property	Well Number	Operator	C-101 Work Type	Well Type	Well Status	Apd Cancelled	Plug Date
----------------	----------	-------------	----------	-----------------	-----------	-------------	---------------	-----------

Quick Links

- [General Well Information](#)
- [History](#)
- [Comments](#)
- [Operator](#)
- [Pits](#)
- [Casing](#)
- [Well Completions](#)
- [Financial Assurance](#)
- [Compliance](#)
- [Complaints, Incidents and Spills](#)
- [Orders](#)
- [Production](#)
- [Transporters](#)
- [Points of Disposition](#)

Associated Images

- [Well Files](#)
- [Well Logs](#)
- [Administrative Orders](#)

New Searches

- [New Well Search](#)

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

02/12/2016	[315082] W ALAMITO UNIT	#466H	[120782] WPX ENERGY PRODUCTION, LLC	New	Oil	New		
------------	-------------------------------	-------	--	-----	-----	-----	--	--

Comments

Operator

General Contact Information

Company: [372286] ENDURING RESOURCES, LLC Main Phone: 303-350-5716
 Address: 1050 17TH STREET, SUITE 2500 Main Fax: 303-573-0461
 DENVER, CO 80265
 Country: U.S.A.

Central Contact

Name: Travis Whitham Phone Number: 303-350-5716
 Title: Landman Cell Number: 719-688-5521
 E-Mail Address: twitham@enduringresources.com Fax Number: 303-573-0461

Aztec Contact

Name: Andrea Felix Phone Number: 505-636-9741
 Title: Regulatory Manager Cell Number: 505-386-8205
 E-Mail Address: afelix@enduringresources.com Fax Number:

Pits

No Pits Found

Casing

No Casing Found

Well Completions

[98163] ALAMITO MANCOS W

Status: New, Not Drilled Last Produced:
 Bottomhole Location: N-13-22N-08W 330 FSL 2250 FWL
 Lat/Long:
 Acreage: 240 13-22N-08W Units: C F K N
 12-22N-08W Units: K N
 DHC: Consolidation Code:
 Production Method:

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells	Operator Data	Submit Form	Fee Application	Administration	
Gas-Oil Ratio:	0 Kcf / bbl	Oil Gravity:	0.0 Corr. API		
Disposition of Gas:		Water Volume:	0.0 bbls		
Perforations					
Date	Top Measured Depth (Where Completion Enters Formation)	Bottom Measured Depth (End of Lateral)	Top Vertical Depth	Bottom Vertical Depth	
Notes					
Event Dates					
Initial Effective/Approval:	02/12/2016	TA Expiration:			
Most Recent Approval:	04/19/2018	Confidential Until:			
Confidential Requested On:		Test Allowable End:			
Test Allowable Approval:		DHC:			
TD Reached:		Rig Released:			
Deviation Report Received:	No	Logs Received:	No		
Directional Survey Run:	No	Closure Pit Plat Received:			
Directional Survey Received:	No	First Gas Production:			
First Oil Production:		Completion Report Received:			
First Injection:		New Well C-104 Approval:			
Ready to Produce:		Revoked Until:			
C-104 Approval:					
Plug Back:					
Authorization Revoked Start:					
Well Completion History					
Effective Date	Property	Well Number	Operator	Completion Status	TA Expiration Date
04/19/2018	[321257] W ALAMITO UNIT	#466H	[372286] ENDURING RESOURCES, LLC	New, Not Drilled	
02/12/2016	[315082] W ALAMITO UNIT	#466H	[120782] WPX ENERGY PRODUCTION, LLC	New, Not Drilled	

Financial Assurance

Effective	Bond Type	Base	Balance	Issuer	Cash/Surety	Cancellation Date
06/30/2017	Blanket	250000	250000	RLI INSURANCE COMPANY	Surety	

Requests to release bonds must be submitted in writing. You may send an e-mail to Denise.Gallegos@state.nm.us or fax a letter to (505) 476-3453.

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports ([Inactive Well Report](#), [Financial Assurance Report](#)).

Also note that some compliance issues are addressed at the operator level so not listed under each well.

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

[Wells](#) [Operator Data](#) [Submit Form](#) [Fee Application](#) [Administration](#)

report may be recorded here as a spill, information related to the abatement plans, remediation plans and ground water impact information are not yet part of this application.

Orders

No Orders Found

Production / Injection

Earliest Production in OCD Records:

Last

[Show All Production](#)[Export to Excel](#)

Time Frame	Production				Injection					
	Oil(BBLS)	Gas(MCF)	Water(BBLS)	Days	Water(BBLS)	Co2(MCF)	Gas(MCF)	Other	Pressure	
				P/I						
Grand Total:	0	0	0	0	0	0	0	0	N/A	

Transporters

Transporter	Product	Most Recent for Property
-------------	---------	--------------------------

Points of Disposition

ID	Type	Description	Pool(s)
----	------	-------------	---------

New Mexico Energy, Minerals and Natural Resources Department | Copyright 2012
1220 South St. Francis Drive | Santa Fe, NM 87505 | P: (505) 476-3200 | F: (505) 476-3220

[EMNRD Home](#) [OCD Main Page](#) [OCD Rules](#) [Help](#)

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration**OCD Permitting**

Home Wells Well Details

30-045-35720 W ALAMITO UNIT #467H [321257]**General Well Information**

Operator:	[372286] ENDURING RESOURCES, LLC		
Status:	New	Direction:	Horizontal
Well Type:	Oil	Multi-Lateral:	No
Work Type:	New	Mineral Owner:	Federal
		Surface Owner:	Indian
Surface Location:	F-12-22N-08W 1978 FNL 1830 FWL		
Lat/Long:	36.156001,-107.636275 NAD83		
GL Elevation:	6794		
KB Elevation:		Sing/Mult Compl:	Single
DF Elevation:		Potash Waiver:	False

Proposed Formation and/or Notes

AMW HD/104 DS/PLAT/NSL

Depths

Proposed:	13013	True Vertical Depth:	0
Measured Vertical Depth:	0	Plugback Measured:	0

Formation Tops

Formation	Top	Producing	Method Obtained
-----------	-----	-----------	-----------------

Event Dates

Initial APD Approval:	02/12/2016	Current APD Expiration:	02/03/2020
Most Recent APD Approval:	04/19/2018		
APD Cancellation:			
APD Extension Approval:	01/08/2018		
Spud:		Gas Capture Plan Received:	
Approved Temporary		TA Expiration:	
Abandonment:			
Shut In:		PNR Expiration:	
Plug and Abandoned Intent		Last MIT/BHT:	
Received:			
Well Plugged:			
Site Release:			
Last Inspection:			

History

Effective Date	Property	Well Number	Operator	C-101 Work Type	Well Type	Well Status	Apd Cancelled	Plug Date
----------------	----------	-------------	----------	-----------------	-----------	-------------	---------------	-----------

Quick Links

- [General Well Information](#)
- [History](#)
- [Comments](#)
- [Operator](#)
- [Pits](#)
- [Casing](#)
- [Well Completions](#)
- [Financial Assurance](#)
- [Compliance](#)
- [Complaints Incidents and Spills](#)
- [Orders](#)
- [Production](#)
- [Transporters](#)
- [Points of Disposition](#)

Associated Images

- [Well Files](#)
- [Well Logs](#)
- [Administrative Orders](#)

New Searches

- [New Well Search](#)

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

02/12/2016	[315082] W ALAMITO UNIT	#467H	[120782] WPX ENERGY PRODUCTION, LLC	New	Oil	New		
------------	-------------------------------	-------	--	-----	-----	-----	--	--

Comments

Operator

General Contact Information

Company: [372286] ENDURING RESOURCES, LLC Main Phone: 303-350-5716
 Address: 1050 17TH STREET, SUITE 2500 Main Fax: 303-573-0461
 DENVER, CO 80265
 Country: U.S.A.

