

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

Form C-141  
Revised August 24, 2018  
Submit to appropriate OCD District office

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

|                |  |
|----------------|--|
| Incident ID    |  |
| District RP    |  |
| Facility ID    |  |
| Application ID |  |

## Release Notification

**NMOC**

### Responsible Party

**JAN 11 2019**

|   |                                |                     |
|---|--------------------------------|---------------------|
| Responsible Party Dugan Production Corp.      | OGRID 006515                   | <b>DISTRICT III</b> |
| Contact Name Kevin Smaka                      | Contact Telephone 505-325-1821 |                     |
| Contact email kevin.smaka@duganproduction.com | Incident # NCS 1828930229      |                     |
| Contact mailing address                       |                                |                     |

### Location of Release Source

Latitude 36.339824

Longitude -107.7109528

(NAD 83 in decimal degrees to 5 decimal places)

|                                   |                  |
|-----------------------------------|------------------|
| Site Name Arviso #1               | Site Type Well   |
| Date Release Discovered 9/28/2018 | API#30-045-33943 |

| Unit Letter | Section | Township | Range | County   |
|-------------|---------|----------|-------|----------|
| L           | 5       | 24N      | 8W    | San Juan |

Surface Owner:  State  Federal  Tribal  Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

|  |  |   |
|--|--|---|
| <input type="checkbox"/> Crude Oil                 | Volume Released (bbls)   | Volume Recovered (bbls)   |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls) 23  | Volume Recovered (bbls)   |
|  | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate                | Volume Released (bbls)   | Volume Recovered (bbls)   |
| <input type="checkbox"/> Natural Gas               | Volume Released (Mcf)  | Volume Recovered (Mcf)  |
| <input type="checkbox"/> Other (describe)          | Volume/Weight Released (provide units)   | Volume/Weight Recovered (provide units)                             |

Cause of Release Water line piping corroded and began to leak.

## Smith, Cory, EMNRD

---

**From:** Smith, Cory, EMNRD  
**Sent:** Monday, January 14, 2019 8:48 AM  
**To:** 'Kevin Smaka'  
**Cc:** Fields, Vanessa, EMNRD; 'l1thomas@blm.gov'; 'aadeloye@blm.gov'  
**Subject:** RE: Dugan Prod, Arviso #1, P812032  
**Attachments:** Gypsum application.doc

Kevin,

OCD Approves Dugan's remediation plan and timelines for the remediation at the Arviso #1. With the following conditions of approval

- Dugan will only rip/disc areas that were affected by the release.
- Dugan will schedule with OCD to witness final Confirmation sampling for the "March 15<sup>th</sup>" sampling event per 19.15..29 NMAC,
- Dugan will need to sample and varying depths to ensure the complete 4" has been remediated.
- All soils that are not completely and entire remediated by the "March 15" sampling event will need to be remediated with an alternative remediation plan approved by the OCD.

The OCD recommends that Dugan consults the attached Gypsum document to aid with remediation specifically the application rate and the recommend water usage.

OCD approval of this remediation plan does not relieve Dugan of any requirements imposed by other regulatory agencies.

Cory Smith  
Environmental Specialist  
Oil Conservation Division  
Energy, Minerals, & Natural Resources  
1000 Rio Brazos, Aztec, NM 87410  
(505)334-6178 ext 115  
[cory.smith@state.nm.us](mailto:cory.smith@state.nm.us)

---

**From:** Smith, Cory, EMNRD  
**Sent:** Tuesday, January 8, 2019 11:53 AM  
**To:** 'Kevin Smaka' <Kevin.Smaka@duganproduction.com>  
**Cc:** Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>  
**Subject:** RE: Dugan Prod, Arviso #1, P812032

Kevin,

Which sample is which? The report Dugan provided does not differentiate between sampling locations.

Also which area is going to be ripped? OCD does not approve of blending contaminates so only the area that is affect can be ripped for the application of gypsum.

|                |  |
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|  |  |
|--|--|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                      | If YES, for what reason(s) does the responsible party consider this a major release?<br><br><br> |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br>By Kevin Smaka, to Cory Smith and Jim Griswold Via E-mail. |  |

### Initial Response

*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

|  |
|--|
| <input checked="" type="checkbox"/> The source of the release has been stopped.<br><input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.<br><input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.<br><input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.  |
| If all the actions described above have <u>not</u> been undertaken, explain why:<br><br><br>   |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.  |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. |
| Printed Name: _____ Title: _____<br>Signature: _____ Date: _____<br>email: _____ Telephone: _____  |
| <b><u>OCD Only</u></b><br><br>Received by: _____ Date: _____   |

|                |  |
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| Application ID |  |

### Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date*

|   |   |
|---|---|
| What is the shallowest depth to groundwater beneath the area affected by the release?   | 200ft (ft bgs)  |
| Did this release impact groundwater or surface water?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release 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? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine?   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain?  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas not on an exploration, development, production, or storage site?   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

**Characterization Report Checklist:** *Each of the following items must be included in the report.*

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

|                |  |
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### Remediation Plan

**Remediation Plan Checklist:** Each of the following items must be included in the plan.

- Detailed description of proposed remediation technique
- Scaled sitemap with GPS coordinates showing delineation points
- Estimated volume of material to be remediated
- Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** Each of the following items must be confirmed as part of any request for deferral of remediation.

- Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- Extents of contamination must be fully delineated.
- Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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Printed Name: Kevin Smaka Title: Engineer  
 Signature: [Handwritten Signature] Date: 12-21-18  
 email: \_\_\_\_\_ Telephone: 325-1821

**OCD Only**

Received by: OCD Date: 1/11/19

- Approved     Approved with Attached Conditions of Approval     Denied     Deferral Approved

Signature: [Handwritten Signature] Date: 1/14/19

|                |  |
|----------------|--|
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kevin Smakyn

Title: Engineer

Signature: [Handwritten Signature]

