

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-144
Revised April 3, 2017

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application

Type of action: Below grade tank registration
 Permit of a pit or proposed alternative method
 Closure of a pit, below-grade tank, or proposed alternative method
 Modification to an existing permit/or registration
 Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method

BGT1

Existing BGT

Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Dugan Production Corp. OGRID #: 006515
Address: PO Box 420, Farmington, NM 87499-0420
Facility or well name: Merry May # 001
API Number: 30-045-24421 OCD Permit Number: BGT # 1
U/L or Qtr/Qtr I Section 24 Township 24N Range 10W County: San Juan
Center of Proposed Design: Latitude 36.2973518 Longitude -107.8419037 NAD83
Surface Owner: Federal State Private Tribal Trust or Indian Allotment 1850' FSL & 790' FEL

2.
 Pit: Subsection F, G or J of 19.15.17.11 NMAC
Temporary: Drilling Workover
 Permanent Emergency Cavitation P&A Multi-Well Fluid Management Low Chloride Drilling Fluid yes no
 Lined Unlined Liner type: Thickness _____ mil LLDPE HDPE PVC Other _____
 String-Reinforced
Liner Seams: Welded Factory Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____

3.
 Below-grade tank: Subsection I of 19.15.17.11 NMAC
Volume: 95 bbl Type of fluid: Produced Water
Tank Construction material: Steel
 Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
 Visible sidewalls and liner Visible sidewalls only Other _____
Liner type: Unlined HDPE PVC Other _____

4.
 Alternative Method:
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)
 Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)
 Four foot height, four strands of barbed wire evenly spaced between one and four feet
 Alternate. Please specify _____

6.
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)
 Screen Netting Other _____
 Monthly inspections (If netting or screening is not physically feasible)

7.
Signs: Subsection C of 19.15.17.11 NMAC
 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
 Signed in compliance with 19.15.16.8 NMAC

8.
Variations and Exceptions:
 Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.
Please check a box if one or more of the following is requested, if not leave blank:
 Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.
 Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

9.
Siting Criteria (regarding permitting): 19.15.17.10 NMAC
Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.

General siting

Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

Yes No
 NA

Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

Yes No
 NA

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. **(Does not apply to below grade tanks)**

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

Yes No

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)**

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

Yes No

Within an unstable area. **(Does not apply to below grade tanks)**

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

Yes No

Within a 100-year floodplain. **(Does not apply to below grade tanks)**

- FEMA map

Yes No

Below Grade Tanks

Within 100 feet of a continuously flowing watercourse, significant watercourse, lakebed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

Yes No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Yes No

Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)

- Topographic map; Visual inspection (certification) of the proposed site

Yes No

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Yes No

Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Yes No

Within 100 feet of a wetland.
 - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

Yes No

Temporary Pit Non-low chloride drilling fluid

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).
 - Topographic map; Visual inspection (certification) of the proposed site

Yes No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.
 - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Yes No

Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;
 - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Yes No

Within 300 feet of a wetland.
 - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

Yes No

Permanent Pit or Multi-Well Fluid Management Pit

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).
 - Topographic map; Visual inspection (certification) of the proposed site

Yes No

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.
 - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Yes No

Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.
 - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Yes No

Within 500 feet of a wetland.
 - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

Yes No

10.
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
 - Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
 - Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
 - Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
 - Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
 - Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
- Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

11.
Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
 - Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
 - A List of wells with approved application for permit to drill associated with the pit.
 - Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
 - Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
 - Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12. **Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC

Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- Climatological Factors Assessment
- Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- Quality Control/Quality Assurance Construction and Installation Plan
- Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- Nuisance or Hazardous Odors, including H₂S, Prevention Plan
- Emergency Response Plan
- Oil Field Waste Stream Characterization
- Monitoring and Inspection Plan
- Erosion Control Plan
- Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

13. **Proposed Closure:** 19.15.17.13 NMAC

Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Multi-well Fluid Management Pit
 Alternative
- Proposed Closure Method: Waste Excavation and Removal
 Waste Removal (Closed-loop systems only)
 On-site Closure Method (Only for temporary pits and closed-loop systems)
 In-place Burial On-site Trench Burial
 Alternative Closure Method

14. **Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC
- Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15. **Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Ground water is between 25-50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	<input type="checkbox"/> Yes <input type="checkbox"/> No

adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> No

16.
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC
- Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.11 NMAC
- Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC
- Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC
- Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.
Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Kevin Smaka, PE Title: Regulatory Engineer

Signature: Kevin Smaka Date: March 18, 2025

e-mail address: Kevin.Smaka@duganproduction.com Telephone: 505-486-6207

18.
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)

OCD Representative Signature: Joel Stone **Approval Date:** 03/27/2025

Title: Environmental Scientist & Specialist-A **OCD Permit Number:** BGT1

19.
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC
Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

Closure Completion Date: _____

20.
Closure Method:

Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only)

If different from approved plan, please explain.

