

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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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: Solaris Water Midstream, LLC **OGRID Number:** 371643
Well Name: Ironside SWD #1 **API:** _____
Pool: Proposed: SWD, Devonian-Silurian **Pool Code:** 97869

**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
- 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.

Randall Hicks (agent)

Print or Type Name

Randall Hicks

Signature

EXHIBIT *1*

SOLARIS
Case 20812

April 15, 2019

Date

505 238 9515

Phone Number

r@rthicksconsult.com

e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ ☒ Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes _____ No
- II. OPERATOR: Solaris Water Midstream, LLC
ADDRESS: 907 Tradewinds Blvd, Suite B, Midland, TX 79706
CONTACT PARTY: Randall Hicks (Agent) PHONE: 505 238 9515
- 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: _____
- 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: Randall Hicks TITLE: Agent
SIGNATURE:  DATE: 4/23/2019
E-MAIL ADDRESS: R@rthicksconsult.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: _____

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.

INJECTION WELL DATA SHEET

OPERATOR: Solaris Water Midstream, LLCWELL NAME & NUMBER: Ironside SWD #1WELL LOCATION: 1270 FSL 175 FEL
FOOTAGE LOCATION

UNIT LETTER

32

SECTION

25S

TOWNSHIP

32E

RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: See Attachments Casing Size: Cemented with: sx. or ft³Top of Cement: Method Determined: Intermediate CasingHole Size: Casing Size: Cemented with: sx. or ft³Top of Cement: Method Determined: Production CasingHole Size: Casing Size: Cemented with: sx. or ft³Top of Cement: Method Determined: Total Depth: Injection Interval feet to

(Perforated or Open Hole: indicate which)

Other Type of Tubing/Casing Seal (if applicable): _____

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 the Injection Formation: Proposed: SWD, Devonian-Silurian

3. Name of Field or Pool (if applicable): _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. _____ No _____

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: See Attachments

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-0161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 748-1283 Fax: (505) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3460 Fax: (505) 478-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name IRONSIDE STATE SWD	Well Number 1
OGRID No.	Operator Name SOLARIS WATER MIDSTREAM	Elevation 3317'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	32	25 S	32 E		1270	SOUTH	175	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
---------------	---------	----------	-------	---------	---------------	------------------	---------------	----------------	--------

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

N:398525.6 E:735647.8 (NAD 83)	N:398556.9 E:738318.3 (NAD 83)	N:398579.9 E:740986.9 (NAD 83)
N:395891.4 E:735664.1 (NAD 83)	N:395936.7 E:740994.4 (NAD 83)	
N:393253.2 E:735675.2 (NAD 83)	N:393276.7 E:738338.9 (NAD 83)	N:393301.8 E:741002.9 (NAD 83)

SURFACE LOCATION
Lat - N 32.083115°
Long - W 103.689228°
NMSPCE- N 394569.9
E 740823.8
(NAD-83)

175'
1270'

OPERATOR CERTIFICATION

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

Signature _____ Date _____

Printed Name _____

Email Address _____

SURVEYOR CERTIFICATION

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

MARCH 19, 2019

Date Surveyed _____

Signature & Seal of Professional Surveyor _____

Certificate No. Gary L. Jones 7977

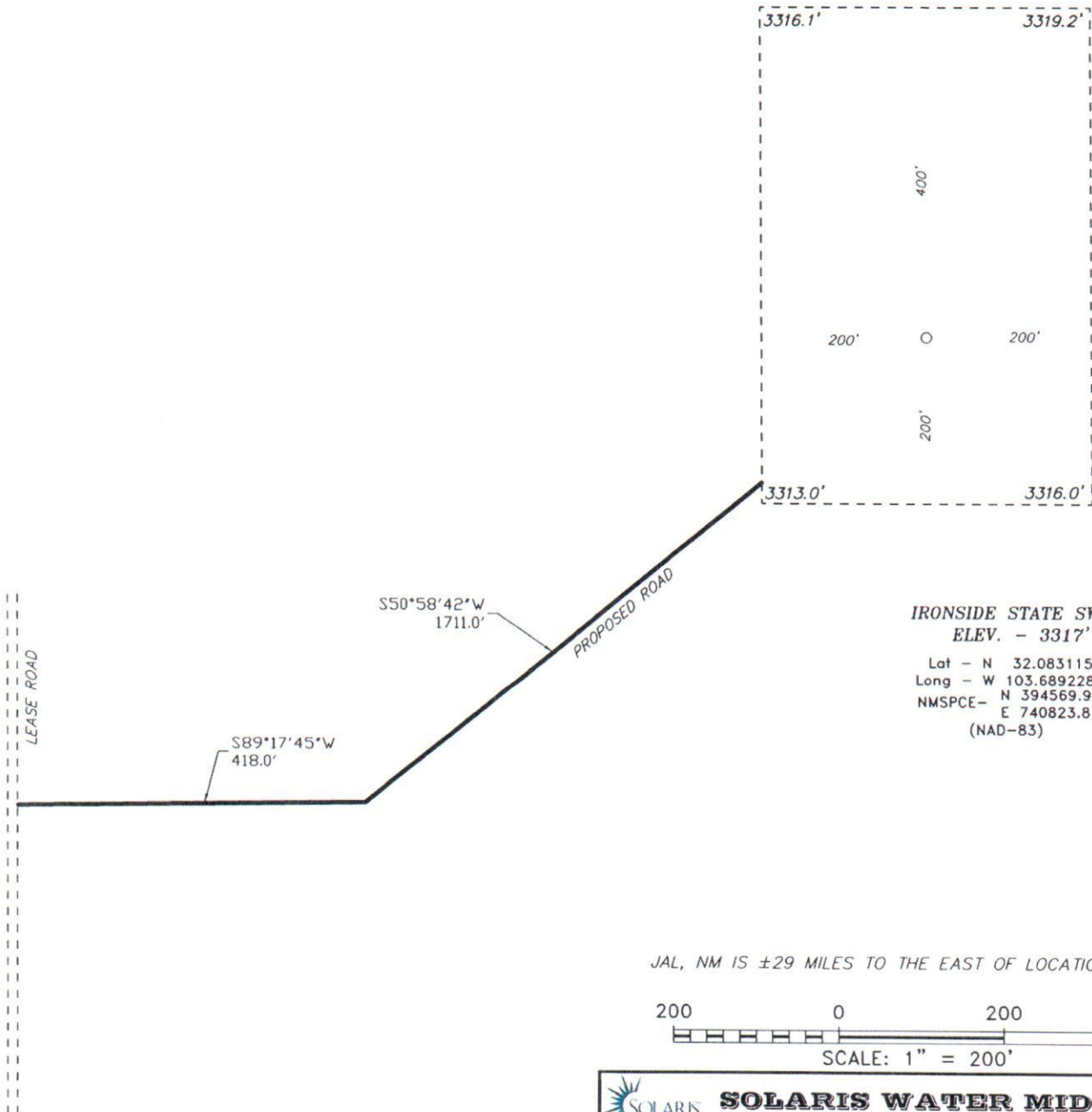
DAVID A. JONES

0' 500' 1000' 1500' 2000'

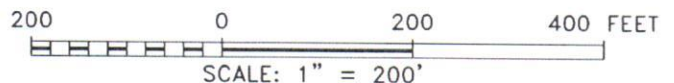
SCALE: 1" = 1000'

WO Num.: 34390

SECTION 32 TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



JAL, NM IS ± 29 MILES TO THE EAST OF LOCATION.



P.O. Box 1786 (575) 393-7316 - Office
focused on excellence 1120 N. West County Rd. (575) 392-2206 - Fax
in the oilfield Hobbs, New Mexico 88241 basin-surveys.com



SOLARIS WATER MIDSTREAM

REF: IRONSIDE STATE SWD 1 / WELL PAD TOPO

THE IRONSIDE STATE SWD 1 LOCATED 1270' FROM
THE SOUTH LINE AND 175' FROM THE EAST LINE OF
SECTION 32, TOWNSHIP 25 SOUTH, RANGE 32 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.

W.O. Number: 34390

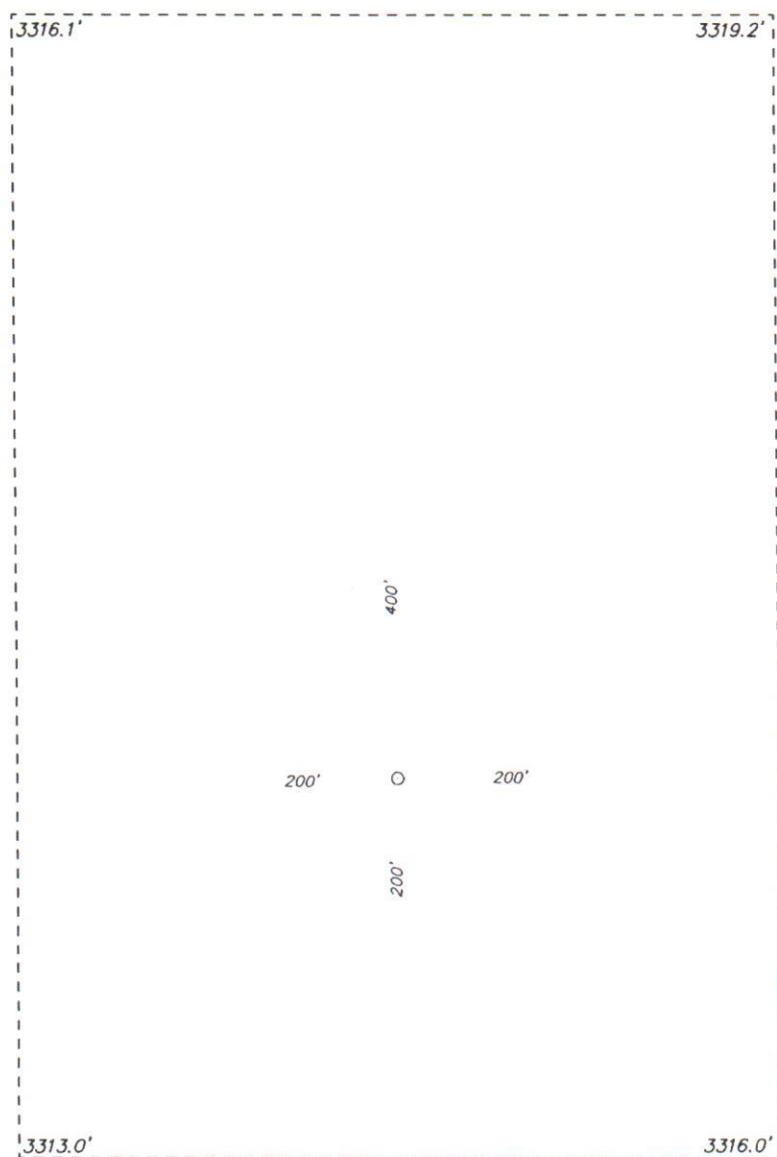
Drawn By: J GOAD

Date: 3-21-2019

Survey Date: 3-19-2019

Sheet 1 of 1 Sheets

SECTION 32 TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



100 0 100 200 FEET

SCALE: 1" = 100'



SOLARIS WATER MIDSTREAM

REF: IRONSIDE STATE SWD 1 / WELL PAD TOPO

THE IRONSIDE STATE SWD 1 LOCATED 1270' FROM
THE SOUTH LINE AND 175' FROM THE EAST LINE OF
SECTION 32, TOWNSHIP 25 SOUTH, RANGE 32 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.



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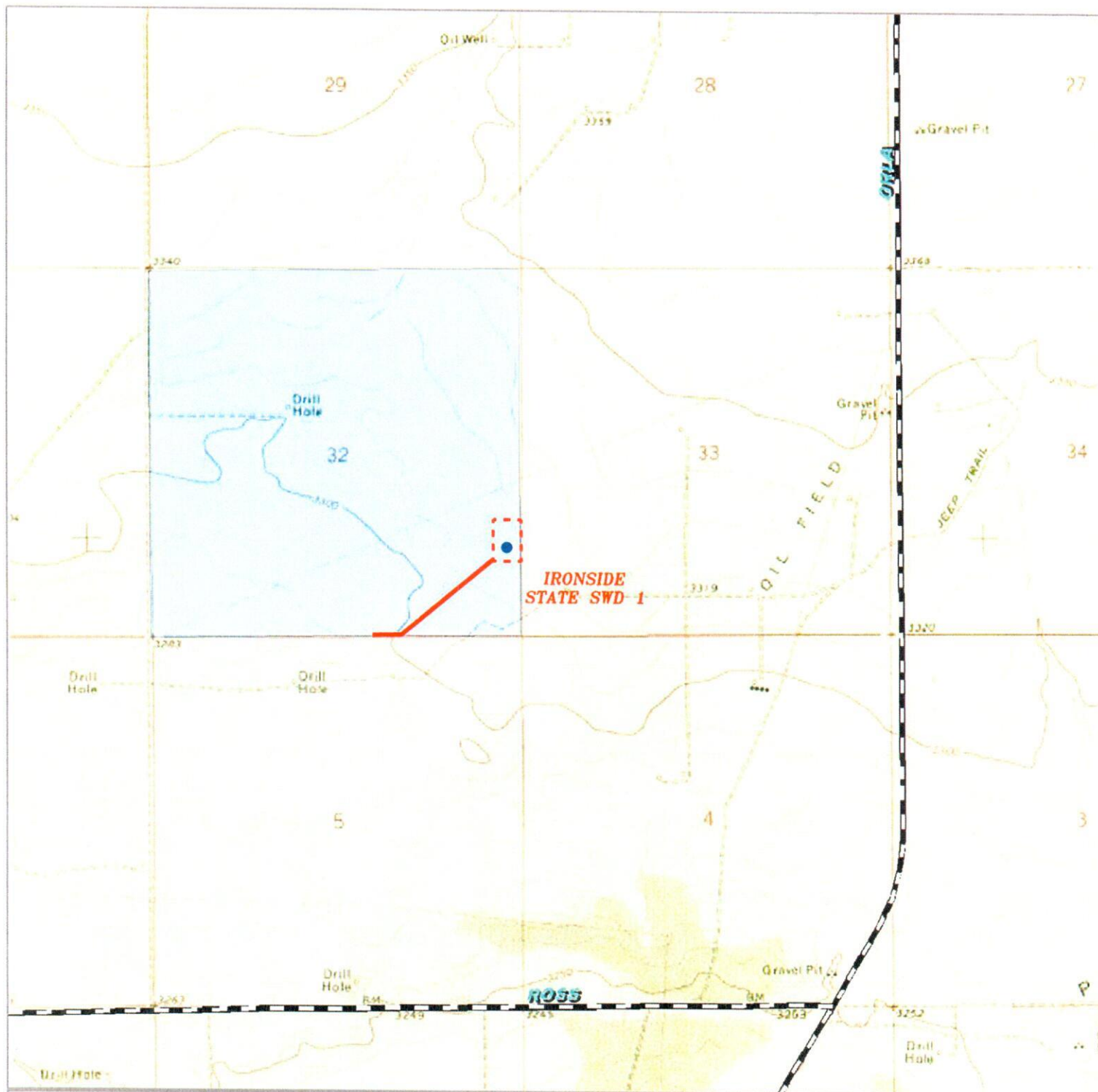
W.O. Number: 34390

Drawn By: J GOAD

Date: 3-21-2019

Survey Date: 3-19-2019

Sheet 1 of 1 Sheets



IRONSIDE STATE SWD 1

Located 1270' FSL & 175' FEL
 Section 32, Township 25 South, Range 32 East,
 N.M.P.M., Lea County, New Mexico.



P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
 (575) 392-2206 - Fax
basinsurveys.com

0' 1000' 2000' 3000' 4000'
 SCALE: 1" = 2000'

W.O. Number: JG - 34390

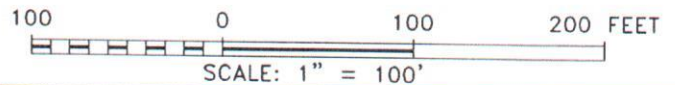
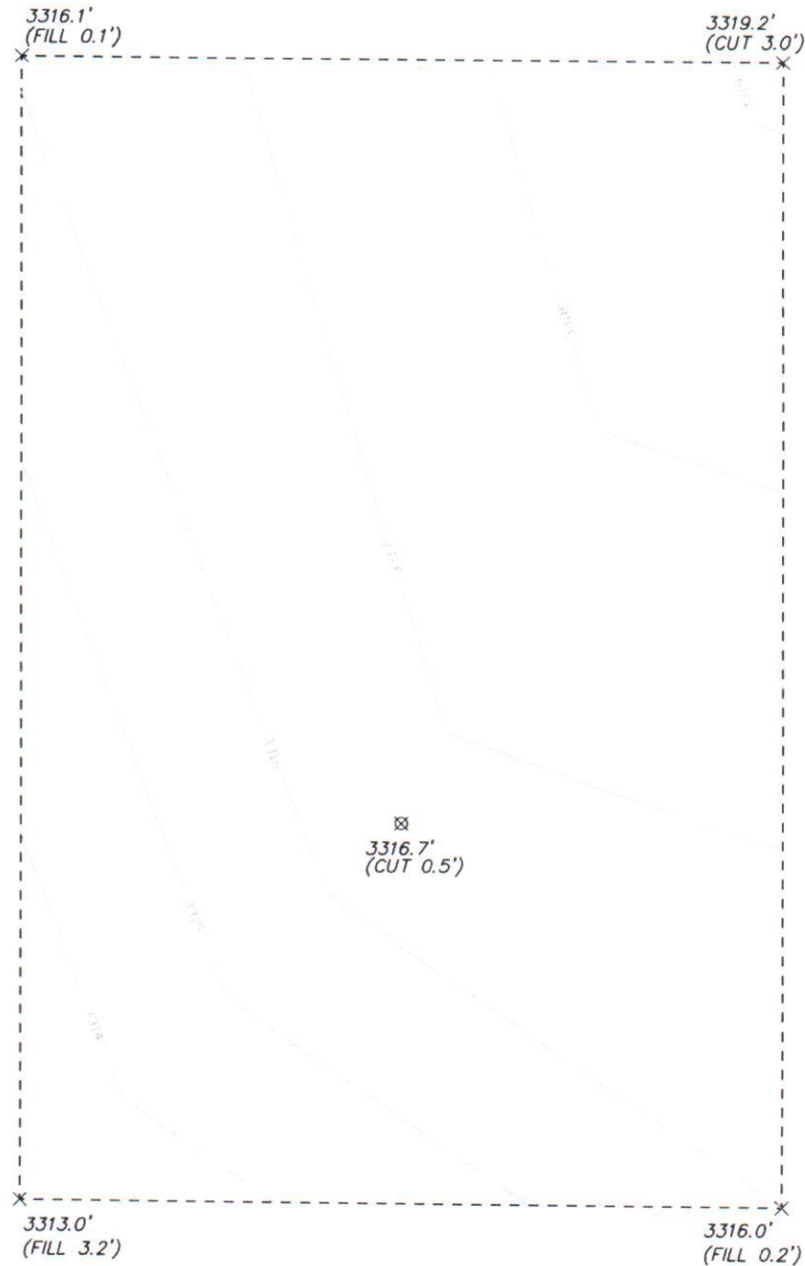
Survey Date: 3-19-2019

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND



Q

SECTION 32 TOWNSHIP 25 SOUTH, RANGE 32 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



SOLARIS WATER MIDSTREAM

REF: IRONSIDE STATE SWD 1 / CUT & FILL

THE IRONSIDE STATE SWD 1 LOCATED 1270' FROM
THE SOUTH LINE AND 175' FROM THE EAST LINE OF
SECTION 32, TOWNSHIP 25 SOUTH, RANGE 32 EAST,
N.M.P.M., LEA COUNTY, NEW MEXICO.



P.O. Box 1786 (575) 393-7316 - Office
1120 N. West County Rd. (575) 392-2206 - Fax
Hobbs, New Mexico 88241 basin-surveys.com

W.O. Number: 34390

Drawn By: J GOAD

Date: 3-21-2019

Survey Date: 3-19-2019

Sheet 1 of 1 Sheets

Attachments to C-108

Copy of well bore diagram

Section III-XII Written descriptions to supplement C-108

Plates referenced in written descriptions

Tables referenced in written descriptions

OSE well logs referenced in written descriptions

Section XIII Proof of Notice

SOLARIS WATER MIDSTREAM - WELLBORE DATA SHEET

Ironside State SWD #1



AREA/SYSTEM:	Pecos Star System
WELL NAME:	Ironside State SWD #1
OBJECTIVE:	Devonian
SHL:	1270' FSL & 175' FEL
BHL:	Same as SHL
SURFACE ELEV.:	3317
TOTAL DEPTH:	18,550'
WELL DESIGN BY:	CHRIS GIESE

REVIEWED BY JIM BRANNIGAN AND ED MARTIN

MUD LOGGING E LOGGING/ DIRECTIONAL	CASING SIZE (IN.)	RKB DRILL DEPTH	MD	TVD	BOPE	FORMATION	HOLE SIZE (IN.)	MUD WT.	FRAC GRAD
Grnd Level	RKB	30							
GL ELEV									
30"			0	0	Open	Set and grouted		8.8	
			1,125			Rustler	18 125"	8.4	
16"			1,450	1,450	21-1/4"-5M Annular/Diverter			8.4	
84 lb/ft J55, BTC			1,500			T/Salt		9.5	
Mud Logging to begin @ 2,500'			4,300			B/Salt		9.5	
			4,500			T/Lamar	14 75"	to 10	
13.375"			4,550	4,550	13-5/8"-5M Annular			10.0	
68 lb/ft L-80, EZ-GO FJ3					13-5/8"-5M BOP's			9.4	FIT
			5,550			Cherry Canyon			
			7,125			Brushy Canyon			
			8,600			Bone Spring			
			9,500			1st BS Sand			
			10,200			2nd BS Sand			
			11,325			3rd BS Sand	12 25"	9.4	
			11,750			Wolfcamp		to 10.0	
TOL			11,650	11,650					
9.625"			11,850	11,850	13-5/8"-5M Annular			10.0	
53.50 lb/ft HCP-110, BTC					13-5/8"-10M BOP's			12.5	15.6
			13,525			Canyon			
			13,725			Strawn			
			14,000			Atoka			
			14,550			Morrow			
			14,850			Morrow Clastics			
			15,475			Morrow Lower	8 5"	12.5	
			15,975			Barnett		to 13.5	
Liner Wedge 512 7.625"			17,125	17,125	13-5/8"-5M Annular	Devonian			
39 lb/ft P-110			17,125		13-5/8"-10M BOP's			13.5	
Run #1									
GR/NEUTRON 18,550							6 5"	9.0	
USIT/CBL 17,125									
Dual 0"									
TO 18,550			18,550	18,550	13-5/8"-5M Annular	Base of Fusselman			
					13-5/8"-10M BOP's				

Casing Set Depths/ Cement								
Conductor = 120'	Hole Size	Casing Size	Casing Grade	Casing Weight	Setting Depth		Sacks of Cement	TOC
Surface	18.125"	16"	J55, BTC	84 lb/ft	0	1450	3,343	Surface
1st Intermediate	14.75"	13.375"	L-80, EZ-GO FJ3	68 lb/ft	0	4550	2,742	Surface
2nd Intermediate	12.25"	9.625"	HCP-110, BTC	53.50 lb/ft	0	11850	2,829	Surface
Liner Wedge 513	8.5"	7.625"	P-110	39 lb/ft	11650	17125	223	Liner Top
Openhole	6.5"				17125	18550		

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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**

Lease Name: Ironside SWD #1

Property Code	Property Name IRONSIDE STATE SWD	Well Number 1
OGRID No.	Operator Name SOLARIS WATER MIDSTREAM	Elevation 3317'

Surface Location									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	32	25 S	32 E		1270	SOUTH	175	EAST	LEA

- 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**

The attached Wellbore Data Sheet provides all of the design specifics required and a tabulation of these data are shown on the diagram...