Date: 12-21-18

email: \_\_\_\_\_

Telephone: 325-1821

**OCD Only**

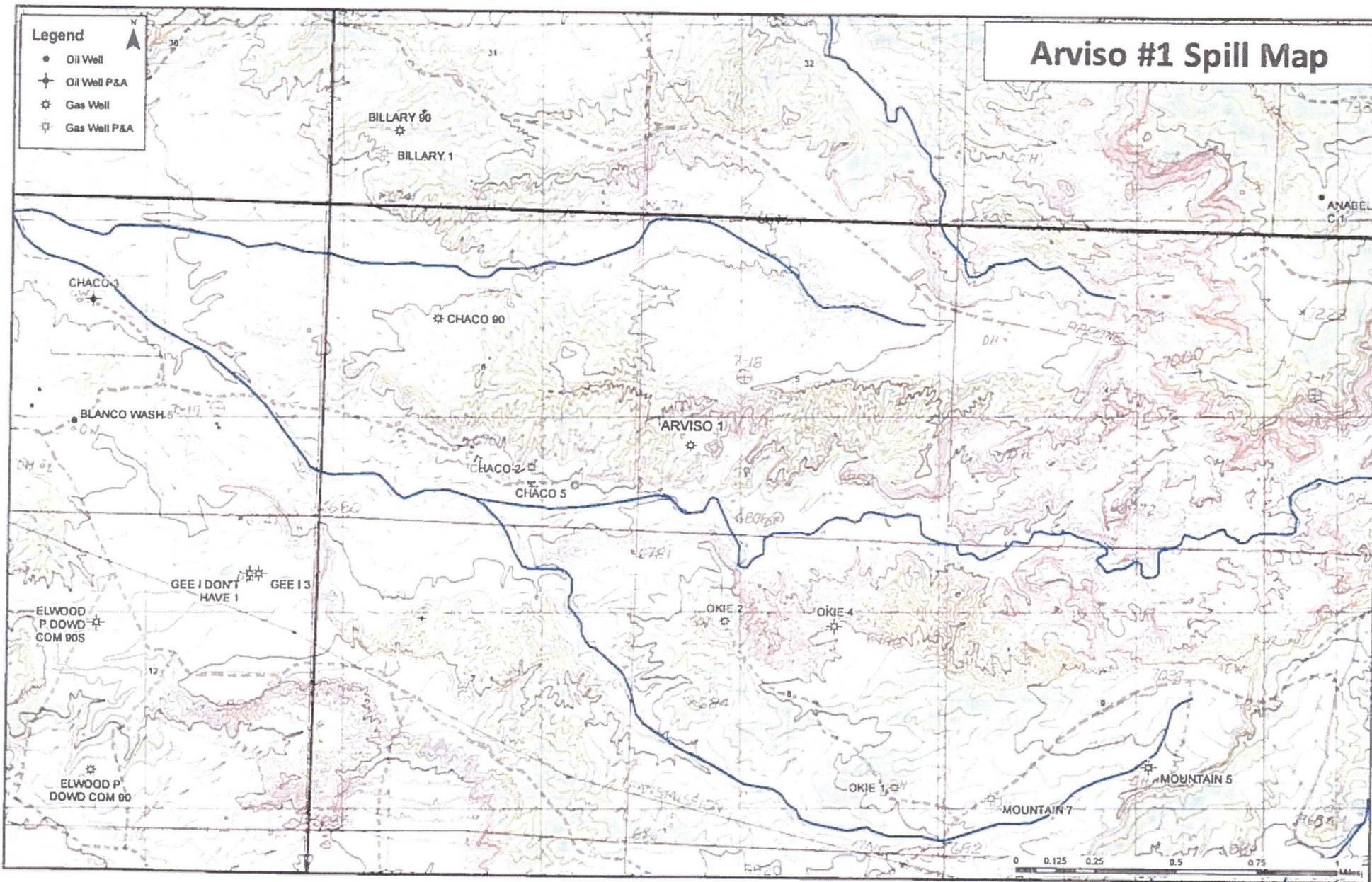
Received by: \_\_\_\_\_

Date: \_\_\_\_\_

# Arviso #1 Spill Map

## Legend

- Oil Well
- ✦ Oil Well P&A
- ✧ Gas Well
- ✧ Gas Well P&A



# Arviso Spill Map

Write a description for your map.

