

May 11, 2020

NMOCD District 2

811 S. First St.

Artesia, New Mexico 88210

Re:

Closure Request

Kaiser-Francis Oil Co Williams Fee 2524 LBC #001H

NMOCD Incident #: nRM2003759623

To Whom It May Concern

RXSoil, Inc. is pleased to submit the closure request summarizing work done for the on-site remediation of treated produced water impacted soil for the above release, associated with the Williams Fee 2524 LBC #001H site located in Eddy County, New Mexico.

Sincerely,

Jace Caraway

**Chief Operating Officer** 

RXSoil, Inc.

(940) 210-2051

Zach Robbins

**Technical and Engineering Analyst** 

RXSoil, Inc.

(210) 400-7645

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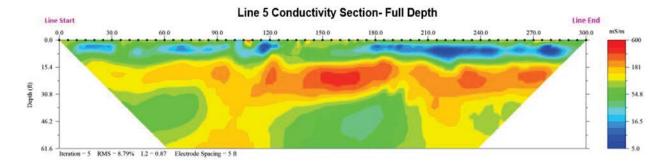
### I. Introduction

On behalf of Kaiser-Francis Oil Co., RXSoil, Inc. ("RXSoil") has prepared this closure request that describes remediation of the release of nRM2003759623 associated with the Williams Fee 2524 LBC #001H site with API #30-015-43743.

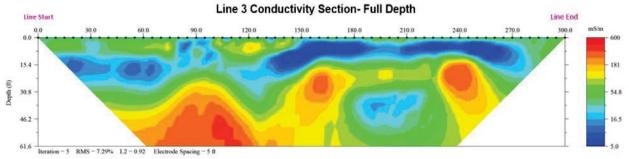
The release occurred in Unit Letter M, Section 36, Township 23S, Range 28E (see *Figure 1* for Vicinity Map) at coordinates (32.25621, -104.04931). It was reported that 24 barrels of produced water were released, and 0 barrels were recovered during the initial response. The closure C-141 is listed in *Appendix A*.

## II. Site Assessment/Characterization

- 1. **Spill Map** See *Figure 2*
- 2. **Depth to ground water** Per the New Mexico Office of the State Engineer, the only well data with a half mile radius is C-02186 with depth to water reported at 55' (*Figure 3*). Per .kmz layers provided by the State Land Office (SLO), this release occurred within an area classified as medium potential karst risk. SLO considers this to be "an unstable area", so the release was treated as if it occurred less than 50' to ground water per NMAC 19.15.29.12 C (4).
- 3. **Wellhead protection area** There are no known water sources within a half mile of the release (see *Figure 4*).
- 4. **Distance to nearest significant watercourse** There are no significant watercourses within a half mile of the release (see *Figure 4*).
- 5. Soil/waste characteristics – The release was delineated horizontally and vertically before and during excavation. No traces of TPH or BTEX were detected in initial testing of the most affected areas, providing strong evidence that no TPH or BTEX contamination occurred and no longer required monitoring. A resistivity study was conducted prior to excavation to determine extent of the release (see Appendix C for the report in its entirety). This study showed highly conductive soils separate from the spill plume. Excavation was guided by field data, testing soil samples until results showed chloride levels below 600 mg/kg, per 19.15.29.13.D.1. Sidewall and bottom sample locations are shown in Figure 5. Excavation went vertically and horizontally until clean soil was found (600 mg/kg) except in three areas: the west finger, a small center area, and one sample on the southern side wall. The west finger is represented by bottom samples EB35 - EB41. Resistivity Line 5 (below) intersects with the excavation area between the 135' and 150' markers. A large mass of conductivity is evident at deeper depths that does not connect to the spill. It is apparent that our excavation to 12' depth has encountered residuals from this mass and is evidence that soils affected from this spill have been excavated.



"Center" is represented by bottom samples EB28 and EB33 which tested at 736 and 1040 mg/kg, respectively, at an excavation depth of 16'. **Resistivity Line 3** (below) intersects with the excavation area between the 115' and 120' markers. A large mass of conductivity is evident at deeper depths that does not connect to the spill. It is apparent that our excavation to 16' depth has encountered residuals from this mass and is evidence that soils affected from this spill have been excavated.



A 20-mil poly liner has been placed in the areas where chlorides are still elevated to protect any potential migration. Pictures are shown in *Appendix F*.

Hydroexcavation was used in many areas to safely remove soils around the four pipelines that ran through the spill area. The line that ran parallel to the southern wall of the excavation was a 16" diameter line operating at pressures around 1000psig. Three of the sidewall samples near this line tested below 600 mg/kg chloride, while one tested above threshold. RXSoil continued excavation via hydroexcavation until 5' away from the line in this area, where sample point ES7 tested at 704 mg/kg chloride. Due to the high pressure and large flow rates in that line, Lucid Energy Group requested RXSoil not excavate any closer to the line to avoid posing a great safety risk. That letter of request is attached as *Appendix G*.

All other excavation samples, where each sample represented no more than 200 square feet, tested below 600 mg/kg chloride. Excavation depths and sample locations are detailed in *Figure 5*. Results from these tests are summarized in *Appendix D* with the laboratory report shown in *Appendix H.1*.

## III. Closure Reporting

- 1. **Scaled site and sampling diagram** See *Figure 5* for excavation samples. See *Figure 6* for remediation samples
- 2. **Photographs of remediated site prior to backfill** See *Appendix F* for a photograph of remediated site prior to backfill.
- 3. **Laboratory analyses of final sampling** See *Appendix H* for laboratory reports summarized in *Appendix D* and *Appendix E*.
- 4. **Description of all remedial activities** RXSoil's core process of on-site remediation was used to address the contamination. RXSoil constructed an above-ground treatment cell adjacent to the contaminated area (see *Figure 6* for placement). This cell was built to an approximate height of 4'. The cell was approximately 225' by 110'. A 30-mil poly liner was installed on the bottom and sides of cells to contain treatment. A proprietary drainage and collection system was installed prior to filling the cells with contaminated soils.

Once all contaminated material was in the treatment cell, chemical treatment began. To confirm successful treatment, as previously agreed upon, confirmation samples were gathered at depth 36"-48" with one sample representing no more than 50 cubic yards as agreed upon in previous work. A grid pattern of 78 samples was collected. If a sample were to test above threshold, treatment continued in that area until the soil tested clean. 50% of the samples were then delivered on ice to Cardinal Laboratories in Hobbs, NM. See *Appendix E* for a summary table of these samples.

Sidewall and bottom samples were taken using a stainless-steel hand shovel while remediation samples were taken using a stainless-steel bucket auger. All tools were decontaminated before each sample, as specified in *Field Equipment Cleaning and Decontamination* (EPA, 2015). This includes wiping the equipment clean, water-rinsing the equipment, washing the equipment in detergent and water, and rinsing the equipment in water.

Samples were temporarily transferred to a new plastic bag in the field. Once in a location safer for handling glass, the samples were transferred to glass jars, supplied by an approved laboratory. The threads on all jars were wiped clean to allow an air-tight seal. Samples were transferred on ice to a third-party laboratory to ensure tests were completed within 14 days (as recommended in the EPA handbook).

All lab reports of sampling can be found in Appendix H.

# IV. Restoration, Reclamation and Re-Vegetation

RXSoil is requesting permission to backfill the excavated area with the remediated soil. Following this approval, RXSoil will reclaim the site to its previous state and seed the area at the discretion of the landowner. RXSoil will continue to monitor this area and if deemed necessary, reseed in next growing season to encourage more growth.

On behalf of all parties, RXSoil is requesting no further action following backfill.





0.6 km

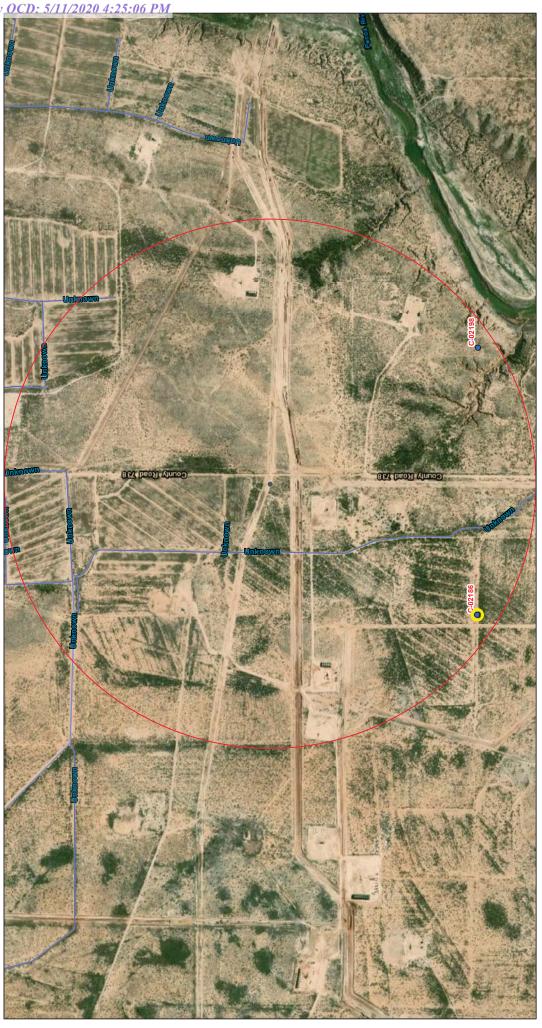
0.3

1:9,028

0.15

0.07

Figure 3 - Depth to Water Map



0.5 mile radius

OSE District Boundary Conveyances

5/7/2020, 2:55:11 PM

Ditch

GIS WATERS PODs Active

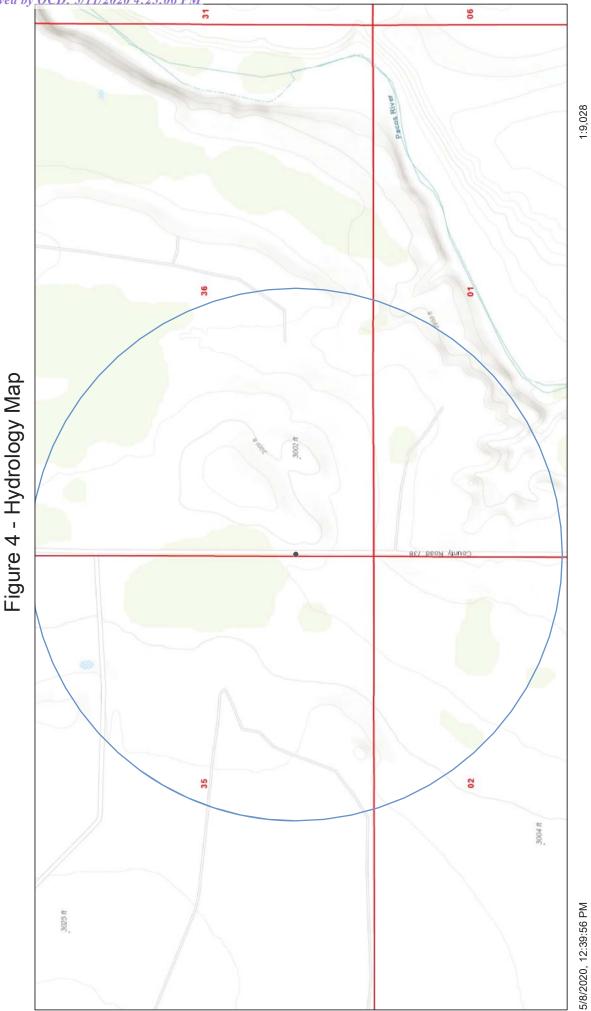
WATERS PODs

WATERS PODs

WATERS PODs

Lateral

Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalClobe, GeoEye, Earthstar and Geographics, CNES/Aribus DS, USCBA, USCBS, AeroGRID, (GN, and State Engineer (OSE) provides this geographic data and any associated metadata "as is" without warranty of any kind, including but not limited to its completeness, fitness for a particular use, or accuracy of its content, positional or otherwise. It is the side responsibility of the user to John Provides this geographic data and any associated metadata "as is" without warranty of any kind, including but not limited to its completeness, fitness for a particular use, or accuracy of its content, positional or otherwise. It is the side responsibility of the user to John Provides this geographic data and any associated metadata "as is" without warranty of any kind, including but not limited to its completeness, fitness for a particular use, or accuracy of its content, positional or otherwise. It is the side responsibility of the user to John Provides this geographic data and any associated metadata "as is" without warranty of any kind, including but not limited to its completeness, fitness for a particular use, or accuracy of its content, positional or otherwise. It is the side responsibility of the user to John Provides this geographic data and any associated metadata "as is" without warranty of any kind, including but not limited to its complete.



1:9,028

0.15

0.07

0.3

OCD District Offices PLSS First Division

Override 1





**APPENDIX A** 

C-141

Form C-141 Page 6 State of New Mexico
Oil Conservation Division

Incident ID	nRM2003759623
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:  Charles W Lock Title: LH B Manager  Date: 5-//-2020  Email: Charles I Reponse: 7/8-49/-4337							
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:						

# **APPENDIX B**

# **DEPTH TO WATER SUPPORT**



# New Mexico Office of the State Engineer

# **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 Number** 

Q64 Q16 Q4 Sec Tws Rng

X

C 02186

24S 28E

589128 3568606\*

**Driller License:** 

1184

**Driller Company:** 

WEST TEXAS WATER WELL SERVICE

**Driller Name:** 

ROBERT W. COLLIS

02/04/1990

**Drill Finish Date:** 

02/04/1990

Plug Date:

**Drill Start Date:** Log File Date:

02/13/1990

**PCW Rcv Date:** 

Source:

Shallow

**Pump Type:** 

Pipe Discharge Size:

300 GPM

**Casing Size:** 

6.00

Depth Well:

100 feet

Depth Water:

**Estimated Yield:** 

55 feet

Water Bearing Stratifications:

Top Bottom Description

80

98 Other/Unknown

**Casing Perforations:** 

**Bottom** Top

80 100

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.

5/7/20 3:12 PM

POINT OF DIVERSION SUMMARY

<sup>\*</sup>UTM location was derived from PLSS - see Help

# **APPENDIX C**

# **RESISTIVITY STUDY**



# PERFORMED FOR:

# **TRAVELERS**

# GEOPHYSICAL INVESTIGATION SURVEY EARTHS ELECTRICAL RESISTIVITY SURVEY WILLOW CREEK, LOVING, NEW MEXICO

PERFORMED BY: THE EARTH MEASUREMENT CORP. FEBRUARY 2020



27 February 2020

Ms. Gina Palermo **Travelers** 

P.O. Box 650293 Dallas. Texas 75265-0293

Office: (281) 606-8618

RE: Geophysical Investigation Survey – Earths Electrical Resistivity Study Willow Creek, Loving, New Mexico – Claim # CEM2655 EMC Project # TR022012

Dear Ms. Palermo:

This report describes the results of a geophysical survey performed by the Earth Measurement Corp. (EMC) at the Willow Creek site near Loving, New Mexico

### PROJECT SCOPE

The scope of this project was to determine the location and depth of salt water that was leaked from a nearby rupture of a salt water transfer pipe.

The geophysical technologies and techniques described in this report will significantly increase and refine the body of knowledge about a specific site. They are not definitive measures in any environment and should not be the only methods used to identify and delineate subsurface objects. . Positioning of the EM data and end points of each resistivity line in real world coordinate data was accomplished using Trimble differential global positioning system (DGPS) equipment.

# ACQUISITION

**EMC** fielded an experienced five-person crew for the acquisition phase of this project: Operations Manager - Harold Fulton, Field Operations Manager - Scott Kotara, and Equipment Operators – Justin Cooper & Gary Woods. EMC performed six (6) profiles of Earths Electrical Resistivity Survey (RES) at the site. The following equipment was used.

# Earths Electrical Resistivity

The geophysical instrument used for this project was the Advanced Geoscience, Inc. (AGI) SuperSting R8 IP. This instrument is a state-of-the-art multi-channel portable memory earth resistivity meter with memory storage of readings and user defined measure cycles. It provides the highest accuracy and lowest noise levels in the industry. The SuperSting revolutionized the field of resistivity imaging surveys by its capability to simultaneously measure up to 8 channels using a high-power transmitter. The SuperSting R8 IP uses the new Multi-channel Swift Dual Mode Automatic Multi-Electrode cable based on the successful design used in the single-channel cables. With this new cable it is now possible to efficiently record 3D data and use a virtually unlimited quantity of electrodes in a single layout. For this project the EMC field crew utilized a 112 resistivity electrode system, however, not all resistivity lines collected for this project utilized the entire 112 electrodes.

Before surveying operations began for the RES profile, conventional survey equipment was used to establish the resistivity profile line and the position of each probe. Resistivity lines were collected at lengths of 300 foot utilizing a 61 probe resistivity array. The probe separation along the resistivity profiles was placed at a five foot (5') probe separation. The procedures used to acquire the resistivity data were planting the stainless-steel probes to a depth of six inches (6").

Earths Electrical Resistivity lines

Resistivity Line	Length (feet)	Latitude	Longitude	Northing	Easting	Attributes
1 Start	300	32.25606363	-104.0493895	457005.26	629111.34	Line 1 SOL
1 Stop	300	32.25688737	-104.0493778	457304.94	629114.19	Line 1 EOL
2 Start	300	32.25606693	-104.0495088	457006.37	629074.47	Line 2 SOL
2 Stop	300	32.25689001	-104.049501	457305.80	629076.10	Line 2 EOL
3 Start	300	32.25606926	-104.0496391	457007.11	629034.20	Line 3 SOL
3 Stop	300	32.25688974	-104.0496301	457305.60	629036.20	Line 3 EOL
4 Start	300	32.25607112	-104.049744	457007.70	629001.78	Line 4 SOL
4 Stop	300	32.25689195	-104.0497332	457306.32	629004.30	Line 4 EOL
5 Start	300	32.256074	-104.0498416	457008.67	628971.59	Line 5 SOL
5 Stop	300	32.25689601	-104.0498297	457307.72	628974.49	Line 5 EOL
6 Start	300	32.25607561	-104.0499757	457009.15	628930.12	Line 6 SOL
6 Stop	300	32.25689756	-104.0499654	457308.17	628932.54	Line 6 EOL

Map Projection Presented in State Plane NAD83 New Mexico East-U.S. Survey Feet

# **Electromagnetics**

The electromagnetic (EM) instrument used was a **Geonics, Ltd.** Electromagnetic Meter, Model EM-31 MK2. This instrument collected conductivity data in the Quadrature mode. The quadrature component indicates the bulk apparent conductivity of the volume of ground sampled, in milli-Siemens per meter (mS/m). Conductivity is the inverse of resistivity; the value measured is an apparent conductivity because it represents an average of the true conductivity values of all materials within the sampled volume. The true conductivity value is a physically diagnostic property and can be used to differentiate between ground materials. To identify possible buried objects and contaminant plumes the interpreter will look for anomalous values in the data. The depth of investigation for this instrument is approximately eighteen (18') feet.

