# Initial Application Part I

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*

| DATE IN | SUSPENSE | ENGINEER | LOGGED IN | TYPE | APP NO. |
|---|---|---|---|---|---|
| 06/28/2019 | | | | SWD | pMAM1918242353 |

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]

**SWD-2180**

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

Goodnight Midstream
372311

Springer SWD G1 SWD#1

[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

SWD; Glorieta
96106

[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.**

| Nate Alleman | Nathan Alleman | Regulatory Specialist - ALL Consulting | 6/28/2019 |
|---|---|---|---|
| Print or Type Name | Signature | Title | Date |

nalleman@all-llc.com
Date e-mail Address

## McMillan, Michael, EMNRD

**From:** David Alleman <dalleman@all-llc.com>
**Sent:** Friday, June 28, 2019 3:37 PM
**To:** Jones, William V, EMNRD; Goetze, Phillip, EMNRD; McMillan, Michael, EMNRD
**Cc:** Nate Alleman
**Subject:** [EXT] Goodnight_Midstream_Permian, _LLC_-_Springer_SWD_G_1 _Application_for_Authorization_to_Inject
**Attachments:** Springer SWD G 1 - OCD Injection Application (Compiled).pdf

Subject: Goodnight Midstream Permian, LLC – Springer SWD G 1 Application for Authorization to Inject

To Whom It May Concern,

On behalf of Goodnight Midstream Permian, LLC (Goodnight), ALL Consulting, LLC (ALL) is submitting the enclosed Application for Authorization to Inject for the Springer SWD G 1, 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
Sr. Regulatory Specialist

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

ALL CONSULTING
GOVERNMENT RELATIONS · ENERGY · PLANNING · TECHNOLOGY
ENGINEERING · ENVIRONMENTAL

June 28, 2019

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

Subject: Goodnight Midstream Permian, LLC – Springer SWD G 1
Application for Authorization to Inject

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Sincerely,
ALL Consulting

Nathan Alleman

Nate Alleman
Sr. Regulatory Specialist

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

## APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: Goodnight Midstream Permian, LLC

ADDRESS: 5910 N Central Expressway, Suite 850, Dallas, TX 75206

CONTACT PARTY: Grant Adams PHONE: 214-444-7388(0)

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes ___X___No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

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

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

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

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Nathan Alleman TITLE: Regulatory Consultant - ALL Consulting

SIGNATURE: Nate Alleman DATE: 06/28/2019

E-MAIL ADDRESS: nalleman@all-llc.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

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

Side 2

III. WELL DATA

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

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

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

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

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

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

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

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

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

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

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

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

Application for Authorization to Inject
Well Name: Springer SWD G 1

## III – Well Data (*The Wellbore Diagram is included as **Attachment 1***)

**A.**

**(1) General Well Information:**

Operator: Goodnight Midstream Permian, LLC (OGRID No. 372311)
Lease Name & Well Number: Springer SWD G 1
Location Footage Calls: 940' FNL & 1,985' FWL
Legal Location: Unit Letter C, S13 T21S R36E
Ground Elevation: 3,552'
Proposed Injection Interval: 5,200' – 5,500'
County: Lea

**(2) Casing Information:**

| Type | Hole Size | Casing Size | Casing Weight | Setting Depth | Sacks of Cement | Estimated TOC | Method Determined |
|---|---|---|---|---|---|---|---|
| Surface | 12-1/4" | 9-5/8" | 40.0 lb/ft | 1,475' | 465 | Surface | Circulation |
| Intermediate 1 | 8-3/4" | 7" | 26.0 lb/ft | 5,550' | 725 | Surface | Circulation/ CBL |
| Tubing | 6-3/11" | 4-1/2" | 20.0 lb/ft | 5,180' | N/A | N/A | N/A |

**(3) Tubing Information:**

4-1/2" (composite weight string) of fiberglass-coated tubing with setting depth of 5,180'

**(4) Packer Information:** Lok-set or equivalent packer set at 5,180'

**B.**

**(1) Injection Formation Name:** Glorieta
**Pool Name:** SWD; GLORIETA
**Pool Code:** 91606
**(2) Injection Interval:** Perforated injection between 5,200' – 5,500'
**(3) Drilling Purpose:** New Drill for Salt Water Disposal
**(4) Other Perforated Intervals:** No other perforated intervals exist.
**(5) Overlying Oil and Gas Zones:** Below are the approximate formation tops for known oil and gas producing zones in the area.

- Grayburg (3,795')

**Underlying Oil and Gas Zones:** Below are the approximate formation tops for known oil and gas producing zones in the area.