The formation tops were established by Jim Brannigan, R.G. CPG. Tops below the 2nd Bone Spring Sand were picked using intervals from wells with e-logs or the NMOCD Form C-105. The upper section was picked by using the Yates Petroleum Corp. #1H Jefe BSJ Fed. Com. In Section 32-T25S-R32E. The result of the evaluation of Mr. Brannigan is presented to the right.

- 3. A description of the tubing to be used including its size, lining material, and setting depth**

5-1/2" (20#) internal plastic coated tubing swaged down to 5" (18#) with setting depth of 17,025'

- 4. The name, model, and setting depth of the packer used or a description of any other seal system or assembly used**

Halliburton BWS or equivalent packer set at 17,025'.

Formation	GL	3317
Tops	KB	3347
	SS	TVD
Rustler	2222	1125
T/Salt	1847	1500
B/Salt	-953	4300
T/Lamar	-1153	4500
Bell Canyon	-1178	4525
Cherry Canyon	-2203	5550
Brushy Canyon	-3778	7125
Bone Spring	-5253	8600
1st BS Sand	-6153	9500
2nd BS Sand	-6853	10200
3rd BS Sand	-7978	11325
Wolfcamp	-8403	11750
Canyon	-10178	13525
Strawn	-10378	13725
Atoka	-10653	14000
Morrow	-11203	14550
Morrow Clastics	-11503	14850
Morrow Lower	-12128	15475
Barnett	-12628	15975
Miss LS	-12828	16175
Woodford		
Devonian	-13778	17125
Fusselman		
T/Montoya	-15403	18750
Injection Interval	17125	18550
TD	18550	

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

The proposed injection intervals include both the Devonian and Fusselman and the top 100' of The Montoya in an open-hole interval.

(2) The injection interval and whether it is perforated or open-hole.

The depth interval of the open-hole injection interval is 17,125-18,550 (1,425 feet).

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

The well will be drilled for disposal.

(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

There are no perforated intervals, only the open-hole completion described above.

(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.

Overlying Oil and Gas Zones:

Delaware (4,500')
Bone Spring (8,575')
Wolfcamp (11,725')
Canyon (13,500')
Strawn (13,700')
Atoka (13,975')
Morrow (14,825')

Underlying Oil and Gas Zones:

No underlying oil and gas zones exist.

IV. Is this an expansion of an existing project

No.

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

Plate 1 identifies all OCD listed wells and API numbers. Note that where numerous wells are closely-spaced, the API number may not be labeled for clarity. Table 1 lists all of these wells within the 2-mile area of review.

Plate 2 shows all of the leases and the leaseholder name within the 2-mile area of review. Tabular listing of all mapped leases are presented in

Table 2a BLM leases

Table 2b State of NM leases

Note that Plate 1 shows one apparent BLM lease on private land. This single parcel is the only private land within the area of review. Information on this parcel is presented below.

UPC	TWP	RNG	SECTION	Parcel Code	Number	Name	Address	City	State	Zip Code	Zip Ext
4186151686338	26	32	06	4950302104125	203021	BAKER, JESSE T	PO BOX 24	SILVER CITY	NM	88062	0024

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

One well is either several hundred feet inside or a similar distance outside the area of review, based upon examination of several maps. This well is:

Operator Name and Address MESQUITE SWD INC PO BOX 1479 CARLSBAD NM, 88221				OGRID Number 161968	
Property Code 316377				API Number 30-025-43379	
Property Name PADUCA 6 SWD				Well No 001Y	

Surface Location									
UL - Lot E 2	Section 6	Township 26S	Range 32E	Lot Idn	Feet from 2650	N/S Line S	Feet from 1175	E/W Line W	County LEA

All information on this well can be downloaded from

<http://ocdimage.emnrd.state.nm.us/imaging/WellFileView.aspx?RefType=WF&RefID=30025433790000>.

Data on this well are highlighted in Table 1 and form C-105 follows this text.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected

Proposed Maximum Injection Rate: 40,000 bbl/day

Proposed Average Injection Rate: 30,000 bbl/day

2. Whether the system is open or closed

This is will be an open system. All Solaris SWDs may receive produced water from recycling storage facilities, such as in-ground containments or above-ground steel-walled containments, which are registered or permitted under Rule 34.

3. Proposed average and maximum injection pressure

Proposed Maximum Injection Pressure: 4,081 psi

Proposed Average Injection Rate: 2,800 psi

4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water

The attached Table 3 "Produced Water Chemistry of Nearby Wells" provides the requisite analyses. The Bone Springs and Avalon Formations are the subjects of most of the analyses. These formations, in addition to the Wolfcamp, will provide most of the produced water to the proposed SWD. At the time of writing, we are unaware of any problems associated with disposal of produced water derived from the Bone Springs, Avalon and Wolfcamp into the Devonian injection zone.

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.).

Table 4 presents formational water quality data from the Go-Tech site for Devonian-producing wells. The closest wells represented in Table 4 are more than 30 miles to the east. The value of these data for the purpose of evaluating potential problems relating to the injections of produced water into the proposed injection interval is probably poor. As stated above, we are unaware of any problems associated with disposal of produced water derived from the Bone Springs, Avalon and Wolfcamp into the Devonian injection zone.

***VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth.**

The proposed injection intervals include both the Devonian and Fusselman and the top 100' of The Montoya in an open-hole interval. The highly cemented carbonate nature of the Devonian and Fusselman indicate that favorable open-hole integrity will exist, allowing for the saltwater to be injected without concern of collapse in the open-hole injection interval.

As indicated in Section III.A.2, the approximate depth to the top of the Devonian and Montoya are 17,125 and 18,750 respectively. The depth interval of the injection interval is 17,125-18,550 (1,425 feet).

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.

The Rustler Formation and the Chinle Formation yield water to supply wells in southeastern Eddy County and southwestern Lea County. In the area of the Ironside SWD, the Chinle yields water to wells from 100-200 feet below the ground surface to a depth of about 600 feet. The upper portion of the Rustler Formation yields fresh water to wells in Eddy County and in the area of the Ironside SWD, the depth interval of this potential source of fresh water is about 1125-1400.

The locations of all water supply wells listed in public databases are shown in Plate 3. The USGS database identified two wells about 1 mile southeast of the proposed SWD. Our examination of Google Earth images found no evidence of water supply wells at these locations. We conducted a ground survey of the area was April 17, 2019 and found several water troughs and evidence of water pipelines, but there is no evidence of the USGS wells shown on Plate 3. These wells are mis-located on the USGS database.

Two water well driller's logs are attached to this response and show the following relationships that will also exist in the area of the proposed Ironside SWD.

- Well C-4209 shows
 - groundwater was first encountered at a depth of 155 feet
 - red clay that did not yield water was penetrated at a depth of 350 feet
 - the nearly 200-foot water-bearing zone can produce at a rate of about 25 GPM
- Well C-4256 shows
 - Groundwater was first encountered at a depth of 340 feet
 - The red and tan sand logged from the depth interval 85-290 feet is probably the same unit that yielded water to well C-4209

- The red and blue clay logged from 290-330 feet below ground is probably the red clay observed in well C-4209
- The red and blue siltstone, sandstone and gravel logged from a depth of 330 to 610 are probably a mix of sandstones and siltstones that characterize the Chinle. Alternatively, the lower sandstones could be considered the Santa Rosa Sandstone horizon of the Chinle, which is the basal unit
- The variegated clay encountered from 610-690 may be the underlying Quartermaster Formation (AKA Dewey Lake)

In the area of the Ironside SWD, the depth interval of the Rustler is 1125-1500, according to the BLM and OCD and, we agree with this assessment. Thus, no water supply wells in the area of the Ironside SWD penetrate the Rustler. The bottom of the Rustler Formation is characterized by evaporates (anhydrite) and is not considered an underground source of drinking water. Thus, in this area, surface casing required by OCD to prevent impairment of fresh water runs from ground surface to a depth of 1450 feet at the proposed Ironside SWD.

IX. Describe the proposed stimulation program, if any

A small cleanup acid job may be used to remove mud and drill cuttings from the formation. However, no other formation stimulation is currently planned.

***X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted)**

Logs will be submitted to OCD upon completion of the well.

***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**

No active water supply wells were identified within one mile of the proposed SWD. Data from various sources permit a conclusion that groundwater within the Chinle Formation is potable.

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

Randall T. Hicks, a Professional Geologist with decades of experience in hydrogeology, affirms, on behalf of Solaris Water Midstream, that

- The USGS has mapped quaternary faults in New Mexico and no such faults are mapped in the area of the proposed Ironside State SWD ¹
- The Texas Bureau of Economic Geology has mapped older faults (e.g. basement and Woodford) in New Mexico and the closest mapped fault is more than 11 miles to the east²
- With respect to migration of produced water from the injection zone to underground sources of drinking water via faults or other natural conduits, the following conditions were considered
 - The lowest underground source of drinking water is the middle and upper Rustler Formation. Within the area shown in Plate 3, several wells are thought to draw water from the Rustler (e.g. USGS-9141)
 - Wells in the USGS database are sometimes mis-located and examination of Google Earth images did not identify any evidence of wells in the area where the two USGS wells are shown southwest of the Ironside SWD location. A ground survey of the area identified water trough and water pipelines near the area of the USGS wells was conducted on April 17, 2019 and did not identify any evidence of the mapped USGS wells shown on Plate 3.
 - More than 15,000 feet of sedimentary rock separates the bottom of the Rustler Formation and the top of the injection zone. Many of the formations that lie between the injection zone and the lowermost aquifer are permeable and contain oil, gas or water at various pressures. Any excursion of injected fluids from the Devonian disposal zone would undoubtedly enter these permeable formations prior to moving through the 2800-foot low-permeability salt zone that underlies the Rustler Formation.
 - There is no evidence that the pressure regime in the oil and gas reservoirs is sufficient to cause the upward migration of formation water through the bedded salt and into the Rustler or Chinle aquifers.
- There is no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water

Randall Hicks

¹ <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>

² Bureau of Economic Geology (Accessed April 2019). University of Texas at Austin. Basement Faults (Ewing 1990, Tectonic Map of Texas); Precambrian Faults (Frenzel et al. 1988, Figure 6); Woodford Faults (Comer 1991, plate 1). [Http://www.beg.utexas.edu/resprog/permianbasin/gis.htm](http://www.beg.utexas.edu/resprog/permianbasin/gis.htm)

Submit To Appropriate District Office Two Copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505		State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505			Form C-105 Revised August 1, 2011		
		1. WELL API NO. 30-025-43379					
		2. Type of Lease ☐ STATE ☒ FEE ☐ FED/INDIAN					
		3. State Oil & Gas Lease No.					
WELL COMPLETION OR RECOMPLETION REPORT AND LOG							
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)				5. Lease Name or Unit Agreement Name PADUCA 6 SWD			
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER				6. Well Number: 1Y			
8. Name of Operator MESQUITE SWD, INC.				9. OGRID 161968			
10. Address of Operator PO BOX 1479 CARLSBAD NM 88221				11. Pool name or Wildcat [96101] SWD;DEVONIAN			
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	
Surface:	E	6	26S	32E	2	2650	
BH:							
13. Date Spudded 08/01/2016		14. Date T.D. Reached 03/04/2017		15. Date Rig Released 04/11/2017		16. Date Completed (Ready to Produce) 04/09/2017	
18. Total Measured Depth of Well 18881'		19. Plug Back Measured Depth 18881'		20. Was Directional Survey Made? No		17. Elevations (DF and RKB, RT, GR, etc.) 3285' GR	
22. Producing Interval(s), of this completion - Top, Bottom, Name 17310' - 18881' (OH) Devonian						21. Type Electric and Other Logs Run Comp GR/Borehole Profile/CBL	
23. CASING RECORD (Report all strings set in well)							
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED		
20"	94#	950'	26"	1730 sx	0		
13 3/8"	68#	4329'	17 1/2"	2570 sx	0		
*9 5/8"	53.5#	11930'	12 1/4"	2860 sx	0		
*Cmt retainer set @ 11668' w/50 sx cmt on top. Milled window 11605-11627', Drd out w/ 8 1/2" bit to 17310'. Drd 6 1/2" hole to 18881'. TD.							
24. LINER RECORD							
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN			
7 5/8"	10365'	17310'	2120 sx				
26. Perforation record (interval, size, and number) 17310' - 18881' Open Hole							
25. TUBING RECORD							
SIZE	DEPTH SET	PACKER SET					
4 1/2"	17329'	17284'					
5 1/2"	9926'						
27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED 							
28. PRODUCTION							
Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)			Well Status (Prod. or Shut-in)		
Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl.	
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)	
29. Disposition of Gas (Sold, used for fuel, vented, etc.)						30. Test Witnessed By	
31. List Attachments							
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.							
33. If an on-site burial was used at the well, report the exact location of the on-site burial:							
Latitude _____ Longitude _____ NAD 1927 1983							
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief							
Signature		Printed Name Melanie J. Wilson		Title Regulatory Analyst		Date 05/15/2017	
E-mail Address mjp1692@gmail.com							

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico			Northwestern New Mexico	
T. Anhy	T. Canyon		T. Ojo Alamo	T. Penn A"
T. Salt	T. Strawn	14056'	T. Kirtland	T. Penn. "B"
B. Salt	T. Atoka	14191'	T. Fruitland	T. Penn. "C"
T. Yates	T. Miss	16860'	T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers	T. Devonian	17302'	T. Cliff House	T. Leadville
T. Queen	T. Silurian		T. Menefee	T. Madison
T. Grayburg	T. Montoya	18854'	T. Point Lookout	T. Elbert
T. San Andres	T. Simpson		T. Mancos	T. McCracken
T. Glorieta	T. McKee		T. Gallup	T. Ignacio Otzte
T. Paddock	T. Ellenburger		Base Greenhorn	T. Granite
T. Blinebry	T. Gr. Wash		T. Dakota	
T. Tubb	T. Delaware Sand		T. Morrison	
T. Drinkard	T. Bone Springs	9416'	T. Todilto	
T. Abo	T. Morrow	14956'	T. Entrada	
T. Wolfcamp	T. Barnett	16342'	T. Wingate	
T. Penn			T. Chinle	
T. Cisco (Bough C)			T. Permian	

OIL OR GAS SANDS OR ZONES

No. 1, from.....to.....
No. 2, from.....to.....
No. 3, from.....to.....
No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
No. 2, from.....to.....feet.....
No. 3, from.....to.....feet.....

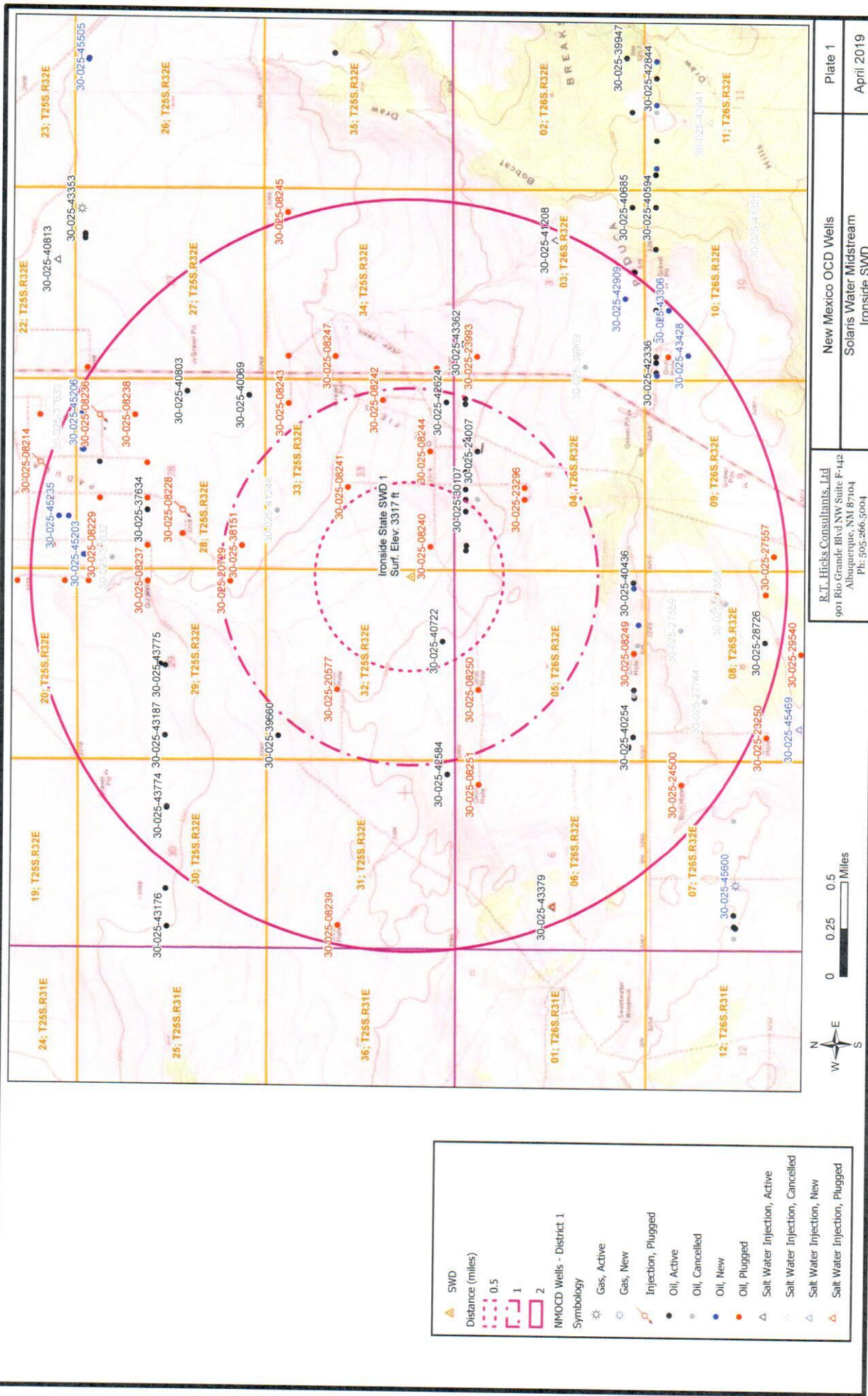
LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology

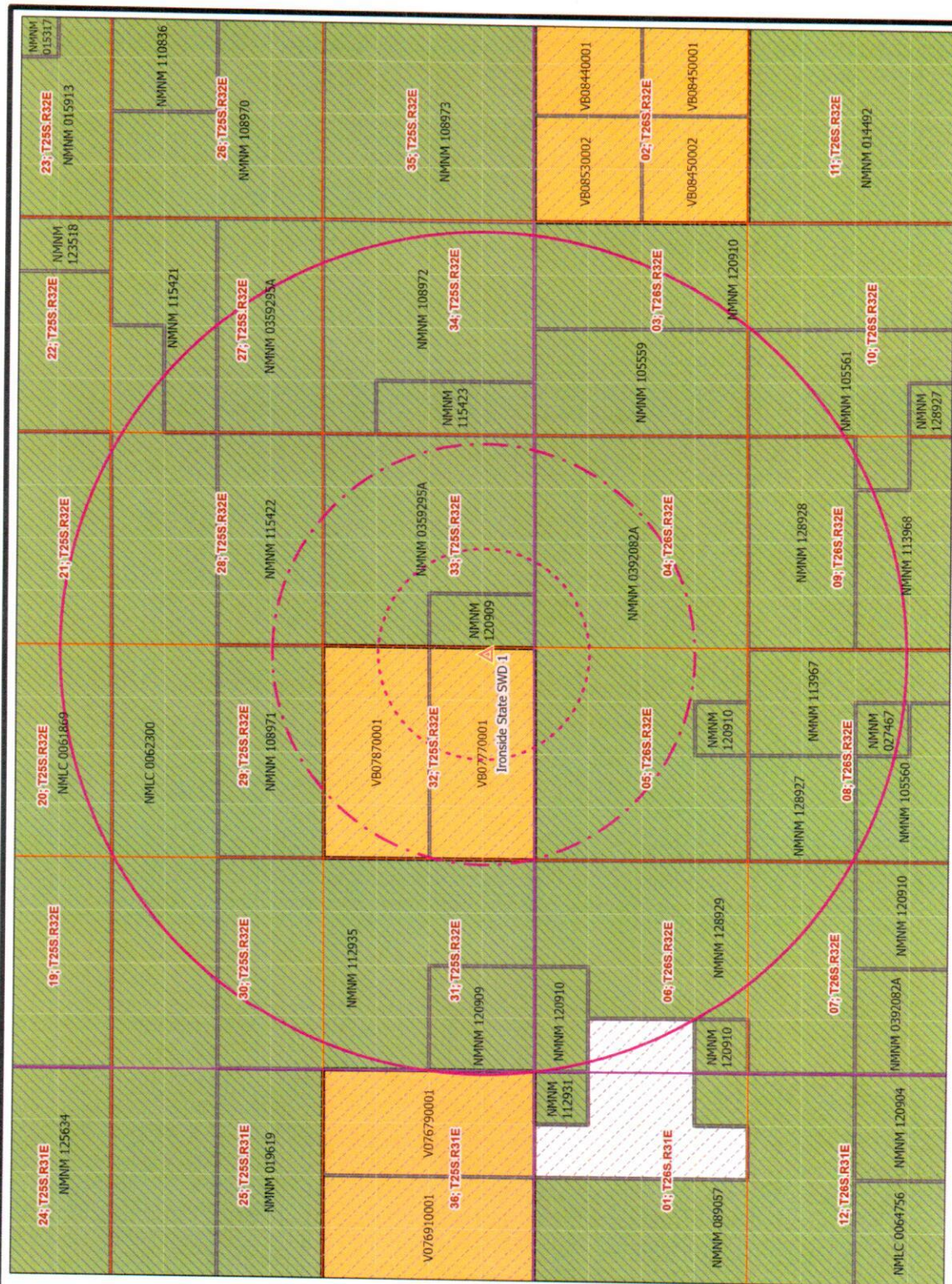
From	To	Thickness In Feet	Lithology

Plates

Plate 1	OCD wells within the area of review
Plate 2	Mineral leases within the area of review
Plate 3	Water supply wells within the area of review



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R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Oil & Gas Leases and Mineral Ownership	Plate 2a
	Solaris Water Midstream Ironside State SWD #1	Oct. 9, 2019

SWD

Distance (miles)
 0.5
 1
 2

Mineral Ownership (BLM Dataset)
 All minerals are owned by the U.S. (BLM)
 No minerals are owned by the U.S. (BLM)
 Oil and Gas Leases
 SLO Leases
 BLM Leases
 Township Range Section
 Township Range
 Section
 UL (qq)

