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

Table of Contents

Figures

Appendix

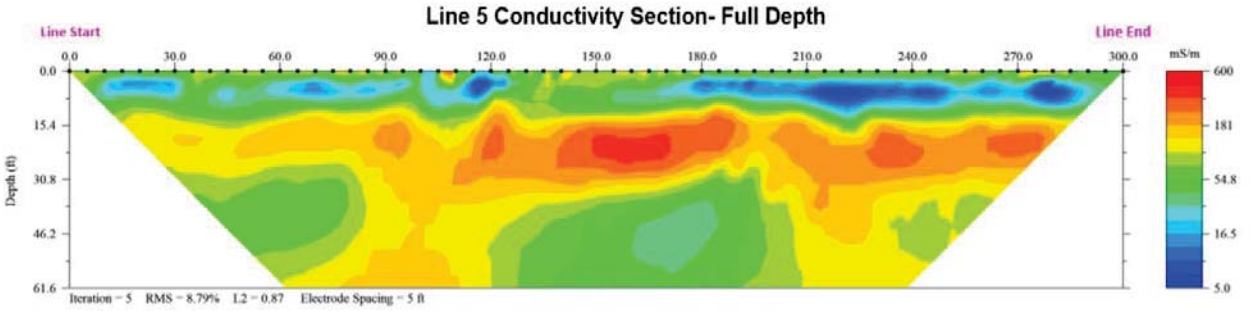
I. Introduction

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.

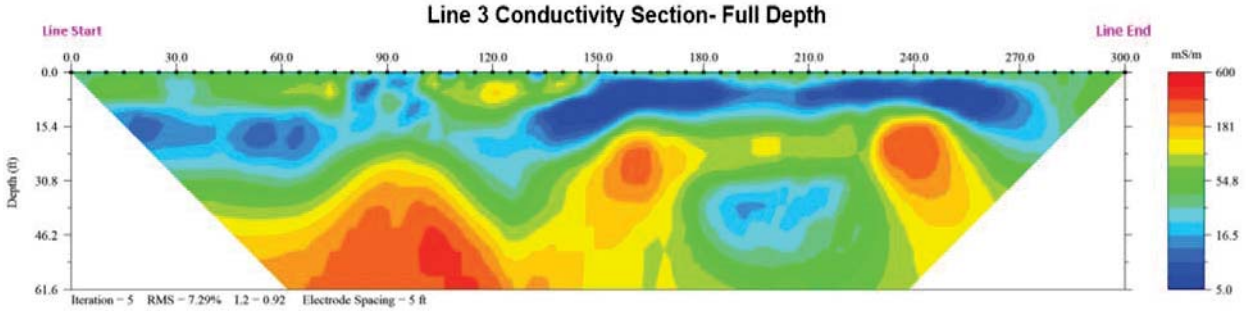
The release occurred in Unit Letter M, Section 36, Township 23S, Range 28E (see *Figure 1* for Vicinity Map) at coordinates (32.25621, -104.04931). It was reported that 24 barrels of produced water were released, and 0 barrels were recovered during the initial response. The closure C-141 is listed in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