Central Contact

Name: Travis Whitham Phone Number: 303-350-5716
 Title: Landman Cell Number: 719-688-5521
 E-Mail Address: twitham@enduringresources.com Fax Number: 303-573-0461

Aztec Contact

Name: Andrea Felix Phone Number: 505-636-9741
 Title: Regulatory Manager Cell Number: 505-386-8205
 E-Mail Address: afelix@enduringresources.com Fax Number:

Pits

No Pits Found

Casing

No Casing Found

Well Completions

[98163] ALAMITO MANCOS W

Status: New, Not Drilled Last Produced:
 Bottomhole Location: M-13-22N-08W 330 FSL 1100 FWL
 Lat/Long:
 Acreage: 240 13-22N-08W Units: D E L M
 12-22N-08W Units: L M
 DHC: Consolidation Code:
 Production Method:

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

Gas-Oil Ratio: 0 Kcf / bbl Oil Gravity: 0.0 Corr. API
 Disposition of Gas: Water Volume: 0.0 bbls

Perforations

Date	Top Measured Depth (Where Completion Enters Formation)	Bottom Measured Depth (End of Lateral)	Top Vertical Depth	Bottom Vertical Depth
------	--	--	--------------------	--------------------------

Notes

Event Dates

Initial Effective/Approval:	02/12/2016	TA Expiration:	
Most Recent Approval:	04/19/2018	Confidential Until:	
Confidential Requested On:		Test Allowable End:	
Test Allowable Approval:		DHC:	
TD Reached:		Rig Released:	
Deviation Report Received:	No	Logs Received:	No
Directional Survey Run:	No	Closure Pit Plat Received:	
Directional Survey Received:	No	First Gas Production:	
First Oil Production:		Completion Report Received:	
First Injection:		New Well C-104 Approval:	
Ready to Produce:		Revoked Until:	
C-104 Approval:			
Plug Back:			
Authorization Revoked Start:			

Well Completion History

Effective Date	Property	Well Number	Operator	Completion Status	TA Expiration Date
04/19/2018	[321257] W ALAMITO UNIT	#467H	[372286] ENDURING RESOURCES, LLC	New, Not Drilled	
02/12/2016	[315082] W ALAMITO UNIT	#467H	[120782] WPX ENERGY PRODUCTION, LLC	New, Not Drilled	

Financial Assurance

Effective	Bond Type	Base	Balance	Issuer	Cash/Surety	Cancellation Date
06/30/2017	Blanket	250000	250000	RLI INSURANCE COMPANY	Surety	

Requests to release bonds must be submitted in writing. You may send an e-mail to Denise.Gallegos@state.nm.us or fax a letter to (505) 476-3453.

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports ([Inactive Well Report](#), [Financial Assurance Report](#)).

Also note that some compliance issues are addressed at the operator level so not listed under each well.

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

[Wells](#)
[Operator Data](#)
[Submit Form](#)
[Fee Application](#)
[Administration](#)

report may be recorded here as a spin, information related to the abatement plans, remediation plans and ground water impact information are not yet part of this application.

Orders

No Orders Found

Production / Injection

Earliest Production in OCD Records:

Last

[Show All Production](#)[Export to Excel](#)

Production				Injection						
Time Frame	Oil(BBLS)	Gas(MCF)	Water(BBLS)	Days		Water(BBLS)	Co2(MCF)	Gas(MCF)	Other	Pressure
				P/I						
Grand Total:	0	0	0	0		0	0	0	0	N/A

Transporters

Transporter	Product	Most Recent for Property
-------------	---------	--------------------------

Points of Disposition

ID	Type	Description	Pool(s)
----	------	-------------	---------

New Mexico Energy, Minerals and Natural Resources Department | Copyright 2012
 1220 South St. Francis Drive | Santa Fe, NM 87505 | P: (505) 476-3200 | F: (505) 476-3220

[EMNRD Home](#)
[OCD Main Page](#)
[OCD Rules](#)
[Help](#)

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration**OCD Permitting**

Home Wells Well Details

30-045-28665 STATE K #001 [313014]**General Well Information**

Operator: [282327] ENCANA OIL & GAS (USA) INC.
 Status: Plugged, Site Direction: Vertical
 Released Multi-Lateral: No
 Well Type: Oil Mineral Owner: State
 Work Type: New Surface Owner:
 Surface Location: P-36-23N-08W 400 FSL 900 FEL
 Lat/Long: 36.1771545,-107.6274185 NAD83
 GL Elevation: 6942
 KB Elevation:
 DF Elevation: Sing/Mult Compl:
 Potash Waiver: False

Proposed Formation and/or Notes

P&A 6-29-09

Depths

Proposed: 0 True Vertical Depth: 5130
 Measured Vertical Depth: 5130 Plugback Measured: 5060

Formation Tops

Formation	Top	Producing	Method Obtained
Ojo Alamo Formation	793		
Kirtland Formation	957		
Pictured Cliffs Formation	1370		
Cliff House Formation	2834		
Menefee Formation	2872		
Point Lookout Formation	3752		
Mancos Formation	3942		
Gallup Formation	4602		

Event Dates

Initial APD Approval: 05/11/1992
 Most Recent APD Approval: 12/19/2013 Current APD Expiration: 05/11/1994
 APD Cancellation:
 APD Extension Approval:
 Spud: 05/23/1992 Gas Capture Plan Received:
 TA Expiration:

Quick Links

- [General Well Information](#)
- [History](#)
- [Comments](#)
- [Operator](#)
- [Pits](#)
- [Casing](#)
- [Well Completions](#)
- [Financial Assurance](#)
- [Compliance](#)
- [Complaints, Incidents and Spills](#)
- [Orders](#)
- [Production](#)
- [Transporters](#)
- [Points of Disposition](#)

Associated Images

- [Well Files](#)
- [Well Logs](#)
- [Administrative Orders](#)

New Searches

- [New Well Search](#)

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

Site Release: 12/12/2016
 Last Inspection: 12/12/2016

History

Effective Date	Property	Well Number	Operator	C-101 Work Type	Well Type	Well Status	Apd Cancelled	Plug Date
12/19/2013	[313014] STATE K	#001	[282327] ENCANA OIL & GAS (USA) INC.	New	Oil	Plugged, Site Released		06/29/2009
09/01/1994	[16174] STATE K	#001	[23846] QEP ENERGY COMPANY	New	Oil	Zones Permanently Plugged		
06/01/1992	[1911] STATE K	#001	[1883] BCO INC	New	Oil	Active		

Comments

Operator

General Contact Information

Company: [282327] ENCANA OIL & GAS (USA) INC. Main Phone: 720-876-5240
 Address: 370 17th Street Suite 1700 Main Fax: 720-876-6240
 Denver, CO 80202
 Country: U.S.A.

Central Contact

Name: Katie Wegner Phone Number: 720-876-5240
 Title: Manager, Regulatory & Permitting Cell Number: 303-819-7349
 E-Mail Address: julia.carter@encana.com Fax Number: 720-876-6240

Aztec Contact

Name: Tom Lawlor Phone Number: 720-876-3082
 Title: Cell Number: 720-201-3815
 E-Mail Address: tom.lawlor@encana.com Fax Number:

Pits

Pit On Site: Number 1

Pit Type: Workover Status: Active
 Registration Denied:
 Closure Approved:
 Closure Denied:

8/23/2019

OCD Permitting - Well Details

SCRUEST6 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

Date	Detail
07/02/2009	RR 6-30-09

Casing

String/Hole Type	Taper	Date Set	Boreholes, Strings and Equipment Specifications			Specifications for Strings and Tubing			Strings Cemented and Intervals			Cement and Plug Description		
			Diameter	Top	Bottom (Depth)	Grade	Length	Weight	Bot of Cem	Top of Cem	Meth	Class of Cement	Sacks	Pressure Test (Y/N)
Surface Casing	1		8.625	0	356		0	0.0	356	0	Circ	Unknown	275	No
Production Casing	1		4.500	0	5119		0	0.0	5119	0	Circ	Unknown	800	No
Tubing 1	1		2.375	0	4980		0	0.0	0	0			0	No

Well Completions

[1039] ALAMITO-GALLUP (O)

Status: Zone Permanently Last Produced: 05/01/2009
 Plugged
 Bottomhole Location: P-36-23N-08W 400 FSL 900 FEL
 Lat/Long:
 Acreage:
 DHC: No Consolidation Code:
 Production Method: Flowing