**Legend**

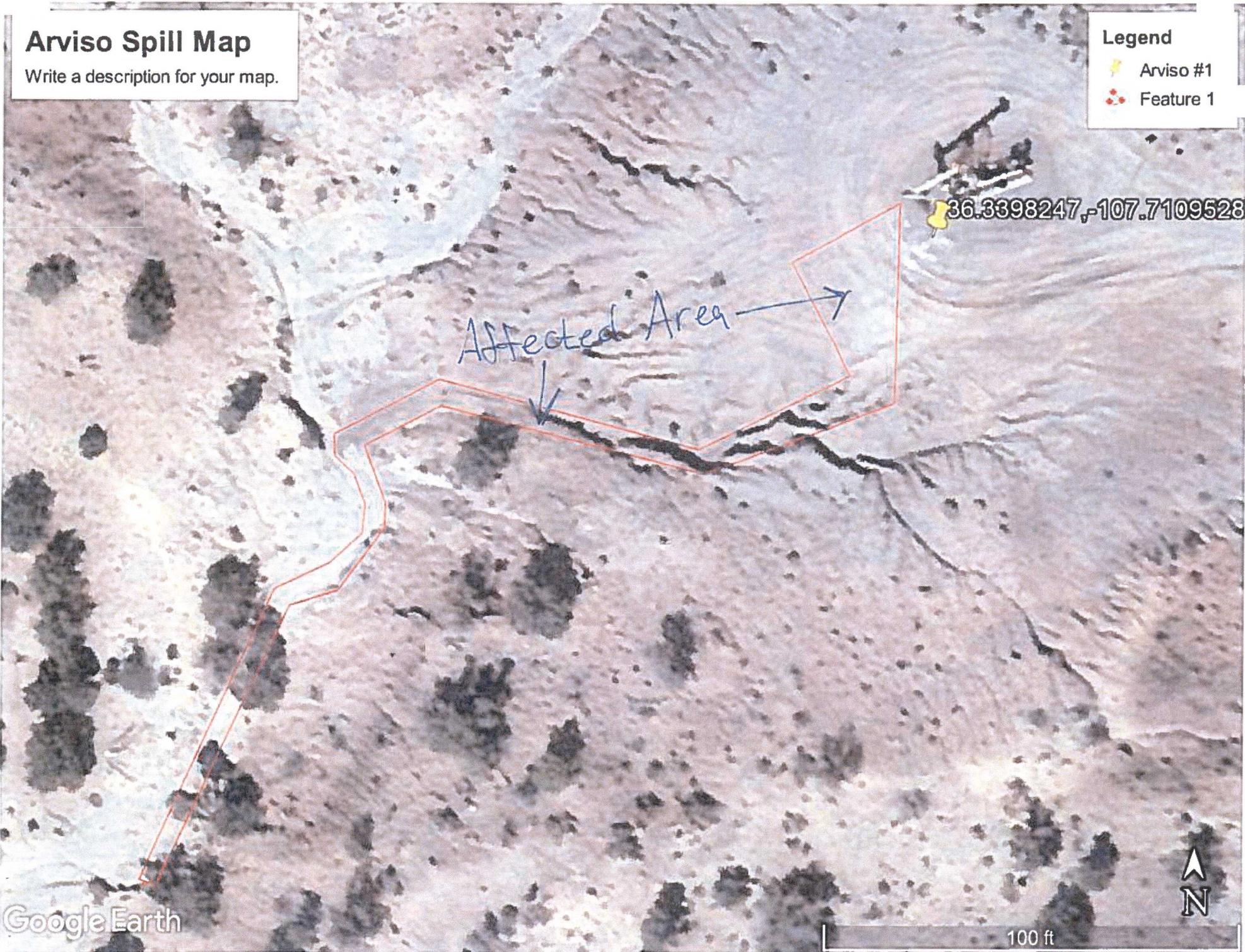
- Arviso #1
- Feature 1

36.3398247,-107.7109528

Affected Area

Google Earth

100 ft

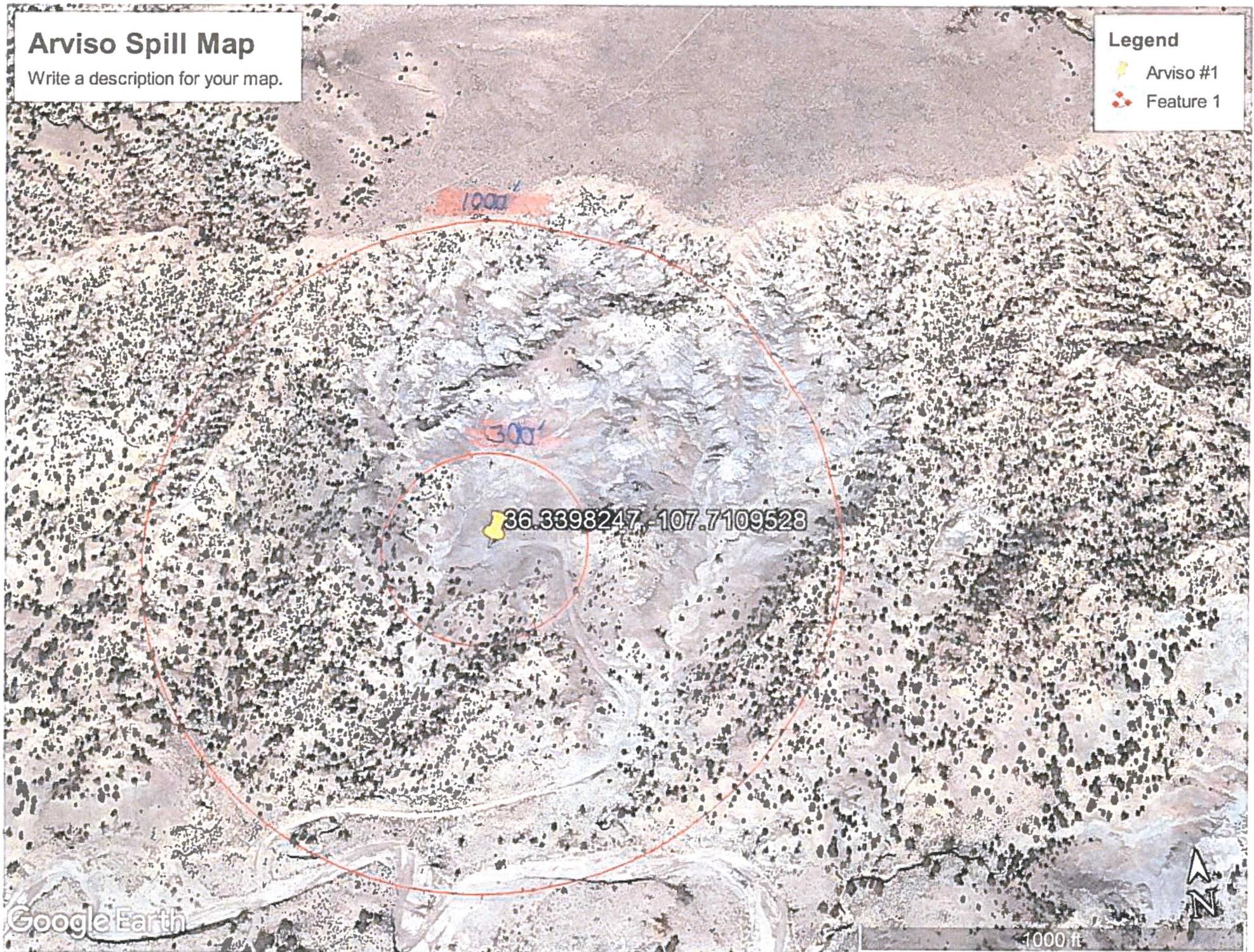


# Arviso Spill Map

Write a description for your map.