Figure 1 - Vicinity Map

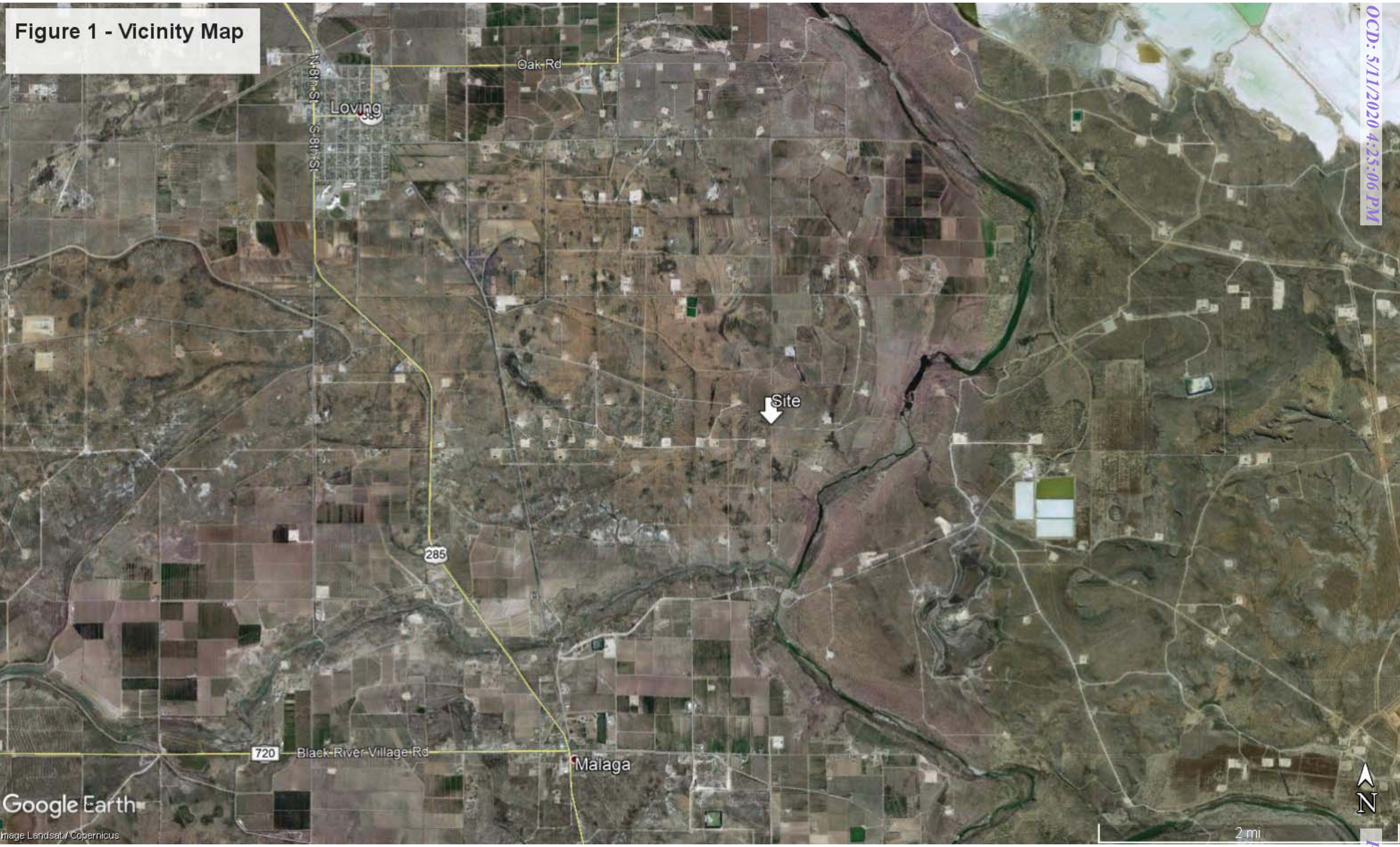


Figure 3 - Depth to Water Map

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OSE District Boundary

GIS WATERS PODs

Active

Conveyances

Ditch

Lateral

0.5 mile radius

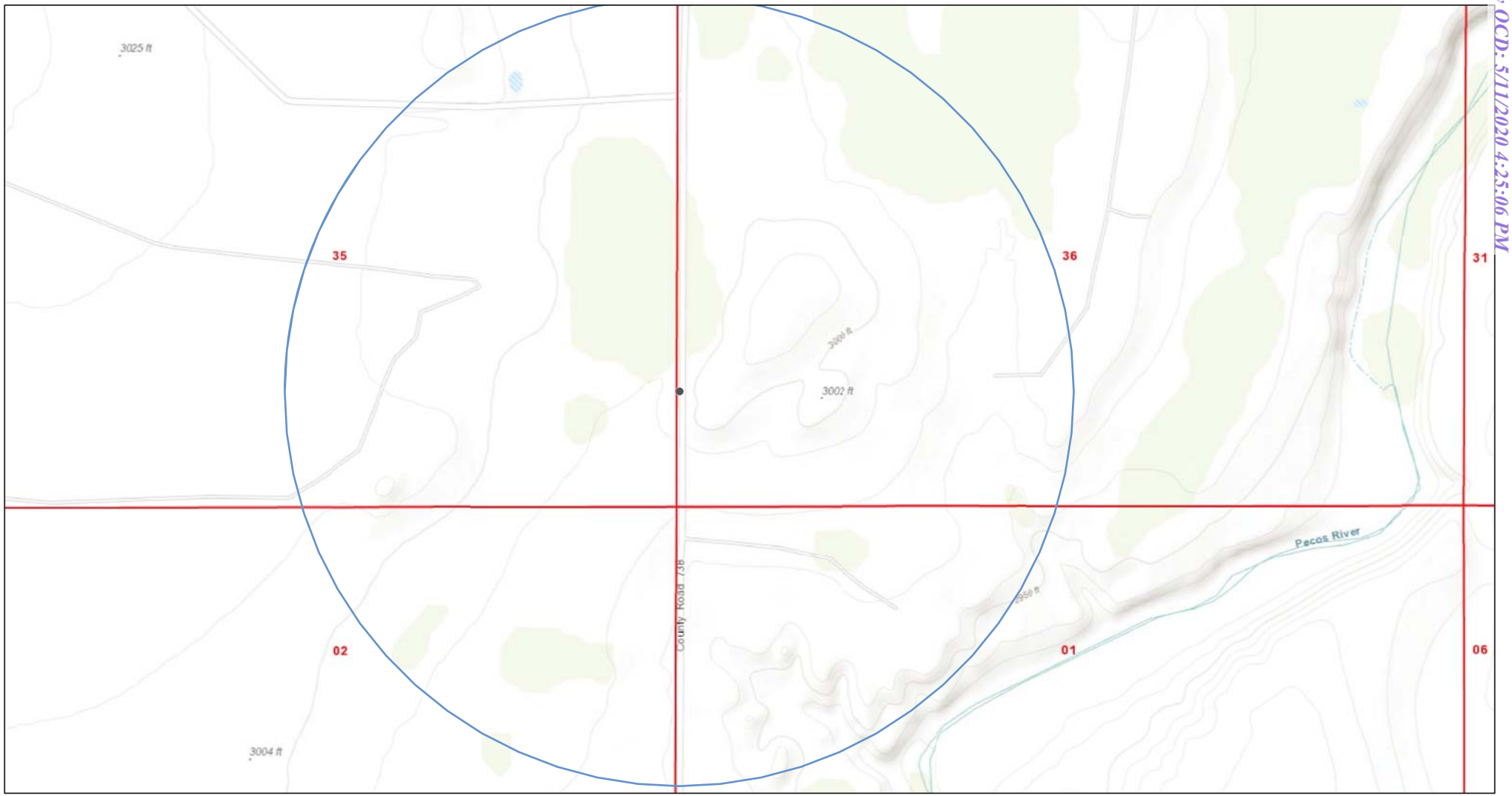
Site Center

1:9,028

0 0.07 0.15 0.3 mi

0 0.15 0.3 0.6 km

Figure 4 - Hydrology Map



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Override 1

OCD District Offices

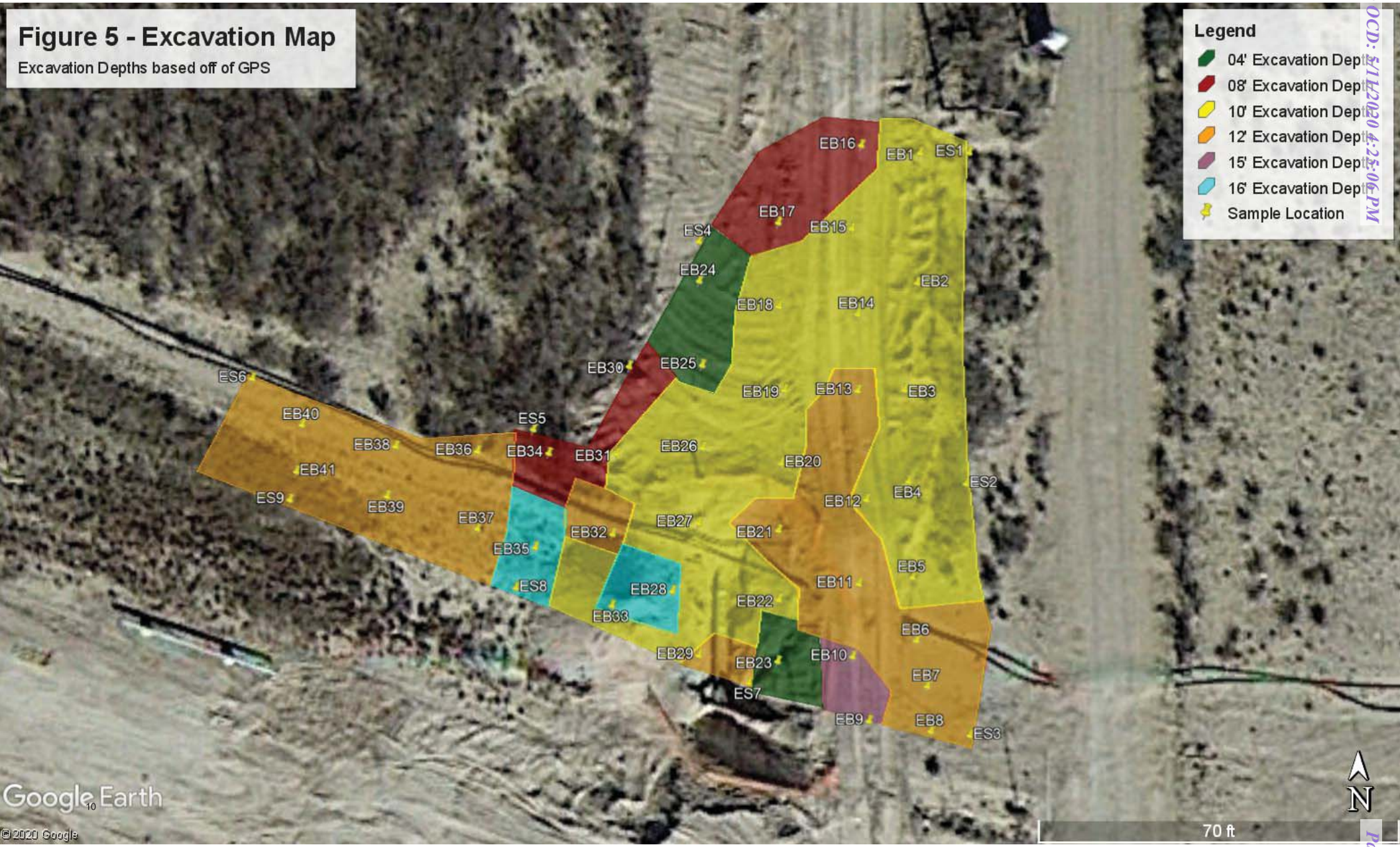
PLSS First Division