21.
Closure Report Attachment Checklist: *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- Proof of Closure Notice (surface owner and division)
- Proof of Deed Notice (required for on-site closure for private land only)
- Plot Plan (for on-site closures and temporary pits)
- Confirmation Sampling Analytical Results (if applicable)
- Waste Material Sampling Analytical Results (required for on-site closure)
- Disposal Facility Name and Permit Number
- Soil Backfilling and Cover Installation
- Re-vegetation Application Rates and Seeding Technique
- Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: 1927 1983

22.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

Below Grade Tank Closure Plan

Dugan Production Corp.

Merry May # 001

BGT 1

30-045-24421

I-24-24N-10W

1850 FSL 790 FEL

Surface Owner: Federal

As directed by NMAC 19.15.17 the following plan/procedure has been prepared for closure of the below grade tank identified on the associated C-144. The plan/procedure was included in the Pit Permit Application approved by the NM OCD on August 25, 2008, and updated to meet the June 28, 2013, NMAC 19.15.17 compliance standards:

1. Dugan shall notify the surface owner by certified mail return receipt requested, unless the surface owner is a government agency in which case Dugan will notify via email (BLM), that Dugan plans closure operations for at least 72 hours, but not more than one week, prior to any closure operation. Notice shall include well name, API number and location. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement. A copy of the email sent to NM OCD will be included.
2. Dugan shall notify the OCD at least 72 hours, but not more than one week, prior to any closure operation. The notice shall include the operator's name and the location to be closed by unit letter, section, township and range. If the closure is associated with a particular well, then the notice shall also include the well's name, number and API number. Dugan must close out a below-grade tank within 60-days of cessation of operation.
3. Dugan shall close the below-grade tank by first removing all contents and, if applicable, synthetic liners and transferring those materials to a division approved facility. In this case Dugan will haul solid waste to Envirotech (Permit # NM-01-0011). Liquid waste will be hauled to Dugan's Sanchez O'Brien SWD #1 (Permit # SWD-694). The pit liner will be disposed of at Waste Management's Crouch Mesa facility. The tank will be hauled to Dugan's yard. If the tank is in good condition, it will be placed in Dugan's inventory until it's placed back in service. If the tank is in poor condition, it will be sold for scrap.
4. Dugan shall test the soils beneath the below-grade tank as follows:

(a) At a minimum, a five-point composite sample to include any obvious stained or wet soils, or other evidence of contamination shall be taken under the liner or the below-grade tank and that sample shall be analyzed for the constituents listed in Table I of 19.15.17.13 NMAC.

(b) If any contaminant concentration is higher than the parameters listed in Table I of 19.15.17.13 NMAC, the division may require additional delineation upon review of the results and Dugan must receive approval before proceeding with closure.

(c) If all contaminant concentrations are less than or equal to the parameters listed in Table I of 19.15.17.13 NMAC, then Dugan can proceed to backfill the pit, pad, or excavation with non-waste containing, uncontaminated, earthen material.

5. Once Dugan has closed the below-grade tank, Dugan shall reclaim the below-grade tank location and all areas associated with the below-grade tank including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area. Dugan shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as provided in Paragraph (2) of Subsection H of 19.15.17.13 NMAC, recontour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate according to Paragraph (5) in Subsection H of 19.15.17.13 NMAC. This BGT is located at a plugged well site. The site will be contoured and constructed to prevent erosion and run off. Dugan will comply with subsection H of 19.15.17.13 NMAC.
6. Areas reasonably needed for production operations or for subsequent drilling operations shall be compacted, covered, paved, or otherwise stabilized and maintained in such a way as to minimize dust and erosion to the extent practicable
7. Dugan will install a soil cover that shall consist of the background thickness of topsoil or one foot of suitable material, whichever is greater. The soil cover shall be constructed to the site's existing grade and all practical efforts shall be made to prevent ponding of water and erosion of the soil cover material.
8. Dugan will comply with the seeding requirements found in NMAC 19.15.17.13.H.(5) and notify the division when reclamation and re-vegetation are complete.
9. Within 60 days of closure completion Dugan will submit a closure report with form C-144 and will include the following:
 - a. Proof of closure notice given to NMOCD and the surface owner
 - b. Sampling analytical reports; information required by 19.15.17 NMAC
 - c. Disposal facility name and permit numbers
 - d. Details on backfilling, capping, covering and, where applicable, seeding application rates and seeding technique
 - e. Photo documentation of sampling and site reclamation