## Legend

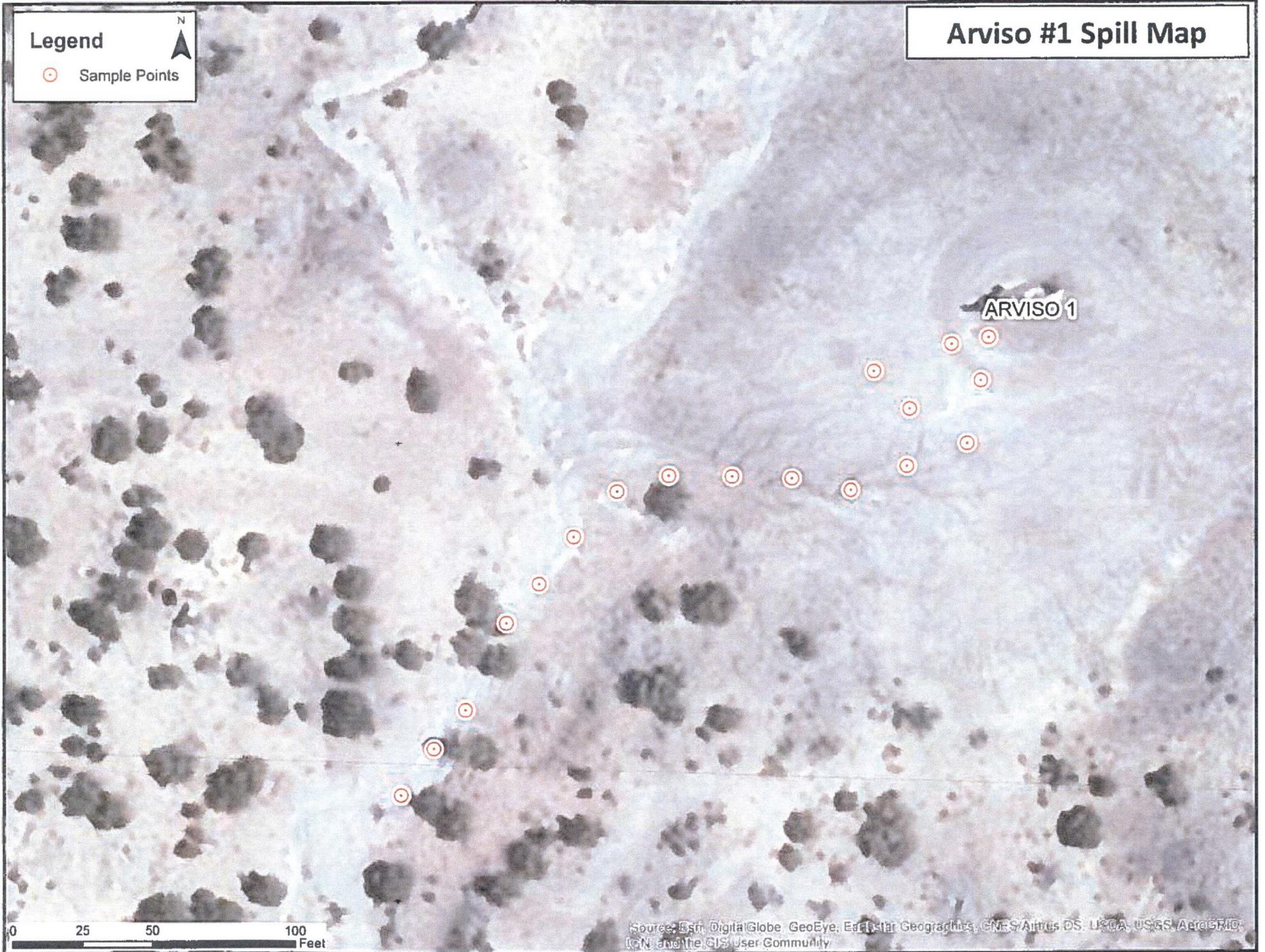
- Arviso #1
- Feature 1



# Arviso #1 Spill Map

## Legend

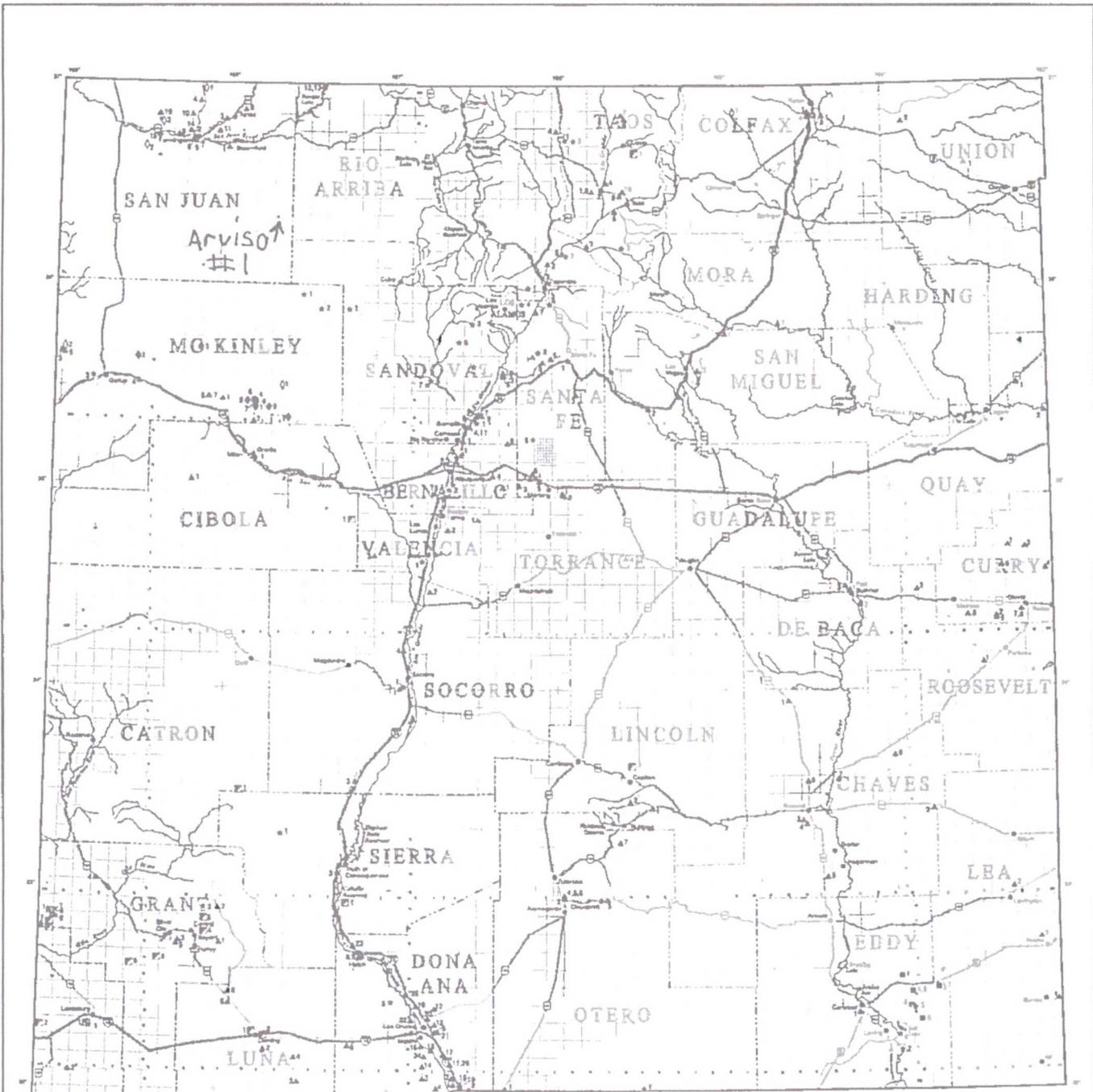
○ Sample Points



ARVISO 1

0 25 50 100 Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



### Mines, Mills, and Quarries in New Mexico Spring 2001

- ▲ Aggregate and stone mining
- Coal mining
- Industrial minerals, mining, and milling
- Metals
- Potash mining and milling
- Smelters, converters, and refineries
- Uranium mining and milling

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(505) 833-5460





## New Mexico Office of the State Engineer

# Active & Inactive Points of Diversion

(with Ownership Information)

| WR File Nbr             | Sub | (acre ft per annum) |      |                       |       | County                  | POD Number              | Cnd | Grant   | (quarters are 1-NW 2-NE 3-SW 4-SE) |    |    |     | (NAD83 UTM in meters) |        |          |          |   |    |     |     |        |          |          |
|-------------------------|-----|---------------------|------|-----------------------|-------|-------------------------|-------------------------|-----|---------|------------------------------------|----|----|-----|-----------------------|--------|----------|----------|---|----|-----|-----|--------|----------|----------|
|                         |     | Basin               | Use  | Diversion             | Owner |                         |                         |     |         | Source                             | Q1 | Q2 | Q3  | Q4                    | X      | Y        |          |   |    |     |     |        |          |          |
| <a href="#">SJ00870</a> | SJ  | HWY                 | D    | NM STATE HIGHWAY DEPT |       | SJ                      | <a href="#">SJ00870</a> |     |         | Shallow                            | 2  | 3  | 36  | 24N                   | 08W    | 263245   | 4017010* |   |    |     |     |        |          |          |
| <a href="#">SJ00950</a> | SJ  | IRR                 | 19:6 | ODIE VAL C LAFMAN     | SJ    | <a href="#">SJ00950</a> |                         |     | Shallow | 3                                  | 3  | 36 | 24N | 08W                   | 262730 | 4016518* |          |   |    |     |     |        |          |          |
|                         |     |                     |      |                       |       |                         |                         |     |         |                                    |    |    |     |                       |        |          | 3        | 3 | 36 | 24N | 08W | 262744 | 4016920* |          |
|                         |     |                     |      |                       |       |                         |                         |     |         |                                    |    |    |     |                       |        |          |          |   |    |     |     |        |          | 3        |
|                         |     |                     |      |                       |       |                         |                         |     |         |                                    |    |    |     |                       |        |          | 2        | 4 | 3  | 36  | 24N | 08W    | 263336   |          |
| <a href="#">SJ02656</a> | SJ  | STK                 | 3    | BRUCF STERLING        | SJ    | <a href="#">SJ02656</a> |                         |     | Shallow | 3                                  | 4  | 2  | 32  | 24N                   | 08W    | 267502   |          |   |    |     |     |        |          | 4017472* |

Record Count: 6

POD Search:

Basin: San Juan

PLSS Search:

Ownership: 24N Range: 08W

Sorted by: File Number

\*UTM location was derived from PLSS - see Help

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

10/26/18 11:31 AM

ACTIVE & INACTIVE POINTS OF DIVERSION

Exhibit #3

### Okie #1 Hydrogeologic Report

The Okie #1 is located on Federal land on the Chaco Slope area of the San Juan Basin, San Juan County, New Mexico. The area can be characterized as an arid region with low ridges forested by Juniper and Pinon trees bordered by "Bad Lands" topography and sage brush flats.

A records search of the NM Office of the State Engineer -iWATERS database was conducted for the Okie #1 location. No water wells were located in the area of the below grade tank. The results of the search are shown on Exhibit 3.

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. The proposed below grade tank is not located in an arroyo. There is a small arroyo 200 feet to the south (Exhibit 1).

The Nacimiento Formation extends from the surface down to a depth of approximately 1218 feet. Thin silty sands inter-bedded with more dominant mudstones occur near the top. Toward the base of the unit, mud content decreases and sand content increases. Shale content in the Nacimiento increases to the west toward the outcrop and recharge area.

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 (Stone, 1983).

Based on electric open hole logs, the iWATERS database, literature reviewed, depth to ground water ranges from 25 - 50 feet below the surface in major arroyos in the area. Moving away from the wash ground water depth drops rapidly to greater than 200 feet below the surface. At the location of the subject below grade tank, lesser amounts of poor quality ground water might be found at depths of approximately 200-250 and 400-800 feet below the surface in laterally discontinuous sand intervals in the middle and lower Nacimiento Formation. A deeper source of ground water would include the Ojo Alamo interval; at a depth of 1218-1300 feet below the surface.

Due to the high silt content in the sands, poor water and reservoir quality and unpredictable nature of sand occurrence, there has not been any Nacimiento water wells drilled in the area of the subject below grade tank.

This Hydrogeologic Report was prepared by Mr. Kevin Smaka, Engineer for Dugan Production.

- 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. Geological Survey, Atlas HA-720-B, Sheet 1 and 2.



# FEMA Flood Map Service Center: Search By Address

Navigation

Search

Languages

- MSC Home (/portal/)
- MSC Search by Address (/portal/search)
- MSC Search All Products (/portal/advanceSearch)
- MSC Products and Tools (/portal/resources/productsandtools)
    - Hazus (/portal/resources/hazus)
    - LOMC Batch Files (/portal/resources/lomc)
    - Product Availability (/portal/productAvailability)
  - MSC Frequently Asked Questions (FAQs) (/portal/resources/faq)
  - MSC Email Subscriptions (/portal/subscriptionHome)
  - Contact MSC Help (/portal/resources/contact)

Enter an address, place, or coordinates: ?