# Radio Detection/Induction

The final instrument used on this project was the RadioDetection RD8000. The RD8000 is designed to locate buried pipes, lines, and cables. Several frequencies and modes of operation are available to suit specific locating needs.

# **PROCESSING**

After the data were acquired, geotechnical software was utilized to process the EM information for the Earth's normal field of adjustments, terrain corrections and filtering to

discriminate against extraneous interference. The EM data were post-processed and mapped using Surfer 17 Contour and Mapping software.

The RES information was processed using the AGI's Earth Imager 2-D and 3-D proprietary software packages. The metric used to show the material's resistance of flow is Ohm-meters (Ohm-m). The scope of this project was to identify elevated conductivity readings; therefore the resistivity data were converted to conductivity data measured in millisiemens per meter (mS/M). In the mS/m scale provided in this report's attachments, the blue and green colors indicate low mS/m readings, which represent higher resistivity in the subsurface soils. Conversely a high mS/m reading (yellow and red colors) indicates high conductivity, or a lower resistance of electric current flow. For data analysis purposes, each resistivity line's mS/m range was set to a consistent scale, revealing any relative changes when compared to each other.

The depths of the resistivity profiles are established by the length of the line, meaning the longer the line, the deeper the penetration of the resistivity information.

# **INTERPRETATION**

Please remember that all resistivity profiles presented in this report have been displayed in a conductivity image in milliSiemens per meter (mS/m) to display the higher conductive properties of the data in the richer red-hues for ease of determining possible impacted areas. In the resistivity profiles included in this report, we have added a complete profile to a depth of 54' feet and 61.6 feet (see Resistivity Profile Map-Full Depth Range). **EMC** also has included resistivity profiles that have been trimmed and reprocessed to a depth of 51.2 feet for each profile (see Resistivity Profile Map-Trimmed Depth Range). The purpose of cropping the resistivity profiles is to highlight the area between ground surface to the depth of 13.4 feet below ground surface (bgs).

We will discuss the Resistivity Profile Map-Full Depth Range first. At a depth of approximately ten feet (10') a conductive layer was observed in profiles 1 - 4 (measured in mS/m) in the brighter color hues (red-orange). This resistive layer extends down to depths exceeding (54.6' or 61.6') bgs. This layer could be the result of a natural occurring salt deposit layer possibly derived from underlying Permian Rustler and Salado Formations or a release from another source(s). The reasoning behind this statement is there in no indication in the shallow resistivity data that feeds the higher conductive values at the ten-foot (10') plus depth. Resistivity profiles 5 & 6 are showing the conductive layering at approximately ten-feet (10') that, for the most part, does not extend down to the depths of 61.6 feet bgs.

The Resistivity Profile Map-Trimmed Depth Range version of the resistivity data shows in better detail the top 13.4' bgs of the resistivity data. This data set should shows areas of higher conductive materials at the near-surface where this leak occurred. The closest survey probe to the actual leak location is located on Resistivity Line 3, at 123' from the southern start of the profile. On the included Interpretive Map, the red-hatched area indicates the areas we feel display the results from this leak. This area encompasses approximately 3,032 square feet and ranges in thickness from 3' to 9'.

Also included on the Interpretive Map is an area depicted in a green-hatch pattern. This area shows elevated conductive values higher than background levels. The depth of this layer starts around the nine-foot (9') depth and extends down in various areas

approximately nine feet (9'). We cannot tie this elevated conductive area to the leak area. There is an area that needs to be discussed on the east side of the survey site. This area has elevated conductive levels at a deeper depth, in the thirty-foot (30') range, extending down past the fifty-foot (50') range bgs. This area is not depicted on the Interpretive Map due to its depth. It would overlap on the map making it confusing and messy. We could not tie this anomaly to the investigated leak.

## **DELIVERABLES**

The following items will be delivered to *Travelers*:

- Written Report of Procedures and Conclusions
- Resistivity Study Profile Layout Map
- Interpretive Map
- Resistivity Profile Map-Full Depth Range 1-3
- Resistivity Profile Map-Full Depth Range 4-6
- > Resistivity Profile Map-Trimmed Depth Range 1-3
- Resistivity Profile Map-Trimmed Depth Range 4-6
- Conductivity Contours Maps (Depth 3, 6, 9, 12, 14, 19, 23, 28, 33, 38, 44 & 50 ft)
- ➤ Resistivity Profile Maps-Full and Trimmed Depth (Profiles 1 6)
- ➤ EM-31 Conductivity Map
- Equipment Descriptions

### STATEMENT

Resistivity and electromagnetic data are not definitive measures in obstructed environments and should not be the only method used to define the boundaries of subsurface anomalies. The interpretation of the processed data describes the anomalies as closely as possible. The survey results described in this report and illustrated on the Resistivity Profiles and Interpreted Map represent theories supported by the evidence of the data collected. Based on experience and expertise in the field, **EMC** has every confidence in the results.

Please be advised that original project data will be held in **EMC**'s offices for a period of six months. After that time, the data will be destroyed. **EMC** personnel are always ready to answer any questions about this project. Please do not hesitate to call.

Thank you for this opportunity.



Joe M. Austin

State of Texas Professional Geoscientist

License #5336

# Legend

Resistivity Line Start/End Resistivity Line

Pipeline

Elevated Conductivity 2-9 Ft.

Elevated Conductivity 9-14 Ft.

Map Projection Presented in State Plane NAD83 New Mexico East- U.S Survey Feet

FEB 2020 Litten P Geophysical Investigation Survey INTERPRETIVE MAP SHOWING AREAS OF ELEVATED CONDUCTIVITY LOVING, NEW MEXICO WILLOW CREEK SCALE 1 INCH = 40 FEET

23

629200

629120 629040 Geophysical Eastings 628920 628800 456970-457370-457050-457210-457130-457330-457290-457250-457170-457090-457010-Geophysical Northings

of 124

13.7

41.0

27.3

Depth (ft)

54.6

54.6

15.4

30.8

Depth (ft)

46.2

41.0

13.7

27.3

Depth (ft)

SOUTH

9.19

30.8

Depth (ft)

15.4

46.2

0.0

15.4

30.8

Дебди (ц)

46.2

SOUTH 0.0 0.0

15.4

30.8

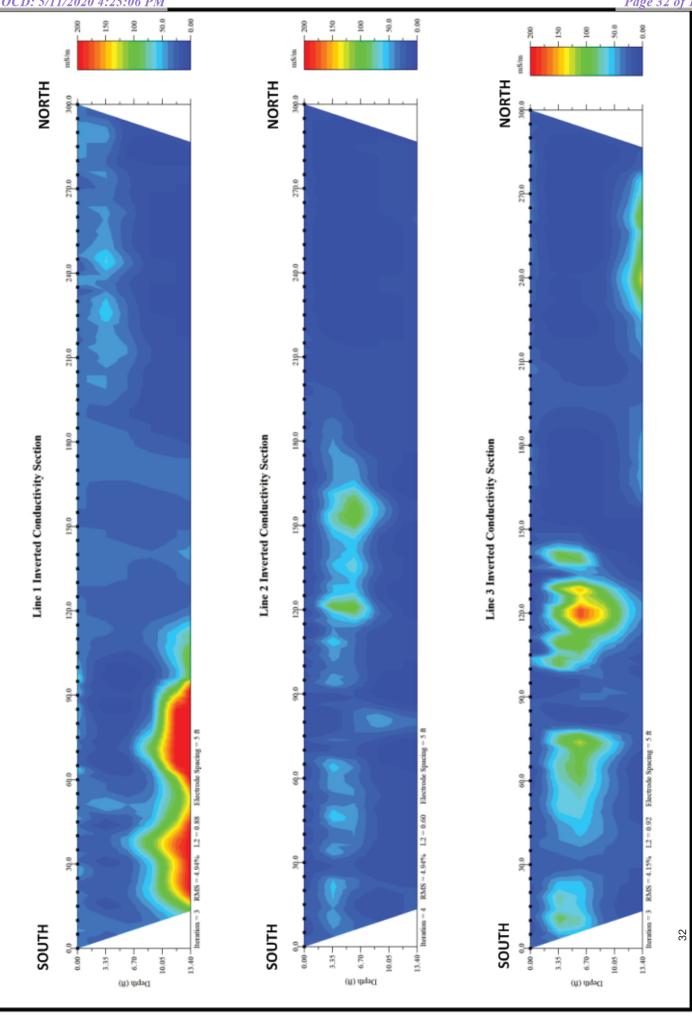
Depth (ft)

