JUN 27 2019 PM01:28

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
06/27/2014		SWD	pMAM19178 53144

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: Cahill Fed SWD #1 **API:**
Pool: 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

SWD-2174

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

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

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

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.

Steve Pattee – Agent of Solaris Water Midstream
Print or Type Name

Signature

June 21, 2019
Date

(512) 600-1774
Phone Number

steve@lonquist.com
e-mail Address

LONQUIST & CO. LLC

PETROLEUM ENGINEERS | ENERGY ADVISORS

AUSTIN · HOUSTON · WICHITA · DENVER · CALGARY

JUN 27 2019 PM01:28

June 24, 2019

New Mexico Energy, Minerals, and Natural Resources Department
Oil Conservation Division District IV
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
(505) 476-3440

RE: CAHILL FED SWD NO. 1 AUTHORIZATION TO INJECT

To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for Solaris Water Midstream, LLC's (Solaris") Cahill Fed SWD No. 1. In addition, Forms C-101 and C-102 have also been included with this package. Notices have been sent to offset, operators, leaseholders and the surface owner. Proof of notice will be sent to the OCD upon receipt.

Any questions should be directed towards Solaris Water Midstream, LLC's agent Lonquist & Co., LLC.

Regards,

Ramona K Hovey

Ramona K. Hovey
Sr. Petroleum Engineer
Lonquist & Co., LLC

(512) 600-1777
ramona@lonquist.com

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ___X___Disposal _____Storage
Application qualifies for administrative approval? ___X___Yes _____No

II. OPERATOR: Solaris Water Midstream, LLC

ADDRESS: 701 Tradewinds Blvd., Suite C, Midland, TX 79706

CONTACT PARTY: Whitney McKee PHONE: 432-203-9020

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 ___X___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: Stephen Pattee, P.G. TITLE: Vice President – Agent for Solaris Water Midstream

SIGNATURE: _____ DATE: 6/21/2019

E-MAIL ADDRESS: steve@lonquist.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: _____

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

Side 2

III. WELL DATA

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

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

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

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

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

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

(1) The name of the injection formation and, if applicable, the field or pool name.

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

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

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Solaris Water Midstream, LLC

WELL NAME & NUMBER: Cahill Fed SWD No. 1

WELL LOCATION: 918' FSL 252' FWL (FOOTAGE LOCATION) | M (UNIT LETTER) | 28 (SECTION) | 26S (TOWNSHIP) | 30E (RANGE)

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 18.125"

Cemented with: 709 sx.

Top of Cement: surface

Casing Size: 16.00"

or _____ ft³

Method Determined: circulation

Intermediate Casing

Hole Size: 14.750"

Cemented with: 616 sx.

Top of Cement: surface

Casing Size: 13.375"

or _____ ft³

Method Determined: circulation

Production Casing

Hole Size: 12.250"

Cemented with: 2263 sx.

Top of Cement: surface

Casing Size: 9.625"

or _____ ft³

Method Determined: circulation

Liner

Hole Size: 8.500"

Cemented with: 489 sx.

Top of Cement: 11,607'

Total Depth: 17,862'

Casing Size: 7.625"

or _____ ft³

Method Determined: calculation

Injection Interval

16,062 feet to 17,862 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 5.5", 20 lb/ft, HCL-80, BTC from 0' – 11,307' and 5", 18 lb/ft, HCL-80, LTC from 11,307'- 16,012'
Lining Material: Duoline

Type of Packer: Nickel Plated Double Grip Retrievable Packer or Equivalent

Packer Setting Depth: 16,012'

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: Devonian, Fusselman

3. Name of Field or Pool (if applicable): SWD; Devonian-Silurian 97869

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, new drill.

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

   Bell Canyon: 3,338'
   Cherry Canyon: 4,261'
   Brushy Canyon: 5,543'
   Bone Spring: 7,161'
   Wolfcamp: 11,607'
   Strawn: 13,135'
   Atoka: 13,262'
   Morrow: 13,923'
   Mississippian Lime 15,743'

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
SOLARIS WATER MIDSTREAM, LLC 701 TRADEWINDS BLVD., SUITE C MIDLAND, TX 79706	371643
	3. API Number TBD

4. Property Code	5. Property Name	6. Well No.
	CAHILL FED SWD	1

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
M	28	26 S	30 E		918	S	252	W	EDDY

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
	-	-	-		-	-	-	-	-

9. Pool Information

Pool Name	Pool Code
SWD; Devonian-Silurian	97869

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
N	SWD	R	Private	2965'
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	17,862	Devonian-Silurian	TBD	ASAP

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
180'	1.4 miles	>1 mile

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	18.125"	16"	84 lb/ft	865'	709	Surface
Intermediate	14.75"	13.375"	68 lb/ft	3,332'	616	Surface
Production	12.25"	9.625"	53.5 lb/ft	11,707'	2263	Surface
Liner	8.5"	7.625"	39 lb/ft	11,507'-16,062'	489	11,607
Tubing		5.5" & 5"	20 lb/ft & 18 lb/ft	0'-11,307, 11,307'-16,012'	N/A	

Casing/Cement Program: Additional Comments

See attached schematic.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Hydraulic/Blinds, Pipe	8,000 psi	10,000 psi	TBD – Schaffer/Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:	OIL CONSERVATION DIVISION
	Approved By:
Printed name: Stephen Pattee, P.G.	Title:
Title: Vice President	Approved Date: / Expiration Date:
E-mail Address: steve@lonquist.com	
Date: June 21, 2019 / Phone: 512-600-1774	Conditions of Approval Attached

DISTRICT I
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Phone (575) 393-6161 Fax: (575) 393-0720
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State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	97869	Devonian-Silurian

Property Code	Property Name	Well Number
	CAHILL FED SWD	1

OGRID No.	Operator Name	Elevation
371643	SOLARIS WATER MIDSTREAM	2965'

Surface Location

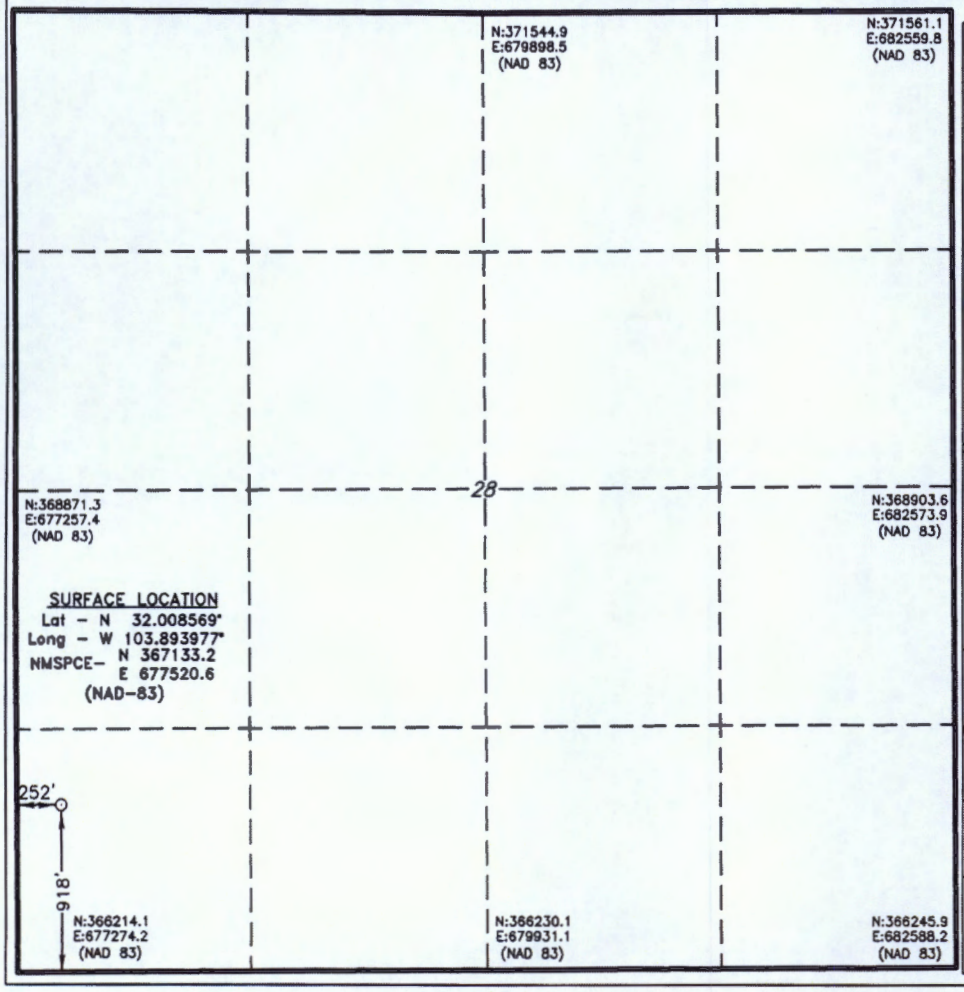
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	28	26 S	30 E		918'	SOUTH	252'	WEST	EDDY

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.

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



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: 06/21/19

Steve Pattee
Printed Name

steve@lonquist.com
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 supervison, and that the same is true and correct to the best of my belief.

APRIL 22, 2019
Date Surveyed

Signature & Seal of Professional Surveyor

Certificate No. Gary L. Jones 7977

0' 1000' 2000' 3000' 4000' N

SCALE: 1" = 2000'
WO Num.: 34506

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	97869	Devonian-Silurian

Property Code	Property Name	Well Number
	CAHILL FED SWD	1

OGRID No.	Operator Name	Elevation
371643	SOLARIS WATER MIDSTREAM	2965'

Surface Location

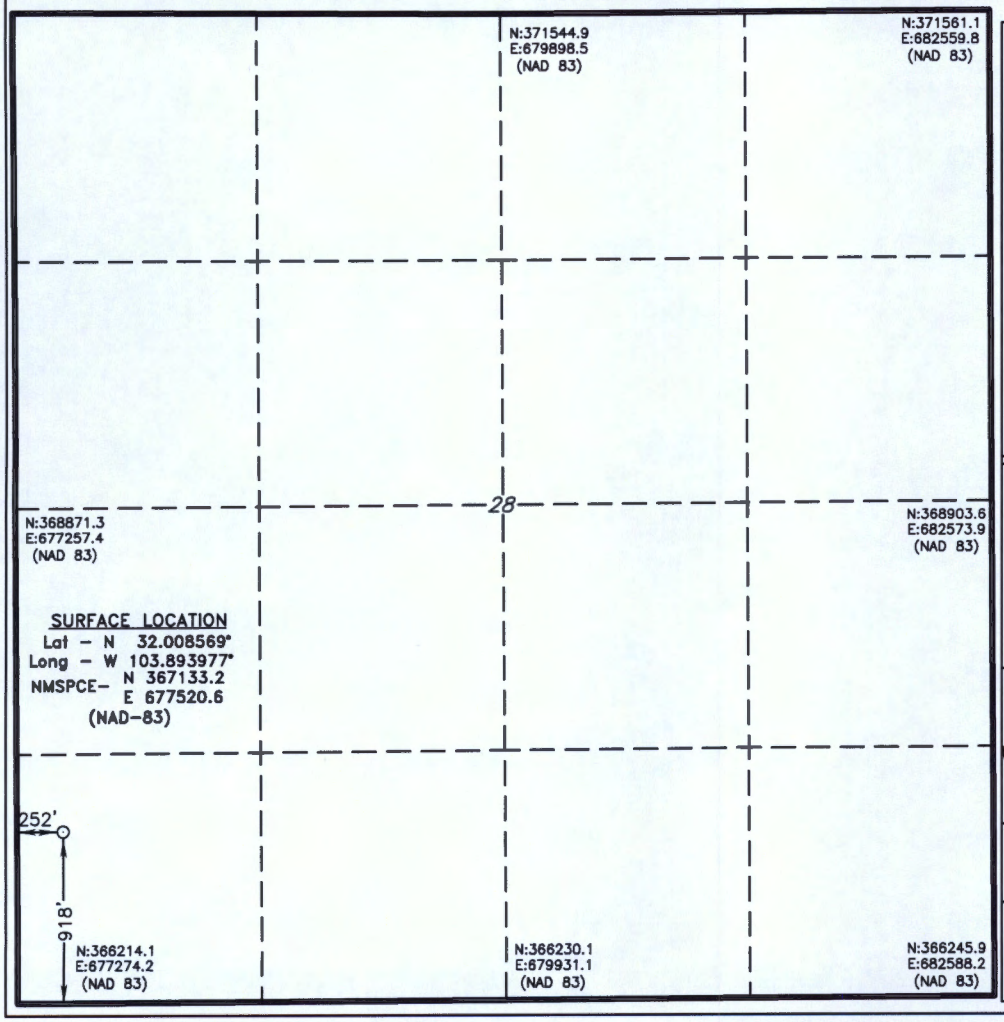
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	28	26 S	30 E		918'	SOUTH	252'	WEST	EDDY

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.

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



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

Steve Pattee

Printed Name

steve@lonquist.com

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 supervison, and that the same is true and correct to the best of my belief.

APRIL 22, 2019

Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number Gary L. Jones 7977

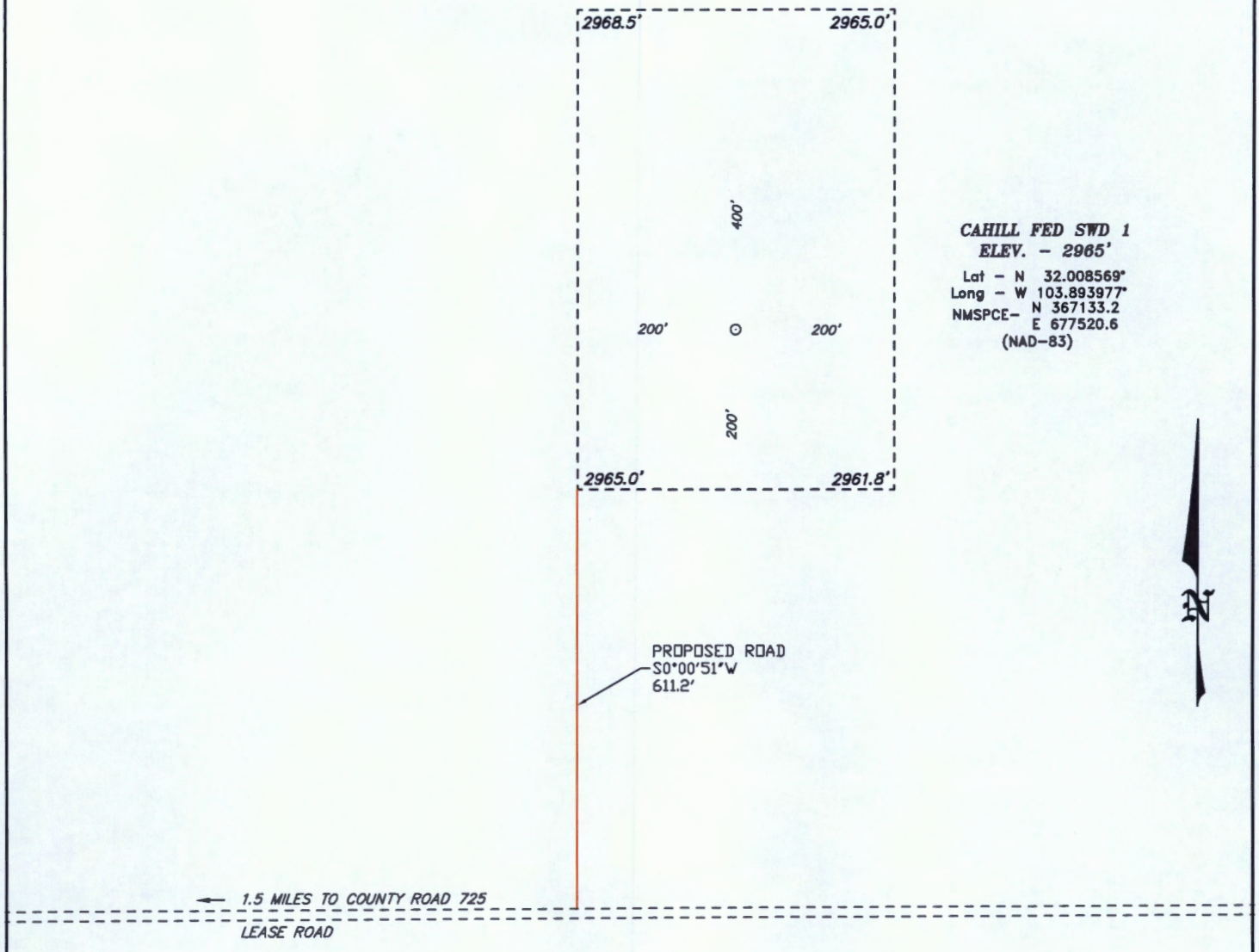
0' 1000' 2000' 3000' 4000' N

SCALE: 1" = 2000'

WO Num.: 34506

SECTION 28 TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



MALAGA, NM IS ±18 MILES TO THE NORTHWEST OF LOCATION.