Well Test Data

Production Test: Test Length: 0 hours
 Flowing Tubing Pressure: 0 psi Flowing Casing Pressure: 0 psi
 Choke Size: 0.000 inches Testing Method:
 Gas Volume: 0.0 MCF Oil Volume: 0.0 bbls
 Gas-Oil Ratio: 0 Kcf / bbl Oil Gravity: 0.0 Corr. API
 Disposition of Gas: Water Volume: 0.0 bbls

Perforations

Date	Top Measured Depth (Where Completion Enters Formation)	Bottom Measured Depth (End of Lateral)	Top Vertical Depth	Bottom Vertical Depth
	4775	5017	0	0

Notes

Event Dates

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

Wells Operator Data Submit Form **Fee Application** Administration

Directional Survey Run:	No	Logs Received:	No
Directional Survey Received:	No	Closure Pit Plat Received:	
First Oil Production:	06/01/1992	First Gas Production:	06/01/1992
First Injection:		Completion Report Received:	
Ready to Produce:	06/18/1992	New Well C-104 Approval:	
C-104 Approval:	06/18/1992	Revoked Until:	
Plug Back:			
Authorization Revoked Start:			

Well Completion History

Effective Date	Property	Well Number	Operator	Completion Status	TA Expiration Date
06/29/2009	[16174] STATE K	#001	[23846] QEP ENERGY COMPANY	Zone Permanently Plugged	
09/01/1994	[16174] STATE K	#001	[23846] QEP ENERGY COMPANY	Active	
06/01/1992	[1911] STATE K	#001	[1883] BCO INC	Active	

Financial Assurance

Effective	Bond Type	Base	Balance	Issuer	Cash/Surety	Cancellation Date
07/20/2011	Blanket	50000	50000	TRAVELERS CASUALTY AND SURETY OF AMERICA	Surety	
12/06/2013	Single Well	10130	10130	TRAVELERS CASUALTY AND SURETY OF AMERICA	Surety	

Requests to release bonds must be submitted in writing. You may send an e-mail to Denise.Gallegos@state.nm.us or fax a letter to (505) 476-3453.

Compliance

Note that Financial Assurance and Inactive Well Compliance are documented in separate reports ([Inactive Well Report](#), [Financial Assurance Report](#)).

Also note that some compliance issues are addressed at the operator level so not listed under each well.

cJK1634041074

Violation Source:

Date of Violation: 12/05/2016

Compliance Required: 03/10/2017

Resolved: 12/12/2016

Notes

Well number and UL/Qt/Qt section information missing from P&A marker, location cannot be released. 12/12/2016 follow up inspection found that well number and UL / Qt/Qt section have been added to marker, loc ok to release, compliance cleared.

Actions/Events

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

[Wells](#)
[Operator Data](#)
[Submit Form](#)
[Fee Application](#)
[Administration](#)

12/05/2016

Notifications

E-Mail

Complaints, Incidents and Spills

No Incidents Found

Please note that incidents that impact ground water are recorded along with "facilities" which may not be wells, so although the initial report may be recorded here as a spill, information related to the abatement plans, remediation plans and ground water impact information are not yet part of this application.

Orders

No Orders Found

Production / Injection

Earliest Production in OCD Records: 12/1992 Last

[Show All Production](#)
[Export to Excel](#)

5/2009

Time Frame	Production				Injection				
	Oil(BBLS)	Gas(MCF)	Water(BBLS)	Days P/I	Water(BBLS)	Co2(MCF)	Gas(MCF)	Other	Pressure
1992 Cumulative	2335	25250	345	99	0	0	0	0	N/A
1993	1627	25929	525	330	0	0	0	0	N/A
1994	1362	15307	90	343	0	0	0	0	N/A
1995	1073	13526	80	364	0	0	0	0	N/A
1996	991	9433	68	366	0	0	0	0	N/A
1997	826	7481	65	365	0	0	0	0	N/A
1998	842	6829	61	365	0	0	0	0	N/A
1999	797	6513	54	365	0	0	0	0	N/A
2000	751	6027	34	366	0	0	0	0	N/A
2001	707	4971	25	351	0	0	0	0	N/A
2002	636	5594	22	364	0	0	0	0	N/A
2003	587	4707	35	365	0	0	0	0	N/A
2004	562	4993	2	366	0	0	0	0	N/A
2005	512	4616	116	365	0	0	0	0	N/A
2006	572	4421	230	363	0	0	0	0	N/A

8/23/2019

OCD Permitting - Well Details

SCRUES76 (REGULATORY SPECIALIST FOR DJR OPERATING, LLC) SIGN OUT HELP

[Wells](#) [Operator Data](#) [Submit Form](#) [Fee Application](#) [Administration](#)

2008	0	0	0	0	0	0	0	0	N/A
2009	38	0	0	1	0	0	0	0	N/A
Grand Total:	14471	148528	1981	5390	0	0	0	0	N/A

Transporters

Transporter	Product	Most Recent for Property
-------------	---------	--------------------------

Points of Disposition

ID	Type	Description	Pool(s)
537950	Water		[1039] ALAMITO-GALLUP (O)
537930	Gas		[1039] ALAMITO-GALLUP (O)
537910	Oil		[1039] ALAMITO-GALLUP (O)

New Mexico Energy, Minerals and Natural Resources Department | Copyright 2012
1220 South St. Francis Drive | Santa Fe, NM 87505 | P: (505) 476-3200 | F: (505) 476-3220

[EMNRD Home](#) [OCD Main Page](#) [OCD Rules](#) [Help](#)

Amended Application for Authorization to Inject

DJR Operating, LLC

North Alamito Unit SWD #001

Administrative Order SWD-2255

Operations Plan

1. Average Injection Rate: 3,000-bwpd with a maximum of 6,000-bwpd.
2. The system will be closed.
3. The average injection pressure: 1,000 psi and the maximum will be 1,380 psi.
4. The source of injected water will be produced water from DJR Operating, LLC wells in the San Juan Basin of New Mexico from the Fruitland Coal, Pictured Cliffs, Mancos, and Gallup Dakota formations. The water to be injected is compatible with the water in the disposal zone.
5. Injection is for disposal purposes into a zone (Entrada Sandstone) that is not productive of oil or gas within one mile of the proposed injection well.

Produced Water Samples

1. Lybrook M35-2308-01H/02H

UL M & N, Section 35-23N-8W

API: 030-45-35526 – 01H

API: 030-45-35527 – 02H

2. Lybrook O35-2308-01H/02H

UL O, Section 35-23N-8W

API: 030-45-35525-01H

API: 030-45-35524-02H

Multi-Chem Analytical Laboratory

1553 East Highway 40

Vernal, UT 84078

Units of Measurement: Standard

multi-chem

A HALLIBURTON SERVICE

Water Analysis Report

Production Company: DJR Operating, LLC
 Well Name: LYBROOK M35-2308-01H/02H
 Sample Point: SEPARATOR
 Sample Date: 4/9/2019
 Sample ID: WA-385502

Sales Rep: Craig Smith
 Lab Tech: Amanda Harvey

Scaling potential predicted using ScaleSoftPitzer from
 Brine Chemistry Consortium (Rice University)

Sample Specifics		Analysis @ Properties in Sample Specifics			
Test Date:	4/19/2019	Cations	mg/L	Anions	mg/L
System Temperature 1 (°F):	50	Sodium (Na):	9648.38	Chloride (Cl):	15500.00
System Pressure 1 (psig):	15	Potassium (K):	28.17	Sulfate (SO ₄):	16.00
System Temperature 2 (°F):	200	Magnesium (Mg):	42.98	Bicarbonate (HCO ₃):	335.50
System Pressure 2 (psig):	200	Calcium (Ca):	280.55	Carbonate (CO ₃):	
Calculated Density (g/ml):	1.0152	Strontium (Sr):	72.84	Hydroxide (HO):	
pH:	7.00	Barium (Ba):	23.43	Acetic Acid (CH ₃ COO):	
Calculated TDS (mg/L):	26049.70	Iron (Fe):	84.00	Propionic Acid (C ₂ H ₅ COO):	
CO ₂ in Gas (%):		Zinc (Zn):	0.96	Butanoic Acid (C ₃ H ₇ COO):	
Dissolved CO ₂ (mg/L):	99.00	Lead (Pb):	0.00	Isobutyric Acid ((CH ₃) ₂ CHCOO):	
H ₂ S in Gas (%):		Ammonia (NH ₃):		Fluoride (F):	
H ₂ S in Water (mg/L):	0.00	Manganese (Mn):	1.38	Bromine (Br):	
Tot. Suspended Solids (mg/L):		Aluminum (Al):	0.04	Silica (SiO ₂):	15.51
Corrosivity (Langlier Sat. Indx):	0.00	Lithium (Li):	1.23	Calcium Carbonate (CaCO ₃):	
Alkalinity:		Boron (B):	3.05	Phosphates (PO ₄):	1.50
		Silicon (Si):	7.25	Oxygen (O ₂):	