-107.7109528, 36.3398247

Whether you are in a high risk zone or not, you may need [flood insurance](https://www.fema.gov/national-flood-insurance-program) because most homeowners insurance doesn't cover flood damage. If you live in an area with low or moderate flood risk, you are 5 times more likely to experience flood than a fire in your home over the next 30 years. For many, a National Flood Insurance Program's flood insurance policy could cost less than \$400 per year. Call your insurance agent today and protect what you've built.

Learn more about [steps you can take](https://www.fema.gov/what-mitigation) to reduce the risk flood damage

## Search Results—Products for SAN JUAN COUNTY UNINCORPORATED AREAS

Show ALL Products » (<https://msc.fema.gov/portal/availabilitySearch?addcommunity=350064&communityName=SAN>,

The flood map for the selected area is number **35045C2100F**, effective on **08/05/2010** ?

DYNAMIC MAP



MAP IMAGE



[https://msc.fema.gov/portal/downloadProduct?](https://msc.fema.gov/portal/downloadProduct?filepath=/35/P/Firm/35045C2100E.png&productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL)

[filepath=/35/P/Firm/35045C2100E.png&productTypeID=FINAL\\_PRODUCT&productSubTypeID=FIRM\\_PANEL](https://msc.fema.gov/portal/downloadProduct?filepath=/35/P/Firm/35045C2100E.png&productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL)

Changes to this FIRM ?

- Revisions (0)
- Amendments (0)
- Revalidations (0)

You can choose a new flood map or move the location pin by selecting a different location on the locator map below or by entering a new location in the search field above. It may take a minute or more during peak hours to generate a dynamic FIRMeite.

Go To NFHL Viewer » (<https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d>)



San Juan County  
35006-1

AREA OF MINIMAL FLOOD HAZARD

**35045C2100F**  
eff. 08/05/2010



**PHI** Approximate location based on user input and does not represent an authoritative property location

**MAP PANELS**  Selected FloodMap Boundary  
 Digital Data Available  
 No Digital Data Available  
 Unmapped

**OTHER AREAS** Area of Minimal Flood Hazard Zone 1  
 Effective LOMFs  
 Area of Undetermined Flood Hazard Zone 3

**SPECIAL FLOOD HAZARD AREAS** Without Base Flood Elevation (BFE) Zone A, X, AH  
 With BFE or Depth  
 Regulatory Floodway Zone AE, AO, AH, VE, AR

**OTHER AREAS OF FLOOD HAZARD** 0.2% Annual Chance Flood Hazard. Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone 2  
 Future Conditions 1% Annual Chance Flood Hazard Zone X  
 Areas with Reduced Flood Risk due to Levee. See Notes. Zone 1  
 Areas with Flood Risk due to Levee Zone 1

**OTHER FEATURES** Cross Sections with 1% Annual Chance  
 Water Surface Elevation  
 Coastal Transect  
 Base Flood Elevation Line (BFE)  
 Limit of Study  
 Jurisdiction Boundary  
 Coastal Transect Baseline  
 Profile Baseline  
 Hydrographic Feature

**GENERAL STRUCTURES** Cheesnut, Culvert, or Storm Sewer  
 Levee, Dike, or Floodwall

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<https://www.oig.dhs.gov/hotline>

Official website of the Department of Homeland Security

## Arviso #1

API# 30-045-33943

### Spill Remediation Plan

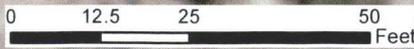
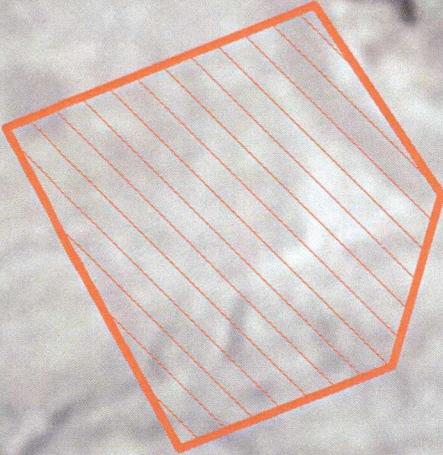
In order to remediate the produced water spill at the Arviso #1, Dugan intends to take the following actions:

1. Rip the pad in the affected area. The soil on the pad is a type of clay and raking in gypsum has not proven to be effective. By ripping the 50' x 50' square that was affected we will get better results when treating the spill with gypsum. Dugan will not be mixing the contaminated soil with clean soil. Please see map titled: Arviso #1: Area to be ripped.
2. Dugan will apply gypsum as needed to remove the chlorides from the soil.
3. The affected area will be sampled on a monthly basis, but no later than the 15<sup>th</sup> of every month, until samples prove to be acceptable.
4. The area in the wash will no longer be treated or sampled. Sampling results 1 & 2, which came from the wash, indicate chloride levels were below 600 mg/L as directed in table 1 of the spill rule. Since this meets the criteria of the spill rule no further remedial action will be taken in the wash. Sample #3, the affected area on the well pad, was above 2000 mg/L chlorides. Dugan will continue efforts to clean up this area.
5. It is estimated that 370 cubic yards of dirt need remediation.
6. Dugan intends to start work no later than January 11, 2019.
7. Samples will be gathered by February 15<sup>th</sup> and March 15<sup>th</sup>.
8. Dugan plans to have all remedial activities completed by March 26<sup>th</sup>, 2019 (last day of the 90 day window).

Arviso #1: Area To Be Ripped



ARVISO 1



# Arviso Spill Map

Write a description for your map.

## Legend

- Arviso #1
- Feature 1



|                |  |
|----------------|--|
| Incident ID    |  |
| District RP    |  |
| Facility ID    |  |
| Application ID |  |

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

## Analytical Report

### Report Summary

Client: Dugan Production Corp.  
Chain Of Custody Number:  
Samples Received: 12/14/2018 4:18:00PM  
Job Number: 06094-0177  
Work Order: P812032  
Project Name/Location: Arviso #1

Report Reviewed By:



Date: 12/19/18

Walter Hinchman, Laboratory Director



Date: 12/19/18

Tim Cain, Project Manager



Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.  
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.  
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Envirotech, Inc, currently holds the appropriate and available Utah TNI certification NM009792018-1 for the data reported.

|  |   |                                    |
|--|---|------------------------------------|
| Dugan Production Corp.<br>PO Box 420<br>Farmington NM, 87499 | Project Name: Arviso #1<br>Project Number: 06094-0177<br>Project Manager: Mike Sandoval | <b>Reported:</b><br>12/19/18 10:29 |
|--|---|------------------------------------|

### Analytical Report for Samples

| Client Sample ID | Lab Sample ID | Matrix | Sampled  | Received | Container        |
|------------------|---------------|--------|----------|----------|------------------|
| Arviso #1 - 1    | P812032-01A   | Soil   | 12/14/18 | 12/14/18 | Glass Jar, 4 oz. |
| Arviso #1 - 2    | P812032-02A   | Soil   | 12/14/18 | 12/14/18 | Glass Jar, 4 oz. |
| Arviso #1 - 3    | P812032-03A   | Soil   | 12/14/18 | 12/14/18 | Glass Jar, 4 oz. |

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|  |   |                             |
|--|---|-----------------------------|
| Dugan Production Corp.<br>PO Box 420<br>Farmington NM, 87499 | Project Name: Arviso #1<br>Project Number: 06094-0177<br>Project Manager: Mike Sandoval | Reported:<br>12/19/18 10:29 |
|--|---|-----------------------------|