- Tubb (6,260')

## V – Well and Lease Maps

The following maps are included in ***Attachment 2***:

- 2-mile Oil & Gas Well Map
- 2-mile Lease Map
- 1/2-mile Well Detail List w/ Casing Information for the Penetrating Well
- Potash Lease Map

## VI – AOR Well List

A list of the wells within the 1/2-mile AOR is included in ***Attachment 2***.

There is one proposed well that will penetrate the injection zone, and, based on application information, it will be properly cased and cemented to isolate the injection zone. The casing & cementing information for this well is also included in ***Attachment 2*.**

## VII – Proposed Operation

**(1)** **Proposed Maximum Injection Rate:** 20,000 bpd
**Proposed Average Injection Rate:** 12,500 bpd

**(2)** A **closed system** will be used.

**(3)** **Proposed Maximum Injection Pressure**: 1,040 psi (surface)
**Proposed Average Injection Pressure**: approximately 520 psi (surface)

**(4)** **Source Water Analysis:** It is expected that the injectate will consist of produced water from production wells completed in the Wolfcamp and Bone Springs formations. Analysis of water from these formations is included in ***Attachment 3***.

**(5)** **Injection Formation Water Analysis:** The proposed SWD will be injecting water into the Glorieta formation which is a non-productive zone known to be compatible with formation water from the Wolfcamp and Bone Springs formations. Water analyses from the Glorieta formation in the area are included in ***Attachment 4*.**

## VIII – Geologic Description

The proposed injection interval includes the Glorieta formations from 5,200 – 5,500 feet. This formation consists of interbedded carbonate rocks including dolomites, siltstones, and sands. Several thick intervals of porous and permeable rock capable of taking water are present within the subject formation in the area.

The freshwater formation is the Rustler at a depth of approximately 1,450 feet. Water well depths in the area range from approximately 95 - 151 feet below ground surface.

## IX – Proposed Stimulation Program

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

## X – Logging and Test Data

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

## XI – Fresh Groundwater Samples

Based on a review of data from the New Mexico Office of the State Engineer, 3 groundwater wells are located within 1 mile of the proposed SWD location. However, two of the three water wells (CP-00685 Pod 1 & CP-00446 Pod 2) were previously sampled on 09/04/2018 and 01/28/2019, and no additional samples were taken.

A water well map, details of water wells within 1-mile, and any associated water analyses are included in ***Attachment 5***.

## XII – No Hydrologic Connection Statement

No faulting is present in the area that would provide a hydrologic connection between the injection interval and overlying USDWs. Additionally, the casing program has been designed to ensure there will be no hydrologic connection between the injection interval and overlying USDWs.

## XIII – Proof of Notice

A Public Notice was filed with the Hobbs News-Sun newspaper and an affidavit is included in ***Attachment 6***.

A copy of the application was mailed to the OCD District Office, landowner, and leasehold operators within 1/2-mile of the proposed SWD location. A list of the recipients, as well as delivery confirmations, are included in ***Attachment 6***.

# Attachments

**Attachment 1:** Wellbore Diagram

**Attachment 2:** Area of Review Information:

- 2-mile Oil & Gas Well Map
- 2-mile Lease Map
- 1/2-mile Well Detail List w/ Casing Information for the Penetrating Well
- Potash Lease Map