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ ·2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
200.00	200.00	0.62	26.38	0.21	2.97	0.00	0.00	2.01	54.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
183.00	179.00	0.50	20.91	0.25	3.42	0.00	0.00	1.89	53.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	159.00	0.38	15.78	0.30	4.00	0.00	0.00	1.77	51.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.00	138.00	0.28	11.13	0.36	4.68	0.00	0.00	1.65	49.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133.00	118.00	0.18	6.99	0.44	5.46	0.00	0.00	1.53	47.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.00	97.00	0.09	3.36	0.53	6.32	0.00	0.00	1.40	44.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	77.00	0.01	0.26	0.65	7.24	0.00	0.00	1.28	41.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83.00	56.00	0.00	0.00	0.78	8.19	0.00	0.00	1.15	38.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.00	36.00	0.00	0.00	0.95	9.14	0.00	0.00	1.03	34.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.00	15.00	0.00	0.00	1.14	10.06	0.00	0.00	0.93	32.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Multi-Chem Analytical Laboratory

1553 East Highway 40

Vernal, UT 84078

multi-chem
 A HALLIBURTON SERVICE

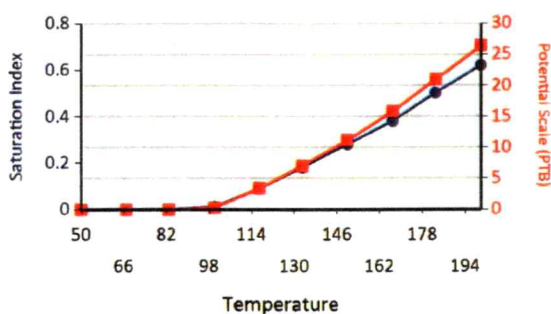
Water Analysis Report

Temp (°F)	PSI	Hemihydrate CaSO ₄ ·0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
200.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.11	0.00	0.00	0.28	1.62	0.00	0.00	7.49	34.44
183.00	179.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.78	33.06
167.00	159.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.09	31.01
150.00	138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.41	28.37
133.00	118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.75	25.32
117.00	97.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.11	22.00
100.00	77.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50	18.62
83.00	56.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.93	15.35
67.00	36.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.41	12.41
50.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.06	10.45

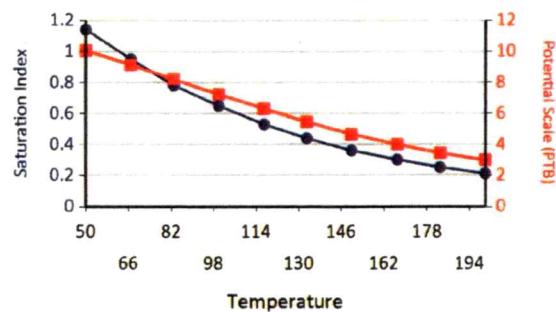
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Barium Sulfate Iron Carbonate Fe Silicate

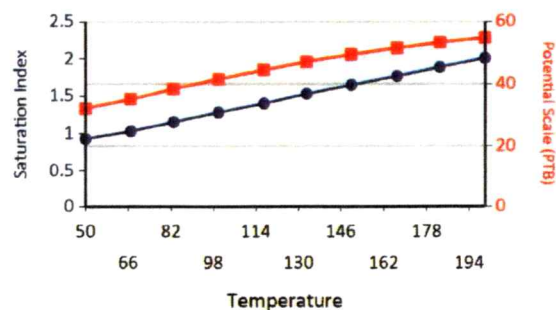
Calcium Carbonate



Barium Sulfate



Iron Carbonate

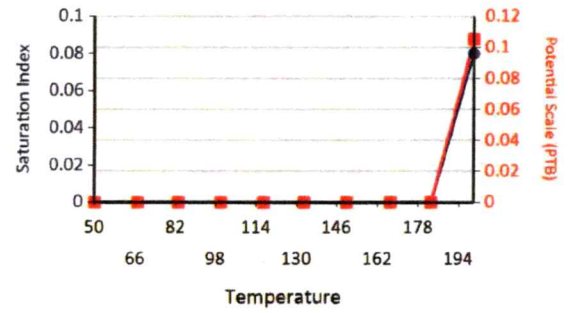


Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

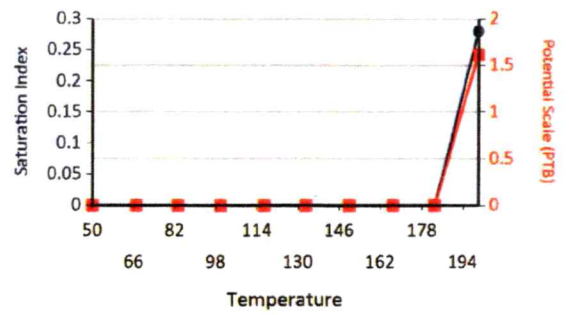
multi-chem
A HALLIBURTON SERVICE

Water Analysis Report

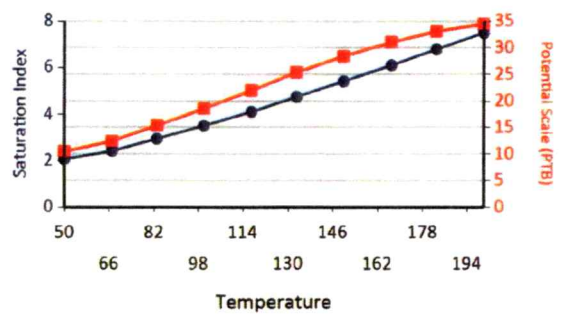
Zinc Carbonate



Mg Silicate



Fe Silicate



Multi-Chem Analytical Laboratory

1553 East Highway 40

Vernal, UT 84078

Units of Measurement: Standard

multi-chem

A HALLIBURTON SERVICE

Water Analysis Report

Production Company: DJR Operating, LLC
 Well Name: LYBROOK 035-2308-01H/02H
 Sample Point: SEPARATOR
 Sample Date: 4/9/2019
 Sample ID: WA-385478

Sales Rep: Craig Smith
 Lab Tech: Amanda Harvey

Scaling potential predicted using ScaleSoftPitzer from
 Brine Chemistry Consortium (Rice University)

Sample Specifics		Analysis @ Properties in Sample Specifics			
		Cations	mg/L	Anions	mg/L
Test Date:	4/19/2019	Sodium (Na):	13492.45	Chloride (Cl):	21500.00
System Temperature 1 (°F):	50	Potassium (K):	47.70	Sulfate (SO ₄):	0.00
System Pressure 1 (psig):	15	Magnesium (Mg):	56.95	Bicarbonate (HCO ₃):	335.50
System Temperature 2 (°F):	200	Calcium (Ca):	323.89	Carbonate (CO ₃):	
System Pressure 2 (psig):	200	Strontium (Sr):	89.20	Hydroxide (OH):	
Calculated Density (g/ml):	1.0218	Barium (Ba):	29.22	Acetic Acid (CH ₃ COO):	
pH:	7.30	Iron (Fe):	13.86	Propionic Acid (C ₂ H ₅ COO):	
Calculated TDS (mg/L):	35921.58	Zinc (Zn):	0.10	Butanoic Acid (C ₃ H ₇ COO):	
CO ₂ in Gas (%):		Lead (Pb):	0.00	Isobutyric Acid ((CH ₃) ₂ CHCOO):	
Dissolved CO ₂ (mg/L):	99.00	Ammonia (NH ₃):		Fluoride (F):	
H ₂ S in Gas (%):		Manganese (Mn):	0.45	Bromine (Br):	
H ₂ S in Water (mg/L):	0.00	Aluminum (Al):	0.05	Silica (SiO ₂):	32.26
Tot. Suspended Solids (mg/L):		Lithium (Li):	1.68	Calcium Carbonate (CaCO ₃):	
Corrosivity (Langlier Sat. Indx):	0.00	Boron (B):	5.64	Phosphates (PO ₄):	0.98
Alkalinity:		Silicon (Si):	15.08	Oxygen (O ₂):	