200 0 200 400 FEET

SCALE: 1" = 200'

SOLARIS WATER MIDSTREAM

REF: CAHILL FED SWD 1 / WELL PAD TOPO

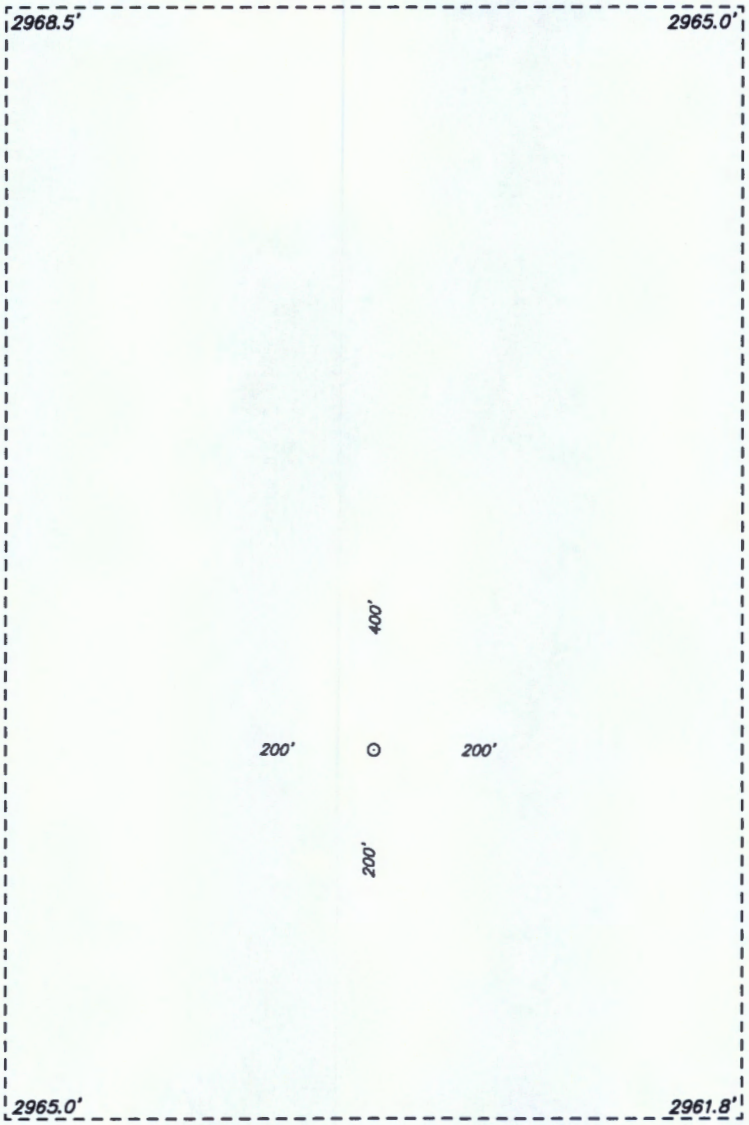
THE CAHILL FED SWD 1 LOCATED 918' FROM THE SOUTH LINE AND 252' FROM THE WEST LINE OF SECTION 28, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 34506	Drawn By: J GOAD	Date: 4-25-2019	Survey Date: 4-22-2019	Sheet 1 of 1 Sheets

SECTION 28 TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



100 0 100 200 FEET

SCALE: 1" = 100'

SOLARIS WATER MIDSTREAM

REF: CAHILL FED SWD 1 / WELL PAD TOPO

THE CAHILL FED SWD 1 LOCATED 918' FROM THE SOUTH LINE AND 252' FROM THE WEST LINE OF SECTION 28, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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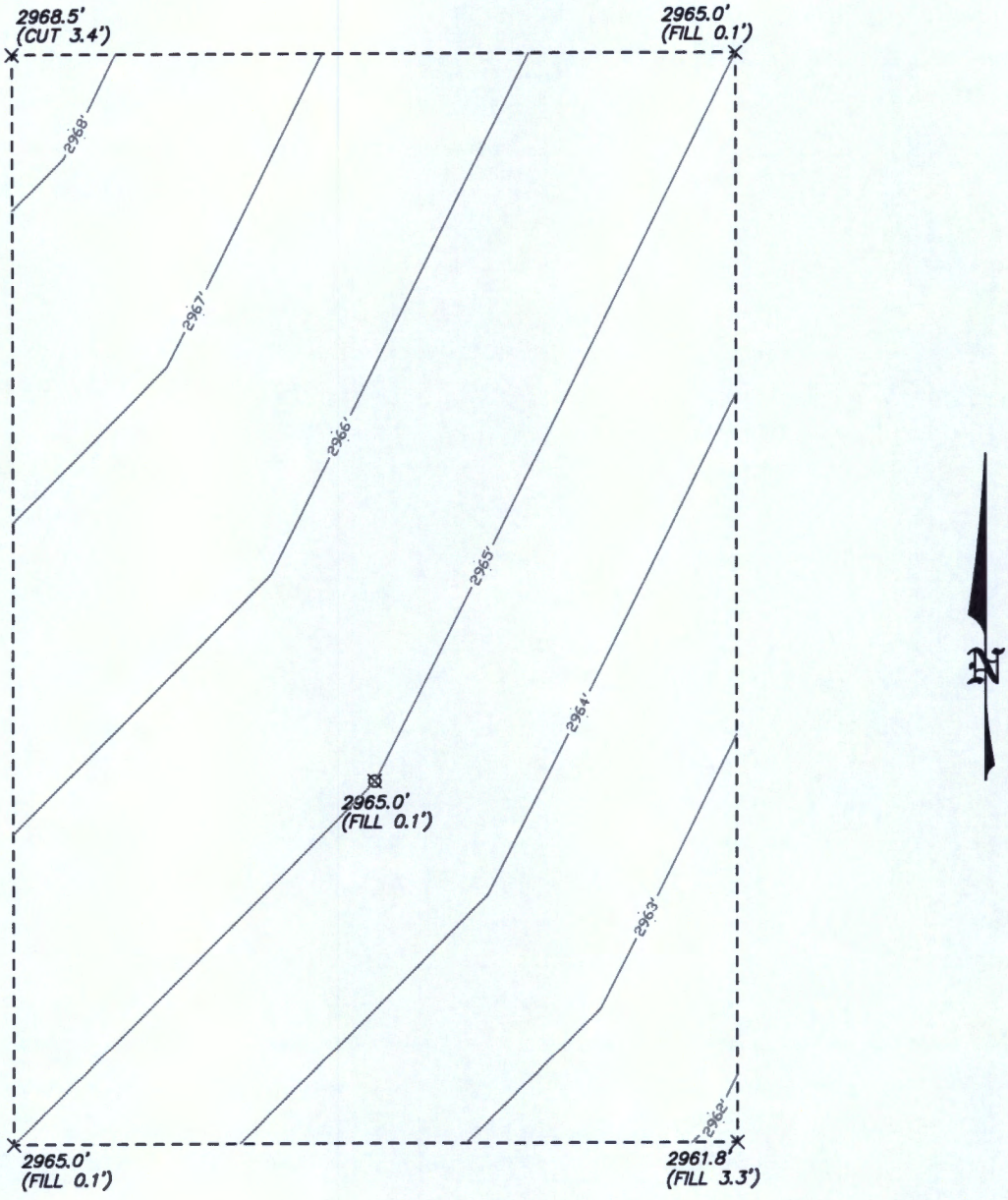
W.O. Number: 34506	Drawn By: J GOAD	Date: 4-25-2019	Survey Date: 4-22-2019	Sheet 1 of 1 Sheets

SECTION 28 TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, NEW MEXICO.



SOLARIS WATER MIDSTREAM

REF: CAHILL FED SWD 1 / CUT & FILL

THE CAHILL FED SWD 1 LOCATED 918' FROM THE SOUTH LINE AND 252' FROM THE WEST LINE OF SECTION 28, TOWNSHIP 26 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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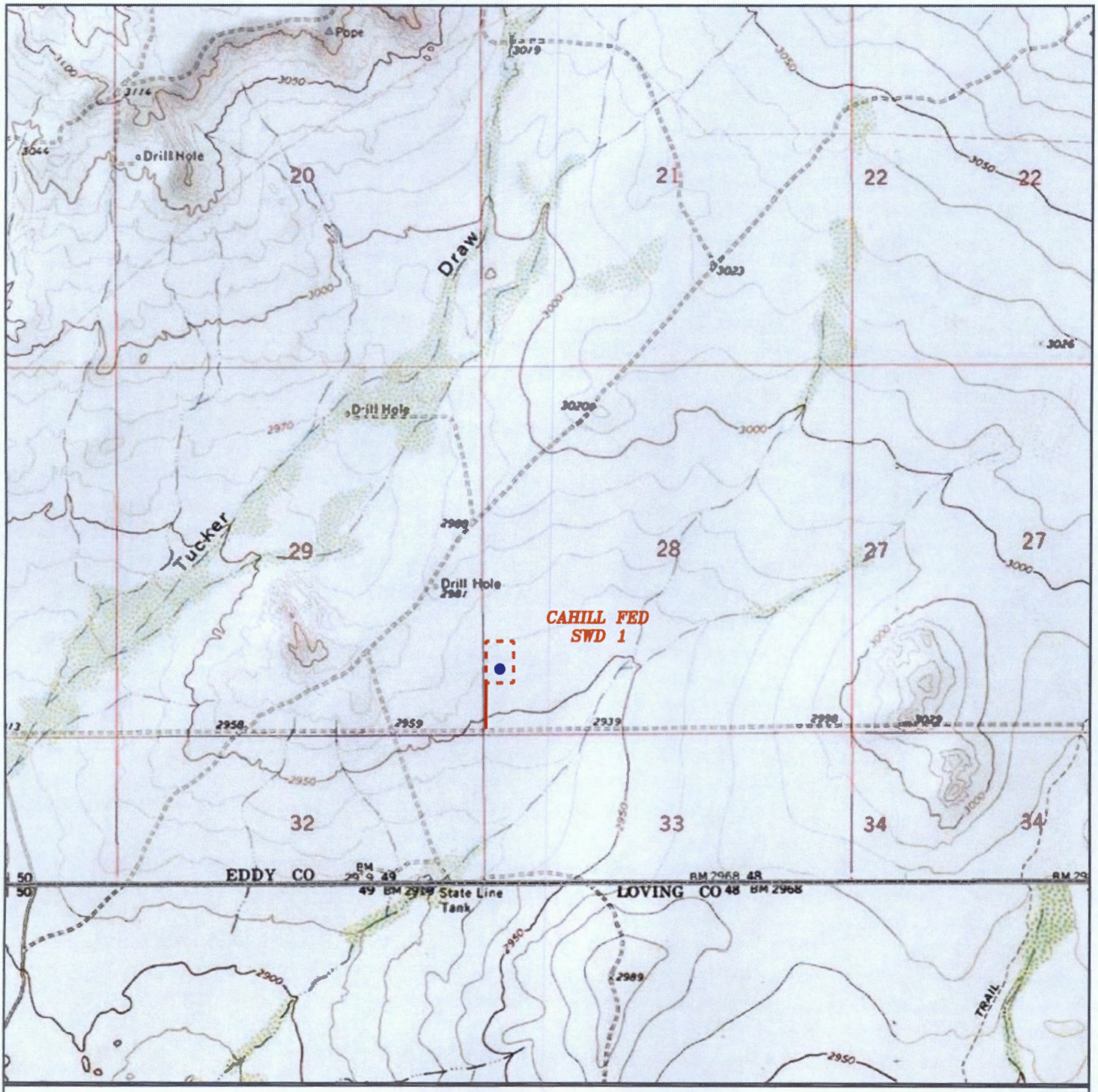
W.O. Number: 34506	Drawn By: J GOAD	Date: 4-25-2019	Survey Date: 4-22-2019	Sheet 1 of 1 Sheets



CAHILL FED SWD 1

Located 918' FSL & 252' FEL
Section 28, Township 26 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

Basin Surveys
focused on excellence in the oilfield

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 – 34506

Survey Date: 4-22-2019

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

N

SOLARIS WATER MIDSTREAM

CAHILL FED SWD 1

Located 918' FSL & 252' FEL
Section 28, Township 26 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

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

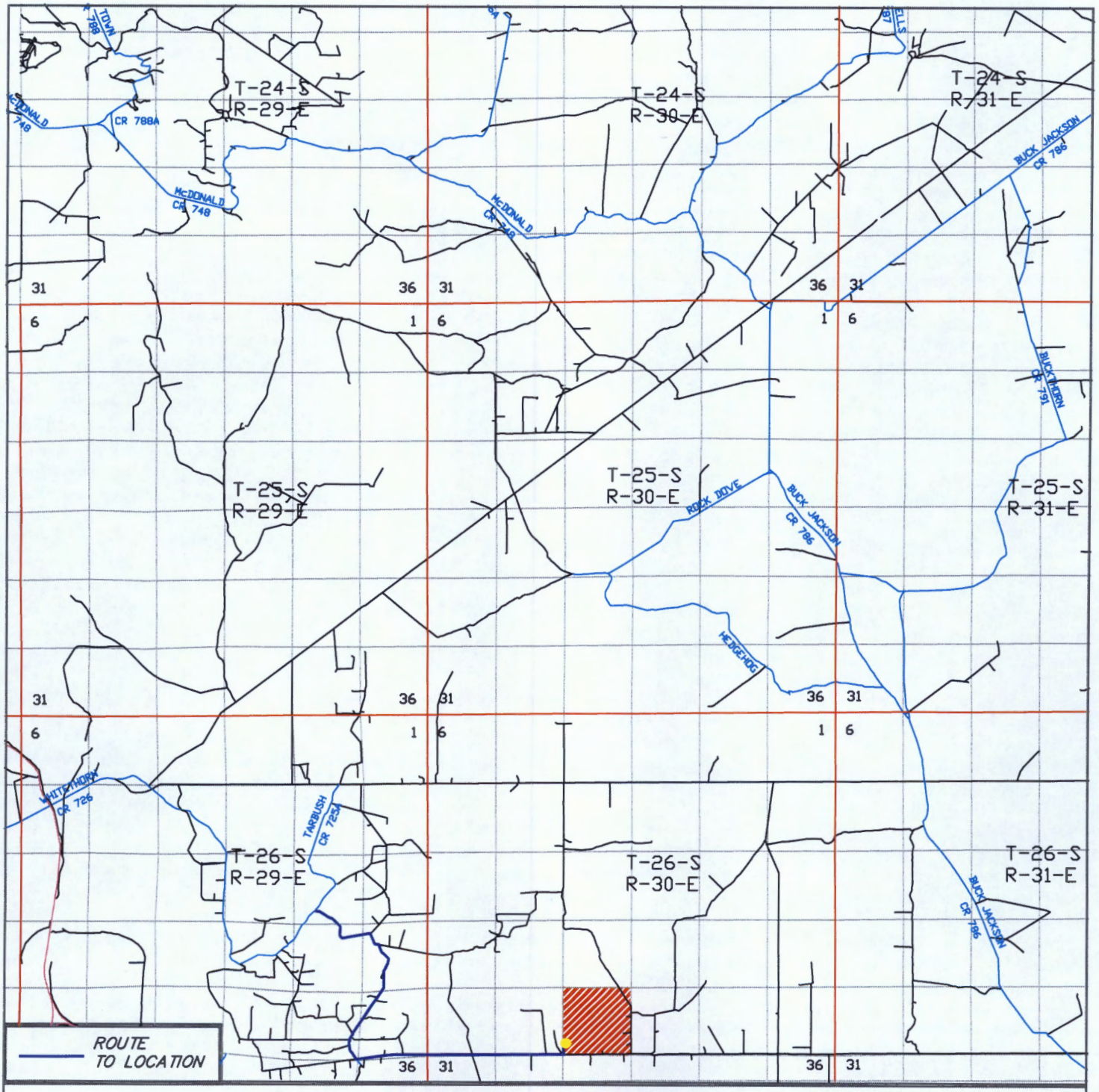
W.O. Number: JG – 34506

Survey Date: 4-22-2019

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

N

SOLARIS WATER MIDSTREAM



CAHILL FED SWD 1

Located 918' FSL & 252' FEL
Section 28, Township 26 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield

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

0 1 MI 2 MI 3 MI 4 MI
SCALE: 1" = 2 MILES

W.O. Number: JG – 34506

Survey Date: 4-22-2019

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

SOLARIS WATER MIDSTREAM

Solaris Water Midstream, LLC

Cahill Fed SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Cahill Fed SWD
Well No.	1
Location	S-28 T-26S R-30E
Footage Location	918' FSL & 252' FWL

2.

a. Wellbore Description

Casing Information				
Type	Surface	Intermediate	Production	Liner
OD	16"	13.375"	9.625"	7.625"
WT	0.495"	0.480"	0.545"	0.500"
ID	15.010"	12.415"	8.535"	6.625"
Drift ID	14.822"	12.259"	8.379"	6.500"
COD	17.000"	13.375"	10.625"	7.625"
Weight	84 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
Grade	J-55 BTC	L-80, EZ-GO FJ3	HCP-110 BTC	Q-125 EZ-GO FJ3
Hole Size	18.125"	14.75"	12.25"	8.5"
Depth Set	865'	3,332'	11,707'	11,507'- 16,062'

b. Cementing Program

Cement Information					
Casing String	Conductor	Surface	Intermediate	Production	Liner
Lead Cement	EXTENDACEM™	HALCEM™	HALCEM™	NEOCEM™ IL2	NEOCEM™
Lead Cement Volume (sacks)	250	457	428	Stage 1: 1272 Stage 2: 307	-
Lead Cement Density (ft3/sack)	1.694	1.664	1.664	Stage 1: 2.731 Stage 2: 2.732	-
Tail Cement	-	HALCEM™	HALCEM™	NEOCEM™/HALCEM™	VERSACEM™
Tail Cement Volume (sacks)	-	252	188	Stage 1: 475 Stage 2: 209	489
Tail Cement Density (ft3/sack)	-	1.332	1.332	Stage 1: 1.056 Stage 2: 1.336	1.223
Cement Excess	0%	50%	30%	50%, 0%	50%
Total Sacks	250	709	616	2263	489
TOC	Surface	Surface	Surface	Surface	11,607'
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface	Circulate to Surface	Logged

3. Tubing Description

Tubing Information	
OD	5.5" 5.0"
WT	0.361" 0.362"
ID	4.778" 4.276"
Drift ID	4.653" 4.151"
COD	6.050" 5.563"
Weight	20 lb/ft 18 lb/ft
Grade	HCL-80 BTC HCL-80 LTC
Depth Set	0' - 11,307' 11,307'- 16,012'

Tubing will be lined with Duoline.