**Arviso #1 - 1**  
**P812032-01 (Solid)**

| Reporting |        |       |       |          |       |          |          |        |       |
|-----------|--------|-------|-------|----------|-------|----------|----------|--------|-------|
| Analyte   | Result | Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |

**Volatile Organics by EPA 8021**

|               |    |     |       |   |         |          |          |           |  |
|---------------|----|-----|-------|---|---------|----------|----------|-----------|--|
| Benzene       | ND | 100 | ug/kg | 1 | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| Toluene       | ND | 100 | ug/kg | 1 | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| Ethylbenzene  | ND | 100 | ug/kg | 1 | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| p,m-Xylene    | ND | 200 | ug/kg | 1 | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| o-Xylene      | ND | 100 | ug/kg | 1 | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| Total Xylenes | ND | 100 | ug/kg | 1 | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| Total BTEX    | ND | 100 | ug/kg | 1 | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |

*Surrogate: 4-Bromochlorobenzene-PID*      98.0 %      50-150      1851002      12/17/18      12/17/18      EPA 8021B

**Nonhalogenated Organics by 8015**

|                                  |    |      |       |   |         |          |          |           |  |
|----------------------------------|----|------|-------|---|---------|----------|----------|-----------|--|
| Gasoline Range Organics (C6-C10) | ND | 20.0 | mg/kg | 1 | 1851002 | 12/17/18 | 12/17/18 | EPA 8015D |  |
| Diesel Range Organics (C10-C28)  | ND | 25.0 | mg/kg | 1 | 1851004 | 12/17/18 | 12/18/18 | EPA 8015D |  |
| Oil Range Organics (C28-C40+)    | ND | 50.0 | mg/kg | 1 | 1851004 | 12/17/18 | 12/18/18 | EPA 8015D |  |

*Surrogate: 1-Chloro-4-fluorobenzene-FID*      101 %      50-150      1851002      12/17/18      12/17/18      EPA 8015D

*Surrogate: n-Nonane*      91.6 %      50-200      1851004      12/17/18      12/18/18      EPA 8015D

**Anions by 300.0/9056A**

|          |     |      |       |   |         |          |          |                    |  |
|----------|-----|------|-------|---|---------|----------|----------|--------------------|--|
| Chloride | 375 | 20.0 | mg/kg | 1 | 1851001 | 12/17/18 | 12/17/18 | EPA<br>300.0/9056A |  |
|----------|-----|------|-------|---|---------|----------|----------|--------------------|--|

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|  |   |                                    |
|--|---|------------------------------------|
| Dugan Production Corp.<br>PO Box 420<br>Farmington NM, 87499 | Project Name: Arviso #1<br>Project Number: 06094-0177<br>Project Manager: Mike Sandoval | <b>Reported:</b><br>12/19/18 10:29 |
|--|---|------------------------------------|

**Arviso #1 - 2**  
**P812032-02 (Solid)**

| Reporting                                      |        |        |       |          |         |          |          |                    |       |
|--|--------|--------|-------|----------|---------|----------|----------|--------------------|-------|
| Analyte  | Result | Limit  | Units | Dilution | Batch   | Prepared | Analyzed | Method             | Notes |
| <b>Volatile Organics by EPA 8021</b>           |        |        |       |          |         |          |          |                    |       |
| Benzene  | ND     | 100    | ug/kg | 1        | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B          |       |
| Toluene  | ND     | 100    | ug/kg | 1        | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B          |       |
| Ethylbenzene                                   | ND     | 100    | ug/kg | 1        | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B          |       |
| p,m-Xylene                                     | ND     | 200    | ug/kg | 1        | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B          |       |
| o-Xylene                                       | ND     | 100    | ug/kg | 1        | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B          |       |
| Total Xylenes                                  | ND     | 100    | ug/kg | 1        | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B          |       |
| Total BTEX                                     | ND     | 100    | ug/kg | 1        | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B          |       |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i>     |        | 98.2 % |       | 50-150   | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B          |       |
| <b>Nonhalogenated Organics by 8015</b>         |        |        |       |          |         |          |          |                    |       |
| Gasoline Range Organics (C6-C10)               | ND     | 20.0   | mg/kg | 1        | 1851002 | 12/17/18 | 12/17/18 | EPA 8015D          |       |
| Diesel Range Organics (C10-C28)                | ND     | 25.0   | mg/kg | 1        | 1851004 | 12/17/18 | 12/18/18 | EPA 8015D          |       |
| Oil Range Organics (C28-C40+)                  | ND     | 50.0   | mg/kg | 1        | 1851004 | 12/17/18 | 12/18/18 | EPA 8015D          |       |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> |        | 102 %  |       | 50-150   | 1851002 | 12/17/18 | 12/17/18 | EPA 8015D          |       |
| <i>Surrogate: n-Nonane</i>                     |        | 94.6 % |       | 50-200   | 1851004 | 12/17/18 | 12/18/18 | EPA 8015D          |       |
| <b>Anions by 300.0/9056A</b>                   |        |        |       |          |         |          |          |                    |       |
| Chloride                                       | 296    | 20.0   | mg/kg | 1        | 1851001 | 12/17/18 | 12/17/18 | EPA<br>300.0/9056A |       |

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|--|---|-----------------------------|
| Dugan Production Corp.<br>PO Box 420<br>Farmington NM, 87499 | Project Name: Arviso #1<br>Project Number: 06094-0177<br>Project Manager: Mike Sandoval | Reported:<br>12/19/18 10:29 |
|--|---|-----------------------------|

**Arviso #1 - 3**  
**P812032-03 (Solid)**

| Reporting |        |       |       |          |       |          |          |        |       |
|-----------|--------|-------|-------|----------|-------|----------|----------|--------|-------|
| Analyte   | Result | Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |

**Volatile Organics by EPA 8021**

|  |    |        |       |        |         |          |          |           |  |
|--|----|--------|-------|--------|---------|----------|----------|-----------|--|
| Benzene                                    | ND | 100    | ug/kg | 1      | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| Toluene                                    | ND | 100    | ug/kg | 1      | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| Ethylbenzene                               | ND | 100    | ug/kg | 1      | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| p,m-Xylene                                 | ND | 200    | ug/kg | 1      | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| o-Xylene                                   | ND | 100    | ug/kg | 1      | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| Total Xylenes                              | ND | 100    | ug/kg | 1      | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| Total BTEX                                 | ND | 100    | ug/kg | 1      | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |
| <i>Surrogate: 4-Bromochlorobenzene-PID</i> |    | 98.3 % |       | 50-150 | 1851002 | 12/17/18 | 12/17/18 | EPA 8021B |  |

**Nonhalogenated Organics by 8015**

|  |    |       |       |        |         |          |          |           |  |
|--|----|-------|-------|--------|---------|----------|----------|-----------|--|
| Gasoline Range Organics (C6-C10)               | ND | 20.0  | mg/kg | 1      | 1851002 | 12/17/18 | 12/17/18 | EPA 8015D |  |
| Diesel Range Organics (C10-C28)                | ND | 25.0  | mg/kg | 1      | 1851004 | 12/17/18 | 12/18/18 | EPA 8015D |  |
| Oil Range Organics (C28-C40+)                  | ND | 50.0  | mg/kg | 1      | 1851004 | 12/17/18 | 12/18/18 | EPA 8015D |  |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> |    | 103 % |       | 50-150 | 1851002 | 12/17/18 | 12/17/18 | EPA 8015D |  |
| <i>Surrogate: n-Nonane</i>                     |    | 103 % |       | 50-200 | 1851004 | 12/17/18 | 12/18/18 | EPA 8015D |  |

