

10/23/2017 DATE IN	SUSPENSE	902 ENGINEER	10/23/2017 LOGGED IN	SWJ TYPE	PMAM 1729659123 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
- 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

**Application Acronyms:**

**[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]**  
**[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]**  
**[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]**  
**[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]**  
**[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]**  
**[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]**

**[1] TYPE OF APPLICATION - Check Those Which Apply for [A]**

[A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement  
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify \_\_\_\_\_

**[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply**

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☒ Offset Operators, Leaseholders or Surface Owner

[C] ☒ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO  
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

**[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

**[4] 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.**

Ben Stone		Agent for Solaris Water Midstream, LLC 10/20/17
Print or Type Name	Signature	Title
		ben@sosconsulting.us
		e-mail Address

SWJ  
 - Solaris Water  
 Midstream Partners, LLC  
 - "well"  
 mobility ranch SW 41  
 30-015 pending

Pool  
 - SWJ, DeLeonian -  
 Silurian  
 97865

2017 OCT 20 PM 2:00  
 RECEIVED

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: ***Salt Water Disposal*** and the application ***QUALIFIES*** for administrative approval.
- II. OPERATOR: ***Solaris Water Midstream, LLC***  
ADDRESS: ***701 Tradewinds Blvd., Suite C, Midland, TX 79706***  
  
CONTACT PARTY: ***Agent: SOS Consulting, LLC -- Ben Stone (903) 488-9850***
- III. WELL DATA: ***All well data and applicable wellbore diagrams are ATTACHED.***
- IV. ***This is not an expansion of an existing project.***
- V. ***A map is attached*** 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. A tabulation is attached of data on all wells of public record within the area of review which penetrate the proposed injection zone. ***There are NO (0) Wells in the subject AOR which Penetrate the proposed Devonian interval.*** The data includes a description of each well's type, construction, date drilled, location, depth, and a schematic of any plugged well illustrating all plugging detail. ***NO P&A Wells penetrate.***
- VII. ***The following data is ATTACHED*** 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. ***Appropriate geologic data on the injection zone is ATTACHED*** 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. ***Stimulation program -- a conventional acid job may be performed to clean and open the formation.***
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). ***Well Logs will be filed with OCD.***
- \*XI. ***There is 1 (one) water well within one mile of the proposed salt water disposal well. Analysis was done previously and included here.***
- XII. ***An affirmative statement is ATTACHED that available geologic and engineering data has been examined and no evidence was found*** of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. ***"Proof of Notice" section on the next page of this form has been completed and ATTACHED. There are 9 offset lessees and/or operators within ½ mile and offsetting State & Federal minerals - all have been noticed. Well location is Private.***
- 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: ***Ben Stone*** TITLE: ***SOS Consulting, LLC agent for Solaris Water Midstream, LLC***

SIGNATURE:  DATE: ***10/20/2017***

E-MAIL ADDRESS: ***ben@sosconsulting.us***

\* 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:

**FORM C-108 – APPLICATION FOR AUTHORIZATION TO INJECT (cont.)**

III. WELL DATA – *The following information and data is included (See ATTACHED Wellbore Schematic):*

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 *pursuant to the following criteria is ATTACHED.*

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.**

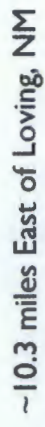


(Attachment to NMOCD Form C-108 - Item V)





(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



**Eddy County, New Mexico**



# WELL SCHEMATIC - PROPOSED

Mobley Ranch SWD Well No.1

Per APD 07/03/18

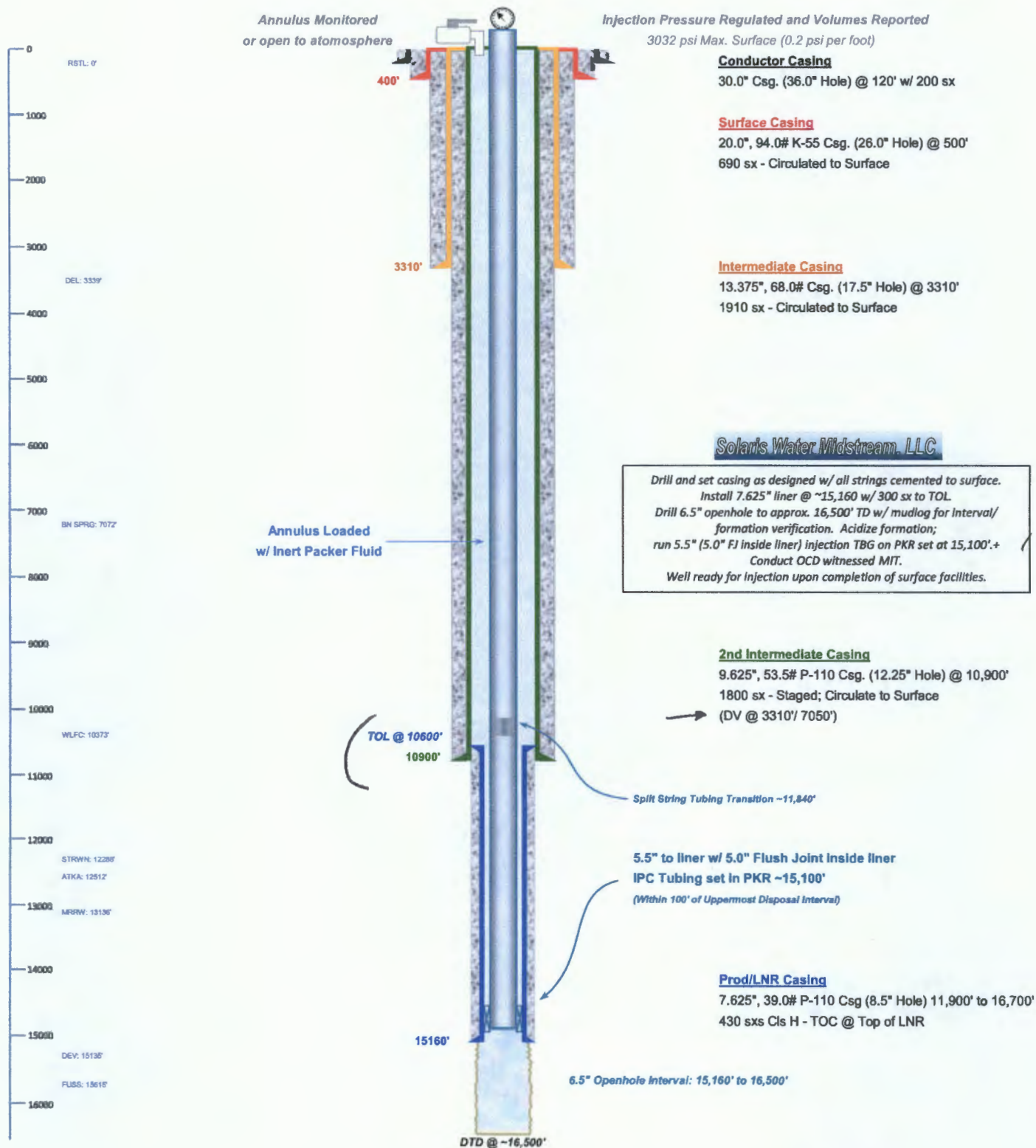
API 30-015-XXXX 45072

225' FNL & 2460' FWL, SEC. 19-T23S-R30E  
EDDY COUNTY, NEW MEXICO

SWD; Devonian-Silurian (97869)

Spud Date: 12/01/2017

SWD Config Dt: 1/01/2018



Solaris Water Midstream, LLC

Drill and set casing as designed w/ all strings cemented to surface.  
Install 7.625" liner @ ~15,160 w/ 300 sx to TOL.  
Drill 6.5" openhole to approx. 16,500' TD w/ mudlog for interval/  
formation verification. Acidize formation;  
run 5.5" (5.0" F) inside liner injection TBG on PKR set at 15,100'.+  
Conduct OCD witnessed MIT.  
Well ready for injection upon completion of surface facilities.



Drawn by: Ben Stone, 10/20/2017

## **C-108 ITEM X**

### **LOGS and AVAILABLE TEST DATA**

**A Standard Suite of Logs will be run after  
drilling the well and submitted to the Division.**



## **C-108 ITEM VII – PROPOSED OPERATION**

### **Mobley Ranch SWD No.1**

#### ***Commercial SWD Facility***

Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take approximately 6-8 weeks. Facility construction including installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval but at a different location from the well. In any event, it is not expected for the construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. The operator has negotiated a Surface Owner Agreement for the facility and well site.

#### ***Configure for Salt Water Disposal***

Prior to commencing any work, an NOI sundry(ies) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.

#### ***Operational Summary***

The SWD facility will not be fenced so that trucks may access for load disposal 24/7.

The well and injection equipment will be a closed system and equipped with pressure limiting devices and volume meters. The annulus, loaded with an inert, anti-corrosion packer fluid, will be monitored for pressure.

The tanks will be equipped with telemetry devices and visual alarms to alert the operator and customers of full tanks or an overflow situation.

Anticipated daily maximum volume is 30,000 bpd and an average of 20,000 bpd at a maximum surface injection pressure of 3032 psi (.2 psi/ft gradient – maximum pressure will be adjusted If the top of interval is modified after well logs are run).

Potential releases will be contained and cleaned up immediately. The operator shall repair or otherwise correct the situation within 48 hours before resuming operations. OCD will be notified within 24 hours of any release greater than 5 bbls. If required, remediation will start as soon as practicable. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as necessary and appropriate.



## **C-108 ITEM VII – PRODUCED WATER ANALYSES**

### **Item VII.4 – Water Analysis of Source Zone Water**

### **Item VII.5 – Water Analysis of Disposal Zone Water**

The following data was submitted previously for this location.

Formation Water			
<u>API Number</u>	<u>Formation</u>	<u>TDS</u>	<u>Chlorides</u>
30-015-03691	Devonian	64,582	37,500
Possible Disposed Fluid			
<u>API Number</u>	<u>Formation</u>	<u>TDS</u>	<u>Chlorides</u>
30-015-03691	Devonian	64,582	37,500
30-015-22553	Morrow	62,523	37,600
30-015-28127	Bone Springs	Unknown	84,981
30-015-28638	Delaware	8,856	62,858
30-015-27173	Brushy Canyon	255,443	179,189
Data obtained from GO-Tech.			

