

Additional Information

Long Shot SWD#1
(SWD-2494)

Updated Wellbore Diagram & Cementing Requirements
Rec'd April 16, 2024

From: [Oliver Seekins](#)
To: [Harris, Anthony, EMNRD](#)
Cc: [Goetze, Phillip, EMNRD](#); [Gebremichael, Million, EMNRD](#); [Reed Davis](#)
Subject: [EXTERNAL] RE: Waterbridge Longshot SWD#1 & Sniper SWD#1
Date: Tuesday, April 16, 2024 1:24:35 PM
Attachments: [image002.png](#)
[image003.png](#)
[Long Shot SWD #1 - WB Redesign Package 4.16.24.pdf](#)
[Sniper SWD #1 - WB Redesign Package 4.16.24.pdf](#)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Tony,

As requested we have completed the following revisions to the well designs and well data table:

1. An updated Wellbore diagram illustrating cement to the surface (TOC - Confirmed with a CBL) for the production casing for both the Long Shot and Sniper SWD applications.
2. An updated Section III – Well Data Casing Information Table to reflect the following for both the Long Shot and Sniper SWD applications:
 - a. TOC at the surface for the production casing on each well.
 - b. CBL for the surface casing on each well.

As discussed yesterday, these two applications are of extremely high importance to WaterBridge. Please do not hesitate to contact me with any questions.

Best Regards,

Oliver W. Seekins, PMP

Project Manager / Regulatory Specialist

A.L.L. Consulting, LLC

1718 S. Cheyenne Ave.

Tulsa, Oklahoma 74119

office: 918-382-7581 Ext. 141

Cell: 918-805-5037

From: Harris, Anthony, EMNRD <Anthony.Harris@emnrd.nm.gov>

Sent: Monday, April 15, 2024 3:12 PM

To: Oliver Seekins <oseekins@all-llc.com>

Cc: Goetze, Phillip, EMNRD <phillip.goetze@emnrd.nm.gov>; Gebremichael, Million, EMNRD <Million.Gebremichael@emnrd.nm.gov>

Subject: FW: Waterbridge Longshot SWD#1 & Sniper SWD#1

As discussed.

From: Harris, Anthony, EMNRD

Sent: Thursday, April 4, 2024 1:27 PM

To: nalleman@all-llc.com

Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@emnrd.nm.gov>; Gebremichael, Million, EMNRD <Million.Gebremichael@emnrd.nm.gov>

Subject: Waterbridge Longshot SWD#1 & Sniper SWD#1

Good Afternoon, Nate

With reference to the subject applications, please note that the Production casing will require cement to be circulated to surface. Furthermore, since these wells are located in a karst area, a CBL will be required for the surface casing.

Please provide the following information via the OCD portal or via return e-mail:

1. An updated Wellbore diagram illustrating cement to surface for the production casing on each well.
2. An updated Section III – Well Data Casing Information Table (see snapshot example below) to reflect the following:
 - a. TOC at surface for the production casing on each well.
 - b. CBL for the surface casing

III – Well Data (The Wellbore Diagram is included as **Attachment 1**)**A.****(1) General Well Information:**

Operator: Waterbridge Stateline, LLC (OGRID No. 330129)
 Lease Name & Well Number: Long Shot SWD #1
 Location Footage Calls: 812 FSL & 2,220 FEL
 Legal Location: Unit Letter O, S18 T20S R27E
 Ground Elevation: 3,308'
 Proposed Injection Interval: 8,320' – 8,995'
 County: Eddy

(2) Casing Information:

| Type | Hole Size | Casing Size | Casing Weight | Setting Depth | Sacks of Cement | Estimated TOC | Method Determined |
|-------------------|-----------|-------------|-------------------|---------------|-----------------|---------------|-------------------|
| Surface | 26" | 20" | 94.0 lb/ft | 400' | 420 | Surface | Circulation |
| Intermediate 1 | 17-1/2" | 13-3/8" | 61.0 & 54.5 lb/ft | 2,520' | 1,840 | Surface | Circulation |
| Production Casing | 12-1/2" | 9-5/8" | 53.5 lb/ft | 9,300' | 2,225 | 2,300' | CBL |
| Tubing | N/A | 5-1/2" | 20.0 lb/ft | 8,300' | N/A | N/A | N/A |

DV Tool set at: 5,800'

(3) Tubing Information:

5-1/2" (20.0 lb/ft) of ceramic-coated tubing with setting depth of 8,300'

(4) Packer Information: Baker Hughes Hornet or equivalent packer set at 8,300'

Please feel free to call me if you have any questions.