4. Packer Description

Nickel Plated Double Grip Retrievable Packer or Equivalent

B. Completion Information

1. Injection Formation: Devonian, Fusselman

2. Gross Injection Interval: 16,062' - 17,862'

   Completion Type: Open Hole

3. Drilled for injection.

4. See the attached wellbore schematic.

5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Bell Canyon	3,338'
Cherry Canyon	4,261'
Brushy Canyon	5,543'
Bone Spring	7,161'
Wolfcamp	11,607'
Strawn	13,135'
Atoka	13,262'
Morrow	13,923'
Mississippian Lime	15,743'

VI. Area of Review

No wells within the area of review penetrate the proposed injection zone.

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injected:

   Average Volume: 30,000 BPD
   Maximum Volume: 40,000 BPD

2. Closed System

3. Anticipated Injection Pressure:

Average Injection Pressure: 2,409 PSI (surface pressure)
Maximum Injection Pressure: 3,212 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Avalon, Bone Spring, and Delaware formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the Avalon, Bone Spring, Delaware, Morrow, Wolfcamp.

5. The disposal interval is non-productive. No water samples are available from the surrounding area.

VIII. Geological Data

Devonian Formation Lithology:

The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and the Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia) features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a tremendous Salt Water Disposal horizon.

Fusselman Formation Lithology:

The Silurian/Ordovician Fusselman Formation is stratigraphically below the Wristen Group and is above and separated from the Montoya Formation by the Sylvan Shale. The Sylvan Shale is the lower confining layer for the proposed Cahill Fed SWD No. 1 well. Fusselman facies include a laminated skeletal wackestone in the upper part and a buildup complex in the lower part composed of ooid and bryozoan grainstones. These grainstones can also be potentially prolific zones for disposal.

A. Injection Zone: Devonian-Silurian Formation

Formation	Depth
Rustler	486'
Salado (Top of Salt)	890'
Salado (Bottom of Salt)	3,312'
Bell Canyon	3,338'
Cherry Canyon	4,261'
Brushy Canyon	5,543'
Bone Spring	7,161'
Wolfcamp	11,607'
Strawn	13,135'
Atoka	13,262'
Morrow	13,923'
Mississippian Lime	15,743'
Woodford	15,947'
Devonian	16,062'

B. Underground Sources of Drinking Water

No water wells exist within a one-mile radius of the proposed well. Water wells outside a one-mile radius in the surrounding area have an average depth of 440 feet and an average water depth of 180 feet generally producing from the Carlsbad Basin. The upper Rustler may also be another USDW and will be protected.

IX. Proposed Stimulation Program

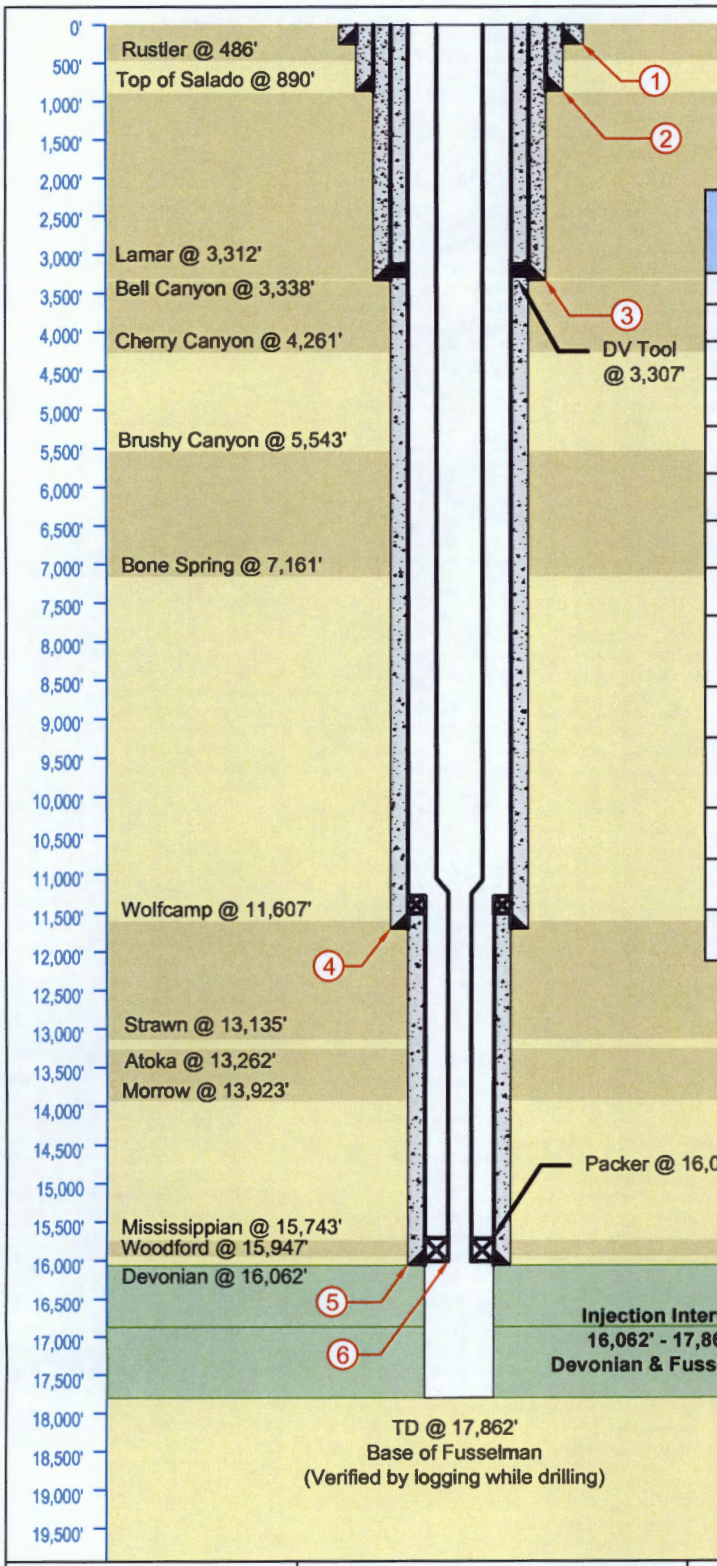
50,000 gallon acid job

X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

XI. Chemical Analysis of Fresh Water Wells

Because there are no water wells that exist within a one-mile radius of the proposed well, chemical analysis of fresh water wells was not retrieved for the proposed well.



Casing Information

Label	1	2	3	4	5
Type	Conductor	Surface	Intermediate	Production	Liner
OD	30"	16"	13-3/8"	9-5/8"	7-5/8"
WT		0.495"	0.480"	0.545"	0.500"
ID		15.010"	12.415"	8.535"	6.625"
Drift ID		14.822"	12.259"	8.379"	6.500"
COD		17.000"	13.375"	10.625"	7.625"
Weight		84 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
Grade		J-55 BTC	L-80 EZ-GO FJ3	HCP-110 BTC	Q-125 EZ-GO FJ3
Hole Size	Set and grouted	18-1/8"	14-3/4"	12-1/4"	8-1/2"
Depth Set	120'	865'	3,332'	11,707'	Top: 11,507' Bottom: 16,062'
TOC	Circulate to surface	Circulate to surface	Circulate to surface	Circulate to surface	11,607'
Volume	250 sks	709 sks	616 sks	2263 sks	489 sks
% Excess	0%	50%	30%	50%	50%

Tubing Information

Label	6
OD	5-1/2", 5"
WT	0.361", 0.362"
ID	4.778", 4.276"
Drift ID	4.653", 4.151"
COD	6.050", 5.563"
Weight	20 lb/ft, 18 lb/ft
Grade	HCL-80 BTC, HCL-80 LTC
Depth Set	0' - 11,307' 11,307' - 16,012'

LONQUIST & CO. LLC
PETROLEUM ENGINEERS | ENERGY ADVISORS
HOUSTON | CALGARY
AUSTIN | WICHITA | DENVER

Texas License F-9147

12912 Hill Country Blvd. Ste F-200
Austin, Texas 78738
Tel: 512.732.9812
Fax: 512.732.9816

Solaris Water Midstream, LLC

Cahill Fed SWD No. 1

Country: USA	**State/Province:** New Mexico	**County/Parish:** Eddy
Location:	**Site:** 918' FSL & 252' FWL	**Survey:** S28-T26S-R30E
API No: NA	**Field:** Devonian-Silurian (Code: 97869)	**Well Type/Status:** SWD
NMOCD District No: 2	**Project No:** 2006	**Date:** 6/18/2019
Drawn: TFM	**Reviewed:**	**Approved:**
Rev No: 1	**Notes:**	

SOLARIS WATER MIDSTREAM, LLC
Cahill Fed SWD #1
Section 28-T26S-R30E
918' FSL & 252' FWL
Eddy County, New Mexico
GEOLOGICAL PROGNOSIS
06/12/2019

GL: 2,965' (est.)
KB: 3,987' (+22' est.)
Proposed Injection Interval: 16,062'-17,862'

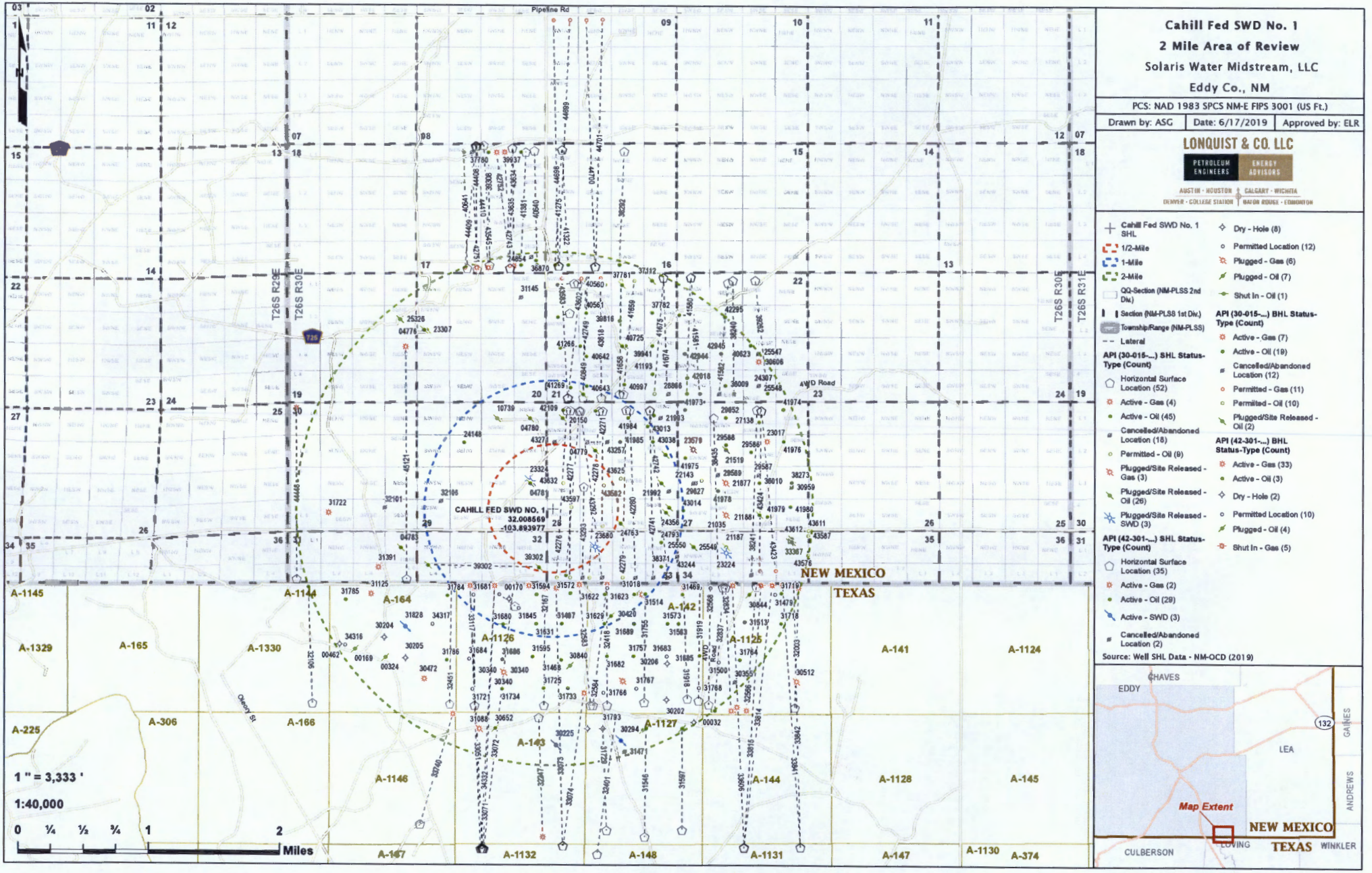
Tops	Depths (est.)	Subsea (est.)
Rustler	486'	+2,501
T/Salt	890'	+2,097
B/Salt	3,312'	-325
T/Bell Canyon – Oil	3,338'	-351
T/Cherry Canyon – Oil	4,261'	-1,274
T/Brushy Canyon – Oil	5,543'	-2,556
T/Bone Spring – Oil	7,161'	-4,174
T/Wolfcamp – Oil	11,607'	-8,620
T/Strawn – Gas	13,135'	-10,148
T/Atoka – Gas	13,262'	-10,275
T/Morrow LM	13,923'	-10,936
T/Mississippian_Lime	15,743'	-12,756
T/Woodford	15,947'	-12,960
T/Devonian	16,062'	-13,075
TD	17,862'	-TBD

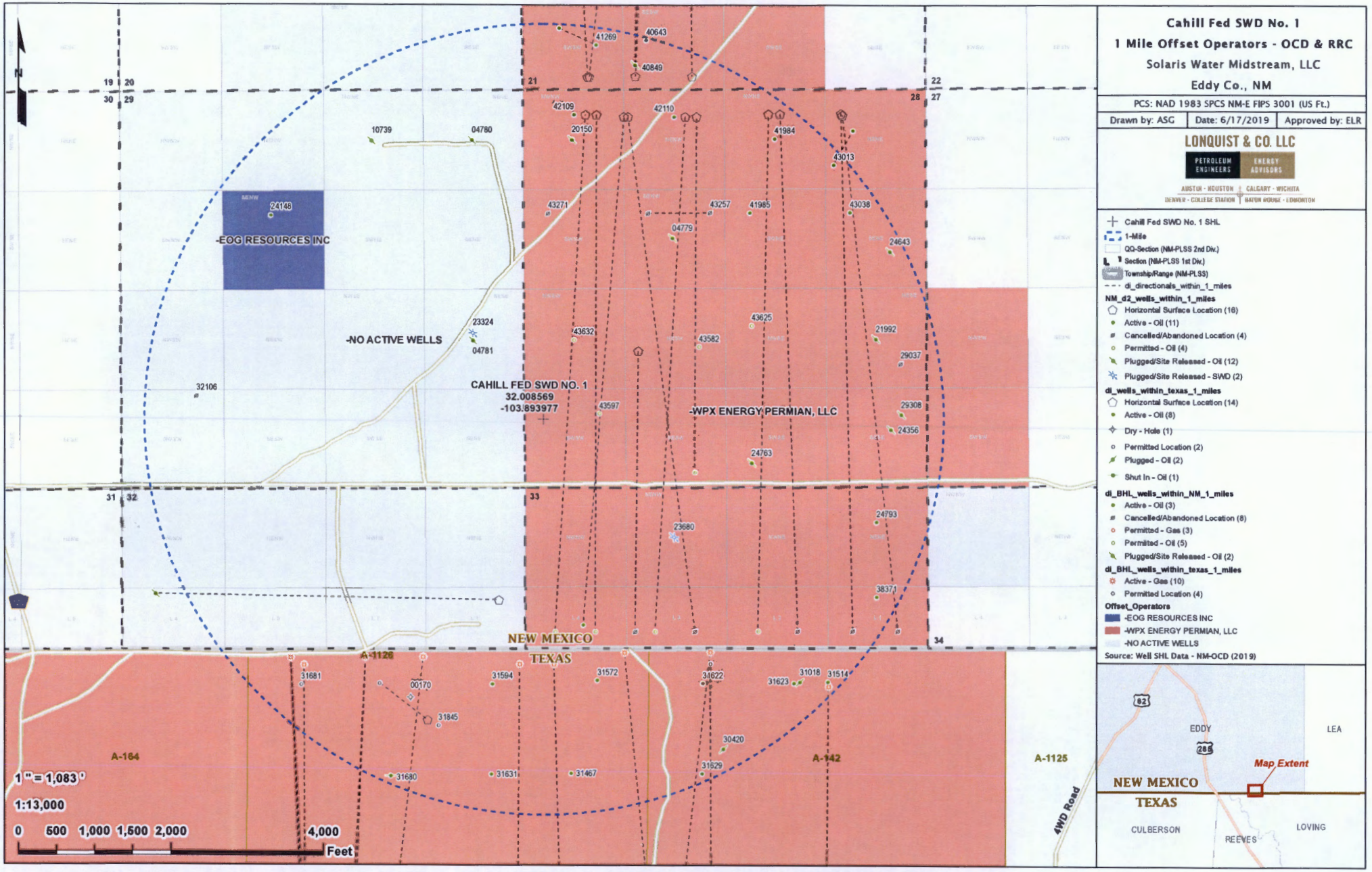
GEOLOGIC AFFIRMATION

I have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and underground sources of drinking water.