## **C-108 ITEM VII – PRODUCED WATER ANALYSES**

### **Item VII.4 – Water Analysis of Source Zone Water**

Delaware  
Bone Spring  
Wolfcamp  
Morrow

### **Item VII.5 – Water Analysis of Disposal Zone Water**

Devonian

**Water Analyses follow this page.**



**C-108 Item VII.5 - Produced Water Data**  
**Solaris Water Midstream, LLC - Mobley Ranch SWD Well No.1**

**SOURCE ZONE**

**DELAWARE**

<b>API No</b>	3002508367	<b>Lab ID</b>	
<b>Well Name</b>	BELL LAKE UNIT 007	<b>Sample ID</b>	4347
		<b>Sample No</b>	
<b>Location</b>	ULSTR 01 24 S 33 E 660 N 660 E	<b>Lat / Long</b>	32.25143 -103.51924
		<b>County</b>	Lea
<b>Operator (when sampled)</b>			
	Field SWD	<b>Unit</b>	1
<b>Sample Date</b>		<b>Analysis Date</b>	
	<b>Sample Source</b> UNKNOWN	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph		alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	87686	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	53920	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	391
iron_mgL		sulfate_mgL	749
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

*(Produced water data courtesy of NMT Octane NM WAIDS database.)*



**C-108 Item VII.5 - Produced Water Data**  
**Solaris Water Midstream, LLC - Mobley Ranch SWD Well No.1**

**SOURCE ZONE**

**BONE SPRING**

<b>API No</b>	3002502429	<b>Lab ID</b>	
<b>Well Name</b>	LEA UNIT 005	<b>Sample ID</b>	4916
		<b>Sample No</b>	
<b>Location</b>	ULSTR 12 20 S 34 E	<b>Lat / Long</b>	32.58504 -103.51106
	1980 S 1980 E	<b>County</b>	Lea
<b>Operator (when sampled)</b>			
	Field LEA	<b>Unit</b>	J
<b>Sample Date</b>		<b>Analysis Date</b>	
	<b>Sample Source</b> DST	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph		alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	202606	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	118100	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	5196
iron_mgL		sulfate_mgL	992
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

*(Produced water data courtesy of NMT Octane NM WAIDS database.)*





**C-108 Item VII.5 - Produced Water Data**  
**Solaris Water Midstream, LLC - Mobley Ranch SWD Well No.1**

**SOURCE ZONE**

**WOLFCAMP**

<b>API No</b>	3001520138	<b>Lab ID</b>	
<b>Well Name</b>	MAHUN STATE	<b>Sample ID</b>	5688
	001	<b>Sample No</b>	
<b>Location</b>	ULSTR 16 22 S 22 E	<b>Lat / Long</b>	32.39340 -104.70979
	1800 N 1980 W	<b>County</b>	Eddy
<b>Operator (when sampled)</b>			
	<b>Field</b>	ROCKY ARROYO	<b>Unit</b> F
<b>Sample Date</b>	5/17/1968	<b>Analysis Date</b>	
	<b>Sample Sourc</b>	DST	<b>Depth (if known)</b>
	<b>Water Typ</b>		
ph	8.6	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	35495	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	19000	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	830
iron_mgL		sulfate_mgL	2500
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

*(Produced water data courtesy of NMT Octane NM WAIDS database.)*



**C-108 Item VII.5 - Produced Water Data**  
**Solaris Water Midstream, LLC - Mobley Ranch SWD Well No.1**

**SOURCE ZONE**

**MORROW**

<b>API No</b>	3002520756	<b>Lab ID</b>	
<b>Well Name</b>	CUSTER MOUNTAIN UNIT 001	<b>Sample ID</b>	2434
		<b>Sample No</b>	
<b>Location</b>	ULSTR 09 24 S 35 E	<b>Lat / Long</b>	32.22999 -103.37431
	1980 S 1980 W	<b>County</b>	Lea
<b>Operator (when sampled)</b>			
	Field CINTA ROJA	<b>Unit</b>	K
<b>Sample Date</b>		<b>Analysis Date</b>	
	<b>Sample Source</b> DST	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph		alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	282741	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	176800	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	161
iron_mgL		sulfate_mgL	650
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

*(Produced water data courtesy of NMT Octane NM WAIDS database.)*





**C-108 Item VII.5 - Produced Water Data**  
**Solaris Water Midstream, LLC - Mobley Ranch SWD Well No.1**

**DISPOSAL ZONE**

**DEVONIAN**

<b>API No.</b>	3002508483	<b>Lab ID</b>	
<b>Well Name</b>	BELL LAKE UNIT	<b>Sample ID</b>	5733
	006	<b>Sample No</b>	
<b>Location</b>	ULSTR 06 23 S 34 E	<b>Lat / Long</b>	32.32821 -103.50663
	660 S 1980 E	<b>County</b>	Lea
<b>Operator (when sampled)</b>			
	Field BELL LAKE NORTH	<b>Unit</b>	O
<b>Sample Date</b>		<b>Analysis Date</b>	
	<b>Sample Source</b> HEATER/TREATER	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph	7	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	71078	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	42200	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	500
iron_mgL		sulfate_mgL	1000
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

*(Produced water data courtesy of NMT Octane NM WAIDS database.)*



**C-108 Item VII.5 - Produced Water Data**  
**Solaris Water Midstream, LLC - Mobley Ranch SWD No.1**

**DISPOSAL ZONE**

**DEVONIAN**

<b>API No.</b>	3002521082	<b>Lab ID</b>	
<b>Well Name</b>	ANTELOPE RIDGE UNIT 003	<b>Sample ID</b>	5720
		<b>Sample No</b>	
<b>Location</b>	ULSTR 34 23 S 34 E	<b>Lat / Long</b>	32.25922 -103.46068
	1980 S 1650 W	<b>County</b>	Lea
<b>Operator (when sampled)</b>			
	<b>Field</b> ANTELOPE RIDGE	<b>Unit</b>	K
<b>Sample Date</b>	11/14/1967	<b>Analysis Date</b>	
	<b>Sample Source</b> UNKNOWN	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph	6.9	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	80187	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	47900	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	476
iron_mgL		sulfate_mgL	900
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

*(Produced water data courtesy of NMT Octane NM WAIDS database.)*



## **C-108 – Item VIII**

### **Geologic Information**

The Devonian and Silurian (including Fusselman) consist of carbonates including light colored dolomite and chert intervals interspersed with some tight limestone intervals. Several thick sections of porous dolomite capable of taking water are present within the subject formations in the area. Depth control data was inferred from deep wells in the vicinity. If the base of Devonian and top of Silurian and/or Ordovician rocks come in as expected the well will only be drilled deep enough for adequate logging rathole.

At a proposed depth of 16,500' BGL (Below Ground Level) the well will TD approximately 1,350 feet below the estimated top of the Devonian. Mud logging through the interval will ensure the target interval remains in Devonian and Silurian. Once Devonian is determined, the casing shoe depth will be set at an approximate maximum upper depth of 15,160' BGL. Injection will occur through the resulting openhole interval. If the base of Silurian and top of Ordovician rocks come in as expected the well will only be drilled deep enough for adequate logging rathole; estimated total depth approximately 16,500'.

The Devonian is overlain by the Woodford Shale and Mississippian Lime. The lower Silurian (Fusselman) rock is underlain by the Ordovician; Simpson, McKee and Ellenburger.

Fresh water in the area is generally available from valley and basin fill of the Carlsbad-Pecos segment of the lower Pecos Valley complex of Quaternary alluvial sand and gravel deposits. State Engineer's records show water wells in the area with an average depth to groundwater of 103 feet.

There is 1 (one) water well located within one mile of the proposed SWD. Analysis was performed for previous permitting effort and is included in this application.



# C-108 ITEM XI – WATER WELLS IN AOR

The NM Office of the State Engineer database indicates there is one water well located within one mile of the proposed well.



## New Mexico Office of the State Engineer Active & Inactive Points of Diversion (with Ownership Information)

										(R=POD has been replaced and no longer serves this file. (quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)											
(acre ft per annum)																					
Sub										q q q											
WR File Nbr	basin	Use	Diversion	Owner	County					POD Number	Code	Grant	Source	5416	4	Sec	Tws	Rng	X	Y	
C 02486	C	PRO	0	TEXACO EXPLORATION & PROD.	ED					C 02486				3	2	3	19	23S	30E	601304	3572832

# C-108 Item XI

## Water Wells Within One Mile

### Mobley Ranch SWD - Water Well Locator Map



# C-108 ITEM XI – WATER WELLS IN AOR

Water Analysis of well within one mile of proposed SWD.



PHONE (878) 293-2236 • 101 S. MARLAND • MOBILE, AL 36688

## Analytical Results For:

DTC ENERGY GROUP 518 17TH STREET SUITE 650 DENVER CO, 80202	Project: MOBLEY RANCH SWD #001 Project Number: NONE GIVEN Project Manager: MATT MEYER Fax To:	Reported: 17-Aug-15 14:44
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## MOBLEY RANCH HS02851-01 (Water)

Analyte	Result	MECL	Reporting Unit	Units	Dilution	Batch	Analyst	Analysed	Method	Notes
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### Cardinal Laboratories

#### Inorganic Compounds

Alkalinity, Bicarbonate	170		5.00	mg/L	1	5000504	AP	14-Aug-15	310.1	
Alkalinity, Carbonate	ND		0.00	mg/L	1	5000504	AP	14-Aug-15	310.1	
Chloride*	470		4.00	mg/L	1	5001206	AP	13-Aug-15	4500-C3-B	
Conductivity*	4250		1.00	uS/cm	1	5001100	AP	11-Aug-15	120.1	
pH*	7.34		0.100	pH Units	1	5001104	AP	11-Aug-15	120.1	
Sulfate*	1440		500	mg/L	10	5001105	AP	13-Aug-15	375.4	
TDS*	3950		5.00	mg/L	1	5001404	AP	14-Aug-15	140.1	
Alkalinity, Total*	140		4.00	mg/L	1	5000504	AP	14-Aug-15	310.1	

### Green Analytical Laboratories

#### Total Recoverable Metals by MCP (EPA 8230.7)

Calcium*	624		0.200	mg/L	10	B500149	JGS	15-Aug-15	EPA300.7	
Magnesium*	159		1.00	mg/L	10	B500149	JGS	15-Aug-15	EPA300.7	
Potassium*	11.0		10.0	mg/L	10	B500149	JGS	15-Aug-15	EPA300.7	
Sodium*	309		10.0	mg/L	10	B500149	JGS	15-Aug-15	EPA300.7	

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Mobility and Detection. Cardinal's facilities and clients maintain records for any data arising, whether tested or not, and any errors to the extent permitted by law. All data, including those for migration, is any other data whatsoever shall be obtained without written request to Cardinal after they (C) stop the completion of the applicable statute. In no event shall Cardinal be liable for indirect or consequential damage including, without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or contractors arising out of or in relation to the performance of the services furnished by Cardinal, regardless of whether the data is based upon any of the data obtained hereunder or otherwise. Results shall only be the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Colley D. Keene, Lab Director/Quality Manager

# C-108 ITEM XI – WATER WELLS IN AOR

## Depth to Ground Water



## New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW#### in the  
POD suffix indicates the  
POD has been replaced  
& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,  
C=the file is  
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(in feet)

POD Number	POD Sub- Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
<a href="#">C 02095</a>	CUB	ED		2	3	34	23S	30E		606337	3569759*	554	440	114
<a href="#">C 02486</a>	C	ED		3	2	3	19	23S	30E	601304	3572832*	350		
<a href="#">C 02770</a>		ED		4	4	1	14	23S	30E	608004	3574921*	286		
<a href="#">C 02771</a>		ED		1	2	3	14	23S	30E	607807	3574718*	295		
<a href="#">C 02772 POD1</a>	C	ED		4	4	1	14	23S	30E	608043	3574840	300		
<a href="#">C 03139</a>		ED		4	2	4	01	23S	30E	610424	3577764*	425		
<a href="#">C 03222 EXPLORE</a>		ED		1	1	4	12	23S	30E	609833	3576349*	365		
<a href="#">C 03478 POD1</a>	C	ED		3	2	1	21	23S	30E	604638	3573670	230	105	125
<a href="#">C 03559 POD1</a>	CUB	ED		4	3	2	01	23S	30E	609928	3578260	50	0	50
<a href="#">C 03559 POD2</a>	CUB	ED		4	3	2	01	23S	30E	609928	3578260	25	0	25
<a href="#">C 03559 POD3</a>	CUB	ED		4	3	2	01	23S	30E	609928	3578260	20	0	20
<a href="#">C 03559 POD4</a>	CUB	ED		4	3	2	01	23S	30E	609928	3578260	25	0	25
<a href="#">C 03559 POD5</a>	CUB	ED		4	3	2	01	23S	30E	609912	3578236	50		
<a href="#">C 03908 POD1</a>	CUB	ED		3	4	3	34	23S	30E	606331	3569300	760		
<a href="#">C 03908 POD2</a>	CUB	ED		3	1	3	34	23S	30E	605872	3569594	518		
<a href="#">C 03908 POD3</a>	CUB	ED		3	1	3	34	23S	30E	605851	3569640	463		
<a href="#">C 03908 POD4</a>	CUB	ED		3	2	1	34	23S	30E	606333	3569605	1137		
<a href="#">C 04018 POD1</a>	CUB	ED		2	2	1	21	23S	30E	604664	3573868	380	179	201