Depth to Groundwater

Dugan conducted a comprehensive assessment of groundwater conditions for the BGT site, utilizing multiple data sources:

Hydrogeologic Report: The report identified poor-quality water at depths between 300 feet within the Nacimiento Formation, as indicated by electric open-hole logs. However, the Ojo Alamo Sandstone, located between 765 and 875 feet, may offer a larger volume of higher-quality groundwater.

State Engineer Data: Dugan reviewed information from the New Mexico Office of the State Engineer, which listed three wells in Sections 33, 36, and 29 of T-24N, R-10W. The average depth to groundwater across these wells is 439 feet, with the well closest to the site showing a depth of 284 feet.

USGS Database: Additional data from a nearby water well recorded a depth to groundwater of 646.05 feet in May 1986.

Depth Estimate: Based on these findings, and with the agreement of the New Mexico Oil Conservation Division (OCD), Dugan estimates the depth to groundwater at the site to be more than 100 feet below the base of the BGT.

Distance to Watercourse

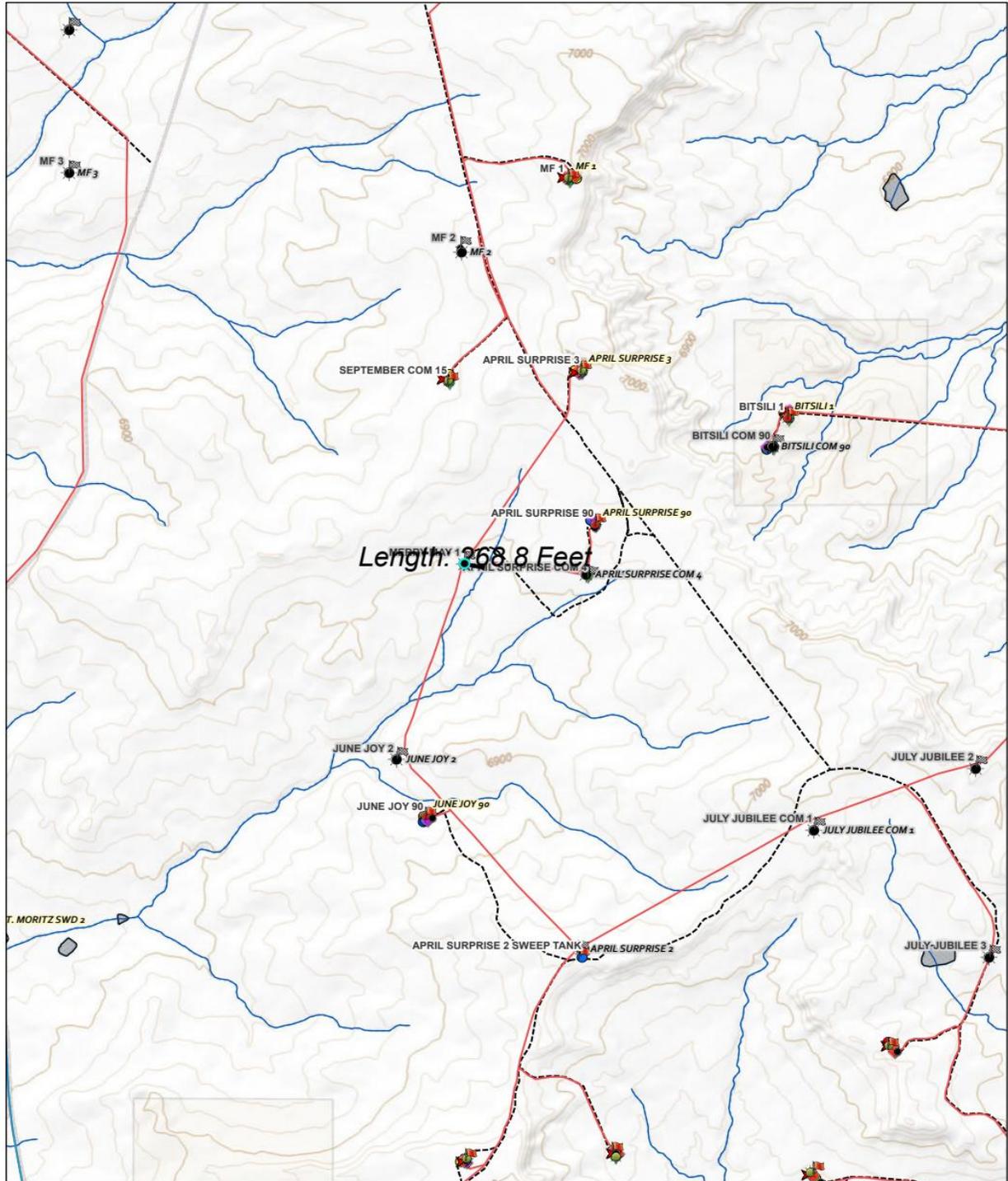
The below-grade tank is not within 100 feet of a continuously flowing watercourse, significant watercourse, lakebed, sinkhole, wetland, playa lake, or an ephemeral / intermittent watercourse. The nearest significant watercourse is an ephemeral / intermittent watercourse measured approximately 268.8 feet south-east of the below-grade tank.