Regards

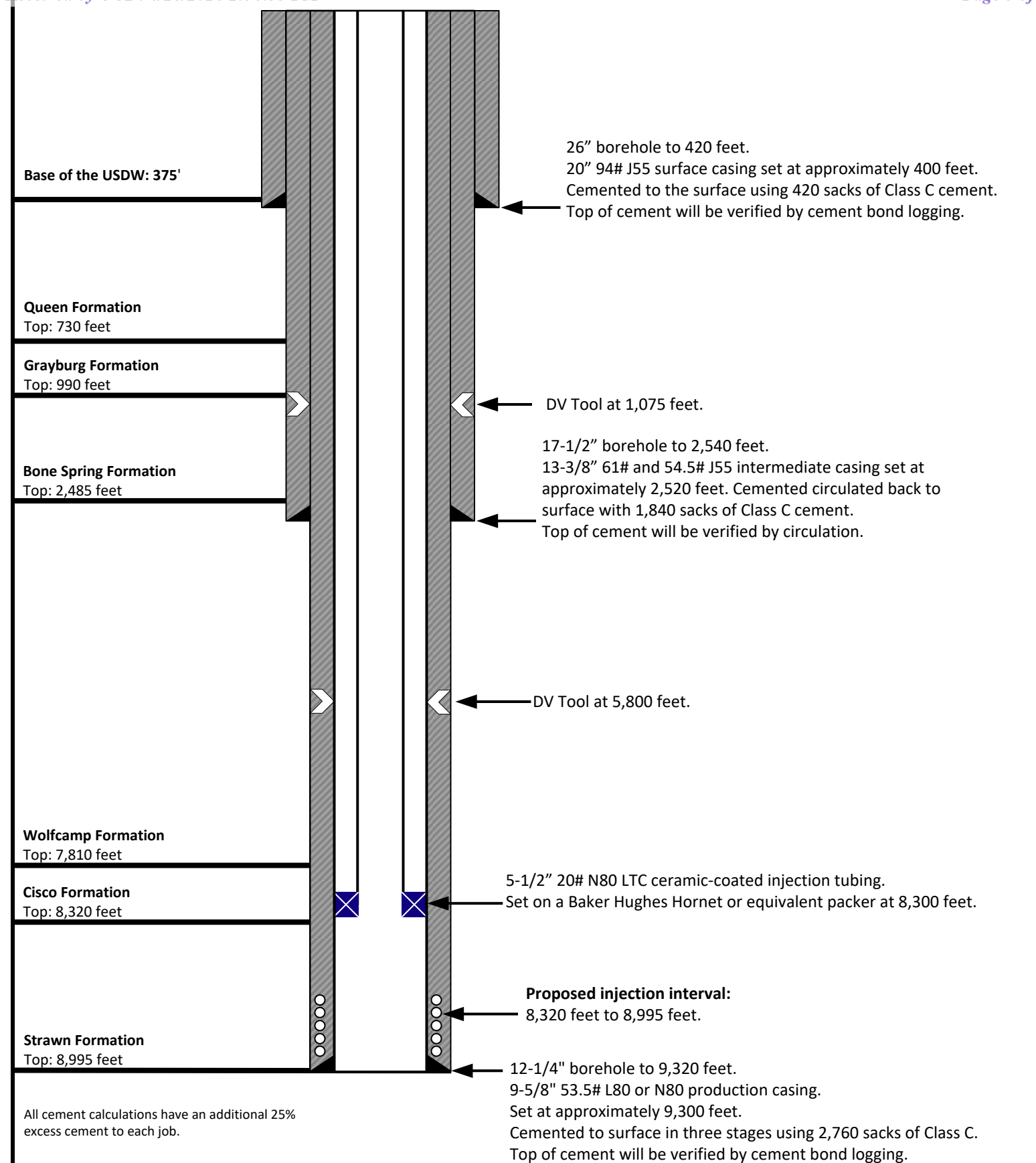
Tony Harris

Petroleum Specialist

Anthony.harris@emnrd.nm.gov

505 549 8131.





Not to Scale



Drawn by: Joshua Ticknor

Project Manager:
Oliver Seekins

Date: 04/16/2024

Longshot SWD #1
Wellbore Diagram
Lat: 32.568627, Long: -104.319114

Application for Authorization to Inject
Well Name: Long Shot SWD #1

III – Well Data *(The wellbore diagram is included as Attachment 1)*

A.