46.2

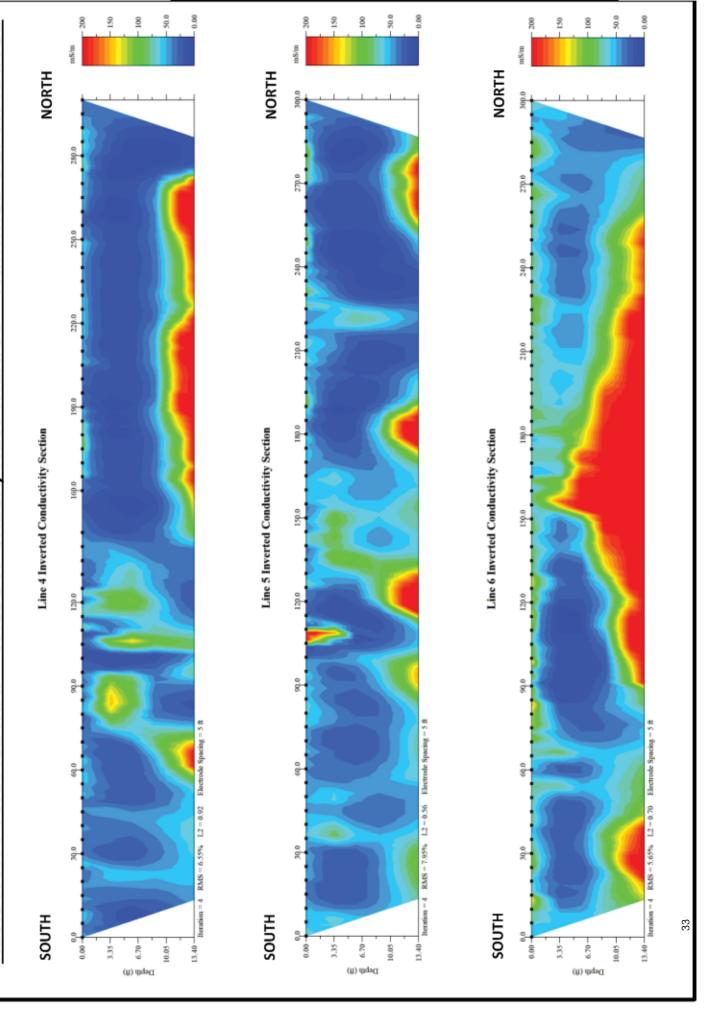
SOUTH

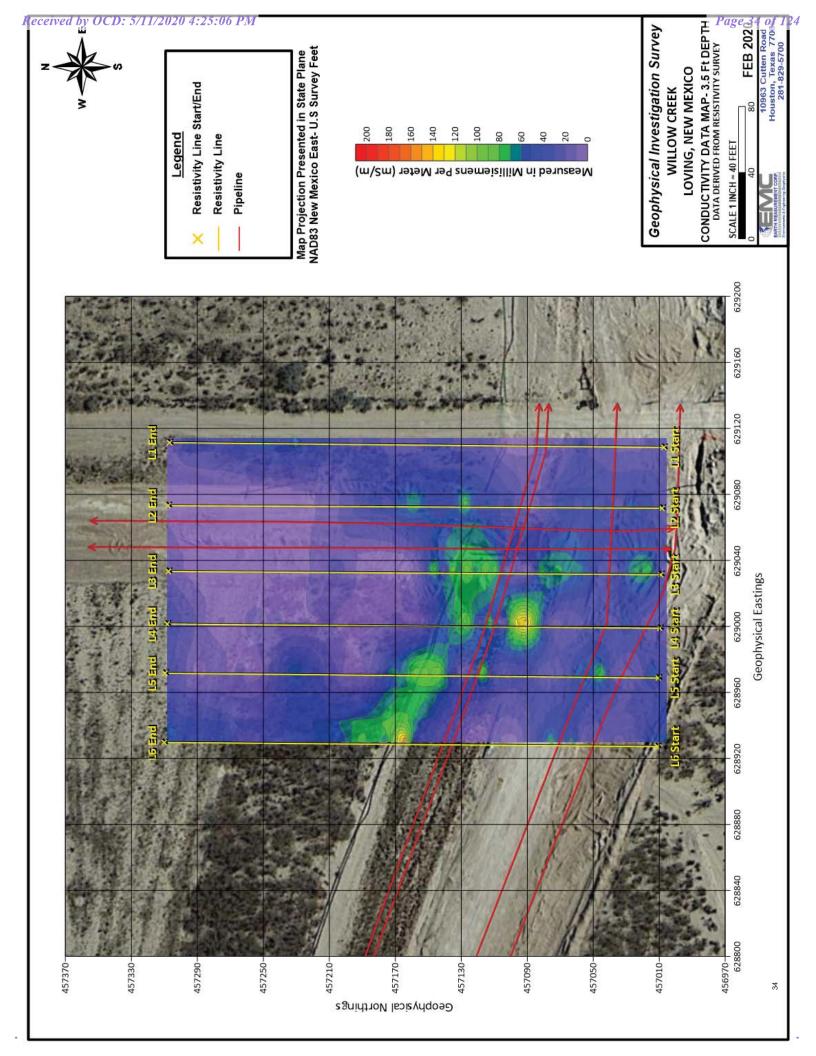
0.0

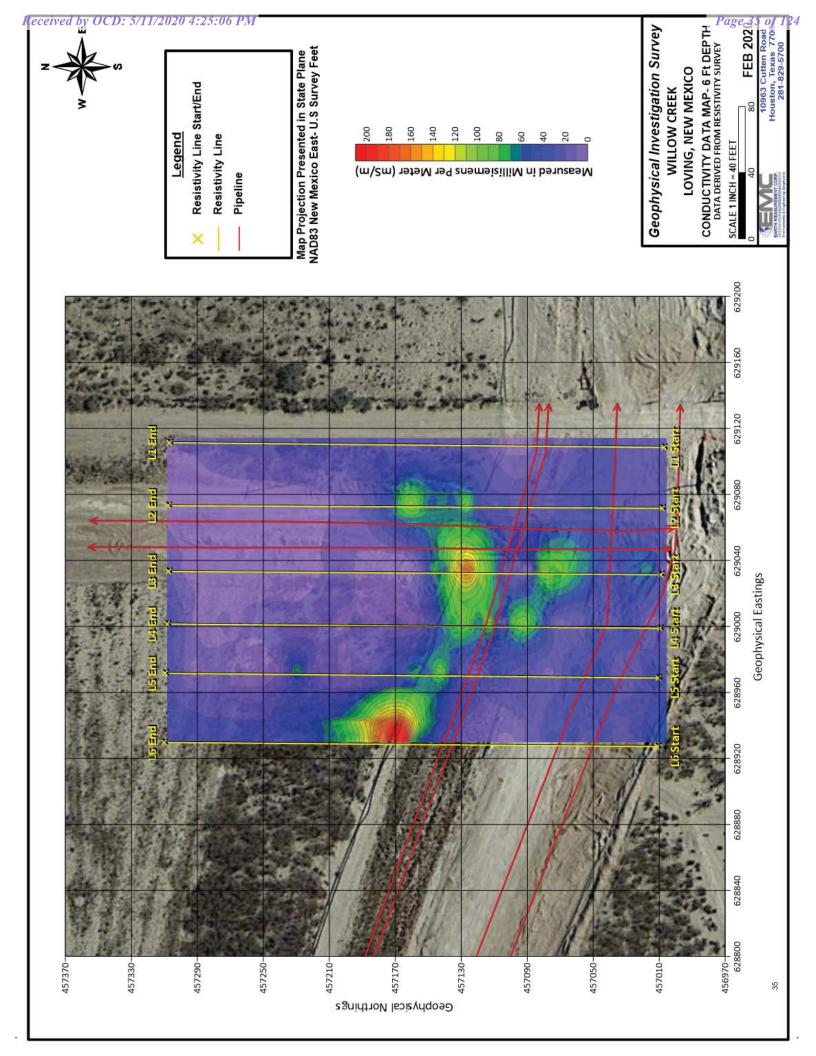
# RESISTIVITY PROFILE MAP - WILLOW CREEK, NEW MEXICO - TRIMMED DEPTH RANGE

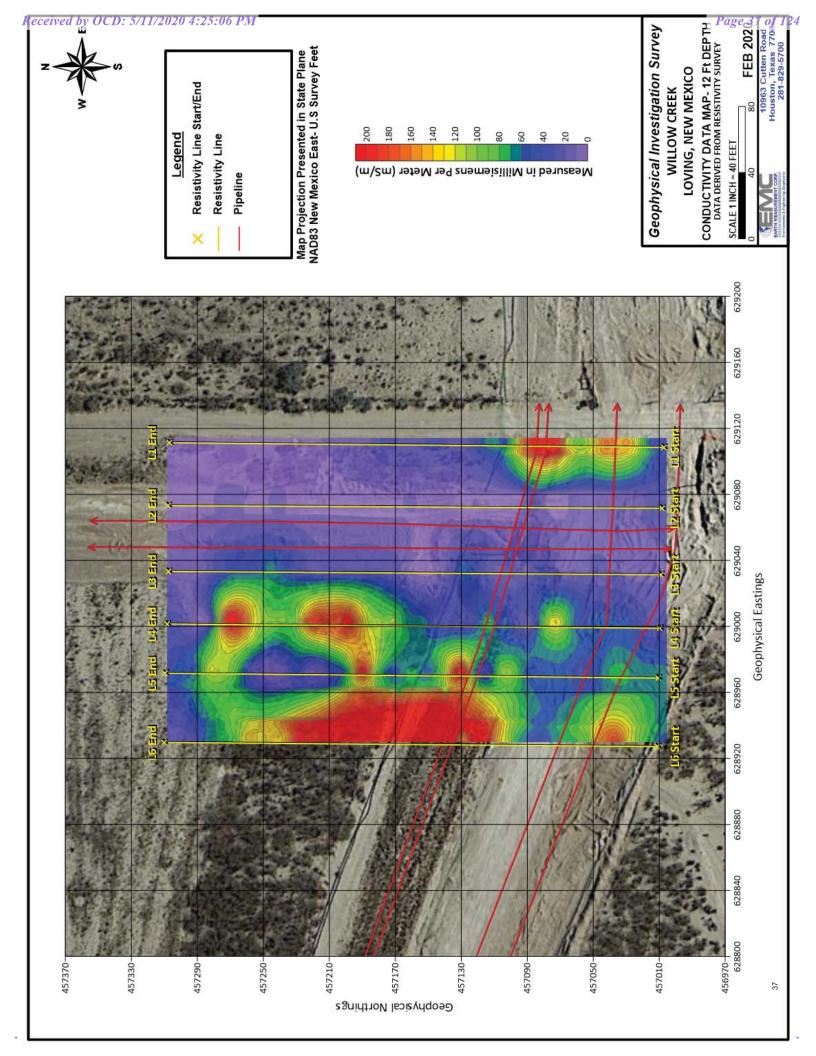


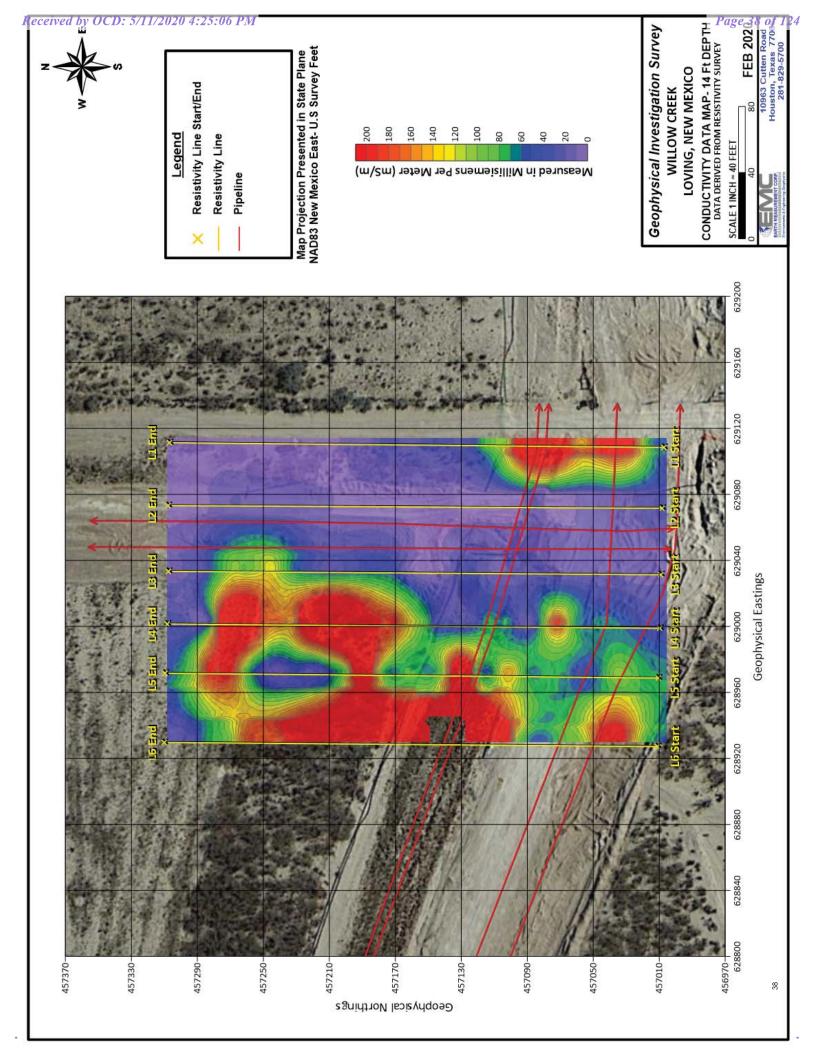
# RESISTIVITY PROFILE MAP - WILLOW CREEK, NEW MEXICO - TRIMMED DEPTH RANGE

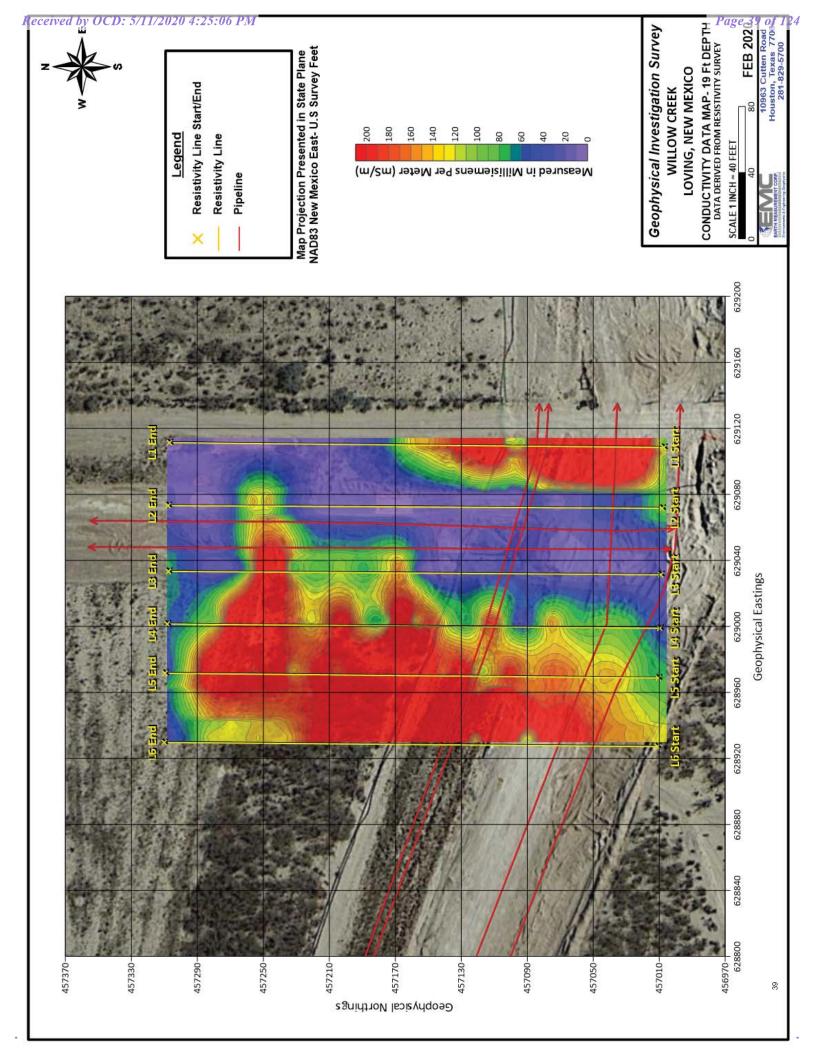


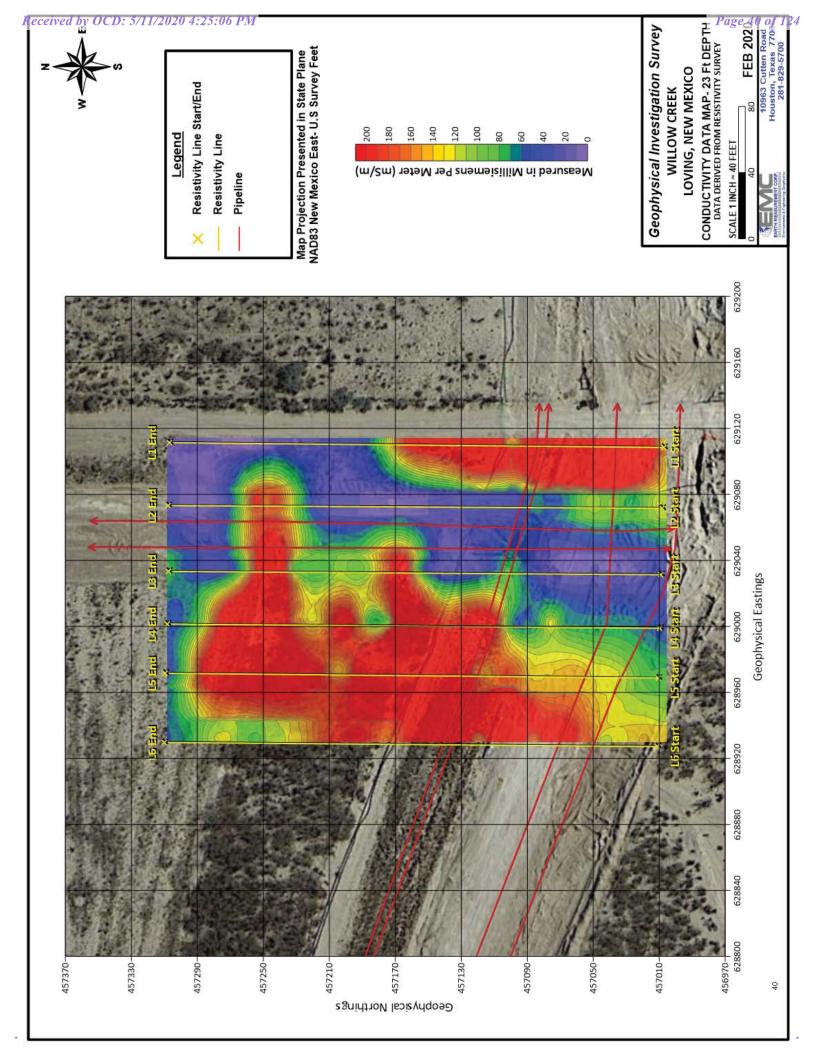


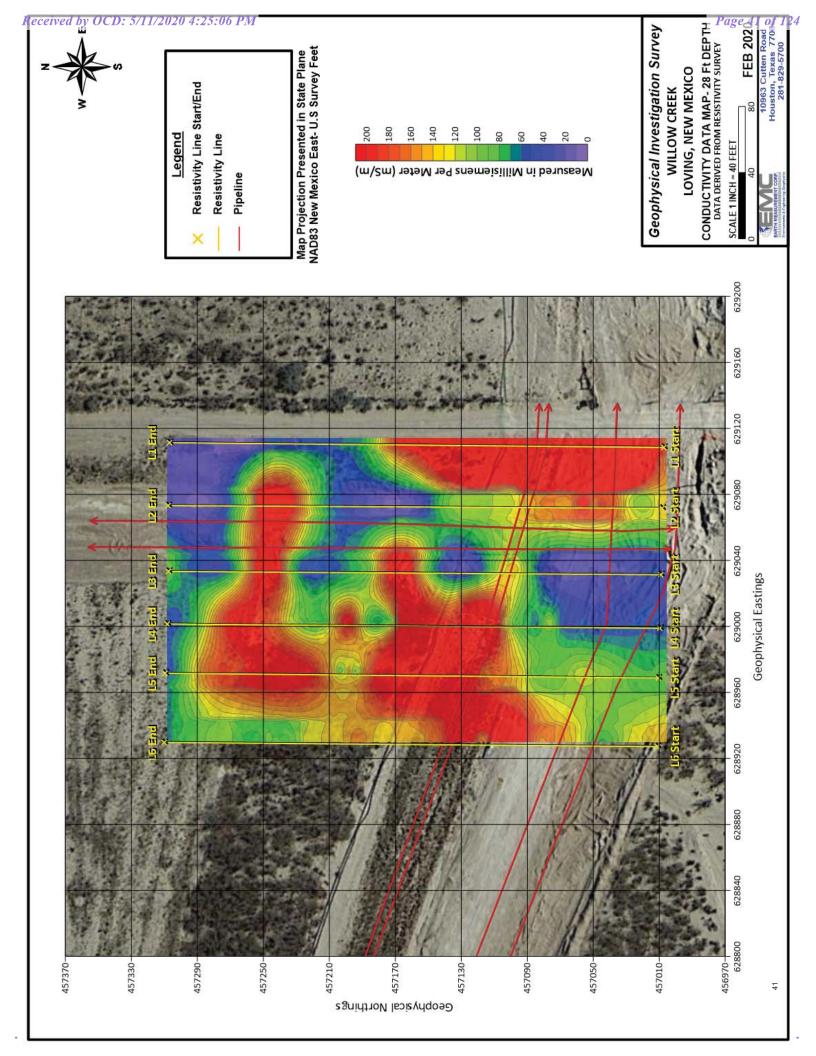


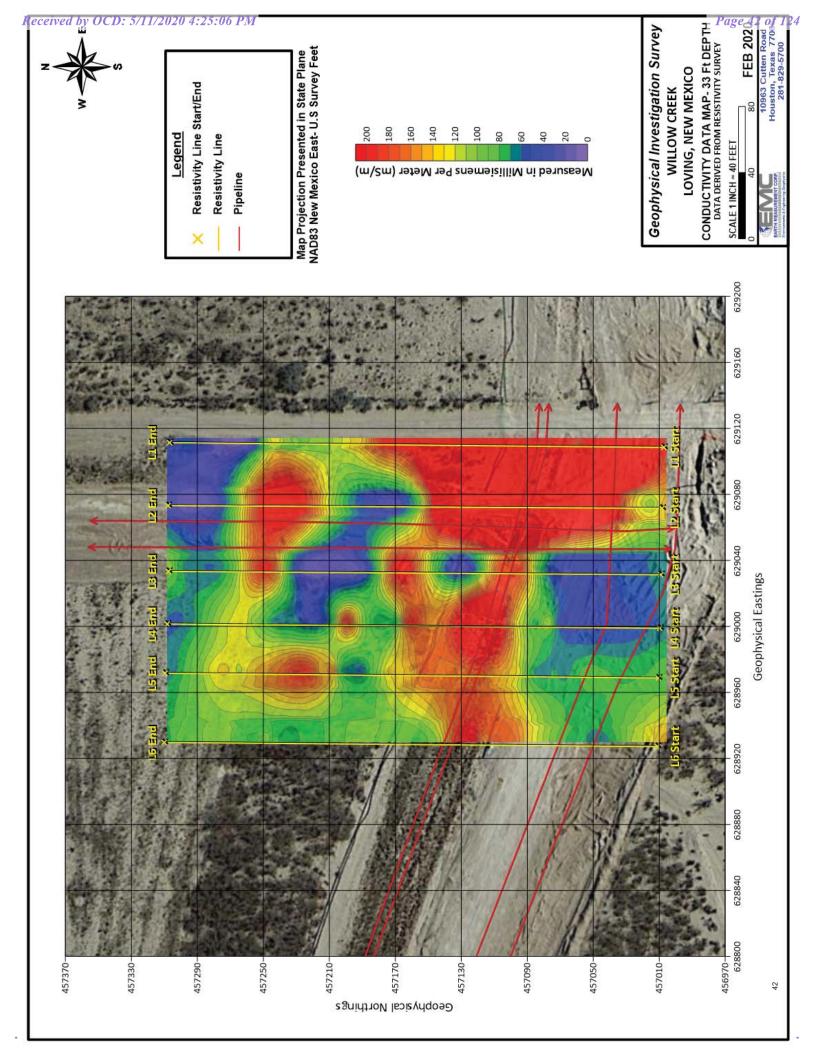


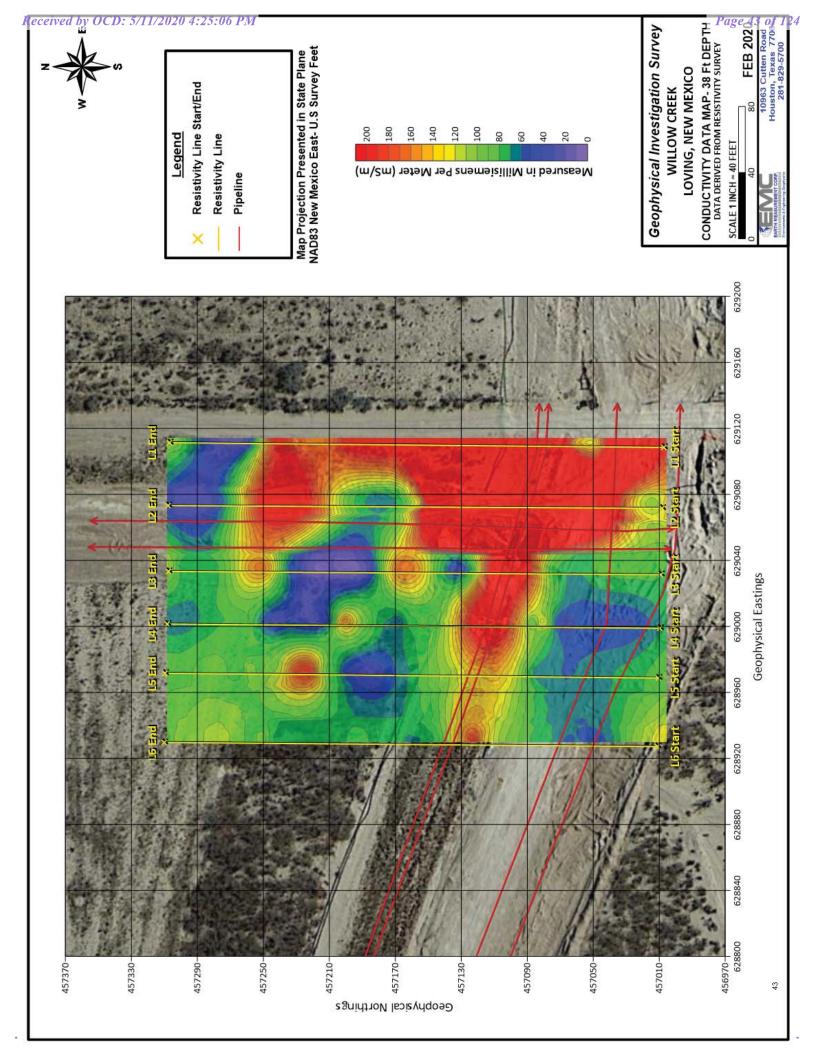


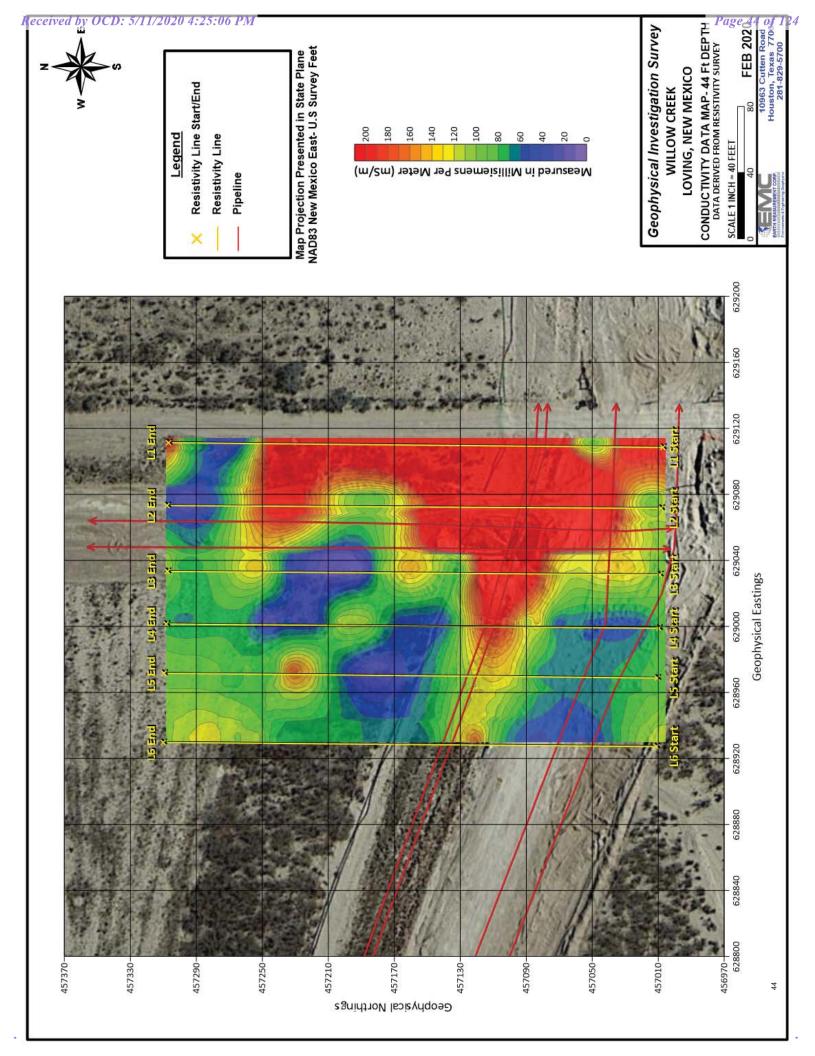


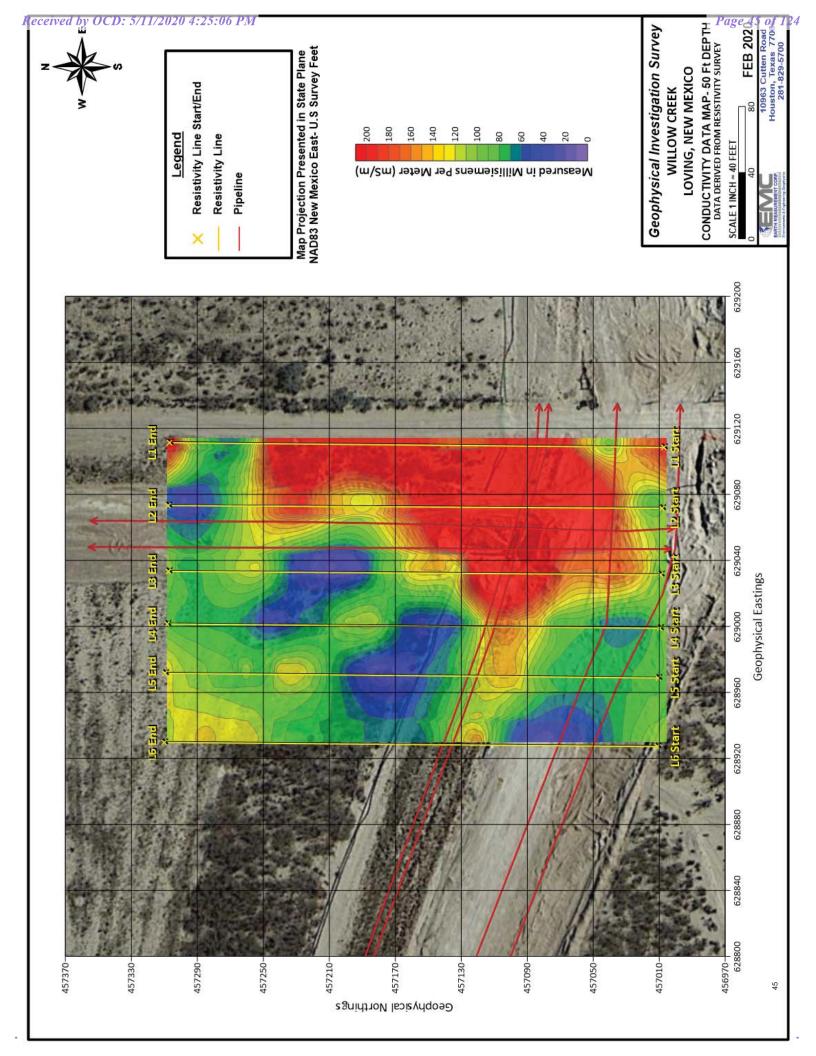


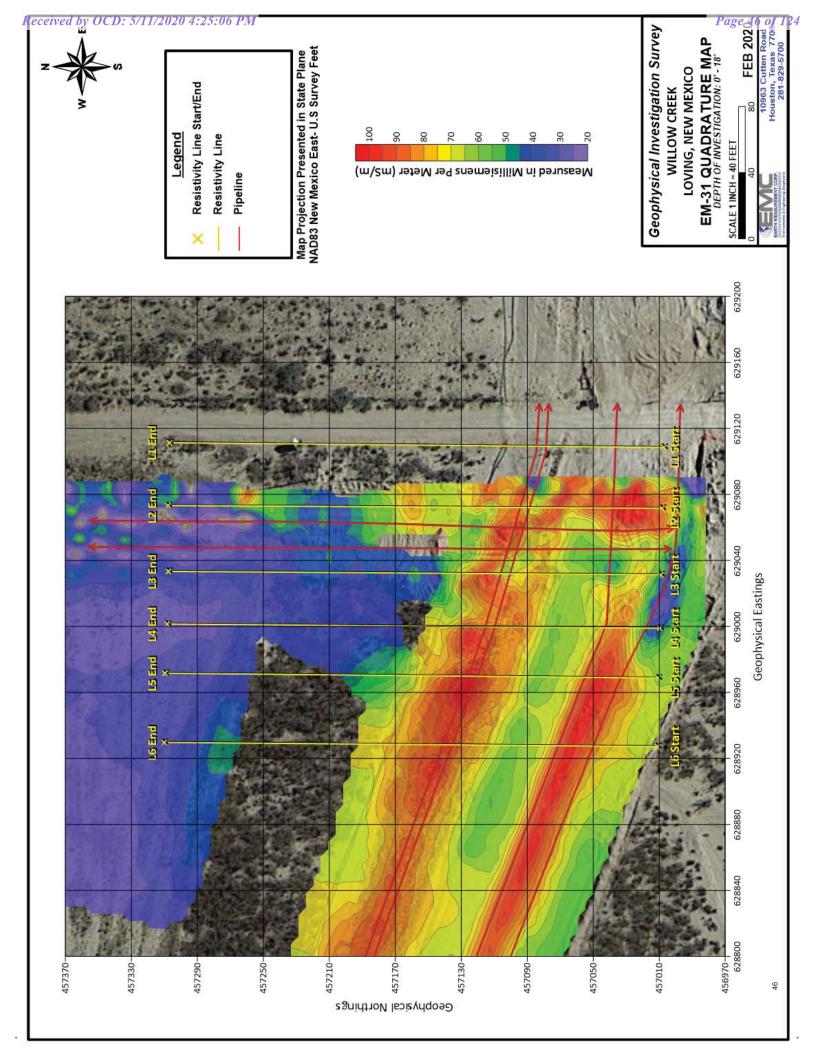












Latitude	Longitude	Northing	Easting	Attributes
32.25606363	-104.0493895	457005.26	629111.34	Line 1 Start
32.25688737	-104.0493778	457304.94	629114.19	Line 1 End
32.25606693	-104.0495088	457006.37	629074.47	Line 2 Start
32.25689001	-104.049501	457305.80	629076.10	Line 2 End
32.25606926	-104.0496391	457007.11	629034.20	Line 3 Start
32.25688974	-104.0496301	457305.60	629036.20	Line 3 End
32.25607112	-104.049744	457007.70	629001.78	Line 4 Start
32.25689195	-104.0497332	457306.32	629004.30	Line 4 End
32.256074	-104.0498416	457008.67	628971.59	Line 5 Start
32.25689601	-104.0498297	457307.72	628974.49	Line 5 End
32.25607561	-104.0499757	457009.15	628930.12	Line 6 Start
32.25689756	-104.0499654	457308.17	628932.54	Line 6 End

Northing/Easting Projection in State Plane NAD83 New Mexico East- U.S. Survey Feet



## SuperSting R8 IP 8 channel Memory Earth Resistivity and IP Meter



The **SuperSting R8 IP** is a state-of-the-art multi-channel portable memory earth resistsivity meter with memory storage of readings and user defined measure cycles. It provides the highest accuracy and lowest noise levels in the industry. This new instrument revolutionizes the field of resistivity imaging surveys by its capability to simultaneously measure up to 8 channels using a high power transmitter so that field data production can reach previously unheard of speeds. With the high power transmitter good data can be recorded in difficult locations where time-consuming stacking was the only alternative before. **SuperSting R8 IP** uses the new Multi-channel Swift Dual Mode Automatic Multi-electrode cable (patent 6,404,203) based on the successful design used in the single-channel cables. With this new cable it is now possible to efficiently record 3D data and use a virtually unlimited quantity of electrodes in a single layout. The electrode address is now a 16 bit number which sets range at about 65,000 electrodes! The controller for this new cable is completely built into the **SuperSting R8 IP** main instrument so there are no extra boxes to carry and connect in the field.

### **Key Benefits**

- 8 channel simultaneous measure capability, cuts field time dramatically!
- High power transmitter. Can use both 12V and 24V batteries for added power.
- Field adapted rugged construction. Built to last in real conditions.
- Easy to use menu driven system.
- The best accuracy and noise performance in the industry!
- Large capacity internal memory for storage of measurement results.
- User programmed measure cycles can be loaded into memory from a PC and later executed in the field.
- Directly controls the Multi-Channel Swift Dual Mode Automatic Multi-electrode system (patent 6,404,203)!
- Induced Polarization mode records 6 individual IP chargeability windows.
- Manual measurements are available via four banana pole screws on the top of the instrument for connecting current and potential electrodes. Manual measurement array types include: Resistance, Schlumberger, Wenner, Dipole-dipole, Pole-dipole, and Pole-pole.



# GEONICS EM-31 Electromagnetic Meter

The Geonics **EM-31** can be used to map geologic features or groundwater contaminant plumes by measuring terrain conductivity without electrodes or ground contact using a patented electromagnetic inductive technique. The instrument reads directly in millisiemens per meter. Using this inductive method, surveys are readily carried out in all regions including those with high surface resistivity such as sand, gravel and asphalt. The **EM-31** is one-person portable and has an effective depth-of-exploration of about six meters. It has been designed to cover the range-of-depths most useful to engineering geophysics. The **EM-31** is the ideal tool for site assessment surveys. Typical applications for the **EM-31** instrument are:

- Delineating regions of permafrost (frozen pore water)
- Locating suspected and delineating known gravel deposits
- Mapping saline intrusions and bedrock topography
- Detecting cavities in carbonate rocks
- Mapping pollution plumes in groundwater
- Mapping terrain conductivity for electrical grounding
- ♦ General geologic mapping of soil types, faults, and fracture zones
- ♦ Archaeological exploration
- ♦ Locating pipes and metallic conductors (tanks, drums and ferrous waste)

Advantages of this instrument over conventional resistivity methods are the speed with which surveys can be conducted, the precision with which small changes in conductivity can be measured and the capability of continuous readouts while traversing a survey area. The **EM-31** has the added ability of simultaneously mapping contaminant plumes and buried metals. These features make it ideal for most any type of geotechnical or groundwater contaminant survey.





### Trimble Pro-XH GPS Receiver/Trimble Zephyr Dual Frequency Antenna

### Fully integrated Bluetooth GPS receiver with H-Star technology for sub-foot accuracy

The GPS Pathfinder® ProXH™ receiver introduces a new era in GPS for GIS data collection. A GPS receiver, antenna, and all-day battery in one, the ProXH receiver delivers sub-foot (30 cm) accuracy with Trimble's revolutionary H-Star™ technology.