Average Depth to Water: 103 feet

Minimum Depth: 0 feet

Maximum Depth: 440 feet

Record Count: 18

PLSS Search:

Township: 23S

Range: 30E

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

10/20/17 2:27 PM

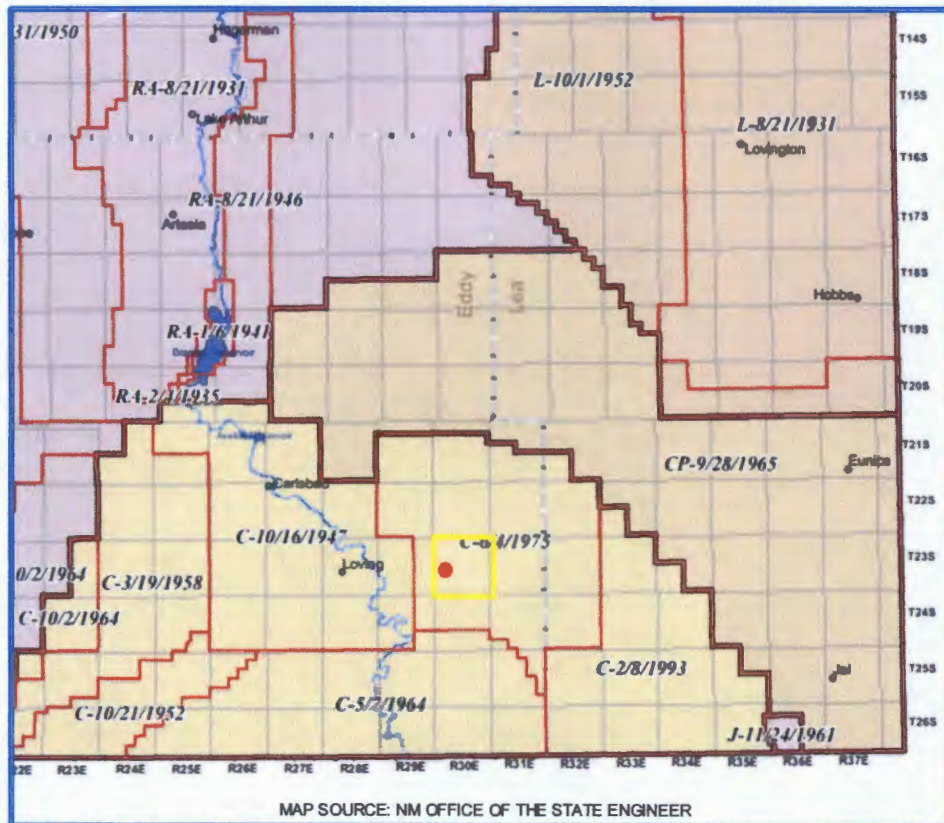
Page 1 of 1

WATER COLUMN/ AVERAGE  
DEPTH TO WATER



## C-108 - Item XI

### Groundwater Basins - Water Column / Depth to Groundwater



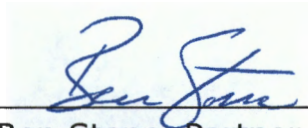
The subject well is located within the Carlsbad Basin.

Fresh water in the area is generally available from the Santa Rosa or Cenozoic alluvial deposits of the Carlsbad Basin. State Engineer's records show water wells in 23S-30E with an average depth to water at 103 feet.

There is 1 (one) water well located within one mile of the proposed SWD.

## C-108 ITEM XII – GEOLOGIC AFFIRMATION

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



---

Ben Stone, Partner  
SOS Consulting, LLC

Project: Solaris Water Midstream, LLC  
Mobley Ranch SWD No.1  
Reviewed 10/17/2017

## **C-108 ITEM XIII – PROOF OF NOTIFICATION**

### IDENTIFICATION AND NOTIFICATION OF INTERESTED PARTIES

#### **Exhibits for Section**

Leasehold Plat

List of Interested Parties

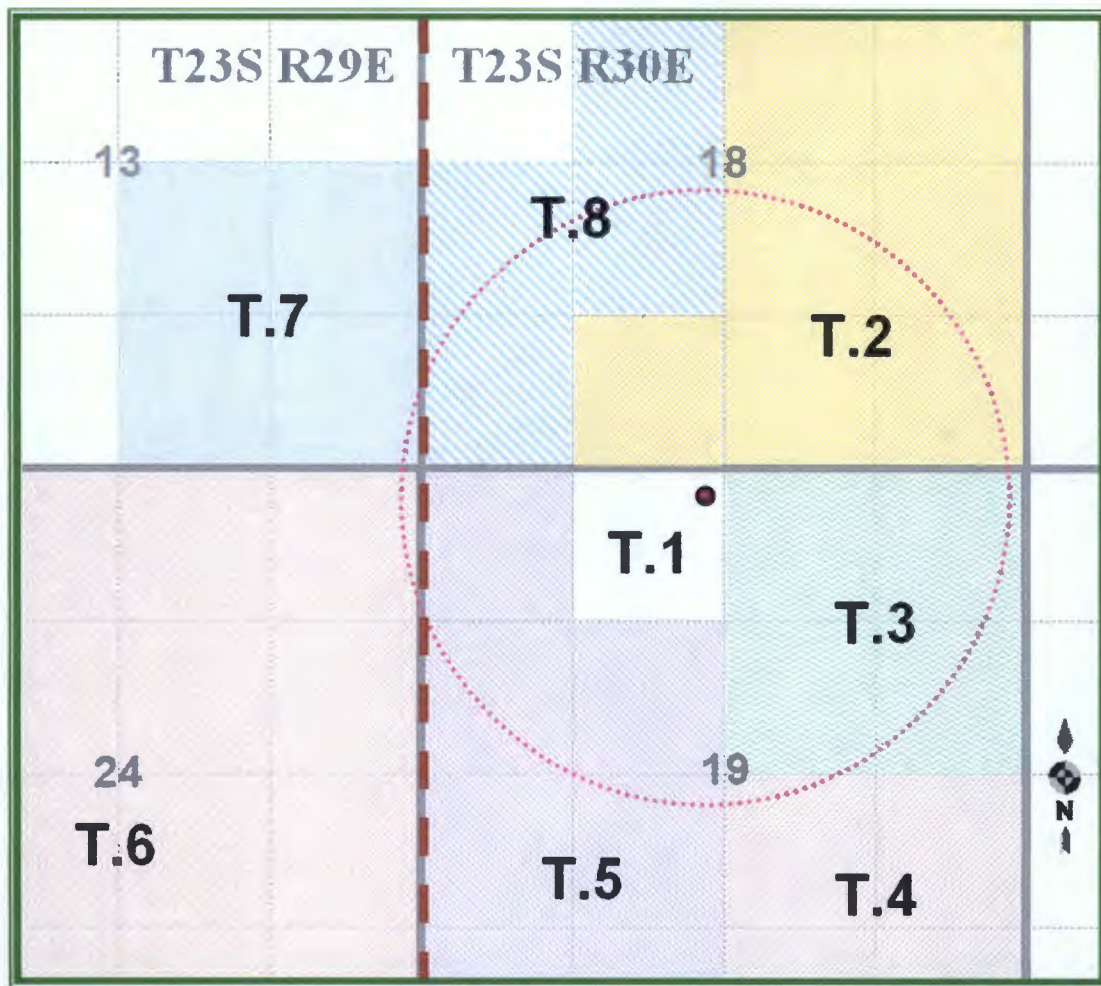
Notification Letter to Interested Parties

Proof of Certified Mailing

Published Legal Notice

# Mobley Ranch SWD Well No.1 - Leasehold Plat

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



## LEGEND

- T.1 – Fee – Mobley Ranch – XTO Energy, Inc.
- T.2 – NMNM-0556863 – Asher Resources
- T.3 – NMNM-017056 – XTO Energy, Inc.
- T.4 – NMNM-113963 – Devon Energy Production Co., LP
- T.5 – EO-5229 – BMT O&G NM, LLC / BEPCO, LP
- T.6 – EO-5894 - BMT O&G NM, LLC / BEPCO, LP
- T.7 – NMNM-017589 – Occidental Permian, LP



# **C-108 ITEM XIII – PROOF OF NOTIFICATION INTERESTED PARTIES LIST**

## **SURFACE OWNER**

- 1 MOBLEY RANCH c/o W.L. MOBLEY, JR.  
3515 Standpipe Road  
Carlsbad, NM 88220  
Certified: 7015 0640 0007 9482 9583

## **OFFSET MINERALS LESSEES and OPERATORS (All Notified via USPS Certified Mail)**

### **Fee Lease – Mobley Ranch (T.1 on Leasehold Plat)**

#### ***Lessee & Operator***

- 2 XTO ENERGY, INC.  
P.O. Box 6501  
Englewood, CO 80155  
Certified: 7015 3010 0001 3790 0005

### **BLM Lease NMNM-0556863 (T.2 on Leasehold Plat)**

#### ***Lessee***

- 3 ASHER RESOURCES  
100 Sandau Rd., Ste.300  
San Antonio, TX 78216-3635  
Certified: 7015 3010 0001 3789 9996

#### ***Operators***

XTO ENERGY, INC.  
P.O. Box 6501  
Englewood, CO 80155

### **BLM Lease NMNM-017056 (T.3 on Leasehold Plat)**

#### ***Lessee & Operator***

XTO ENERGY, INC.  
P.O. Box 6501  
Englewood, CO 80155

### **BLM Lease NMNM-113963 (T.4 on Leasehold Plat)**

#### ***Lessee & Operator***

- 4 DEVON ENERGY PRODUCTION CO., LP  
333 W. Sheridan Avenue  
OKC, OK 73102-5010  
Certified: 7015 3010 0001 3789 9989

### **State Leases EO-5229 & EO-5894 (T.5 & T.6 on Leasehold Plat)**

#### ***Lessee & Operator***

- 5 BMT O&G NM, LLC / BEPCO, LP  
201 Main Street, Ste.2700  
Fort Worth, TX 76102  
Certified: 7015 3010 0001 3789 9972

## **C-108 ITEM XIII – PROOF OF NOTIFICATION**

### **INTERESTED PARTIES LIST (cont.)**

#### **State Leases EO-5229 & EO-5894 (T.5 & T.6 on Leasehold Plat – cont.)**

##### ***Operator***

XTO ENERGY, INC.  
P.O. Box 6501  
Englewood, CO 80155

#### **BLM Lease NMNM-017589 (T.7 on Leasehold Plat)**

##### ***Lessee***

- 6 OCCIDENTAL PERMIAN, LP  
6001 Deauville Blvd.  
Midland, TX 79706  
Certified: 7015 3010 0001 3789 9965

##### ***Operator***

XTO ENERGY, INC.  
P.O. Box 6501  
Englewood, CO 80155

#### **OFFSET MINERALS OWNERS (All Notified via USPS Certified Mail)**

- 7 STATE OF NEW MEXICO (FedEx'd copy)  
Oil, Gas and Minerals Division  
310 Old Santa Fe Trail  
Santa Fe, NM 87504  
Certified: 7015 3010 0001 3789 9958
- 8 U.S. DEPARTMENT OF INTERIOR  
Bureau of Land Management  
Oil & Gas Division  
620 E. Greene St.  
Carlsbad, NM 88220  
Certified: 7015 3010 0001 3789 9941
- 9 MOSAIC POTASH (*Potash lease >1 mile from proposed well.*)  
P.O. Box 71  
Carlsbad, NM 88220  
Certified: 7015 3010 0001 3789 9934

#### **REGULATORY**

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed original and copy)  
1220 S. St. Francis Dr.  
Santa Fe, NM 87505

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed copy)  
811 S. First St.  
Artesia, NM 88210



October 20, 2017

**NOTIFICATION TO INTERESTED PARTIES**  
**via U.S. Certified Mail – Return Receipt Requested**

To Whom It May Concern:

Solaris Water Midstream, LLC, Midland, Texas, has made application to the New Mexico Oil Conservation Division to drill and complete for salt water disposal the Mobley Ranch SWD Well No.1. The proposed commercial operation will be for produced water disposal from area operators. As indicated in the notice below, the well is located in Section 19, Township 23 South, Range 30 East in Eddy County, New Mexico.