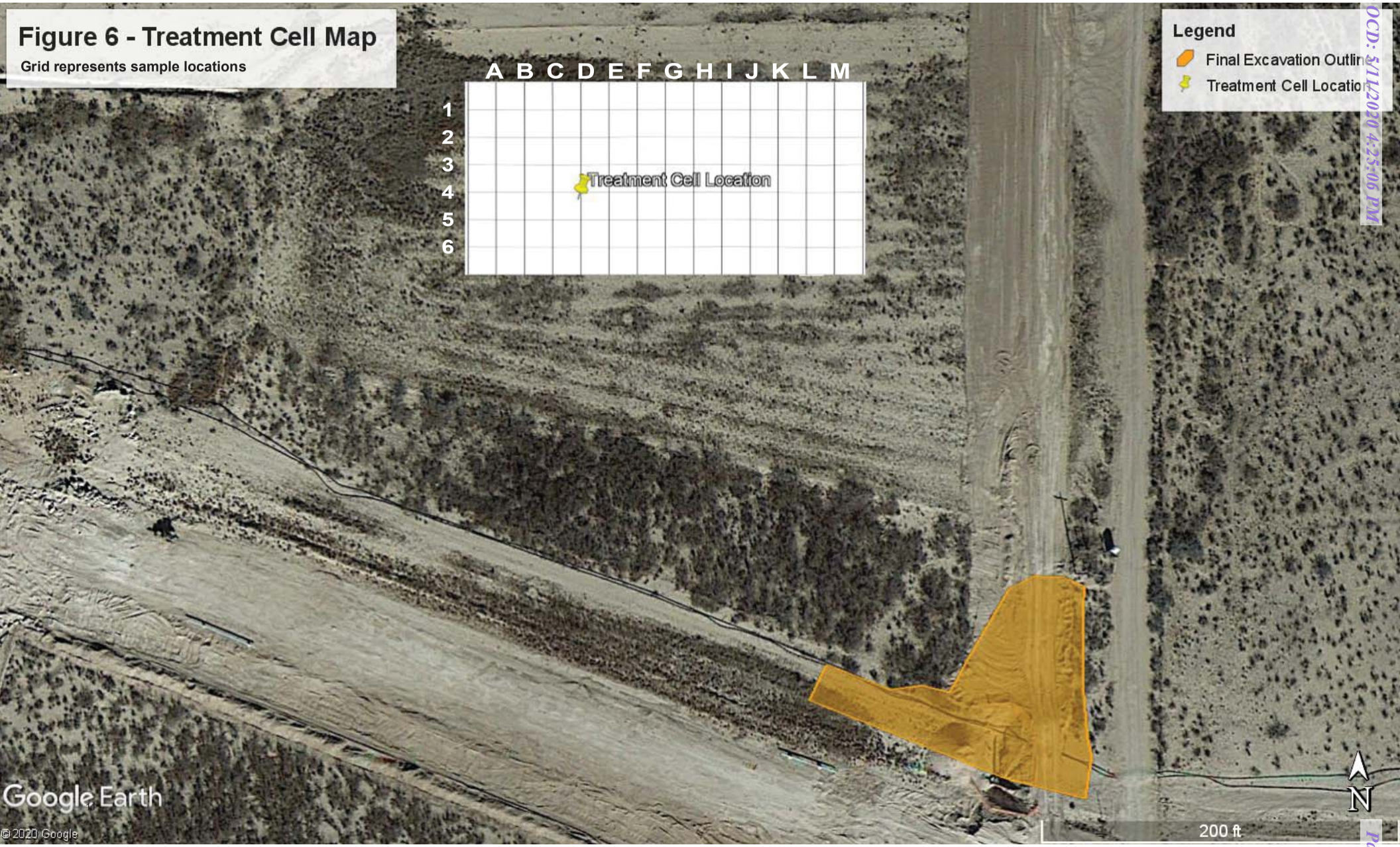
1:9,028

0 0.07 0.15 0.3 mi

0 0.15 0.3 0.6 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, OCD,





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: EH&S Manager

Signature: Charles W Lock Date: 5-11-2020

email: Charles1@KFOC.net Telephone: 918-491-4337

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

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	C 02186			2	02	24S	28E	589128	3568606*

Driller License: 1184 **Driller Company:** WEST TEXAS WATER WELL SERVICE

Driller Name: ROBERT W. COLLIS

Drill Start Date:	02/04/1990	**Drill Finish Date:**	02/04/1990	**Plug Date:**	
Log File Date:	02/13/1990	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	300 GPM
Casing Size:	6.00	**Depth Well:**	100 feet	**Depth Water:**	55 feet

Water Bearing Stratifications:	Top	Bottom	Description
	80	98	Other/Unknown

Casing Perforations:	Top	Bottom
	80	100

***UTM location was derived from PLSS - see Help**

APPENDIX C

RESISTIVITY STUDY

EARTH MEASUREMENT CORP.
Environmental & Engineering Geophysics

PERFORMED FOR:

TRAVELERS

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

PERFORMED BY:
THE EARTH MEASUREMENT CORP.
FEBRUARY 2020

Professionally solving subsurface questions

EARTH MEASUREMENT CORP.
Environmental & Engineering Geophysics

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

www.emcgeophysics.com
Texas Phone (281) 829-5700 Louisiana Phone (225) 302-5621

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

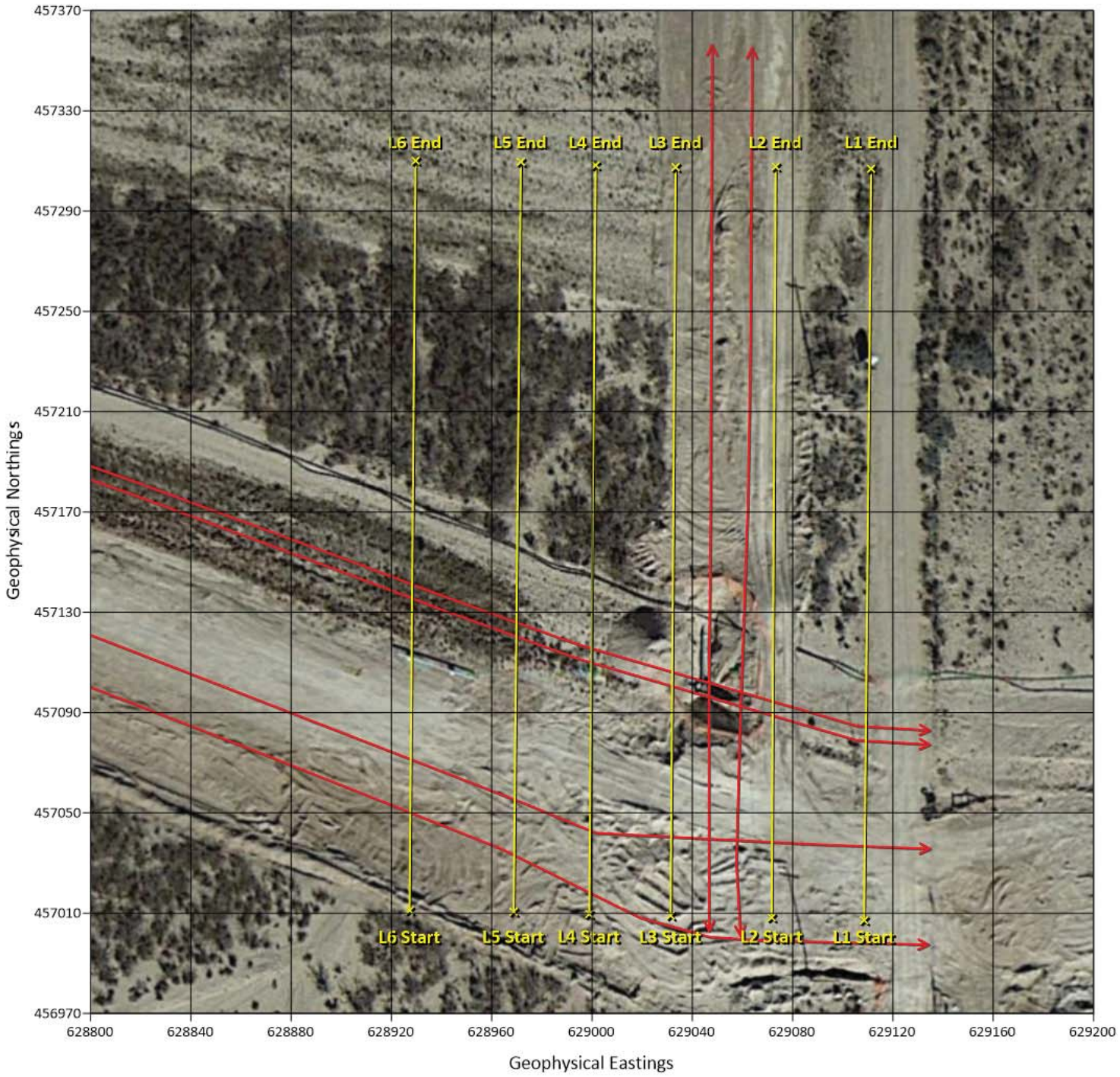
STATEMENT

Resistivity and electromagnetic data are not definitive measures in obstructed environments and should not be the only method used to define the boundaries of sub-surface 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

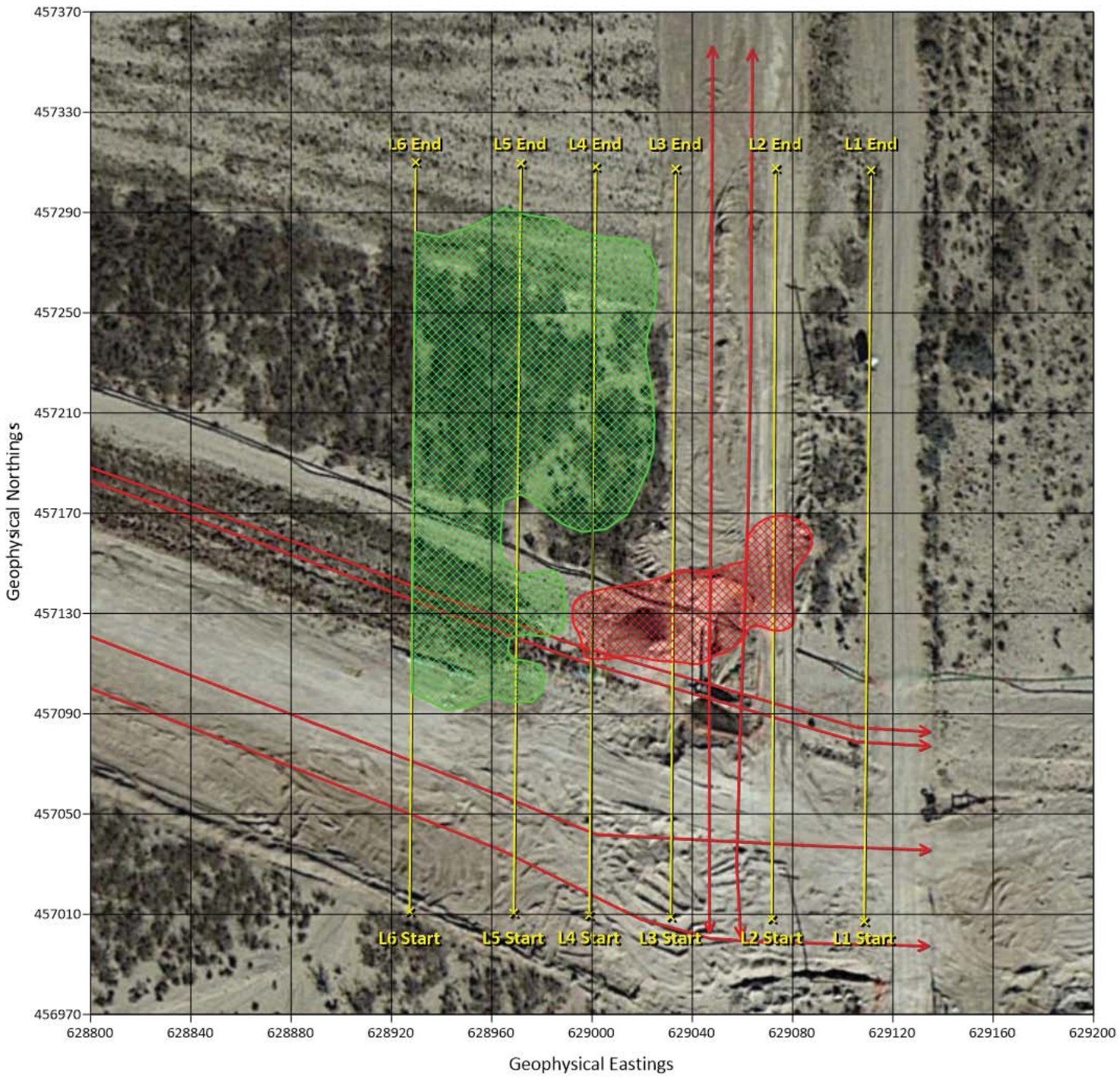
Map Projection Presented in State Plane
NAD83 New Mexico East- U.S Survey Feet