**Attachment 3:** Source Water Analyses

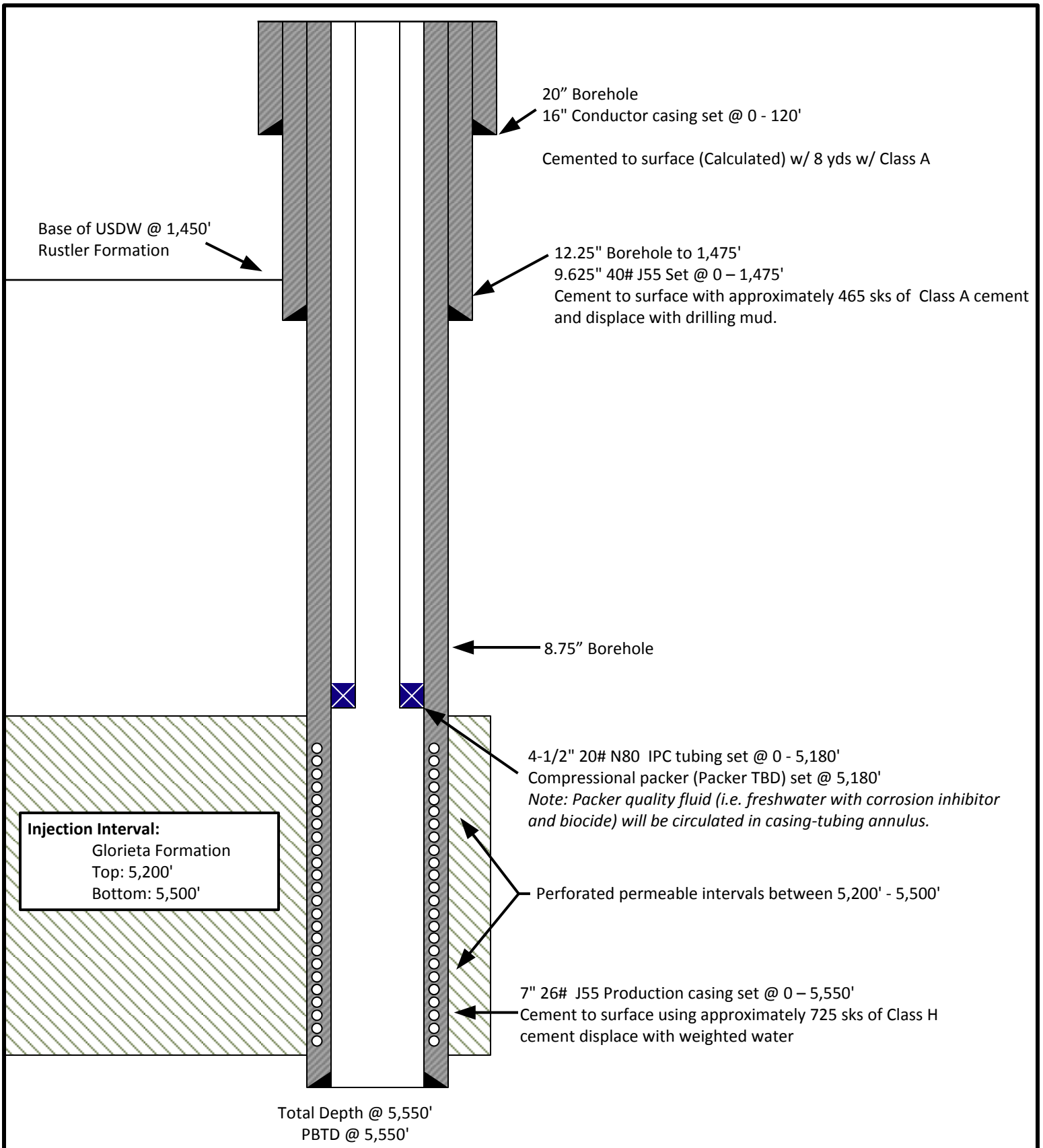
**Attachment 4:** Injection Formation Water Analyses

**Attachment 5:** Water Well Map and Well Data

**Attachment 6:** Public Notice Affidavit and Notice of Application Confirmations

**Attachment 1**

Wellbore Diagram




*NOT TO SCALE*

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

| | | |
|---|---|---|
| *Prepared by:* ALL CONSULTING | Drawn by: Joshua Ticknor | Goodnight Midstream Permian, LLC |
| | Project Manager: Nathan Alleman | Springer SWD G 1 |
| | Date: 06/06/2019 | Section 13, Twp 21S, Rng 36E<br>940' FNL & 1,985' FWL<br>Lea County, NM |