List of Attachments

1. A topographic map of the area surrounding the BGT that identifies all nearby water courses as directed in section 9 of the C-144. Additionally, the map includes measurements to the nearest significant watercourse. See **Appendix A**
2. The Hydrogeologic Report, NMOSE iWaters database reports, and the NM OSE POD information for domestic water wells near the facility. See **Appendix B (Figures 1 – 4)**
3. A copy of the USGS water data for a water well in the area which the BGT is located. See **Appendix C**

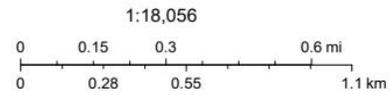
Appendix A: Topographic Map

Merry May # 001 Topo Map



3/17/2025, 11:06:29 AM

- | | | |
|-------------------|------------|---|
| Override 1 | PNEUMATICS | PIPES |
| SITES | PITS | GAS |
| ABANDONED SITES | SEPARATORS | WATER |
| WELLS | TANKS | ROADS |
| GAS | OIL TANKS | RIVERS, STREAMS, WASHES |
| OIL | PJ ENGINE | 0 - 5,000 |
| ABANDONED WELLS | PUMPJACK | Ephemeral/Intermittent |
| ALLOCATION_METERS | | LAKES, PONDS, WETLANDS |
| | | Lakes, Ponds, Reservoirs, and Estuaries |



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S.

Dugan Production Corp

Appendix B: New Mexico Office of the State Engineer Data

Figure 1: Hydrogeologic Report

Merry May #1 Hydrogeologic Report

The Merry May #1 is located on Federal land on the Chaco Slope area of the San Juan Basin, in San Juan County, New Mexico. The area is characterized by an arid, westward sloping, gentle hilly terrain covered with sage, grass and isolated stands of pinon and juniper. It is well drained by numerous arroyos that carry water during seasonal periods (rainstorms and snowmelt) to the west.

A records search of the NM Office of the State Engineer –iWATERS database was conducted on a three square mile area centered on the Merry May #1 location (Exhibit 2). No water wells were located in the search area. The results of the search are shown on Exhibit 1.

The main source of stock water in the region is encountered in valley-fill deposits in existing arroyos at shallow depths of approximately 15 – 50 feet below the surface and stock tanks constructed on surface shale in the upper reaches and confluences of arroyos. The proposed below grade tank is not located in an arroyo. The closest arroyo is located 350 feet southeast of the proposed below grade tank.

The Nacimiento Formation extends from the surface down to approximately 765 feet. From surface down to 245 feet, the interval consists primarily of mudstone / shale with a trace of siltstone. The interval from 245 to 555 has more siltstone, sand (245-265, 395-405 and 450-555) and less mudstone / shale. These sands have good reservoir qualities and could contain poor quality groundwater. From 555 to 765 the section is comprised of mudstone / shale.

The Nacimiento is a source of ground water for livestock purposes and more rarely domestic use in some areas near the outcrop. With depth and distance from the outcrop, water quality decreases quickly and may be useful for livestock only. Due to the high silt content in the sands, poor reservoir quality and unpredictable nature of sand occurrence, the Nacimiento is not expected to contain significant quantities of ground water in the area of the proposed below grade tank.

The underlying Ojo Alamo Sandstone ranges from approximately 765 feet down to a depth of approximately 875 feet and is comprised of a coarse grained alluvial sandstone inter-bedded with lenses of mudstone and occasional conglomeratic sandstone. The Ojo could provide a greater volume of poor quality groundwater.