Parker Jessee
Geologist

Project: Solaris Water Midstream, LLC
Cahill Fed #1


Cahill Fed SWD No. 1
2 Mile Area of Review
Solaris Water Midstream, LLC
Eddy Co., NM
PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
Drawn by: ASG
Date: 6/17/2019
Approved by: ELR
LONQUIST & CO. LLC
PETROLEUM ENGINEERS
ENERGY ADVISORS
AUSTIN · HOUSTON · CALGARY · WICHITA
DENVER · COLLEGE STATION · BATON ROUGE · EDMONTON
Cahill Fed SWD No. 1 SHL
1/2-Mile
1-Mile
2-Mile
QQ-Section (NM-PLSS 2nd Div.)
Section (NM-PLSS 1st Div.)
Township/Range (NM-PLSS)
Lateral
API (30-015-...) SHL Status-Type (Count)
Horizontal Surface Location (52)
Active - Gas (4)
Active - Oil (45)
Cancelled/Abandoned Location (18)
Permitted - Oil (9)
Plugged/Site Released - Gas (3)
Plugged/Site Released - Oil (26)
Plugged/Site Released - SWD (3)
API (42-301-...) SHL Status-Type (Count)
Horizontal Surface Location (35)
Active - Gas (2)
Active - Oil (29)
Active - SWD (3)
Cancelled/Abandoned Location (2)
Dry - Hole (8)
Permitted Location (12)
Plugged - Gas (6)
Plugged - Oil (7)
Shut In - Oil (1)
API (30-015-...) BHL Status-Type (Count)
Active - Gas (7)
Active - Oil (19)
Cancelled/Abandoned Location (12)
Permitted - Gas (11)
Permitted - Oil (10)
Plugged/Site Released - Oil (2)
API (42-301-...) BHL Status-Type (Count)
Active - Gas (33)
Active - Oil (3)
Dry - Hole (2)
Permitted Location (10)
Plugged - Oil (4)
Shut In - Gas (5)
Source: Well SHL Data - NM-OCD (2019)
CAHILL FED SWD NO. 1
32.008569
-103.893977
Pipeline Rd
AWD Road
T26S R29E
T26S R30E
T26S R31E
NEW MEXICO
TEXAS
A-1145
A-1144
A-164
A-142
A-1329
A-165
A-1330
A-1126
A-1125
A-141
A-1124
A-225
A-306
A-166
A-163
A-1127
A-1146
A-144
A-1128
A-145
A-147
A-1130
A-374
A-1132
A-148
A-1131
1 " = 3,333 '
1:40,000
0 ¼ ½ ¾ 1 2
Miles
CHAVES
EDDY
LEA
GAINES
ANDREWS
CULBERSON
LOVING
WINKLER
Map Extent


Cahill Fed SWD No. 1
1 Mile Offset Operators - OCD & RRC
Solaris Water Midstream, LLC
Eddy Co., NM
PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
Drawn by: ASG
Date: 6/17/2019
Approved by: ELR
LONQUIST & CO. LLC
PETROLEUM ENGINEERS
ENERGY ADVISORS
AUSTIN · HOUSTON · CALGARY · WICHITA
DENVER · COLLEGE STATION · BATON ROUGE · EDMONTON
-EOG RESOURCES INC
-NO ACTIVE WELLS
-WPX ENERGY PERMIAN, LLC
CAHILL FED SWD NO. 1
32.008569
-103.893977
NEW MEXICO
TEXAS
A-1126
A-164
A-142
A-1125
4WD Road
1 " = 1,083 '
1:13,000
0 500 1,000 1,500 2,000 4,000
Feet
Cahill Fed SWD No. 1 SHL
1-Mile
QQ-Section (NM-PLSS 2nd Div.)
Section (NM-PLSS 1st Div.)
Township/Range (NM-PLSS)
di_directionals_within_1_miles
NM_d2_wells_within_1_miles
Horizontal Surface Location (16)
Active - Oil (11)
Cancelled/Abandoned Location (4)
Permitted - Oil (4)
Plugged/Site Released - Oil (12)
Plugged/Site Released - SWD (2)
di_wells_within_texas_1_miles
Horizontal Surface Location (14)
Active - Oil (8)
Dry - Hole (1)
Permitted Location (2)
Plugged - Oil (2)
Shut In - Oil (1)
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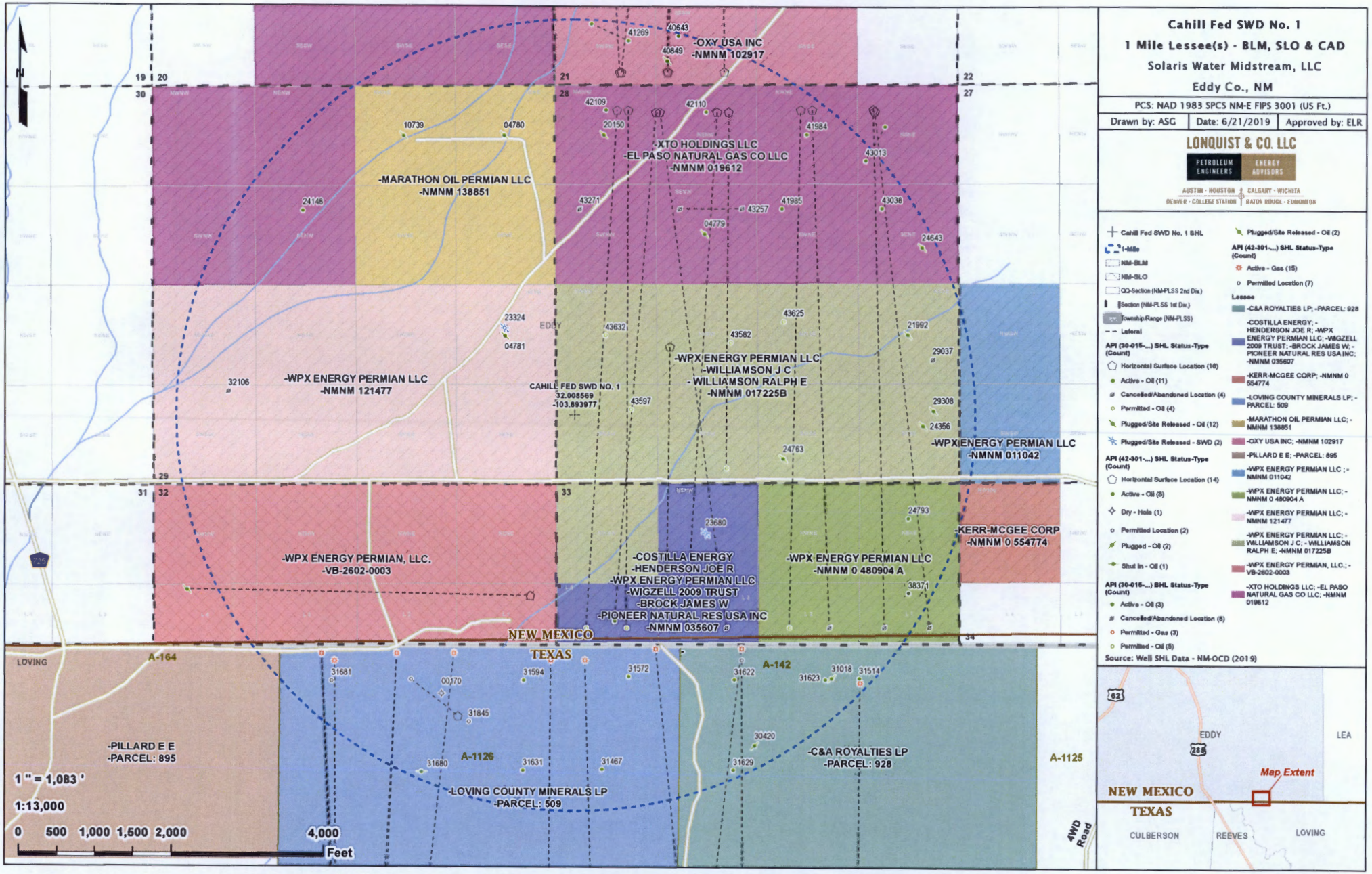
Active - Oil (3)
Cancelled/Abandoned Location (8)
Permitted - Gas (3)
Permitted - Oil (5)
Plugged/Site Released - Oil (2)
di_BHL_wells_within_texas_1_miles
Active - Gas (10)
Permitted Location (4)
Offset_Operators
-EOG RESOURCES INC
-WPX ENERGY PERMIAN, LLC
-NO ACTIVE WELLS
Source: Well SHL Data - NM-OCD (2019)
EDDY
LEA
Map Extent
NEW MEXICO
TEXAS
CULBERSON
REEVES
LOVING


Cahill Fed SWD No. 1
1 Mile Lessee(s) - BLM, SLO & CAD
Solaris Water Midstream, LLC
Eddy Co., NM
PCS: NAD 1983 SPCS NM-E FIPS 3001 (US Ft.)
Drawn by: ASG
Date: 6/21/2019
Approved by: ELR
LONQUIST & CO. LLC
PETROLEUM ENGINEERS
ENERGY ADVISORS
AUSTIN · HOUSTON · CALGARY · WICHITA
DENVER · COLLEGE STATION · BATON ROUGE · EDMONTON
-OXY USA INC
-NMNM 102917
-XTO HOLDINGS LLC
-EL PASO NATURAL GAS CO LLC
-NMNM 019612
-MARATHON OIL PERMIAN LLC
-NMNM 138851
-WPX ENERGY PERMIAN LLC
-NMNM 121477
CAHILL FED SWD NO. 1
32.008569
-103.893977
-WPX ENERGY PERMIAN LLC
-WILLIAMSON J C
- WILLIAMSON RALPH E
-NMNM 017225B
-WPX ENERGY PERMIAN LLC
-NMNM 011042
-KERR-MCGEE CORP
-NMNM 0 554774
-WPX ENERGY PERMIAN, LLC.
-VB-2602-0003
-COSTILLA ENERGY
-HENDERSON JOE R
-WPX ENERGY PERMIAN LLC
-WIGZELL 2009 TRUST
-BROCK JAMES W
-PIONEER NATURAL RES USA INC
-NMNM 035607
-WPX ENERGY PERMIAN LLC
-NMNM 0 480904 A
-PILLARD E E
-PARCEL: 895
-LOVING COUNTY MINERALS LP
-PARCEL: 509
-C&A ROYALTIES LP
-PARCEL: 928
NEW MEXICO
TEXAS
LOVING
EDDY
A-164
A-1126
A-142
A-1125
1 " = 1,083 '
1:13,000
0 500 1,000 1,500 2,000 4,000 Feet
4WD Road
Cahill Fed SWD No. 1 SHL
1-Mile
NM-BLM
NM-SLO
QQ-Section (NM-PLSS 2nd Div.)
Section (NM-PLSS 1st Div.)
Township/Range (NM-PLSS)
Lateral
API (30-015-...) SHL Status-Type (Count)
Horizontal Surface Location (16)
Active - Oil (11)
Cancelled/Abandoned Location (4)
Permitted - Oil (4)
Plugged/Site Released - Oil (12)
Plugged/Site Released - SWD (2)
API (42-301-...) SHL Status-Type (Count)
Horizontal Surface Location (14)
Active - Oil (8)
Dry - Hole (1)
Permitted Location (2)
Plugged - Oil (2)
Shut In - Oil (1)
API (30-015-...) SHL Status-Type (Count)
Active - Oil (3)
Cancelled/Abandoned Location (6)
Permitted - Gas (3)
Permitted - Oil (5)
Plugged/Site Released - Oil (2)
API (42-301-...) SHL Status-Type (Count)
Active - Gas (15)
Permitted Location (7)
Lessees
-C&A ROYALTIES LP; -PARCEL: 928
-COSTILLA ENERGY; -HENDERSON JOE R; -WPX ENERGY PERMIAN LLC; -WIGZELL 2009 TRUST; -BROCK JAMES W; -PIONEER NATURAL RES USA INC; -NMNM 035607
-KERR-MCGEE CORP; -NMNM 0 554774
-LOVING COUNTY MINERALS LP; -PARCEL: 509
-MARATHON OIL PERMIAN LLC; -NMNM 138851
-OXY USA INC; -NMNM 102917
-PILLARD E E; -PARCEL: 895
-WPX ENERGY PERMIAN LLC ; -NMNM 011042
-WPX ENERGY PERMIAN LLC; -NMNM 0 480904 A
-WPX ENERGY PERMIAN LLC; -NMNM 121477
-WPX ENERGY PERMIAN LLC; -WILLIAMSON J C; - WILLIAMSON RALPH E; -NMNM 017225B
-WPX ENERGY PERMIAN, LLC.; -VB-2602-0003
-XTO HOLDINGS LLC; -EL PASO NATURAL GAS CO LLC; -NMNM 019612
Source: Well SHL Data - NM-OCD (2019)
Map Extent
EDDY
LEA
CULBERSON
REEVES
LOVING