# SPECIFICATION GUIDES

## A-3™ LOK-SET Retrievable Casing Packer, Product Family No. H64630

| Casing | | | Packer | | | | |
|---|---|---|---|---|---|---|---|
| OD | | Weight * | Size | Nom ID | | Max Gage Ring OD | |
| in. | mm | lb/ft | | in. | mm | in. | mm |
| 4 | 101.6 | 9.5–12.9 | 41A2 | 1.500 | 38.1 | 3.244 | 82.4 |
| 4-1/2 | 144.3 | 21.6–23.6 | 41A2 | 1.500 | 38.1 | 3.244 | 82.4 |
| 4 | 101.6 | 9.5 | 41A4 | 1.500 | 38.1 | 3.423 | 112.4 |
| 4-1/2 | 114.3 | 18.8 | 41A4 | 1.500 | 38.1 | 3.423 | 112.4 |
| | | 13.5–17.7 | 41B | | | 3.578 | 90.9 |
| | | 11.6–13.5 | 43A2 | 1.978 | 50.2 | 3.786 | 96.2 |
| | | 9.5–10.5 | 43A4 | | | 3.786 | 96.2 |
| 5 | 127.0 | 15–18 | 43B | 1.978 | 50.2 | 4.140 | 105.2 |
| | | 11.5–15 | 43C | | | 4.265 | 108.3 |
| 5-1/2 | 139.7 | 26 | 43C | 1.978 | 50.2 | 4.265 | 108.3 |
| | | 20–23 | 45A2 | | | 4.515 | 114.7 |
| | | 15.5 –20 | 45A4 | | | 4.656 | 118.3 |
| | | 13–15.5 | 45B | | | 4.796 | 121.8 |
| 6 | 152.4 | 26 | 45B | 1.978 | 50.2 | 4.796 | 121.8 |
| | | 20–23 | 45C | | | 5.078 | 129.0 |
| | | 15–18 | 45D | | | 5.171 | 131.3 |
| 6-5/8 | 168.3 | 34 | 45E | 1.978 | 50.2 | 5.421 | 137.7 |
| | | 24–32 | 45F | | | 5.499 | 139.7 |
| | | 24 | 47A2 | 2.441 | 62.0 | 5.671 | 144.0 |
| | | 17–24 | 45G | 1.978 | 50.2 | 5.796 | 147.2 |
| | | 17–20 | 47A4 | 2.441 | 62.0 | 5.827 | 148.0 |
| 7 | 177.8 | 38 | 47A2 | 2.441 | 62.0 | 5.671 | 144.0 |
| | | 32–35 | 47A4 | | | 5.827 | 148.0 |
| | | 26–29 | 47B2 | | | 5.983 | 152.0 |
| | | 23–26 | 47B4 | | | 6.093 | 154.8 |
| | | 17–20 | 47C2 | | | 6.281 | 159.5 |
| 7-5/8 | 193.7 | 33.7–39 | 47C4 | 2.441 | 62.0 | 6.468 | 164.3 |
| | | 24–29.7 | 47D2 | | | 6.687 | 169.9 |
| | | 20–24 | 47D4 | | | 6.827 | 173.4 |
| 8-5/8 | 219.1 | 44–49 | 49A2 | 3.500 | 88.9 | 7.327 | 186.1 |
| | | 32–40 | 49A4 | | | 7.546 | 191.7 |
| | | 20–28 | 49B | | | 7.796 | 198.0 |
| 9-5/8 | 244.5 | 47–53.5 | 51A2 | 3.500 | 88.9 | 8.234 | 209.1 |
| | | 40–47 | 51A4 | | | 8.452 | 214.7 |
| | | 29.3–36 | 51B | | | 8.608 | 218.6 |

## AL-2™ Large Bore LOK-SET Retrievable Casing Packer Product Family No. H64628

| Casing | | Packer | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| OD | | Weight * | Size | Nom ID | | Max Gage Ring OD | | Max Diameter of Compressed Drag Block | |
| in. | mm | lb/ft | | in. | mm | in. | mm | in. | mm |
| 5-1/2 | 139.7 | 20 | 45A2 x 2-3/8 | 2.375 | 60.3 | 4.562 | 115.9 | 4.592 | 116.6 |
| | | 15.5–17 | 45A4 x 2-3/8 | | | 4.656 | 118.3 | 4.750 | 120.7 |
| | | 13 | 45B x 2-3/8 | | | 4.796 | 121.8 | 4.902 | 124.5 |
| 6 | 152.4 | 26 | 45B x 2-3/8 | 2.375 | 60.3 | 4.796 | 121.8 | 4.902 | 124.5 |

* *When selecting a packer for a casing weight common to two weight ranges (same OD), choose the packer size shown for the lighter of the two weight ranges. Example: for 7-in. (177.8 mm) OD 26 lb/ft casing use packer size 47B4. Under certain circumstances the other packer size may be run, such as when running in mixed casing strings.*

*Repair kits, including such items as packing elements, seal rings, etc., are available for redressing Baker Retrievable Packers. Contact your Baker Hughes representative. Use only Baker Hughes repair parts.*

# A-3 and AL-2 LOK-SET Retrievable Casing Packers

Product Family No. H64630 and H64628

## APPLICATION

The A-3™ LOK-SET™ packer combines advantages of a retrievable packer with the features of a permanent packer. An ability to lock down tubing forces makes the A-3 suitable for a broad range of applications, including production, injection, zone isolation, and remedial operations. The AL-2™ LOK-SET packer is similar to the A-3, and has a larger bore.