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO ₄ ·2H ₂ O		Celestite SrSO ₄		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
200.00	200.00	0.87	30.69	0.00	0.00	0.00	0.00	1.38	9.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
183.00	179.00	0.76	26.00	0.00	0.00	0.00	0.00	1.29	9.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	159.00	0.66	21.66	0.00	0.00	0.00	0.00	1.18	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.00	138.00	0.57	17.81	0.00	0.00	0.00	0.00	1.08	8.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
133.00	118.00	0.48	14.40	0.00	0.00	0.00	0.00	0.97	8.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.00	97.00	0.40	11.44	0.00	0.00	0.00	0.00	0.86	7.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	77.00	0.33	8.93	0.00	0.00	0.00	0.00	0.74	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83.00	56.00	0.27	6.86	0.00	0.00	0.00	0.00	0.62	6.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.00	36.00	0.21	5.24	0.00	0.00	0.00	0.00	0.51	5.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.00	15.00	0.18	4.41	0.00	0.00	0.00	0.00	0.41	4.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

multi-chem
A HALLIBURTON SERVICE

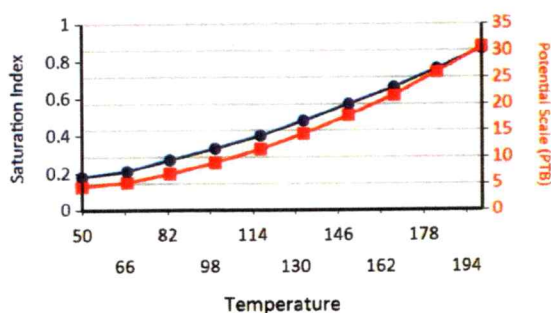
Water Analysis Report

Temp (°F)	PSI	Hemihydrate CaSO ₄ ~0.5H ₂ O		Anhydrate CaSO ₄		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
200.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.73	13.64	1.61	8.91	7.12	10.52
183.00	179.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	8.47	1.12	5.60	6.51	10.34
167.00	159.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	4.20	0.62	2.80	5.91	10.07
150.00	138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.81	0.12	0.55	5.31	9.67
133.00	118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.72	9.11
117.00	97.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.14	8.37
100.00	77.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.57	7.48
83.00	56.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.04	6.48
67.00	36.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.55	5.48
50.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.21	4.76

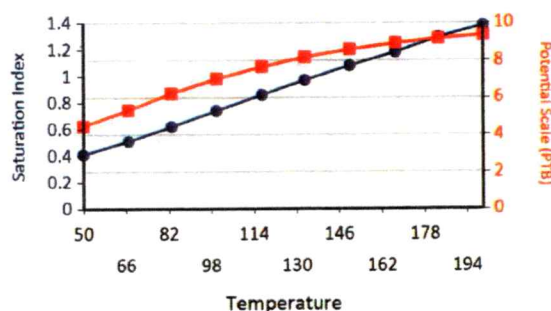
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Iron Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Carbonate Fe Silicate

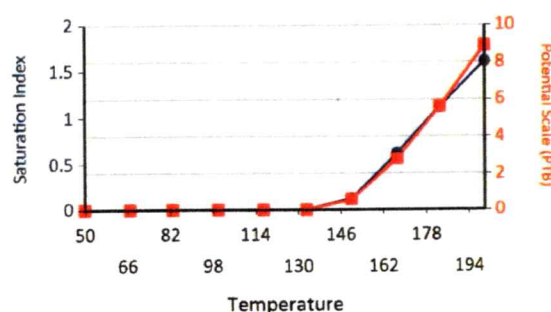
Calcium Carbonate



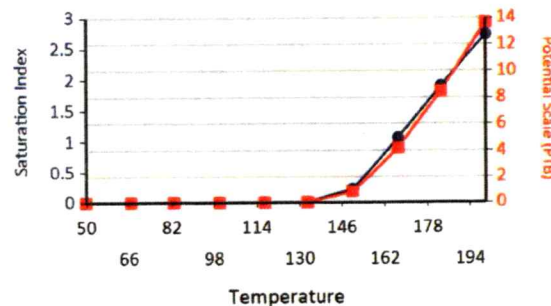
Iron Carbonate



Ca Mg Silicate



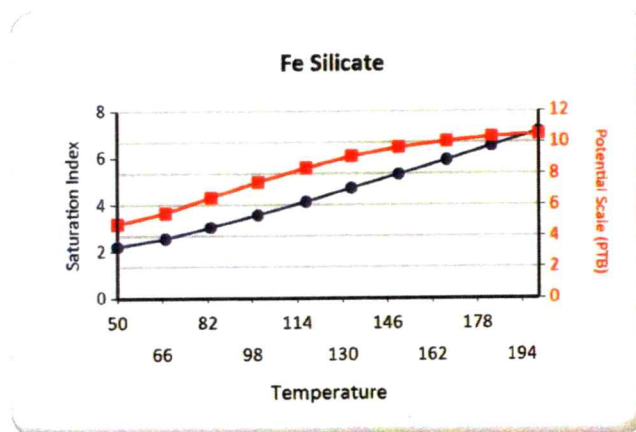
Mg Silicate



Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

multi-chem
A HALLIBURTON SERVICE

Water Analysis Report





dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

DJR Operating
1 Road 3263
Aztec NM, 87410

Project: API
Project Name / Number: [none]
Project Manager: Lansa Farrell

Reported:
10/27/20 15:48

Notes and Definitions

U	Estimated concentration. Analyte concentration was less than the MDL.
B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

A handwritten signature in black ink that reads 'Debbie Zufelt'.

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.

Page 9 of 10 2010242 GAL FINAL 10 27 20 1548 10/27/20 15:48:29



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

DJR Operating
1 Road 3263
Aztec NM, 87410Project: API
Project Name / Number: [none]
Project Manager: Lansa FarrellReported:
10/27/20 15:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Fruitland Coal	2010242-01	Water	10/22/20 10:24	10/22/20 15:08	
Gallup Dakota	2010242-02	Water	10/22/20 12:33	10/22/20 15:08	
Pictured Cliffs	2010242-03	Water	10/22/20 11:56	10/22/20 15:08	

Green Analytical Laboratories

A handwritten signature in black ink, reading "Debbie Zufelt".

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.

Page 2 of 10 2010242 GAL FINAL 10 27 20 1548 10/27/20 15:48:29



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

DJR Operating
1 Road 3263
Aztec NM, 87410

Project: API
Project Name / Number: [none]
Project Manager: Lanssa Farrell

Reported:
10/27/20 15:48

Fruitland Coal

2010242-01 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO ₃ *	710	10.0	7.16	mg/L	10	10/26/20 14:00	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	10	10/26/20 14:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	10/26/20 14:00	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	710	10.0	7.16	mg/L	10	10/26/20 14:00	2320 B		VJW
Chloride*	7940	500	44.3	mg/L	500	10/26/20 13:20	EPA300.0		AES
Conductivity*	26700	1.00		umho/cm @ 25.0°C	1	10/23/20 11:05	2510 B		VJW
pH*	7.60			pH Units	1	10/23/20 11:05	EPA150.1		VJW
Resistivity	37.4			ohm/cm	1	10/23/20 11:05	2510 B		VJW
Total Dissolved Solids*	14900	40.0		mg/L	4	10/23/20 17:15	EPA160.1		VJW
Specific Gravity	1.010	0.8000		No Unit	1	10/26/20 09:50	ASTM D1429-03		VJW
Sulfate*	<7.62	50.0	7.62	mg/L	50	10/27/20 03:22	EPA300.0	U	AES
Total Recoverable Metals by ICP (E200.7)									
Iron*	<5.00	5.00	0.813	mg/L	50	10/27/20 12:46	EPA200.7	B3	AES
Dissolved Metals by ICP									
Hardness	289	33.1	6.90	mg/L	50	10/27/20 12:15	2340 B		AES
Barium*	1.27	1.00	0.078	mg/L	50	10/27/20 12:16	EPA200.7		AES
Calcium*	76.6	5.00	0.829	mg/L	50	10/27/20 12:15	EPA200.7		AES
Iron*	<2.50	2.50	0.920	mg/L	50	10/27/20 12:15	EPA200.7		AES
Magnesium*	23.7	5.00	1.17	mg/L	50	10/27/20 12:15	EPA200.7		AES
Manganese*	<1.00	1.00	0.078	mg/L	50	10/27/20 12:15	EPA200.7		AES
Potassium*	<50.0	50.0	6.51	mg/L	50	10/27/20 12:15	EPA200.7		AES
Sodium*	4780	50.0	5.03	mg/L	50	10/27/20 12:15	EPA200.7		AES
Strontium*	<5.00	5.00	0.208	mg/L	50	10/27/20 12:15	EPA200.7		AES
Cation/Anion Balance	-5.24								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.