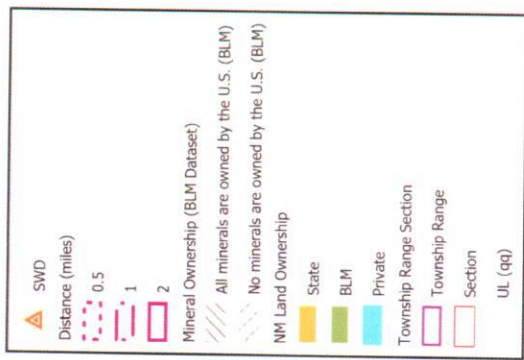
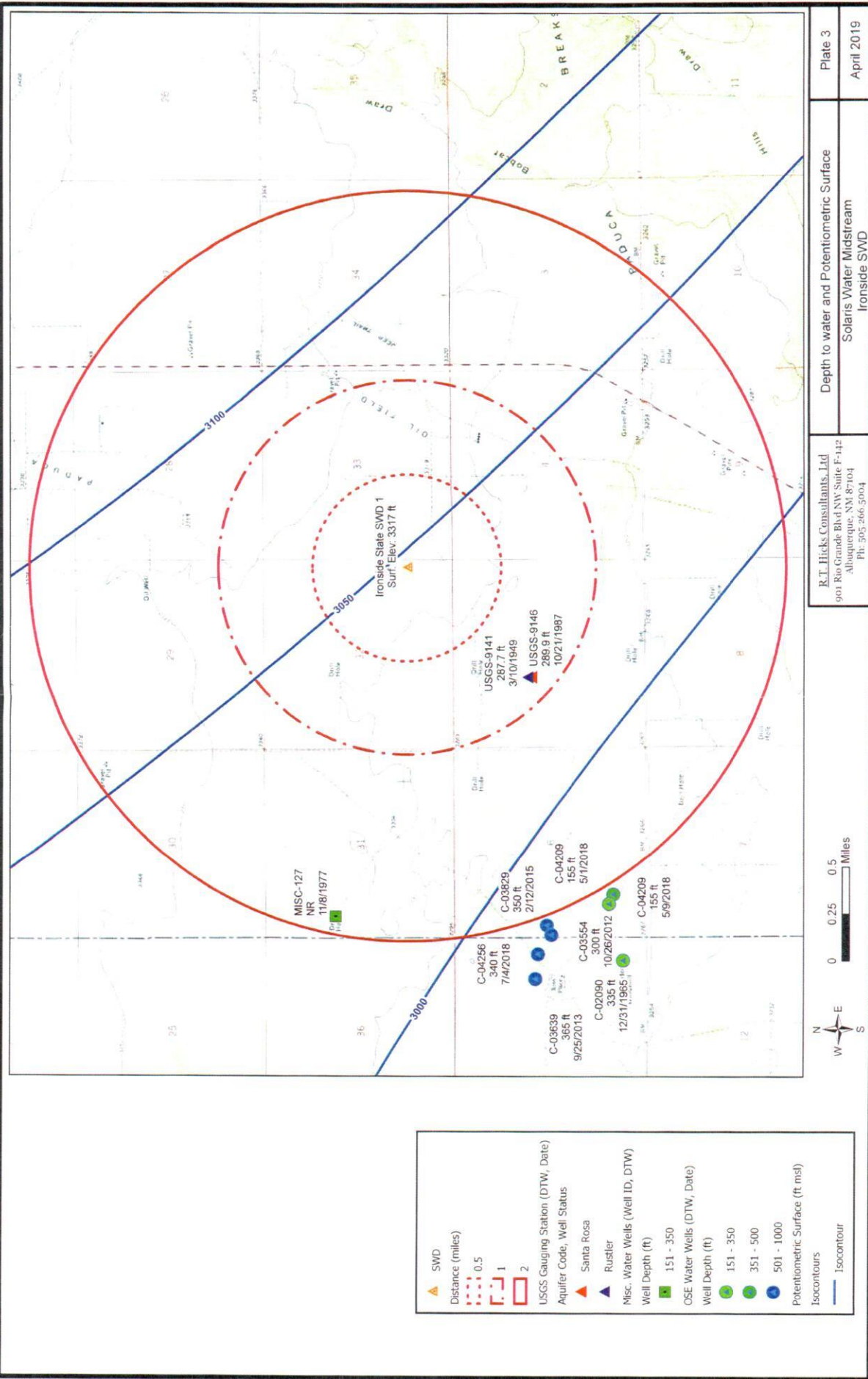
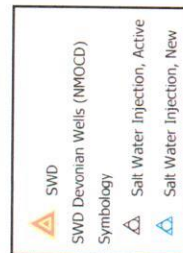
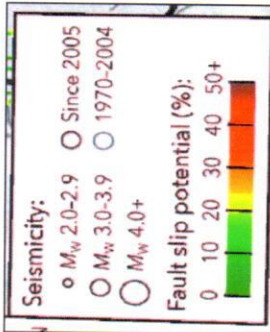


Plate 2b	Surface and Mineral Ownership	R.T. Hicks Consultants, Ltd. 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004
Oct. 9, 2019	Solaris Water Midstream Ironside State SWD #1	

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28A



Seismic and Fault Slip source:
State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity (Jens-Erik Lund Snee and Mark D. Zoback)

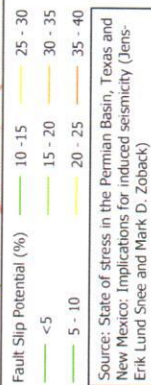


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Albuquerque, NM 87104
Ph: 505.266.5004

Seismicity and Fault Slip Potential
Solaris Water Midstream
Ironside State SWD #1

Plate 4
April 2019

25B



Source: State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity (Jens-Erik Lund Snee and Mark D. Zoback)



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Fault Slip Potential

Solaris Water Midstream
Inside SWD

Plate 5
April 2019

28C

Tables

Table 1	OCD wells within the area of review
Table 2a	BLM leases within the area of review
Table 2b	State leases within the area of review
Table 3	Produced Water Chemistry of Nearby Wells
Table 4	Available Devonian formational water quality data

Table 1 - NMOC Wells within 2-miles of Ironside State SWD #1

API	Well Name	Well Type	ULSTR	OGRID	OGRID Name	Status	DIR	Status Elevation	Measured Depth	Total Depth	Spud Date	Plug Date
30-025-08232	COTTON DRAW UNIT #001	O	B-28-255-32E	20077	SAHARA OPERATING CO	A	V	99999	4744	4744	6/17/1961	12/31/9999
30-025-24007	UNION FEDERAL #002	O	B-04-265-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	V	0	0	0	12/31/9999	12/31/9999
30-025-28726	ANOCO FEDERAL #001	O	J-08-265-32E	20077	SAHARA OPERATING CO	A	V	3200	4425	4425	6/29/1984	12/31/9999
30-025-30107	UNION B FEDERAL #001	O	C-04-265-32E	37636	ROBINSON OIL INC	A	V	99999	4578	4578	12/31/9999	12/31/9999
30-025-37634	COTTON DRAW UNIT #101	O	F-28-255-32E	20077	SAHARA OPERATING CO	A	V	3375	5000	5000	2/7/2006	12/31/9999
30-025-39660	PRESIDENTE BPD STATE COM #001H	O	D-32-255-32E	7377	EOG RESOURCES INC	A	H	3335	13132	13132	8/43/9/30/2010	12/31/9999
30-025-39911	RED HILLS WEST UNIT #002H	O	C-10-265-32E	14744	MEWBOURNE OIL CO	A	H	3275	13678	13678	9/86/6/2/2011	12/31/9999
30-025-40069	RED HILLS WEST UNIT #001H	O	P-28-255-32E	217955	COG PRODUCTION, LLC	A	H	3373	13795	13795	9/44/7/5/2012	12/31/9999
30-025-40254	HALLERTAU 5 FEDERAL #004H	O	M-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3253	15091	15091	10/42/2/24/2013	12/31/9999
30-025-40436	HALLERTAU 5 FEDERAL #001H	O	P-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3272	16552	16552	12/04/1/8/2015	12/31/9999
30-025-40455	HALLERTAU 5 FEDERAL #003H	O	N-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3306	13948	13948	9/63/9/10/2013	12/31/9999
30-025-40474	HALLERTAU 4 FEDERAL #003H	O	B-04-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3312	13484	13484	9/10/5/29/2012	12/31/9999
30-025-40475	HALLERTAU 4 FEDERAL #004H	O	A-04-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3308	15169	15169	10/13/10/28/2013	12/31/9999
30-025-40476	HALLERTAU 4 FEDERAL #007H	O	B-04-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3312	15202	15202	10/720/3/25/2012	12/31/9999
30-025-40477	HALLERTAU 4 FEDERAL #008H	O	A-04-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3275	14761	14761	9/69/12/1/2012	12/31/9999
30-025-40687	RED HILLS WEST UNIT #004H	O	C-10-265-32E	14744	MEWBOURNE OIL CO	A	H	3297	17319	17319	10/26/9/18/2012	12/31/9999
30-025-40722	JEFEE BSJ FEDERAL COM #001H	O	O-32-255-32E	7377	EOG RESOURCES INC	A	H	3384	13840	13840	9/36/10/25/2012	12/31/9999
30-025-40803	SOL 28 FEDERAL #002H	O	I-28-255-32E	217955	COG PRODUCTION, LLC	A	H	3310	13804	13804	9/400/5/21/2014	12/31/9999
30-025-41062	HALLERTAU 4 FEDERAL #005H	O	D-04-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3310	13558	13558	9/034/3/31/2013	12/31/9999
30-025-41069	HALLERTAU 4 FEDERAL #001H	O	D-04-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3314	13794	13794	9/408/6/13/2014	12/31/9999
30-025-41119	HALLERTAU 4 FEDERAL #002H	O	C-04-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3273	15650	15650	10/648/6/1/2013	12/31/9999
30-025-41136	RED HILLS WEST UNIT #005H	O	D-10-265-32E	14744	MEWBOURNE OIL CO	A	H	3307	13739	13739	9/456/8/6/2014	12/31/9999
30-025-41208	PINTAIL 3 FEDERAL SWD #001	S	J-03-265-32E	229137	COG OPERATING LLC	A	V	3254	13403	13403	9/124/5/26/2014	12/31/9999
30-025-41628	HALLERTAU 4 FEDERAL #006H	O	C-04-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3304	13863	13863	9/440/7/12/2014	12/31/9999
30-025-41849	RED HILLS WEST UNIT #007H	O	D-10-265-32E	14744	MEWBOURNE OIL CO	A	H	3250	13450	13450	9/087/12/13/2014	12/31/9999
30-025-41878	HALLERTAU 4 FEDERAL #009H	O	D-10-265-32E	14744	MEWBOURNE OIL CO	A	H	3251	13685	13685	9/422/12/13/2014	12/31/9999
30-025-42336	RED HILLS WEST UNIT #011H	O	P-31-255-32E	7377	EOG RESOURCES INC	A	H	3281	16126	16126	8/32/9/14/2015	12/31/9999
30-025-42417	RED HILLS WEST UNIT #012H	O	P-33-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	H	3317	14011	14011	9/495/6/30/2015	12/31/9999
30-025-42584	ALMOST EDDY 31 FEDERAL #001H	O	M-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3271	16124	16124	11/843/9/27/2017	12/31/9999
30-025-42624	VAN DOO DAH 33 FEDERAL #003H	O	E-29-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	H	3367	17592	17592	10/359/11/26/2016	12/31/9999
30-025-42666	HALLERTAU 5 FEDERAL #008H	O	N-05-265-32E	215099	CIMAREX ENERGY CO.	A	H	3273	16590	16590	11/875/9/27/2017	12/31/9999
30-025-43187	MORAB 29 20 FEDERAL COM #001H	O	N-05-265-32E	215099	CIMAREX ENERGY CO.	A	H	3273	16594	16594	11/903/10/16/2017	12/31/9999
30-025-43303	HALLERTAU 5 FEDERAL #009H	O	D-03-265-32E	14744	MEWBOURNE OIL CO	A	H	3317	17200	17200	12/083/11/7/2016	12/31/9999
30-025-43362	JENNINGS 34 WJMD FEDERAL COM #001H	O	2-06-265-32E	161968	MESQUITE SWD, INC	A	V	3285	18881	18881	8/1/2016	12/31/9999
30-025-43379	PADUCA 6 SWD #001	S	G-30-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	V	3362	17940	17940	10/436/8/2/2017	12/31/9999
30-025-43774	ARABIAN 30 19 FEDERAL COM #003H	O	F-29-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	H	3361	17807	17807	10/227/7/10/2018	12/31/9999
30-025-43775	MORAB 29 20 FEDERAL COM #002H	O	G-29-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	H	3361	18045	18045	10/366/8/1/2018	12/31/9999
30-025-43776	MORAB 29 20 FEDERAL COM #003H	O	H-30-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	H	3362	17950	17950	10/213/8/4/2017	12/31/9999
30-025-43788	ARABIAN 30 19 FEDERAL COM #004H	O	M-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3272	16579	16579	11/891/12/7/2017	12/31/9999
30-025-43886	HALLERTAU 5 FEDERAL #011H	O	M-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3272	16529	16529	12/048/11/3/2017	12/31/9999
30-025-43887	HALLERTAU 5 FEDERAL #016H	O	N-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	A	H	3272	16532	16532	11/885/11/4/2017	12/31/9999
30-025-43911	HALLERTAU 5 FEDERAL #007H	O	C-04-265-32E	214263	PRE-ONGARD WELL OPERATOR	C	O	0	0	0	0	12/31/9999
30-025-24158	PRE-ONGARD WELL #003	O	H-08-265-32E	214263	PRE-ONGARD WELL OPERATOR	C	O	0	0	0	0	12/31/9999
30-025-27558	PRE-ONGARD WELL #002	O	B-08-265-32E	214263	PRE-ONGARD WELL OPERATOR	C	O	0	0	0	0	12/31/9999
30-025-27559	PRE-ONGARD WELL #003	O	F-08-265-32E	214263	PRE-ONGARD WELL OPERATOR	C	O	0	0	0	0	12/31/9999
30-025-27744	PRE-ONGARD WELL #001	O	D-28-255-32E	256999	POGO PRODUCING COMPANY LLC	C	O	0	0	0	0	12/31/9999
30-025-37632	COTTON DRAW UNIT #009	O	P-21-255-32E	256999	POGO PRODUCING COMPANY LLC	C	O	3387	0	0	0	12/31/9999
30-025-37633	COTTON DRAW UNIT #100	O	L-03-265-32E	14744	MEWBOURNE OIL CO	C	O	3271	0	0	0	12/31/9999
30-025-39903	RED HILLS WEST 3 FEDERAL COM #001	O	O-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	C	H	3257	0	0	0	12/31/9999
30-025-40454	HALLERTAU 5 FEDERAL COM #002C	O	O-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	C	H	3257	0	0	0	12/31/9999

Table 1 - NMOC Wells within 2 miles of Ironside State SWD #1

API	Well Name	Effective Date	APR Date	Latitude	Longitude	District	Pool ID
30-025-08232	COTTON DRAW UNIT #051	6/3/2015	1/1/1900	32.1068764	-103.6789322	1	[49460] PADUCA, DELAWARE
30-025-24007	UNION FEDERAL #002	10/25/2012	1/1/1900	32.0778885	-103.6778183	1	[34010] JENNINGS, DELAWARE
30-025-28726	AMOCO FEDERAL #001	4/1/2004	10/1/1984	32.0557785	-103.695076	1	[44859] MASON, DELAWARE, NORTH
30-025-30107	UNION B FEDERAL #001	3/1/1997	1/1/1988	32.0778711	-103.682251	1	[34010] JENNINGS, DELAWARE
30-025-37634	COTTON DRAW UNIT #101	6/3/2015	1/5/2006	32.1032295	-103.6833191	1	[49460] PADUCA, DELAWARE
30-025-39660	PRESIDENTE BPD STATE COM #001H	1/16/2019	2/4/2010	32.0931969	-103.7037125	1	[96403] WILDCAT, BONE SPRING; [97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-39911	RED HILLS WEST UNIT #002H	12/1/2012	9/14/2010	32.0641365	-103.6650009	1	[96403] WILDCAT, BONE SPRING; [97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-40254	HALLERTAU 5 FEDERAL #004H	12/1/2011	2/16/2011	32.0954285	-103.6728516	1	[96403] WILDCAT, BONE SPRING; [97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-40254	HALLERTAU 5 FEDERAL #004H	8/23/2011	8/23/2011	32.0658951	-103.7036896	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-40436	HALLERTAU 5 FEDERAL #001H	12/14/2011	12/14/2011	32.0658798	-103.6896973	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-40455	HALLERTAU 5 FEDERAL #003H	2/21/2012	2/21/2012	32.0658531	-103.694324	1	[97838] JENNINGS, UPPER BONE SPRING SHALE; [98065] WC-025 G-08 S263205N, UPPER WOLF CAMP
30-025-40474	HALLERTAU 4 FEDERAL #003H	2/28/2012	2/28/2012	32.0787964	-103.6784668	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-40475	HALLERTAU 4 FEDERAL #004H	2/28/2012	2/28/2012	32.0788116	-103.6735611	1	[97838] JENNINGS, UPPER BONE SPRING SHALE; [97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-40476	HALLERTAU 4 FEDERAL #007H	2/28/2012	2/28/2012	32.0788116	-103.6730728	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-40477	HALLERTAU 4 FEDERAL #008H	2/28/2012	2/28/2012	32.0788116	-103.6730728	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-40687	RED HILLS WEST UNIT #004H	12/1/2012	7/12/2012	32.0638313	-103.6657257	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-40722	JEFF BSI FEDERAL COM #001H	1/16/2019	8/10/2012	32.080555	-103.6950378	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-40803	SOL 28 FEDERAL #002H	9/28/2012	9/28/2012	32.1001587	-103.6725082	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41052	HALLERTAU 4 FEDERAL #005H	3/15/2013	3/15/2013	32.0787241	-103.686385	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-41059	HALLERTAU 4 FEDERAL #001H	3/15/2013	3/15/2013	32.0787659	-103.6868362	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41119	HALLERTAU 4 FEDERAL #002H	3/15/2013	3/15/2013	32.0787773	-103.6833115	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41136	RED HILLS WEST UNIT #005H	4/19/2013	4/19/2013	32.0641212	-103.6697845	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41208	PINTAIL 3 FEDERAL SWD #001	7/16/2013	6/5/2013	32.0719337	-103.6587219	1	[97003] SWD, CHERRY CANYON
30-025-41628	HALLERTAU 4 FEDERAL #006H	1/21/2014	1/21/2014	32.0787849	-103.6813431	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41849	RED HILLS WEST UNIT #007H	5/16/2014	5/14/2014	32.0641289	-103.6676865	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41878	HALLERTAU 4 FEDERAL #009H	5/28/2014	5/6/2014	32.0787888	-103.6797256	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42336	RED HILLS WEST UNIT #011H	12/12/2014	12/12/2014	32.0641196	-103.6706947	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42417	RED HILLS WEST UNIT #012H	2/2/2015	1/27/2015	32.0641255	-103.6692546	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42584	ALMOST EDDY 31 FEDERAL #001H	5/26/2015	5/18/2015	32.08018608	-103.7071072	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42624	VAN DOO DAH 33 FEDERAL #003H	6/10/2015	6/6/2015	32.08026571	-103.6734083	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42666	HALLERTAU 5 FEDERAL #008H	7/6/2015	6/26/2015	32.06625	-103.704675	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-43187	MORAB 29 20 FEDERAL COM #001H	4/25/2016	4/19/2016	32.1018807	-103.7037373	1	[96641] PADUCA, BONE SPRING (O); [97903] WC-025 G-08 S263205N, UPPER WOLF CAMP
30-025-43303	HALLERTAU 5 FEDERAL #009H	6/17/2016	6/14/2016	32.065817	-103.700072	1	[98065] WC-025 G-08 S263205N, UPPER WOLF CAMP
30-025-43304	HALLERTAU 5 FEDERAL #010H	6/17/2016	6/14/2016	32.0658182	-103.700139	1	[98065] WC-025 G-08 S263205N, UPPER WOLF CAMP
30-025-43362	JENNINGS 34 W1MD FEDERAL COM #001H	3/30/2017	7/11/2016	32.07884799	-103.668033	1	[97838] JENNINGS, UPPER BONE SPRING SHALE; [98065] WC-025 G-08 S263205N, UPPER WOLF CAMP
30-025-43379	PADUCA 6 SWD #001Y	8/1/2016	8/1/2016	32.07216184	-103.7192409	1	[96101] SWD, DEVONIAN
30-025-43774	ARABIAN 30 19 FEDERAL COM #003H	5/1/2017	4/25/2017	32.1017508	-103.7101203	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-43775	MORAB 29 20 FEDERAL COM #002H	4/25/2017	4/25/2017	32.1018629	-103.6973335	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-43776	MORAB 29 20 FEDERAL COM #003H	5/1/2017	4/25/2017	32.102242	-103.697207	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-43788	ARABIAN 30 19 FEDERAL COM #004H	5/8/2017	4/26/2017	32.101751	-103.7102171	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-43886	HALLERTAU 5 FEDERAL #011H	7/3/2017	6/27/2017	32.06625	-103.704544	1	[98065] WC-025 G-08 S263205N, UPPER WOLF CAMP
30-025-43887	HALLERTAU 5 FEDERAL #016H	7/3/2017	6/27/2017	32.06625	-103.704608	1	[98065] WC-025 G-08 S263205N, UPPER WOLF CAMP
30-025-43911	HALLERTAU 5 FEDERAL #007H	8/1/2017	7/21/2017	32.065817	-103.700008	1	[98065] WC-025 G-08 S263205N, UPPER WOLF CAMP
30-025-24158	PRE ONGARD WELL #003	1/1/1900	1/1/1900	32.07787304	-103.6822183	1	
30-025-27558	PRE ONGARD WELL #002	1/1/1900	1/1/1900	32.05878082	-103.6915358	1	
30-025-27559	PRE ONGARD WELL #003	1/1/1900	1/1/1900	32.06223734	-103.6939764	1	
30-025-27744	PRE ONGARD WELL #001	1/1/1900	1/1/1900	32.10592691	-103.687588	1	
30-025-37632	COTTON DRAW UNIT #099	2/14/2008	1/5/2006	32.10947651	-103.6749689	1	
30-025-37633	COTTON DRAW UNIT #100	2/14/2008	1/5/2006	32.10947651	-103.6749689	1	
30-025-39903	RED HILLS WEST 3 FEDERAL COM #001	3/15/2012	9/14/2010	32.06956396	-103.6701765	1	[96403] WILDCAT, BONE SPRING
30-025-40454	HALLERTAU 5 FEDERAL COM #002C	2/21/2012	2/21/2012	32.06556632	-103.695343	1	[97838] JENNINGS, UPPER BONE SPRING SHALE