**Anions by 300.0/9056A**

|          |      |      |       |   |         |          |          |                    |  |
|----------|------|------|-------|---|---------|----------|----------|--------------------|--|
| Chloride | 2040 | 20.0 | mg/kg | 1 | 1851001 | 12/17/18 | 12/17/18 | EPA<br>300.0/9056A |  |
|----------|------|------|-------|---|---------|----------|----------|--------------------|--|

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| Dugan Production Corp.<br>PO Box 420<br>Farmington NM, 87499 | Project Name: Arviso #1<br>Project Number: 06094-0177<br>Project Manager: Mike Sandoval | Reported:<br>12/19/18 10:29 |
|--|---|-----------------------------|

**Volatile Organics by EPA 8021 - Quality Control**  
**Envirotech Analytical Laboratory**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch 1851002 - Purge and Trap EPA 5030A**

| <b>Blank (1851002-BLK1)</b>         |      | Prepared: 12/17/18 0 Analyzed: 12/17/18 1 |       |      |   |      |        |  |  |  |
|-------------------------------------|------|---|-------|------|---|------|--------|--|--|--|
| Benzene                             | ND   | 100                                       | ug/kg |      |   |      |        |  |  |  |
| Toluene                             | ND   | 100                                       | "     |      | * |      |        |  |  |  |
| Ethylbenzene                        | ND   | 100                                       | "     |      |   |      |        |  |  |  |
| p,m-Xylene                          | ND   | 200                                       | "     |      |   |      |        |  |  |  |
| o-Xylene                            | ND   | 100                                       | "     |      |   |      |        |  |  |  |
| Total Xylenes                       | ND   | 100                                       | "     |      |   |      |        |  |  |  |
| Total BTEX                          | ND   | 100                                       | "     |      |   |      |        |  |  |  |
| Surrogate: 4-Bromochlorobenzene-PID | 7880 |   | "     | 8000 |   | 98.5 | 50-150 |  |  |  |

| <b>LCS (1851002-BS1)</b>            |       | Prepared: 12/17/18 0 Analyzed: 12/17/18 1 |       |       |  |      |        |  |  |  |
|-------------------------------------|-------|---|-------|-------|--|------|--------|--|--|--|
| Benzene                             | 5000  | 100                                       | ug/kg | 5000  |  | 100  | 70-130 |  |  |  |
| Toluene                             | 5030  | 100                                       | "     | 5000  |  | 101  | 70-130 |  |  |  |
| Ethylbenzene                        | 5070  | 100                                       | "     | 5000  |  | 101  | 70-130 |  |  |  |
| p,m-Xylene                          | 10400 | 200                                       | "     | 10000 |  | 104  | 70-130 |  |  |  |
| o-Xylene                            | 5060  | 100                                       | "     | 5000  |  | 101  | 70-130 |  |  |  |
| Total Xylenes                       | 15500 | 100                                       | "     | 15000 |  | 103  | 70-130 |  |  |  |
| Surrogate: 4-Bromochlorobenzene-PID | 7860  |   | "     | 8000  |  | 98.3 | 50-150 |  |  |  |

| <b>Matrix Spike (1851002-MS1)</b>   |       | <b>Source: P812030-01</b> |       | Prepared: 12/17/18 0 Analyzed: 12/17/18 2 |    |      |          |  |  |  |
|-------------------------------------|-------|---------------------------|-------|---|----|------|----------|--|--|--|
| Benzene                             | 4590  | 100                       | ug/kg | 5000                                      | ND | 91.8 | 54.3-133 |  |  |  |
| Toluene                             | 4600  | 100                       | "     | 5000                                      | ND | 92.0 | 61.4-130 |  |  |  |
| Ethylbenzene                        | 4630  | 100                       | "     | 5000                                      | ND | 92.6 | 61.4-133 |  |  |  |
| p,m-Xylene                          | 9470  | 200                       | "     | 10000                                     | ND | 94.7 | 63.3-131 |  |  |  |
| o-Xylene                            | 4590  | 100                       | "     | 5000                                      | ND | 91.8 | 63.3-131 |  |  |  |
| Total Xylenes                       | 14100 | 100                       | "     | 15000                                     | ND | 93.8 | 63.3-131 |  |  |  |
| Surrogate: 4-Bromochlorobenzene-PID | 7900  |                           | "     | 8000                                      |    | 98.7 | 50-150   |  |  |  |

| <b>Matrix Spike Dup (1851002-MSD1)</b> |       | <b>Source: P812030-01</b> |       | Prepared: 12/17/18 0 Analyzed: 12/18/18 1 |    |      |          |      |    |  |
|--|-------|---------------------------|-------|---|----|------|----------|------|----|--|
| Benzene                                | 4990  | 100                       | ug/kg | 5000                                      | ND | 99.8 | 54.3-133 | 8.32 | 20 |  |
| Toluene                                | 5030  | 100                       | "     | 5000                                      | ND | 101  | 61.4-130 | 8.93 | 20 |  |
| Ethylbenzene                           | 5090  | 100                       | "     | 5000                                      | ND | 102  | 61.4-133 | 9.52 | 20 |  |
| p,m-Xylene                             | 10400 | 200                       | "     | 10000                                     | ND | 104  | 63.3-131 | 9.63 | 20 |  |
| o-Xylene                               | 5030  | 100                       | "     | 5000                                      | ND | 101  | 63.3-131 | 9.18 | 20 |  |
| Total Xylenes                          | 15500 | 100                       | "     | 15000                                     | ND | 103  | 63.3-131 | 9.49 | 20 |  |
| Surrogate: 4-Bromochlorobenzene-PID    | 7780  |                           | "     | 8000                                      |    | 97.2 | 50-150   |      |    |  |

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5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362-1879



|  |   |                                    |
|--|---|------------------------------------|
| Dugan Production Corp.<br>PO Box 420<br>Farmington NM, 87499 | Project Name: Arviso #1<br>Project Number: 06094-0177<br>Project Manager: Mike Sandoval | <b>Reported:</b><br>12/19/18 10:29 |
|--|---|------------------------------------|

**Nonhalogenated Organics by 8015 - Quality Control**  
**Envirotech Analytical Laboratory**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch 1851002 - Purge and Trap EPA 5030A**

|  |      |      |       |   |    |   |        |       |    |   |
|--|------|------|-------|---|----|---|--------|-------|----|---|
| <b>Blank (1851002-BLK1)</b>                    |      |      |       | Prepared: 12/17/18 0 Analyzed: 12/17/18 1 |    |   |        |       |    |   |
| Gasoline Range Organics (C6-C10)               | ND   | 20.0 | mg/kg |   |    |   |        |       |    |   |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> | 8.06 |      | "     | 8.00                                      |    | 101                                       | 50-150 |       |    | * |
| <b>LCS (1851002-BS2)</b>                       |      |      |       | Prepared: 12/17/18 0 Analyzed: 12/17/18 1 |    |   |        |       |    |   |
| Gasoline Range Organics (C6-C10)               | 45.4 | 20.0 | mg/kg | 50.0                                      |    | 90.9                                      | 70-130 |       |    |   |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> | 8.29 |      | "     | 8.00                                      |    | 104                                       | 50-150 |       |    |   |
| <b>Matrix Spike (1851002-MS2)</b>              |      |      |       | <b>Source: P812030-01</b>                 |    | Prepared: 12/17/18 0 Analyzed: 12/17/18 2 |        |       |    |   |
| Gasoline Range Organics (C6-C10)               | 48.3 | 20.0 | mg/kg | 50.0                                      | ND | 96.5                                      | 70-130 |       |    |   |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> | 8.18 |      | "     | 8.00                                      |    | 102                                       | 50-150 |       |    |   |
| <b>Matrix Spike Dup (1851002-MSD2)</b>         |      |      |       | <b>Source: P812030-01</b>                 |    | Prepared: 12/17/18 0 Analyzed: 12/17/18 2 |        |       |    |   |
| Gasoline Range Organics (C6-C10)               | 48.4 | 20.0 | mg/kg | 50.0                                      | ND | 96.9                                      | 70-130 | 0.347 | 20 |   |
| <i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i> | 8.31 |      | "     | 8.00                                      |    | 104                                       | 50-150 |       |    |   |