Page 3 of 10 2010242 GAL FINAL 10 27 20 1548 10/27/20 15:48:29



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

DJR Operating
1 Road 3263
Aztec NM, 87410

Project: API
Project Name / Number: [none]
Project Manager: Lanssa Farrell

Reported:
10/27/20 15:48

Gallup Dakota

2010242-02 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO ₃ *	710	10.0	7.16	mg/L	10	10/26/20 14:00	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	10	10/26/20 14:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	10/26/20 14:00	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	710	10.0	7.16	mg/L	10	10/26/20 14:00	2320 B		VJW
Chloride*	8970	500	44.3	mg/L	500	10/26/20 13:39	EPA300.0		AES
Conductivity*	30000	1.00		umho/cm @ 25.0°C	1	10/23/20 11:05	2510 B		VJW
pH*	7.21			pH Units	1	10/23/20 11:05	EPA150.1		VJW
Resistivity	33.3			ohm/cm	1	10/23/20 11:05	2510 B		VJW
Total Dissolved Solids*	17400	40.0		mg/L	4	10/23/20 17:15	EPA160.1		VJW
Specific Gravity	1.010	0.8000		No Unit	1	10/26/20 09:50	ASTM D1429-03		VJW
Sulfate*	393	50.0	7.62	mg/L	50	10/27/20 03:41	EPA300.0		AES
Total Recoverable Metals by ICP (E200.7)									
Iron*	25.0	5.00	0.813	mg/L	50	10/27/20 12:53	EPA200.7	B3	AES
Dissolved Metals by ICP									
Hardness	423	33.1	6.90	mg/L	50	10/27/20 12:18	2340 B		AES
Barium*	<1.00	1.00	0.078	mg/L	50	10/27/20 12:19	EPA200.7		AES
Calcium*	119	5.00	0.829	mg/L	50	10/27/20 12:18	EPA200.7		AES
Iron*	19.5	2.50	0.920	mg/L	50	10/27/20 12:18	EPA200.7		AES
Magnesium*	30.7	5.00	1.17	mg/L	50	10/27/20 12:18	EPA200.7		AES
Manganese*	<1.00	1.00	0.078	mg/L	50	10/27/20 12:18	EPA200.7		AES
Potassium*	103	50.0	6.51	mg/L	50	10/27/20 12:18	EPA200.7		AES
Sodium*	5910	50.0	5.03	mg/L	50	10/27/20 12:18	EPA200.7		AES
Strontium*	18.6	5.00	0.208	mg/L	50	10/27/20 12:18	EPA200.7		AES
Cation/Anion Balance	-1.18								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.

Page 4 of 10 2010242 GAL FINAL 10 27 20 1548 10/27/20 15:48:29



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

DJR Operating
1 Road 3263
Aztec NM, 87410

Project: API
Project Name / Number: [none]
Project Manager: Lansa Farrell

Reported:
10/27/20 15:48

Pictured Cliffs

2010242-03 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO ₃ *	540	10.0	7.16	mg/L	10	10/26/20 14:00	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	10	10/26/20 14:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	10/26/20 14:00	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	540	10.0	7.16	mg/L	10	10/26/20 14:00	2320 B		VJW
Chloride*	27300	1000	88.6	mg/L	1000	10/26/20 13:59	EPA300.0		AES
Conductivity*	63100	1.00		umho/cm @ 25.0°C	1	10/23/20 11:05	2510 B		VJW
pH*	7.31			pH Units	1	10/23/20 11:05	EPA150.1		VJW
Resistivity	15.8			ohm/cm	1	10/23/20 11:05	2510 B		VJW
Total Dissolved Solids*	38800	100		mg/L	10	10/23/20 17:15	EPA160.1		VJW
Specific Gravity	1.025	0.8000		No Unit	1	10/26/20 09:50	ASTM D1429-03		VJW
Sulfate*	<15.2	100	15.2	mg/L	100	10/27/20 04:01	EPA300.0	U	AES
Total Recoverable Metals by ICP (E200.7)									
Iron*	67.4	10.0	1.63	mg/L	100	10/27/20 12:56	EPA200.7	B3	AES
Dissolved Metals by ICP									
Hardness	1540	66.2	13.8	mg/L	100	10/27/20 12:25	2340 B		AES
Barium*	46.4	2.00	0.155	mg/L	100	10/27/20 12:26	EPA200.7		AES
Calcium*	411	10.0	1.66	mg/L	100	10/27/20 12:25	EPA200.7		AES
Iron*	5.12	5.00	1.84	mg/L	100	10/27/20 12:25	EPA200.7		AES
Magnesium*	125	10.0	2.35	mg/L	100	10/27/20 12:25	EPA200.7		AES
Manganese*	<2.00	2.00	0.155	mg/L	100	10/27/20 12:25	EPA200.7		AES
Potassium*	<100	100	13.0	mg/L	100	10/27/20 12:25	EPA200.7		AES
Sodium*	11900	100	10.1	mg/L	100	10/27/20 12:25	EPA200.7		AES
Strontium*	70.5	10.0	0.416	mg/L	100	10/27/20 12:25	EPA200.7		AES
Cation/Anion Balance	-17.24								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.

Page 5 of 10 2010242 GAL FINAL 10 27 20 1548 10/27/20 15:48:29

Entrada Formation Water Samples

1. Entrada SWD

Section 8-25N-3W

2. Santa Fe 20 No. 1 SWD

Section 20-21N-8W

3. Herry Monster #3 SWD

Section 11-24N-11W



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

DJR Operating
1 Road 3263
Aztec NM, 87410

Project: API
Project Name / Number: North Alamito WDW #1
Project Manager: Dave Brown

Reported:
11/03/20 15:47

North Alamito WDW #1

2010288-01 (Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO ₃ *	290	10.0	7.16	mg/L	5	10/30/20 14:00	2320 B		JDA
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	10/30/20 14:00	2320 B		JDA
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	10/30/20 14:00	2320 B		JDA
Alkalinity, Total as CaCO ₃ *	290	10.0	7.16	mg/L	5	10/30/20 14:00	2320 B		JDA
Chloride*	2350	200	17.7	mg/L	200	11/02/20 12:04	EPA300.0		JDA
Conductivity*	19300	1.00		umho/cm @ 25.0°C	1	10/30/20 13:35	2510 B		JDA
pH*	7.40			pH Units	1	10/30/20 11:15	EPA150.1		JDA
Resistivity	51.8			ohm/cm	1	10/30/20 13:35	2510 B		JDA
Total Dissolved Solids*	13200	20.0		mg/L	2	10/30/20 14:29	EPA160.1		JDA
Specific Gravity	1.011	0.8000		No Unit	1	10/30/20 14:00	ASTM D1429-03		JDA
Sulfate*	5300	200	30.5	mg/L	200	11/02/20 12:04	EPA300.0		JDA
Total Recoverable Metals by ICP (E200.7)									
Iron*	55.1	1.25	0.407	mg/L	25	11/03/20 11:33	EPA200.7		AES
Dissolved Metals by ICP									
Hardness	494	16.5	3.45	mg/L	25	11/03/20 14:30	2340 B		AES
Barium*	<0.500	0.500	0.039	mg/L	25	11/03/20 14:30	EPA200.7		AES
Calcium*	178	2.50	0.415	mg/L	25	11/03/20 14:30	EPA200.7		AES
Iron*	<1.25	1.25	0.460	mg/L	25	11/03/20 14:30	EPA200.7		AES
Magnesium*	12.0	2.50	0.587	mg/L	25	11/03/20 14:30	EPA200.7		AES
Manganese*	0.514	0.500	0.039	mg/L	25	11/03/20 14:30	EPA200.7		AES
Potassium*	1280	25.0	3.25	mg/L	25	11/03/20 14:30	EPA200.7		AES
Sodium*	3110	25.0	2.51	mg/L	25	11/03/20 14:30	EPA200.7		AES
Strontium*	8.44	2.50	0.104	mg/L	25	11/03/20 14:30	EPA200.7		AES
Cation/Anion Balance	-98								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.