Bringing together advanced GPS receiver design and a powerful new post-processing engine, H-Star technology is in a class of its own. Working together with Trimble's TerraSync™ software, the Trimble® GPScorrect™ extension for ESRI ArcPad software, or an application built with the GPS Pathfinder Tools Software Development Kit (SDK), the ProXH receiver quickly and efficiently logs the data you need to achieve subfoot accuracy. Back in the office, the GPS Pathfinder Office software or the Trimble GPS Analyst™ extension for ESRI ArcGIS Desktop software guides you through the H-Star correction process and displays the accuracy you've achieved.

The all-in-one design of the ProXH receiver means it's simple to set up and easy to use. With a Bluetooth® wireless connection you're cable free between the ProXH receiver and a field computer.

### Dual frequency GPS antenna for high-accuracy applications with the ProXH™ receiver

Trimble's Zephyr™ external L1/L2 GPS antenna contains advanced technology for extremely low multipath, outstanding low elevation satellite tracking, and sub-millimeter phase center accuracy. Use the Zephyr antenna together with a GeoXH handheld or GPS Pathfinder® ProXH receiver for high-accuracy mapping and GIS data collection.



**Pro-XH Receiver** 



**Zephyr Antenna** 



### Radiodetection RD 8000/RD 8000 Transmitter

### **Locating Tool**

The RD8000 locating system is a newly designed utility pipe, cable, and line locating system. Featuring 18 frequencies, circuit breakers, and left-right arrows, Peak & Null mode, Compass, True depth as well as a complete digital platform the RD8000 is versatile, reliable and durable.

The Radiodetection RD8000 receiver is designed to locate buried pipes, lines, and cables. Several frequencies and modes of operation are available to suit specific locating needs. Available passive modes include: 50Hz, and 60 Hz power, radio, and 31 kHz CATV. Available active modes include ELF (98/128) Hz, 577 Hz, 512 Hz, 640 Hz, 870 Hz, 940 Hz, 8 kHz, 33 kHz, 65 kHz, 83 kHz, 131 kHz and 200 kHz for use with Radiodetection transmitters.

The Radiodetection RD8000 transmitter is designed to place signals on target lines. It can be configured to send 512 Hz, 640 Hz, 8 kHz, 33 kHz. It places a signal on the line through a direct connection, induction clamping, or broadcast modes.





For more detailed information on all of our services, please visit our website at: <a href="https://www.emcgeophysics.com">www.emcgeophysics.com</a>

### **APPENDIX D**

### **DELINEATION SUMMARY TABLE**

Camala	Committee				Delineation S				TDU-4	001ENA)	
Sample	Sample	Depth (ft)	Sample Date	Chlori	de M4500		8021B)	0.00		3015M)	05.00
Type	Name		- / - /	Field Screening		Benzene	Total BTEX	GRO	DRO	EXT DRO	C6-C35
Boring		SF	2/4/2020	344	448	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring	,	1	2/4/2020	764	720	-	-	-	-	-	-
Boring	1	2	2/4/2020	1676	1800	-	-	-	-	-	-
Boring		3	2/4/2020	2276	2480	-	-	-	-	-	-
Boring		4	2/4/2020	2276	2600	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring		SF	2/4/2020	5920	6660	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring		1	2/4/2020	3580	4000	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring	2	2	2/4/2020	2748	3040	-	-	-	-	-	-
Boring		3	2/4/2020	1864	2000	-	-	-	-	-	-
Boring	ľ	4	2/4/2020	1864	2120	-	-	-	-	-	-
Boring		SF	2/4/2020	3004	3560	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring	•	1	2/4/2020	892	1020	-	-	-	-	-	-
Boring	3	2	2/4/2020	1164	1200	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring		3	2/4/2020	588	640	-	-	-	-	_	-
Boring	,	4	2/4/2020	824	832	-	-	_	-	-	
Boring		SF	2/4/2020	1864	1550	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring		1	2/4/2020	704	688	-	-	-	-	-	-30
Boring	4	2	2/4/2020	764	832	<u> </u>	-			_	
	4	3	2/4/2020	824	800	-	-	-	-	-	
Boring		4		1676	1420					-10.0	
Boring		SF	2/4/2020			<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring	,		2/4/2020	644	704	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring	_	1	2/4/2020	136	160	-	-	-	-	-	-
Boring	5	2	2/4/2020	ND	48	-	-	-	-	-	-
Boring	,	3	2/4/2020	ND	32	-	-	-	-	-	-
Boring		4	2/4/2020	ND	16	-	-	-	-	-	-
Boring		SF	2/4/2020	344	384	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring		1	2/4/2020	764	752	-	-	-	-	-	-
Boring	6	2	2/4/2020	1676	1480	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring		3	2/4/2020	1000	1070	-	-	-	-	-	-
Boring		4	2/4/2020	824	784	-	-	-	-	-	-
Background	7 (BG)	SF	2/4/2020	ND	16	<0.050	< 0.300	<10.0	<10.0	<10.0	<30
Boring		SF	2/4/2020	ND	16	<0.050	< 0.300	<10.0	<10.0	<10.0	<30
Boring	8	1	2/4/2020	ND	16	-	-	-	-	-	-
Boring	,	2	2/4/2020	ND	<16.0	-	-	-	-	-	-
Sidewall	ES1	2	3/18/2020	ND	112	-	-	-	-	-	-
Sidewall	ES2	2	3/11/2020	376	240	-	-	-	-	-	-
Sidewall	ES3	2	3/11/2020	ND	<16.0	-	-	-	-	-	-
Sidewall	ES4	2	3/12/2020	268	448	-	-	_	-	-	
Sidewall	ES5	2	3/19/2020	300	96	-	-		-	_	
Sidewall	ES6	2	3/12/2020	180	208	<del>                                     </del>	-	-	-	-	
Sidewall	ES7	2	3/20/2020	616	704	-	-	-	-	-	-
Sidewall	ES8	2	3/20/2020	ND	32	-	-	<u> </u>	-	-	
			3/20/2020							-	-
Sidewall	ES9	2		ND 300	96	-	-	-	-	-	-
Bottom	EB1	10	3/31/2020	300	336	-	-	-	-	-	
Bottom	EB2	10	3/31/2020	376	512	-	-	-	-	-	-
Bottom	EB3	10	3/31/2020	376	208	-	-	-	-	-	-
Bottom	EB4	10	3/31/2020	376	432	-	-	-	-	-	-
Bottom	EB5	10	3/31/2020	336	400	-	-	-	-	-	-
Bottom	EB6	12	4/7/2020	188	336	-	-	-	-	-	-
Bottom	EB7	12	4/7/2020	164	272	-	-	-	-	-	-
Bottom	EB8	12	4/7/2020	ND	304	-	-	-	-	-	-
Bottom	EB9	12	4/7/2020	304	352	-	-	-	-	-	-
MOCD Thre	abalda C	M < EO'		600	1	10	50				2500

