

Application TO DRILL

Received: 06/28/2019

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

McMillan, Michael, EMNRD

From: David Alleman <dalleman@all-llc.com>
Sent: Friday, June 28, 2019 2:27 PM
To: Jones, William V, EMNRD; Goetze, Phillip, EMNRD; McMillan, Michael, EMNRD; Kautz, Paul, EMNRD
Cc: Nate Alleman
Subject: [EXT] Goodnight_Midstream_Permian,_LLC_-_Sosa_SA_17_2_-_Application_for_Permit_to_Drill
Attachments: Sosa SA 17 2 - OCD Drilling Application.pdf

Subject: Goodnight Midstream Permian, LLC – Sosa SA 17 2 – Application for Permit to Drill

To Whom It May Concern,

On behalf of Goodnight Midstream Permian, LLC (Goodnight), ALL Consulting, LLC (ALL) is submitting the enclosed Application for Permit to Drill for the Sosa SA 17 2, a proposed salt water disposal well, in Lea County, NM.

Should you have any questions regarding the enclosed application, please contact Nate Alleman at (918) 382-7581 or nalleman@all-llc.com.

Sincerely,
ALL Consulting
Nate Alleman
Project Manager

David Alleman

Senior Consultant/Project Manager
PH: 918-382-7581
Cell: 918-521-6448
www.all-llc.com
Tulsa, OK 74119

June 28, 2019

New Mexico Oil Conservation Division - District 1
1625 N. French Drive
Hobbs, NM 88240

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Sincerely,
ALL Consulting



Nate Alleman
Project Manager

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

Operator Name and Address Goodnight Midstream Permian, LLC 5910 N Central Expressway, Suite 850, Dallas, TX 75206		OGRID Number 372311
		API Number
Property Code	Property Name Sosa SA 17	Well No. 2

7. Surface Location

UL - Lot N	Section 17	Township 21S	Range 36E	Lot Idn	Feet from 470	N/S Line SOUTH	Feet From 1,815	E/W Line WEST	County LEA
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8. Proposed Bottom Hole Location

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

Pool Name SWD; SAN ANDRES	Pool Code 96121
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Additional Well Information

Work Type N	Well Type S	Cable/Rotary R	Lease Type Private Surface/Federal Minerals	Ground Level Elevation 3,648'
Multiple No	Proposed Depth 5,400'	Formation San Andres	Contractor TBD	Spud Date Upon Approval
Depth to Ground water 246' (CP-01485 - Pod 1)		Distance from nearest fresh water well 217 (CP-01485 - Pod 1)		Distance to nearest surface water 11,856' (Northwest)

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	12-1/4"	9-5/8"	40 lb/ft	1,465'	460	Surface
Intermediate 1	8-3/4"	7"	26 lb/ft	5,400'	710	Surface
Tubing	6-3/11"	4-1/2"	20 lb/ft	4,480'	N/A	N/A