Page 3 of 8 2010288 GAL FINAL 11 03 20 1547 11/03/20 15:47:46



(970) 247-4220
dzufelt@greenanalitycal.com
75 Suttle St Durango, CO 81303
Fax: (970) 247-4227

FORM-006
COC - Revision 6.0

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

Multi-Chem Analytical Laboratory
1122 S. FM1788
Midland, TX 76708

Units of Measurement: Standard

multi-chem
A HALLIBURTON SERVICE

Water Analysis Report

Production Company: **TNT Environmental**
Well Name: **SWD ENTRADA**
Sample Point: **SWD**
Sample Date: **11/20/2014**
Sample ID: **WA-294316**

Sales Rep: **Greg Ramelho**
Lab Tech: **Andrew Callaghan**

Scaling potential predicted using ScaleSoftPitzer from
Brine Chemistry Consortium (Rice University)

Sample Specifics		Analyte Properties in Sample Specifics	
Test Date:	11/25/2014	Cations	Anions
System Temperature 1 (°F):	31	Sodium (Na):	4455.35
System Pressure 1 (psig):	15	Potassium (K):	44.79
System Temperature 2 (°F):	300	Magnesium (Mg):	23.10
System Pressure 2 (psig):	300	Calcium (Ca):	115.57
Calculated Density (g/ml):	1.0050	Strontium (Sr):	7.60
pH:	7.60	Barium (Ba):	9.30
Calculated TDS (mg/L):	12320.63	Iron (Fe):	1.82
CO2 in Gas (%):		Zinc (Zn):	0.10
Dissolved CO2 (mg/L):	80.00	Lead (Pb):	0.00
H2S in Gas (%):		Ammonia NH3:	
H2S in Water (mg/L):	2.50	Manganese (Mn):	0.55
		Chloride (Cl):	6000.00
		Sulfate (SO4):	1094.00
		Bicarbonate (HCO3):	427.00
		Carbonate (CO3):	120.00
		Acetic Acid (CH3COO):	
		Propionic Acid (C2H5COO):	
		Butanoic Acid (C3H7COO):	
		Isobutyric Acid ((CH3)2CHCOO):	
		Fluoride (F):	
		Bromine (Br):	
		Silica (SiO2):	21.35

Notes:

(PTB = Pounds per Thousand Barrels)

Temp (°F)	PSI	SG	PTB	SG	PTB	SG	PTB	SG	PTB	SG	PTB	SG	PTB	SG	PTB	SG	PTB
300.00	300.00	1.90	85.63	1.92	5.47	2.21	0.99	1.95	1.31	0.00	0.00	0.00	1.02	0.00	0.00	6.95	0.05
270.00	268.00	1.58	77.73	1.90	5.47	2.04	0.99	1.80	1.30	0.00	0.00	0.00	0.00	0.00	0.00	7.04	0.05
240.00	236.00	1.47	68.31	1.90	5.47	1.89	0.98	1.63	1.29	0.00	0.00	0.00	0.00	0.00	0.00	7.17	0.05
210.00	205.00	1.26	57.99	1.92	5.47	1.76	0.97	1.45	1.27	0.00	0.00	0.00	0.00	0.00	0.00	7.32	0.05
180.00	173.00	1.06	47.51	1.98	5.48	1.67	0.96	1.25	1.24	0.00	0.00	0.00	0.00	0.00	0.00	7.53	0.05
150.00	141.00	0.88	37.61	2.08	5.49	1.62	0.96	1.03	1.19	0.00	0.00	0.00	0.00	0.00	0.00	7.79	0.05
120.00	110.00	0.71	29.02	2.23	5.51	1.64	0.96	0.81	1.11	0.00	0.00	0.00	0.00	0.00	0.00	8.13	0.05
90.00	78.00	0.57	22.00	2.44	5.52	1.73	0.97	0.59	0.96	0.00	0.00	0.00	0.00	0.00	0.00	8.56	0.05
60.00	48.00	0.46	16.76	2.73	5.53	1.92	0.98	0.36	0.73	0.00	0.00	0.00	0.00	0.00	0.00	9.11	0.05
31.00	15.00	0.39	13.73	3.10	5.53	2.26	0.99	0.16	0.39	0.00	0.00	0.00	0.00	0.00	0.00	9.83	0.05

Temp (°F)	PSI	SG	PTB	SG	PTB	SG	PTB	SG	PTB	SG	PTB	SG	PTB	SG	PTB	SG	PTB
300.00	300.00	0.00	0.00	0.14	31.79	0.00	0.00	0.91	0.06	0.00	0.00	7.71	25.75	4.14	13.11	9.66	1.42
270.00	268.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.06	0.00	0.00	6.34	25.03	3.32	12.39	8.62	1.41
240.00	236.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.05	0.00	0.00	4.87	22.02	2.45	10.55	7.49	1.41
210.00	205.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.03	0.00	0.00	3.30	15.59	1.51	7.07	6.31	1.40
180.00	173.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67	7.51	0.54	2.57	5.08	1.38
150.00	141.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.84	1.32
120.00	110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.66	1.18
90.00	78.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.55	0.90
60.00	48.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.45
31.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01



CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS
WATER ANALYSIS

30-045-22291
G-20-21n-8w

RECEIVED

MAR 25 1977

Minerals Management Inc.

File WA - 5

Company Dome Petroleum Corp. Well Name Santa Fe 20 No. 1 Sample No. SS-2
Formation _____ Depth _____ Sampled From _____
Location Sec 20 T 21N R 8W Field _____ County San Juan State N.M.
Date Sampled 3-9-77 Date Analyzed 3-13-77 Engineer RGC

Total Dissolved Solids 11,114.5 mg/L

Sp. Gr. 1.009 @ 70 °F.

Resistivity 1.0 ohm-meters @ 70 °F.

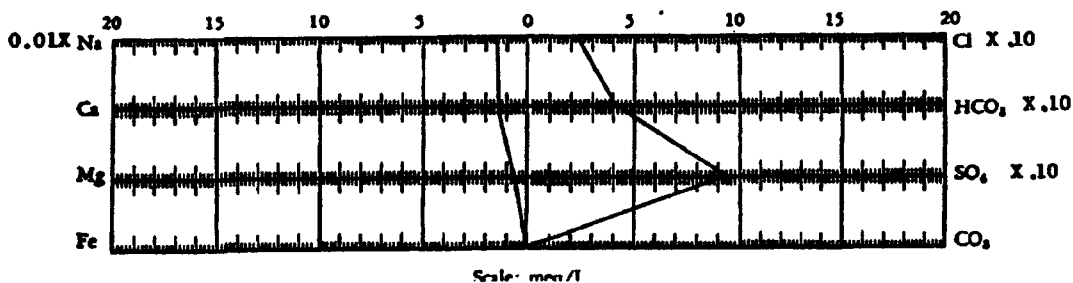
Hydrogen Sulfide Present

pH 7.73

Constituents	meq/L	mg/L
Sodium	<u>140.44</u>	<u>3228.7</u>
Calcium	<u>1.35</u>	<u>27.0</u>
Magnesium	<u>0.73</u>	<u>8.9</u>
Iron	<u>0.03</u>	<u>0.9</u>
Barium	<u>ND</u>	<u>ND</u>