The published notice states that the interval will be from 15,160 feet to 16,500 feet into the Devonian, Silurian and Fusselman formations.

Following is the notice published in the Artesia Daily Press, Artesia, New Mexico on or about October 22, 2017.

**LEGAL NOTICE**

Solaris Water Midstream, LLC, 701 Tradewinds Blvd., Suite C, Midland, TX 79706, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Mobley Ranch SWD No.1, will be located 225' FNL and 2460' FWL, Section 19, Township 23 South, Range 30 East, Eddy County, New Mexico. Produced water from area production will be commercially disposed into the Devonian, Silurian and Fusselman formations at a depth of 15,160' to 16,500' at a maximum surface pressure of 3032 psi and a rate limited only by such pressure. The proposed SWD well is located approximately 10.0 miles east of Loving, NM.

This proposed well was originally permitted and authorized for SWD by a different operator. Those permits were cancelled by the operator or otherwise allowed to expire by the NMOCD. This application will essentially redo the previously authorized permits at the exact location.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email [info@sosconsulting.us](mailto:info@sosconsulting.us).

***You have been identified as a party who may be interested as an offset lessee or operator.***

You are entitled to a full copy of the application. A full copy in PDF format is posted on the SOS Consulting **ShareFile** site and is available for immediate download.

Use the URL link: <https://sosconsulting.sharefile.com/d-sf4ac0ac3af4480db>

**(Please Note: The ShareFile service is powered by Citrix Systems and is completely secure.\*)**

*The link to this file will be active for 30 days from the date of this letter. Your company can access and download the file a maximum of five (5) times. (One copy may be downloaded and shared as needed amongst your company.)*

Alternatively, you may call SOS Consulting, LLC at 903-488-9850, or email [info@sosconsulting.us](mailto:info@sosconsulting.us), and the same PDF file copy will be expedited to you via email.

Please use the subject **"Mobley Ranch Oct2017 PDF Copy Request"**.

Thank you for your attention in this matter.

Best regards,



Ben Stone, SOS Consulting, LLC  
Agent for Solaris Water Midstream, LLC

Cc: Application File

***SOS Consulting is committed to providing superior quality work using technology to assist clients and interested parties in obtaining the documentation required. SOS will continue to utilize methods for reducing papers copies and are less energy and resource intensive.***

***We hope you'll partner with us and appreciate these efforts.***

\* You will be asked for your name and email. This will not be used for anything except to track the file downloads. You will not be solicited by SOS or anyone else. Data is stored on Citrix Systems servers only.



# C-108 - Item XIV

## Proof of Notice (Certified Mail Receipts)

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MOBLEY RANCH  
c/o W.L. MOBLEY, JR.  
3515 Standpipe Road  
Carlsbad, NM 88220

7015 3010 0001 3790 0005

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P.O. Box 6501  
Englewood, CO 80155

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ASHER RESOURCES  
100 Sandau Rd., Ste.300  
San Antonio, TX 78216-3635

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DEVON ENERGY PROD. CO., LP  
333 W. Sheridan Avenue  
OKC, OK 73102-5010

# C-108 - Item XIV

Proof of Notice (Certified Mail Receipts – cont.)

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Oil, Gas and Minerals Division  
310 Old Santa Fe Trail  
Santa Fe, NM 87504

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Bureau of Land Management  
Oil & Gas Division  
620 E. Greene St.  
Carlsbad, NM 88220

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## **C-108 - Item XIV**

### **Proof of Notice – Legal Notice Newspaper of General Circulation**

#### **Legal Notice**

Solaris Water Midstream, LLC, 701 Tradewinds Blvd., Suite C, Midland, TX 79706, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Mobley Ranch SWD No.1, will be located 225' FNL and 2460' FWL, Section 19, Township 23 South, Range 30 East, Eddy County, New Mexico. Produced water from area production will be commercially disposed into the Devonian, Silurian and Fusselman formations at a depth of 15,160' to 16,500' at a maximum surface pressure of 3032 psi and a rate limited only by such pressure. The proposed SWD well is located approximately 10.0 miles east of Loving, NM.

This proposed well was originally permitted and authorized for SWD by a different operator. Those permits were cancelled by the operator or otherwise allowed to expire by the NMOCD. This application will essentially redo the previously authorized permits at the exact location.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email [info@sosconsulting.us](mailto:info@sosconsulting.us).

Published in the Artesia Daily Press, Artesia, N.M., Oct. 22, 2017 Legal No. 24464.

The above is the "Proof Copy" sent from the Artesia Daily Press.  
The affidavit of publication will be forwarded as soon as it is received.

# Affidavit of Publication

No. 24464

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn say: that she is the

Publisher

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

## Legal Ad

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same day as follows:

First Publication October 24, 2017

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Seventh Publication

Subscribed and sworn before me this

24th day of October 2017



OFFICIAL SEAL  
Latisha Romine  
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires:

5/12/2019

*Latisha Romine*

Latisha Romine

Notary Public, Eddy County, New Mexico

# Copy of Publication:

## Legal Notice

Solaris Water Midstream, LLC, 701 Tradewinds Blvd., Suite C, Midland, TX 79706, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Mobley Ranch SWD No.1, will be located 225' FNL and 2460' FWL, Section 19, Township 23 South, Range 30 East, Eddy County, New Mexico. Produced water from area production will be commercially disposed into the Devonian, Silurian and Fusselman formations at a depth of 15,160' to 16,500' at a maximum surface pressure of 3032 psi and a rate limited only by such pressure. The proposed SWD well is located approximately 10.0 miles east of Loving, NM.

This proposed well was originally permitted and authorized for SWD by a different operator. Those permits were cancelled by the operator or otherwise allowed to expire by the NMOCD. This application will essentially redo the previously authorized permits at the exact location.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email info@sosconsulting.us.

Published in the Artesia Daily Press, Artesia, N.M., Oct. 24, 2017 Legal No. 24464.

RECEIVED OCT 30 2017



# Affidavit of Publication

No. 24464

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn says that she is the

Publisher

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

## Legal Ad

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same

day as follows:

First Publication October 24, 2017

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Seventh Publication

Subscribed and sworn before me this

24th day of October 2017



OFFICIAL SEAL  
Latisha Romine  
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2019

*Latisha Romine*

Latisha Romine

Notary Public, Eddy County, New Mexico

# Copy of Publication:

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2017 NOV - 2 P 2:20

RECEIVED OGD



October 20, 2017

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

Attn: Mr. David Catanach, Director

*Re: Application of Solaris Water Midstream, LLC to permit for salt water disposal in the proposed Mobley Ranch SWD Well No.1, to be located in Section 19, Township 23 South, Range 30 East, NMPM, Eddy County, New Mexico.*

Dear Mr. Catanach,

Please find enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request to permit for disposal, the Mobley Ranch SWD No.1.

Please note that this proposed well was originally permitted and authorized for SWD by a different operator. Those permits were cancelled by the operator or otherwise allowed to expire by the NMOCD. This application will essentially redo the previously authorized permits at the exact location.

Solaris Water Midstream seeks to optimize efficiency, both economically and operationally, of its operations and to offer additional disposal options for operators in southeast New Mexico. Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice will run on or about October 22, 2017 in the edition of the Artesia Daily Press and all offset operators and other interested parties have been notified individually. The legal notice affidavit will be forwarded when received. This application also includes a wellbore schematic, area of review maps, leaseholder plats and other required information for a complete Form C-108. The well is located on private land and minerals.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

Best regards,

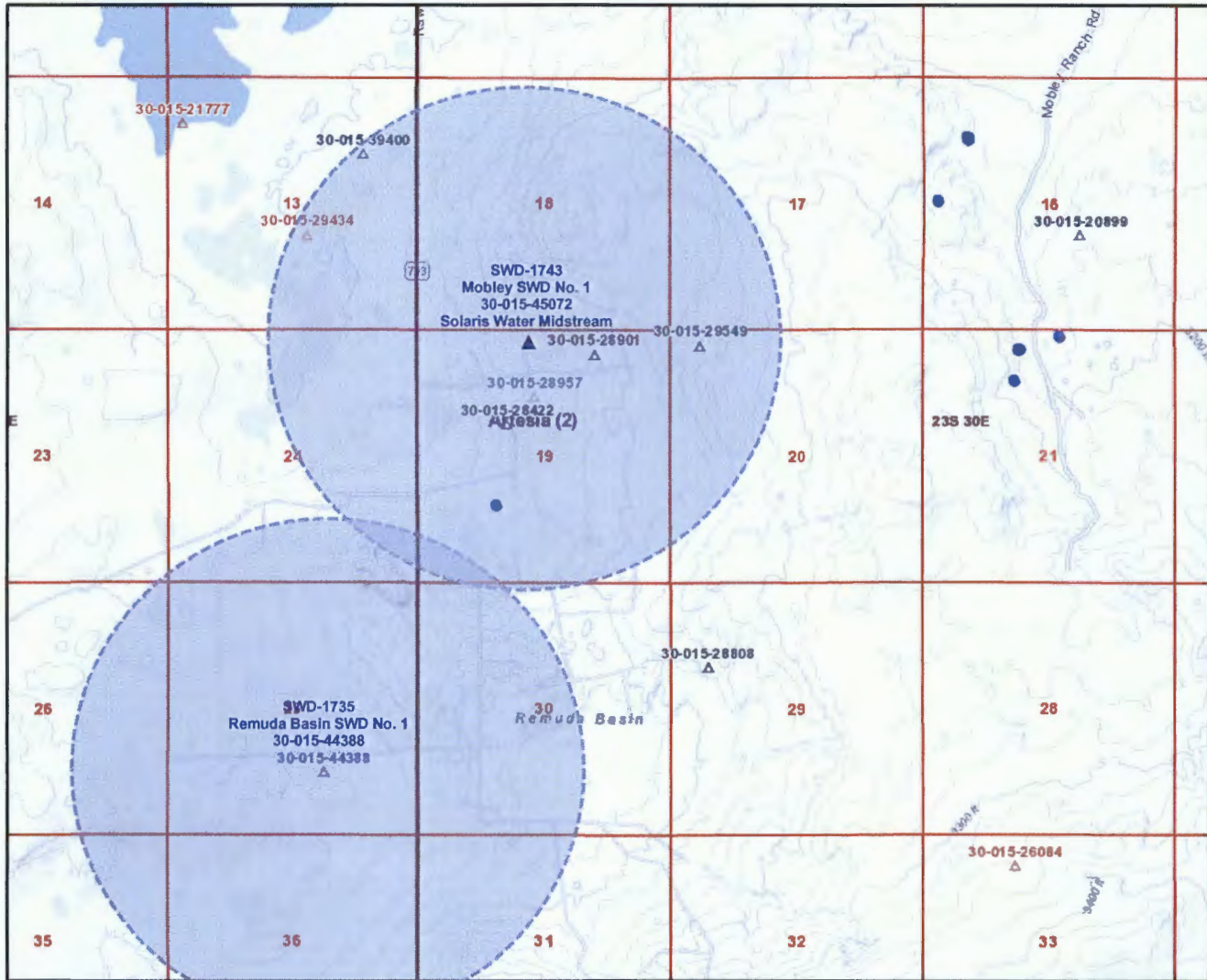
A handwritten signature in blue ink, appearing to read "Ben Stone".