Based on electric open hole logs, the iWATERS database, literature reviewed, poor quality groundwater might be found a depth below 300 feet from thin, discontinuous, shaly sands in the Nacimiento Formation. However, the underlying Ojo Alamo Sandstone (765-875) is capable of producing a larger volume of better quality groundwater.

The excessive drilling depth to reservoirs with unpredictable variations in reservoir quality and water quality has discouraged the drilling of water wells in the area.

- Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.
- Brown, D.R., and Stone, W.J., 1979, Hydrogeology of Aztec quadrangle, San Juan County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Hydrogeologic Sheet 1.
- Levings, G.W., Craigg, S.D., Dam, W.L., Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan Structural Basin, New Mexico, Colorado, Arizona and Utah: U.S. Geological Survey, Atlas HA-720-A, Sheet 1 and 2.
- Thorn, C.R., Levings, G.W., Craigg, S.D., Dam, W.L., and Kernodle, J.M., 1990, Hydrogeology of the Ojo Alamo Sandstone in the San Juan Structural Basin, New Mexico, Colorado, Arizona and Utah: U.S.G.S, Atlas HA-720-B, Sheet 1 and 2.

Appendix B: New Mexico Office of the State Engineer Data

Figure 2: iWaters Data



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 smallest to largest)

(In feet)

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tw	Range	X	Y	Map	Well Depth	Depth Water	Water Column
SJ_01713		SJ	SJ		SE	SE	33	24N	10W	239936.0	4017203.0 *		373		
SJ_01714		SJ	SJ		SW	SE	36	24N	10W	244334.0	4017107.0 *		442	284	158
SJ_03141		SJ	SJ	SW	NE	NW	29	24N	10W	237520.0	4019956.0 *		640	595	45

Average Depth to Water: **439 feet**
 Minimum Depth: **284 feet**
 Maximum Depth: **595 feet**

Record Count: 3

Basin/County Search:

County: SJ

PLSS Search:

Range: 10W

Township: 24N

Section: 1-36

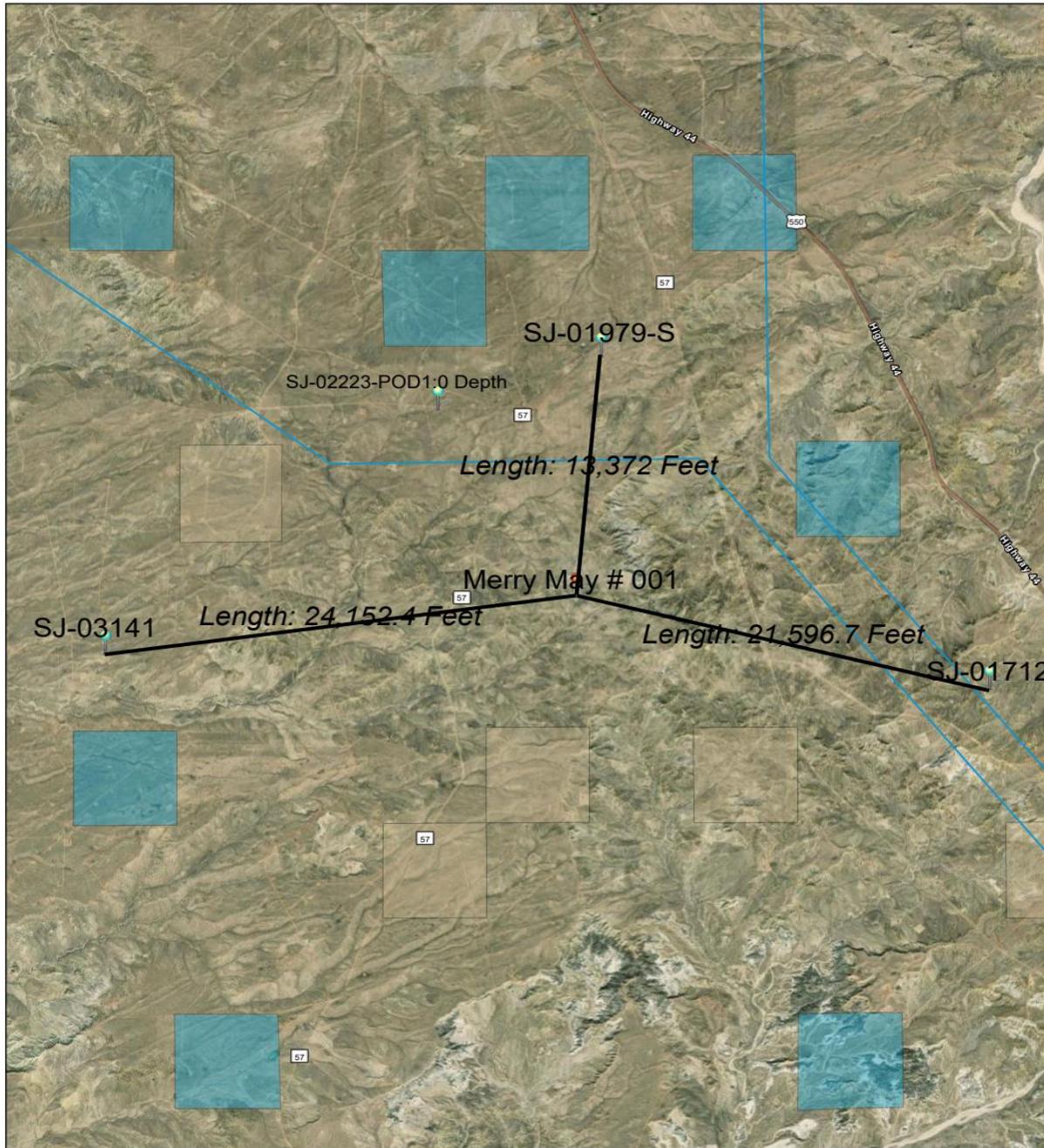
* UTM location was derived from PLSS - see Help