Geophysical Investigation Survey
WILLOW CREEK
LOVING, NEW MEXICO
RESISTIVITY LINE LAYOUT MAP

SCALE 1 INCH = 40 FEET
0 40 80

FEB 202

EMC EARTH MEASUREMENT CORP.
10963 Cutten Road
Houston, Texas 770
281-829-5700



N
W
E
S

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

Geophysical Investigation Survey

WILLOW CREEK

LOVING, NEW MEXICO

INTERPRETIVE MAP

SHOWING AREAS OF ELEVATED CONDUCTIVITY

SCALE 1 INCH = 40 FEET

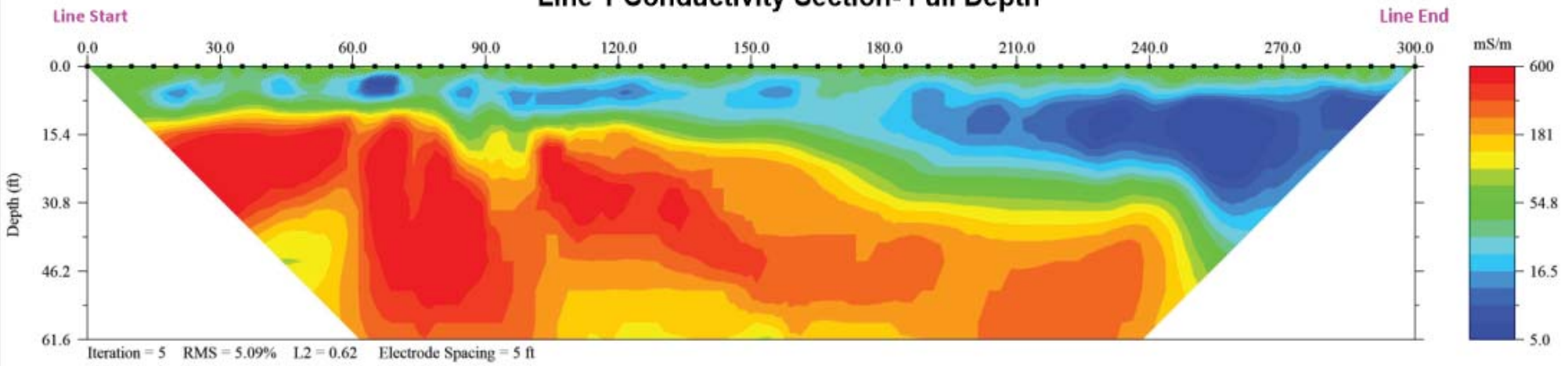
0 40 80

FEB 202

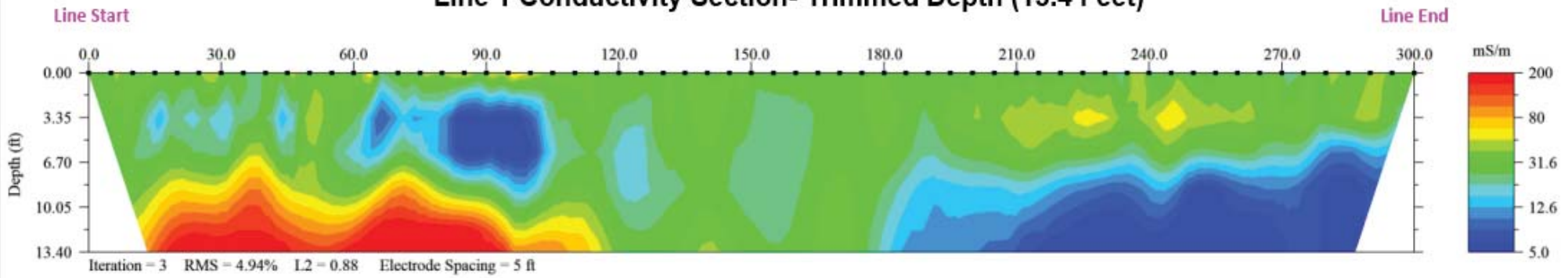
EMC
EARTH MEASUREMENT CORP.
10963 Cutten Road
Houston, Texas 770
281-829-5700

EARTH MEASUREMENT CORP.
Environmental & Engineering Geophysics

Line 1 Conductivity Section- Full Depth



Line 1 Conductivity Section- Trimmed Depth (13.4 Feet)