Ben Stone, Partner  
SOS Consulting, LLC  
Agent for Solaris Water Midstream, LLC

Cc: Application attachment and file



**Pending Application for High-Volume Devonian Disposal Well  
C-108 Application for Mobley SWD No. 1 – Solaris Water Midstream LLC**



**Mobley SWD No. 1; Solaris Water Midstream LLC**

API 30-015-45072; Application No. pMAM1729659123; Rcvd 10.23.2017

Proposed interval: 15,160' to 16,500'

Proposed construction: processing application with current design; tapered tubing set: 5-inch tubing in 7 $\frac{5}{8}$ -liner and 5.5-inch tubing above in 9 $\frac{5}{8}$ -inch casing

Protested by Mosaic; suspn: 11.02.2017; protest withdrawn

**Closet Devonian Wells with Large-Volume Potential:** Remuda Basin SWD No. 1 (30-015-44388) SWD-1735; approved current tubing: 4.5-inch tubing in liner and casing; potentially modified upper tubing portion.

Remaining active SWD wells in area are primarily older disposal operations in DMG.

County: Eddy - 015

BLM Field Office: Carlsbad

BUREAU OF LAND MANAGEMENT  
STATUS OF PUBLIC DOMAIN  
LAND AND MINERALS

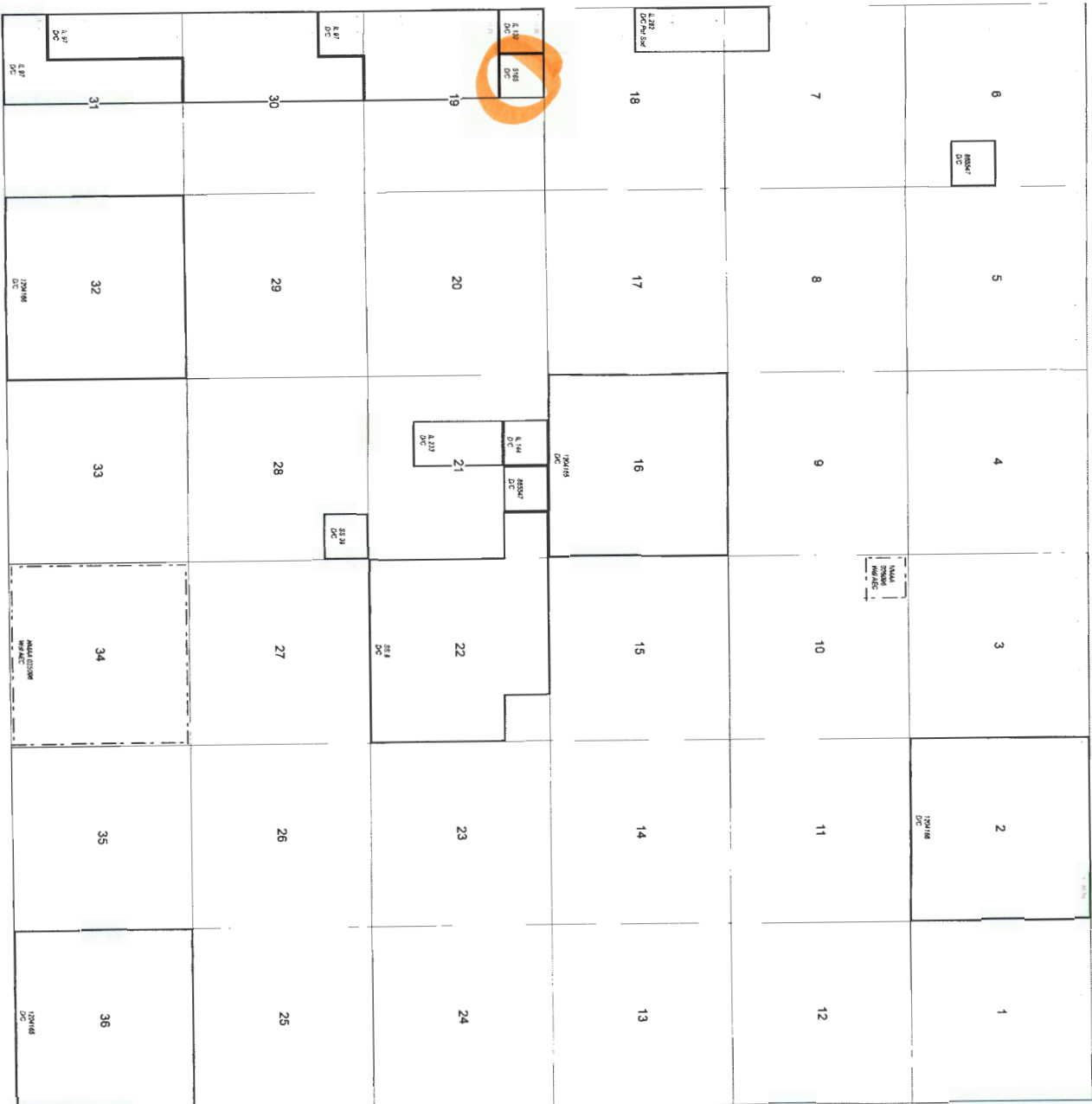
## T235 R30E

Entire Township included  
EO WdI NM 1 Por Res 6 (3/11/1926)  
Revised Por Area of 10/16/1951, SO 5/11/1965  
Designated Por Area 50/60/71/1975  
C of Public Lands NM 05602.02 (CI No 30-06-01)

BLM/DOE COOPERATIVE AGREEMENT WIPP PROJECT  
SEC 1: LOT 1

IN 1977 DOE CONDEMNED THE EXISTING LEASEHOLD INTEREST IN THIS AREA. THIS DOES NOT PRECLUDE OIL AND GAS LEASING IN SEC 1: LOT 1

DUE TO WIPP SITE LOCATION IN T225 RATE CONTRACT DOE PRIOR TO LEASING



**NOTE:** The serial numbers displayed are in the Bureau's LEADS system format. If there is a zero in the 7<sup>th</sup> position (from the right), the serial number has a "prefix" zero, example HMD 0012345. If there is not a zero in the 7<sup>th</sup> position (from the right) then the serial number does not have a "prefix" zero, example HMD 012345.

T 23 S  
R 30 E  
NMPM

## Goetze, Phillip, EMNRD

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**From:** McMillan, Michael, EMNRD  
**Sent:** Wednesday, April 11, 2018 8:04 AM  
**To:** Goetze, Phillip, EMNRD  
**Subject:** FW: Mobley Ranch SWD 1 - Section 19 23S 30E  
**Attachments:** Mobley Ranch SWD 1 private surface and minerals Sec 19 23S 30E - 2018-04-11.jpg

FYI

Mike

**From:** Rutley, James <jrutley@blm.gov>  
**Sent:** Wednesday, April 11, 2018 8:03 AM  
**To:** McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>  
**Cc:** Bell, Ric - Carlsbad (Third Party) <Ric.Bell@mosaicco.com>  
**Subject:** Mobley Ranch SWD 1 - Section 19 23S 30E

Good Morning Mike,

I have had a conversation with Mosaic this morning regarding Solaris Mobley Ranch SWD 1 whether they were objecting to the SWD or not. From my discussion with Ric Bell just a moment ago, Mosaic does not object to the well and has requested to lift protest with you.

Do you need an official letter or will an e-mail do?

Thanks

Jim

*James S. Rutley*

*Geologist (Potash Specialist)*

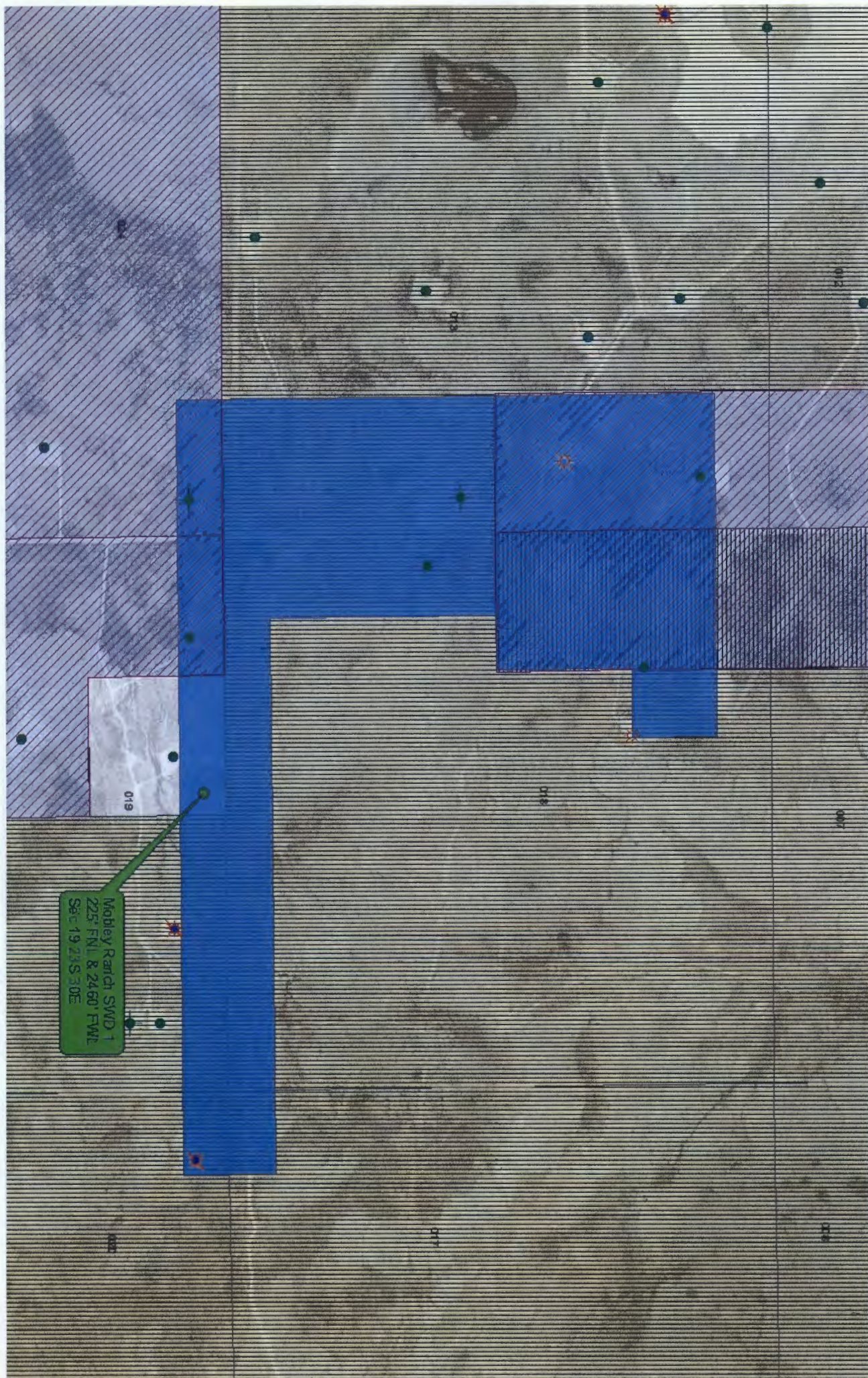
*Carlsbad Field Office*

*Bureau of Land Management*

*(575) 234-5904*

*Warning: This message is intended only for use of the individual or entity to which it is addressed, and may contain information that is privileged or confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately by return letter/fax/email.*









THE SECRETARY OF THE INTERIOR  
WASHINGTON

ORDER NO. 3324

Subject: Oil, Gas, and Potash Leasing and Development within the Designated Potash Area of Eddy and Lea Counties, New Mexico

**Sec. 1 Purpose and Effect.** This Order revises and supersedes the Order of the Secretary of the Interior, dated October 28, 1986 (51 FR 39425), and corrected on August 26, 1987 (52 FR 32171), and provides procedures and guidelines for more orderly co-development of oil, gas, and potash deposits owned by the United States within the Designated Potash Area through safe, concurrent operations.