Table 1 - NMOCD Wells within 2-miles of Ironside State SWD #1

API	Well Name	Well Type	ULSTR	OGRID	OGRID Name	Status	DIR	Status Elevation	Measured Depth	Total Depth	Spud Date	Plug Date
30-025-41063	HALLERTAU 5 FEDERAL #007C	O	N-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	C	H	3273	0	0	12/31/9999	12/31/9999
30-025-41248	VAN DOO DAH 33 FEDERAL #001C	O	C-33-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	H	3362	0	0	12/31/9999	12/31/9999
30-025-42438	RED HILLS WEST UNIT #010C	O	D-10-265-32E	14744	MEWBOURNE OIL CO	C	H	3255	0	0	12/31/9999	12/31/9999
30-025-42665	HALLERTAU 5 FEDERAL #005H	O	P-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	N	H	3255	0	0	12/31/9999	12/31/9999
30-025-42673	HALLERTAU 5 FEDERAL #006H	O	O-05-265-32E	162683	CIMAREX ENERGY CO. OF COLORADO	N	H	3260	0	0	12/31/9999	12/31/9999
30-025-42908	RED HILLS WEST UNIT #013H	O	D-10-265-32E	14744	MEWBOURNE OIL CO	N	H	3248	0	0	12/31/9999	12/31/9999
30-025-42909	RED HILLS WEST UNIT #016H	O	N-03-265-32E	14744	MEWBOURNE OIL CO	N	H	3199	0	0	12/31/9999	12/31/9999
30-025-43306	RED HILLS WEST UNIT #015H	O	C-10-265-32E	14744	MEWBOURNE OIL CO	N	H	3267	0	0	12/31/9999	12/31/9999
30-025-43374	JENNINGS 34 ASMD FEDERAL COM #002H	O	D-03-265-32E	14744	MEWBOURNE OIL CO	N	H	3317	0	0	12/31/9999	12/31/9999
30-025-43428	RED HILLS WEST UNIT #017C	O	D-10-265-32E	14744	MEWBOURNE OIL CO	N	H	3245	0	0	12/31/9999	12/31/9999
30-025-45202	VAN DOO DAH 28 33 FEDERAL COM #231H	O	D-28-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	H	3377	0	0	12/31/9999	12/31/9999
30-025-45203	MARWARI 28 16 STATE FEDERAL COM #232H	O	D-28-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	H	3377	0	0	12/31/9999	12/31/9999
30-025-45204	MARWARI 28 16 STATE FEDERAL COM #234H	O	D-28-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	H	3377	0	0	12/31/9999	12/31/9999
30-025-45205	MARWARI 28 16 STATE FEDERAL COM #236H	O	N-21-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	H	3390	0	0	12/31/9999	12/31/9999
30-025-45206	MARWARI 28 16 STATE FEDERAL COM #238H	O	B-28-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	H	3389	0	0	12/31/9999	12/31/9999
30-025-45235	VAN DOO DAH 21 33 FEDERAL COM #235H	O	A-28-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	H	3384	0	0	12/31/9999	12/31/9999
30-025-45236	VAN DOO DAH 28 33 FEDERAL COM #235H	O	N-21-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	H	3390	0	0	12/31/9999	12/31/9999
30-025-45237	VAN DOO DAH 28 33 FEDERAL COM #237H	O	B-28-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	H	3389	0	0	12/31/9999	12/31/9999
30-025-08202	COTTON DRAW UNIT #043	O	A-28-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	H	3384	0	0	12/31/9999	12/31/9999
30-025-08211	COTTON DRAW UNIT #037	O	P-20-255-32E	22351	TEXACO EXPLORATION & PRODUCTION INC	P	V	3369	4700	4700	3/25/1961	8/5/1995
30-025-08212	COTTON DRAW UNIT #038	O	M-21-255-32E	16696	OXY USA INC	P	V	99999	4784	4784	3/31/1961	11/7/2013
30-025-08227	PRE-ONGARD WELL #002	O	N-21-255-32E	22351	TEXACO EXPLORATION & PRODUCTION INC	P	V	3404	4750	4750	2/21/1986	2/21/1986
30-025-08229	COTTON DRAW UNIT #045	O	L-28-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/04/1/1/1900	1/1/1900
30-025-08230	COTTON DRAW UNIT #047	O	K-28-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/755/1/1/1900	1/1/1900
30-025-08231	COTTON DRAW UNIT #047	O	D-28-255-32E	22351	TEXACO EXPLORATION & PRODUCTION INC	P	O	0	0	0	4/744/1/1/1900	1/1/1900
30-025-08233	PRE-ONGARD WELL #015	O	F-28-255-32E	22351	TEXACO EXPLORATION & PRODUCTION INC	P	O	3392	4770	4770	4/29/1985	4/29/1985
30-025-08234	PRE-ONGARD WELL #016	O	C-28-255-32E	16696	OXY USA INC	P	V	99999	4750	4750	4/23/1961	11/1/2013
30-025-08235	PRE-ONGARD WELL #055	O	E-28-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/738/1/1/1900	1/1/1900
30-025-08236	COTTON DRAW UNIT #056	O	G-28-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/770/1/1/1900	1/1/1900
30-025-08237	G E JORDAN NCT-1 #019	O	A-29-255-32E	22351	TEXACO EXPLORATION & PRODUCTION INC	P	V	3376	4727	4727	11/29/1989	11/29/1989
30-025-08238	G E JORDAN NCT-1 #020	O	A-28-255-32E	22351	TEXACO EXPLORATION & PRODUCTION INC	P	V	3387	4760	4760	8/30/1961	8/14/1995
30-025-08240	PRE-ONGARD WELL #001	O	A-28-255-32E	22351	TEXACO EXPLORATION & PRODUCTION INC	P	V	3350	4622	4622	10/6/1961	7/29/1997
30-025-08241	PRE-ONGARD WELL #001	O	H-29-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	P	V	3385	10553	10553	10/4/1964	7/25/1997
30-025-08242	PRE-ONGARD WELL #001	O	D-28-255-32E	6137	DEVON ENERGY PRODUCTION COMPANY, LP	P	O	0	0	0	4/614/1/1/1900	1/1/1900
30-025-08243	PRE-ONGARD WELL #002	O	F-33-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/633/1/1/1900	1/1/1900
30-025-08244	JENNINGS FEDERAL #001	O	M-33-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/664/1/1/1900	1/1/1900
30-025-08246	PRE-ONGARD WELL #001	O	A-33-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/625/1/1/1900	1/1/1900
30-025-08247	PRE-ONGARD WELL #001	O	I-33-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/658/1/1/1900	1/1/1900
30-025-08249	PRE-ONGARD WELL #001	O	O-33-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/632/12/31/9999	9/1/2017
30-025-08250	PRE-ONGARD WELL #001	O	D-34-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/833/1/1/1900	1/1/1900
30-025-08251	PRE-ONGARD WELL #001	O	E-34-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/646/1/1/1900	1/1/1900
30-025-08252	PRE-ONGARD WELL #001	O	O-05-265-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/703/1/1/1900	1/1/1900
30-025-08253	PRE-ONGARD WELL #001	O	C-05-265-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/572/1/1/1900	1/1/1900
30-025-08254	PRE-ONGARD WELL #001	O	A-06-265-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/545/1/1/1900	1/1/1900
30-025-08255	PRE-ONGARD WELL #001	O	H-08-265-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/523/1/1/1900	1/1/1900
30-025-08256	PRE-ONGARD WELL #001	O	D-10-265-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/575/1/1/1900	1/1/1900
30-025-20417	PRE-ONGARD WELL #001	O	F-04-265-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/622/1/1/1900	1/1/1900
30-025-20577	COTTON TREE STATE SWD #001	O	F-32-255-32E	245872	JUDAH OIL LLC	P	V	3297	5795	5795	6/3/1963	4/4/2016
30-025-20729	PRE-ONGARD WELL #001	O	P-29-255-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/720/1/1/1900	1/1/1900
30-025-23296	PRE-ONGARD WELL #001	O	F-04-265-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/542/1/1/1900	1/1/1900
30-025-23993	PRE-ONGARD WELL #001	O	D-03-265-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/690/1/1/1900	1/1/1900
30-025-24500	PRE-ONGARD WELL #002	O	A-07-265-32E	214263	PRE-ONGARD WELL OPERATOR	P	O	0	0	0	4/535/1/1/1900	1/1/1900

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Table 1 - NMOCD Wells within 2-miles of Ironside State SWD #1

API	Well Name	Effective Date	APR Date	Latitude	Longitude	District	Pool ID
30-025-41063	HALLERTAU 5 FEDERAL #007C	3/15/2013	3/15/2013	32.0658493	-103.699913	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-41248	VAN DOO DAH 33 FEDERAL #001C	6/24/2013	6/24/2013	32.0932693	-103.6832809	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42438	RED HILLS WEST UNIT #010C	2/12/2015	2/12/2015	32.06412849	-103.6674544	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42665	HALLERTAU 5 FEDERAL #005H	7/6/2015	6/26/2015	32.06583889	-103.6901944	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42673	HALLERTAU 5 FEDERAL #006H	7/7/2015	6/29/2015	32.06548611	-103.6934694	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42908	RED HILLS WEST UNIT #013H	10/30/2015	10/27/2015	32.06406944	-103.6709417	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42909	RED HILLS WEST UNIT #016H	10/30/2015	10/27/2015	32.06500036	-103.6639846	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-43306	RED HILLS WEST UNIT #015H	6/17/2016	6/14/2016	32.06315929	-103.665017	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-43374	JENNINGS 34 A3MD FEDERAL COM #002H	7/20/2016	7/11/2016	32.0788473	-103.6682911	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-43428	RED HILLS WEST UNIT #017C	9/21/2016	9/8/2016	32.0616815	-103.6691228	1	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-45202	VAN DOO DAH 28 33 FEDERAL COM #231H	9/18/2018	9/13/2018	32.1080191	-103.6873562	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-45203	MARWARI 28 16 STATE FEDERAL COM #232H	9/18/2018	9/13/2018	32.1081014	-103.6873567	1	[96715] WC-025 G-06 S253206M, BONE SPRING
30-025-45205	MARWARI 28 16 STATE FEDERAL COM #234H	9/18/2018	9/13/2018	32.1092557	-103.6839049	1	[96715] WC-025 G-06 S253206M, BONE SPRING
30-025-45206	MARWARI 28 16 STATE FEDERAL COM #238H	9/18/2018	9/13/2018	32.1081974	-103.6777937	1	[96715] WC-025 G-06 S253206M, BONE SPRING
30-025-45235	VAN DOO DAH 21 33 FEDERAL COM #233H	9/18/2018	9/13/2018	32.1082121	-103.6744838	1	[96715] WC-025 G-06 S253206M, BONE SPRING
30-025-45236	VAN DOO DAH 28 33 FEDERAL COM #235H	9/27/2018	9/26/2018	32.1099971	-103.6839051	1	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-45237	VAN DOO DAH 28 33 FEDERAL COM #237H	9/27/2018	9/26/2018	32.1081298	-103.6744837	1	[96715] WC-025 G-06 S253206M, BONE SPRING
30-025-08202	COTTON DRAW UNIT #043	8/5/1995	1/1/1900	32.1095505	-103.6897354	1	[49460] PADUCA, DELAWARE
30-025-08211	COTTON DRAW UNIT #037	3/1/2008	1/1/1900	32.1104736	-103.685463	1	[49460] PADUCA, DELAWARE
30-025-08212	COTTON DRAW UNIT #038	2/21/1986	2/21/1986	32.1104927	-103.6822815	1	[49460] PADUCA, DELAWARE
30-025-08227	PRE-ONGARD WELL #002	1/1/1900	1/1/1900	32.1002211	-103.6854401	1	[49460] PADUCA, DELAWARE
30-025-08228	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.106842	-103.6863311	1	[49460] PADUCA, DELAWARE
30-025-08229	COTTON DRAW UNIT #045	4/29/1985	1/1/1900	32.1033333	-103.6822251	1	[49460] PADUCA, DELAWARE
30-025-08230	COTTON DRAW UNIT #500	1/1/1900	1/1/1900	32.1068615	-103.682262	1	[49460] PADUCA, DELAWARE
30-025-08231	COTTON DRAW UNIT #047	3/1/2008	1/1/1900	32.1032143	-103.6865158	1	[49460] PADUCA, DELAWARE
30-025-08233	PRE-ONGARD WELL #015	1/1/1900	1/1/1900	32.1032143	-103.6865158	1	[49460] PADUCA, DELAWARE
30-025-08234	PRE-ONGARD WELL #016	1/1/1900	1/1/1900	32.1032143	-103.6865158	1	[49460] PADUCA, DELAWARE
30-025-08235	COTTON DRAW UNIT #055	11/29/1989	1/1/1900	32.1032143	-103.6865158	1	[49460] PADUCA, DELAWARE
30-025-08236	COTTON DRAW UNIT #056	8/14/1995	1/1/1900	32.1077347	-103.6897354	1	[49460] PADUCA, DELAWARE
30-025-08237	G E JORDAN NCT-1 #019	7/29/1997	10/3/1961	32.103199	-103.6897125	1	[49460] PADUCA, DELAWARE
30-025-08238	G E JORDAN NCT-1 #020	7/29/1997	1/1/1900	32.1041756	-103.6746597	1	[49460] PADUCA, DELAWARE
30-025-08239	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0886154	-103.720932	1	[49460] PADUCA, DELAWARE
30-025-08240	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0814896	-103.6865082	1	[49460] PADUCA, DELAWARE
30-025-08241	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0878372	-103.68116	1	[49460] PADUCA, DELAWARE
30-025-08242	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0851631	-103.673233	1	[34010] JENNINGS, DELAWARE
30-025-08243	PRE-ONGARD WELL #002	1/1/1900	1/1/1900	32.0924034	-103.6735535	1	[34010] JENNINGS, DELAWARE
30-025-08244	JENNINGS FEDERAL #001	10/25/2012	1/1/1900	32.0815201	-103.6778259	1	[34010] JENNINGS, DELAWARE
30-025-08245	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0924187	-103.6692886	1	[34010] JENNINGS, DELAWARE
30-025-08247	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0887871	-103.6692963	1	[34010] JENNINGS, DELAWARE
30-025-08249	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0658607	-103.6960907	1	[34010] JENNINGS, DELAWARE
30-025-08250	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0781198	-103.6994553	1	[34010] JENNINGS, DELAWARE
30-025-08251	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0777931	-103.7079849	1	[34010] JENNINGS, DELAWARE
30-025-08253	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0595245	-103.6907501	1	[34010] JENNINGS, DELAWARE
30-025-08254	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0632172	-103.6692581	1	[34010] JENNINGS, DELAWARE
30-025-20417	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.074493	-103.6811829	1	[34010] JENNINGS, DELAWARE
30-025-20577	COTTON TREE STATE SWD #001	1/29/2015	5/27/1963	32.0886765	-103.6994553	1	[96838] DRY AND ABANDONED
30-025-20729	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0968742	-103.689682	1	[96838] DRY AND ABANDONED
30-025-23296	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.074455	-103.6822433	1	[96838] DRY AND ABANDONED
30-025-23993	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0779152	-103.6692963	1	[96838] DRY AND ABANDONED
30-025-24500	PRE-ONGARD WELL #002	1/1/1900	1/1/1900	32.0622025	-103.7079544	1	[96838] DRY AND ABANDONED

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Table 1 - NMOCD Wells within 2 miles of Ironside State SWD #1

API	Well Name	Well Type	ULSTR	OGRID	OGRID Name	Status	DIR	Status	Elevation	Measured Depth	Total Depth	Spud Date	Plug Date
30-025-27079	PRE-ONGARD WELL #001	O	M-34-26S-32E	214263	PRE-ONGARD WELL OPERATOR	P	0		0	0	4650	1/1/1900	1/1/1900
30-025-27557	EXXON FEDERAL #001	O	L-09-26S-32E	22223	TEMPO ENERGY INC	P	V		3198	4452	4452	9/4/1991	9/4/1991
30-025-28483	EXXON FEDERAL #001	O	L-08-26S-32E	10461	QUAY VALLEY INC.	P	V		3195	4445	4445	4/27/1984	3/1/2004
30-025-38151	INE FEDERAL #001	O	M-28-26S-32E	160825	BC OPERATING, INC.	P	V		3357	4771	4771	10/26/2006	3/10/2010
30-025-43277	PADUCA 6 SWD #001	S	3-06-26S-32E	161968	MESQUITE SWD, INC	P	V		3285	960	960	7/20/2016	7/29/2016

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Table 1 - NMOC D Wells within 2-miles of Ironside State SWD #1

API	Well Name	Effective Date	APR Date	Latitude	Longitude	District	Pool ID
30-025-27079	PRE-ONGARD WELL #001	1/1/1900	1/1/1900	32.0810127	-103.6703644	1	
30-025-27557	EXXON FEDERAL #001	9/4/1991	9/4/1991	32.0550995	-103.6873169	1	[44859] MASON, DELAWARE, NORTH
30-025-28483	EXXON FEDERAL #001	6/1/1984	6/1/1984	32.0557251	-103.6907425	1	[44859] MASON, DELAWARE, NORTH
30-025-38151	IKK FEDERAL #001	9/12/2006	9/12/2006	32.095816	-103.6864853	1	[49480] PADUCA, DELAWARE, EAST
30-025-43277	PADUCA 6 SWD #001	6/28/2016	5/25/2016	32.07215062	-103.7190976	1	[96101] SWD, DEVONIAN; [96838] DRY AND ABANDONED

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Table 1
Oil & Gas Wells within 1-Mile AORSolaris Water Midstream
Inside State SWD #1

API	OGRID	OGRID Name	Well Type	Status	Well Name	District	UL-S-T-R	Total Depth	Pool
30-025-08240	214263	PRE-ONGARD WELL OPERATOR	O	P	PRE-ONGARD WELL #001	1	M-33-25S-32E	4633	
30-025-08241	214263	PRE-ONGARD WELL OPERATOR	O	P	PRE-ONGARD WELL #001	1	F-33-25S-32E	4664	
30-025-08242	214263	PRE-ONGARD WELL OPERATOR	O	P	PRE-ONGARD WELL #001	1	I-33-25S-32E	4625	[34010] JENNINGS, DELAWARE
30-025-08244	6137	DEVON ENERGY PRODUCTION COMPANY, LP	O	P	JENNINGS FEDERAL #001	1	O-33-25S-32E	4632	[34010] JENNINGS, DELAWARE
30-025-08250	214263	PRE-ONGARD WELL OPERATOR	O	P	PRE-ONGARD WELL #001	1	C-05-26S-32E	4572	
30-025-20417	214263	PRE-ONGARD WELL OPERATOR	O	P	PRE-ONGARD WELL #001	1	F-04-26S-32E	4622	
30-025-20577	245872	JUDAH OIL LLC	O	P	COTTON TREE STATE SWD #001	1	F-32-25S-32E	5795	[96838] DRY AND ABANDONED
30-025-20729	214263	PRE-ONGARD WELL OPERATOR	O	P	PRE-ONGARD WELL #001	1	P-29-25S-32E	4720	
30-025-23296	214263	PRE-ONGARD WELL OPERATOR	O	P	PRE-ONGARD WELL #001	1	F-04-26S-32E	4542	
30-025-24007	6137	DEVON ENERGY PRODUCTION COMPANY, LP	O	P	UNION FEDERAL #002	1	B-04-26S-32E	4620	[34010] JENNINGS, DELAWARE
30-025-24158	214263	PRE-ONGARD WELL OPERATOR	O	C	PRE-ONGARD WELL #003	1	C-04-26S-32E	0	
30-025-30107	37636	ROBINSON OIL INC	O	A	UNION B FEDERAL #001	1	C-04-26S-32E	4578	[34010] JENNINGS, DELAWARE
30-025-38151	160825	BC OPERATING, INC	O	P	IKE FEDERAL #001	1	M-28-25S-32E	4771	[49480] PADUCA, DELAWARE, EAST
30-025-40474	162683	CIMAREX ENERGY CO. OF COLORADO	O	A	HALLERTAU 4 FEDERAL #003H	1	B-04-26S-32E	9463	[97903] JENNINGS, UPPER BONE SPRING SHALE; [97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-40475	162683	CIMAREX ENERGY CO. OF COLORADO	O	A	HALLERTAU 4 FEDERAL #004H	1	A-04-26S-32E	9110	G-08 S253235G, LWR BONE SPRIN
30-025-40476	162683	CIMAREX ENERGY CO. OF COLORADO	O	A	HALLERTAU 4 FEDERAL #007H	1	B-04-26S-32E	10713	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-40477	162683	CIMAREX ENERGY CO. OF COLORADO	O	A	HALLERTAU 4 FEDERAL #008H	1	A-04-26S-32E	10720	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-40722	7377	EOG RESOURCES INC	O	A	JEFF BSI FEDERAL COM #001H	1	O-32-25S-32E	10526	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41062	162683	CIMAREX ENERGY CO. OF COLORADO	O	A	HALLERTAU 4 FEDERAL #005H	1	D-04-26S-32E	9400	[97903] WC-025 G-08 S253235G, LWR BONE SPRIN
30-025-41069	162683	CIMAREX ENERGY CO. OF COLORADO	O	A	HALLERTAU 4 FEDERAL #001H	1	D-04-26S-32E	9034	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41119	162683	CIMAREX ENERGY CO. OF COLORADO	O	A	HALLERTAU 4 FEDERAL #002H	1	C-04-26S-32E	9408	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41248	6137	DEVON ENERGY PRODUCTION COMPANY, LP	O	C	VAN DOO DAH 33 FEDERAL #001C	1	C-33-25S-32E	0	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41628	162683	CIMAREX ENERGY CO. OF COLORADO	O	A	HALLERTAU 4 FEDERAL #006H	1	C-04-26S-32E	9456	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-41878	162683	CIMAREX ENERGY CO. OF COLORADO	O	A	HALLERTAU 4 FEDERAL #009H	1	B-04-26S-32E	9440	[97838] JENNINGS, UPPER BONE SPRING SHALE
30-025-42624	6137	DEVON ENERGY PRODUCTION COMPANY, LP	O	A	VAN DOO DAH 33 FEDERAL #003H	1	P-33-25S-32E	9495	[97838] JENNINGS, UPPER BONE SPRING SHALE

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Table 2a - Oil and Gas Leases on BLM Surface within 2-Miles of Ironside State SWD #1 Solaris Water Midstream

SerialNum	Name 1	Name 2	Name 3	Name 4
NMLC 0062300	3-M ENERGY CO	CHEVRON USA INC	DEVON ENERGY	PROVIDENCE MINERALS LLC
NMLC 0061869	DEVON ENERGY PROD CO LP			
NMNM 027467	OCCIDENTAL PERMIAN LP			
NMNM 105560	MEWBOURNE OIL CO			
NMNM 108972	COG OPERATING LLC			
NMNM 105559	MEWBOURNE OIL CO			
NMNM 108971	OXY Y-1 COMPANY	EOG A RESOURCES INC	EOG M RESOURCES INC	
NMNM 105561	MEWBOURNE OIL CO			
NMNM 115421	OXY USA INC			
NMNM 128927	COG OPERATING LLC			
NMNM 120910	COG PRODUCTION LLC			
NMNM 115422	OGX RESOURCES INC			
NMNM 128928	MAGNUM HUNTER PRODUCTION INC			
NMNM 113968	DEVON ENERGY PROD CO LP			
NMNM 113967	DEVON ENERGY PROD CO LP			
NMNM 112935	OXY Y-1 COMPANY	EOG A RESOURCES INC	EOG M RESOURCES INC	
NMNM 115423	OXY USA INC			
NMNM 120909	CHEVRON USA INC			
NMNM 128929	OCCIDENTAL PERMIAN LP			
NMNM 0359295A	DEVON ENERGY OPER CO LP			
NMNM 0392082A	MAGNUM HUNTER PRODUCTION INC			

Unique Key	Lease Prefix	Lease Number	Lease Suffix	OGRID Number	OGRID Name
V076790001	V0	7679	1	90712	MEWBOURNE OIL COMPANY
VB07770001	VB	777	1	25575	EOG Y RESOURCES, INC.
VB07870001	VB	787	1	25575	EOG Y RESOURCES, INC.