Cahill Fed SWD No. 1
1 Mile Area of Review List

API (30-015-...)	WELL NAME	WELL TYPE	STATUS	OPERATOR	TVD (FT.)	LATITUDE (NAD83 DD)	LONGITUDE (NAD83 DD)	SPUD DATE	FIELD
04779	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	3428	32.01520920000	-103.88845060000	1/1/1900	-
04780	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	3407	32.01882550000	-103.89698030000	1/1/1900	-
04781	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	3410	32.0114784000	-103.896965000	1/1/1900	-
10739	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	3350	32.0188179000	-103.901321400	1/1/1900	-
20150	PRE-ONGARD WELL #001	O	P	PRE-ONGARD WELL OPERATOR	3400	32.0188332000	-103.892723100	1/1/1900	-
21992	PRE-ONGARD WELL #002	O	P	PRE-ONGARD WELL OPERATOR	7265	32.0114899000	-103.879821800	1/1/1900	-
23324	FEDERAL AZ #001	S	P	WPX Energy Permian, LLC	3580	32.0117531000	-103.896965000	6/18/1980	[96100] SWD, DELAWARE
23680	ROSS DRAW SWD #001	S	P	WPX Energy Permian, LLC	14365	32.0042267000	-103.888435400	5/21/1981	[98033] SWD, DELAWARE
24148	FEDERAL BF COM #001	O	A	EOG RESOURCES INC	14418	32.0160866000	-103.905654900	5/28/1982	[52800] ROSS DRAW, DELAWARE, WEST; [91162] EDDY UNDESIGNATED, WOLFCAMP (GAS)
24356	ABBY FEDERAL #001	O	P	J C WILLIAMSON	5770	32.0081558000	-103.879188500	12/31/9999	[52800] ROSS DRAW, DELAWARE, WEST
24643	ENFIELD FEDERAL #001	O	P	WPX Energy Permian, LLC	7065	32.0146904000	-103.879203800	12/31/9999	[52800] ROSS DRAW, DELAWARE, WEST
24763	ABBY FEDERAL #003	O	P	J C WILLIAMSON	5750	32.0069504000	-103.885131800	12/31/9999	[52800] ROSS DRAW, DELAWARE, WEST
24793	ROSS DRAW #012	O	A	WPX Energy Permian, LLC	6800	32.0047607000	-103.879814100	10/29/1985	[52790] ROSS DRAW, DELAWARE
29037	ABBY FEDERAL #004	O	C	J C WILLIAMSON	0	32.0105859657	-103.878757332	12/31/9999	-
29308	ABBY FEDERAL #005	O	P	WPX Energy Permian, LLC	6995	32.0087051000	-103.878746000	12/15/1996	[52800] ROSS DRAW, DELAWARE, WEST
32106	ROSS DRAW 29 FEDERAL COM #001	G	C	EOG RESOURCES INC	0	32.0094499064	-103.908820757	12/31/9999	-
38371	ROSS DRAW UNIT #031	O	A	WPX Energy Permian, LLC	6850	32.0020142000	-103.879814100	2/16/2011	[52790] ROSS DRAW, DELAWARE
39302	BULLION BRL STATE #001	O	P	EOG Y RESOURCES, INC.	325	32.0019417000	-103.895889300	11/30/2011	[96403] WILDCAT, BONE SPRING
40643	RDX FEDERAL 21 #042	O	A	WPX Energy Permian, LLC	7380	32.0224686000	-103.889541600	10/17/2013	[8090] BRUSHY DRAW, DELAWARE, EAST
40849	RDX FEDERAL 21 #001H	O	P	WPX Energy Permian, LLC	9	32.02156070000	-103.89002230000	1/24/2013	[97863] WILDCAT G-03 S263016K, BONE SPRING
41269	RDX FEDERAL 21 #041	O	A	WPX Energy Permian, LLC	7459	32.0223007000	-103.891670200	11/4/2013	[8090] BRUSHY DRAW, DELAWARE, EAST
41984	RDX FEDERAL 28 #013	O	A	WPX Energy Permian, LLC	0	32.01884460000	-103.88409420000	3/31/2014	[52800] ROSS DRAW, DELAWARE, WEST
41985	RDX FEDERAL 28 #023	O	A	WPX Energy Permian, LLC	7322	32.0161209000	-103.885154700	9/24/2014	[52800] ROSS DRAW, DELAWARE, WEST
42109	RDX FEDERAL 28 #011	O	A	WPX Energy Permian, LLC	7370	32.0197411000	-103.892623900	7/4/2014	[52800] ROSS DRAW, DELAWARE, WEST
42110	RDX FEDERAL 28 #012	O	A	WPX Energy Permian, LLC	7392	32.0196648000	-103.888366700	5/20/2014	[52800] ROSS DRAW, DELAWARE, WEST
42271	RDX FEDERAL COM 28 #005H	O	N	WPX Energy Permian, LLC	0	32.01966480000	-103.88739780000	12/31/9999	[97863] WILDCAT G-03 S263016K, BONE SPRING
42276	RDX FEDERAL COM 28 #002H	O	N	WPX Energy Permian, LLC	0	32.0197411000	-103.892143200	12/31/9999	[97863] WILDCAT G-03 S263016K, BONE SPRING
42277	RDX FEDERAL COM 28 #003H	O	N	WPX Energy Permian, LLC	0	32.0197411000	-103.891662600	12/31/9999	[97863] WILDCAT G-03 S263016K, BONE SPRING
42278	RDX FEDERAL COM 28 #004H	O	N	WPX Energy Permian, LLC	0	32.0196648000	-103.887886000	12/31/9999	[97863] WILDCAT G-03 S263016K, BONE SPRING
42279	RDX FEDERAL COM 28 #006H	O	N	WPX Energy Permian, LLC	0	32.0197525000	-103.884338400	12/31/9999	[97863] WILDCAT G-03 S263016K, BONE SPRING
42280	RDX FEDERAL COM 28 #007H	O	C	WPX Energy Permian, LLC	0	32.0197525000	-103.883850100	12/31/9999	[84330] ROSS DRAW, WOLFCAMP (G) (ABOLISH); [97863] WILDCAT G-03 S263016K, BONE SPRING
42741	RDX FEDERAL COM 28 #001H	O	C	WPX Energy Permian, LLC	0	32.0197601395	-103.881253317	12/31/9999	[97863] WILDCAT G-03 S263016K, BONE SPRING
42742	RDX FEDERAL COM 28 #008H	O	C	WPX Energy Permian, LLC	10940	32.0197052390	-103.881194867	12/31/9999	[97863] WILDCAT G-03 S263016K, BONE SPRING
42749	RDX FEDERAL 21 #002H	O	C	WPX Energy Permian, LLC	0	32.0211502896	-103.889994659	12/31/9999	[97863] WILDCAT G-03 S263016K, BONE SPRING
43013	RDX FEDERAL 28 #014	O	A	WPX Energy Permian, LLC	7417	32.0178788200	-103.881581500	5/15/2015	[52800] ROSS DRAW, DELAWARE, WEST
43038	RDX FEDERAL 28 #024	O	A	WPX Energy Permian, LLC	0	32.0161319554	-103.880906699	8/27/2015	[52800] ROSS DRAW, DELAWARE, WEST
43257	RDX FEDERAL 28 #022	O	C	WPX Energy Permian, LLC	0	32.0161281000	-103.886847400	12/31/9999	[52800] ROSS DRAW, DELAWARE, WEST
43271	RDX FEDERAL 28 #021	O	C	WPX Energy Permian, LLC	0	32.0161168000	-103.893752300	12/31/9999	[52800] ROSS DRAW, DELAWARE, WEST
43292	RDX FEDERAL COM 28 #015H	O	C	WPX Energy Permian, LLC	0	32.0196704000	-103.890323000	12/31/9999	[84330] ROSS DRAW, WOLFCAMP (G) (ABOLISH); [98220] PURPLE SAGE, WOLFCAMP (GAS)
43293	RDX FEDERAL COM 28 #010H	O	C	WPX Energy Permian, LLC	0	32.0110800000	-103.889924300	12/31/9999	[84330] ROSS DRAW, WOLFCAMP (G) (ABOLISH); [98220] PURPLE SAGE, WOLFCAMP (GAS)
43294	RDX FEDERAL COM 28 #009H	O	A	WPX Energy Permian, LLC	10700	32.0196704000	-103.890492400	11/16/2015	[84330] ROSS DRAW, WOLFCAMP (G) (ABOLISH); [97136] BRUSHY DRAW, WOLFCAMP (O)(ABOLISH); [98220] PURPLE SAGE, WOLFCAMP (GAS)
43582	RDX FEDERAL 28 #032	O	N	WPX Energy Permian, LLC	0	32.0112155000	-103.887350200	12/31/9999	[52800] ROSS DRAW, DELAWARE, WEST
43583	RDX FEDERAL 21 #009H	G	N	WPX Energy Permian, LLC	0	32.0211362900	-103.892036400	12/31/9999	[84330] ROSS DRAW, WOLFCAMP (G) (ABOLISH); [98220] PURPLE SAGE, WOLFCAMP (GAS)
43597	RDX FEDERAL 28 #041	O	N	WPX Energy Permian, LLC	0	32.0087693000	-103.891606300	12/31/9999	[52800] ROSS DRAW, DELAWARE, WEST
43602	RDX FEDERAL 21 #008H	G	N	WPX Energy Permian, LLC	0	32.0211365	-103.8919557	12/31/9999	[84330] ROSS DRAW, WOLFCAMP (G) (ABOLISH); [98220] PURPLE SAGE, WOLFCAMP (GAS)
43618	RDX FEDERAL 21 #007H	G	N	WPX Energy Permian, LLC	0	32.0211432000	-103.887587900	12/31/9999	[84330] ROSS DRAW, WOLFCAMP (G) (ABOLISH); [98220] PURPLE SAGE, WOLFCAMP (GAS)
43625	RDX FEDERAL 28 #033	O	N	WPX Energy Permian, LLC	0	32.0119868000	-103.885101700	12/31/9999	[52800] ROSS DRAW, DELAWARE, WEST
43632	RDX FEDERAL 28 #031	O	N	WPX Energy Permian, LLC	0	32.0114859000	-103.892674100	12/31/9999	[52800] ROSS DRAW, DELAWARE, WEST
API (42-301-...)	**WELL NAME**	**WELL TYPE**	**STATUS**	**OPERATOR**	**TVD (FT.)**	**LATITUDE (NAD83 DD)**	**LONGITUDE (NAD83 DD)**	**SPUD DATE**	**FIELD**
00170	-	V	DRY - HOLE	Lewis and Slagle	0	31.9982000000	-103.899000000	12005	-
30420	ROBINSON "A" -5-	V	PLUGGED - OIL	SOUTHWEST ROYALTIES, INC.	6248	31.9963000000	-103.886000000	34451	-
31018	ROBINSON -5-	V	PLUGGED - OIL	SOUTHWEST ROYALTIES, INC.	6052	31.9988000000	-103.883000000	34348	-
31467	CBR 6	V	ACTIVE - OIL	RKI EXPLORATION & PRODUCTION LLC	7420	31.9955000000	-103.892000000	40269	-
31514	ROBINSON 5	V	ACTIVE - OIL	RKI EXPLORATION & PRODUCTION LLC	7508	31.9988000000	-103.881000000	40191	-
31572	CBR 6	V	ACTIVE - OIL	RKI EXPLORATION & PRODUCTION LLC	7400	31.9989000000	-103.891000000	40571	-
31594	CBR 6	V	ACTIVE - OIL	RKI EXPLORATION & PRODUCTION LLC	7370	31.9987000000	-103.896000000	40748	-
31622	ROBINSON 5	V	ACTIVE - OIL	WPX ENERGY PERMIAN, LLC	7503	31.9987000000	-103.887000000	40883	-
31623	ROBINSON 5	V	ACTIVE - OIL	RKI EXPLORATION & PRODUCTION LLC	7512	31.9987000000	-103.883000000	40833	-
31629	ROBINSON 5	V	ACTIVE - OIL	RKI EXPLORATION & PRODUCTION LLC	7501	31.99540000000	-103.88700000000	40925	-
31631	CBR 6	V	ACTIVE - OIL	RKI EXPLORATION & PRODUCTION LLC	7252	31.9954000000	-103.896000000	40868	-
31680	CBR 6	V	SHUT-IN OIL	WPX ENERGY PERMIAN, LLC	7365	31.9954000000	-103.900000000	40925	-
31681	CBR 6	V	PERMITTED LOCATION	RKI EXPLORATION & PRODUCTION LLC	7500	31.99870000000	-103.90400000000	-	-
31731	CBR 6	H	PERMITTED LOCATION	RKI EXPLORATION & PRODUCTION LLC	7500	31.9974000000	-103.899000000	-	-
31755	ROBINSON 5	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	11950	31.98660000000	-103.88200000000	41062	-
31845	CBR 6	V	PERMITTED LOCATION	RKI EXPLORATION & PRODUCTION LLC	5600	31.9972000000	-103.898000000	-	-
32167	CBR 6	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	15534	31.9862000000	-103.895000000	42381	-
32418	ROBINSON 5	H	PERMITTED LOCATION	RKI EXPLORATION & PRODUCTION LLC	0	31.9863000000	-103.886000000	-	-
32472	CBR 6	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	15231	31.9862000000	-103.904000000	42011	-
32583	CBR 6	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	15485	31.9862000000	-103.889000000	42172	-
32584	ROBINSON 5	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	15530	31.98620000000	-103.88800000000	42206	-
33051	CBR 6-7A	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	17932	31.9700000000	-103.903000000	42750	-
33071	CBR 6-7B	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	21375	31.97000000000	-103.90300000000	42749	-

Cahill Fed SWD No. 1
1 Mile Area of Review List

33072	CBR 6-7C	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	21424	31.9700000000	-103.903000000	42747	-
33073	CBR 6-7D	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	21315	31.9704000000	-103.892000000	42814	-
33117	CBR 6-7E	H	ACTIVE - GAS	WPX ENERGY PERMIAN, LLC	21909	31.97000000000	-103.90300000000	42751	-
34331	CBR 6-7-56-1	H	PERMITTED LOCATION	WPX ENERGY PERMIAN, LLC	16000	31.9700000000	-103.903000000	43584	-
34332	CBR 6-7-56-1	H	PERMITTED LOCATION	WPX ENERGY PERMIAN, LLC	16000	31.9700000000	-103.903000000	43583	-

Cahill Fed SWD No. 1
1 Mile Offset Operators and Lessees List

S/T/R	QQ UNIT LETTER(S)	OPERATOR	MINERAL LESSEE	MINERAL OWNER	SURFACE OWNER	ADDRESS 1	ADDRESS 2
20/T26S/R30E	N,O,P	-	XTO HOLDINGS LLC	-	-	22777 SPRINGWOODS VILLAGE PKWY	SPRING TX 773891425
	N,O,P	-	EL PASO NATURAL GAS CO LLC	-	-	600 N DAIRY ASHFORD RD	HOUSTON TX 770791100
	N,O,P	-	COSTILLA ENERGY (OPERATING RIGHTS)	-	-	PO BOX 10369	MIDLAND TX 79702
	N,O,P	-	WPX ENERGY PERMIAN LLC (OPERATING RIGHTS)	-	-	3500 ONE WILLIAMS CTR	TULSA OK 741720135
	N,O,P	-	K P ACQUISITION CORP (OPERATING RIGHTS)	-	-	500 W TEXAS #1450	MIDLAND TX 79701
	N,O,P	-	XTO HOLDINGS LLC (OPERATING RIGHTS)	-	-	22777 SPRINGWOODS VILLAGE PKWY	SPRING TX 773891425
	N,O,P	-	WILLIAMSON J C (OPERATING RIGHTS)	-	-	PO BOX 16	MIDLAND TX 797020016
	N,O,P	-	WILLIAMSON RALPH E (OPERATING RIGHTS)	-	-	BOX 994	MIDLAND TX 79702
	N,O,P	-	WILLIAMSON CHARLOTTE (OPERATING RIGHTS)	-	-	BOX 50410	AUSTIN TX 78763
	N,O,P	-	DOMINION OK TX EXPL & PROD INC (OPERATING RIGHTS)	-	-	14000 QUAIL SPGS PKY #600	OKLAHOMA CITY OK 73134
	N,O,P	-	EOG RESOURCES INC (OPERATING RIGHTS)	-	-	PO BOX 4362	HOUSTON TX 772104362
	N,O,P	-	K P ACQUISITION CORP (OPERATING RIGHTS)	-	-	2040 MURRAY HOLLADAY	SALT LAKE CITY UT 84117
21/T26S/R30E	M,N,O	WPX ENERGY PERMIAN LLC,	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
27/T26S/R30E	L,M	WPX ENERGY PERMIAN LLC,	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
28/T26S/R30E	ENTIRE SECTION	WPX ENERGY PERMIAN LLC,	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
29/T26S/R30E	F	EOG RESOURCES INC	-	-	-	P.O. BOX 2267	MIDLAND, TX 79702
	A,B,G,H	-	MARATHON OIL PERMIAN LLC	-	-	5555 SAN FELIPE ST	HOUSTON TX 770562701
	C,D,E,F	-	XTO HOLDINGS LLC	-	-	22777 SPRINGWOODS VILLAGE PKWY	SPRING TX 773891425
	C,D,E,F	-	EL PASO NATURAL GAS CO LLC	-	-	600 N DAIRY ASHFORD RD	HOUSTON TX 770791100
	C,D,E,F	-	COSTILLA ENERGY (OPERATING RIGHTS)	-	-	PO BOX 10369	MIDLAND TX 79702
	C,D,E,F	-	WPX ENERGY PERMIAN LLC (OPERATING RIGHTS)	-	-	3500 ONE WILLIAMS CTR	TULSA OK 741720135
	C,D,E,F	-	K P ACQUISITION CORP (OPERATING RIGHTS)	-	-	500 W TEXAS #1450	MIDLAND TX 79701
	C,D,E,F	-	XTO HOLDINGS LLC (OPERATING RIGHTS)	-	-	22777 SPRINGWOODS VILLAGE PKWY	SPRING TX 773891425
	C,D,E,F	-	WILLIAMSON J C (OPERATING RIGHTS)	-	-	PO BOX 16	MIDLAND TX 797020016
	C,D,E,F	-	WILLIAMSON RALPH E (OPERATING RIGHTS)	-	-	BOX 994	MIDLAND TX 79702
	C,D,E,F	-	WILLIAMSON CHARLOTTE (OPERATING RIGHTS)	-	-	BOX 50410	AUSTIN TX 78763
	C,D,E,F	-	DOMINION OK TX EXPL & PROD INC (OPERATING RIGHTS)	-	-	14000 QUAIL SPGS PKY #600	OKLAHOMA CITY OK 73134
	C,D,E,F	-	EOG RESOURCES INC (OPERATING RIGHTS)	-	-	PO BOX 4362	HOUSTON TX 772104362
	C,D,E,F	-	K P ACQUISITION CORP (OPERATING RIGHTS)	-	-	2040 MURRAY HOLLADAY	SALT LAKE CITY UT 84117
	I,J,K,L,M,N,O,P	-	WPX ENERGY PERMIAN LLC	-	-	3500 ONE WILLIAMS CTR	TULSA OK 741720135
	I,J,K,L,M,N,O,P	-	WPX ENERGY PERMIAN LLC (OPERATING RIGHTS)	-	-	3500 ONE WILLIAMS CTR	TULSA OK 741720135
	I,J,K,L,M,N,O,P	-	EXXONMOBIL OIL CORP (OPERATING RIGHTS)	-	-	810 HOUSTON ST	FORT WORTH TX 761026203
32/T26S/R30E	A,B,C,D,E,F,G,H	-	WPX ENERGY PERMIAN, LLC,	-	-	3500 ONE WILLIAMS CENTER, STE. 4400	TULSA, OK 741720135
33/T26S/R30E	A,B,C,D,E,F,G,H	WPX ENERGY PERMIAN LLC,	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
34/T26S/R30E	D	-	KERR-MCGEE CORP	-	-	PO BOX 25861	OKLAHOMA CITY OK 73125
	D	-	COSTILLA ENERGY	-	-	PO BOX 10369	MIDLAND TX 79702
	D	-	WPX ENERGY PERMIAN LLC	-	-	3500 ONE WILLIAMS CTR	TULSA OK 741720135
	D	-	DOMINION OK TX EXPL & PROD INC	-	-	14000 QUAIL SPGS PKY #600	OKLAHOMA CITY OK 73134
A-142 (Texas)	ENTIRE ABSTRACT	WPX Energy Permian, LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
	ENTIRE ABSTRACT	-	C&A ROYALTIES LP	-	-	4849 GREENVILLE AVE STE 1515	Dallas Tx, 75206
A-1126 (Texas)	ENTIRE ABSTRACT	WPX Energy Permian, LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
	ENTIRE ABSTRACT	-	LOVING COUNTY MINERALS LP	-	-	111 WEST 75TH STREET	KANSAS CITY MO, 64114
A-164 (Texas)	ENTIRE ABSTRACT	WPX Energy Permian, LLC	-	-	-	3500 ONE WILLIAMS CENTER	TULSA, OK 74172
	320 ac.	-	PILLARD E E	-	-	132 CODY CIRCLE N	SULPHUR SPRINGS TX, 75482
Surface Location	-	-	-	-	BUREAU OF LAND MANAGEMENT	-	-