**BOLD** results indicate results above RRAL

All units in mg/kg unless otherwise noted

<sup>-</sup> indicates tests were not ran

				Appendix D.	Delineation S	ummary Tab	le				
Sample	Sample	Depth (ft)	Cample Date	Chlori	de	BTEX (	8021B)		TPH (8	3015M)	
Туре	Name	Depth (It)	Sample Date	Field Screening	M4500	Benzene	Total BTEX	GRO	DRO	EXT DRO	C6-C35
Bottom	EB10	15	4/8/2020	ND	464	-	-	-	-	-	-
Bottom	EB11	12	4/7/2020	340	352	-	-	-	-	-	-
Bottom	EB12	10	3/31/2020	304	320	-	-	-	-	-	-
Bottom	EB13	12	4/7/2020	340	304	-	-	-	-	-	-
Bottom	EB14	10	3/31/2020	340	336	-	-	-	-	-	-
Bottom	EB15	10	3/31/2020	272	272	-	-	-	-	-	-
Bottom	EB16	8	3/20/2020	336	448	-	-	-	-	-	-
Bottom	EB17	8	3/20/2020	336	384	-	-	-	-	-	-
Bottom	EB18	10	3/20/2020	268	128	-	-	-	-	-	-
Bottom	EB19	10	3/20/2020	300	320	-	-	-	-	-	-
Bottom	EB20	10	3/19/2020	336	304	-	-	-	-	-	-
Bottom	EB21	12	3/19/2020	416	464	-	-	-	-	-	-
Bottom	EB22	10	3/19/2020	236	208	-	-	-	-	-	-
Bottom	EB23	4	3/12/2020	376	368	-	-	-	-	-	-
Bottom	EB24	4	3/12/2020	376	352	-	-	-	-	-	-
Bottom	EB25	4	3/12/2020	ND	32	-	-	-	-	-	-
Bottom	EB26	10	4/1/2020	164	144	-	-	-	-	-	-
Bottom	EB27	10	4/1/2020	188	128	-	-	-	-	-	-
Bottom	EB28	16	4/8/2020	616	736	-	-	-	-	-	-
Bottom	EB29	12	4/5/2020	336	544	-	-	-	-	-	-
Bottom	EB30	8	3/31/2020	ND	32	-	-	-	-	-	-
Bottom	EB31	10	4/1/2020	ND	32	-	-	-	-	-	-
Bottom	EB32	12	4/8/2020	336	320	-	-	-	-	-	-
Bottom	EB33	16	4/8/2020	564	1040	-	-	-	-	-	-
Bottom	EB34	8	3/31/2020	ND	80	-	-	-	-	-	-
Bottom	EB35	16	4/8/2020	944	1010	-	-	-	-	-	-
Bottom	EB36	12	4/7/2020	1216	1680	-	-	-	-	-	-
Bottom	EB37	12	4/7/2020	912	800	-	-	-	-	-	-
Bottom	EB38	12	4/7/2020	1136	1360	-	-	-	-	-	-
Bottom	EB39	12	4/7/2020	1400	1170	-	-	-	-	-	-
Bottom	EB40	12	4/7/2020	1716	2000	-	-	-	-	-	-
Bottom	EB41	12	4/7/2020	1604	1860	-	-	-	-	-	-
NMOCD Thre	sholds - G	W <50'		600	)	10	50				2500

BOLD results indicate results above RRAL

All units in mg/kg unless otherwise noted

<sup>-</sup> indicates tests were not ran

### **APPENDIX E**

### **REMEDIATION SAMPLING SUMMARY TABLE**

	Appe	ndix E. F	Remediation Sa	ampling Summary	Table
Davis	Column	Depth	Cample Date	Chlori	de
Row	Column	(ft)	Sample Date	Field Screening	M4500
Α	1	4	4/30/2020	164	240
Α	2	4	5/1/2020	164	-
Α	3	4	4/29/2020	304	-
Α	4	4	4/30/2020	380	496
Α	5	4	5/1/2020	340	-
Α	6	4	4/27/2020	340	448
В	1	4	4/30/2020	340	528
В	2	4	5/1/2020	304	-
В	3	4	4/27/2020	340	368
В	4	4	4/30/2020	380	336
В	5	4	5/1/2020	272	-
В	6	4	4/29/2020	272	-
С	1	4	4/27/2020	244	-
С	2	4	4/27/2020	188	288
С	3	4	4/29/2020	304	-
С	4	4	4/29/2020	304	-
С	5	4	5/1/2020	272	304
С	6	4	5/1/2020	244	256
D	1	4	4/27/2020	304	320
D	2	4	4/27/2020	244	-
D	3	4	4/27/2020	244	320
D	4	4	5/1/2020	304	304
D	5	4	4/30/2020	272	-
D	6	4	4/29/2020	304	ı
Е	1	4	4/29/2020	140	208
Ε	2	4	4/27/2020	304	-
Ε	3	4	4/27/2020	304	336
Е	4	4	4/27/2020	304	-
Е	5	4	4/30/2020	244	-
Е	6	4	5/1/2020	272	320
F	1	4	4/27/2020	340	304
F	2	4	4/29/2020	188	-
F	3	4	4/27/2020	340	352
F	4	4	4/29/2020	340	-
F	5	4	4/30/2020	164	528
F	6	4	4/30/2020	188	-
G	1	4	4/27/2020	180	-
G	2	4	4/27/2020	180	304
G	3	4	4/27/2020	268	-
NMO			Remediation	600	)

**BOLD** results indicate results above RRAL

- indicates tests were not ran

All units in mg/kg unless otherwise noted

	Appendix E. Remediation Sampling Summary Table  Chloride  Chloride									
	0.1	Depth	Complete Date	Chlori	de					
Row	Column	(ft)	Sample Date	Field Screening	M4500					
G	4	4	4/27/2020	376	256					
G	5	4	4/27/2020	180	-					
G	6	4	4/27/2020	376	336					
Н	1	4	4/27/2020	236	240					
Н	2	4	4/27/2020	300	-					
Н	3	4	4/27/2020	180	448					
Н	4	4	4/29/2020	304	-					
Н	5	4	4/27/2020	336	384					
Н	6	4	4/27/2020	336	-					
I	1	4	4/27/2020	200	-					
- 1	2	4	4/27/2020	236	368					
- 1	3	4	4/27/2020	180	-					
- 1	4	4	4/27/2020	268	592					
- 1	5	4	4/27/2020	132	208					
- 1	6	4	4/27/2020	180	-					
J	1	4	4/27/2020	300	448					
J	2	4	4/27/2020	180	-					
J	3	4	4/27/2020	152	240					
J	4	4	4/27/2020	300	-					
J	5	4	4/27/2020	180	-					
J	6	4	4/27/2020	152	400					
K	1	4	4/27/2020	180	-					
K	2	4	4/27/2020	180	304					
K	3	4	4/27/2020	180	320					
K	4	4	4/27/2020	180	-					
K	5	4	4/27/2020	236	-					
K	6	4	4/27/2020	152	400					
L	1	4	4/27/2020	180	496					
L	2	4	4/27/2020	180	-					
L	3	4	4/27/2020	132	192					
L	4	4	4/27/2020	180	-					
L	5	4	4/27/2020	180	-					
L	6	4	4/27/2020	ND	480					
М	1	4	4/30/2020	188	-					
М	2	4	4/27/2020	180	-					
М	3	4	5/1/2020	244	336					
M	4	4	4/27/2020	376	544					
M	5	4	4/29/2020	304	-					
М	6	4	4/27/2020	272	336					
_			Remediation	600						

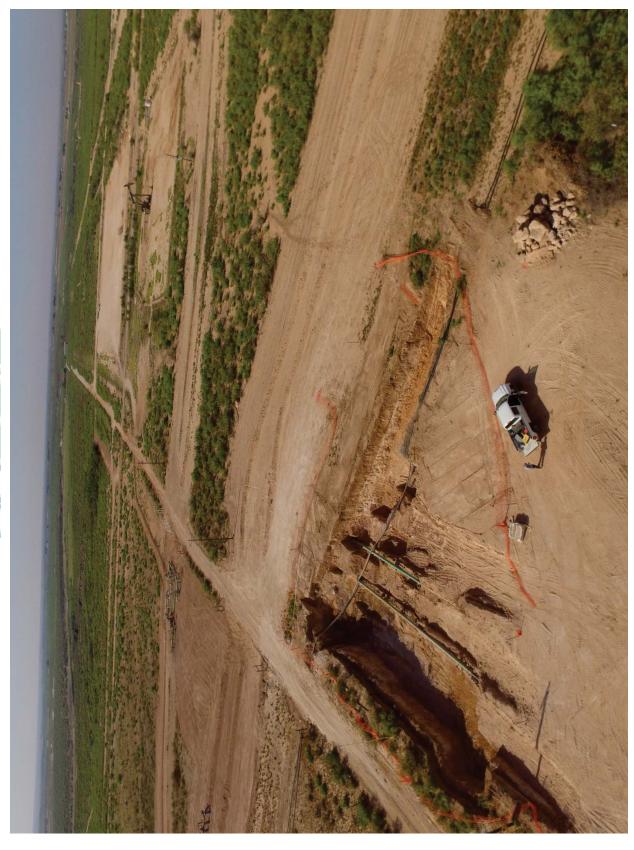
**BOLD** results indicate results above RRAL

- indicates tests were not ran

All units in mg/kg unless otherwise noted

### **APPENDIX F**

### **SITE PHOTOGRAPHS**



RXSoil, Inc. 201 Main St. Ste. 1360, Fort Worth, TX 76102



### **APPENDIX G**

**LETTER RE: LUCID PIPELINE** 



3100 McKinnon Street, Suite 800 – Dallas, Texas 75201 201 S. 4<sup>th</sup> Street – Artesia, New Mexico 88210 Tel: 214.420.4950 Fax: 214.420.4949 Tel: 575.810.6025 Fax: 575.748.4274

March 26,2020

Re: RXSoil Remediation of Willow Creek Spill on Lucid Energy Delaware Pipeline ROW

To whom it may concern,

This letter is in response to RXSoil's remediation efforts near Lucid Energy Delaware's primary natural gas gathering pipeline. The line is 16" in diameter, operates at pressures near or above 1000psig and is responsible for feeding two processing facilities, one located in Eddy County, the other in Lea County. The approximate length of the pipeline is 40 miles. Volumes are approximately 750mmcf/day!

RXSoil has excavated to within five feet of this pipeline. It is our understanding that sidewall samples have come back at <16.0 mg/kg; 704 mg/kg;32.0mg/kg and 96mg/kg for chlorides. Due to safety and operational concerns associated with this remediation, Lucid is requesting that RXSoil not excavate any further. Based on NMOCD guidelines, it appears any additional excavation(s) may only provide a marginal gain in chloride values while creating an exceptional safety risk.

If you have any questions, need additional information, or would like to discuss this further please contact me at 575-810-6025, 575-626-8168 or gblake@lucid-energy.com.

Sincerely,

Glen Blake

Field EHSR Manager

Lucid Energy Group, LLC

201 South 4th Street

Artesia, NM 88210

### **APPENDIX H.1**

### **LABORATORY REPORTS**

### **CHARACTERIZATION**



March 23, 2020

MATTHEW LONGCRIER

RX-SOIL INC.

201 MAIN STREET, SUITE 1360

FORT WORTH, TX 76102

RE: WILLOW CREEK

Enclosed are the results of analyses for samples received by the laboratory on 03/20/20 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102

Fax To: NA

Received:

Chloride, SM4500Cl-B

03/20/2020

Sampling Date:

03/11/2020

Reported:

03/23/2020

mg/kg

Reporting Limit

16.0

Result

96.0

Analyzed

03/23/2020

Sampling Type:

Soil

Project Name: Project Number: WILLOW CREEK NONE GIVEN Sampling Condition: Sample Received By: Cool & Intact Kelly Jacobson

Project Location:

NOT GIVEN

### Sample ID: ES - 3 (H000874-01)

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/23/2020	ND	432	108	400	0.00	
Sample ID: ES - 7.3 (H00	0874-02)								
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	03/23/2020	ND	432	108	400	0.00	
Sample ID: ES - 8 (H0008	874-03)								
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/23/2020	ND	432	108	400	0.00	
Sample ID: ES - 9 (H0008	874-04)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: GM					

Method Blank

ND

BS

432

% Recovery

108

True Value QC

400

Analyzed By: GM

### Cardinal Laboratories

Analyte

Chloride

\*=Accredited Analyte

RPD

0.00

Qualifier

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Celey D. Keene



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Freene

# CARDINAL Laboratories

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Company Name:		BILL TO	ANALYSIS RECLIEST
Project Manager:	Misto An	P.O. #:	
Address:	10	Company:	
City:	State: Zip:	Attn:	
Phone #:		Address:	
Project #:	Project Owner:	City:	
Project Name: \\ \(  \)	CON CREEK	State: Zip:	
Project Location:		#	
Sampler Name: ////	tt Longerie	Fax #:	
FOR LAB USE ONLY		SERV.	SAMPLING
	(C)OMP ERS ATER		lorid
		HER: D/BASE: / COOL HER:	Ch
A A COUNT	# CO GRO WAS SOI OIL	OTH ACII ICE	TIME
2 ES-73		246	
1		3/20	
מין יין	×,	3/6	X ×
	No.	120	
PLEASE NOTE: Liability and Damages, Cardinal's I	iability and client's exclusive remodules on the second state of t		
nalyses. All claims including those for negligence of negretary including those for negligence of new control of the liable for incidential of the new control of the	ver shall be de es, including w eunder by Car	corror, small be impled to the amount paid by the client for the di received by Cardinal within 30 days after completion of the a loss of use, of loss of profits incurred by client, its subsidiaries, is based from any of the above stated reasons or otherwise.	by the client for the control the control the control the control the applicable ent. Its subsidiaries, sons or otherwise.
Mathy	Time: 45 Pm		Verbal Result: ☐ Yes ☐ No Add'I Phone #: All Results are emailed. Please provide Email address:
Kelinquisned By: /	Time: Received By:		REMARKS:
Delivered By: (Circle One)		CHECKED BY:	Turnaround Time: Standard Bacteria (only) Sample Condition
Sampler - UPS - Bus - Other:	Corrected Temp. °C Yes Yes Yes N Yes N No No No	(Initials) ルン	Cool Intact
. (			1



March 24, 2020

MATTHEW LONGCRIER RX-SOIL INC.

201 MAIN STREET, SUITE 1360 FORT WORTH, TX 76102

RE: WILLOW CREEK

Enclosed are the results of analyses for samples received by the laboratory on 03/23/20 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102

Fax To: NA

Received:

03/23/2020

Sampling Date:

03/12/2020

Reported:

03/24/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK NONE GIVEN

mg/kg

Sampling Condition: Sample Received By: Cool & Intact Kelly Jacobson

Project Number: Project Location:

NOT GIVEN

Sample ID: ES - 1 (H000890-01)

Chloride, SM4500Cl-B

Analyzed By: GM

Analyte

Reporting Limit Result

Analyzed

% Recovery

True Value OC RPD Oualifier

Chloride

112

16.0 03/24/2020 Method Blank ND

BS 400

100

3.92

Sample ID: ES - 2 (H000890-02)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: GM

Method Blank

BS

% Recovery

Chloride

Result 240

Result

448

Result

96.0

16.0 03/24/2020

Reporting Limit

Reporting Limit

16.0

Reporting Limit

16.0

ND

400

100

True Value QC 400

400

RPD Qualifier 3.92

Sample ID: ES - 4 (H000890-03)

Chloride, SM4500Cl-B

Analyte

Analyte

Analyte

mg/kg

Analyzed By: GM

Analyzed

03/24/2020

03/24/2020

Analyzed

Method Blank

% Recovery

100

True Value QC 400

RPD

3.92

Qualifier

Chloride

Chloride

Sample ID: ES - 5 (H000890-04)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: GM

Analyzed

Method Blank

ND

ND

400

BS

400

% Recovery

100

True Value QC

400

RPD

3.92

Qualifier

Cardinal Laboratories

\*=Accredited Analyte

Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Kreene

Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102

Fax To: NA

Received:

03/23/2020

Sampling Date:

03/12/2020

Reported:

03/24/2020

Sampling Type:

Soil

True Value QC

400

RPD

3.92

Qualifier

Project Name:

WILLOW CREEK NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Kelly Jacobson

Project Number: Project Location:

NOT GIVEN

Result

128

Reporting Limit

16.0

### Sample ID: ES - 6 (H000890-05)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/24/2020	ND	400	100	400	3.92	
Sample ID: EB - 16 (H000	0890-06)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	03/24/2020	ND	400	100	400	3.92	
Sample ID: EB - 17 (H000	0890-07)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	03/24/2020	ND	400	100	400	3.92	
Sample ID: EB - 18 (H000	0890-08)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: GM					

### Sample ID: EB - 19 (H000890-09)

Analyte

Chloride

	,								
Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	03/24/2020	ND	400	100	400	3.92	

Method Blank

ND

BS

400

% Recovery

100

Analyzed

03/24/2020

### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene



### Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Tax To.