Table 3 - Produced Water Chemistry of Nearby Wells

api	S	TWO	RNG	CTY	formation	sampledate	ph	tds_mgl	resistivity_ohm_cm	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mg_L
3001542426	1	255	31E	EDDY	DELAWARE-BRUSHY CANYON	10/7/2015 0:00	6.3	245565.5	0.05108	71987.8	15105.6	76.4	2475.6	153168.3	545.1	400	545.1	400
3001542515	1	255	31E	EDDY	DELAWARE-BRUSHY CANYON	10/7/2015 0:00	6.5	240893.6	0.05116	69999.9	13540.5	54	2248.5	152475.6	600.8	300	600.8	300
3001542952	1	255	31E	EDDY	EDDY	2/12/2014 0:00	6.7	128946.5		41405	6715	16	588		1	78100	317	481
3001542513	1	255	31E	EDDY	BONE SPRING 2ND SAND	4/12/2015 0:00	7.1	145420.8		45951.8	7711.4	35	973.4	1.29	89433.1	144	0	200
3001542514	1	255	31E	EDDY	BONE SPRING 2ND SAND	4/12/2015 0:00	7.1	145160.9		44866.9	7892.4	36	972.6	1.25	89011.8	244	0	200
3001542952	1	255	31E	EDDY	EDDY	8/24/2005 0:00	7	153395.2		45072.8	6045	2	480		82003	248.9	477	
3001541664	2	255	31E	EDDY	BONE SPRING 2ND SAND	3/9/2011 0:00	7	133147.6		44488.8	5627	3.5	511	0.2	80547	341.6	468	0.2
3001541363	2	255	31E	EDDY	BONE SPRING 2ND SAND	6/30/2014 0:00	6.5	144473.4		53511.8	9168.8	44.7	1111.4	1.41	98461	244	0	200
3001541364	2	255	31E	EDDY	BONE SPRING 2ND SAND	1/27/2015 0:00	6.3	151759.9		46840.4	7768.3	47	933	1.22	93955.3	122	0	200
3001541364	2	255	31E	EDDY	BONE SPRING 2ND SAND	1/27/2015 0:00	6.3	151611		47257.6	7748.1	48.7	954	1.3	93154.3	122	875.3	200
3001541364	2	255	31E	EDDY	BONE SPRING 2ND SAND	1/27/2015 0:00	6.3	151433.6		47257.6	7748.1	48.7	954	1.31	93154.3	122	0	200
3001548433	2	255	31E	EDDY	DELAWARE-BRUSHY CANYON	10/7/2015 0:00	6.5	255155.5	0.04973	74122.9	16699.4	79.5	2736.1	160663.2	359.4	400		
3001548433	2	255	31E	EDDY	DELAWARE-BRUSHY CANYON	2/1/2013 0:00	7.1	204607.1		68549.6	7663	25	1369	1.5	12033	976	1434	60
3001548534	2	255	31E	EDDY	AVALLON LOWER	2/1/2013 0:00	7.1	176370.9		63443.9	3951	36	615	0.8	104946	1537.2	1188	40
3001548536	2	255	31E	EDDY	AVALLON MIDDLE	2/1/2013 0:00	7.3	220564.8		73317.3	11591.4	44	1987	2.5	140733	610	781	40
3001548536	2	255	31E	EDDY	AVALLON MIDDLE	5/15/2013 0:00	7.2	22182.4		62900.7	13704	29	2349	3.5	130100	134.2	331	
3001548533	2	255	31E	EDDY	AVALLON MIDDLE	6/25/2013 0:00	6.5	221504.1		71676	13845	49	2039	2.5	131876	707.6	1106	50
3001548533	2	255	31E	EDDY	BONE SPRING 2ND SAND	10/7/2013 0:00	6.6	99209		33720	3384	38	912	3	56135	122	3635	150
3001548533	2	255	31E	EDDY	AVALLON LOWER	6/17/2014 0:00	6.6	173840.4		59159	4111	73	912	1.5	105084	1403	0	350
3001548534	2	255	31E	EDDY	AVALLON MIDDLE	1/27/2014 0:00	6.6	193809		59779	8398	95	1562	2.5	120738	549	0	400
3001548536	2	255	31E	EDDY	AVALLON LOWER	1/27/2014 0:00	6.7	154676.5		55033	1169	47	261	0.8	94550	1220	0	300
3001548536	2	255	31E	EDDY	AVALLON MIDDLE	1/27/2014 0:00	6.4	201266.5		60669	9699	64	1785	3.5	125944	488	300	0
3001548536	2	255	31E	EDDY	AVALLON MIDDLE	2/12/2014 0:00	6.12	251232.5		73846	15965	56	2572	3.5	155756	122	0	350
3001548536	2	255	31E	EDDY	AVALLON MIDDLE	2/12/2014 0:00	6.59	131449.7		42344	6992	6	601	0.2	79520	353	542	40
3001548536	2	255	31E	EDDY	AVALLON MIDDLE	2/12/2014 0:00	6.74	85748.5		28036	3873	887	362	9	51300	59	389	50
3001548536	2	255	31E	EDDY	AVALLON MIDDLE	2/12/2014 0:00	7.47	246826		74769	16401	65	2689	3.5	149839	158	410	410
3001548536	2	255	31E	EDDY	BONE SPRING 2ND SAND	2/20/2014 0:00	6.3	194713		58546	10372	70	1733	3	130869	634	656	570
3001541363	2	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6.4	155083		46590.1	7728.7	132	945.5	1.8	97130.8	183	876.9	200
3001541364	2	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6.4	154900.7		46590.1	7728.7	132	945.5	1.78	97130.8	183	0	200
3001541364	2	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6.2	151545		47168.6	7450	48.1	989.6	1.15	93392.1	122	0	200
3001541364	2	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6.2	151722		47168.6	7450	48.1	989.6	1.1	93392.1	122	1116.7	200
3001541437	2	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6.2	160017		48268.6	7948.4	38.3	1005.5	1.1	100334.1	122	834.5	100
3001541437	2	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6.2	159829		48268.6	7948.4	38.3	1005.5	1.06	100334.1	122	0	100
3001541437	2	255	31E	EDDY	BONE SPRING 2ND SAND	4/7/2015 0:00	6.9	149970.4	0.06035	47221.1	7719.3	48.6	945.9	1.39	91736.6	188	0	200
3001529345	2	255	31E	EDDY	EDDY	2/21/2005 0:00	6	251350.9		72408	18324	168	2885		154636	124.4	253	
3001529345	2	255	31E	EDDY	EDDY	2/21/2005 0:00	7	122561		40510.6	5512	2	495		74701	290.4	456	
3001529345	2	255	31E	EDDY	EDDY	8/24/2005 0:00	5	264347.8		81366.6	15276	146	2599		162178	62.2	249	
3001529345	2	255	31E	EDDY	EDDY	8/24/2005 0:00	7	136044.4		45442.1	5998	0.7	450		82374	311.1	468	
3001529345	2	255	31E	EDDY	EDDY	8/24/2005 0:00	6.2	136576.4		45028.5	6334	280	485		82850	122.4	459	
3001541364	2	255	31E	EDDY	DELAWARE-BRUSHY CANYON	6/17/2014 0:00	6	202329		64882.1	13144.3	55.3	2199.6	3.77	119000	244	0	70
3001541364	2	255	31E	EDDY	BONE SPRING 2ND SAND	6/30/2014 0:00	6.7	126424.8		40645.2	6514.4	11.4	810.1	0	75892	244	0	200
3001541499	2	255	31E	EDDY	BONE SPRING 2ND SAND	1/7/2015 0:00	6.2	153518		48378.6	7952.2	44.4	937.3	1.18	95666.7	244	0	200
3001541499	2	255	31E	EDDY	BONE SPRING 2ND SAND	1/7/2015 0:00	6.2	15325.4		48678.5	7968	37.6	993.3	1.14	92365.3	122	846.7	150
3001541499	2	255	31E	EDDY	BONE SPRING 2ND SAND	1/7/2015 0:00	6.6	85262.9		31498.1	815	15	116	0.2	48116	2867	1368	200
3001541499	2	255	31E	EDDY	AVALLON LOWER	9/21/2011 0:00	6	229994.1		73657.1	10000	42	1944		136320	500	531	
3001541499	2	255	31E	EDDY	BONE SPRING 2ND SAND	1/27/2015 0:00	6.3	143276.8		42636.7	6947.7	35.4	881.4	1.06	90482.2	244	0	300
3001542317	3	255	31E	EDDY	BONE SPRING 2ND SAND	1/27/2015 0:00	6.4	143721.9		43196.3	7185.3	47.3	911.9	1.17	90265.4	122	0	200
3001531381	3	255	31E	EDDY	DELAWARE-BRUSHY CANYON	6/25/2013 0:00	6.7	271580.1		8240	18493	103	3404	5	16310	219.6	286	30
3001531381	3	255	31E	EDDY	EDDY	2/10/2014 0:00	6.2	240716		69047	14901	68	2407	3	151403	122	0	300
3001531381	3	255	31E	EDDY	EDDY	2/10/2014 0:00	7.4	255030.4		71818	14633	58	2445	3	162812	146.4	495	390
3001531381	3	255	31E	EDDY	EDDY	2/20/2014 0:00	7.4	242428.7		69222	14322	51	2315	2.5	153661	134.2	443	380
3001542317	3	255	31E	EDDY	BONE SPRING 2ND SAND	4/7/2015 0:00	6.5	15149.4	0.05979	68772	14093	55	2298	2.5	161917	134.2	506	470
3001542317	3	255	31E	EDDY	BONE SPRING 2ND SAND	4/7/2015 0:00	6.5	15149.4	0.05979	68772	14093	55	2298	2.5	161917	134.2	506	470
3001542317	3	255	31E	EDDY	BONE SPRING 2ND SAND	4/7/2015 0:00	6.5	150344.4	0.05986	46536.7	7533.5	36	943.7	0	93214.4	122	0	200

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Table 3 - Produced Water Chemistry of Nearby Wells

api	S	TWO	RNG	CTY	formation	sampledate	ph	tds_mgl	resistivity_ohm_cm	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mgl		
3001518535	3	255	31E	EDDY	DELAWARE-BRUSHY CANYON	12/17/2014 0:00	6	259463.7	73189.3	17155.5	59.3	2948.2	3.44	163095.6	122	0	400	0		
3001518952	3	255	31E	EDDY	DELAWARE-BRUSHY CANYON	8/11/2015 0:00	6.4	193507	56637.5	10651.6	36.3	1522.3	3.49	148489.6	188	0	400	0		
3001513181	3	255	31E	EDDY	DELAWARE-BRUSHY CANYON	9/21/2011 0:00	6.2	194556.7	67591.7	5200.8	84	1944		122006.1		846.7	200	0		
3001518535	3	255	31E	EDDY	DELAWARE-BRUSHY CANYON	2/1/2013 0:00	7.4	254959.9	79764.6	13961.1	35	2265	2.5	156140	220	1657	0	0		
3001519230	10	255	31E	EDDY	DELAWARE-BRUSHY CANYON	11/4/2014 0:00	6	259922	71811.8	15698.5	62	2546	3.91	166925.1	305	0	300	20		
3001519216	10	255	31E	EDDY	DELAWARE-BRUSHY CANYON	11/4/2014 0:00	6.2	248787.7	69168.6	15101.9	85.5	2497.6	3.39	159331.7	122	0	350	0		
3001519216	10	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6.2	166762.2	50511.3	8741.5	34.9	1113.3	1.09	104123.2	122	0	150	0		
3001519216	10	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6.2	166972	50511.3	8741.5	34.9	1113.3	1.1	104123.2	122	698.3	150	0		
3001519216	10	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6	157210.6	48584.2	8080.1	33.4	1039.4	1.05	97266	122	0	150	0		
3001519216	10	255	31E	EDDY	BONE SPRING 2ND SAND	11/18/2014 0:00	6	157444	48584.2	8080.1	33.4	1039.4	1.05	97266	122	0	150	0		
3001519216	10	255	31E	EDDY	BONE SPRING 2ND SAND	4/7/2015 0:00	6.8	156876.4	0.05826	47995.3	8167.1	45.9	1037.2	1.26	97409	152	0	200	0	
3001519216	10	255	31E	EDDY	BONE SPRING 2ND SAND	4/7/2015 0:00	6.5	158175.7	0.05806	48703.1	8121.1	37.1	1022.8	1.06	98100	172	0	200	0	
3001519216	10	255	31E	EDDY	BONE SPRING 2ND SAND	1/25/2015 0:00	6.2	126269.1	40446.7	6580.5	43.2	894	1.63	76140.7	122	0	200	0		
3001519216	10	255	31E	EDDY	BONE SPRING 2ND SAND	1/25/2015 0:00	6.1	135102.7	42665.9	7042.6	54.3	944	2.19	82210.5	122	0	250	0		
3001519375	11	255	31E	EDDY	DELAWARE-BRUSHY CANYON	1/27/2014 0:00	6.3	249141.5	73945	14492	45	2514	2.5	155100	122	0	250	0		
3001519376	11	255	31E	EDDY	BONE SPRING 2ND SAND	1/27/2014 0:00	6.6	154710.4	46995	6817	39	940	1.5	97481	183	0	200	0		
3001519375	11	255	31E	EDDY	DELAWARE-BRUSHY CANYON	1/27/2014 0:00	6.2	247108.5	74025	12425	76	2423	4.5	154200	122	0	300	0		
3001519375	11	255	31E	EDDY	DELAWARE-BRUSHY CANYON	2/7/2014 0:00	6.2	245188.5	72215	15714	45	2559	3	151636	98	332	380	0		
3001519370	11	255	31E	EDDY	DELAWARE-BRUSHY CANYON	2/20/2014 0:00	6.2	257350	74080	14866	54	2518	3	162870	110	376	400	0		
3001519376	11	255	31E	EDDY	BONE SPRING 2ND SAND	10/29/2014 0:00	6.3	157604.8	48581.5	7916	78.4	914	1.81	100557	244	0	250	0		
3001519272	12	255	31E	EDDY	BONE SPRING 2ND SAND	2/12/2014 0:00	4.42	23445	7789	1376	424	167	24	13755	0	19	0	0		
3001519850	12	255	31E	EDDY	DELAWARE-BRUSHY CANYON	2/12/2014 0:00	6.59	131449.7	42344	6992	6	601	0.2	79220	353	542	0	0		
30015190385	13	255	31E	EDDY	BONE SPRING 2ND SAND	10/7/2015 0:00	6.7	239818.3	0.05047	77792.6	12750.4	110.8	2141.6		0	149691.1		595.6	400	
30015192091	14	255	31E	EDDY	BONE SPRING 2ND SAND	4/7/2015 0:00	6.4	155527.8	0.05827	47632.8	7833.6	31.4	950.8		1.07	95447.5	122	0	200	
30015192091	14	255	31E	EDDY	BONE SPRING 2ND SAND	4/7/2015 0:00	6.2	154868.7	0.05887	48183	8015.7	36	979.9		1.08	95447.5	122	0	200	
30015192091	14	255	31E	EDDY	BONE SPRING 2ND SAND	4/22/2015 0:00	6.8	149342.5		46854.9	7735.5	34.3	953.9		1.07	91392.5	244	0	200	
30015192091	14	255	31E	EDDY	BONE SPRING 2ND SAND	4/22/2015 0:00	6.8	148687.1		46832	7781.8	31.8	940.8		1.03	91091.9	144	0	200	
30015192091	14	255	31E	EDDY	BONE SPRING 2ND SAND	1/6/2015 0:00	6.9	147434.3		45458.9	7994.4	37.3	982.6		1.17	90722.4	61	0	380	
30015192091	14	255	31E	EDDY	BONE SPRING 2ND SAND	1/6/2015 0:00	7	145369.9		45077.6	7846.9	36.1	956.5		1.13	89272.7	61	0	220	
30015192091	14	255	31E	EDDY	BONE SPRING 2ND SAND	4/7/2015 0:00	6.9	158206.7	0.05806	48491.4	7898.9	47.9	982.5		1.19	98665.6	122	0	200	
30015192091	14	255	31E	EDDY	AVALLON UPPER	9/5/2013 0:00	6.8	160733		52106	1481	68	289		0.9	103200	2342.4	1012	60	
30015192091	14	255	31E	EDDY	BONE SPRING 2ND SAND	6/11/2014 0:00	6.5	137946		45552	7086	26	850		1	81903	244	683	25	
30015192091	14	255	31E	EDDY	BONE SPRING 2ND SAND	6/11/2014 0:00	6.5	137735		45552	7086	26	850		1	81903	244	0	25	
30015191940	25	255	31E	EDDY	BONE SPRING 2ND SAND	5/21/2015 0:00	6.12	200406.7	59653.7	10821.5	24.3	1679.7	1.93	125567.1		715		0		
30015191940	25	255	31E	EDDY	BONE SPRING 2ND SAND	2/27/2015		247372											0	
30025418129	4	255	32E	LEA	BONE SPRING 2ND SAND	1/27/2015 0:00	6.3	140235.4	42818.4	6441.7	40.5	785.3		0	87998.1	244	0	200		
30025418129	4	255	32E	LEA	BONE SPRING 2ND SAND	11/17/2014 0:00	6.5	139733.4	42191.3	7002.9	78.4	913.2	1.66	87280.6	244	0	150	0		
30025418129	4	255	32E	LEA	BONE SPRING 2ND SAND	4/7/2015 0:00	7.2	141809.9	43932.5	6382.4	63.2	789.5	1.2	88463.4	244	0	100	0		
3002519948	6	255	32E	LEA	AVALLON LOWER	1/15/2015 0:00	6.2	122		0	0	0	0	0	0	122	0	200	0	
3002540044	6	255	32E	LEA	DELAWARE-BRUSHY CANYON	1/15/2015 0:00	6.3	239818.3	74875.7	14394.1	58.6	2437.4	2.53	14508.4	122	0	300	0		
3002540105	6	255	32E	LEA	AVALLON LOWER	1/15/2015 0:00	6.5	144738.6	53757.9	718.2	44.8	135.8		0	86689.6	1098	0	400	0	
3002540105	6	255	32E	LEA	DELAWARE-BRUSHY CANYON	10/7/2015 0:00	6.5	239860	74029.5	13590.6	48.6	2237.5		2	108593	48.8	1692	230	0	
3002540048	6	255	32E	LEA	BONE SPRING 2ND SAND	12/18/2013 0:00	7.65	179697.7	56825.9	9232	23	1459		107	0.2	97097	2281.4	1177	40	
3002540048	6	255	32E	LEA	AVALLON LOWER	2/1/2013 0:00	7.4	165243.8	62859.4	567	17	107		0.2	97097	2281.4	1177	40	0	
3002540105	6	255	32E	LEA	AVALLON MIDDLE	2/1/2013 0:00	7.2	191604.1	65433.6	6298	128	1120		2	114866	793	1710	50	0	
3002540048	6	255	32E	LEA	BONE SPRING 2ND SAND	1/23/2014 0:00	7.1	164202.4	62428.1	501	25	96		0.5	96323	2305.8	1264	30	0	
3002540048	6	255	32E	LEA	AVALLON MIDDLE	1/27/2014 0:00	6.3	197184.5	62422	6809	218	1344		3.5	123168	549	0	500	0	
3002540046	6	255	32E	LEA	BONE SPRING 2ND SAND	1/29/2014 0:00	6.7	139871.5	40364	6643	41	750		1.5	89675	183	0	200	0	
3002540047	6	255	32E	LEA	DELAWARE-BRUSHY CANYON	7/29/2014 0:00	6.2	225114.5	60110	12606	50	1970		3	147814	122	0	250	0	
3002540047	6	255	32E	LEA	DELAWARE-BRUSHY CANYON	3/20/2015 0:00	6.7	252093.3	0.04616	78477.1	17591.8	34.8	2984		2.98	150156.7	148.8	0	300	0
3002540047	6	255	32E	LEA	DELAWARE-BRUSHY CANYON	7/17/2015 0:00	6.7	248632	0.04819	71715	15831.6	43.8	2760.6		2.61	155536.8	122	0	400	0
3002540047	6	255	32E	LEA	BONE SPRING 2ND SAND	8/31/2015 0:00	6.2	162064.6	0.06386	49783.6	7951.8	36.1	987.1		1	100900.9	949.5	100	0	
3002542476	6	255	32E	LEA	BONE SPRING 2ND SAND	8/31/2015 0:00	6.58	151458.9	0.06586	46370.7	7184.6	35.5	876			94130.6	1111.8	200	0	

Table 3 - Produced Water Chemistry of Nearby Wells

api	S	TWO	RNG	CTY	formation	sampledate	ph	tds_mgl	resistivity_ohm_cm	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mgl
3002539948	6/255	32E		lea	AVALON LOWER	12/8/2011 0:00	7	14495.1		54645.4	665	22	113	0.3	84541	2708.4	1047	60
3002539949	6/255	32E		lea	AVALON MIDDLE	12/8/2011 0:00	7	145592.5		55404.5	440	25	71	0.3	84840	2806	1092	60
3002540105	6/255	32E		lea	AVALON LOWER	12/8/2011 0:00	7	145530.9		55235.9	493	27	80	0.5	84856	2720.6	1090	60
3002541996	10/255	32E		lea	BONE SPRING 2ND SAND	4/7/2015 0:00	6.5	207154.8	0.05017	68477	4041.6	41.3	1744.6	1.53	126763.4	122	0	200
3002508176	10/255	32E		lea	DELAWARE			246555							152600	112	939	
3002508182	15/255	32E		lea	DELAWARE			308600										
3002508182	15/255	32E		lea	DELAWARE			309960										
3002508196	16/255	32E		lea	DELAWARE			224016										
3002508271	22/255	32E		lea	DELAWARE			276839							138600	139	462	
3002508276	22/255	32E		lea	DELAWARE			239464							170500	198	552	
3002508276	32/255	32E		lea	DELAWARE										147800	64	908	
CAL TROPS SWD	33/255	32E		lea					0.05289	57077.4	20081.9	19.4	2963.6		144325.8		528.7	300
3001542113	2/265	31E		EDDY	BONE SPRING 3RD SAND	10/8/2015 0:00	6.1	226822		31952.7	3678.6	31.7	483.6	0.83	57489.5	244	0	200
3001542113	2/265	31E		EDDY	BONE SPRING 3RD SAND	9/30/2015 0:00	7	94518.2	0.08933	30031.5	3402.8	19.9	438.9		58787.2		355.2	200
3001542113	2/265	31E		EDDY	BONE SPRING 3RD SAND	10/7/2015 0:00	7.2	94518.2	0.08933	30031.5	3402.8	19.9	438.9		58787.2		355.2	200
3001542688	2/265	31E		EDDY	WOLF CAMP	10/7/2015 0:00	7.3	81366.4	0.1004	26319.4	2687.4	26.1	326.7		50281.2		399.7	100
3001542113	2/265	31E		EDDY	BONE SPRING 3RD SAND	12/14/2014 0:00	6.1	223019	0.08914	28721.3	3440.7	16.3	437.4		56957.4		327.9	150
3001539036	2/265	31E		EDDY	AVALON UPPER	6/26/2014 0:00	6.5	179788.5		76001.7	10437.8	209.9	1922.4	4.5	131072	366	632	1100
3001539162	2/265	31E		EDDY	AVALON UPPER	6/26/2014 0:00	6.5	179788.5		76001.7	10437.8	209.9	1922.4	4.5	131072	366	632	1100
3001539104	2/265	31E		EDDY	AVALON UPPER	6/26/2014 0:00	6.5	179788.5		76001.7	10437.8	209.9	1922.4	4.5	131072	366	632	1100
3001579605	10/265	31E		EDDY	AVALON UPPER	8/31/2011 0:00	7	162560.1		71575.7	617.4	21.8	109.6	0	101374	3660	844	500
3001579605	10/265	31E		EDDY	AVALON UPPER	8/31/2011 0:00	7	162560.1		71575.7	617.4	21.8	109.6	0	101374	3660	844	500
3001540994	10/265	31E		EDDY	BONE SPRING 2ND SAND	3/20/2015 0:00	6.3	111430.5	0.07008	38922.4	3647.3	76.8	487.9	1.05	66173.2	366	0	300
3001540994	10/265	31E		EDDY	BONE SPRING 2ND SAND	4/14/2015 0:00	7	54116.9		46100	5224	349.6	719.3	3.73	0	73.2	0	570
3001537899	10/265	31E		EDDY	BONE SPRING 2ND SAND	6/26/2014 0:00	6.6	138161.9		44558.5	6280.8	29.7	781.3	0	84470	122	0	20
3001537899	10/265	31E		EDDY	AVALON UPPER	6/26/2014 0:00	6.6	138161.9		44558.5	6280.8	29.7	781.3	0	84470	122	0	20
3001537899	10/265	31E		EDDY	BONE SPRING 2ND SAND	6/26/2014 0:00	6.5	152439.2		68948.2	7560.4	111.2	1522.8	2.19	118195	732	0	500
3001537899	10/265	31E		EDDY	AVALON UPPER	6/26/2014 0:00	6.5	152439.2		68948.2	7560.4	111.2	1522.8	2.19	118195	732	0	500
3001538193	11/265	31E		EDDY	AVALON UPPER	7/19/2011 0:00	7.1	209352.4		70889.5	7227	203	1557	2.5	127230	146.4	600	600
3001538193	11/265	31E		EDDY	AVALON UPPER	7/19/2011 0:00	6.1	225188.8		77010.7	8743.8	636.1	1649.2	6.75	134075	366	0	300
3001538193	11/265	31E		EDDY	AVALON UPPER	7/19/2011 0:00	7	196576.7		65797.3	5059	12	1066	0.9	118943	122	872	380
3001505886	26/265	31E		EDDY	DELAWARE	8/31/2011 0:00	7	203078.9		72261.4	4407	112	904	1.5	122172	1098	658	80
3002508253	8/265	32E		lea	DELAWARE			212112							132100	195	425	
3002508253	8/265	32E		lea	DELAWARE			216350							134500	198	998	
3002508278	25/265	32E		lea	DELAWARE			244815							153600	88	220	
3002508291	26/265	32E		lea	DELAWARE			254895										
3002508296	26/265	32E		lea	DELAWARE			249479										
3002508308	35/265	32E		lea	DELAWARE			255115							156000	976	373	
															160000	85	310	