Cahill Fed SWD No. 1
Offsetting Produced Water Analysis

Well Name	API	Section	Township	Range	Unit	County	Field	Formation	ph	tds_mgL	sodium_mgL	calcium_mgL	iron_mgL	magnesium_mgL	manganese_mgL	chloride_mgL	bicarbonate_mgL	sulfate_mgL	co2_mgL
USA #001	3001504776	20	26S	30E	E	EDDY		DELAWARE		159967						97900	137	1100	
E D WHITE FEDERAL NCT 1 #003	3001505886	26	26S	31E	O	EDDY	MASON NORTH	DELAWARE		212112						132100	195	425	
NORTH EL MAR UNIT #022	3002508278	25	26S	32E	J	LEA	EL MAR	DELAWARE		244815						153500	88	220	
HOPI FEDERAL #001	3001529367	1	25S	28E	F	EDDY	WILLOW LAKE	DELAWARE	6.2	301207	109024	25348.9	34.713	2749.51		221998	74.4534	84.987	
HOPI FEDERAL #002	3001530754	1	25S	28E	C	EDDY		DELAWARE	5.9	289700	104602	23783.6	45.334	2914.5		212544	49.5095	508.218	
NORTH EL MAR UNIT #028	3002508296	26	26S	32E	L	LEA	EL MAR	DELAWARE		249479						156000	976	373	
NORTH EL MAR UNIT #045	3002508308	35	26S	32E	A	LEA	EL MAR	DELAWARE		255115						160000	85	310	
CONTINENTAL FED #002	3001510172	20	25S	30E	L	EDDY	CORRAL CANYON	DELAWARE		157068						97030	68	510	
R & B FED FED A #001	3001504752	17	25S	30E	D	EDDY	CORRAL CANYON	DELAWARE	7	146809						89710	24	346	
BENNETT FEDERAL #001	3001524071	30	25S	30E	O	EDDY	CORRAL CANYON SOUTH	DELAWARE	6	103300	53495	3120	10	3080		97000	100		
HOPP FED #001	3001504738	4	25S	30E	M	EDDY		DELAWARE		180137						110500	232	1199	
R AND B FEDERAL #001Y	3001504753	17	25S	30E	D	EDDY	CORRAL CANYON	DELAWARE		146130						89700	24	346	
CONTINENTAL FEDERAL #001	3001510048	20	25S	30E	D	EDDY	CORRAL CANYON	DELAWARE		193989						119700	82	1446	
SUPERIOR STATE #002	3001510181	8	25S	30E	I	EDDY	CORRAL CANYON	DELAWARE		150830									
COTTON DRAW UNIT #161H	3001538433	2	25S	31E	D	EDDY		DELAWARE-BRUSHY CANYON	6.5	257515.5	74122.9	16699.4	79.5	2736.1		160663.2		359.4	400
COTTON DRAW 13 FEDERAL #001H	3001540385	13	25S	31E	M	EDDY		DELAWARE-BRUSHY CANYON	6.7	239818.3	72792.6	12750.4	110.8	2141.6		149091.1		595.6	400
COTTON DRAW UNIT #172H	3001542426	1	25S	31E	O	EDDY		DELAWARE-BRUSHY CANYON	6.3	245565.5	71987.8	15105.6	76.4	2475.6		153168.3		545.1	400
COTTON DRAW UNIT #173H	3001542515	1	25S	31E	P	EDDY		DELAWARE-BRUSHY CANYON	6.5	240893.6	69999.9	13540.5	54	2248.5		152475.6		600.8	300
COTTON DRAW 10 FEDERAL COM #002H	3001539230	10	25S	31E	A	EDDY		DELAWARE-BRUSHY CANYON	7.4	254959.9	79764.6	13961	35	2265	2.5	156140	48.8	351	20
COTTON DRAW UNIT #153H	3001538535	3	25S	31E	B	EDDY		DELAWARE-BRUSHY CANYON	6.7	271580.1	82640	18493	103	3404	5	163110	219.6	286	30
COTTON DRAW 11 FEDERAL #002H	3001539375	11	25S	31E	C	EDDY		DELAWARE-BRUSHY CANYON	6.3	249141.5	73945	14492	45	2514	2.5	155100	122	0	250
COTTON DRAW UNIT #162H	3001539730	11	25S	31E	M	EDDY		DELAWARE-BRUSHY CANYON	6.2	247108.5	74025	13425	76	2423	4.5	154200	122	0	300
SNAPPING 2 STATE #013H	3001542113	2	26S	31E	N	EDDY		BONE SPRING 3RD SAND	6.8	91289.1	28721.3	3440.7	16.3	437.4		56957.4		327.9	150
SNAPPING 10 FEDERAL #005H	3001540994	10	26S	31E	P	EDDY		BONE SPRING 2ND SAND	6.6	138376	44458.5	6280.8	29.7	781.3	0	84470	122	618	20
SNAPPING 10 FEDERAL #003H	3001539866	10	26S	31E	N	EDDY		BONE SPRING 2ND SAND	6.5	152439.2	48495.7	6731.3	29.1	801.4	1.06	94055	244	0	100
ODIE 4 STATE #001H	3001541311	4	25S	28E	M	EDDY		BONE SPRING 2ND SAND	6.2	190675.4	57102	10650	45	1414	1.3	119078	93.1	17	252
NERMAL 4 STATE #001H	3001541239	4	25S	28E	C	EDDY		BONE SPRING 2ND SAND	7.4	208311.9	67903	12598	31	1592	1.5	123723	61	1.7	260
POOKY 4 STATE #001H	3001541241	4	25S	28E	A	EDDY		BONE SPRING 2ND SAND	7	204576.5	63037.2	12091.9	28.2	1510.7	1.6	125493	48.8	0	0
COTTON DRAW UNIT #219H	3001541363	2	25S	31E	P	EDDY		BONE SPRING 2ND SAND	6.4	154900.7	46690.1	7728.7	132	945.5	1.78	97130.8	183	0	200
COTTON DRAW UNIT #220H	3001541364	2	25S	31E	P	EDDY		BONE SPRING 2ND SAND	6.2	151722	47168.6	7450	48.1	989.6	1.1	93392.1	122	1116.7	200
COTTON DRAW 10 FEDERAL COM #003H	3001542126	10	25S	31E	A	EDDY		BONE SPRING 2ND SAND	6.2	166762.2	50511.3	8741.5	34.9	1113.3	1.09	104123.2	122	0	150
COTTON DRAW 10 FEDERAL COM #003H	3001542126	10	25S	31E	A	EDDY		BONE SPRING 2ND SAND	6.2	166972	50511.3	8741.5	34.9	1113.3	1.1	104123.2	122	698.3	150
COTTON DRAW 10 FEDERAL COM #004H	3001542127	10	25S	31E	A	EDDY		BONE SPRING 2ND SAND	6	157444	48594.2	8080.1	33.4	1039.4	1	97266	122	767.5	150
COTTON DRAW 15 FED COM #002H	3001540748	15	25S	31E	B	EDDY		BONE SPRING 2ND SAND	6.9	158206.7	48491.4	7898.9	47.9	982.5	1.19	98665.6	122	0	200
COTTON DRAW UNIT #202H	3001541437	2	25S	31E	M	EDDY		BONE SPRING 2ND SAND	6.9	149970.4	47221.1	7739.3	48.6	945.9	1.39	91736.6	188	0	200
COTTON DRAW 14 FED COM #001H	3001542091	14	25S	31E	O	EDDY		BONE SPRING 2ND SAND	6.4	155557.8	47632.8	7833.6	31.4	950.8	0	96870.5	122	0	200
COTTON DRAW 14 FED COM #002H	3001542092	14	25S	31E	O	EDDY		BONE SPRING 2ND SAND	6.2	154868.7	48183	8015.7	36	979.9	1.07	95447.5	122	0	200
COTTON DRAW 10 FEDERAL COM #003H	3001542126	10	25S	31E	A	EDDY		BONE SPRING 2ND SAND	6.8	156876.4	47995.3	8167.1	46.9	1037.2	1.26	97409	152	0	200
COTTON DRAW 10 FEDERAL COM #004H	3001542127	10	25S	31E	A	EDDY		BONE SPRING 2ND SAND	6.5	158125.7	48703.1	8121.1	37.1	1022.8	1.06	98100	122	0	200
COTTON DRAW UNIT #216H	3001542317	3	25S	31E	O	EDDY		BONE SPRING 2ND SAND	6.5	151149.4	46958.4	7753.9	38.7	968.6	0	93214.4	122	0	200
COTTON DRAW UNIT #217H	3001542318	3	25S	31E	O	EDDY		BONE SPRING 2ND SAND	6.5	150344.4	46535.7	7533.5	36	943.7	0	93134.6	122	0	200
COTTON DRAW 14 FEDERAL #003H	3001542504	14	25S	31E	A	EDDY		BONE SPRING 2ND SAND	6.8	149342.5	46864.9	7735.5	34.3	953.9	1.08	91392.5	244	0	200
COTTON DRAW 14 FEDERAL #004H	3001542505	14	25S	31E	A	EDDY		BONE SPRING 2ND SAND	6.8	148867.1	46832	7781.8	31.8	940.8	1.03	91091.9	144	0	200
COTTON DRAW UNIT #222H	3001542513	1	25S	31E	N	EDDY		BONE SPRING 2ND SAND	7.1	145420.8	45961.8	7771.4	35	973.4	1.29	88433.1	144	0	200
COTTON DRAW UNIT #221H	3001542514	1	25S	31E	N	EDDY		BONE SPRING 2ND SAND	7.1	145160.9	44866.9	7892.4	36	972.6	1.25	89011.8	244	0	200
SNAPPING 2 STATE #014H	3001542688	2	26S	31E	P	EDDY		WOLFCAMP	7.3	81366.4	26319.4	2687.4	26.1	326.7		50281.2		399.7	100
SIGNAL ST #002	3001502520	28	25S	28E	N	EDDY		MORROW		102849									
GOVERNMENT 134 #001	3001500076	12	26S	24E	H	EDDY	WASHINGTON RANCH	MORROW		2009						40	73	1320	
SNAPPING 10 FEDERAL #001H	3001537899	10	26S	31E	B	EDDY		AVALON UPPER	6.5	199638.8	68948.2	7560.4	111.2	1522.8	2.19	118195	732	0	500
SNAPPING 11 FEDERAL #001H	3001538193	11	26S	31E	N	EDDY		AVALON UPPER	6.1	225189.8	77010.7	8743.8	636.1	1649.2	6.75	134075	366	0	300
SNAPPING 2 STATE #003H	3001539036	2	26S	31E	M	EDDY		AVALON UPPER	6.1	223019	76001.7	10437.8	209.9	1922.4	4.5	131072	366	632	1100
SNAPPING 2 STATE #006H	3001539162	2	26S	31E	O	EDDY		AVALON UPPER	6.5	179788.5	71575.7	617.4	21.8	109.6	0	101374	3660	0	500
COOTER 16 STATE #001H	3001537625	16	25S	29E	N	EDDY		AVALON UPPER	7	208453.6	79520.3	498	28	162	0.4	121800	3208.4	1994	990
COOTER 16 STATE #002H	3001537626	16	25S	29E	M	EDDY		AVALON UPPER	7	219573.8	84179.4	370	22	141	0.4	129012	3178.6	1497	980
COOTER 16 STATE #003H	3001537627	16	25S	29E	O	EDDY		AVALON UPPER	7	201311	77136.2	343	34	108	0.6	117265	3342.8	2127	990
COOTER 16 STATE #004H	3001537628	16	25S	29E	N	EDDY		AVALON UPPER	7	190430.5	71870.7	929	110	237	1.5	111478	3224.6	1389	1140
COOTER 16 STATE COM #005H	3001537875	16	25S	29E	O	EDDY		AVALON UPPER	7	187758.9	71165.6	758	20	178	0.3	109624	3212.4	1623	970
COOTER 16 STATE COM #007H	3001537877	16	25S	29E	P	EDDY		AVALON UPPER	7	200382.3	76518.3	605	91	154	1.5	118991	1464	1277	700
COOTER 16 STATE COM #008H	3001537878	16	25S	29E	P	EDDY		AVALON UPPER	6.8	207677.5	79391.5	595	99	147	1.5	123161	1708	1342	800
SLIDER 8 FEDERAL #001H	3001538242	8	25S	29E	J	EDDY		AVALON UPPER	6.9	190364	72196.4	814	60	289	1	113348	707.6	1578	500
SLIDER 8 FEDERAL #003H	3001538272	8	25S	29E	J	EDDY		AVALON UPPER	7.2	150471.8	55164.4	2053	37	445	0.5	89777	610	1249	500
COOTER 16 STATE COM #006H	3001537876	16	25S	29E	O	EDDY		AVALON UPPER	7	193732.3	74027.8	513	104	118	1	113441	1830	2665	700
COTTON DRAW UNIT #135H	3001538533	2	25S	31E	N	EDDY		AVALON MIDDLE	7.1	204607.1	68549.6	7663	25	1369	1.5	123033	976	1434	60
COTTON DRAW UNIT #136H	3001538534	2	25S	31E	N	EDDY		AVALON LOWER	7.1	176370.9	63443.9	3351	36	615	0.8	104946	1537.2	1188	40
COTTON DRAW UNIT #137H	3001538556	2	25S	31E	N	EDDY		AVALON MIDDLE	7.3	230564.8	73317.3	11591	44	1987	2.5	140233	610	781	40
COTTON DRAW UNIT #135H	3001538533	2	25S	31E	N	EDDY		AVALON MIDDLE	6.5	221504.1	71676	11845	49	2039	2.5	131876	707.6	1106	50
SOFTSHELL 22 FEDERAL #001	3001539727	22	25S	31E	B	EDDY		AVALON UPPER	6.8	160733	52106	1481	68	289	0.9	102300	2342.4	1012	60
COTTON DRAW UNIT #134H	3001538293	2	25S	31E	M	EDDY		AVALON LOWER	6.66	173840.4	59159	4411	73	912	1.5	105084	1403	0	350
COTTON DRAW UNIT #135H	3001538533	2	25S	31E	N	EDDY		AVALON MIDDLE	6.6	193809	59779	8398	95	1562	2.5	120738	549	0	400
COTTON DRAW UNIT #136H	3001538534	2	25S	31E	N	EDDY		AVALON LOWER	6.7	154676.5	55033	1169	47	261	0.8	94550	1220	0	300
COTTON DRAW UNIT #137H	3001538556	2	25S	31E	N	EDDY		AVALON MIDDLE	6.4	201266.5	60669	9699	64	1785	2.5	125944	488	300	0
COTTON DRAW UNIT #137H	3001538556	2	25S	31E	N	EDDY		AVALON MIDDLE	6.3	194713	58546	10372	70	1733	3	120869	634	656	570
COTTON DRAW UNIT #134H	3001538293	2	25S	31E	M	EDDY		AVALON LOWER	6.6	85262.9	31498.1	815	15	116	0.2	48116	2867	1368	200
TRIONYX 6 FEDERAL #001H	3002539948	6	25S	32E	M	Lea		AVALON LOWER	7.4	165243.8	62859.4	567	17	107	0.2	97097	2281.4	1177	40
TRIONYX 6 FEDERAL #002H	3002539949	6	25S	32E	M	Lea		AVALON MIDDLE	7.2	191604.1	65433.6	6298	128	1120	2	114866	793	1710	50
TRIONYX 6 FEDERAL #003Y	3002540105	6	25S	32E	M	Lea		AVALON LOWER	7.1	164202.4	62428.1	501	25	96	0.5	96323	2305.8	1264	30

CARLSBAD
CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No.
0001288977

LONQUIST FIELD SERVICE
1001 MCKINNEY ST., SUITE 1650

HOUSTON TX 77002

I, a legal clerk of the **Carlsbad Current-Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

06/19/19

Legal Clerk

Subscribed and sworn before me this
19th of June 2019.

State of WI, County of Brown
NOTARY PUBLIC

9-1921

My Commission Expires

VICKY FELTY
NOTARY
PUBLIC
STATE OF WISCONSIN

Ad#:0001288977
P O : 0001288977
# of Affidavits :0.00

Legal Notice
Solaris Water Midstream, LLC, 907 Tradewinds Blvd., Suite B, Midland, TX 79706, is filling Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division for administrative approval for its salt water disposal well Cahill Fed SWD No. 1. The proposed well will be located 918' FSL & 252' FWL in Section 28, Township 26S, Range 30E in Eddy County, New Mexico. Disposal water will be sourced from area production, and will be injected into the Devonian-Silurian formation (determined by offset log analysis) through an open hole completion between a maximum applied for top of 16,062 feet to a maximum depth of 17,862 feet. The maximum surface injection pressure will not exceed 3,213 psi with a maximum rate of 40,000 BWPD. Interested parties opposing the action must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days. Additional information can be obtained from the applicant's agent, Lonquist & Co., LLC, at (512) 600-1774.
Pub: June 19, 2019 #1288977

Cahill Fed SWD No. 1 - Notice of Affected Parties						
Solaris Water Midstream, LLC						
TRACT ID	**COUNTY CLERK**	**MAILING ADDRESS**	**PHONE**	**TRACKING #**	**DATE SHIPPED**	**DATE RECEIVED**
	OIL CONSERVATION DIVISION DISTRICT II	811 S. FIRST ST., ARTESIA, NM 88210		7018 3090 0002 2010 0704	6/21/2019	
	OIL CONSERVATION DIVISION DISTRICT IV	1220 S ST FRANCIS DR, SANTA FE, NM 87505		7018 3090 0002 2010 0711	6/21/2019	
	SURFACE LANDOWNER	**MAILING ADDRESS**				
	Bureau of Land Management	620 E Greene Street Carlsbad, NM 88220		7018 3090 0002 2010 0728	6/21/2019	
	GOVERNMENT AGENCY	**MAILING ADDRESS**				
	Bureau of Land Management	620 E Greene Street Carlsbad, NM 88220		7018 3090 0002 2010 0728	6/21/2019	
	AFFECTED PARTIES	**MAILING ADDRESS**				
	C&A ROYALTIES LP	4849 GREENVILLE AVE STE 1515 Dallas TX 75206		7018 3090 0002 2010 0735	6/21/2019	
	COSTILLA ENERGY	PO BOX 10369 Midland TX 79702		7018 3090 0002 2010 0742	6/21/2019	
	DOMINION OK TX EXPL & PROD INC	14000 QUAIL SPRINGS PKWY #600 Oklahoma City OK 73134		7018 3090 0002 2010 0759	6/21/2019	
	EL PASO NATURAL GAS CO LLC	600 N DAIRY ASHFORD RD Houston TX 770791100		7018 3090 0002 2010 0766	6/21/2019	
	EOG RESOURCES INC	PO BOX 2267 Midland TX 79702		7018 3090 0002 2010 0773	6/21/2019	
	EOG RESOURCES INC (OPERATING RIGHTS)	PO BOX 4362 Houston TX 772104362		7018 3090 0002 2010 0780	6/21/2019	
	EXXONMOBIL OIL CORP (OPERATING RIGHTS)	810 HOUSTON ST Fort Worth TX 761026203		7018 3090 0002 2010 0797	6/21/2019	
	K P ACQUISITION CORP (OPERATING RIGHTS)	500 W TEXAS #1450 Midland TX 79701		7018 3090 0002 2010 0803	6/21/2019	
	K P ACQUISITION CORP (OPERATING RIGHTS)	2040 MURRAY HOLLADAY Salt Lake City UT 84117		7018 3090 0002 2010 0810	6/21/2019	
	KERR-MCGEE CORP	PO BOX 25861 Oklahoma City OK 73125		7018 3090 0002 2010 0827	6/21/2019	
	LOVING COUNTY MINERALS LP	111 WEST 75TH STREET Kansas City MO, 64114		7018 3090 0002 2010 0834	6/21/2019	
	MARATHON OIL PERMIAN LLC	5555 SAN FELIPE ST Houston TX 770562701		7018 3090 0002 2010 0841	6/21/2019	
	PILLARD E E	132 CODY CIRCLE N Sulphur Springs TX, 75482		7018 3090 0002 2010 0858	6/21/2019	
	WILLIAMSON CHARLOTTE (OPERATING RIGHTS)	BOX 50410 Austin TX 78763		7018 3090 0002 2010 0865	6/21/2019	
	WILLIAMSON J C (OPERATING RIGHTS)	PO BOX 16 Midland TX 797020016		7018 3090 0002 2010 0872	6/21/2019	
	WILLIAMSON RALPH E (OPERATING RIGHTS)	BOX 994 Midland TX 79702		7018 3090 0002 2010 0889	6/21/2019	
	WPX ENERGY PERMIAN LLC	3500 ONE WILLIAMS CTR Tusla OK 741720135		7018 3090 0002 2010 0896	6/21/2019	
	XTO HOLDINGS LLC	22777 SPRINGWOODS VILLAGE PKWY Spring TX 773891425		7018 3090 0002 2010 0902	6/21/2019	

Notices were sent for the Cahill Fed SWD No. 1 application by mailing them a copy of the Form C-108 on June 21, 2019

Sincerely,

Tyler F. Moehlman
Petroleum Engineer / Lonquist & Co., LLC
Agent for Solaris Water Midstream

LONQUIST & CO. LLC

AUSTIN
HOUSTON

PETROLEUM ENGINEERS | ENERGY ADVISORS

WICHITA
CALGARY

www.lonquist.com

June 20, 2019

Bureau of Land Management
620 E Greene Street
Carlsbad, NM 88220

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for Solaris Water Midstream LLC's Cahill Fed SWD No. 1 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application. The notice of application has been extended to a one-mile radius.