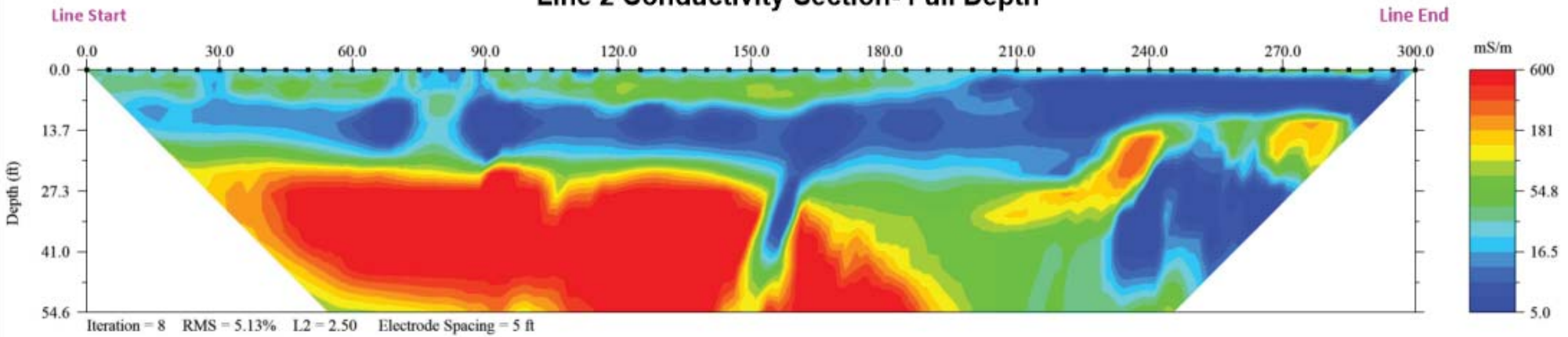


Notes: Resistivity Line 1
Length: 300 Feet
Number of Electrodes: 61
Line Start: 629111.34E/457005.26N
Line End: 629114.194E/457304.939N

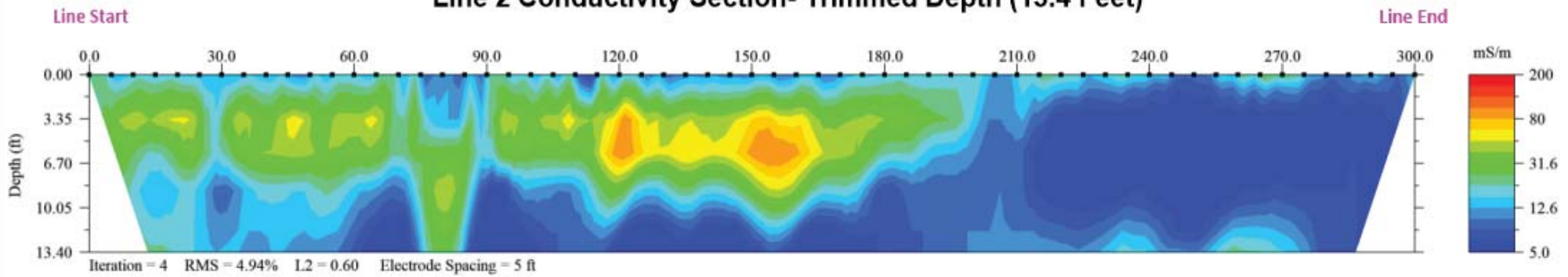
Willow Creek
Loving, New Mexico

EARTH MEASUREMENT CORP.
Environmental & Engineering Geophysics

Line 2 Conductivity Section- Full Depth



Line 2 Conductivity Section- Trimmed Depth (13.4 Feet)

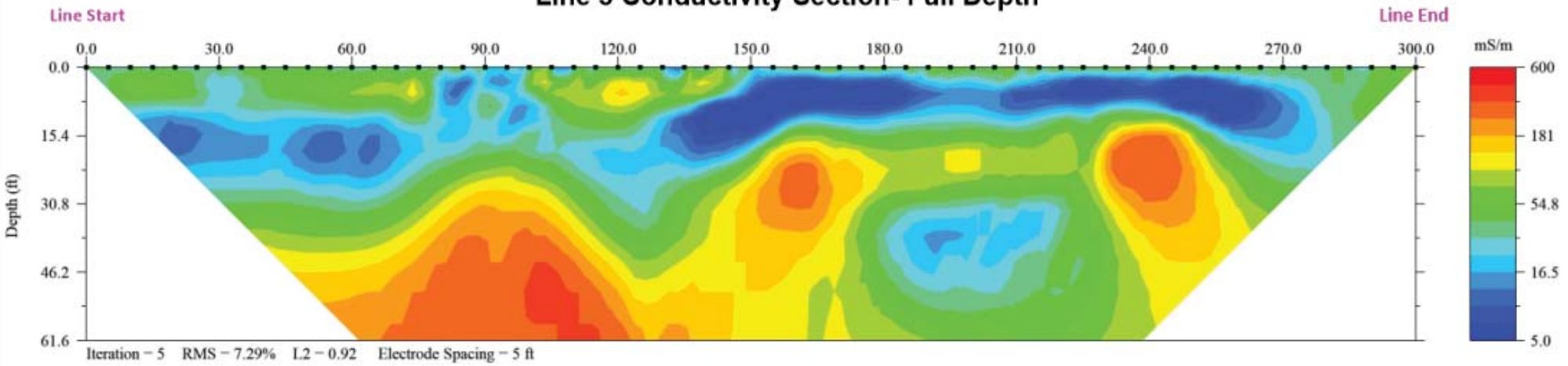


Notes: Resistivity Line 2
Length: 300 Feet
Number of Electrodes: 61
Line Start: 629074.474E/457006.369N
Line End: 629076.096E/457305.798N