**Sec. 2 Authority.** This Order is issued in accordance with the authority vested in the Secretary of the Interior in the Mineral Leasing Act of 1920, as amended and supplemented (30 U.S.C. 181 *et seq.*); the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351-359); the Federal Land Policy and Management Act of 1976, as amended (43 U.S.C. 1701 *et seq.*); and regulations and onshore orders implementing these statutes.

**Sec. 3 Order Revised and Superseded.** The Order of the Secretary of the Interior, dated October 28, 1986 (51 FR 39425), and corrected on August 26, 1987 (52 FR 32171), is hereby superseded by this revised Order. The following provisions will apply to concurrent operations in prospecting for, developing, and producing oil, gas, and potash deposits owned by the United States within the Designated Potash Area.

**Sec. 4. Definitions.**

a. **Authorized Officer.** Any employee of the Bureau of Land Management (BLM) authorized to perform duties described in 43 CFR Parts 3000, 3100, and 3500, as delegated in the BLM Manual.

b. **Barren Area.** An area established by the BLM within the Designated Potash Area for which sufficient data is available to establish a lack of potash mineralization in sufficient thickness and quality to be mineable under existing technology and economics.

c. **Buffer Zone.** Areas established by the BLM within the Designated Potash Area:

(1) extending outward a certain distance from the perimeter of existing underground open mine workings within which oil or gas operations are generally not allowed due to a BLM determination that oil or gas drilling could constitute a hazard to or interfere with orderly potash mining operations; or

(2) extending outward a certain distance from operating oil or gas well(s) or established Drilling Islands within which potash operations are generally not allowed due to a BLM determination that potash mining or exploration operations could constitute a hazard to or interfere with orderly oil or gas operations.



d. Co-development. The concurrent development of oil, gas, and potash resources within the Designated Potash Area. Co-development is a cooperative effort between industries under the guidelines of this order, as regulated by the BLM, to support production of potash, oil, and gas from the lands within the Designated Potash Area.

e. Designated Potash Area. The land area described in Section 8 of this Order.

f. Development Area. An area established by the BLM within the Designated Potash Area in consideration of appropriate oil and gas technology such that wells can be drilled from a Drilling Island capable of effectively extracting oil and gas resources while managing the impact on potash resources. Each Development Area will typically have only one Drilling Island, subject to narrow exceptions based on specific facts and circumstances. All new oil and gas wells that penetrate the potash formations within a Development Area will be drilled from the Drilling Island(s) associated with that Development Area. The boundaries of each Development Area will be determined in conformity with Section 6.e.(2).

g. Drilling Island. An area established by the BLM, usually associated with and within a Development Area, from which all new drilling of vertical, directional, or horizontal wells that newly penetrate the potash formations can be performed in order to support the development of oil and gas resources. The size and shape of a Drilling Island defines the area where wellbore penetrations of the potash formations will be allowed; this area is to be as small as practical to allow effective oil and gas development while managing impacts on potash.

h. Indicated Resources. Potash resources from which tonnage, grade, and mineral content are computed partly from specific measurements and samples, and partly from projection of geologic evidence. Indicated Resources are estimated at a lower level of confidence than Measured Reserves.

i. Inferred Resources. Potash resources which are probable, considering reasonably correlated data from lithologic descriptions and well logs, but for which tonnage and grade cannot be computed due to the absence of specific data.

j. Joint Industry Technical Committee. A committee established by, and subject to the management and control of, the potash mining industry and the oil and gas industry whose role is to study how concurrent development of potash and oil and gas can be safely performed in proximity to each other. While the committee may provide input to the BLM on such matters as indicated herein or otherwise at its discretion, it will not be subject to the BLM's management or control.

k. Measured Reserves (also known as "Potash Enclave"). Areas within the Designated Potash Area where potash is known to exist in sufficient thickness and quality to be mineable under existing technology and economics.

l. Potash. Potassium and associated minerals as specified in the Act of February 27, 1927 (30 U.S.C. §§ 281-287).

m. Unknown Area. An area within the Designated Potash Area where there is an absence of data for the BLM to classify the mineralization as Measured Reserves, Indicated Resources, Inferred Resources, or Barren Area.

**Sec. 5 Status of Lands.** This Order will not affect the current status of lands with respect to their being withdrawn from or open to entry or leasing.

**Sec. 6 General Provisions.**

a. Issuance of Oil and Gas Leases. The Department of the Interior reaffirms its policy that the lease stipulations contained in the Order of the Secretary of the Interior, dated October 28, 1986, and corrected on August 26, 1987 (52 FR 32171), are necessary to protect the rights of the oil and gas and potash lessees and operators. Therefore, each successful applicant for a noncompetitive oil and gas lease, and any party awarded a competitive lease, for lands included in the Designated Potash Area, is required, as a condition to the issuance of such lease, to execute a stipulation to the lease as follows.

(1) Drilling for oil and gas shall be permitted only in the event that the lessee establishes to the satisfaction of the Authorized Officer, BLM, that such drilling will not interfere with the mining and recovery of potash deposits, or the interest of the United States will best be served by permitting such drilling.

(2) No wells shall be drilled for oil or gas at a location which, in the opinion of the Authorized Officer, would result in undue waste of potash deposits or constitute a hazard to or unduly interfere with mining operations being conducted for the extraction of potash deposits.

(3) When the Authorized Officer determines that unitization is necessary for orderly oil and gas development and proper protection of potash deposits, no well shall be drilled for oil or gas except pursuant to a unit plan approved by the Authorized Officer.

(4) The drilling or the abandonment of any well on said lease shall be done in accordance with applicable oil and gas operating regulations (43 CFR 3160), including such requirements as the Authorized Officer may prescribe as necessary to prevent the infiltration of oil, gas, or water into formations containing potash deposits or into mines or workings being utilized in the extraction of such deposits.

In addition, the Authorized Officer will include a lease provision which states that drilling for and production of oil and gas will be subject to the terms of this Order, any subsequent revisions, and the orders of the Authorized Officer thereunder.

b. Reinstatement or Renewal of Oil and Gas Leases. As a condition to the granting of any discretionary reinstatement or renewal of any existing lease that includes lands in the Designated Potash Area, the BLM will impose stipulations identical to those specified in Section 6.a.

c. Potash Leases.

(1) All potash permits, licenses, and leases hereafter issued or existing potash leases hereafter readjusted for Federal lands within the Designated Potash Area, must be subject to a requirement, either to be included in the lease, license, or permit or imposed as a stipulation, that no mining or exploration operations may be conducted that, in the opinion of the Authorized Officer, will constitute a hazard to oil or gas production, or that will unreasonably interfere with orderly development and production under any oil and gas lease issued for the same lands.

(2) The BLM will continue to include applicable due diligence stipulations in all potash leases issued or readjusted after the date of this Order.

(3) Before being allowed to participate in a competitive lease sale, all bidders must certify in writing that they have an identifiable, substantial, and genuine interest in developing the potash resources and that they intend to develop the potash resources in accordance with the applicable diligence stipulations.

(4) In addition, the Authorized Officer will include a lease provision providing that potash mining operations will be subject to the terms of this Order, any subsequent revisions, and the orders of the Authorized Officer thereunder.

d. Delineation of Resource Areas. Each potash lessee must file annually by March 1, with the Authorized Officer, data and a map(s) on which has been delineated the following information with respect to the Federal, state, and private potash leases which the lessee then holds; and lands on which exploration activities have been conducted.

(1) Those areas where active mining operations are currently in progress in one or more ore zones;

(2) Those areas where operations have been completed in one or more ore zones;

(3) Those areas that are not presently being mined which are considered to contain Measured Reserves in one or more ore zones;

(4) Those areas that are not presently being mined which are considered to contain Indicated Resources in one or more ore zones;

(5) Those areas that are not presently being mined which are considered to contain Inferred Resources in one or more ore zones;

(6) Those areas that are considered to be Barren Areas;

(7) Those areas that are Unknown Areas; and

(8) Those areas that are planned to be mined as per a three-year mine plan.

(9) The Authorized Officer will annually review the information submitted under this requirement and make any revisions to the boundaries of Measured Reserves, Indicated Resources, Inferred Resources, Barren Areas, and Unknown Areas. Upon verification, the Authorized Officer will commit the initial findings to a map(s) of suitable scale and will thereafter revise that map(s) as necessary to reflect the latest available information.

e. Oil and Gas Drilling.

(1) Drilling within the Designated Potash Area. It is the intent of the Department of the Interior to administer oil and gas operations throughout the Designated Potash Area in a manner which promotes safe, orderly co-development of oil, gas, and potash resources. It is the policy of the Department of the Interior to deny approval of most applications for permits to drill oil and gas wells from surface locations within the Designated Potash Area. Three exceptions to this policy will be permitted if the drilling will occur under the following conditions from:

(a) a Drilling Island associated with a Development Area established under this Order or a Drilling Island established under a prior Order;

(b) a Barren Area and the Authorized Officer determines that such operations will not adversely affect active or planned potash mining operations in the immediate vicinity of the proposed drill-site; or

(c) a Drilling Island, not covered by (a) above, or single well site established under this Order by the approval and in the sole discretion of the Authorized Officer, provided that such site was jointly recommended to the Authorized Officer by the oil and gas lessee(s) and the nearest potash lessee(s).

(2) Development Areas.

(a) When processing an application for permit to drill (APD) an oil or gas well in the Designated Potash Area that complies with regulatory requirements, the Authorized Officer will determine whether to establish a Development Area in connection with the application, and if so, will determine the boundaries of the Development Area and the location within the Development Area of one or more Drilling Islands from which drilling will be permitted. The BLM may also designate a Development Area outside of the APD process based on information in its possession, and may modify the boundaries of a Development Area. Existing wells may be included within the boundaries of a Development Area. A Development Area may include Federal oil and gas leases and other Federal and non-Federal lands.

(b) After designating or modifying a Development Area, the BLM will issue a Notice to Lessees, consistent with its authorities under 43 CFR Subpart 3105 and part 3180, informing lessees that future drilling on lands under an oil and gas lease within that Development Area will:

(i) occur, under most circumstances, from a Barren Area or a Drilling Island within the Development Area; and

(ii) be managed under a unit or communitization agreement, generally by a single operator, consistent with BLM regulations and this Order. Unit and communitization agreements will be negotiated among lessees. The BLM will consider whether a specific plan of development is necessary or advisable for a particular Drilling Island.

(c) The Authorized Officer reserves the right to approve an operator or successor operator of a Development Area and/or a Drilling Island, if applicable, to ensure that the operator has the resources to operate and extract the oil and gas resources consistent with the requirements of this Order and all applicable laws and regulations, and has provided financial assurance in the amount required by the Authorized Officer.

(d) The Authorized Officer will determine the appropriate designation of a Development Area in terms of location, shape, and size. In most cases, a single Drilling Island will be established for each Development Area. In establishing the location, shape, and size of a Development Area and an associated Drilling Island, the Authorized Officer will consider:

(i) the appropriate location, shape, and size of a Development Area and associated Drilling Island to allow effective extraction of oil and gas resources while managing the impact on potash resources;

(ii) the application of available oil and gas drilling and production technology in the Permian Basin;

(iii) the applicable geology of the Designated Potash Area and optimal locations to minimize loss of potash ore while considering co-development of both resources;

(iv) any long term exploration and/or mining plans provided by the potash industry;

(v) whether a Barren Area may be the most appropriate area for a Drilling Island;

(vi) the requirements of this Order; and

(vii) any other relevant factors.

(e) As the Authorized Officer establishes a Development Area, the Authorized Officer will more strictly apply the factors listed in Section 6.e.(2)(d), especially the appropriate application of the available oil and gas drilling and production technology in the Permian Basin, when closer to current traditional (non-solution) potash mining operations. Greater flexibility in the application of the factors listed in Section 6.e.(2)(d) will be applied further from current and near-term traditional (non-solution) potash mining operations. No Drilling Islands will be established within one mile of any area where approved potash mining



operations will be conducted within 3 years consistent with the 3-year mine plan referenced above (Section 6.d.(8)) without the consent of the affected potash lessee(s).