2/11

OSE Well Logs



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

2019 JUL 18 11:14:23

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) C-4256-POD1		WELL TAG ID NO.		OSE FILE NO(S):			
	WELL OWNER NAME(S): Baker Ranch				PHONE (OPTIONAL): 480-365-8463			
	WELL OWNER MAILING ADDRESS: P.O. Box 24				CITY: Silver City STATE: NM ZIP: 88062			
	WELL LOCATION (FROM GPS)		DEGREES 32	MINUTES 4	SECONDS 23.4	* ACCURACY REQUIRED: ONE TENTH OF A SECOND		
	LONGITUDE		103	43	28.3	* DATUM REQUIRED: WGS 84		
	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - (LESS SECTION, TOWNSHIP, RANGE - WHERE AVAILABLE)							
2. DRILLING & CASING INFORMATION	LICENSE NO. WJD1706		NAME OF LICENSED DRILLER Bryce Wallace			NAME OF WELL DRILLING COMPANY Elite Drillers Corporation		
	DRILLING STARTED 06/28/18		DRILLING ENDED 07/04/18		DEPTH OF COMPLETED WELL (FT) 666	BORE HOLE DEPTH (FT) 680	DEPTH WATER FIRST ENCOUNTERED (FT) 340	
	COMPLETED WELL IS: ☒ ARTESIAN ☐ DRY HOLE ☐ SHALLOW UNCONFINED						STATIC WATER LEVEL IN COMPLETED WELL (FT) 330	
	DRILLING FLUID: ☐ AIR ☒ MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: ☒ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (not coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	100	17.5	ASTM53 Grade B	Welded	12.57	.188	
	0	326	12.25	ASTM53 Grade B	Welded	6.063	.238	
	326	666	12.25	SDR 17 PVC	Splice	5.8	SDR 17	.032
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	100	17.5	Portland III Cement	80	Tremie		
	0	315	12.25	Portland III Cement	187	Tremie		
	315	666	12.25	Silica Sand 8/16	219	Pour		

FOR OSE INTERNAL USE

FILE NO. C-4256 POD NO. 1 TRN NO. 626507
LOCATION 265.31E.1.2.4.4 EXPL WELL TAG ID NO. N/A PAGE 1 OF 2

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WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER'S OFFICE
SANTA FE, NEW MEXICO

2018 MAY 21 AT 10:46

1. GENERAL AND WELL LOCATION	OSE FORM NO. (WELL NO.) C-4209-POD1		WELL TAG ID NO.		OSE FILE NO. (S)			
	WELL OWNER NAME(S) Baker Ranch				WELL OPERATOR			
	WELL OWNER MAILING ADDRESS P.O. Box 24				CITY STATE ZIP Silver City NM 88062			
	WELL LOCATION (FROM GPS)		DEGREES LATITUDE 32	MINUTES 04	SECONDS 02.5	N	* ACCURACY REQUIRED: ONE FIFTH OF A SECOND	
		LONGITUDE 103	43	08.8	W	* DATUM REQUIRED: NAD83		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND NEARBY LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE, WHERE AVAILABLE)								
2. DRILLING & CASING INFORMATION	LICENSE NO. WD1706		NAME OF LICENSED DRILLER Bryce Wallace			NAME OF WELL DRILLING COMPANY Elite Drillers Corporation		
	DRILLING STARTED 4/28/18		DRILLING ENDED 5/1/18		DEPTH OF COMPLETE WELL (FT) 360	BORE HOLE DEPTH (FT) 360	DEPTH WATER FIRST ENCOUNTERED (FT) 155	
	COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☒ SHALLOW (UNDEVELOPED)						STATIC WATER LEVEL IN COMPLETED WELL (FT) 155	
	DRILLING FLUID: ☐ AIR ☒ MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: ☒ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER - SPECIFY:							
	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	200	11	PVC	Spline	6	SDR 21	
	200	360	11	PVC	Spline	6	SDR 21	.032
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						
	0	25	11	Portland CEM	25	Slurry/Pour		
	25	360	11	8/16 Silica Sand	145	Pour		

FOR OSE INTERNAL USE

FILE NO	C-4209	POD NO.	1	WR-20 WELL RECORD & LOG (Version 06.30.17)
LOCATION	265.32E.6.3.3.2	EXPL	WELL TAG ID NO.	NIA
			TRN NO.	621334
			PAGE 1 OF 2	

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[illegible]

5. TEST; RIG SUPERVISION

SIGNATURE

FOR OFFICE INTERNAL USE

FILE NO.	C-4209	POD NO.	1	TRN NO.	621334
LOCATION	26S 32E.6.3.3.2	EXPL		WELL TAG ID NO	N/A
					PAGE 2 OF 2

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

Township	Range	Section	Unit Letter	Lease Number	UPC	Leasee (O & G Minerals)	Leassor (O & G Minerals)	Surface Owner
25S	32E	28	M	NMNM 115422	4188149268266	OGX RESOURCES INC	BLM (US)	BLM (US)
25S	32E	28	N	NMNM 115422	4188149268266	OGX RESOURCES INC	BLM (US)	BLM (US)
25S	32E	28	O	NMNM 115422	4188149268266	OGX RESOURCES INC	BLM (US)	BLM (US)
25S	32E	29	N	NMNM 108971	4187149268266	OXY Y-1 COMPANY 33.3% EOG A RESOURCES 33.3% EOG M RESOURCES INC 33.3%	BLM (US)	BLM (US)
25S	32E	29	O	NMNM 108971	4187149268266	OXY Y-1 COMPANY 33.3% EOG A RESOURCES 33.3% EOG M RESOURCES INC 33.3%	BLM (US)	BLM (US)
25S	32E	29	P	NMNM 108971	4187149268266	OXY Y-1 COMPANY 33.3% EOG A RESOURCES 33.3% EOG M RESOURCES INC 33.3%	BLM (US)	BLM (US)
25S	32E	31	I	NMNM 112935	4187147225134	OXY Y-1 COMPANY 33.3% EOG A RESOURCES 33.3% EOG M RESOURCES INC 33.3%	BLM (US)	BLM (US)
25S	32E	31	P	NMNM 112935	4187147225134	OXY Y-1 COMPANY 33.3% EOG A RESOURCES 33.3% EOG M RESOURCES INC 33.3%	BLM (US)	BLM (US)
25S	32E	32	A	VB07870001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	B	VB07870001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	C	VB07870001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	D	VB07870001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	E	VB07870001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	F	VB07870001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	G	VB07870001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	H	VB07870001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	I	VB07770001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	J	VB07770001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	K	VB07770001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	L	VB07770001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	M	VB07770001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	N	VB07770001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	O	VB07770001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	32	P	VB07770001	4187150268266	EOG Y RESOURCES, INC.	State	State
25S	32E	33	A	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	B	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	C	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	D	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	E	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	F	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	G	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	H	NMNM 0359295A	4188150462352	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	I	NMNM 0359295A	4188150462352	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	J	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	K	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	L	NMNM 120909	4188150217244	CHEVRON USA INC	BLM (US)	BLM (US)
25S	32E	33	M	NMNM 120909	4188150217244	CHEVRON USA INC	BLM (US)	BLM (US)
25S	32E	33	N	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	O	NMNM 0359295A	4188150217244	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
25S	32E	33	P	NMNM 0359295A	4188150462352	DEVON ENERGY OPER CO LP	BLM (US)	BLM (US)
26S	32E	04	A	NMNM 0392082A	4188151170191	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	B	NMNM 0392082A	4188151170191	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	C	NMNM 0392082A	4188151170191	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	D	NMNM 0392082A	4188151170191	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	E	NMNM 0392082A	4188151170191	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	F	NMNM 0392082A	4188151170191	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	G	NMNM 0392082A	4188151170191	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	H	NMNM 0392082A	4188151355339	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	J	NMNM 0392082A	4188151355339	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	K	NMNM 0392082A	4188151170191	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	04	L	NMNM 0392082A	4188151170191	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	A	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	B	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	C	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	D	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	E	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	F	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	G	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	H	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	I	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	J	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)
26S	32E	05	K	NMNM 0392082A	4187151268203	MAGNUM HUNTER PRODUCTION INC	BLM (US)	BLM (US)

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Solaris Water Midstream

Ironsides SWD #1

Notification List

Name	Type	Address1	Address2	City	State	Zip
Sahara Operating	O	P.O. Box 4130		Midland	TX	79704
Devon Energy Production Company, LP	O	333 W. Sheridan		Oklahoma City	OK	73102
Robinson Oil Co.	O	P.O. Box 364		Eunice	NM	88231
EOG Resources, Inc.	O	P.O. Box 2267		Midland	TX	79702
Mewbourne Oil Co.	O, LS	P.O. Box 5270		Hobbs	NM	88241
COG Production, LLC	O	P.O. Box 2064		Midland	TX	79702
Cimarex Energy Co. of Colorado	O	600 N. Marienfeld	Suite 600	Midland	TX	79701
Mesquite SWD, Inc.	O	P.O. Box 1479		Carlsbad	NM	88221
3-M Energy Co.	L	502 S. Koenigheim St.	#2B	San Angelo	TX	76903
OGX Resources	L	P.O. Box 2064		Midland	TX	79702
Magnum Hunter Production, Inc.	L	600 East Las Colinas Blvd.	Suite 1100	Irving	TX	75039
Chevron USA, Inc.	L	6301 Deauville Blvd.		Midland	TX	79706
EOG-Y Resources, Inc.	L	104 S. 4th St.		Artesia	NM	88210
State of New Mexico	L	Oil, Gas and Minerals Division	310 Old Santa Fe Trail	Santa Fe	NM	87504
Bureau of Land Management	L	Oil & Gas Division	620 E. Greene St.	Carlsbad	NM	88220

O = Operator (Well)

L, BLM = Lessee of Record - Federal

L, S = Lessee of Record - State

L = Landowner

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☐ Adult Signature Restricted Delivery \$0.00

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Total Postage and Fees \$6.85

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City, State, ZIP+4®
MIDLAND, TX 79704

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

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City, State, ZIP+4®
EUNICE, NM 88231

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☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

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City, State, ZIP+4®
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OKLAHOMA CITY, OK 73102

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☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

Sent To
DEVON ENERGY PROD. Co., LP
Street and Apt. No., or PO Box No.
333 W. SHERIDAN
City, State, ZIP+4®
OKLAHOMA CITY, OK 73102

PS Form 3800, April 2015 PSN 7530-02-000-9047

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MIDLAND, TX 79702

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☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

Sent To
EOG RESOURCES, INC.
Street and Apt. No., or PO Box No.
P.O. Box 2267
City, State, ZIP+4®
MIDLAND, TX 79702

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

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MIDLAND, TX 79702

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\$2.80
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

Sent To
COG PRODUCTION, LLC
Street and Apt. No., or PO Box No.
P.O. Box 2064
City, State, ZIP+4®
MIDLAND, TX 79702

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

7018 1130 0001 8740 9561

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MIDLAND, TX 79701

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Extra Services & Fees (check box, add fee as appropriate)	\$2.80
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

0501 02
Postmark Here
04/22/2019

Sent To
CIMAREX ENERGY CO. OF COLO.
Street and Apt. No., or PO Box No.
600 N. MARIENFELD, STE. 600
City, State, ZIP+4®
MIDLAND, TX 79701

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 1130 0001 8740 9578

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CARLSBAD, NM 88221

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Extra Services & Fees (check box, add fee as appropriate)	\$2.80
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

0501 02
Postmark Here
04/22/2019

Sent To
MESQUITE SWD, INC.
Street and Apt. No., or PO Box No.
P.O. Box 1479
City, State, ZIP+4®
CARLSBAD, NM 88221

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 1130 0001 8740 9585

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For delivery information, visit our website at www.usps.com.
SAN ANGELO, TX 76903

Certified Mail Fee	\$3.50
Extra Services & Fees (check box, add fee as appropriate)	\$2.80
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

0501 02
Postmark Here
04/22/2019

Sent To
3-M ENERGY Co.
Street and Apt. No., or PO Box No.
502 KOENIGHEIM ST. #2B
City, State, ZIP+4®
SAN ANGELO, TX 76903

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

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04/22/2019

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600 EAST LAS COLINAS BLVD, #1100
City, State, ZIP+4®
IRVING, TX 75039

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MIDLAND, TX 79706

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☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

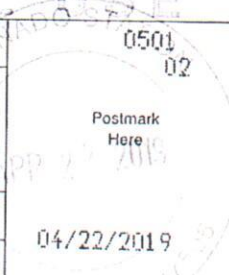
0501 02
Postmark Here
04/22/2019

Sent To
CHEVRON USA, INC.
Street and Apt. No., or PO Box No.
6301 DEANVILLE BLVD.
City, State, ZIP+4®
MIDLAND, TX 79706

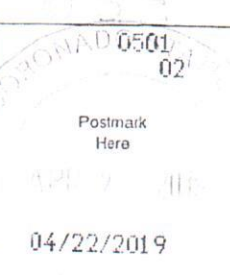
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

52

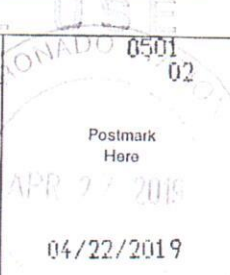
7018 1130 0001 8740 6126

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For delivery information, visit our website at www.usps.com ®.	
ARTESIA, NM 88210	
Certified Mail Fee \$3.50	 04/22/2019
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) \$2.80	
☐ Return Receipt (electronic) \$0.00	
☐ Certified Mail Restricted Delivery \$0.00	
☐ Adult Signature Required \$0.00	
☐ Adult Signature Restricted Delivery \$0.00	
Postage \$0.55	
Total Postage and Fees \$5.85	
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PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

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U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
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SANTA FE, NM 87501	
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☐ Return Receipt (electronic) \$0.00	
☐ Certified Mail Restricted Delivery \$0.00	
☐ Adult Signature Required \$0.00	
☐ Adult Signature Restricted Delivery \$0.00	
Postage \$0.55	
Total Postage and Fees \$5.85	
Sent To NEW MEXICO STATE LAND OFFICE Street and Apt. No., or PO Box No. 310 OLD SANTA FE TRAIL City, State, ZIP+4® SANTA FE, NM 87504	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

7018 1130 0001 8740 8588

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com ®.	
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Certified Mail Fee \$3.50	 04/22/2019
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) \$2.80	
☐ Return Receipt (electronic) \$0.00	
☐ Certified Mail Restricted Delivery \$0.00	
☐ Adult Signature Required \$0.00	
☐ Adult Signature Restricted Delivery \$0.00	
Postage \$0.55	
Total Postage and Fees \$5.85	
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PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

57

LEGAL NOTICE
April 23, 2019

Solaris Water Midstream, LLC, 907 Tradewinds Blvd Suite B, Midland, TX 79706 is filing Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Ironside SWD No. 1, will be located 1,270 feet from the South line and 175 feet from the East line, Section 32, Township 25 South, Range 32 East, Lea County, New Mexico. Produced water from area production will be commercially disposed into the Devonian, Silurian and Fusselman formations at a depth of 17,125 feet to 18,150 feet at a maximum surface pressure of 4,081 psi and an average injection rate of 30,000 barrels per day. The proposed SWD well is located approximately 27 miles southeast of Loving, New Mexico.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, NM 87505 (505) 476-3460 within 15 days of the date of this notice.

Additional information can be obtained by contacting Mr. Randall Hicks, agent for Solaris Water Midstream, at 505-238-9515.

#34044

54

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996
Artesia ▲ Carlsbad ▲ Durango ▲ Midland

October 14, 2019

Mr. Phillip Goetze, P.G.
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Solaris Water Midstream Ironside State SWD #1
UL P Section 32 T25S R32E, Lea County

Dear Mr. Goetze:

On behalf of Solaris Water Midstream LLC, R.T. Hicks Consultants is providing data and an opinion regarding the probability that injection of wastewater in the above referenced well at the proposed rates will cause seismic events of sufficient magnitude to create damage. It is our understanding that OCD is interested in such an opinion as part of the SWD approval process. We elected to provide this opinion as a separate submission as the C-108 does not specifically require such an opinion.

We relied upon the following data to develop our opinion

- State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity, Jens-Erik Lund Snee and Mark D. Zoback, The Leading Edge, February 2018¹
- Plate 4, which is reproduced from the Snee and Zoback publication, which uses the following references
 - Crone, A. J., and R. L. Wheeler, 2000, Data for Quaternary faults, liquefaction features, and possible tectonic features in the Central and Eastern United States, east of the Rocky Mountain front; U.S. Geological Survey Open-File Report.
 - Ewing, T. E., R. T. Budnik, J. T. Ames, and D. M. Ridner, 1990, Tectonic map of Texas: Bureau of Economic Geology, University of Texas at Austin.
 - Green, G. N., and G. E. Jones, 1997, e digital geologic map of New Mexico in ARC/INFO format: U.S. Geological Survey Open-File Report.
 - Ruppel, S. C., R. H. Jones, C. L. Breton, and J. A. Kane, 2005, Preparation of maps depicting geothermal gradient and Precambrian structure in the Permian Basin: USGS Order no. 04CRSA0834 and Requisition no. 04CRPR01474.
 - NMOCD database of oil and gas wells
- Plates 4 and 5, which shows the distribution of active and new SWD wells in the area of the proposed Ironside State SWD #1 well
- Stratigraphic and lithologic information from two deep wells in the Delaware Basin
- Data on the thickness and lithology of the Simpson Group from the Texas Bureau of Economic Geology²

¹ https://scits.stanford.edu/sites/default/files/3702_tss_lundsnee_v2.pdf

² http://www.beg.utexas.edu/resprog/permianbasin/PBGSP_members/writ_synth/Simpson.pdf

EXHIBIT 2

SOLARIS

Case 20F12

Plate 4 reproduces Figure 3 of the 2018 publication of Snee and Zoback and shows

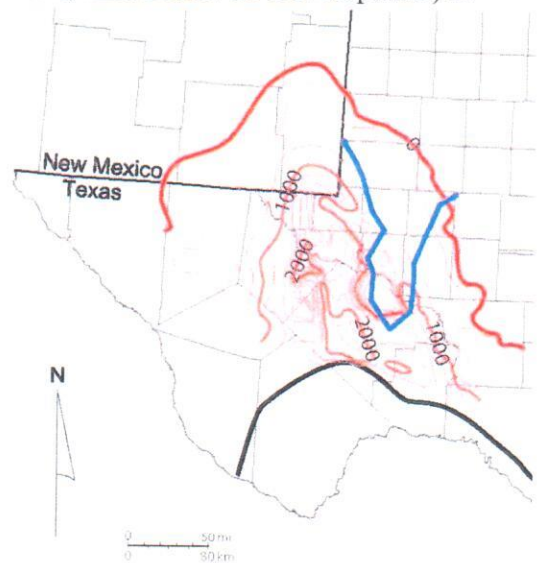
1. Fault traces based upon the references provided above for which Dr. Snee and Dr. Zoback provide a value of the fault slip potential (FSP)
2. Areas of documented seismic activity, such as the Dagger Draw area and a magnitude 2.0-2.9 earthquake that occurred between 1970-2004 about 8-miles northeast of the proposed Ironside State SWD #1.
3. Although Plates 4 and 5 do not show faults that may be identified in confidential seismic data owned by oil and gas operators, the mapped fault that is closest to the Ironside State SWD #1 (about 11 miles to the east) exhibits a low FSP (less than 5%) based upon the modeling and analysis of Snee and Zoback referenced above
4. Other mapped faults in southern Lea County shown on Plate 4 also show a low FSP, except for part of southwest-northeast trending fault about 35 miles north-northwest of the Ironside State SWD #1 well that has a FSP of about 25 – 33% at the northeast end.

Plate 5 reproduces the major elements of Plate 4 in the inset map and also shows that within the approximately 200 square miles displayed on Plate 5, the OCD database shows 7 active and 5 new Devonian SWDs, which translates into an average density of about one SWD for every 16 square miles.

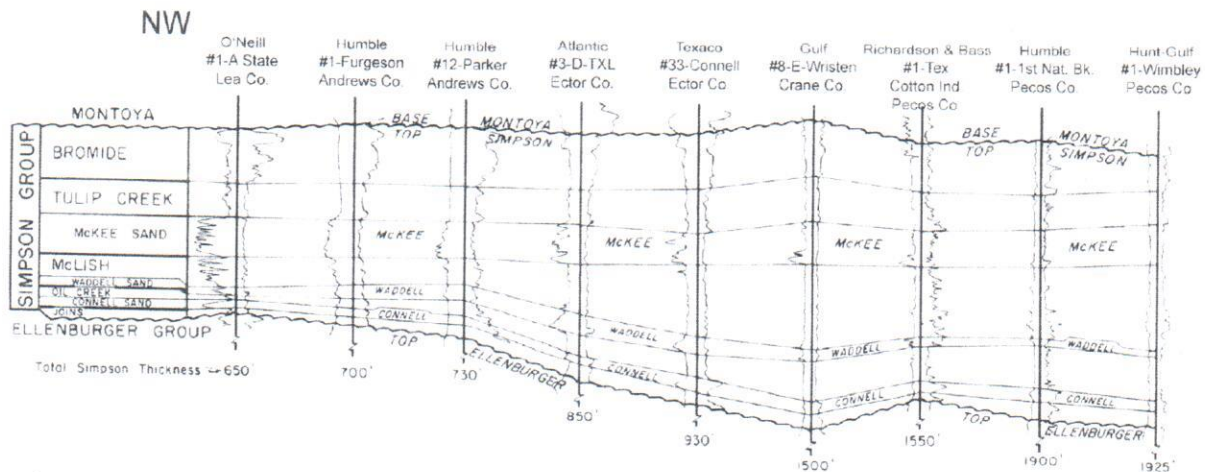
Figure 4 from the referenced Bureau of Economic Geology (The Middle-Upper Ordovician Simpson Group of the Permian Basin: Deposition, Diagenesis, And Reservoir Development) is attached to this letter and the portion of that figure for the Delaware Basin is shown to the right. In southern Lea County the mapped thickness appears to be 500-1500 feet thick (note one contour line appears to be missing on the map).