According to the New Mexico Oil Conservation Division, surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date in which this application was mailed to them.

Any questions should be directed towards Solaris Water Midstream LLC's agent, Lonquist & Co., LLC.

Regards,

Ramona K Hovey

Ramona K. Hovey
Sr. Petroleum Engineer
Lonquist & Co., LLC

(512) 600-1777
ramona@lonquist.com

June 20, 2019

C & A Royalties LP
4849 Greenvill Ave STE 1515
Dallas, TX 75206

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

To Whom It May Concern:

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Regards,

Ramona K. Hovey

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Sr. Petroleum Engineer
Lonquist & Co., LLC

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ramona@lonquist.com

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HOUSTON

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WICHITA
CALGARY

www.lonquist.com

June 20, 2019

Charlotte Williamson
Box 50410
Austin, TX 78763

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

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ramona@lonquist.com

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CALGARY

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June 20, 2019

Costilla Energy
P.O. Box 10369
Midland, TX 79702

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

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CALGARY

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June 20, 2019

Dominion OK TX Expl & Prod Inc.
14000 Quail Springs Pkwy #600
Oklahoma City, OK 73134

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

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Sr. Petroleum Engineer
Lonquist & Co., LLC

(512) 600-1777
ramona@lonquist.com

June 20, 2019

E. E. Pillard
132 Cody Circle N
Sulphur Springs, TX 75482

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

To Whom It May Concern:

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WICHITA
CALGARY

www.lonquist.com

June 20, 2019

El Paso Natural Gas Co. LLC
600 N Dairy Ashford Rd
Houston, TX 770791100

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

To Whom It May Concern:

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Lonquist & Co., LLC

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ramona@lonquist.com

LONQUIST & CO. LLC

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HOUSTON

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WICHITA
CALGARY

www.lonquist.com

June 20, 2019

EOG Resources Inc
P.O. Box 2267
Midland, TX 79702

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

To Whom It May Concern:

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LONQUIST & CO. LLC

AUSTIN
HOUSTON

PETROLEUM ENGINEERS | ENERGY ADVISORS

WICHITA
CALGARY

www.lonquist.com

June 20, 2019

EOG Resources Inc
P.O. Box 4362
Houston, TX 772104362

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

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HOUSTON

PETROLEUM ENGINEERS | ENERGY ADVISORS

WICHITA
CALGARY

www.lonquist.com

June 20, 2019

Exxon Mobil Corp
810 Houston ST
Fort Worth, TX 761026203

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

To Whom It May Concern:

Attached for your review is Form C-108, Application for Authorization to Inject, and its supplemental documents prepared for Solaris Water Midstream LLC's Cahill Fed SWD No. 1 well. Section XIV of Form C-108 requires that the surface land owner on which the well is located and each leasehold operator within a one-half mile radius of the proposed well location be furnished with the application. The notice of application has been extended to a one-mile radius.

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Any questions should be directed towards Solaris Water Midstream LLC's agent, Lonquist & Co., LLC.

Regards,

Ramona K. Hovey
Sr. Petroleum Engineer
Lonquist & Co., LLC

(512) 600-1777
ramona@lonquist.com

LONQUIST & CO. LLC

AUSTIN
HOUSTON

PETROLEUM ENGINEERS | ENERGY ADVISORS

WICHITA
CALGARY

www.lonquist.com

June 20, 2019

J C Williamson
P.O. Box 16
Midland, TX 79702

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

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(512) 600-1777
ramona@lonquist.com

June 20, 2019

K P Acquisition Corp
500 W Texas #1450
Midland, TX 79701

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

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June 20, 2019

K P Acquisition Corp
2040 Murray Holladay
Salt Lake City, UT 84117

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CALGARY

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June 20, 2019

Kerr-Mcgee Corp
P.O. Box 25861
Oklahoma City, OK 73125

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ramona@lonquist.com

June 20, 2019

Loving County Minerals LP
111 West 75th Street
Kansas City, MO 64114

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(512) 600-1777
ramona@lonquist.com

June 20, 2019

Marathon Oil Permian LLC
5555 San Felipe St
Houston, TX 770562701

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June 20, 2019

OIL CONSERVATION DIVISION DISTRICT II
811 S. FIRST ST.
ARTESIA, NM 88210

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June 20, 2019

OIL CONSERVATION DIVISION DISTRICT IV
1220 S ST FRANCIS DR
SANTA FE, NM 87505

Subject: **Cahill Fed SWD No. 1 Authorization to Inject**

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June 20, 2019

Ralph E Williamson
BOX 994
Midland, TX 79702

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June 20, 2019

WPX Energy Permian LLC
3500 One Williams CTR
Tulsa OK 741720135

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June 20, 2019

XTO Holdings LLC
22777 Springwoods Village Pkwy
Spring, TX 773891425

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ramona@lonquist.com

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OIL CONSERVATION DIVISION DISTRICT IV
1220 S ST FRANCIS DR
SANTA FE, NM 87505

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1. Article Addressed to:

BUREAU OF LAND MANAGEMENT
620 E GREENE STREET
CARLSBAD, NM 88220

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9590 9402 4809 8344 2870 25

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1. Article Addressed to:

C&A ROYALTIES LP
4849 GREENVILLE AVE STE 1515
DALLAS, TX 75206

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9590 9402 4809 8344 2870 18

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1. Article Addressed to:

COSTILLA ENERGY
PO BOX 10369
MIDLAND, TX 79702

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1. Article Addressed to:

DOMINION OK TX EXPL & PROD INC
14000 QUAIL SPRINGS PKWY #600
OKLAHOMA CITY, OK 73134

2006-CAHILL FED NO. 1

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1. Article Addressed to:

EL PASO NATURAL GAS CO LLC
600 N DAIRY ASHFORD RD
HOUSTON, TX 77079-1100

2006-CAHILL FED NO. 1

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- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0766

7018 3090 0002 2010 0766

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

OFFICIAL USE

Certified Mail Fee

$

Extra $

☐ Ret
☐ Ret
☐ Cer
☐ Adu
☐ Adu

Postag

$

Total F

$

EL PASO NATURAL GAS CO LLC
600 N DAIRY ASHFORD RD
HOUSTON, TX 77079-1100

2006-CAHILL FED NO. 1

Sent To

Street and Apt. No., or PO Box No.

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:

EOG RESOURCES INC
PO BOX 2267
MIDLAND, TX 79702

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2869 74

7018 3090 0002 2010 0773

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0773

7018 3090 0002 2010 0773

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

OFFICIAL USE

Certified Mail Fee
$
Extra Se
☐ Retur
☐ Retur
☐ Certi
☐ Adult
☐ Adult
Postage
$
Total Postage and Fees
$

EOG RESOURCES INC
PO BOX 2267
MIDLAND, TX 79702

2006-CAHILL FED NO. 1

Sent To
Street and Apt. No., or PO Box No.
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:

EOG RESOURCES INC
PO BOX 4362
HOUSTON, TX 77210-4362

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2869 67

7018 3090 0002 2010 0780

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0780

7018 3090 0002 2010 0780

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

OFFICIAL USE

Certified Mail Fee
$

Extra Services & Fees *(check box, add fee as appropriate)*
☐ Retur
☐ Retu
☐ Cert
☐ Adul
☐ Adul

Postag
$

Total P
$

EOG RESOURCES INC
PO BOX 4362
HOUSTON, TX 77210-4362

2006-CAHILL FED NO. 1

Sent To

Street and Apt. No., or PO Box No.

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:

EXXONMOBIL OIL CORP
810 HOUSTON ST
FT WORTH TX 76102-6203

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2869 50

7018 3090 0002 2010 0797

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0797

7018 3090 0002 2010 0797

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

OFFICIAL USE

Certified Mail Fee
$
Extra
☐ Re
☐ Re
☐ Ce
☐ Ad
☐ Ad
Posta
$
Total Postage and Fees
$

EXXONMOBIL OIL CORP
810 HOUSTON ST
FT WORTH TX 76102-6203

2006-CAHILL FED NO. 1

Sent To
Street and Apt. No., or PO Box No.
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:

K P ACQUISITION CORP
500 W TEXAS #1450
MIDLAND, TX 79701

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2869 43

7018 3090 0002 2010 0803

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0803

7018 3090 0002 2010 0803

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee
$
Extra $
☐ Ret
☐ Ret
☐ Cer
☐ Adu
☐ Adu
Postag
$
Total Postage and Fees
$
Sent To
Street and Apt. No., or PO Box No.
City, State, ZIP+4®

K P ACQUISITION CORP
500 W TEXAS #1450
MIDLAND, TX 79701

2006-CAHILL FED NO. 1

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:

K P AQCUISITION
2040 MURRAY HOLLADAY
SALT LAKE CITY, UT 84117

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2869 36

7018 3090 0002 2010 0810

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0810

7018 3090 0002 2010 0810

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

OFFICIAL USE

Certified Mail Fee

$

Extra $
- ☐ Ret
- ☐ Ret
- ☐ Cer
- ☐ Adı
- ☐ Adı

Postag

$

Total Postage and Fees

$

K P AQCUISITION
2040 MURRAY HOLLADAY
SALT LAKE CITY, UT 84117

2006-CAHILL FED NO. 1

Sent To

Street and Apt. No., or PO Box No.

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:

KERR-MCGEE CORP
PO BOX 25861
OKLAHOMA CITY, OK 73125

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2869 29

7018 3090 0002 2010 0827

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0827

7018 3090 0002 2010 0827

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee
$
Extra Services & Fees *(check box, add fee as appropriate)*
☐ Re
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☐ Ad
Posta
$
Total
$

KERR-MCGEE CORP
PO BOX 25861
OKLAHOMA CITY, OK 73125

2006-CAHILL FED NO. 1

Sent To
Street and Apt. No., or PO Box No.
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:

LOVING COUNTY MINERALS LP
111 WEST 75TH STREET
KANSAS CITY, MO 64114

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2328 10

7018 3090 0002 2010 0834

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0834

7018 3090 0002 2010 0834

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

OFFICIAL USE

Certified Mail Fee
$
Extra $
☐ Ret
☐ Ret
☐ Cer
☐ Adu
☐ Adu
Postag
$
Total F
$

LOVING COUNTY MINERALS LP
111 WEST 75TH STREET
KANSAS CITY, MO 64114

2006-CAHILL FED NO. 1

Sent To
Street and Apt. No., or PO Box No.
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:

MARATHON OIL PERMIAN LLC
5555 SAN FELIPE ST
HOUSTON, TX 77056-2701

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2328 27

7018 3090 0002 2010 0841

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0841

7018 3090 0002 2010 0841

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

OFFICIAL USE

Certified Mail Fee
$
Extra
☐ Re
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Posta
$
Total
$

MARATHON OIL PERMIAN LLC
5555 SAN FELIPE ST
HOUSTON, TX 77056-2701

2006-CAHILL FED NO. 1

Sent To
Street and Apt. No., or PO Box No.
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:

PILLARD E E
132 CODY CIRCLE N
SULPHUR SPRINGS, TX 75482

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2328 34

7018 3090 0002 2010 0858

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0858

7018 3090 0002 2010 0858

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

OFFICIAL USE

Certified Mail Fee

$

Extra

Postage

$

Total

$

PILLARD E E
132 CODY CIRCLE N
SULPHUR SPRINGS, TX 75482

2006-CAHILL FED NO. 1

Sent To

Street and Apt. No., or PO Box No.

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:

WILLIAMSON CHARLOTTE
PO BOX 50410
AUSTIN, TX 78763

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2328 41

7018 3090 0002 2010 0865

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS. FOLD AT DOTTED LINE.

CERTIFIED MAIL®

7018 3090 0002 2010 0865

7018 3090 0002 2010 0865

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®

OFFICIAL USE

Certified Mail Fee
$
Extra Services & Fees (check box, add fee as appropriate)
☐ Ret
☐ Ret
☐ Cer
☐ Adu
☐ Adu
Postage
$
Total Postage and Fees
$
Sent To
Street and Apt. No., or PO Box No.
City, State, ZIP+4®

WILLIAMSON CHARLOTTE
PO BOX 50410
AUSTIN, TX 78763

2006-CAHILL FED NO. 1

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:

WILLIAMSON J C
PO BOX 16
MIDLAND, TX 79702-0016

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2328 58

7018 3090 0002 2010 0872

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0872

7018 3090 0002 2010 0872

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

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
$

WILLIAMSON J C
PO BOX 16
MIDLAND, TX 79702-0016

2006-CAHILL FED NO. 1

Sent To

Street and Apt. No., or PO Box No.

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:

WILLIAMSON RALPH E
PO BOX 994
MIDLAND, TX 79702

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2328 65

7018 3090 0002 2010 0889

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

7018 3090 0002 2010 0889

7018 3090 0002 2010 0889

U.S. Postal Service™
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WILLIAMSON RALPH E
PO BOX 994
MIDLAND, TX 79702

2006-CAHILL FED NO. 1

Sent To

Street and Apt. No., or PO Box No.

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:

WPX ENERGY PERMIAN LLC
3500 ONE WILLIAMS CTR
TULSA, OK 74172-0135

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2328 72

7018 3090 0002 2010 0896

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

- ☒ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☒ Certified Mail®
- ☐ Certified Mail Restricted Delivery
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- ☐ Collect on Delivery Restricted Delivery
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- ☐ Registered Mail™
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- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

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OFFICIAL USE

Certified Mail Fee
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Postage
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Total
$

WPX ENERGY PERMIAN LLC
3500 ONE WILLIAMS CTR
TULSA, OK 74172-0135

2006-CAHILL FED NO. 1

Sent To
Street and Apt. No., or PO Box No.
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:

XTO HOLDINGS LLC
22777 SPRINGWOODS VILLAGE PKWY
SPRING, TX 77389-1425

2006-CAHILL FED NO. 1

9590 9402 4809 8344 2328 89

7018 3090 0002 2010 0902

2. Article Number *(Transfer from service label)*

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

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

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL®

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OFFICIAL USE

Certified Mail Fee
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☐ Ret
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☐ Adu
☐ Adu
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Total F
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Sent To
Street and Apt. No., or PO Box No.
City, State, ZIP+4®

XTO HOLDINGS LLC
22777 SPRINGWOODS VILLAGE PKWY
SPRING, TX 77389-1425

2006-CAHILL FED NO. 1

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

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ___X___Disposal _____Storage
Application qualifies for administrative approval? ___X___Yes _____No

II. OPERATOR: Solaris Water Midstream, LLC

ADDRESS: 701 Tradewinds Blvd., Suite C, Midland, TX 79706

CONTACT PARTY: Whitney McKee PHONE: 432-203-9020

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 ___X___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: Stephen Pattee, P.G. TITLE: Vice President – Agent for Solaris Water Midstream

SIGNATURE: _____ DATE: 6/21/2019

E-MAIL ADDRESS: steve@lonquist.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: _____

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

Side 2

III. WELL DATA

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

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

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

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

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

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

(1) The name of the injection formation and, if applicable, the field or pool name.

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

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

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Solaris Water Midstream, LLC

WELL NAME & NUMBER: Cahill Fed SWD No. 1

WELL LOCATION: 918' FSL 252' FWL (FOOTAGE LOCATION) | M (UNIT LETTER) | 28 (SECTION) | 26S (TOWNSHIP) | 30E (RANGE)

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 18.125"

Cemented with: 709 sx.

Top of Cement: surface

Casing Size: 16.00"

or _____ ft³

Method Determined: circulation

Intermediate Casing

Hole Size: 14.750"

Cemented with: 616 sx.

Top of Cement: surface

Casing Size: 13.375"

or _____ ft³

Method Determined: circulation

Production Casing

Hole Size: 12.250"

Cemented with: 2263 sx.

Top of Cement: surface

Casing Size: 9.625"

or _____ ft³

Method Determined: circulation

Liner

Hole Size: 8.500"

Cemented with: 489 sx.