(f) The Authorized Officer may establish a Development Area associated with a well or wells drilled from a Barren Area as appropriate and necessary.

(g) As part of the consideration for establishing Development Areas and Drilling Islands, the BLM will consider input from the potash lessees and the oil and gas lessees or mineral right owners who would be potentially subject to a unitization agreement supporting the Development Area, provided that the input is given timely.

(3) **Buffer Zones.** Buffer Zones of  $\frac{1}{4}$  mile for oil wells and  $\frac{1}{2}$  mile for gas wells are hereby established. These Buffer Zones will stay in effect until such time as revised distances are adopted by the BLM Director or other BLM official, as delegated. However, the Authorized Officer may adjust the Buffer Zones in an individual case, when the facts and circumstances demonstrate that such adjustment would enhance conservation and would not compromise safety. The Director will base revised Buffer Zones on science, engineering, and new technology and will consider comments and reports from the Joint Industry Technical Committee and other interested parties in adopting any revisions.

(4) **Unitization and Communitization.** To more properly conserve the potash, oil, and gas resources in the Designated Potash Area and to adequately protect the rights of all parties in interest, including the United States, it is the policy of the Department of the Interior that all Federal oil and gas leases within a Development Area should be unitized or subject to an approved communitization agreement unless there is a compelling reason for another operating system. The Authorized Officer will make full use of his/her authorities wherever necessary or advisable to require unitization and/or communitization pursuant to the regulations in 43 CFR Subparts 3105 and 3180. The Authorized Officer will use his/her discretion to the fullest extent possible to assure that any communitization agreement and any unit plan of operations hereafter approved or prescribed within the Designated Potash Area will adhere to the provisions of this Order. The Authorized Officer will work with Federal lessees, and with the State of New Mexico as provided below, to include non-Federal mineral rights owners in unit or communitization agreements to the extent possible.

(5) **Coordination with the State of New Mexico.**

(a) If the effective operation of any Development Area requires that the New Mexico Oil Conservation Division (NMOCD) revise the State's mandatory well spacing requirements, the BLM will participate as needed in such a process. The BLM may adopt the NMOCD spacing requirements and require lessees to enter into communitization agreements based on those requirements.

(b) The BLM will cooperate with the NMOCD in the implementation of that agency's rules and regulations.

(c) In taking any action under Section 6.e. of this Order, the Authorized Officer will take into consideration the applicable rules and regulations of the NMOCD.

(6) Approvals of Exploration on Existing Potash Leases and Potash Exploration Licenses.

(a) Exploration for potash on lands leased for potash is permitted only with approval by the BLM, in consultation and coordination with the potash lessee, of an exploration plan in accordance with 43 CFR Subpart 3592 and subject to the terms and conditions of the potash lease.

(b) An oil and gas or potash operator may apply for an exploration license to drill core holes necessary to define the absence or existence and extent of mineable potash reserves in areas within the Designated Potash Area. Exploration licenses allow the exploration of known, unleased mineral deposits to obtain geologic, environmental, and other pertinent data concerning the deposit. See 43 CFR Subpart 3506. These licenses can be obtained from the Carlsbad Field Office, BLM. Costs for such exploration may be shared consistent with the provisions of 43 CFR 3506.14, if applicable.

(c) Should an oil and gas or potash operator desire to attempt to gather sufficient data for the BLM to establish a Barren Area in any part of the Designated Potash Area not defined as Barren, provisions and protocols are included in this Order for the operator to review relevant data in the area to design a core acquisition program (see Section 6.e.(8)(b) and (c) of this Order) and to obtain access to the land to acquire core data (see Section 6.e.(6)(b)). The BLM will develop and employ, as appropriate, data management protocols to protect the appropriate use of the data in its records. The BLM will use such newly acquired data to determine the resulting potash ore quality and make any changes to potash reserves and resources maps indicated by the new data.

(7) Notice to Affected Parties. An applicant for an Application for Permit to Drill (APD), or a proponent of a plan of development for a unit or communitization area or a proposal for a Development Area or a Drilling Island, will provide notice of the application, plan, or proposal to the potash lessees and potash operators in the Designated Potash Area and to the owners of the oil and gas rights and surface owners affected by such application, plan, or proposal. A list of current potash lessees and potash operators will be available and maintained by the Carlsbad Field Office, BLM. The BLM will assist to the extent possible in identifying the oil and gas and surface owners affected by the application, plan, or proposal. This notice should be prior to or concurrent with the submission of the application, plan, or proposal to the BLM. The BLM will not authorize any action prior to this notice.

(8) Access to Maps and Surveys.

(a) Well records and survey plats that an oil and gas lessee is required to file pursuant to applicable operating regulations (43 CFR Subpart 3160) will be available for inspection at the Carlsbad Field Office, BLM, by any party holding a potash permit or lease on

the lands on which the well is situated insofar as such records are pertinent to the mining and protection of potash deposits.

(b) Maps of mine workings and surface installations and records of core analyses that a potash lessee is required to file pursuant to applicable operating regulations (43 CFR 3590) will be available for inspection at the Carlsbad Field Office, BLM. These records are available for viewing by any party holding an oil and gas lease on the same lands insofar as such records are pertinent to the development and protection of oil and gas deposits.

(c) In order for an oil and gas or potash operator to establish and design a core acquisition program for the purposes of proving a Barren Area, those records of core analyses in the area of the planned program that are necessary to design that program should be provided in a timely fashion by the BLM to the operator of the planned program to the extent allowed by law, subject to data management protocols as referenced in Section 6.e.(6)(c), and consistent with 43 C.F.R. Part 2 and Sections 3503.41-.43. The BLM will use all data available to it when delineating Barren Areas.

(d) Maps of potash reserves and resources prepared under the provisions of Section 6.d. will be available for inspection in the Carlsbad Field Office, BLM. Digital copies of these maps will be available by mail or at these offices by May 1 of each year. Maps of established Development Areas will be updated as new Development Areas are established. Maps of Development Areas will be provided in a timely fashion by the BLM upon request.

#### **Sec. 7 Regulatory and Administrative Matters.**

a. This Order applies to the exercise of all existing leases in the Designated Potash Area in conformity with lease stipulations and Federal law.

b. Except to the extent otherwise provided by this Order, the regulations contained in 43 CFR Part 3100 and Subparts 3160 and 3180 (governing the leasing and development of oil and gas) and 43 CFR Part 3500 and Subpart 3590 (governing the leasing and development of potash deposits), remain applicable to the lands covered by this Order.

c. In implementing this Order, the BLM is authorized to exercise its discretion through any and all appropriate means, including rulemaking, notices to lessees, and orders of the Authorized Officer.

d. The BLM will obtain and use the best science available when administering this Order consistent with Departmental Manual chapters 305 DM 2 and 305 DM 3. The BLM will comply with the requirements of Secretary's Order 3305, Ensuring Scientific Integrity within the Department of the Interior, dated September 29, 2010. The BLM has previously used Sandia National Laboratories to provide unbiased technical assistance in administering the Designated Potash Area and may continue to do so, if the BLM, consistent with all applicable laws, so chooses.

e. The BLM will develop guidelines consistent with this Order for establishing Development Areas and Drilling Islands. In developing such guidelines, the BLM may consider comments and reports from the Joint Industry Technical Committee and other interested parties.

f. The BLM will develop appropriate time-frame guidelines and requirements, as appropriate, to enable timely actions pursuant to this Order.

**Sec. 8. The Designated Potash Area Legal Description.**

**New Mexico Principal Meridian**

T. 22 S., R. 28 E.,  
secs. 25 and 36.

T. 23 S., R. 28 E.,  
sec. 1.

T. 19 S., R. 29 E.,  
secs. 1 and 2;  
secs 11 to 15, inclusive;  
secs. 22 to 27, inclusive;  
secs. 35 and 36.

T. 20 S., R. 29 E.,  
secs. 1 and 2;  
secs. 11 to 15, inclusive;  
secs. 22 to 27, inclusive;  
secs. 34 to 36, inclusive.

T. 21 S., R. 29 E.,  
secs. 1 to 5, inclusive;  
secs, 10 to 15, inclusive;  
secs. 22 to 27, inclusive;  
secs. 34 to 36, inclusive.

T. 22 S., R. 29 E.,  
secs. 1 to 5, inclusive;  
secs. 8 to 17, inclusive;  
secs. 19 to 36, inclusive.

T. 23 S., R. 29 E.,  
secs. 1 to 17, inclusive;  
secs. 21 to 28, inclusive;  
secs. 33 to 36, inclusive.

T. 24 S., R. 29 E.,  
secs. 1 to 4, inclusive.

T. 18 S., R. 30 E.,  
secs. 8 to 17, inclusive;  
secs. 20 to 29, inclusive;  
secs. 32 to 36, inclusive.

T. 19 S., R. 30 E.

T. 20 S., R. 30 E.

T. 21 S., R. 30 E.

T. 22 S., R. 30 E.

T. 23 S., R. 30 E.

T. 24 S., R. 30 E.,  
secs. 1 to 18, inclusive.

T. 19 S., R. 31 E.,  
secs. 7 and 18;  
secs. 31 to 36, inclusive.

T. 20 S., R. 31 E.

T. 21 S., R. 31 E.

T. 22 S., R. 31 E.

T. 23 S., R. 31 E.

T. 24 S., R. 31 E.,  
secs. 1 to 18, inclusive;  
secs. 35 and 36.

T. 25 S., R. 31 E.,  
secs. 1 and 2.

T. 19 S., R. 32 E.,  
secs. 25 to 28, inclusive;  
secs. 31 to 36, inclusive.

T. 20 S., R. 32 E.



T. 21 S., R. 32 E.

T. 22 S., R. 32 E.,  
secs. 1 to 12, inclusive.

T. 19 S., R. 33 E.,  
secs. 21 to 36, inclusive.

T. 20 S., R. 33 E.

T. 21 S., R. 33 E.

T. 22 S., R. 33 E.,  
secs. 1 to 12, inclusive.

T. 19 S., R. 34 E.,  
secs. 19 and 20;  
secs. 29 to 32, inclusive.

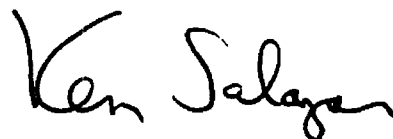
T. 20 S., R. 34 E.,  
secs. 3 to 10, inclusive;  
secs. 15 to 36, inclusive.

T. 21 S., R. 34 E.,  
secs. 5 to 8, inclusive;  
secs. 17 to 20, inclusive;  
secs. 29 to 32, inclusive.

T. 22 S., R. 34 E.,  
sec. 6.

The area described, including public and non-public lands, aggregates 497,002.03 acres, more or less.

**Sec. 9 Administrative Provisions.** The Director, BLM, is authorized to delegate responsibilities herein as is determined appropriate. This Order will remain in effect until superseded, replaced, or incorporated into the Departmental Manual.



Secretary of the Interior

Date: December 3, 2012

## McMillan, Michael, EMNRD

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**From:** McMillan, Michael, EMNRD  
**Sent:** Friday, November 3, 2017 10:49 AM  
**To:** Ben Stone  
**Cc:** Goetze, Phillip, EMNRD; Lowe, Leonard, EMNRD; Jones, William V, EMNRD; Podany, Raymond, EMNRD; Inge, Richard, EMNRD; Klein, Ranell, EMNRD  
**Subject:** Protested Application: Mobley Ranch SWD Well No. 1 (API 30-015-Pending; Appl. No. pMAM1729659123) – Unit C, Section 19, T. 23 S., R. 30 E., NMPM, Eddy County, New Mexico  
**Attachments:** SWD SolarisWaterMidstream\_MosaicPotash EddyCo.pdf

RE: Mobley Ranch SWD Well No. 1 (API 30-015-pending; Appl. No. pMAM1729659123) – Unit C, Section 19, T. 23 S., R. 30 E., NMPM, Eddy County, New Mexico.