(1) General Well Information:

Operator: WaterBridge Stateline LLC (OGRID No. 330129)
Lease Name & Well Number: Long Shot SWD #1
Location Footage Calls: 812 FSL & 2,220 FEL
Legal Location: Unit Letter O, S18 T20S R27E
Ground Elevation: 3,308'
Proposed Injection Interval: 8,320' – 8,995'
County: Eddy

(2) Casing Information:

| Type | Hole Size | Casing Size | Casing Weight | Setting Depth | Sacks of Cement | Estimated TOC | Method Determined |
|-------------------|-----------|-------------|-------------------|---------------|-----------------|---------------|-------------------|
| Surface | 26" | 20" | 94.0 lb/ft | 400' | 420 | Surface | CBL |
| Intermediate 1 | 17-1/2" | 13-3/8" | 61.0 & 54.5 lb/ft | 2,520' | 1,840 | Surface | Circulation |
| Production Casing | 12-1/2" | 9-5/8" | 53.5 lb/ft | 9,300' | 2,760 | Surface | CBL |
| Tubing | N/A | 5-1/2" | 20.0 lb/ft | 8,300' | N/A | N/A | N/A |

DV tools set at: 1,075' and 5,800'

(3) Tubing Information:

5-1/2" (20.0 lb/ft) of ceramic-coated tubing with setting depth of 8,300'

(4) Packer Information: Baker Hughes Hornet or equivalent packer set at 8,300'

B.

(1) Injection Formation Name: Cisco

Pool Name: SWD; Cisco

Pool Code: 96099

(2) Injection Interval: Perforated injection between 8,320' – 8,995'

(3) Drilling Purpose: New drill for saltwater 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.

- Queen (730')
- Bone Spring (2,485')
- Wolfcamp (7,810)

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

- Strawn (8,995')

V – Well and Lease Maps

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

- 2-mile Oil & Gas Well Map
- 1/2-mile Well Detail List
- Penetrating Wellbore Diagrams (Plugged Wells)
- 2-mile Lease Map
- 2-mile Mineral Ownership Map
- 2-mile Surface Ownership Map
- Potash Lease Map

VI – AOR Well List

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

There are two wells that penetrate the injection zone, and both have been properly cased and cemented to isolate the injection zone. Wellbore diagrams and casing information for these wells are also included in **Attachment 2**.

VII – Proposed Operation

- (1) **Proposed Maximum Injection Rate:** 30,000 bpd
Proposed Average Injection Rate: 17,500 bpd
- (2) A closed system will be used.
- (3) **Proposed Maximum Injection Pressure:** 1,664 psi (surface)
Proposed Average Injection Pressure: approximately 1,248 psi (surface)
- (4) **Source Water Analysis:** It is expected that the injectate will consist of produced water from production wells completed in the Delaware, Wolfcamp and Bone Spring 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 Cisco formation which is a non-productive zone known to be compatible with formation water from the Delaware, Wolfcamp and Bone Spring formations. Water analyses from the Cisco formation in the area are included in **Attachment 4**.

VIII – Geologic Description

The proposed injection interval includes the Cisco formation from 8,320 – 8,995 feet. This formation consists of interbedded carbonate rocks including dolomites and limestones. Several thick intervals of porous and permeable carbonate rock capable of taking water are present within the subject formation in the area.

The freshwater formation is the Yates at a depth of approximately 375 feet. Water well depths in the area range from approximately 50 – 210 feet below ground surface.

Additional geology information can be found in the hydrologic connection statement included in **Attachment 7**

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, two (2) groundwater wells are located within 1-mile of the proposed SWD location; however, state water well data and conversations with water well owners have revealed that only one (1) of the water wells are currently in use. A water sample was collected on April 27th, 2022.

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.

A signed *No Hydrologic Connection Statement* is included in **Attachment 7**.

XIII – Proof of Notice

A public notice was filed with the Carlsbad Current-Argus 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 8**.

Karst Analysis

In addition to the information formally requested as part of the C-108 application, ALL Consulting has included a karst analysis in **Attachment 6** to address the identified concerns of permitting an SWD in a high-risk karst area.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 335090

CONDITIONS

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|--|--|
| Operator: WaterBridge Stateline LLC 5555 San Felipe Houston, TX 77056 | OGRID: 330129 |
| | Action Number: 335090 |
| | Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO) |

CONDITIONS

| Created By | Condition | Condition Date |
|----------------|-----------|----------------|
| anthony.harris | None | 4/18/2024 |