Constituents	meq/L	mg/L
Chloride	<u>25.47</u>	<u>903.0</u>
Bicarbonate	<u>41.73</u>	<u>2546.0</u>
Sulfate	<u>91.61</u>	<u>4400.0</u>
Carbonate	<u>ND</u>	<u>ND*</u>
Hydroxide	<u>ND</u>	<u>ND</u>

*ND = Less than 0.1 mg/L



HALLIBURTON

Water Analysis Report

30-045-33217

F-11-24n-11w

To:	<u>Dugan Production</u>	Date:	<u>11/10/2005</u>
Submitted by:	<u>Halliburton Energy Services</u>	Date Rec:	<u>11/10/2005</u>
Attention:	<u>Darrin Steed</u>	Report #:	<u>FLNMSA44</u>
Well Name:	<u>Herry Monster #3 SWD</u>	Formation:	<u>Entrada/SWD</u>

Specific Gravity	1.005	
pH	8.4	
Resistivity	0.89	@ 78° F
Iron (Fe)	0	Mg / L
Potassium (K)	200	Mg / L
Sodium (Na)	4165	Mg / L
Calcium (Ca)	176	Mg / L
Magnesium (Mg)	15	Mg / L
Chlorides (Cl)	2200	Mg / L
Sulfates (SO4)	2000	Mg / L
Carbonates (CO3)	40	Mg / L
Bicarbonates (HCO3)	5612	Mg / L
Total Dissolved Solids	14408	Mg / L

Respectfully: Bill Loughridge
Title: Senior Scientist
Location: Farmington, NM

Application for Authorization to Inject

DJR Operating, LLC

North Alamito WDW #1

Part VIII. Geologic Data

The proposed injection interval is the Entrada Sandstone from approximately 6875' to 7070' below the surface.

The proposed injection interval for the North Alamito water disposal well is the Entrada Sandstone from approximately 6875 ft to 7070 ft.

Point of diversion data (POD) obtained from the New Mexico Office of the State Engineer (NMOSE) on July 17, 2019 and field verification performed by DJR indicates that there are no water wells located within 1 mile of the proposed North Alamito water disposal well.

The NMOSE POD dataset also indicates that the closest surface water diversion to the North Alamito water disposal well is SD 05187, which is located 20.7 miles to the north west of the North Alamito water disposal well.

The National Hydrography Dataset indicates that the closest surface water feature to the North Alamito water disposal well is an unnamed arroyo, which is located 1,300 ft to the north west.

There are no known drinking water sources below the Mesaverde interval. The formation tops in the wells are as follows:

Ojo Alamo	725
Kirtland	765
Fruitland	1025
Pictured Cliffs	1280
Lewis	1460
Chacra	2035
Cliff House	2730
Menefee	2765
Point Lookout	3675
Mancos	3845
Gallup	4515
Greenhorn	5625
Dakota	5775
Todilto	6815
Entrada	6875
Total Depth	7070

Part IX. Stimulation Program

Following injection rate tests, it may be necessary to stimulate the Entrada Sandstone by acidizing or fracturing.

Part X. Logging and Test Data

All logs and test data for the injection well will be submitted to the New Mexico Oil & Gas Conservation Division in Aztec, NM.

Part XI. Fresh Water Samples

Point of diversion data (POD) obtained from the New Mexico Office of the State Engineer (NMOSE) on July 17, 2019 and field verification performed by DJR indicates that there are no water wells located within 1 mile of the proposed North Alamito water disposal well.

NORTH ALAMITO UNIT SWD #001
NOTICE OF APPLICATION
FORM C-108 FOR AUTHORIZATION TO INJECT
AFFIDAVIT OF MAILING

SURFACE OWNER UNDER SWD LOCATION

BUREAU OF LAND MANAGEMENT
301 DINOSAUR TRAIL
SANTA FE, NM 87508

BUREAU OF LAND MANAGEMENT
6251 COLLEGE BLVD., STE. A
FARMINGTON, NM 87402
ATTN: JOE KILLINS

NEW MEXICO STATE LAND OFFICE
310 OLD SANTA FE TRAIL
SANTA FE, NM 87501

LEASEHOLD OWNERS WITHIN ONE-HALF MILE RADIUS OF SWD LOCATION

DUGAN PRODUCTION CORP.
P.O. BOX 420
FARMINGTON, NM 87499
ATTN: RAMON HANCOCK

ENDURING RESOURCES, LLC.
511 16TH STREET, STE. 700
DENVER, CO 80202
ATTN: PAUL BROOKE

DJR ENERGY
1600 BROADWAY STE 1960
DENVER CO 80202-4955

US POSTAGE AND FEES PAID
FIRST-CLASS
Aug 19 2019
Mailed from ZIP 80202
7 oz First-Class Mail Flats Rate

USPS CERTIFIED MAIL



9407 1108 9876 5041 7496 64

USA
BUREAU OF LAND MANAGEMENT
301 DINOSAUR TRL
SANTA FE NM 87508-1560



071S00777793

DJR ENERGY
1600 BROADWAY STE 1960
DENVER CO 80202-4955

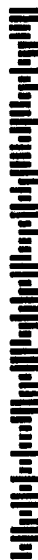
US POSTAGE AND FEES PAID
FIRST-CLASS
Aug 19 2019
Mailed from ZIP 80202
7 oz First-Class Mail Plus Rate

USPS CERTIFIED MAIL



9407 1108 9876 5041 7500 35

ENDURING RESOURCES
PAUL BROOKE
511 16TH ST STE 700
DENVER CO 80202-4248



071S00777793

DJR ENERGY
1600 BROADWAY STE 1960
DENVER CO 80202-4955

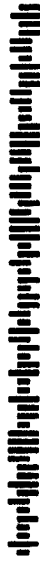
US POSTAGE AND FEES PAID
FIRST-CLASS
Aug 19 2019
Mailed from ZIP 80202
7 oz First-Class Mail Flat Rate

USPS CERTIFIED MAIL



9407 1108 9876 5041 7499 30

DUGAN PRODUCTION CORP.
RAMON HANCOCK
PO BOX 420
FARMINGTON NM 87499-0420



071S00777793

DJR ENERGY
1600 BROADWAY STE 1960
DENVER CO 80202-4955

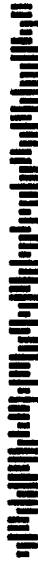
US POSTAGE AND FEES PAID
FIRST-CLASS
Aug 19 2019
Mailed from ZIP 80202
7 oz First-Class Mail Flat Rate

USPS CERTIFIED MAIL



9407 1108 9876 5041 7497 87

BUREAU OF LAND MANAGEMENT
JOE KILINS
6251 COLLEGE BLVD STE A
FARMINGTON NM 87402-1738



071S00777793

THE DAILY TIMES

AFFIDAVIT OF PUBLICATION

Ad No.
0001293746

ANIMAS PROPERTY LAW P.C.
858 MAIN, SUITE 204

DURANGO CO 81301

I, being duly sworn say: THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the State of New Mexico for publication and appeared in the internet at The Daily Times web site on the following days(s):

08/13/19


Legal Clerk

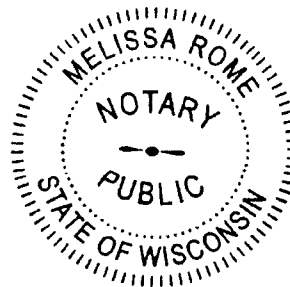
Subscribed and sworn before me this
13th of August 2019.


State of WI, County of Brown
NOTARY PUBLIC

1-12-2021
My Commission Expires

DJR Operating, LLC, 1600 Broadway, Suite 1960, Denver, CO 80202 is making application for administrative approval to dispose of produced and flow-back water by underground injection. Contact person is Ningning Li, Phone 303-407-7390. The proposed disposal site is North Alamito WDW #1, located 908' FNL & 1176' FEL, Sec 1 T22N R8W, San Juan Co NM. Water will be injected into the Entrada Sandstone between the depths of approximately 6875' to 7070' below the surface. Maximum anticipated injection pressure is 1300 psi. Maximum injection rate will be 6000 barrels of water per day. Any interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days of the date of this publication.

Legal No. 1293746 published in The Daily Times on August 13, 2019.



Ad#:0001293746
P O : North Alamito WDW #1
of Affidavits :0.00