Data from the Amoco Federal CW Com 1 (3002528119) show that the thickness of the Simpson in the Antelope Ridge area of Lea County (Section 3 24S 34E) is about 450 feet thick with. This is consistent with Figure 4 of the BEG paper (probably because this well was used to produce the isopach map). Data from a second well in Lea County is presented in the cross-section below, which is part of Figure 5 from the referenced BEG publication. The thickness of the Simpson Group in the O'Neill 1A State well appears to be about 650 feet.

The description of each of the Formations from the BEG report are presented below the cross section.



CI = 100 ft in Oklahoma
CI = 250 ft in Texas/New Mexico



Bromide Formation

"The Bromide Formation comprises massive fossil-rich limestone that is thinly interbedded with green shale and sandstone in the subsurface; the limestone is increasingly sandy and shaly [shaley] away from the Central Basin Platform, to the south, southeast, and west (Wright, 1979)."

Tulip Creek

"Rocks of the Tulip Creek Formation are primarily thinly bedded, green shale thinly interbedded with limestone in the subsurface"

McKee Sand

"Two sandstone layers separated by green shale and sandy limestone characterize the McKee; the sandstones are medium to coarse, white, green, or red in color, and they contain phosphate, as well as abundant frosted quartz (Wright, 1965). The basal McKee Member comprises sandstone, muddy sandstone, and sandy mudstone lithologies in cores from Andrews and Crane (Texas) and Lea (New Mexico) Counties (Bosco and Mazullo, 2000)."

McLish Formation and Wadell Sand

"The McLish Formation consists of gray-green shale interbedded with sandy limestone and fine-grained sandstone; medium-coarse grained calcareous sandstones make up the Waddell Member at the base of the McLish Formation in the subsurface (Wright, 1965). Shale dominates the section north of Ward and Crane Counties, and shaly limestone dominates the subsurface elsewhere outside of the main producing area."

Oil Creek Formation and Connell Sandstone

"The Oil Creek Formation is composed primarily of green, and locally red, shale with thin limestone interbeds; the Connell Sandstone Member consists of medium to coarse, well-rounded, calcareous sandstone in the subsurface and is locally iron rich and interbedded with red and gray shale (Wright, 1965)."

Thus, the Simpson Group in southern Lea County, which is clay-rich carbonate interbedded with shale and sandstone, provides an excellent permeability/pressure barrier between the injection zone and the basement faults that were re-activated during Woodford time.

October 14, 2019

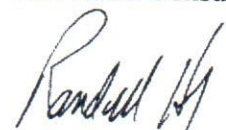
Page 4

We contend that the data permit conclusion that unmapped faults (which may be located by confidential seismic data that Solaris Water Midstream does not possess) near the Ironside State SWD #1 would be dominantly north-south normal faults, as is common in Lea County. The data on Plate 4 permit a conclusion that faults near the Ironside State SWD #1 are also most likely to exhibit a low FSP, like the mapped faults shown on Plate 4.

Given the density of Devonian SWDs (planned/new and active) near the proposed Ironside State SWD #1 well and the high likelihood that any unmapped faults in the area would exhibit a low FSP, the probability that injection into the Ironside State SWD #1 would cause an increase in pore pressure to trigger a seismic event of sufficient magnitude to cause damage is very low.

The users of this letter should recognize the uncertainties of using seismic maps of the Permian Basin to determine probability that injection of wastewater into a single SWD well could cause seismic events of sufficient magnitude to cause damage. However, on a regional basis injection by numerous wells into the Devonian/Fusselman/Montoya interval will raise the hydrostatic pressure. If pressure increases sufficiently, fluid could migrate from the injection zone along fault planes, up and down. Downward fluid migration will be intercepted first by the sandstone and similar permeable units of the Simpson Group. After fluid pressure increases in these sandstones and limestones, fluid would migrate downward into the Ellenberger Formation, which lies beneath the Simpson Group. This downward migration will next enter the permeable units of the Ellenberger and, over time, increase the fluid pressure. After fluid pressure in the Ellenberger is sufficiently large to cause downward migration along fault planes or other conduits, the migrating fluid will, in some areas, enter a thinner horizon of granite wash. Downward migrating fluids from the injection zone could then enter basement fault planes (if the pressure in the granite wash horizon is sufficient) and reduce the frictional resistance (lubricate the faults). Reduction in the frictional force in faults due to fluid invasion can and has caused seismic events. In my opinion, the probability that injection into the Ironside State SWD #1 will measurably contribute to the events described above and will cause a seismic event resulting in damage is so low as to be nil.

Sincerely,
R.T. Hicks Consultants



Randall T. Hicks
Principal

Copy: Solaris Water Midstream, LLC



24S 31E

N



STRIKER 2 SWD #001



24S 32E

25S 32E

Eddy

Lea

25S 31E

9.184 Miles

8.568 Miles



Ironside
State SWD #1

Age		Stratigraphic units		
Permian	Triassic	Chinle Santa Rosa Dewey Lake Rustler Salado Tansill Yates Seven Rivers Queen Grayburg San Andres		
	Ochoan	Artesia Group		
		Guadalupian	Glorieta Paddock Blinnery Tubb Drinkard Abo	
			Leonardian	Yeso
	Wolfcampian			Hueco ("Wolfcamp")
			Virgilian	Cisco
	Pennsylvanian	Missourian	Canyon	
		Des Moinesian	Strawn	
		Atokan	Atoka	
		Morrowan	Morrow	
		Miss.	Upper	undivided
			Lower	
		Dev.	Upper	Woodford
	Middle			
	Lower		Thirtyone	
	Upper		Wristen	
	Sil.	Middle		
		Lower	Fusselman	
		Upper	Montoya	
Ord.	Middle	Simpson		
	Lower	Ellenburger		
	Cambrian	Bliss		
Precambrian		igneous, metamorphics, volcanics		

Figure 8. Stratigraphic chart of the Northwest Shelf and Central Basin Platform.

Age		Stratigraphic units
Permian	Triassic	Chinle Santa Rosa Dewey Lake Rustler Salado Castile
	Ochoan	Delaware Mountain Group Bell Canyon Cherry Canyon Brushy Canyon
Pennsylvanian	Leonardian	Bone Spring
	Wolfcampian	Hueco ("Wolfcamp")
	Virgilian	Cisco
	Missourian	Canyon
	Des Moinesian	Strawn
	Atokan	Atoka
	Morrowan	Morrow
Miss.	Upper	Barnett
	Lower	undivided limestones
Dev.	Upper	Woodford
	Middle	
	Lower	Thirtone
Sil.	Upper	Wristen
	Middle	
Ord.	Lower	Fusselman
	Upper	Montoya
	Middle	Simpson
	Lower	Ellenburger
Cambrian		Bliss
		igneous, metamorphics, volcanics
Precambrian		

Figure 9. Stratigraphic chart of the Delaware Basin.

EXHIBIT

4

SOLARIS WATER MIDSTREAM, LLC

PROPOSED IRONSIDE STATE SWD #1

Section 32-T25S-R32E

1,270' FSL & 175' FEL

Lea County, New Mexico

12/17/2018

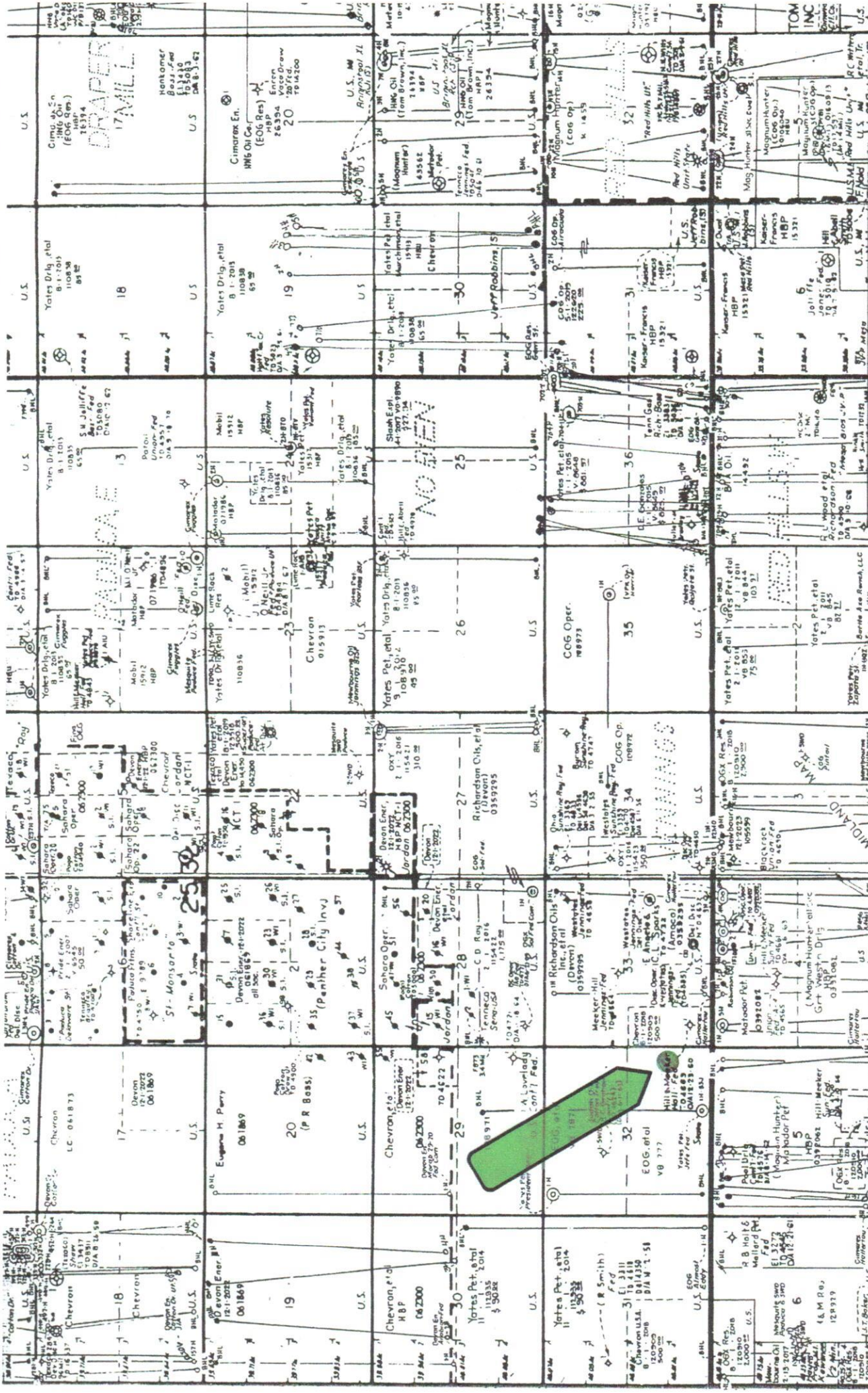
Jim Brannigan, C.P.G., R.G.

GL: 3,317'

KB: 3,322' (est.)

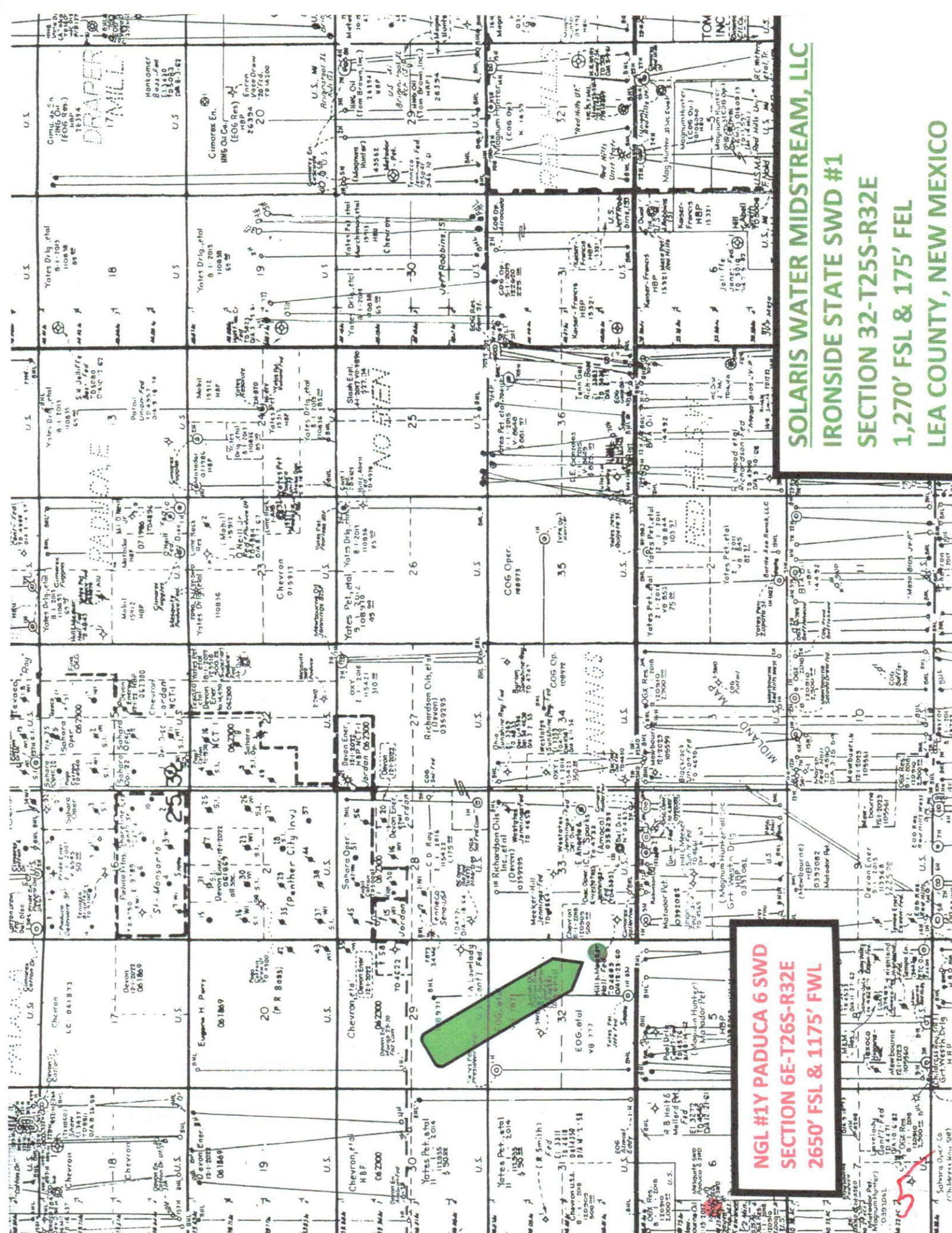
<u>Tops</u>	<u>Depths (est.)</u>	<u>Subsea (est.)</u>
Rustler	1,100'	+2,222
T/Salt	1,475'	+1,847
B/Salt	4,275'	-953
T/Lamar	4,475'	-1,153
T/Bell Canyon – Oil	4,500'	-1,178
T/Cherry Canyon – Oil	5,525'	-2,203
T/Brushy Canyon – Oil	7,100'	-3,778
T/Bone Spring	8,575'	-5,253
T/1 st BS Sand – Oil	9,475'	-6,153
T/2 nd BS Sand – Oil	10,175'	-6,853
T/3 rd BS Sand – Oil	11,300'	-7,978
T/Wolfcamp – Oil	11,725'	-8,403
T/Canyon – Gas	13,500'	-10,178
T/Strawn – Gas	13,700'	-10,378
T/Atoka – Gas	13,975'	-10,653
T/Morrow LM	14,525'	-11,203
T/Morrow Clastics – Gas	14,825'	-11,503
T/Lower Morrow – Gas	15,450'	-12,128
T/Barnett	15,950'	-12,628
T/Miss LM	16,150'	-12,828
T/Devonian	17,100'	-13,778
T/Montoya	18,725'	-15,403

Tops below the 2nd Bone Spring Sand were picked using intervals from wells with e-logs or the NMOCD Form C-105. The upper section was picked by using the Yates Petroleum Corp. #1H Jefe BSJ Fed. Com. In Section 32-T25S-R32E.



SOLARIS WATER MIDSTREAM, LLC
IRONSIDE STATE SWD #1
SECTION 32-T25S-R32E
1,270' FSL & 175' FEL
LEA COUNTY, NEW MEXICO

3



NGL #1Y PADUCA 6 SWD
SECTION 6E-T26S-R32E
2650' FSL & 1175' FWL

SOLARIS WATER MIDSTREAM, LLC
IRONSIDE STATE SWD #1
SECTION 32-T25S-R32E
1,270' FSL & 175' FEL
LEA COUNTY, NEW MEXICO

Searches

Operator Data

Hearing Fee Application

OCD Permitting

Home Searches Wells Well Details

30-025-43379 PADUCA 6 SWD #001Y [325927]

General Well Information

Operator: [372338] NGL WATER SOLUTIONS PERMIAN, LLC
 Status: Active
 Well Type: Salt Water Disposal
 Work Type: New

Surface Location: E-06-26S-32E Lot 2 2650 FSL 1175 FWL
 Lat/Long: 32.07216184,-103.7192409 NAD83
 GL Elevation: 3285
 KB Elevation: 3314
 DF Elevation: 3313

Direction: Vertical
 Multi-Lateral: No
 Mineral Owner: Private
 Surface Owner: Private

Sing/Mult Compl: Single
 Potash Waiver: False

Proposed Formation and/or Notes

LAND P/P PER BLM GLO

Depths

Proposed: 19250
 Measured Vertical Depth: 18881

True Vertical Depth: 18881
 Plugback Measured: 18881

Formation Tops

Formation	Top	Producing	Method Obtained

Event Dates

Initial APD Approval: 08/01/2016
 Most Recent APD Approval: 07/10/2019
 APD Cancellation:
 APD Extension Approval:
 Spud: 08/01/2016
 Approved Temporary
 Abandonment:
 Shut In:
 Plug and Abandoned Intent
 Received:
 Well Plugged:
 Site Release:
 Last Inspection: 06/14/2019

Current APD Expiration: 08/01/2018
 Gas Capture Plan Received:
 TA Expiration:
 PNR Expiration:
 Last MIT/BHT: 06/14/2019

History

Effective Date	Property	Well Number	Operator	C-101 Work Type	Well Type	Well Status	Apd Cancelled	Plug Date
07/10/2019	[325927] PADUCA 6 SWD	#001Y	[372338] NGL WATER SOLUTIONS PERMIAN, LLC	New	Salt Water Disposal	Active		
08/01/2016	[316377] PADUCA 6 SWD	#001Y	[161968] MESQUITE SWD, INC	New	Salt Water Disposal	Active		

Comments

Quick

- [General](#)
- [History](#)
- [Comments](#)
- [Operator](#)
- [Pits](#)
- [Casing](#)
- [Well C](#)
- [Finance](#)
- [Compli](#)
- [Compli](#)
- [Orders](#)
- [Produc](#)
- [Transp](#)
- [Points](#)

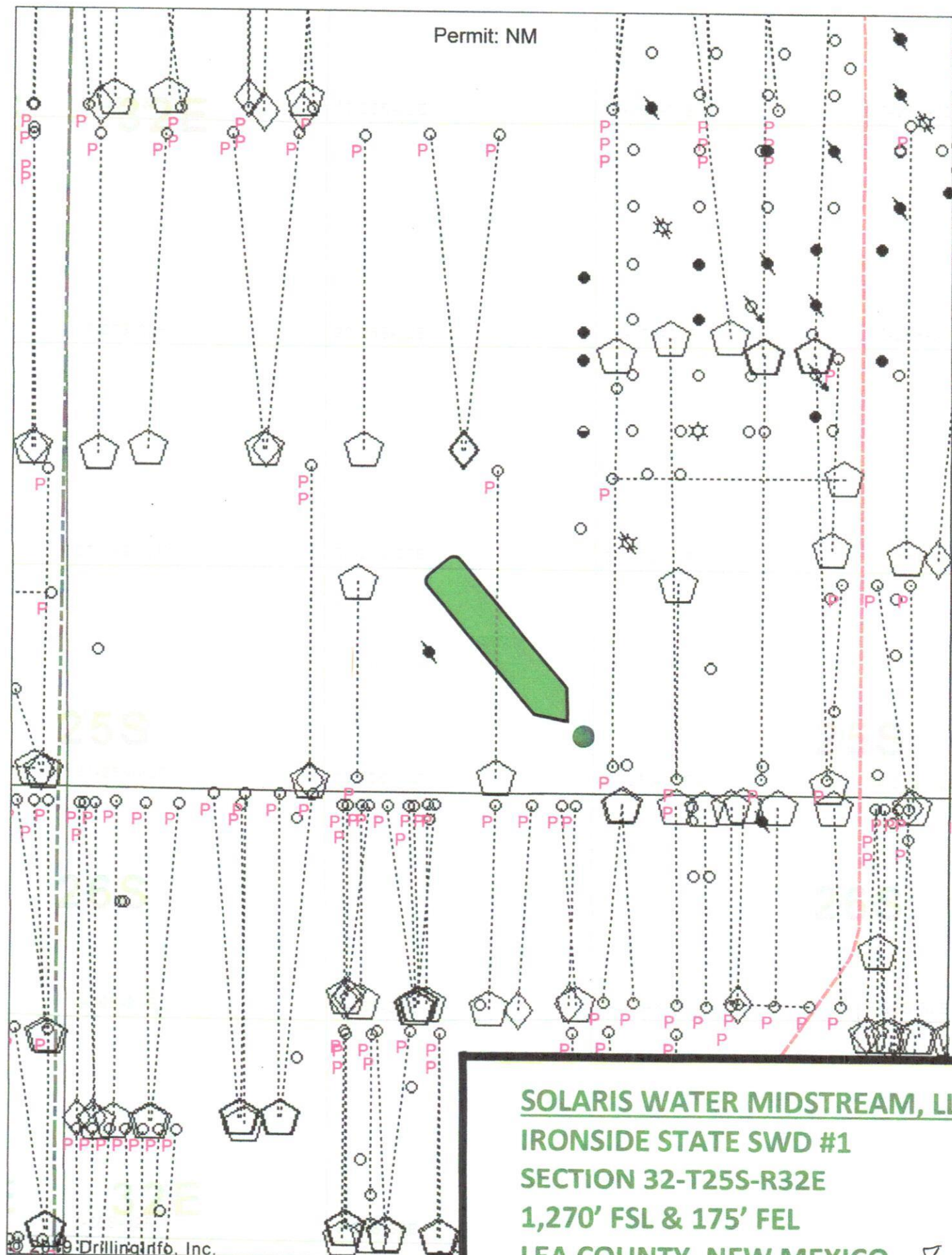
Assoc

- [Well Fi](#)
- [Well Lc](#)
- [Well Ar](#)

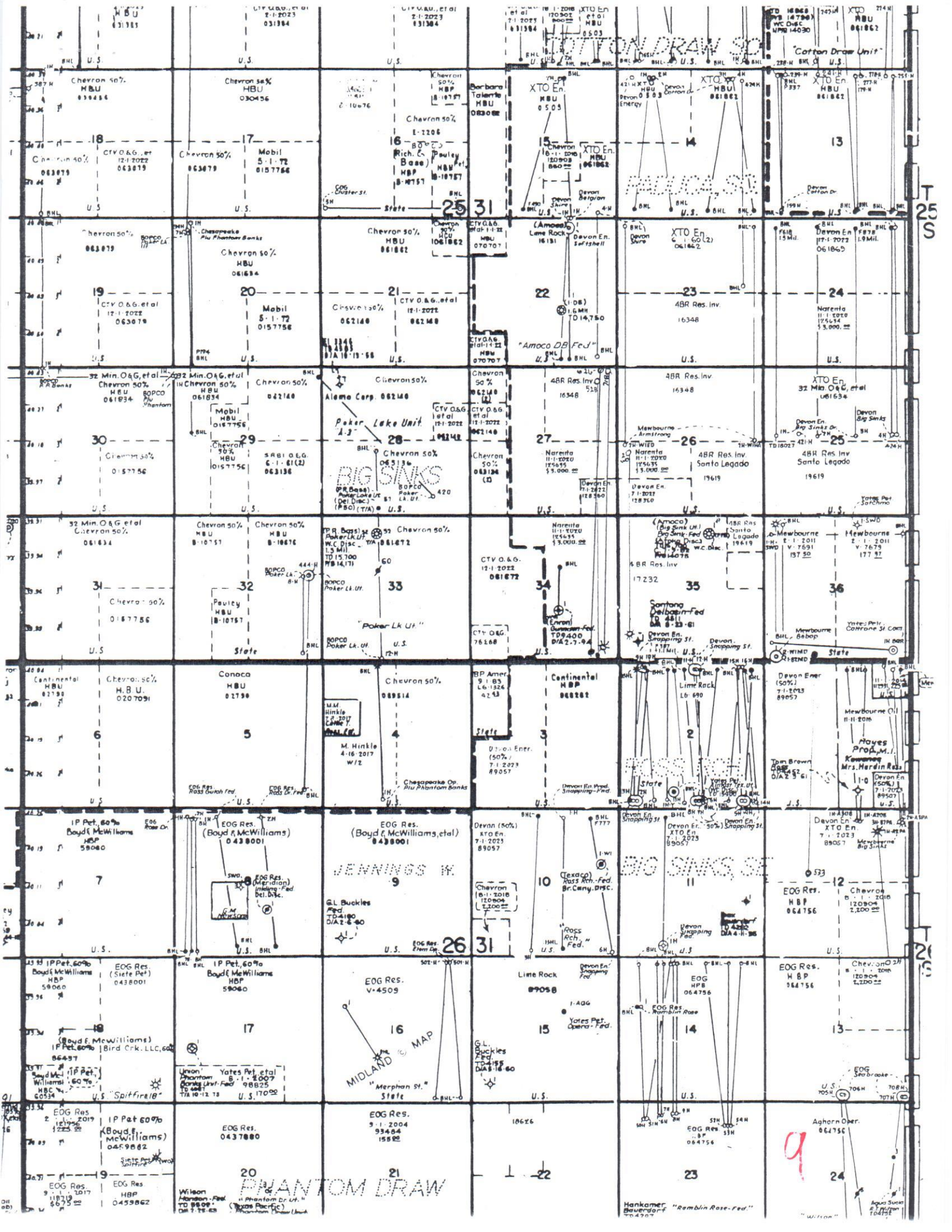
New S

- [New Fi](#)
- [New In](#)
- [New Si](#)
- [New V](#)

Permit: NM



SOLARIS WATER MIDSTREAM, LLC
IRONSIDE STATE SWD #1
SECTION 32-T25S-R32E
1,270' FSL & 175' FEL
LEA COUNTY, NEW MEXICO



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

APPLICATION OF SOLARIS WATER MIDSTREAM,
LLC FOR APPROVAL OF A SALT WATER DISPOSAL
WELL, LEA COUNTY, NEW MEXICO.