Received: 03/23/2020

Reported: 03/24/2020
Project Name: WILLOW CREEK
Project Number: NONE GIVEN

Project Location: NOT GIVEN

Sampling Date: 03/19/2020

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

### Sample ID: EB - 20 (H000890-10)

Chloride, SM4500CI-B	mg/kg		Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	03/24/2020	ND	400	100	400	3.92	

### Sample ID: EB - 21 (H000890-11)

Chloride, SM4500Cl-B mg/kg		Analyze	d By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	03/24/2020	ND	416	104	400	0.00	

### Sample ID: EB - 22 (H000890-12)

Chloride, SM4500Cl-B mg/kg		Analyze	d By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/24/2020	ND	416	104	400	0.00	

### Sample ID: EB - 23 (H000890-13)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	03/24/2020	ND	416	104	400	0.00	

### Sample ID: EB - 24 (H000890-14)

Chloride, SM4500CI-B mg/kg		Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	03/24/2020	ND	416	104	400	0.00	

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Celeg D. Keene



### Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102

Fax To: NA

Received: 03/23/2020 Reported: 03/24/2020

03/24/2020 WILLOW CREEK

Project Number: Project Location:

Project Name:

NONE GIVEN

Sampling Date:

03/12/2020

Sampling Type:

Soil Cool & Intact

Sampling Condition: Sample Received By:

Kelly Jacobson

### Sample ID: EB - 25 (H000890-15)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/24/2020	ND	416	104	400	0.00	

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Keene



### **Notes and Definitions**

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

ecovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Keene

Relinquished By:

Time: 30
Date:

Received By:

Time:

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Observed Temp. °Co

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush

REMARKS:

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

of 8 Page 7 101 East Marland, Hobbs, NM 88240

	(575) 393-2326 FAX (575) 393-24/6	. / σ	٠.
Company Name:	(CYSO)		BILL TO ANALYSIS REQUEST
Project Manager:	Matt Longcrie	P.O. #:	
Address:		Company:	
City:	State:	Zip: Attn:	
Phone #:	Fax #:	Address:	
Droject #:	Project Owner:	city:	
Project Name:	Willow Creek	State:	Zip:
Droinet I postion:		Phone #:	
Floject Location.	Moth	Fax #:	es
Sampler Name:	i mal		SAMPLING
FOR LAB USE ONLY		NA INI	
Lab I.D.	Sample I.D.	G)RAB OR (C)OMF # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:	DATE TIME
TO WE	-M	7	3/2 J. 00/00 /V
3.	ES- 2		3/11 1:00000
ر در	RS-4		The Stoopm
7	Es-5		2/2 Coom
JI.	ES-6		J. J. Solm
C	EB- 16		
4	EB 17		
<b>S</b> .	EB-18		3/20 1,000m
2	EB-19	60	3/20 1:00 PM
℧-	E 8- 20	×	3/19 10;00mm 90
PLEASE NOTE: Liability an analyses. All claims includir	d Damages. Cardinal's liability and client's exclusive remedy for the property of the cause whatsoever shall the cause whatsoever shall the cause whatsoever shall the cause what soe we have the cause what soe we have the cause what soe we have the cause when the cause whe cause when the cause when the cause when the cause when the cau	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive renetly for any claim arising wherethe based in continuous unit, asset to continuous and days after completion of the applicable analyses, All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses, All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses, All claims including those for negligence and any other causes whatsoever shall be deemed waived unless made in writing and received by Cardinal's liability and client's exclusive renewall analyses.	al within 30 days after completion of the applicable of profits incurred by client, its subsidiaries.
affiliates or successors arising to Relinquished By:	ng out of or related to the performance of services hereunder to the performance of services here	Service. In no event state is required by Cardinal, regardless of whether such claim is based upon any of the above stated reasons of untermass.  Received By:  Received By:	of the above stated reasons of whether the state of the s
Velliduistica	3/23		All Results are eliminate in the province

Thermometer ID #97 C #11 3

Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C

Yes Yes
No Corrected Temp. °C

### CARDINAL Laboratories

### 101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

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(5/5) 353-2326	FAX (3/3) 393-24/6				
Company Name: [ Soi		BILL TO		ANALYSIS REQUEST	
Project Manager: Matt &	projerier	P.O. #:			
Address:	0	Company:			
City:	State: Zip:	Attn:			
Phone #:	Fax #:	Address:			
Project #:	Project Owner:	City:			
Project Name: Willow	Cheek	State: Zip:			
Project Location:		Phone #:	5		
Sampler Name: Matt		Fax #:	les		
FOR LAB USE ONLY		PRESERV. SAMPLING			
Lab I.D. Sample I.D.	(G)RAB OR (C)OM # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:	TIME		
EB- 21	×		10:00.00		
17 EB-22		3/19	10.00m		
13 EB-23		3/12	monoci.		
14 EB- ZH		3/12	1,00001		
5 E3 -25	*-	3/n	1: pape.		
P_LEASE NOTE: Liability and Damages, Cardinal's liability and analyses, All claims including those for negligence and any o service. In no event shall Cardinal be liable for incidental or caffinales or successors arising out of or related to the perform	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive menety for any claim assing whether based in contract or fort, shall be immed to the amount palar by the circuit or ine analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in witting and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of upe, or loss of profits incurred by client, its substitiaties, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless or whether such claim is based upon any of the above stated reasons or otherwise.	ract or fort, shall be limited to the amount paid by the client for in and received by Cardinal within 30 days after completion of the ns, loss of use, or loss of profits incurred by client, its subsidiarier sim is based upon any of the above stated reasons or otherwise.	a by me client for me r completion of the applicable dient, its subsidiaries, asons or otherwise.		
Relinquished By:  Madd H	Date: 3/23 Received By:		ılt: □ Yes are emailed. Ple	□ No Add'I Phone #: ase provide Email address:	
Relinquished By:	Date: Received By:		REMARKS:	`	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. C Sample Condition Cool Intact Corrected Temp. C Coll No. 1 No.	ondition CHECKED BY: tact (Initials) Yes // 7	Turnaround Time: Standard Rush Thermometer ID #97 Correction Factor +#44°C	tandard ☐ Bacteria (only) Sample Condition Cool Intact Observed Temp. °C  UST ☐ Cool Intact Observed Temp. °C	

FORW-000 K 3.0



April 06, 2020

MATTHEW LONGCRIER
RX-SOIL INC.
201 MAIN STREET, SUITE 1360
FORT WORTH, TX 76102

RE: WILLOW CREEK

Enclosed are the results of analyses for samples received by the laboratory on 04/01/20 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102

Fax To: NA

Received:

04/01/2020

Sampling Date:

03/31/2020

Reported:

04/06/2020 WILLOW CREEK Sampling Type:

Soil

Project Name: Project Number:

NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Kelly Jacobson

Project Location:

NOT GIVEN

432

16.0

### Sample ID: EB - 1 (H000978-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	04/03/2020	ND	416	104	400	3.92	
Sample ID: EB - 2 (H000	978-02)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	04/03/2020	ND	416	104	400	3.92	
Sample ID: EB - 3 (H000	978-03)								
Chloride, SM4500CI-B	mg	/kg	Analyze	ed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	04/03/2020	ND	416	104	400	3.92	
Sample ID: EB - 4 (H000	978-04)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

04/03/2020

### Cardinal Laboratories

Chloride

\*=Accredited Analyte

3.92

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ND

416

104

400

Celeg D. Kreene



### Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Tax Tot

 Received:
 04/01/2020
 Sampling Date:
 03/31/2020

 Reported:
 04/06/2020
 Sampling Type:
 Soil

Project Name: WILLOW CREEK Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Kelly Jacobson

Project Location: NOT GIVEN

### Sample ID: EB - 5 (H000978-05)

Qualifier  Qualifier
Qualifier
Qualifier
Qualifier
Qualifier
Qualifier
Qualifier
Qualifier
~
•

### Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keene



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102

Fax To: NA

Received:

04/01/2020

Sampling Date:

04/01/2020

Reported:

04/06/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK

Sampling Condition:

Cool & Intact

Project Number: Project Location:

Analyte

NONE GIVEN NOT GIVEN

Sample Received By:

Kelly Jacobson

Sample ID: EB - 27 (H000978-10)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

BS

% Recovery True Value QC RPD

Qualifier

Chloride

Result 128

16.0

Reporting Limit

Reporting Limit

Reporting Limit

Analyzed 04/03/2020

Analyzed

Analyzed

Analyzed

Method Blank ND

416

104

3.92

Sample ID: EB - 30 (H000978-11)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

% Recovery

True Value QC

Chloride

Result 32.0

16.0 04/03/2020 Method Blank ND

BS 416

104

400

400

RPD Qualifier

Sample ID: EB - 31 (H000978-12)

Analyte

Analyte

Analyte

Chloride, SM4500Cl-B

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

BS

% Recovery

True Value QC

RPD

3.92

Qualifier

Chloride

Result 32.0

16.0

04/03/2020

Method Blank ND

416

104

400

3.92

Sample ID: EB - 34 (H000978-13)

mg/kg

Analyzed By: AC

Qualifier

Chloride

Result 80.0

Reporting Limit 16.0

04/03/2020

Method Blank ND

BS 416 % Recovery 104

True Value QC 400

**RPD** 3.92

Cardinal Laboratories

\*=Accredited Analyte

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Celeg D. Kreene

Celey D. Keene, Lab Director/Quality Manager



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Freene

Relinquished B

Time 4:05

services hereunder by Cardinal,

rdinal, regardless of whether such claim in Received By:

sed upon any of the above stated reasons or otherwise.

Verbal Result:

All Results are emailed. Please provide Email address:

□ Yes

☐ No Add'l Phone #:

Date: Time:

Received By:

REMARKS:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Observed Temp. °C 8.0%

Corrected Temp. °C

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush # 113

Bacteria (only) Sample Condition Cool Intact Observed Temp. °C

Cool Intact

Corrected Temp. °C

Thermometer ID #97
Correction Factor + D.4 °C

Relinquished By:

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



(575) 393-2326 FAX (575) 393-2476

Company Name.		BILL TO	ANALYSIS REQUEST
Project Manager: Ma++	P.O. #:		- 1
Address:	Company:	ny:	
City: State:	Zip: Attn:		
Phone #: Fax #:	Address:	is:	
Project #: Project Owner:	er: City:		
Project Name: Willow Creek	State:	Zip:	
Project Location:	Phone #	#	
Sampler Name: MU++	Fax #:		
FOR LABUSE ONLY	MATRIX DEE	DEFECTOV SAMDI ING	
	ERS ATER EER		hlorio
Hanouts	(G)RAB OF # CONTAIN GROUNDV WASTEWA SOIL OIL SLUDGE OTHER:	OTHER:  DATE  TIME	
	×		×
2 EB-2			
3 FB-3			
4 58-4			
S EB 5			
6 EB-12			
11-831 た			
S E 2-15		3/3/ 12:00	
9 EG 26		00:21 /KH	
10 [58-27	×	(1) 17:00 X	8
PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remesty for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed whited unless made in writing and received by Cardinal within 30 days are completion to the applicable service. In no event shall Cardinal be liable for incidental consecuential damages, including white thin between between the state of the order of the consecuential damages.	any claim arising whether based in contract or tort, shall to deemed waived unless made in writing and received by no without limitation business interruptions loss of use or the property of	e limited to the amount paid by the client for the Cardinal within 30 days after completion of the approximate the substitution of the approximation of profits increased by plant the substitution.	pplicable
and the state of t	ing will but in midulon, business interruptions, loss of use, or	loss of profits incurred by client, its subsidiaries,	

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com



(575) 393-2326 FAX (575) 393-2476

Company Name: PXS	2)/	BILL TO	ANAI YSIS REOLIEST
Project Manager: MM	1+	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax#:	Address:	
Project #:	Project Owner:	City:	
Project Name: Willow	) Creek	State: Zip:	6
roject Location:		*	
Sampler Name: MMt+	4	Fax #:	
FOR LAB USE ONLY		SERV. SAMPLING	
Lab I.D. Sam	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL	OIL SLUDGE OTHER: ACID/BASE: ICE/COOL OTHER: DATE	
-		3/3/ 100	
12 - 20 - 21 - 21 - 21 - 21 - 21 - 21 -	*	4/1 12:00pm	
		X 3/3 10:00 an X	
LASE NOTE: Lability and Damages, Cardinal's lia alyses. All claims including those for negligence an vrice. In no event shall Cardinal be liable for inciden liliates or successors arising out of or related to the p	L-ASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remety for any claim arising whether based in contract alyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing an ervice. In no event shall Cardinal be liable for incidental or consequental damages, including whiten utility suspiness interruptions, if illiates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim	LASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be lippifed to the amount paid by the client for the salyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Oxfornal within 30 days after completion of the applicable rivice. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, less of usy of loss of profits incurred by effect, its subsidiaries, filliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.	ble
Man State of	Time: 4:05 pm	A	Verbal Result: ☐ Yes ☐ No Add'I Phone #: All Results are emailed. Please provide Email address:
constantly.	Time:	REMARKS:	
Sampler - UPS - Bus - Other:	Observed Temp. °C Sample Coorected Temp. °C ZYe	Sample Condition CHECKED BY: Turnaround Time: Standard Cool Intact (Initials)  Yes Yes Yes 17 Yes 17 Yes Correction Factor 1947 113	Standard Bacteria (only) Sample Condition  Rush Cool Intact Observed Temp. °C  Pes Yes



April 09, 2020

MATTHEW LONGCRIER
RX-SOIL INC.
201 MAIN STREET, SUITE 1360
FORT WORTH, TX 76102

RE: WILLOW CREEK

Enclosed are the results of analyses for samples received by the laboratory on 04/08/20 8:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102

Fax To: NA

Received:

04/08/2020

Sampling Date:

04/07/2020

Reported:

04/09/2020 WILLOW CREEK Sampling Type:

Soil Cool & Intact

Project Name: Project Number:

NONE GIVEN

Sampling Condition: Sample Received By:

Tamara Oldaker

Project Location:

Chi--id- CM4E00CL B

NOT GIVEN

### Sample ID: EB - 6 (H001040-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	04/09/2020	ND	432	108	400	0.00	
Sample ID: EB - 7 (H001	040-02)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	04/09/2020	ND	432	108	400	0.00	
Sample ID: EB - 8 (H001	040-03)								
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	04/09/2020	ND	432	108	400	0.00	
Sample ID: EB - 9 (H001	040-04)								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Analyte Chloride	Result	Reporting Limit	Analyzed 04/09/2020	Method Blank	BS 432	% Recovery	True Value QC 400	RPD 0.00	Qualifier

### Cardinal Laboratories

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Celey D. Keene



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102 Fax To: NA

Received:

04/08/2020

Sampling Date:

04/07/2020

Reported:

04/09/2020

Sampling Type:

Soil

Project Name: Project Number:

WILLOW CREEK NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Location:

Analyte

Analyte

NOT GIVEN

Sample ID: EB - 11 (H001040-05)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Method Blank

BS

416

% Recovery

104

True Value QC RPD

Qualifier

Chloride

Result 352

16.0

Reporting Limit

Reporting Limit

04/09/2020

Analyzed

Analyzed

ND

400

0.00

Sample ID: EB - 13 (H001040-06)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

BS

% Recovery 104

True Value QC

400

RPD Qualifier

Chloride

Result

304

16.0 04/09/2020 Method Blank ND

416

0.00

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Celeg D. Kreene

Celey D. Keene, Lab Director/Quality Manager



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

Relinquished By

Sampler - UPS - Bus - Other:

Corrected Temp. °C

Sample Condition
Cool Intact
Pres Pres
No No

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush

Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C

Yes Yes
No Corrected Temp. °C

REMARKS:

Thermometer ID #97 Correction Factor + 0.4 °C

Observed Temp. °C 350

Time:

Delivered By: (Circle One)

Relinquished By

service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries,

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

All Results are emailed. Please provide Email address:

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 5 of 5 101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476

Company Name:	RXSoil		OL 77/8	ANALYSIS REQUEST
Project Manager:	Matt Longiner		P.O. #:	- 1
Address:	c		Company:	
City:	State:	Zip:	Attn:	
Phone #:	Fax #:		Address:	
Project #:	Project Owner:	7	City:	
Project Name:	willow creek		State: Zip:	
Project Location:			Phone #:	
Sampler Name:			Fax #:	25
FOR LAB USE ONLY		MATRIX	ESERV. SAMPLING	Ide
Lab I.D.	Sample I.D.	AB OR (C)OMP. ONTAINERS OUNDWATER TEWATER OGE		Chlori
1	mi D-c	# V X 5	10	<
2 4	年8-7		, , ,	
CO	€B-8			
2	10° 4			
5	11-83			
6	EB-13	×	4/7 N:50	<b>*</b>
,		170		
PLEASE NOTE: Liability and D	PLEASE NOTE: Liability and Damages. Cardina's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the	ny claim arising whether based in contract o	or fort, shall be limited to the amount paid by the client for the	the
manyses. All cidnins including in	all dayses. All claims illicitioning mode for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Carolinal within 20 december 20 december 10 december 20 dece	deemed waived unless made in writing and	randinal but Cardinal within 20 days after a malating of the	



April 14, 2020

MATTHEW LONGCRIER
RX-SOIL INC.
201 MAIN STREET, SUITE 1360
FORT WORTH, TX 76102

RE: WILLOW CREEK

Enclosed are the results of analyses for samples received by the laboratory on 04/09/20 8:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102

Fax To: NA

Received:

04/09/2020

04/08/2020

Reported:

04/14/2020

Sampling Type:

Soil

Project Name: Project Number: WILLOW CREEK NONE GIVEN

mg/kg

Reporting Limit

Reporting Limit

Sampling Condition: Sample Received By:

Sampling Date:

Cool & Intact Kelly Jacobson

Project Location:

Analyte

Analyte

NOT GIVEN

Sample ID: EB - 10 (H001048-01)

Chloride, SM4500Cl-B

Analyzed By: GM

Analyzed

Analyzed

% Recovery

True Value QC RPD

Oualifier

Chloride

Result 464

16.0 04/13/2020 Method Blank ND

BS 400

100

400

Sample ID: EB - 29 (H001048-02)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: GM

0.00

Qualifier

Qualifier

Chloride

Result 544

16.0 04/13/2020 Method Blank ND

BS 400 % Recovery 100

True Value QC 400

RPD 0.00

Sample ID: EB - 32 (H001048-03)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD
Chloride	720	16.0	04/13/2020	ND	400	100	400	0.00

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Kreene

Celey D. Keene, Lab Director/Quality Manager



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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\*\*\* Insufficient time to reach temperature.