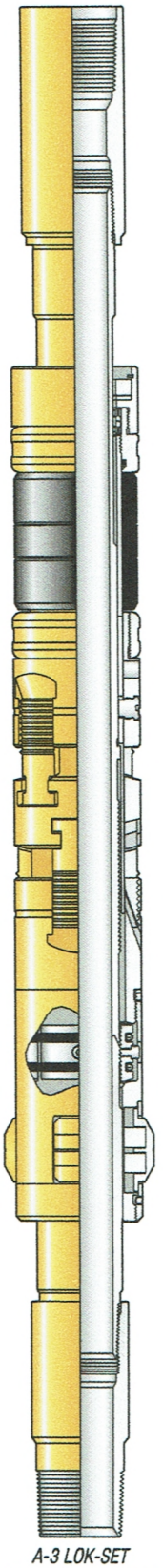
### Advantages

- Holds pressure from above and below, without relying on set-down weight, tubing tension, or hydraulic hold down
- Provides tubing anchoring with tension applied, suitable for pumping wells or injection, controlling tubing forces related to change fluid temperatures
- Opposed, non-transferring, dovetail slips prevent packer movement associated with changing differential pressures, while allowing the landing of the tubing in tension, neutral or compression
- Right-hand tubing rotation controls setting and releasing
- Packing element compression locks in by ratcheting action of lock segments, which restricts rotation to one direction

### Accessories

To provide a simple and reliable injection system for retrieving an injection string without having to unseat the packer:

L-10 or L-316 on-off sealing connectors, Product Family Nos. H68420 and H68422. Baker Hughes blanking plug can be used in the seating nipple profile of the on-off sealing connector to provide a means of plugging the lower zone while the tubing is being pulled.

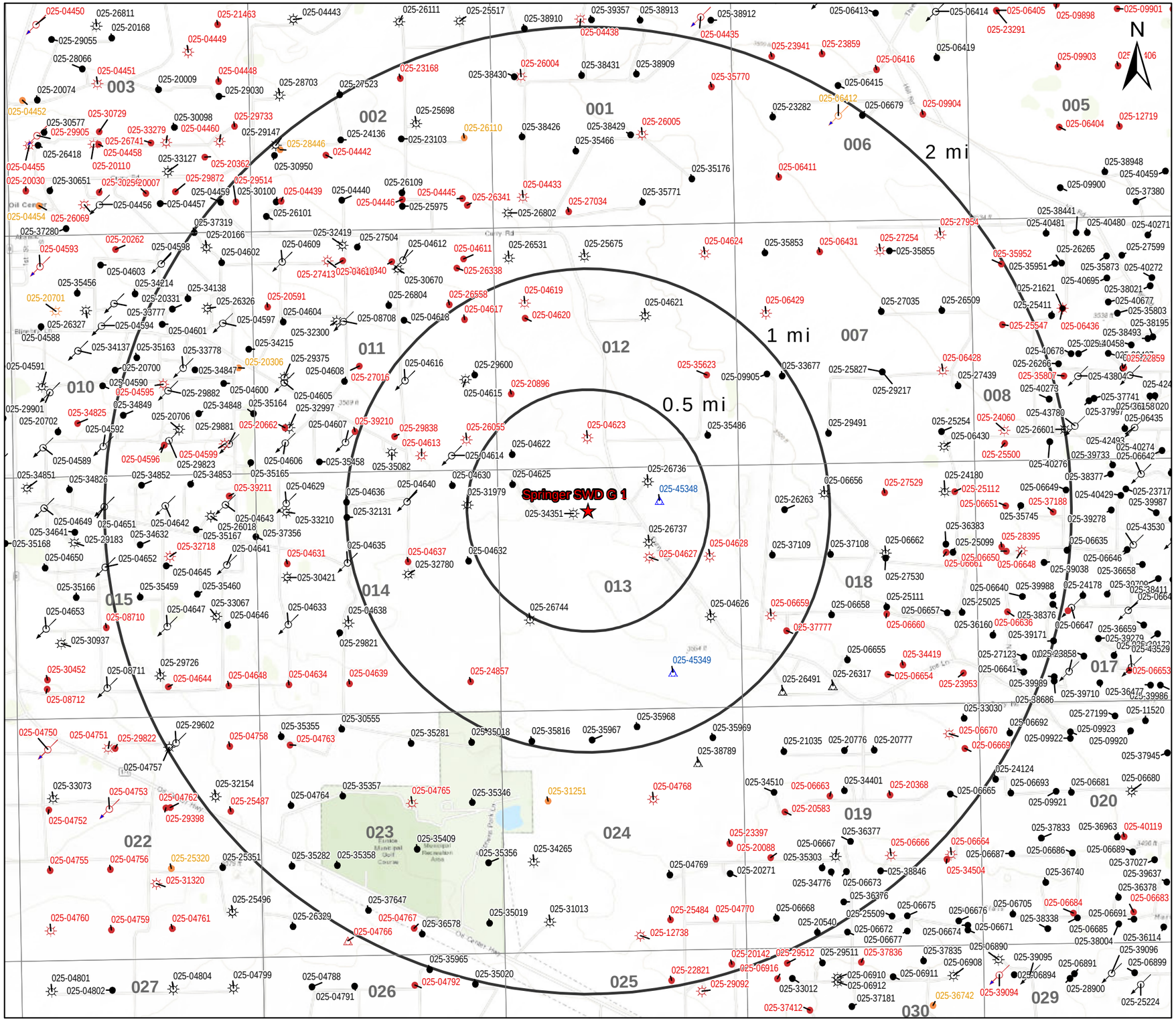


*A-3 LOK-SET*
*Retrievable Casing Packer*
*Product Family No. H64630*

**Attachment 2**

Area of Review Information:

- 2-mile Oil & Gas Well Map
- 2-mile Lease Map
- 1/2-mile Well Detail List w/ Casing Information for the Penetrating Well
- Potash Lease Map




## Legend

- Proposed SWD
- Gas, Active (60)
- Gas, Plugged (40)
- Gas, Temporarily Abandoned (1)
- Injection, Active (53)
- Injection, Plugged (7)
- Injection, Temporarily Abandoned (1)
- Oil, Active (269)
- Oil, Plugged (114)
- Oil, Temporarily Abondoned (8)
- Salt Water Injection, Active (4)
- Salt Water Injection, New (2)
- Salt Water Injection, Plugged (1)

# O&G Wells Area of Review

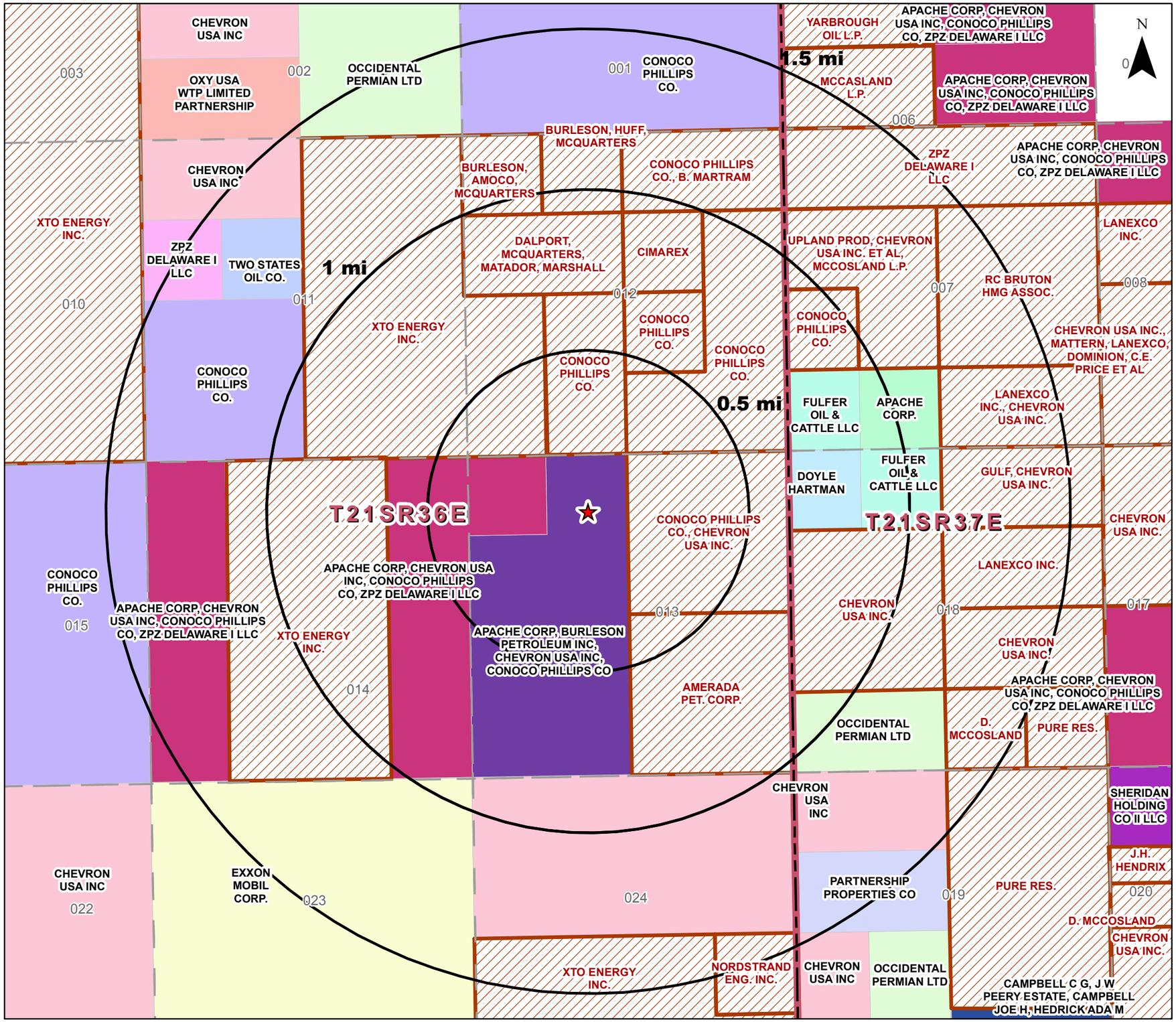
## Springer SWD G 1

**Lea County, New Mexico**

| Proj Mgr: Dan Arthur | June 03, 2019 | Mapped by: Ben Bockelmann |
|---|---|---|