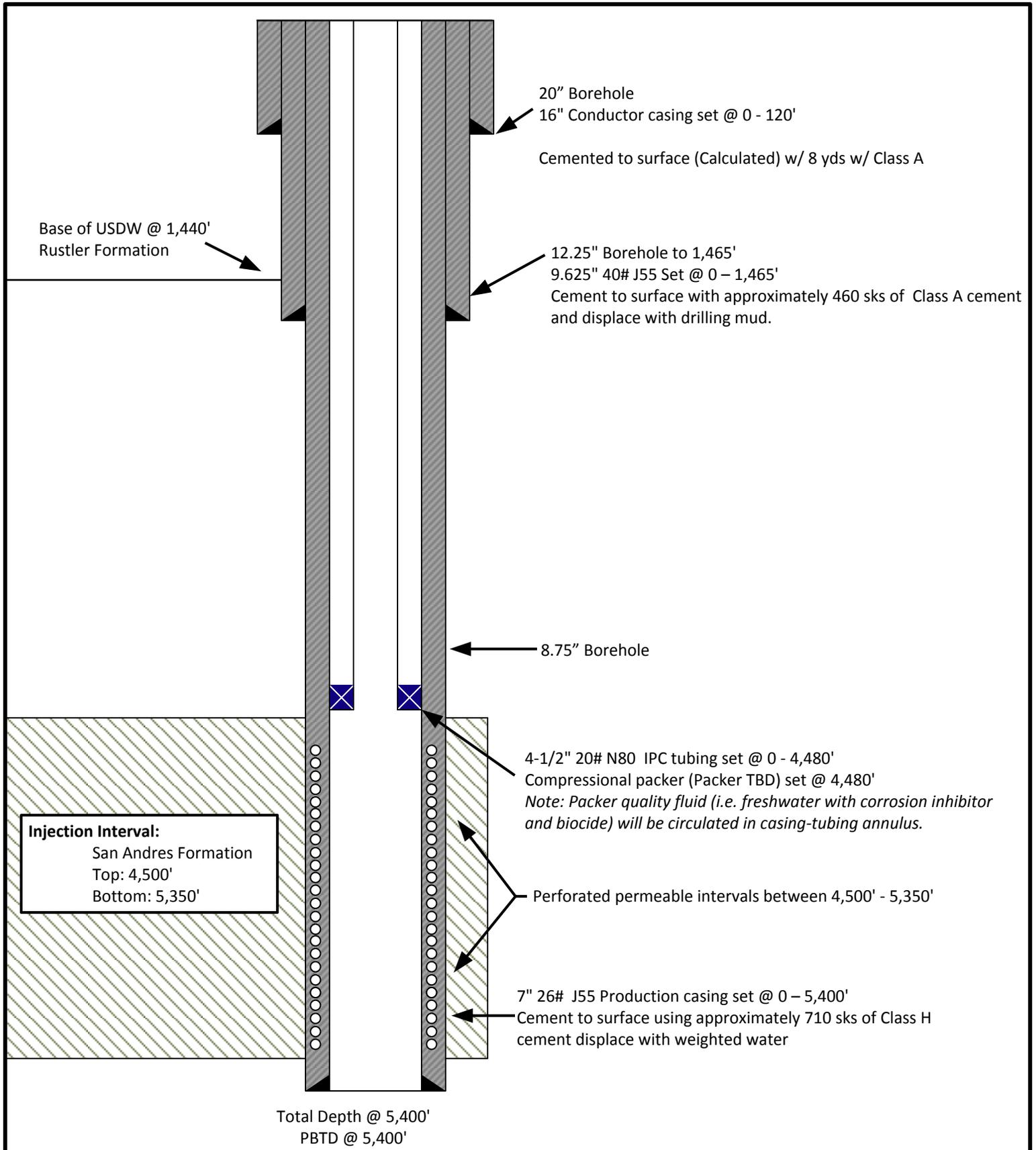
Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular, Pipe & Blind/Shear Rams	3,000 psi	3,000 psi	Hydril, Cameron or Equivalent

<p>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 <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input type="checkbox"/>, if applicable. Signature: <i>Nathan Alleman</i></p> <p>Printed name: Nate Alleman</p> <p>Title: Regulatory Specialist - ALL Consulting</p> <p>E-mail Address: nalleman@all-llc.com</p> <p>Date: 6/28/2019</p>	OIL CONSERVATION DIVISION	
	Approved By:	
	Title:	
	Approved Date:	Expiration Date:
	Conditions of Approval Attached	
	Phone: 918-237-0559	



Note: Listed depths and cement volumes are approximates based on available information.

NOT TO SCALE

Prepared by:

Drawn by: Joshua Ticknor

Project Manager:
Nathan Alleman

Date: 05/29/2019

ALLCONSULTING

Goodnight Midstream Permian, LLC
Sosa SA 17 2
Section 17, Twp 21S, Rng 36E
470' FSL & 1,815' FWL
Lea County, NM

Goodnight Midstream Permian LLC

Sosa SA 17 2

470' FSL & 1,815' FWL

Section 17, Twp 21S, Rng 36E

Lea County, New Mexico

Proposed Drilling Plan for New SWD

1. **Geologic Information:** Permian geologic formations

The Permian San Andres Formation consist of interbedded carbonates rocks including dolomites, siltstones, and sands. Several thick sections of porous and permeable intervals are present within this formation in the area. Geologic information and depths of formation tops were obtained from surrounding wells within the area of interest. Total depth is 50 feet below the base of the San Andres Formation. The base of the Rustler Formation and top of the Salado Formation is at approximately 1,440 feet plus 25 feet equals 1,465 feet to set bottom of the surface casing to protect the deepest underground sources of drinking water (USDWs).