Case No. 20812

SELF-AFFIRMED STATEMENT OF NOTICE

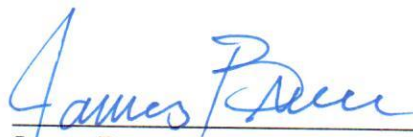
COUNTY OF SANTA FE)
) ss.
STATE OF NEW MEXICO)

James Bruce deposes and states:

1. I am over the age of 18, and have personal knowledge of the matters stated herein.
2. I am an attorney for Solaris Water Midstream, LLC.
3. Solaris Water Midstream, LLC has conducted a good faith, diligent effort to find the names and correct addresses of the interest owners entitled to receive notice of the application filed herein.
4. Notice of the application was provided to the interest owners, at their last known addresses, by certified mail. Copies of the notice letter and certified return receipts are attached hereto as Attachment A.
5. Applicant has complied with the notice provisions of Division Rules.
6. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony in paragraphs 1 through 5 above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.

Date:

10/16/19


James Bruce

EXHIBIT



JAMES BRUCE
ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213
SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone)
(505) 660-6612 (Cell)
(505) 982-2151 (Fax)
jamesbruc@aol.com

September 26, 2019

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

To: Persons on Exhibit A

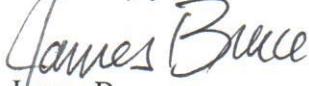
Ladies and gentlemen:

Enclosed is a copy of an application for approval of a salt water disposal well, filed with the New Mexico Oil Conservation Division by Solaris Water Midstream, LLC, regarding the Ironside State SWD Well No. 1 to be located in Unit Letter P of Section 32, Township 25 South, Range 32 East, N.M.P.M., Lea County, New Mexico.

This matter is scheduled for hearing at 8:15 a.m. on Thursday, October 17, 2019, at the Division's offices at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application or as an objecting person, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from contesting the matter at a later date.

A party appearing in a Division case is required by Division Rules to file a Pre-Hearing Statement no later than Thursday, October 10, 2019. This statement must be filed with the Division's Santa Fe office at the above address, and should include: The names of the party and its attorney; a concise statement of the case; the names of the witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that need to be resolved prior to the hearing. The Pre-Hearing Statement must also be provided to the undersigned.

Very truly yours,


James Bruce

Attorney for Solaris Water Midstream, LLC

ATTACHMENT 

EXHIBIT A

Commissioner of Public Lands
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

Attention: Andrea Antillon

NGL Water Solutions Permian, LLC
c/o Deanna Bennett
Modrall Law Firm
P.O. Box 2168
Albuquerque, New Mexico 87103

Bureau of Land Management
620 East Greene
Carlsbad, New Mexico 88220

Sahara Operating Co.
P.O. Box 4130
Midland, Texas 79702

Robinson Oil Inc.
P.O. Box 1829
Eunice, New Mexico 88231

EOG Resources, Inc.
EOG Y Resources Inc.
5509 Champions Drive
Midland, Texas 79706

Chevron U.S.A. Inc.
6301 Deauville Boulevard
Midland, Texas 79706

Attention: Permitting Team

Mewbourne Oil Company
Suite 1020
500 West Texas
Midland, Texas 79701

Attention: Corey Mitchell

Devon Energy Production Company, L.P.
333 West Sheridan
Oklahoma City, Oklahoma 73102

COG Production LLC
COG Operating LLC
One Concho Center
600 West Illinois
Midland, Texas 79701

Cimarex Energy Co. of Colorado
Magnum Hunter Production, Inc.
Suite 600
600 North Marienfeld
Midland, Texas 79701

OGX Operating, LLC
OGX Resources Inc.
P.O. Box 2064
Midland, Texas 79702

3-M Energy Co.
502 Koenigheim Street, No. 2B
San Angelo, Texas 76903

OXY Y-1 Company
Occidental Permian, L.P.
Suite 110
5 Greenway Plaza
Houston, Texas 77046

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

OGX Operating, LLC
OGX Resources
P.O. Box 2064
Midland, Texas 79702



9590 9402 4582 8278 5920 86

2. Article Number *Mastercard* 7018 2290 0000 3426 2248

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

- A. Signature ☒ Agent ☐ Addressee
- B. Received by (Printed Name) *Sam Connell* C. Date of Delivery *10-2-19*
- D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

3. Service Type
- ☐ Priority Mail Express®
 - ☐ Registered Mail™
 - ☐ Registered Mail Restricted Delivery
 - ☐ Certified Mail®
 - ☐ Certified Mail Restricted Delivery
 - ☐ Collect on Delivery
 - ☐ Return Receipt for Merchandise
 - ☐ Signature Confirmation™
 - ☐ Signature Confirmation Restricted Delivery

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OFFICIAL USE

Certified Mail Fee \$
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$
☐ Return Receipt (electronic) \$
☐ Certified Mail Restricted Delivery \$
☐ Adult Signature Required \$
☐ Adult Signature Restricted Delivery \$
Postage \$
Total Postage and Fees \$

OGX Operating, LLC
OGX Resources
P.O. Box 2064
Midland, Texas 79702

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT

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OFFICIAL USE

Certified Mail Fee \$
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$
☐ Return Receipt (electronic) \$
☐ Certified Mail Restricted Delivery \$
☐ Adult Signature Required \$
☐ Adult Signature Restricted Delivery \$
Postage \$
Total Postage and Fees \$

Postmark
Here

3-M Energy Co.
502 Koenigheim Street, No. 2B
San Angelo, Texas 76903

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

3-M Energy Co.
502 Koenigheim Street, No. 2B
San Angelo, Texas 76903



9590 9402 4582 8278 6000 19

2. Article Number *Mastercard* 7018 2290 0000 3426 2361

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

- A. Signature ☒ Agent ☐ Addressee
- B. Received by (Printed Name) *Sam Connell* C. Date of Delivery *9-30-19*
- D. Is delivery address different from item 1? ☐ Yes ☒ No
If YES, enter delivery address below:

3. Service Type
- ☐ Priority Mail Express®
 - ☐ Registered Mail™
 - ☐ Registered Mail Restricted Delivery
 - ☐ Certified Mail®
 - ☐ Certified Mail Restricted Delivery
 - ☐ Collect on Delivery
 - ☐ Return Receipt for Merchandise
 - ☐ Signature Confirmation™
 - ☐ Signature Confirmation Restricted Delivery

icted Delivery

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

EOG Resources, Inc.
EOG Y Resources Inc.
5509 Champions Drive
Midland, Texas 79706



9590 9402 4582 8278 5921 47

2. Article Number (Transfer from carrier label)

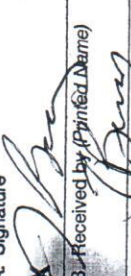
7018 2290 0000 3426 2309

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

SF

COMPLETE THIS SECTION ON DELIVERY

- A. Signature  ☒ Agent ☐ Addressee
- B. Received by (Printed Name) Agent C. Date of Delivery 7-7-14
- D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

3. Service Type
- ☐ Priority Mail Express®
 - ☐ Registered Mail™
 - ☐ Registered Mail Restricted Delivery
 - ☒ Certified Mail®
 - ☐ Return Receipt for Merchandise
 - ☐ Collect on Delivery
 - ☐ Collect on Delivery Restricted Delivery
 - ☐ Signature Confirmation™
 - ☐ Signature Confirmation Restricted Delivery

BY

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OFFICIAL USE

Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	\$
☐ Return Receipt (electronic)	\$
☐ Certified Mail Restricted Delivery	\$
☐ Adult Signature Required	\$
☐ Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage and Fees	\$
Sent To	EOG Resources, Inc. EOG Y Resources Inc. 5509 Champions Drive Midland, Texas 79706
Street and Apt. No., or P.O. Box	
City, State, ZIP+4®	

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

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Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	\$
☐ Return Receipt (electronic)	\$
☐ Certified Mail Restricted Delivery	\$
☐ Adult Signature Required	\$
☐ Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage and Fees	\$
Sent To	Commissioner of Public Lands 310 Old Santa Fe Trail Santa Fe, New Mexico 87501
Street and Apt. No., or P.O. Box	
City, State, ZIP+4®	

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Commissioner of Public Lands
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501



9590 9402 4582 8278 5921 92

2. Article Number (Transfer from carrier label)

7018 2290 0000 3426 2354

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

SF

COMPLETE THIS SECTION ON DELIVERY

- A. Signature  ☒ Agent ☐ Addressee
- B. Received by (Printed Name) Agent C. Date of Delivery 7-7-14
- D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

3. Service Type
- ☐ Priority Mail Express®
 - ☐ Registered Mail™
 - ☐ Registered Mail Restricted Delivery
 - ☒ Certified Mail®
 - ☐ Return Receipt for Merchandise
 - ☐ Collect on Delivery
 - ☐ Collect on Delivery Restricted Delivery
 - ☐ Signature Confirmation™
 - ☐ Signature Confirmation Restricted Delivery

(over 3500)

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

OXY Y-1 Company
Occidental Permian, L.P.
Suite 110
5 Greenway Plaza
Houston, Texas 77046



9590 9402 4582 8278 6002 55

2. Article Number (transfer from sending label)

7018 2290 0000 3426 2378 (over \$500)

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

- A. Signature ☒ Agent ☐ Addressee
- B. Received by (Printed Name) ☐ Date of Delivery
- C. Is delivery address different from item 1? ☐ Yes ☒ No
- D. If YES, enter delivery address below:

James Beard

3. Service Type
- ☐ Priority Mail Express®
 - ☐ Adult Signature
 - ☐ Adult Signature Restricted Delivery
 - ☒ Certified Mail®
 - ☐ Certified Mail Restricted Delivery
 - ☐ Collect on Delivery
 - ☐ Return Receipt for Merchandise
 - ☐ Signature Confirmation™
 - ☐ Signature Confirmation Restricted Delivery

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OFFICIAL USE

Certified Mail Fee \$
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$
☐ Return Receipt (electronic) \$
☐ Certified Mail Restricted Delivery \$
☐ Adult Signature Required \$
☐ Adult Signature Restricted Delivery \$
Postage \$

Total Postage and Fees \$

Sent To OXY Y-1 Company
Occidental Permian, L.P.
Suite 110
5 Greenway Plaza
Houston, Texas 77046

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

Postmark
Here

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

COG Production LLC
One Concho Center
600 West Illinois
Midland, Texas 79701



9590 9402 4582 8278 5921 09

2. Article Number

7018 2290 0000 3426 2262 (over \$500)

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

- A. Signature ☒ Agent ☐ Addressee
- B. Received by (Printed Name) *T. J. Smith* C. Date of Delivery *9/30/15*
- D. Is delivery address different from item 1? ☐ Yes ☒ No
- If YES, enter delivery address below:

3. Service Type
- ☐ Priority Mail Express®
 - ☐ Adult Signature
 - ☐ Adult Signature Restricted Delivery
 - ☒ Certified Mail®
 - ☐ Certified Mail Restricted Delivery
 - ☐ Collect on Delivery
 - ☐ Return Receipt for Merchandise
 - ☐ Signature Confirmation™
 - ☐ Signature Confirmation Restricted Delivery

elvery

(over \$500)

2922 924E 0000 0622 8102

8102 924E 0000 0622 8102

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Certified Mail Fee \$
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$
☐ Return Receipt (electronic) \$
☐ Certified Mail Restricted Delivery \$
☐ Adult Signature Required \$
☐ Adult Signature Restricted Delivery \$
Postage \$

Total Postage and Fees \$
COG Production LLC
One Concho Center
600 West Illinois
Midland, Texas 79701

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

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Here

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
 ■ Print your name and address on the reverse so that we can return the card to you.
 ■ Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Cimarex Energy Co. of Colorado
 Magnum Hunter Production, Inc.
 Suite 600
 600 North Marienfeld
 Midland, Texas 79701



9590 9402 4582 8278 5920 93

2. Article

7018 2290 0000 3426 2255

(over 3500)

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

- A. Signature ☒ Agent ☐ Addressee
 B. Received by (Printed Name) C. Date of Delivery 7/30/14
 D. Is delivery address different from item 1? ☐ Yes ☐ No
 If YES, enter delivery address below:

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

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Certified Mail Fee

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy) \$☐ Return Receipt (electronic) \$☐ Certified Mail Restricted Delivery \$☐ Adult Signature Required \$☐ Adult Signature Restricted Delivery \$

Postage

\$

Total Postage and

\$

Sent To

Cimarex Energy Co. of Colorado

Magnum Hunter Production, Inc.

Suite 600

600 North Marienfeld

Midland, Texas 79701

City, State, ZIP+4®

Postmark Here

See Reverse for Instructions

PS Form 3800, April 2015 PSN 7530-02-000-9047

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
 ■ Print your name and address on the reverse so that we can return the card to you.
 ■ Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Bureau of Land Management
 620 East Greene
 Carlsbad, New Mexico 88220



9590 9402 4582 8278 5921 78

2. Article (Transfer from service label)

7018 2290 0000 3426 2330

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

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Certified Mail Fee

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy) \$☐ Return Receipt (electronic) \$☐ Certified Mail Restricted Delivery \$☐ Adult Signature Required \$☐ Adult Signature Restricted Delivery \$

Postage

\$

Total Postage and Fees

\$

Sent To

Bureau of Land Management

620 East Greene

Street and Apt. No., Carlsbad, New Mexico 88220

City, State, ZIP+4®

Postmark Here

See Reverse for Instructions

PS Form 3800, April 2015 PSN 7530-02-000-9047

COMPLETE THIS SECTION ON DELIVERY

- A. Signature ☒ Agent ☐ Addressee
 B. Received by (Printed Name) C. Date of Delivery 7/30/14
 D. Is delivery address different from item 1? ☐ Yes ☐ No
 If YES, enter delivery address below:

3. Service Type
☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

NGL Water Solutions Permian, LLC
c/o Deanna Bennett
Modrall Law Firm
P.O. Box 2168
Albuquerque, New Mexico 87103



9590 9402 4582 8278 5921 85

2. Article

7018 2290 0000 3426 2347

(over \$500)

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

- A. Signature ☒ Agent ☐ Addressee
- B. Received by (Printed Name) Deanna Bennett C. Date of Delivery 9-30-19
- D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

SEP 30 2019

3. Service Type
- ☐ Adult Signature
 - ☐ Priority Mail Express®
 - ☐ Registered Mail™
 - ☐ Certified Mail®
 - ☐ Return Receipt for Merchandise
 - ☐ Signature Confirmation™
 - ☐ Restricted Mail
 - ☐ Restricted Delivery
 - ☐ Signature Confirmation™ Restricted Delivery

U.S. Postal Service™

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OFFICIAL USE

Certified Mail Fee

Extra Services & Fees (check box, add fee as appropriate)

- ☐ Return Receipt (hardcopy) \$
- ☐ Return Receipt (electronic) \$
- ☐ Certified Mail Restricted Delivery \$
- ☐ Adult Signature Required \$
- ☐ Adult Signature Restricted Delivery \$

Postmark
Here

Total Postage and Fees (check box, add fee as appropriate)

Sent To c/o Deanna Bennett
Modrall Law Firm
P.O. Box 2168
Albuquerque, New Mexico 87103

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

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Certified Mail Fee

Extra Services & Fees (check box, add fee as appropriate)

- ☐ Return Receipt (hardcopy) \$
- ☐ Return Receipt (electronic) \$
- ☐ Certified Mail Restricted Delivery \$
- ☐ Adult Signature Required \$
- ☐ Adult Signature Restricted Delivery \$

Postmark
Here

Total Postage and Fees

Sent To Chevron U.S.A. Inc.
6301 Deauville Boulevard
Midland, Texas 79706

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Chevron U.S.A. Inc.
6301 Deauville Boulevard
Midland, Texas 79706



9590 9402 4582 8278 5921 30

2. Article N

7018 2290 0000 3426 2293

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

- A. Signature ☒ Agent ☐ Addressee
- B. Received by (Printed Name) Deanna Bennett C. Date of Delivery 9-30-19
- D. Is delivery address different from item 1? ☐ Yes ☐ No
If YES, enter delivery address below:

3. Service Type
- ☐ Adult Signature
 - ☐ Priority Mail Express®
 - ☐ Registered Mail™
 - ☐ Certified Mail®
 - ☐ Return Receipt for Merchandise
 - ☐ Signature Confirmation™
 - ☐ Restricted Mail
 - ☐ Restricted Delivery
 - ☐ Signature Confirmation™ Restricted Delivery

Delivery

7018 2290 0000 3426 2323

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT <i>SI</i> <i>Domestic Mail Only</i>	
For delivery information, visit our website at www.usps.com ®.	
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Certified Mail Fee \$ _____	Postmark Here
Extra Services & Fees (check box, add fee as appropriate) ☐ Return Receipt (hardcopy) \$ _____ ☐ Return Receipt (electronic) \$ _____ ☐ Certified Mail Restricted Delivery \$ _____ ☐ Adult Signature Required \$ _____ ☐ Adult Signature Restricted Delivery \$ _____	
Postage \$ _____	
Total Postage and Fees \$ _____	
Sent To Sahara Operating Co. P.O. Box 4130 Street and Apt. No., Midland, Texas 79702 City, State, ZIP+4® _____	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

7018 2290 0000 3426 2316

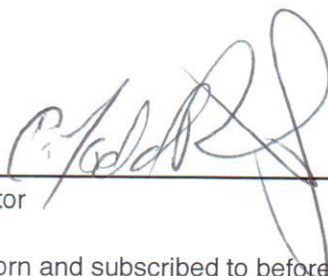
U.S. Postal Service™ CERTIFIED MAIL® RECEIPT <i>ST</i> <i>Domestic Mail Only</i>	
For delivery information, visit our website at www.usps.com ®.	
OFFICIAL USE	
Certified Mail Fee \$ _____	Postmark Here
Extra Services & Fees (check box, add fee as appropriate) ☐ Return Receipt (hardcopy) \$ _____ ☐ Return Receipt (electronic) \$ _____ ☐ Certified Mail Restricted Delivery \$ _____ ☐ Adult Signature Required \$ _____ ☐ Adult Signature Restricted Delivery \$ _____	
Postage \$ _____	
Total Postage and Fees \$ _____	
Sent To Robinson Oil Inc. P.O. Box 1829 Street and Apt. No., or P. Eunice, New Mexico 88231 City, State, ZIP+4® _____	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Todd Bailey, Editor of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
October 02, 2019
and ending with the issue dated
October 02, 2019.



Editor

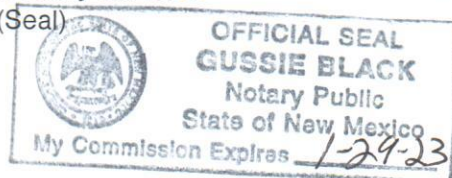
Sworn and subscribed to before me this
2nd day of October 2019.



Business Manager

My commission expires
January 29, 2023

(Seal)



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGAL

LEGAL

LEGAL NOTICE OCTOBER 2, 2019

To: Commissioner of Public Lands, NGL Water Solutions Permian, LLC, Bureau of Land Management, Sahara Operating Co., Robinson Oil Inc., EOG Resources, Inc., EOG Y Resources Inc., Chevron U.S.A. Inc., Mewbourne Oil Company, Devon Energy Production Company, L.P., COG Production LLC, COG Operating LLC, Cimarex Energy Co. of Colorado, Magnum Hunter Production, Inc., OGX Operating, LLC, OGX Resources Inc., 3-M Energy Co., OXY Y-1 Company, and Occidental Permian, L.P., or your successors or assigns: Solaris Water Midstream, LLC has filed an application with the New Mexico Oil Conservation Division (Case No. 20812) seeking an order approving disposal of produced water into the Devonian and Silurian formations at depths of 17125-18550 feet subsurface into the proposed Ironside State SWD Well No. 1, located 1270 feet from the south line and 175 feet from the east line of Section 32, Township 25 South, Range 32 East, NMPM, Lea County, New Mexico. The application is scheduled to be heard at 8:15 a.m. on October 17, 2019 at the Division's offices at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. As an interest owner offsetting the well you have the right to enter an appearance and participate in the case. Failure to appear will preclude you from contesting this matter at a later date. The attorney for applicant is James Bruce, P.O. Box 1056, Santa Fe, New Mexico 87504. The well is located approximately 26 miles west-southwest of Jal, New Mexico.
#34746

EXHIBIT 6

01101711

00234092

JAMES BRUCE
JAMES BRUCE, ATTORNEY AT LAW
P.O. BOX 1056
SANTA FE, NM 87504