*Prepared by:*

ALL CONSULTING




## Legend

- Proposed SWD
- Private Mineral Leases

**BLM Mineral Leases**

- APACHE CORP, BURLESON PETROLEUM INC, CHEVRON USA INC, CONOCO PHILLIPS CO
- APACHE CORP, CHEVRON USA INC, CONOCO PHILLIPS CO, ZPZ DELAWARE I LLC
- CAMPBELL C G, J W PEERY ESTATE, CAMPBELL JOE H, HEDRICK ADA M
- SHERIDAN HOLDING CO II LLC

**NMSLO Mineral Leases**

- APACHE CORP.
- CHEVRON USA INC
- CONOCO PHILLIPS CO.
- DOYLE HARTMAN
- EXXON MOBIL CORP.
- FULFER OIL & CATTLE LLC
- OCCIDENTAL PERMIAN LTD
- OXY USA WTP LIMITED PARTNERSHIP
- PARTNERSHIP PROPERTIES CO
- TWO STATES OIL CO.
- ZPZ DELAWARE I LLC

# Mineral Lease Area of Review

## Springer SWD G 1

**Lea County, New Mexico**

| Proj Mgr: Nate Alleman | June 12, 2019 | Mapped by: Ben Bockelmann |
|---|---|---|

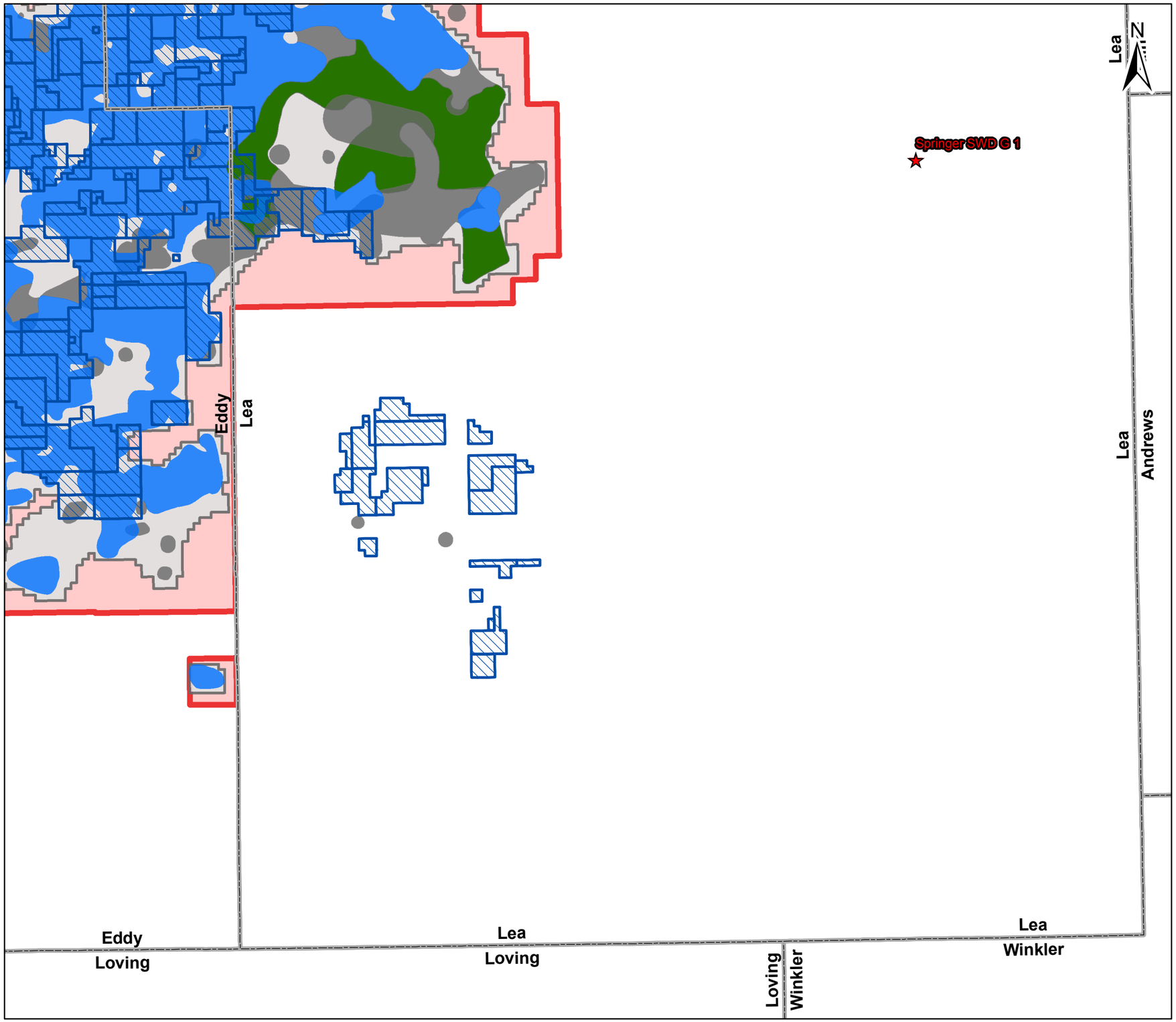
*Prepared by:*

ALL CONSULTING

| AOR Tabulation for Springer SWD G 1 (Top of Injection Interval: 4,500') | | | | | | | |
|---|---|---|---|---|---|---|---|
| Well Name | API# | Well Type | Operator | Spud Date | Location (Sec., Tn., Rng.) | Total Vertical Depth (feet) | Penetrate Inj. Zone? |
| EUNICE MONUMENT SOUTH UNIT #351 | 30-025-04622 | O | XTO ENERGY, INC | 6/15/1938 | M-12-21S-36E | 3910 | No |
| EUNICE MONUMENT SOUTH UNIT #352 | 30-025-04625 | O | XTO ENERGY, INC | 10/14/1938 | D-13-21S-36E | 3885 | No |
| LOCKHART B COM #011 | 30-025-31979 | G | PENROC OIL CORP | 5/19/1993 | A-14-21S-36E | 3660 | No |
| LOCKHART B COM #013 | 30-025-34351 | G | PENROC OIL CORP | 5/18/1998 | C-13-21S-36E | 3800 | No |
| GUTMAN #002 | 30-025-26737 | G | SPECIAL ENERGY CORP | 4/28/1980 | G-13-21S-36E | 4213 | No |