Top of Cement: 11,607'

Total Depth: 17,862'

Casing Size: 7.625"

or _____ ft³

Method Determined: calculation

Injection Interval

16,062 feet to 17,862 feet

(Open Hole)

INJECTION WELL DATA SHEET

Tubing Size: 5.5", 20 lb/ft, HCL-80, BTC from 0' – 11,307' and 5", 18 lb/ft, HCL-80, LTC from 11,307'- 16,012'
Lining Material: Duoline

Type of Packer: Nickel Plated Double Grip Retrievable Packer or Equivalent

Packer Setting Depth: 16,012'

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: Devonian, Fusselman

3. Name of Field or Pool (if applicable): SWD; Devonian-Silurian 97869

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, new drill.

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

   Bell Canyon: 3,338'
   Cherry Canyon: 4,261'
   Brushy Canyon: 5,543'
   Bone Spring: 7,161'
   Wolfcamp: 11,607'
   Strawn: 13,135'
   Atoka: 13,262'
   Morrow: 13,923'
   Mississippian Lime 15,743'

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
SOLARIS WATER MIDSTREAM, LLC 701 TRADEWINDS BLVD., SUITE C MIDLAND, TX 79706	371643
	3. API Number TBD

4. Property Code	5. Property Name	6. Well No.
	CAHILL FED SWD	1

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
M	28	26 S	30 E		918	S	252	W	EDDY

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
	-	-	-		-	-	-	-	-

9. Pool Information

Pool Name	Pool Code
SWD; Devonian-Silurian	97869

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
N	SWD	R	Private	2965'
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	17,862	Devonian-Silurian	TBD	ASAP

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
180'	1.4 miles	>1 mile

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	18.125"	16"	84 lb/ft	865'	709	Surface
Intermediate	14.75"	13.375"	68 lb/ft	3,332'	616	Surface
Production	12.25"	9.625"	53.5 lb/ft	11,707'	2263	Surface
Liner	8.5"	7.625"	39 lb/ft	11,507'-16,062'	489	11,607
Tubing		5.5" & 5"	20 lb/ft & 18 lb/ft	0'-11,307, 11,307'-16,012'	N/A	

Casing/Cement Program: Additional Comments

See attached schematic.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Hydrualic/Blinds, Pipe	8,000 psi	10,000 psi	TBD – Schaffer/Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		OIL CONSERVATION DIVISION	
		Approved By:	
Printed name: Stephen Pattee, P.G.		Title:	
Title: Vice President		Approved Date:	Expiration Date:
E-mail Address: steve@lonquist.com			
Date: June 21, 2019	Phone: 512-600-1774	Conditions of Approval Attached	

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	97869	Devonian-Silurian

Property Code	Property Name	Well Number
	CAHILL FED SWD	1

OGRID No.	Operator Name	Elevation
371643	SOLARIS WATER MIDSTREAM	2965'

Surface Location

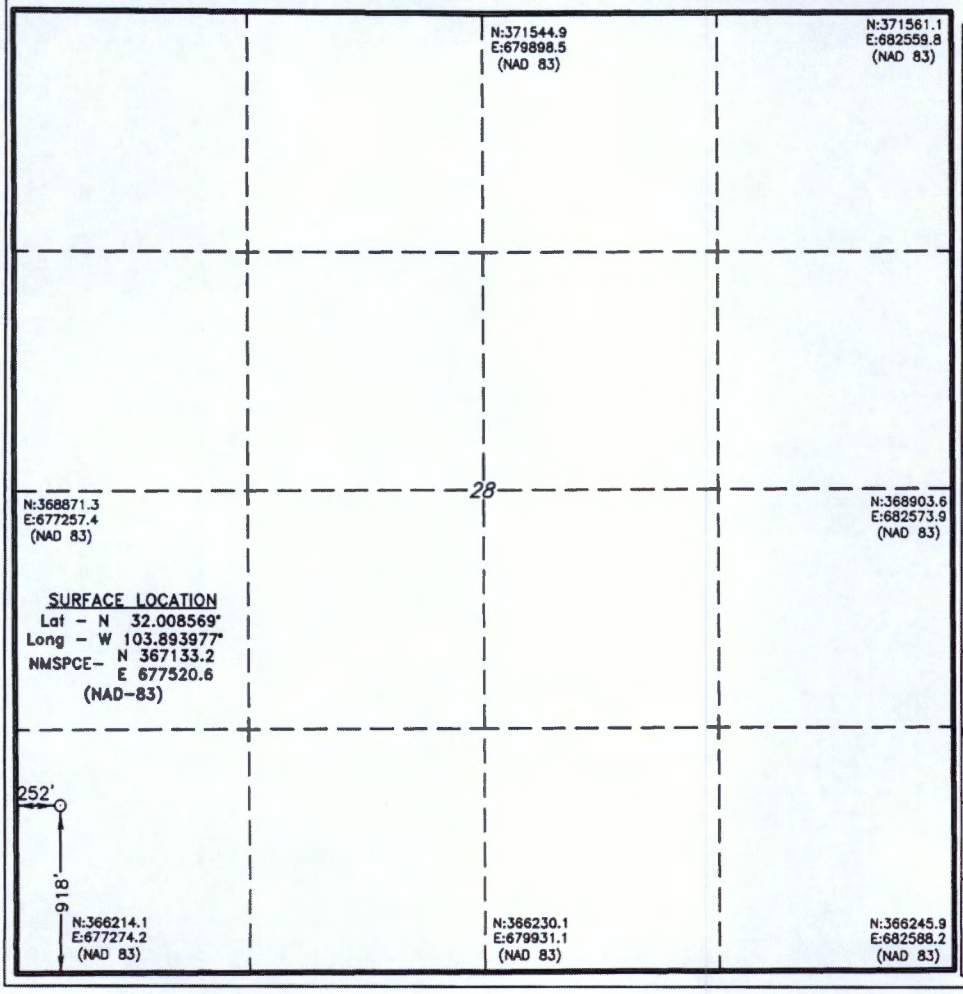
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	28	26 S	30 E		918'	SOUTH	252'	WEST	EDDY

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.

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



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.

06/21/19
Signature Date

Steve Pattee
Printed Name

steve@lonquist.com
Email Address

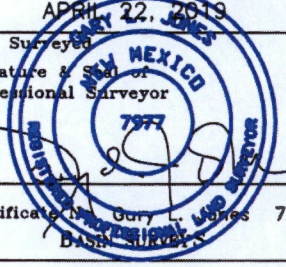
SURVEYOR CERTIFICATION

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 supervison, and that the same is true and correct to the best of my belief.

APRIL 22, 2019
Date Surveyed

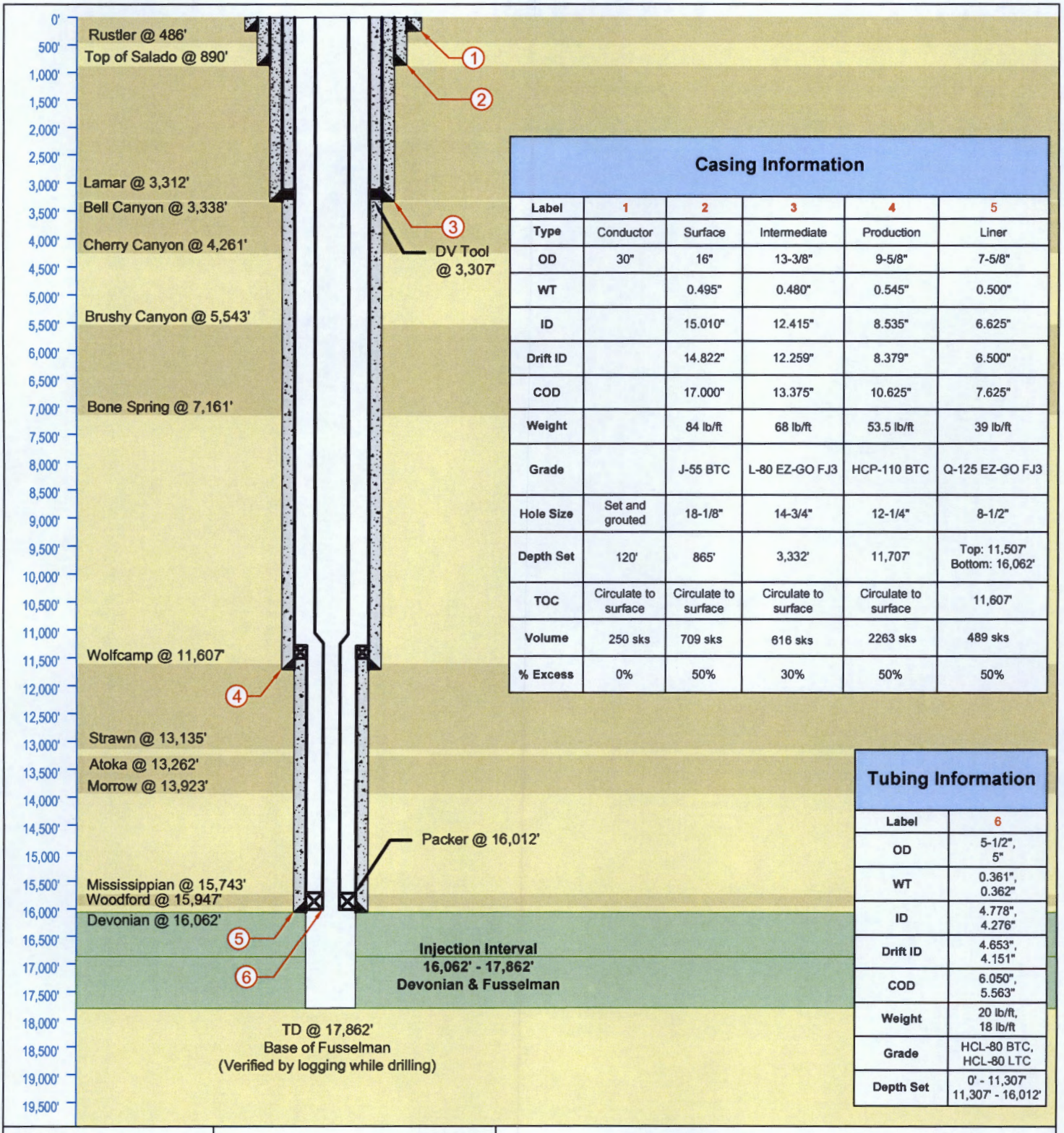
Signature & Seal of Professional Surveyor

Certificate No. Gary L. Jones 7977



0' 1000' 2000' 3000' 4000' N

SCALE: 1" = 2000'
WO Num.: 34506



Casing Information

Label	1	2	3	4	5
Type	Conductor	Surface	Intermediate	Production	Liner
OD	30"	16"	13-3/8"	9-5/8"	7-5/8"
WT		0.495"	0.480"	0.545"	0.500"
ID		15.010"	12.415"	8.535"	6.625"
Drift ID		14.822"	12.259"	8.379"	6.500"
COD		17.000"	13.375"	10.625"	7.625"
Weight		84 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
Grade		J-55 BTC	L-80 EZ-GO FJ3	HCP-110 BTC	Q-125 EZ-GO FJ3
Hole Size	Set and grouted	18-1/8"	14-3/4"	12-1/4"	8-1/2"
Depth Set	120'	865'	3,332'	11,707'	Top: 11,507' Bottom: 16,062'
TOC	Circulate to surface	Circulate to surface	Circulate to surface	Circulate to surface	11,607'
Volume	250 sks	709 sks	616 sks	2263 sks	489 sks
% Excess	0%	50%	30%	50%	50%

Tubing Information

Label	6
OD	5-1/2", 5"
WT	0.361", 0.362"
ID	4.778", 4.276"
Drift ID	4.653", 4.151"
COD	6.050", 5.563"
Weight	20 lb/ft, 18 lb/ft
Grade	HCL-80 BTC, HCL-80 LTC
Depth Set	0' - 11,307' 11,307' - 16,012'

LONQUIST & CO. LLC
PETROLEUM ENGINEERS | ENERGY ADVISORS
HOUSTON | CALGARY
AUSTIN | WICHITA | DENVER

Texas License F-9147

12912 Hill Country Blvd. Ste F-200
Austin, Texas 78738
Tel: 512.732.9812
Fax: 512.732.9816

Solaris Water Midstream, LLC

Cahill Fed SWD No. 1

Country: USA	**State/Province:** New Mexico	**County/Parish:** Eddy
Location:	**Site:** 918' FSL & 252' FWL	**Survey:** S28-T26S-R30E
API No: NA	**Field:** Devonian-Silurian (Code: 97869)	**Well Type/Status:** SWD
NMOCD District No: 2	**Project No:** 2006	**Date:** 6/18/2019
Drawn: TFM	**Reviewed:**	**Approved:**
Rev No: 1	**Notes:**	

GEOLOGIC AFFIRMATION

I have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and underground sources of drinking water.

Parker Jessee
Geologist

Project: Solaris Water Midstream, LLC
Cahill Fed #1

Solaris Water Midstream, LLC

Cahill Fed SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Cahill Fed SWD
Well No.	1
Location	S-28 T-26S R-30E
Footage Location	918' FSL & 252' FWL

2.

a. Wellbore Description

Casing Information				
Type	Surface	Intermediate	Production	Liner
OD	16"	13.375"	9.625"	7.625"
WT	0.495"	0.480"	0.545"	0.500"
ID	15.010"	12.415"	8.535"	6.625"
Drift ID	14.822"	12.259"	8.379"	6.500"
COD	17.000"	13.375"	10.625"	7.625"
Weight	84 lb/ft	68 lb/ft	53.5 lb/ft	39 lb/ft
Grade	J-55 BTC	L-80, EZ-GO FJ3	HCP-110 BTC	Q-125 EZ-GO FJ3
Hole Size	18.125"	14.75"	12.25"	8.5"
Depth Set	865'	3,332'	11,707'	11,507'- 16,062'

b. Cementing Program

Cement Information					
Casing String	Conductor	Surface	Intermediate	Production	Liner
Lead Cement	EXTENDACEM™	HALCEM™	HALCEM™	NEOCEM™ IL2	NEOCEM™
Lead Cement Volume (sacks)	250	457	428	Stage 1: 1272 Stage 2: 307	-
Lead Cement Density (ft3/sack)	1.694	1.664	1.664	Stage 1: 2.731 Stage 2: 2.732	-
Tail Cement	-	HALCEM™	HALCEM™	NEOCEM™/HALCEM™	VERSACEM™
Tail Cement Volume (sacks)	-	252	188	Stage 1: 475 Stage 2: 209	489
Tail Cement Density (ft3/sack)	-	1.332	1.332	Stage 1: 1.056 Stage 2: 1.336	1.223
Cement Excess	0%	50%	30%	50%, 0%	50%
Total Sacks	250	709	616	2263	489
TOC	Surface	Surface	Surface	Surface	11,607'
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface	Circulate to Surface	Logged

3. Tubing Description

Tubing Information	
OD	5.5" 5.0"
WT	0.361" 0.362"
ID	4.778" 4.276"
Drift ID	4.653" 4.151"
COD	6.050" 5.563"
Weight	20 lb/ft 18 lb/ft
Grade	HCL-80 BTC HCL-80 LTC
Depth Set	0' - 11,307' 11,307'- 16,012'

Tubing will be lined with Duoline.

4. Packer Description

   Nickel Plated Double Grip Retrievable Packer or Equivalent

B. Completion Information

1. Injection Formation: Devonian, Fusselman
2. Gross Injection Interval: 16,062' - 17,862'

   Completion Type: Open Hole
3. Drilled for injection.
4. See the attached wellbore schematic.
5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Bell Canyon	3,338'
Cherry Canyon	4,261'
Brushy Canyon	5,543'
Bone Spring	7,161'
Wolfcamp	11,607'
Strawn	13,135'
Atoka	13,262'
Morrow	13,923'
Mississippian Lime	15,743'

VI. Area of Review

No wells within the area of review penetrate the proposed injection zone.

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injected:

   Average Volume: 30,000 BPD
   Maximum Volume: 40,000 BPD
2. Closed System
3. Anticipated Injection Pressure:

Average Injection Pressure: 2,409 PSI (surface pressure)
Maximum Injection Pressure: 3,212 PSI (surface pressure)

4. The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Avalon, Bone Spring, and Delaware formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the Avalon, Bone Spring, Delaware, Morrow, Wolfcamp.

5. The disposal interval is non-productive. No water samples are available from the surrounding area.

VIII. Geological Data

Devonian Formation Lithology:

The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and the Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia) features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a tremendous Salt Water Disposal horizon.

Fusselman Formation Lithology:

The Silurian/Ordovician Fusselman Formation is stratigraphically below the Wristen Group and is above and separated from the Montoya Formation by the Sylvan Shale. The Sylvan Shale is the lower confining layer for the proposed Cahill Fed SWD No. 1 well. Fusselman facies include a laminated skeletal wackestone in the upper part and a buildup complex in the lower part composed of ooid and bryozoan grainstones. These grainstones can also be potentially prolific zones for disposal.

A. Injection Zone: Devonian-Silurian Formation

Formation	Depth
Rustler	486'
Salado (Top of Salt)	890'
Salado (Bottom of Salt)	3,312'
Bell Canyon	3,338'
Cherry Canyon	4,261'
Brushy Canyon	5,543'
Bone Spring	7,161'
Wolfcamp	11,607'
Strawn	13,135'
Atoka	13,262'
Morrow	13,923'
Mississippian Lime	15,743'
Woodford	15,947'
Devonian	16,062'

B. Underground Sources of Drinking Water

No water wells exist within a one-mile radius of the proposed well. Water wells outside a one-mile radius in the surrounding area have an average depth of 440 feet and an average water depth of 180 feet generally producing from the Carlsbad Basin. The upper Rustler may also be another USDW and will be protected.

IX. Proposed Stimulation Program

50,000 gallon acid job

X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

XI. Chemical Analysis of Fresh Water Wells

Because there are no water wells that exist within a one-mile radius of the proposed well, chemical analysis of fresh water wells was not retrieved for the proposed well.