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| Dugan Production Corp.<br>PO Box 420<br>Farmington NM, 87499 | Project Name: Arviso #1<br>Project Number: 06094-0177<br>Project Manager: Mike Sandoval | <b>Reported:</b><br>12/19/18 10:29 |
|--|---|------------------------------------|

**Nonhalogenated Organics by 8015 - Quality Control**  
**Envirotech Analytical Laboratory**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch 1851004 - DRO Extraction EPA 3570**

| <b>Blank (1851004-BLK1)</b>            |      | Prepared: 12/17/18 1 Analyzed: 12/18/18 0 |       |   |      |      |        |      |    |   |
|--|------|---|-------|---|------|------|--------|------|----|---|
| Diesel Range Organics (C10-C28)        | ND   | 25.0                                      | mg/kg |   |      |      |        |      |    |   |
| Oil Range Organics (C28-C40+)          | *ND  | 50.0                                      | "     |   |      |      |        |      |    | * |
| <i>Surrogate: n-Nonane</i>             | 46.7 |   | "     | 50.0                                      |      | 93.4 | 50-200 |      |    |   |
| <b>LCS (1851004-BS1)</b>               |      | Prepared: 12/17/18 1 Analyzed: 12/18/18 0 |       |   |      |      |        |      |    |   |
| Diesel Range Organics (C10-C28)        | 460  | 25.0                                      | mg/kg | 500                                       |      | 92.0 | 38-132 |      |    |   |
| <i>Surrogate: n-Nonane</i>             | 46.7 |   | "     | 50.0                                      |      | 93.4 | 50-200 |      |    |   |
| <b>Matrix Spike (1851004-MS1)</b>      |      | <b>Source: P812030-01</b>                 |       | Prepared: 12/17/18 1 Analyzed: 12/18/18 0 |      |      |        |      |    |   |
| Diesel Range Organics (C10-C28)        | 582  | 25.0                                      | mg/kg | 500                                       | 96.7 | 97.0 | 38-132 |      |    |   |
| <i>Surrogate: n-Nonane</i>             | 48.6 |   | "     | 50.0                                      |      | 97.2 | 50-200 |      |    |   |
| <b>Matrix Spike Dup (1851004-MSD1)</b> |      | <b>Source: P812030-01</b>                 |       | Prepared: 12/17/18 1 Analyzed: 12/18/18 0 |      |      |        |      |    |   |
| Diesel Range Organics (C10-C28)        | 628  | 25.0                                      | mg/kg | 500                                       | 96.7 | 106  | 38-132 | 7.66 | 20 |   |
| <i>Surrogate: n-Nonane</i>             | 48.2 |   | "     | 50.0                                      |      | 96.5 | 50-200 |      |    |   |

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|  |   |                                    |
|--|---|------------------------------------|
| Dugan Production Corp.<br>PO Box 420<br>Farmington NM, 87499 | Project Name: Arviso #1<br>Project Number: 06094-0177<br>Project Manager: Mike Sandoval | <b>Reported:</b><br>12/19/18 10:29 |
|--|---|------------------------------------|

**Anions by 300.0/9056A - Quality Control**

**Envirotech Analytical Laboratory**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

**Batch 1851001 - Anion Extraction EPA 300.0/9056A**

|  |     |      |       |  |      |      |        |      |    |  |
|--|-----|------|-------|--|------|------|--------|------|----|--|
| <b>Blank (1851001-BLK1)</b>            |     |      |       | Prepared & Analyzed: 12/17/18 1                    |      |      |        |      |    |  |
| Chloride                               | ND  | 20.0 | mg/kg |  |      |      |        |      |    |  |
| <b>LCS (1851001-BS1)</b>               |     |      |       | Prepared & Analyzed: 12/17/18 1                    |      |      |        |      |    |  |
| Chloride                               | 256 | 20.0 | mg/kg | 250  |      | 102  | 90-110 |      |    |  |
| <b>Matrix Spike (1851001-MS1)</b>      |     |      |       | Source: P812024-01 Prepared & Analyzed: 12/17/18 1 |      |      |        |      |    |  |
| Chloride                               | 316 | 20.0 | mg/kg | 250  | 79.2 | 94.8 | 80-120 |      |    |  |
| <b>Matrix Spike Dup (1851001-MSD1)</b> |     |      |       | Source: P812024-01 Prepared & Analyzed: 12/17/18 1 |      |      |        |      |    |  |
| Chloride                               | 321 | 20.0 | mg/kg | 250  | 79.2 | 96.8 | 80-120 | 1.57 | 20 |  |

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|  |   |                                    |
|--|---|------------------------------------|
| Dugan Production Corp.<br>PO Box 420<br>Farmington NM, 87499 | Project Name: Arviso #1<br>Project Number: 06094-0177<br>Project Manager: Mike Sandoval | <b>Reported:</b><br>12/19/18 10:29 |
|--|---|------------------------------------|

**Notes and Definitions**

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- \*\* Methods marked with \*\* are non-accredited methods.

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Client: Dugan Production  
 Project: ARVISO #1  
 Project Manager: Mike Sandoval  
 Address: \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_  
 Phone: 330-0929  
 Email: \_\_\_\_\_

**Report Attention**  
 Report due by: 12/19 in a.m  
 Attention: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_

**Lab Use Only**  
 Lab WO# P612032 Job Number 06094-0177  
 TAT 1D 3D    
**EPA Program** RCRA CWA SDW

**Analysis and Method**  
 DRO/ORO by 8015  
 GRO/DRO by 8015  
 BTEX by 8021  
 VOC by 8260  
 Metals 6010  
 Chloride 300.0  
 TPH 418.1  
 State NM CO UT A

| Time Sampled | Date Sampled | Matrix | No Containers | Sample ID | Lab Number | DRO/ORO by 8015 | GRO/DRO by 8015 | BTEX by 8021 | VOC by 8260 | Metals 6010 | Chloride 300.0 | TPH 418.1 | Remarks |
|--------------|--------------|--------|---------------|-----------|------------|-----------------|-----------------|--------------|-------------|-------------|----------------|-----------|---------|
| 11:00        | 12-14-18     |        | 1             | ARVISO #1 | 1          | X               | X               | X            |             |             | X              |           |         |
| 11:15        | 12-14-18     |        | 2             | ARVISO #1 | 2          | 1               | 1               | 1            |             |             | 1              |           |         |
| 11:30        | 12-14-18     |        | 3             | ARVISO #1 | 3          | 1               | 1               | 1            |             |             | 1              |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |
|              |              |        |               |           |            |                 |                 |              |             |             |                |           |         |

**Additional Instructions:** vis. ice in cooler

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: [Signature]

|   |                      |                   |   |                      |                   |  |
|---|----------------------|-------------------|---|----------------------|-------------------|--|
| Relinquished by: (Signature) <u>[Signature]</u> | Date <u>12-14-18</u> | Time <u>16:18</u> | Received by: (Signature) <u>[Signature]</u> | Date <u>12/14/18</u> | Time <u>16:18</u> | Lab Use Only<br>Received on ice: <input checked="" type="checkbox"/> Y / N |
| Relinquished by: (Signature)                    | Date                 | Time              | Received by: (Signature)                    | Date                 | Time              | T1 _____ T2 _____ T3 _____<br>AVG Temp °C <u>4.0</u>                       |

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