Mr. Stone:

OCD was notified that Mosaic Potash Carlsbad Inc. is protesting this application for approval of a salt water disposal well into the Devonian and Silurian formations. Mosaic Potash Carlsbad Inc. has been identified as an affected person for the proposed salt-water disposal well. Therefore, you are being notified that if Solaris Water Midstream, LLC wishes for this application to be considered, it must either go to hearing or may be reviewed administratively if the protest is withdrawn as a result of a negotiated resolution with this party. The application will be retained by OCD, but suspended from further administrative review. Please contact OCD once you have made a decision regarding the application within the next 30 days. If the protest remains after 30 days, OCD will initiate the process for the application to be reviewed at hearing. Please contact me with any questions regarding this matter.

Contact for that Mosaic Potash Carlsbad Inc.  
Paul Gill  
General Manager and VP-Operations  
1361 Potash Mines Road  
Carlsbad, NM 88220  
Phone: 575.628.6207  
E-mail: [paul.gill@mosaicco.com](mailto:paul.gill@mosaicco.com)

Michael McMillan  
1220 South St. Francis  
Santa Fe, New Mexico  
505-476-3448  
[Michael.mcmillan@state.nm.us](mailto:Michael.mcmillan@state.nm.us)

10-26-2017

RECEIVED OCD

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

2017 NOV -2 P 2: 21

7013 3020 0001 4216 5849

Attn: David Cattnach, Director

RE: Objection to Application of Solaris Water Midstream, LLC to permit for salt water disposal in the proposed Mobley Ranch SWD Well No. 1, to be located in Section 19, Township 23 South, Range 30 East, NMPM, Eddy County, New Mexico

Dear Mr. Cattnach:

In accordance with Subsection C of 19.15.26.8 NMAC, Mosaic Potash Carlsbad Inc. ("Mosaic") submits this objection to the Application for Authorization to Inject of Solaris Water Midstream, LLC ("Solaris") for authorization to operate a salt water disposal well in the proposed Mobley Ranch SWD Well No. 1 referenced above.

Mosaic owns and operates an underground potash mine, surface mill (processing plant) and associated facilities in Eddy County, New Mexico. While Mosaic does not currently mine near the location of the proposed well, the Bureau of Land Management ("BLM") and the Department of the Interior Order #3324 has identified potash (both sylvite and langbeinite) reserves in the area.

To avoid risks to those reserves that salt water disposal operations may present, Mosaic respectfully requests that Solaris relocate the proposed well to the western part of Section 19, Township 23 South, Range 30 East on BLM land in proximity to four oil and gas drill islands that we understand are currently proposed for development. Doing so would preserve the opportunity for additional potash development at or near the now-proposed well location and consolidate oil and gas infrastructure in the area.

Thank you for your consideration of this matter.

Sincerely,



Paul Gill

10/26/2017.

General Manager & VP-Operations  
Mosaic Potash Carlsbad Inc.

State of New Mexico  
Energy, Minerals and Natural Resources Department

---

Susana Martinez  
Governor

Ken McQueen  
Cabinet Secretary

Matthias Sayer  
Deputy Cabinet Secretary

David R. Catanach, Division Director  
Oil Conservation Division



October 25, 2017

Mr. Luke Clausen  
Apex Disposal Services LLC  
518 17<sup>th</sup> Street, Suite 650  
Denver, CO. 80161

**RE: Cancellation of Authority - Administrative Order CA-3**  
Authority: Administrative Order SWD-1617; Injection Authority under  
19.15.26.8E. NMAC  
Mobley Ranch SWD Well No. 1      API 30-015-43267  
Unit C, Sec 19, T23S, R30E, NMPM, Eddy County, New Mexico

Mr. Clausen:

Reference is made to your request on behalf of Apex Disposal Services LLC (OGRID 370604; "Apex") received by the Division on September 14, 2017, for the above named well. Apex has requested the cancellation of Administrative Order SWD-1617 approved on February 15, 2016.

It is our understanding that Apex has requested cancellation of the order because Apex is exiting the salt water disposal business, and is selling assets. The Division finds that granting this request is in the interest of conservation and will prevent waste and protect the environment. Therefore, the authority issued to Apex under Administrative Order SWD-1617 is cancelled.

Sincerely,

David R. Catanach  
Director

DRC/mam

cc:      Oil Conservation Division – Artesia Office  
            Administrative Order SWD-1617  
            Well File API 30-015-43267

August 31, 2017

RECEIVED OCD  
2017 SEP 14 P 3: 53

David R. Catanach, Division Director  
Oil Conservation Division  
State of New Mexico  
Energy, Minerals and Natural Resources Department  
1220 South St. Francis Dr.  
Santa Fe, NM 87505  
P: (505)476-3440

Dear Mr. Catanach,

Apex Disposal Services LLC ("Apex") was authorized to utilize its Mobley Ranch SWD Well No. 1 (API 30-015-43267) for disposal of oil field produced water (UIC Class II only) via Administrative order SWD-1617 on February 15, 2016. Apex is exiting the salt water disposal business in New Mexico and is selling its assets to Solaris Midstream DB-NM LLC ("Solaris"). As a result, Apex will no longer require this authorization and would like to terminate the authorization immediately. Solaris will be pursuing their own injection permit application, which we support fully.

Thank you for your assistance in this matter. If you have any questions, please do not hesitate to contact me at (701) 260-3412, or via email at [LClausen@dtcenergygroup.com](mailto:LClausen@dtcenergygroup.com).

Best regards,



Luke Clausen  
Apex Disposal Services





# FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V16.2]

DATE RECORD: First Rec: 10/23/17 Admin Complete: 11/02/17 or Suspended: 10/02/17 Add. Request/Reply: Protest

ORDER TYPE: WFX / PMX (SWD) Number: 1743 Order Date: 07/03/18 Legacy Permits/Orders: Originally issued as SWD-1617, cancelled CA-3

Well No. 1 Well Name(s): Mobley SWD  
API: 30-0 15-45072 Spud Date: TBD - Soon New or Old (EPA): New (UIC Class II Primacy 03/07/1982)

Footages 225' FNL / 2460' FEL Lot - or Unit C Sec 19 Tsp 23S Rge 30E County Eddy

General Location: 10.3 miles east of Loving, Remuda Basia Pool: SWD, Devonian-Silurian Pool No.: 97869

BLM 100K Map: Carlsbad Operator: Solaris Water Midstream, LLC OGRID: 371643 Contact: Stone/SOS Consulting

COMPLIANCE RULE 5.9: Total Wells: 7 Inactive: 0 Fincl Assur: Blanket OK Compl. Order? No IS 5.9 OK? Yes Date: 07/03/18

WELL FILE REVIEWED ☒ Current Status: APD submitted; API issued but no APD in well file

WELL DIAGRAMS: NEW: Proposed ☒ or RE-ENTER: Before Conv. ☐ After Conv. ☐ Logs in Imaging:                     

Planned Rehab Work to Well: \* includes Conductor Casing / 36" / 30" to 120' with 200 SX Unit

Well Construction Details		Sizes (in) * Borehole / Pipe	Setting Depths (ft)	Stage Tool	Cement Sxpr Cf	Cement Top and Determination Method
Planned <input checked="" type="checkbox"/> or Existing <u>Surface</u>		<u>26 / 20</u>	<u>0 to 400</u>		<u>690</u>	<u>Circulate to surface</u>
Planned <input checked="" type="checkbox"/> or Existing <u>Intern/Prod</u>		<u>17 1/2 / 13 3/8</u>	<u>0 to 3310</u>	<u>None</u>	<u>1910</u>	<u>Circulate to surface</u>
Planned <input type="checkbox"/> or Existing <u>Intern/Prod</u>		<u>12 1/4 / 9 5/8</u>	<u>0 to 10900</u>	<u>2 3310 7050</u>	<u>1800</u>	<u>Circulate to surface</u>
Planned <input type="checkbox"/> or Existing <u>Prod/Iner</u>		<u>8.5 / 7 5/8</u>	<u>10600 to 15160</u>	<u>None</u>	<u>430</u>	<u>TOL - not clear request CBL</u>
Planned <input type="checkbox"/> or Existing <u>Liner</u>		<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Planned <input checked="" type="checkbox"/> or Existing <u>OH/ PERF</u>		<u>6.5</u>	<u>15160 to 16500</u>	<u>Inj Length</u>		

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		<u>Mississippian</u>	<u>-</u>
Confining Unit: <u>Litho.</u> Struc. <u>Por.</u>	<u>φ</u>	<u>Woodford</u>	<u>[ &lt; 200 ]</u>
Proposed Inj Interval TOP:	<u>15160</u>	<u>Devonian</u>	<u>15160</u>
Proposed Inj Interval BOTTOM:	<u>16500</u>	<u>Silurian/Fusshman</u>	<u>-</u>
Confining Unit: Litho. Struc. <u>Por.</u>	<u>?</u>	<u>Marathon</u>	<u>?</u>
Adjacent Unit: Litho. Struc. Por.		<u>Simpson</u>	<u>?</u>

Completion/Operation Details:	
Drilled TD <u>-</u>	PBTD <u>-</u>
NEW TD <u>16500</u>	NEW PBTD <u>-</u>
NEW Open Hole <input checked="" type="checkbox"/> or NEW Perfs <input type="checkbox"/>	
Tubing Size <u>5.5 inch to 5.5 inch</u>	Inter Coated? <u>Yes</u>
Proposed Packer Depth <u>15100</u> ft	
Min. Packer Depth <u>15060</u> (100-ft limit)	
Proposed Max. Surface Press. <u>3032</u> psi	
Admin. Inj. Press. <u>3032</u> (0.2 psi per ft)	

### AOR: Hydrologic and Geologic Information

POTASH: R-11 (P Yes) Noticed? Yes BLM Sec Ord ☒ WIPP No Noticed? No Salt/Salado T: 365 B: 13360 NW: Cliff House fm

FRESH WATER: Aquifer Alluvial/Rustler Max Depth 370' HYDRO AFFIRM STATEMENT By Qualified Person ☒

NMOSE Basin: Carlsbad CAPITAN REEF: thru - adj - NA ☒ No. GW Wells in 1-Mile Radius? 1 FW Analysis? Yes

Disposal Fluid: Formation Source(s) DAG/WC/Penn Analysis? Yes On Lease ☐ Operator Only ☐ or Commercial ☒

Disposal Interval: Inject Rate (Avg/Max BWPD): 20000/30000 Protectable Waters? No Source: WAPPS System: Closed or Open

HC Potential: Producing Interval? No Formerly Producing? No Method: Logs/DST/P&A/Other Mudlog request 2-Mi Radius Pool Map ☒

AOR Wells: 1/2-M Radius Map and Well List? NA No. Penetrating Wells: φ [AOR Horizontals: - AOR SWDs: -]

Penetrating Wells: No. Active Wells φ Num Repairs? - on which well(s)? - Diagrams? -

Penetrating Wells: No. P&A Wells φ Num Repairs? - on which well(s)? - Diagrams? -

NOTICE: Newspaper Date 11/02/17 (rcvd) Mineral Owner Fee / Mobley Ranch Surface Owner Fee / Mobley Ranch N. Date 10/28/17

RULE 26.7(A): Identified Tracts? Yes Affected Persons: BLM / XTO / Devon / BNT O&G / Mosaic Potash N. Date 10/28/17

Order Conditions: Issues: HC potential; cement contingency; injection profile of area

Additional COAs: Mudlog; CBL requirements for uncirculated; injection survey in 2 years; formation picks