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Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

### Self of the stand of the standard of the stand

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Company Name:		811170	ANALYSIS REQUEST
Project Manager: Matt		P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name: Willow CV	Creek	State: Zip:	
Project Location:		Phone #:	
Sampler Name: Matt		Fax #:	
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	les
Lab I.D. Sample I.D.	RAB OR (C)OMP ONTAINERS OUNDWATER STEWATER	HER : D/BASE: / COOL HER :	Chloria
びがい	# C	A IO	T
(1)	×	1/6 - 1/201	× >
3 E B-32	*	Woo:h 8/h	
T-CASE IVO 15: Library and Damages. Cardina's library and clerit's exclusive remedy for any claim arising whether based in contract or for, shall be limited to the amount poid by the client for the analyses. All clears including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of type, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is byped upon any of the above stated reasons or otherwise.	exclusive remedy for any claim arising whether based in contract, e whatsoever shall be deemed walved unless made in writing and tal damages, including without limitation, business interruptions, in errices hereunder by Cardinal, regardless of whether such claim.	or ton, shall be limited to the amount paid by the client for the d received by Cardinal within 30 days after completion of the a loss of use, or loss of profits incurred by client, its subsidiaries, is based upon any of the above stated reasons or otherwise.	or the trip the applicable areas and the applicable areas.
Relinquished By:	Time 10		Verbal Result: ☐ Yes ☐ No Add'I Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Received By: //	REMARKS:	(S:
Delivered By: (Circle One)  Obser	Observed Temp. °C Sample Condition  5. 5. C Cook Intact	CHECKED BY: (Initials)	Standard B
UO N 3.U	#13 Find No	120	Yes Yes Yes Yes Corrected Temp. °C



April 14, 2020

MATTHEW LONGCRIER
RX-SOIL INC.
201 MAIN STREET, SUITE 1360
FORT WORTH, TX 76102

RE: WILLOW CREEK

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Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102

Fax To: NA

Received:

04/09/2020

Sampling Date:

04/08/2020

Reported:

04/14/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK NONE GIVEN

mg/kg

Sampling Condition: Sample Received By: Cool & Intact Kelly Jacobson

Project Number: Project Location:

NOT GIVEN

Result 736

Sample ID: EB - 28 (H001049-01)

Chloride, SM4500Cl-B

Analyzed By: GM

Analyte

Reporting Limit

16.0

Reporting Limit

Analyzed Method Blank

BS 400 % Recovery True Value OC

100

RPD Oualifier

0.00

Chloride

Sample ID: EB - 33 (H001049-02)

Chloride, SM4500Cl-B

Analyte

Analyte

Analyte

mg/kg

Analyzed By: GM

Analyzed

04/13/2020

Method Blank

% Recovery

True Value QC

Chloride

Result 1040

16.0 04/13/2020 ND

ND

BS 400

100

400

400

RPD Qualifier 0.00

Sample ID: EB - 35 (H001049-03)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: GM

Result

Reporting Limit Analyzed

Analyzed

04/13/2020

Method Blank

% Recovery

True Value QC

RPD

0.00

Qualifier

1010

Result

1680

16.0 04/13/2020

Reporting Limit

16.0

ND

400

BS

100

100

400

400

0.00

Chloride

Chloride

Sample ID: EB - 36 (H001049-04)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: GM

Method Blank

ND

400

% Recovery

True Value QC RPD Qualifier

Cardinal Laboratories

\*=Accredited Analyte

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Celeg D. Kreene

Qualifier



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

### Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102
Fax To: NA

Tax To.

Received: 04/09/2020

Reported: 04/14/2020
Project Name: WILLOW CREEK
Project Number: NONE GIVEN

Project Location: NOT GIVEN

Sampling Date: 04/08/2020

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

### Sample ID: EB - 37 (H001049-05)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	04/13/2020	ND	400	100	400	0.00	
Sample ID: EB - 38 (H001	-								
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: GM					

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD
Chloride	1360	16.0	04/13/2020	ND	400	100	400	0.00

### Sample ID: EB - 39 (H001049-07)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	04/13/2020	ND	400	100	400	0.00	

### Sample ID: EB - 40 (H001049-08)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	04/13/2020	ND	400	100	400	0.00	

### Sample ID: EB - 41 (H001049-09)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1860	16.0	04/13/2020	ND	400	100	400	0.00	

### Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Keene



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Freene

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Observed Temp. °C

Corrected Temp. °C

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush

Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C
 Yes Yes
 No Corrected Temp. °C

Corrected Temp. °C

REMARKS:

Thermometer ID #97 Correction Factor + 0.4°C # 1/13

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Time:

### Page 5 of 5 101 East Marland, Hobbs, NM 88240 aboratories

(575) 393-2326 FAX (575) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

O

company name:	六		BILL TO	ANALYSIS REQUEST
Project Manager	- Za++		P.O. #:	- 10
Address:			Company:	
City:	State:	Zip:	Attn:	
Phone #:	Fax #:		Address:	
Project #:	Project Owner:		City:	
Project Name:	willow creek		State: Zip:	
Project Location:			Phone #:	
Sampler Name:			Fax #:	
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING	es
Lab I.D.	Sample I.D.	AB OR (C)OMP.  NTAINERS  JNDWATER  FEWATER  GE	:R: BASE: COOL :R:	Chlorid
	F328	/ \ \ \ \ \ \	1/4 4	X
7	EO 33	-		-
ال	E8 35			
	EB 36			
OT.	E037			
6	E838			
4	E039	-		
~	EBHO	_		
9	EB HI	×	4/8 4:00	X .
PLEASE NOTE: Liability and analyses, All claims including service. In no event shall Carc affiliates or successors arising	PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatseever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of just, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is begind upon any of the above stated response nor nohnowise.	any claim arising whether based in contract o e deemed waived unless made in writing and i ng without limitation, business interruptions, lo Cardinal, regardless of whether such claim is	or tort, shall be limited to the amount paid by the coreceived by Cardinal within 30 days after completess of use, or loss of profits incurred by client, its stated teasons or the above stated reasons or the same that the contract of the same that the same	ent for the on of the applicable backlands.
Relinquished By:	Date: 4/4	Received By:	Verba	Sons of otherwise.  Verbal Result: ☐ Yes ☐ No
Relinquished By:	Date:	Received By:	REM	REMARKS:



April 16, 2020

MATTHEW LONGCRIER
RX-SOIL INC.
201 MAIN STREET, SUITE 1360
FORT WORTH, TX 76102

RE: WILLOW CREEK

Enclosed are the results of analyses for samples received by the laboratory on 04/15/20 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102

Fax To: NA

Received: 04/15/2020

Reported: 04/16/2020
Project Name: WILLOW CREEK
Project Number: NONE GIVEN

Project Location: NOT GIVEN

Sampling Date: 04/15/2020

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

### Sample ID: EB - 32.2 (H001114-01)

Chioride, SM4500CI-B	mg/kg		Analyze	Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Analyzed Method Blank		% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	04/16/2020	ND	448	112	400	0.00	

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keene



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories \*=Accredited Analyte

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Celeg D. Freene

Relinquished By

Date: Time:

Received By:

Sampler - UPS - Bus - Other:

LOKINI-DOO K 5.0

Delivered By:

(Circle One)

2.50

Sample Condition Cool Intact Yes Yes

CHECKED BY:

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4 101 East Marland, Hobbs, NM 88240 aboratories

(575) 393-2326 FAX (575) 393-2476

I would	Relinquished By:	nalyses. All claims including envice. In no event shall Card ffliates or successors arising					_	Lab I.D. H001114	FOR LAB USE ONLY	Sampler Name:	Project Location:	Project Name:	Project #:	Phone #:	City:	Address:	Project Manager:	Company Name:
Time: 61:30	Dat 15-Apr	Jauriages, caromais italating and crients exclusive ren those for negligence and any other cause whatsoeve linal be liable for incidental or consequental damages out of or related to the performance of services hereu					EB-32.2	Sample I.D.		Hayes Adams		Willow Creek	Project Owner:	Fax #:	State:		Matt	RXSoil
0	Received By:	or any claim be deemed ding without by Cardinal,						(G)RAB OR (C)OM	o.				ier:		Zip:			
	eive	ansing waived limitation						# CONTAINERS										
	ed B	unless on, bus ess of t			-			GROUNDWATER WASTEWATER										
	Υ.	er base made iness ir whethe					×	SOIL	MA									
-	5	in writin iterrupt					200	OIL	MATRIX									
1	7	ntract on my and ions, lo						SLUDGE	^									
	-	receive ss of u			 			OTHER:	-	Fax #:	Phone #:	State:	City:	Add	Attn:	Con	P.O.	
		d by Ca e, or lo upon a						ACID/BASE: ICE / COOL	RES	#:	ne#	9.	5•//•5	Address:	••	Company:	#	
		limited ardinal a ass of p ass of p						OTHER:	PRESERV.		···			74				1
REMARKS:	Phone Result:	the amount paid by the client for the illin 30 days after completion of the aufits incurred by client, its subsidiaries, above stated reasons or otherwise.					15-Apr 2:00	DATE TIME	SAMPLING			Zip:						BILL TO
KS:	Result:	pplicable	-		+	+	×			Chl	oride	es					Н	
9	□ Yes																	
Z				+													_	
Add Fax #:	Add'l Phone #:																	ANALYSIS REQUEST
							=======================================						Di pinantikan	Character (1)	dentine			

### **APPENDIX H.2**

### **LABORATORY REPORTS**

### **REMEDIATION**



May 01, 2020

MATTHEW LONGCRIER
RX-SOIL INC.
201 MAIN STREET, SUITE 1360
FORT WORTH, TX 76102

RE: WILLOW CREEK

Enclosed are the results of analyses for samples received by the laboratory on 05/01/20 8:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102 Fax To: NA

Received:

05/01/2020

Sampling Date:

04/30/2020

Reported:

05/01/2020

Sampling Type:

Soil

Project Name: Project Number: WILLOW CREEK NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Location:

LOVING, NM

Sample ID: A1 (H001220-01)

Chloride, SM4500Cl-B

Analyte

Analyzed By: AC

mg/kg Result

240

Result

496

Reporting Limit

Reporting Limit

16.0

Reporting Limit

Reporting Limit

16.0

Method Blank

BS % Recovery 100

True Value OC RPD

400

True Value QC

400

Oualifier

Chloride

16.0 05/01/2020 ND

Method Blank

ND

400

Sample ID: A4 (H001220-02)

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyzed

05/01/2020

Analyzed

BS

400

% Recovery

0.00

0.00

RPD Qualifier

Chloride

Sample ID: A6 (H001220-03) Chloride, SM4500Cl-B Analyte

Analyte

mg/kg

Analyzed By: AC

Analyzed

Method Blank BS

% Recovery

100

Qualifier

Chloride

Result 448

Result

528

16.0 05/01/2020 ND

400

100

True Value QC 400

400

RPD 3.92

Chloride

Sample ID: B1 (H001220-04)

Analyte

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyzed

05/01/2020

Method Blank

ND

400

% Recovery

100

True Value QC

RPD 3.92 Qualifier

Cardinal Laboratories

\*=Accredited Analyte

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Celeg D. Kreene

Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102 Fax To: NA

Received:

05/01/2020

Sampling Date:

04/30/2020

Reported:

05/01/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK

Sampling Condition:

Cool & Intact

Project Number: Project Location:

Analyte

NONE GIVEN LOVING, NM

Sample Received By:

Tamara Oldaker

Sample ID: B3 (H001220-05)

Chloride, SN	44500CI-B
--------------	-----------

Analyzed By: AC

BS

% Recovery 100

True Value QC

Qualifier

Chloride

Result 368

Result

336

Result

288

Result

320

320

Reporting Limit 16.0

Reporting Limit

16.0

Reporting Limit

16.0

16.0

Analyzed 05/01/2020

05/01/2020

Method Blank ND

ND

400

400

RPD

Sample ID: B4 (H001220-06)

Analyte

Chloride, S	SM4500CI-B
-------------	------------

mg	кg	

### Analyzed By: AC

Analyzed Method Blank BS

400

% Recovery

100

RPD True Value QC

3.92

Qualifier

Chloride

Chloride,

### Sample ID: C2 (H001220-07)

SM4500CI-B	mg/kg

### Analyzed By: AC

Analyte

Reporting Limit Analyzed Method Blank BS

% Recovery

True Value QC

400

RPD

3.92

Qualifier

Chloride

05/01/2020 16.0

ND

400

100

400

3.92

Sample ID: D1 (H001220-08)

### Chloride, SM4500Cl-B

### Analyte

mg/kg

Analyzed By: AC

Analyzed

05/01/2020

Method Blank

ND

BS

400

400

% Recovery

100

True Value QC

400

**RPD** 

Qualifier

Chloride

Chloride

Sample ID: D3 (H001220-09)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

ND

3.92

Qualifier

Analyte

Result Reporting Limit

Analyzed

05/01/2020

Method Blank BS

% Recovery

100

True Value QC

400

RPD

3.92

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\*=Accredited Analyte

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Celeg D. Keens



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102 Fax To: NA

Received:

05/01/2020

Sampling Date:

04/30/2020

Reported:

05/01/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK

Sampling Condition:

Cool & Intact

Project Number: Project Location:

Analyte

NONE GIVEN LOVING, NM

Sample Received By:

Tamara Oldaker

Sample ID: E1 (H001220-10)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Method Blank

BS

% Recovery

True Value QC RPD

Qualifier

Chloride

208

Result

05/01/2020 16.0

Reporting Limit

16.0

Reporting Limit

ND

400

100

400

Sample ID: E3 (H001220-11)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyzed

Analyte Result

Reporting Limit Analyzed

BS Method Blank

% Recovery

True Value QC

RPD Qualifier

Chloride

336

05/01/2020

ND

400

100

400

3.92

Sample ID: F1 (H001220-12)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

BS

% Recovery

True Value QC

RPD

3.92

Qualifier

Chloride

304

Result

352

Result

528

Result

05/01/2020 16.0

Analyzed

Analyzed

05/01/2020

Method Blank ND

400

100

400

3.92

Chloride

Chloride

mg/kg

Analyzed By: AC

ND

400

BS

400

Sample ID: F3 (H001220-13)

Analyte

Chloride, SM4500Cl-B

Reporting Limit

16.0

Reporting Limit

16.0

Method Blank BS

% Recovery

100

% Recovery

100

True Value QC

**RPD** 

Qualifier

Analyte

Analyte

400

3.92

Qualifier

Sample ID: F5 (H001220-14)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyzed

05/01/2020

Method Blank

ND

True Value QC

400

RPD

3.92

Cardinal Laboratories

\*=Accredited Analyte

Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg & treene

Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102 Fax To: NA

Received:

05/01/2020

Sampling Date:

04/30/2020

Reported:

05/01/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number: Project Location:

LOVING, NM

Sample ID: G2 (H001220-15)

Chloride, SM4500Cl-	В
---------------------	---

, SM4500CI-B	mg/kg	Analyzed By: AC

Analyte

Chloride

Result 304

16.0

Reporting Limit

Analyzed 05/01/2020 Method Blank ND

400

% Recovery True Value QC

100

400

RPD

Qualifier 3.92

Sample ID: G4 (H001220-16)

Chloride,	SM4500CI-B

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	05/01/2020	ND	400	100	400	3.92	

### Sample ID: G6 (H001220-17)

Chloride, SM4500CI-B	mg	mg/kg Analyzed By		l By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	05/01/2020	ND	400	100	400	3.92	

### Sample ID: H1 (H001220-18)

Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/01/2020	ND	400	100	400	3.92	

### Sample ID: H3 (H001220-19)

	,								
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	05/01/2020	ND	400	100	400	3.92	

### Cardinal Laboratories

\*=Accredited Analyte

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Celeg D. Keene



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102 NA

Fax To:

Received:

05/01/2020

Sampling Date:

04/30/2020

Reported:

05/01/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK

Sampling Condition:

Cool & Intact

Project Number: Project Location:

Analyte

NONE GIVEN LOVING, NM

Sample Received By:

Tamara Oldaker

Sample ID: H5 (H001220-20)

Chloride, SM4500Cl-B

mg/kg

Reporting Limit

16.0

Reporting Limit

Analyzed By: AC

BS

% Recovery

RPD

Chloride

Result 720

05/01/2020 16.0

Analyzed

05/01/2020

Analyzed

Analyzed

05/01/2020

Method Blank ND

400

True Value QC 3.92 400

Qualifier

Sample ID: I2 (H001220-21)

Analyte

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Chloride

Result

Reporting Limit Analyzed Method Blank ND

BS 400 % Recovery 100

100

True Value QC 400

RPD

3.92

Qualifier

Sample ID: I4 (H001220-22)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

% Recovery

RPD

Chloride

592

Result

208

Result

448

Result

368

05/01/2020 16.0

Method Blank ND

BS 400

100

True Value QC 400

3.92

Qualifier

Analyte

Chloride, SM4500Cl-B

Analyzed By: AC

Sample ID: I5 (H001220-23)

Analyte

mg/kg

Reporting Limit

16.0

Reporting Limit

16.0

Method Blank

BS

% Recovery True Value QC

**RPD** 

Qualifier

Chloride

Chloride

mg/kg

ND

416

104

400

400

0.00

Sample ID: J1 (H001220-24)

104

Analyte

Chloride, SM4500Cl-B

Analyzed

05/01/2020

Analyzed By: AC Method Blank

ND

BS

416

True Value QC % Recovery

RPD

0.00

Qualifier

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\*=Accredited Analyte

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Celeg & treene

Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102 NA

Fax To:

Received:

05/01/2020

Sampling Date:

04/30/2020

Reported:

05/01/2020

Sampling Type:

Soil

Project Name: Project Number: WILLOW CREEK NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Location:

LOVING, NM

Sample ID: J3 (H001220-25)

Analyte

Sample ID: J6 (H001220-26)

		-			
ma/ka	/~	1	~	m	

Result

240

### Analyzed By: AC

Reporting Limit

16.0

Reporting Limit

Reporting Limit

Reporting Limit

Reporting Limit

16.0

Analyzed

05/01/2020

BS

416

% Recovery 104

True Value QC

RPD Qualifier

Chloride

Chloride, SM4500Cl-B

mg/kg

### Analyzed By: AC

Analyzed

BS

% Recovery

Chloride

Result 400

16.0 05/01/2020 Method Blank ND

Method Blank

ND

416

104

True Value QC 400

400

RPD Qualifier 0.00

Sample ID: K2 (H001220-27)

Analyte

Analyte

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyzed

Method Blank BS % Recovery

True Value QC

RPD

0.00

Qualifier

Chloride

Chloride

Chloride

304

Result

05/01/2020 16.0

ND

416

104

400

0.00

Sample ID: K5 (H001220-28)

Chloride, SM4500Cl-B

Analyte Result

320

Result

400

16.0

05/01/2020

Analyzed By: AC

Method Blank

BS

% Recovery

True Value QC

**RPD** 

Qualifier

Analyte

mg/kg

mg/kg

Analyzed By: AC

Method Blank

ND

ND

416

BS

416

104

% Recovery

104

400

True Value QC

400

0.00

Sample ID: K6 (H001220-29)