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.

Appendix B: New Mexico Office of the State Engineer Data

Figure 3: NM OSE POD Locations Map

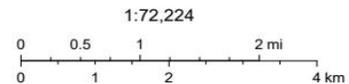
Merry May # 001 - NM OSE POD Location Map



3/17/2025, 10:39:06 AM

- Override 1
- Points
- Override 1
- Override 2
- OSE District Boundary

- Water Right Regulations
- Artesian Planning Area
- New Mexico State Trust Lands
- Subsurface Estate
- Both Estates



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community.
 Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Online web user
 This is an unofficial map from the OSE's online application.

Appendix B: New Mexico Office of the State Engineer Data

Figure 4: POD Summary

Point of Diversion Summary										
quarters are 1=NW 2=NE 3=SW 4=SE quarters are smallest to largest										
NAD83 UTM in meters										
Well Tag	POD Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
SJ 01979		SW	NE	32	25N	09W	247838.5	4027524.9		
* UTM location was derived from PLSS - see Help										
<hr/>										
Driller License:		Driller Company:								
Driller Name:		SALAZAR DRILLING COMPANY								
Drill Start Date:		1986-02-08	Drill Finish Date:		1986-02-15	Plug Date:				
Log File Date:		1986-03-18	PCW Rcv Date:		1986-03-18	Source:		Shallow		
Pump Type:		SUBMER	Pipe Discharge Size:		3.5	Estimated Yield:				
Casing Size:		10.75	Depth Well:		1180	Depth Water:		628		

Appendix C: USGS Data

USGS 361903107531901 24N.10W.15.1143 19-0531

San Juan County, New Mexico

Latitude 36°19'03", Longitude 107°53'19" NAD83

Land-surface elevation 6,864 feet above NAVD88

The depth of the well is 828 feet below land surface.

The depth of the hole is 828 feet below land surface.

This well is completed in the Colorado Plateaus aquifers (N300COPLTS) national aquifer.

This well is completed in the Ojo Alamo Sandstone (211OJAM) local aquifer.

Date	Time	Water-level date-time accuracy	Parameter code	Water level, feet below land surface
1951-12-08			D 62610	
1951-12-08			D 62611	
1951-12-08			D 72019	653.00
1968-05-15			D 62610	
1968-05-15			D 62611	
1968-05-15			D 72019	645.05
1968-09-05			D 62610	
1968-09-05			D 62611	
1968-09-05			D 72019	652.00
1986-05-15			D 62610	
1986-05-15			D 62611	
1986-05-15			D 72019	646.05

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 443612

CONDITIONS

Operator: DUGAN PRODUCTION CORP PO Box 420 Farmington, NM 87499	OGRID: 6515
	Action Number: 443612
	Action Type: [C-144] Below Grade Tank Plan (C-144B)

CONDITIONS

Created By	Condition	Condition Date
joel.stone	None	3/27/2025