| GUTMAN #001 | 30-025-26736 | G | SPECIAL ENERGY CORP | 7/19/1980 | B-13-21S-36E | 4200 | No |
| JOSE ALTUVE SWD #001 | 30-025-45348 | S | GOODNIGHT MIDSTREAM PERMIAN, LLC | Not Drilled | B-13-21S-36E | Proposed (11,500) | Yes |
| ROY RIDDEL #001 | 30-025-04623 | Plugged | CHEVRON U S A INC | 11/24/1952 | N-12-21S-36E | Plugged (3856) | No |
| PRE-ONGARD WELL #001 (Texaco Exploration) | 30-025-04627 | Plugged | PRE-ONGARD WELL OPERATOR | 3/5/1937 | G-13-21S-36E | Plugged (4005) | No |

| Casing Information for Wells Penetrating the Springer SWD G 1 Injection Zone | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well Name | Surface Casing | | | | | | Intermediate Casing | | | | | | Production Casing | | | | | | Tubing | | | Packer | |
| | Set Depth | Casing Size | TOC | TOC Method Determined | Sks of Cement | Hole size | Set Depth | Casing Size | TOC | TOC Method Determined | Sks of Cement | Hole Size | Set Depth | Casing Size | TOC | TOC Method Determined | Sks of Cement | Hole Size | Set Depth | Tubing Size | Lining Material | Packer Type | Packer Set Depth |
| JOSE ALTUVE SWD #001* | 1350 | 9 5/8 | G.S. | RECORDS | 860 | 12 1/4 | N/A | N/A | N/A | N/A | N/A | N/A | 5700 | 7 | G.S. | RECORDS | 725 | 8 3/4 | N/A | N/A | N/A | N/A | N/A |

**Note**: *All information for this well is proposed.




## Legend

- Proposed SWD
- Potash Leases
- Ore Type - Measured
- Ore Type - Indicated
- Ore Type - Inferred
- KPLA
- SOPA

# Potash Leases
# Area of Review

## Springer SWD G 1
**Lea County, New Mexico**

| Proj Mgr: Dan Arthur | May 30, 2019 | Mapped by: Ben Bockelmann |
|---|---|---|

*Prepared by:*

ALL CONSULTING