Chloride, SM4500Cl-B

Analyzed

05/01/2020

Analyzed

RPD

0.00

Qualifier

Cardinal Laboratories

\*=Accredited Analyte

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Celeg & treene

Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC.
MATTHEW LONGCRIER
201 MAIN STREET, SUITE 1360
FORT WORTH TX, 76102

Fax To: NA

Received:

Chloride, SM4500Cl-B

05/01/2020

Sampling Date:

04/30/2020

Reported:

05/01/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK NONE GIVEN Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number: Project Location:

LOVING, NM

Sample ID: L1 (H001220-30)

mg/kg	Analyzed By: AC
ilig/kg	Allalyzeu by. AC

Analyte Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier Chloride 496 05/01/2020 ND 416 400 0.00 16.0 104

### Sample ID: L3 (H001220-31)

Chloride, SM4500Cl-B	mg,	g/kg Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	05/01/2020	ND	416	104	400	0.00	

### Sample ID: L6 (H001220-32)

Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	05/01/2020	ND	416	104	400	0.00	

### Sample ID: M4 (H001220-33)

Chloride, SM4500Cl-B mg/kg		Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	05/01/2020	ND	416	104	400	0.00	

### Sample ID: M6 (H001220-34)

Chloride, SM4500Cl-B mg/kg		Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/01/2020	ND	416	104	400	0.00	

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Celey D. Keene



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

Sampler - UPS - Bus - Other:

Corrected Temp. °C

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY: (Initials) 9

Turnaround Time:

Thermometer ID #87 ZV Correction Factor + 8.4 °C

Standard Rush 7413 40

Observed Temp. °C 4.2

Time:

Delivered By: (Circle One)

Relinquished By:

B

Time 820

Received By:

REMARKS:

All Results are emailed. Please provide Email address:

□ Yes

□ No

Add'I Phone #:

Date: \$ · 1 · 2020

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



1100		ָבַר ר <u>ַ</u>	ANALYSIS REQUEST
Project Manager: Math Long Crier		P.O. #:	- 1
Address:	0	Company:	
City: State:	Zip:	Attn:	
Phone #: 817 -992 - 7649 Fax #:		Address:	
Project #: Project Owner:		City:	
Project Name: WILLOW Creek	0	State: Zip:	
Project Location: Louvy, NM	70	Phone #:	
Sampler Name: Nate Vaquera	71		
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	DĘ
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER: DATE	CHLORI
A1			
2 A4			
7.60			
58			
2			
***************************************			
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the	any claim arising whether based in contract or t	tort, shall be limited to the amount paid by the client for th	
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Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Corrected Temp. °C

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY: (Initials) 9

Turnaround Time: Standard

Rush
Thermometer ID #97 #16
Correction Factor +0.4 C Te

Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C

Yes Yes
No Corrected Temp. °C

Observed Temp. °C 4.2

Relinquished By:

Date: 5-1-2020

Received By:

verbal Result: ☐ Yes

All Results are emailed. Please provide Email address:

□ No

Add'I Phone #:

Date: Time:

Received By:

REMARKS:

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Observed Temp. °C 4.2

Time: Date:

Received By:

REMARKS:

Corrected Temp. °C

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY: (Initials)

Thermometer ID #97 #1 G Correction Factor +874 C

Corrected Temp. °C

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



The state of the s	Working Control and Control an	e de la completa del la completa de la completa del la completa de la completa del la completa de la completa de la completa del la	
Company Name: 2× Coll		BILL TO	ANALYSIS REQUEST
Project Manager: Matt Longer ver	P.O. #:		
Address:	Company:	y:	
City: State:	Zip: Attn:		
Phone #: 817 .992 . 7649 Fax #:	Address:		
Project #: Project Owner:	City:		
Project Name: Willow Creek	State:	Zip:	
Project Location: Loving, NM	Phone #		
Sampler Name: Nate Vaguera	Fax #:	111	
	MATRIX PRESERV	SAMPLING	
Lab I.D. Sample I.D.			
thousand or stock	# CC GRC WAS SOIL OIL SLUI OTH	OTH DATE TIME	
42		\	
778		\	
1×100 H1		\	
100 M		\	
20 HS		\	
2X1 IZ2		\	
252 I4		\	
2×3 IS			
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analyses, All claims including those for negligence and any other cause whatsoever istall be deemed waived unless made in writing and received by Cardinal within 30 days after completion or the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurried by define, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.	eerned waived unless made in writing and received by Co without limitation, business interruptions, loss of use, or Id ardinal, regardless of whether such claim is based upon a	ardinal within 30 days after completion of the applicable oss of profits incurred by client, its subsidiaries, any of the above stated reasons or otherwise.	
Relinquished By:	Received By:	Verbal Result:   All Results are emailed	All Results are emailed. Please provide Email address:

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Corrected Temp. °C Observed Temp. °C Time:

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY: (Initials)

Thermometer ID #97-#//3
Correction Factor +6.4\*C 7-8--

Turnaround Time:

Standard

Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C

Yes Yes
No Corrected Temp. °C

Relinquished By:

S. 1. 22

Received By:

REMARKS:

Verbal Result: ☐ Yes ☐ No Add'I Phone #:
All Results are emailed. Please provide Email address:

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



ANALYSIS REQUEST  Project Manager: Mach Long Crib.  Address:  Address:  Project Owner:  Projec	(575) 3	(575) 393-2326 FAX (575) 393-2476		
Project Manager: Mach Long Crief.  City: State: Zip: Address: City: Project Owner: Zip: Address: City: Project Owner: Zip: Address: City: Project Location: Lovu vrq. Nym.  Project Location: Lovu vrq. Nym.  Sampler Name: Natt-Vladywa A		(1)	B/LL T0	
Address:  Chy.  Phone #: \$V1-QQ2-\text{V2Q1-\text		+	P.O. #:	
State: 2Tp: Attn:   Address:	Address:	•	Company:	
Project Manne: W. W. W. W. C. Feat H. Project Conner: State: Zip: Bright Location: Low VA, M. M. Project Location: Low VA, M. M. Project Location: Low VA, M. M. Phone #:  Sampler Name: N. A. & V. M. M. M. Phone #:  Frequent uses only to a force of the state of the	City:	State:	Attn:	
Project Coartion: Lovi Vid. M.M.  Sampler Name: NARE VIGUEVA.  Sampler Nam			Address:	
Project Location: Location: Locations: Nact Vaques a  MATRIX PRESERV. SAMPLING  Fax #:	Project #:	A-11100	City:	
Sampler Name: Name Volume A. Sample I.D.  Sampler Islands of Sample I.D.  Sampler Islands of Sample Islands of Sample Islands of Sampler Islands o	ame:	C		SS
Feat Assume Name:	-	7	Phone #:	Di
Lab I.D. Sample I.D. OR NATRIX PRESERV. SAMPLING  ON NATRIX PRESERV. SAMPL	Z	ِ ممار	Fax #:	2,
Lab I.D.  Sample I.D.  OR STATE THE  OR STATE	FOR LAB USE ONLY		PRESERV.	
Augustic location including the control to the performance control to the performance of		(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	OTHER: ACID/BASE: ICE / COOL OTHER:	
August 10TE Libility of Common teach year district extraction to the professional common teaching and client exclusive remark for any client consequent and the destruction that it is invited to the amount part by the client for the professional common teaching and client exclusive remark for the professional common teaching and client exclusive remark for the professional common teaching and client exclusive remark for the professional common teaching and client exclusive remark for the professional common teaching and client exclusive remark for the professional common teaching and client exclusive remark for the professional common teaching and client exclusive remark for the professional common teaching and client exclusive remark for the professional common teaching and client exclusive remarks are common teaching with a completion of the applicable services of the professional common teaching and client exclusive remarks are common teaching with the professional common teaching and client exclusive remarks are common teaching and common teaching and consideration and common teaching and consideration and client exclusive remarks are common teaching and common teaching and common teaching and consideration and client exclusive remarks are common teaching and com				\
PLEASE NOTE: Lubality and Damager. Curdinal's labality and client's exclusive remedy for any claim solicity shocker to combust or remedy for any claim solicity shocker to combust or remedy for any claim solicity shocker to combust or remedy for any claim solicity shocker to combust or remedy for any claim solicity shocker to combust or remedy for any claim solicity shocker to combust or remedy for the short of the analysis. All claims in the form of the short of the analysis and claims should be produced in the short of	CÓ	34		1
Relinquished By:    Circle One    Observed Temp. *C   Corrected Temp. *C		M6		
PLEASE NOTE: Liability and Damages. Cardinal's liability and clients exclusive remedy for any claim arising whether based in contract or fort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed walved unless made in writing and received by Cardinal within 30 days after completion of the applicable services. In no event shall be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits featured by Client, its subsidiaries.  Relinquished By:  Received By:  Remarks:  All Results are emailed. Please provide Email address:  All Results are emailed. Please provide Email address:  All Results are emailed. Please provide Email address:  Cool Intact  No No No No Correction Factor +64.4°C  No No No No Correction Factor +64.4°C				
Relinquished By:    Date:   S   1 2020	PLEASE NOTE: Liability and Damages. Ca analyses. All claims including those for negl service. In no event shall Cardinal be liable still late or relate still late or relate still late or relate still late.	rdinal's liability and client's exclusive remedy for any claim arising whether based in con ligence and any other cause whatsoewer shall be deemed waived unless made in with to the consequent of consequental damages, including without limitation, business interrubinal or to consequental damages, including without limitation, business interrubinal to the performance of services becomed to the Cardinal reparatless of whether such a	ntract or tort, shall be limited to the amount paid by thong and received by Cardinal within 30 days after combons, loss of use, or loss of profits incurred by client, I claim is based unon any of the above stated reasons	e client for the splikable substantial services of the applicable substantials, substa
Time:  Relinquished By:  Time:  Date:  Received By:  Time:  Coov Intact (Initials)  Sampler - UPS - Bus - Other:  Corrected Temp. °C  Corrected Temp. °C  No No No CHECKED BY:  Correction Factor +64°C  The Received By:  CHECKED BY:  Condition CHECKED BY:  Condition CHECKED BY:  Continue:  RemarkS:	Relinquished By		1111	bal Result: □ Yes □ No Add'I Phone #: Results are emailed. Please provide Email address:
Delivered By: (Circle One)  Observed Temp. °C  CooV Intact  Coov Inta	Relinguished By:		ra cellable	MARKS:
Delivered By: (Circle One)  Observed Temp. °C  CooV Intact  CooV Intac		Time:	(	
Sampler - UPS - Bus - Other: Corrected Temp. °C Yes Yes Yes Thermometer ID #97 74 15		4.7	CHECKED BY: (Initials)	Standard B
	Sampler - UPS - Bus -	Corrected Temp. °C	4	Yes ☐ Yes ☐ Yes ☐ No

Corrected Temp. °C



May 01, 2020

MATTHEW LONGCRIER
RX-SOIL INC.
201 MAIN STREET, SUITE 1360
FORT WORTH, TX 76102

RE: WILLOW CREEK

Enclosed are the results of analyses for samples received by the laboratory on 05/01/20 13:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab\_accred\_certif.html">www.tceq.texas.gov/field/ga/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102

Fax To: NA

Received:

05/01/2020

Sampling Date:

05/01/2020

Reported:

05/01/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number: Project Location:

LOVING, NM

mg/kg

Sample ID: C5 (H001224-01)

Analyte

Chloride, SM4500Cl-B

Analyzed

Analyzed

05/01/2020

Analyzed By: GM

% Recovery

True Value OC

RPD Oualifier

Chloride

Result 304

Result

256

16.0 05/01/2020 Method Blank ND

Method Blank

ND

BS 416

104

400

0.00

RPD

0.00

Sample ID: C6 (H001224-02)

Analyte

Chloride, SM4500Cl-B

mg/kg Reporting Limit

16.0

Reporting Limit

Reporting Limit

16.0

Reporting Limit

Analyzed By: GM

BS

416

% Recovery

104

True Value QC

400

Qualifier

Chloride

Sample ID: D4 (H001224-03)

Chloride, SM4500Cl-B Analyte

mg/kg

Analyzed By: GM

Analyzed

Analyzed

05/01/2020

Method Blank BS % Recovery

104

True Value QC

RPD Qualifier

Chloride

Chloride

304

Result

320

Result

16.0 05/01/2020 ND

416

104

400

400

0.00

Sample ID: E6 (H001224-04)

Analyte

Chloride, SM4500Cl-B

mg/kg

Analyzed By: GM

Method Blank

ND

BS

416

% Recovery True Value QC

RPD

0.00

Qualifier

Cardinal Laboratories

\*=Accredited Analyte

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Celeg D. Kreene



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102

Fax To: NA

Received:

05/01/2020

Sampling Date:

05/01/2020

Reported:

05/01/2020

Sampling Type:

Soil

Project Name:

WILLOW CREEK NONE GIVEN

Sampling Condition: Sample Received By: Cool & Intact Tamara Oldaker

Project Number: Project Location:

LOVING, NM

Sample ID: M3 (H001224-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	05/01/2020	ND	416	104	400	0.00	

Cardinal Laboratories \*=Accredited Analyte

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Celegy Theene



### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Freene

Sampler - UPS - Bus - Other: Delivered By: (Circle One)

Corrected Temp. °C Observed Temp. °C Time: Date:

人が

Sample Condition
Cool Intact
Pes Pes
No No

CHECKED BY: (Initials)

Turnaround Time:

Standard Rush

Bacteria (only) Sample Condition
Cool Intact Observed Temp. °C

Yes Yes
No Corrected Temp. °C

Thermometer ID #97 ## //S Correction Factor + 0.4°C 70

Relinquished By:

S.1.2020

Received By:

All Results are emailed. Please provide Email address:

☐ No Add'I Phone #:

Verbal Result: ☐ Yes

Received By:

REMARKS:

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



Company Name: XX VOI	6/1/		ANALYSIS REQUEST
Project Manager: Matt Longcrier	₹ P.O. #:		
Address:	Company:		
City: State:	Zip: Attn:		
Phone #: 817 . 992 . 7649 Fax #:	Address:		
Project #: Project Owner:	city:	3	
Project Name: WILLOW Creek	State: Zip:	58	
Project Location: Loving, NM	Phone #:	Di	
Sampler Name: Nate Vaquera	Fax#:	2/1	
FOR LAB USE ONLY	MATRIX PRESERV.	SAMPLING	
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER: ACID/BASE: ICE / COOL OTHER:	DATE TIME	
S		\	
C6.			
KI CO		\	
S.A.		\	(6)
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May 04, 2020

MATTHEW LONGCRIER
RX-SOIL INC.
201 MAIN STREET, SUITE 1360
FORT WORTH, TX 76102

RE: WILLOW CREEK

Enclosed are the results of analyses for samples received by the laboratory on 05/04/20 8:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2 Haloacetic Acids (HAA-5)
Method EPA 524.2 Total Trihalomethanes (TTHM)
Method EPA 524.4 Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celeg D. Keens

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



### Analytical Results For:

RX-SOIL INC. MATTHEW LONGCRIER 201 MAIN STREET, SUITE 1360 FORT WORTH TX, 76102 Fax To: NA

Received:

05/04/2020 05/04/2020

Project Name: Project Number: Project Location:

Analyte

WILLOW CREEK LOVING NM LOVING, NM

Sampling Date:

05/02/2020

Sampling Type:

Soil

Sampling Condition: Sample Received By: \*\* (See Notes) Tamara Oldaker

Sample ID: G4 (H001229-01)

Chloride, SM4500Cl-B

Reported:

mg/kg

Analyzed By: GM

Analyzed

Analyzed

05/04/2020

Method Blank

ND

Method Blank

ND

% Recovery

True Value QC 400

Oualifier

Chloride

Result 256

Result

336

16.0

Reporting Limit

Reporting Limit

16.0

05/04/2020

416

BS

RPD 3.77

3.77

Sample ID: G6 (H001229-02)

Analyte

Chloride, SM4500Cl-B

mg/kg

Analyzed By: GM

BS

416

% Recovery

104

104

True Value QC

400

RPD Qualifier

Qualifier

Chloride

Sample ID: H5 (H001229-03)

Chloride, SM4500Cl-B

mg/kg

Analyzed By: GM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD
Chloride	384	16.0	05/04/2020	ND	416	104	400	3.77

Cardinal Laboratories

\*=Accredited Analyte

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Celeg D. Kreene



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Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST



(575) 393-2326 FAX (575) 393-2476

Company Name: RX Soil		BILL TO	ANALYSIS REQUEST
Project Manager: Matt L	longerier	P.O. #:	
Address:	(	Company:	
City:	State: Zip:	Attn:	
Phone #: 817.992.7649	9 Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name: Willow	Creek	State: Zip:	<u>S</u>
	ZM -	Phone #:	DE
	Vaquera	Fax #:	<u></u>
FOR LAB USE ONLY		ESERV.	SAMPLING
	ERS ATER	. 201	Hu
Lab I.D. Sample I.D.	G)RAB OR CONTAINE GROUNDW.	SOIL DIL SELUDGE DTHER: ACID/BASE: CE / COOL DTHER:	TIME
+00+			
2 66			
U)			
PLEASE NOTE: Liability and Damages. Cardinal's liability analyses. All claims including those for negligence and an service. In no event shall Cardinal be liable for incidental of services or support the party of the cardinal services.	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive resmedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the cleint for the analyses. All claims including those for negligence and any other cause whatsoever between waived unless made in writing and received by Cardinal within 30 days after cause whatsoever, in no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incruded by client, its subsidiaries, affiliate or successors which out of creative here are the cardinal states of whether such claims is based from a not of the above stated research or otherwise.	based in contract or tort, shall be limited to the amount p made in writing and received by Cardinal within 30 days ess interruptions, ploss of use, or loss of profits incurred by at bather such falim is based upon any of the above stated.	to the amount paid by the client for the 1 within 30 days after completion of the applicable profits incurred by client, its subsidiaries, the above stated feasons or otherwise.
Relinquished By:	Date: Received By:		Verbal Result: ☐ Yes ☐ No Add'I Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Received By	mara Crash	REMARKS:
7	Time:		
Delivered By: (Circle One)	Observed Temp. °C /   . 4 Samp	Sample Condition CHECKED BY:  Cool Intact (Initials)	Turnaround Time: Standard Bacteria (only) Sample Condition  Rush Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C	es 2 Yes No 1 No	□ Yes □ Yes □ No

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

### **END OF REPORT**