Estimated Formation Top Depths:

Rustler	1,275'
Salado	1,440'
Grayburg	3,910'
San Andres	4,500'
Total Depth	5,400'

2. **Proposed Drilling Plan:**

- a. Move in equipment, excavate cellar and install tinhorn, and then drill conductor hole and set and cement in conductor casing.
- b. Mobilize drilling rig and rig up drilling rig and associated equipment onsite. Set up H₂S wind direction indicators and monitors; brief all personnel on Emergency Evacuation Routes and ALL Consulting Site Health and Safety Plan.
- c. Everyone onsite will have stop work authority.
- d. Perform Job Safety Analysis (JSA) meetings before each drilling shift change and prior to any subcontractor performing any task on the location. All equipment should be inspected daily and repaired or replaced as required.
- e. Drilling operations commence.
- f. Have mud logger monitoring returns. All drill cuttings and waste hauled to specified waste facility.
- g. After drilling the surface hole and setting and cementing the casing; if hydrogen sulfide (H₂S) levels are detected greater than 10ppm, implement H₂S Plan by ceasing operations, shut in well, employ H₂S safety trailer and personnel safety devices, install flare line, etc. – refer to plan.
- h. Proper secondary containment needs to be in place. Spills need to be cleaned up immediately. Repair or otherwise correct the situation within 48 hours before resuming operations. Notify Oil Conservation Division (OCD) within 24 hours. Remediation started as soon as possible if required. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.

Proposed Sosa SWD G 1 Drilling Plan

i. Sundry forms need to be completed and filed as required by OCD.

3. **Proposed Casing Program:** Casing designed as follows:

STRING	HOLE SZ	DEPTH	CSG SZ	COND	WT/GRD	CLLPS/BRS	TNSN
						<i>(Minimum Safety Factors)</i>	
Conductor	20"	0-120'	16.0"	n/a	n/a	n/a	n/a
Surface	12.25"	0-1,465'	9.625"	New	40# J55	1.125/1.1	1.8
Production	8.75"	0-5,400'	7.0"	New	26# J55	1.125/1.1	1.8
Tubing	6.276"	0-4,480'	4.5"	New	20# N80 IPC	1.125/1.1	1.8

Notes:

- ✓ A deviation survey will be conducted and submitted with the Well Completion Report (Form C-105)
- ✓ While running all casing strings, the pipe will be kept a minimum of 1/3 full at all times to avoid approaching the collapse pressure of casing.
- ✓ Based on well completions and geophysical logs on adjacent wells, 7.0" casing shoe is expected to be set at 5,400'. Similarly, total depth will be approximately 5,400' as determined by open hole geophysical logging and after suitable porosity and low resistivity values have been identified. Maximum perforated interval is anticipated to be from 4,500' to 5,350', but may change based upon actual wellbore determinations. A sundry notice will document such events as a C-105 well completion report filed within 60 days.

4. **Proposed Cementing Plans:**

Surface Casing: Cemented with approximately 460 sacks of Class A cement with 25% excess and circulated to the surface.

Production Casing: Cement with approximately 710 sacks of Class H cement with 25% excess and cement back to surface inside the 9-5/8" surface casing string. Cement top to be confirmed by cement bond logging after cement has cured to appropriate compressive strength.

5. **Pressure Control:** All Blowout Preventers (BOP) and related equipment will comply with well control requirements as described OCD Rules and Regulations and API RP 53, Section 17. The BOP will be either a Hydril, Cameron or equivalent. Minimum working pressure of the BOP and related equipment required for the drilling shall be 500 psi. The maximum working pressure is anticipated at 3,000 psig and the test pressure will be 3,000 psig. The OCD Hobbs district office shall be notified a minimum of 4 hours in advance for a representative to witness all BOP pressure tests. The test shall be performed by an independent service company utilizing a test plug (no cup of J-packer). The results of the test shall be recorded on a calibrated test chart submitted to the OCD district office. BOP testing shall be conducted at:

- a. Installation;
- b. After equipment or configuration changes;

Proposed Sosa SWD G 1 Drilling Plan

- c. At 30 days from any previous test, and;
- d. Any time operations warrant, such as well conditions.

The BOP specifications to be used during the various phases of the drilling and casing installation are included in the table below:

Casing Size	Annular Preventer	Rams
16"	26-3/4" – 3M, with diverter	None
9.625"	11" – 5M	Pipe & Blind/Shear – 5M
7.0"	11" – 5M	Pipe & Blind/Shear – 5M

A diagram showing the representative BOP setup is included as Attachment 1.

6. **Auxiliary Well Control and Monitoring:** Hydraulic remote BOP operation and mudlogging to monitor returns.

7. **Mud Program and Monitoring:** Mud will be balanced for all operations with adjustment as needed based on actual wellbore conditions and is proposed as follows:

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	pH
0-1,465'	FW Spud Mud	8.5-9.2	70-40	20	12	NC	10.0
1,465'-5,400'	Brine Mud	9.2-10.0	28-32	NC	NC	NC	10.0

Mud and all cuttings monitored with all drill cuttings recovered for disposal. Returns shall be visually and electronically monitored. In the event of H₂S, mud shall be adjusted appropriately by weight and H₂S scavengers.

8. **H₂S Safety:** This well and related facilities are not expected to have H₂S releases. However, there may be H₂S in the area. There are no private residences or public facilities in the area but a contingency plan has been developed. Goodnight Midstream Permian, LLC will have a company representative available to personnel throughout all operations. If H₂S levels greater than 10ppm are detected or suspected, the H₂S Contingency Plan will be implemented at the appropriate level.

H₂S Safety – There is a low risk of H₂S in this area. The operator will comply with the provisions of New Mexico Administrative Code (NMAC) 19.15.11 and Bureau of Land Management (BLM) Onshore Oil and Gas Order #6.

- a. Monitoring – all personnel will wear monitoring devices.
- b. Warning Sign – a highly visible H₂S warning sign will be placed for obvious viewing at the vehicular entrance point onto location.
- c. Wind Detection – two (2) wind direction socks will be placed on location.
- d. Communications – will be via cellular phones and/or radios located within reach of the driller, the rig floor and safety trailer when applicable.
- e. Alarms – will be located at the rig floor, circulating pump/reverse unit area and the flare line and will be set for visual (red flashing light) at 15 ppm and visual and audible (115 decibel siren) at 20 ppm.
- f. Mud program – If H₂S levels require, proper mud weight, safe drilling practices and H₂S scavengers will minimize potential hazards.

Proposed Sosa SWD G 1 Drilling Plan

- g. Metallurgy – all tubulars, pressure control equipment, flowlines, valves, manifolds and related equipment will be rated for H₂S service if required.

The Goodnight Midstream Permian, LLC H₂S Contingency Plan will be implemented if levels greater than 10ppm H₂S are detected.

9. **Geophysical Logging and Testing:** Goodnight Midstream Permian, LLC expects to run:
 - a. Geophysical logging through the proposed injection interval will ensure the target interval remains within the San Andres.
 - b. An open hole gamma ray, SP, compensated density- neutron and dual resistivity log suite will be run from total depth to approximately 525’.
 - c. A cement bond log with gamma ray and collar locator will be run (Radial, CET or equivalent) on the production casing.
 - d. No cores or drill stem tests will be conducted. (The well may potentially be step rate tested in the future if additional injection pressures are required.)
10. **Potential Hazards:** H₂S is a potential hazard. No abnormal pressure or temperatures are anticipated, but drilling operations will be prepared in the event that those conditions occur.

No loss of circulation is expected to occur with the exception of drilling into the target disposal zone. All onsite personnel will be familiar with the safe operation of the equipment being used to drill this well. The maximum anticipated bottom-hole pressure is 2500 psig and the maximum anticipated bottom-hole temperature is 210°F.

11. **Waste Disposal Management:** All drill cuttings, fluids, and other solid wastes associated with drilling and completion operations will be transported to a solid waste facility and commercial Class IID injection operation that has been approved and permitted by the Environmental Bureau of the OCD.

12. Anticipated Drilling Commencement Date: Upon approval of the permit for saltwater disposal (SWD), operations would begin within 30 days based on rig availability. Drilling and completion of the well will take approximately six to seven weeks. Installation of the surface facility such as the secondary containment and tank battery, plumbing, injection pump(s), and other treatment and filtering associated equipment would be occurring after the well is completed. In any event, it is not expected for the construction of the surface facility of the project to last more than 90 days, pending on availability of subcontractors and equipment lead times.

13. Completion for Salt Water Disposal: Subsequent to SWD permit issuance from OCD and prior to commencing any work, a Notice of Intent (NOI) sundry will be submitted to complete 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 testing per BLM and OCD test procedures (including appropriate OCD notification). The tubing and packer will be set at a depth of approximately 4,480 feet and the casing/tubing annulus will be filled with freshwater and corrosion inhibitor and pressure tested to the required test pressure using the standard annulus pressure test. Anticipated daily maximum volume is 25,000 barrels of water per day (bpd) and average of 17,500 bpd at a maximum surface injection pressure of 900 psig (0.2 psi/ft to the top of the injection interval).

Proposed Sosa SWD G 1 Drilling Plan

If satisfactory disposals rates cannot be achieved at default pressure of .02 psi/ft, Goodnight Midstream Permian, LLC will conduct a step-rate test and apply for an injection pressure increase 50 psig below actual parting pressure achieved during the step-rate testing.

Attachment 1 – Representative BOP Setup