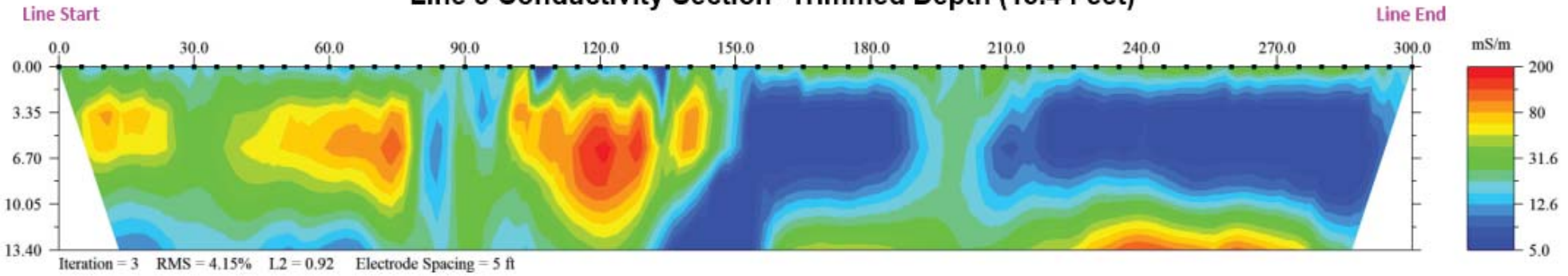
Willow Creek
Loving, New Mexico

EARTH MEASUREMENT CORP.
Environmental & Engineering Geophysics

Line 3 Conductivity Section- Full Depth



Line 3 Conductivity Section- Trimmed Depth (13.4 Feet)



Notes: Resistivity Line 3
Length: 300 Feet
Number of Electrodes: 61
Line Start: 629034.199E/457007.111N
Line End: 629036.197E/457305.596N

Willow Creek
Loving, New Mexico

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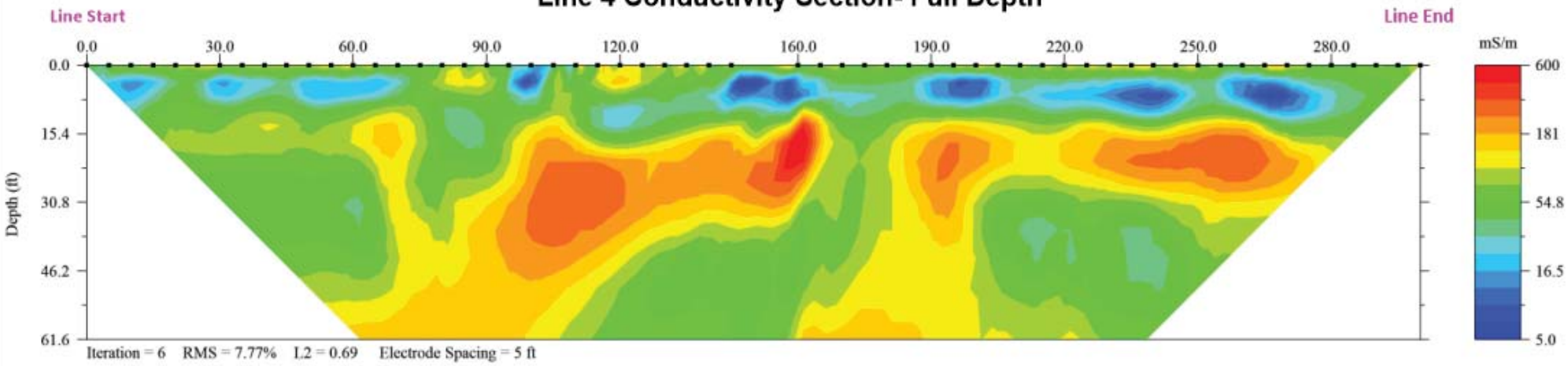
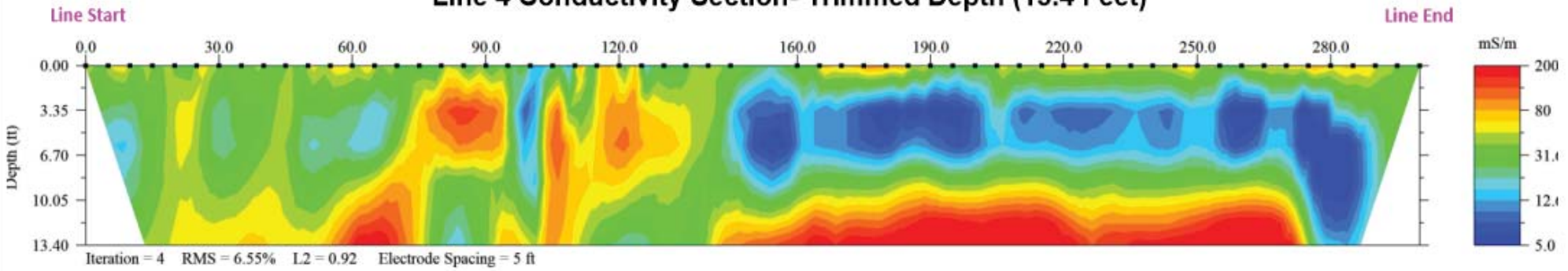
Line 4 Conductivity Section- Full Depth



Line 4 Conductivity Section- Trimmed Depth (13.4 Feet)



Notes: Resistivity Line 4
Length: 300 Feet
Number of Electrodes: 61
Line Start: 629001.776E/457007.701N
Line End: 629004.302E/457306.316N

Willow Creek
Loving, New Mexico

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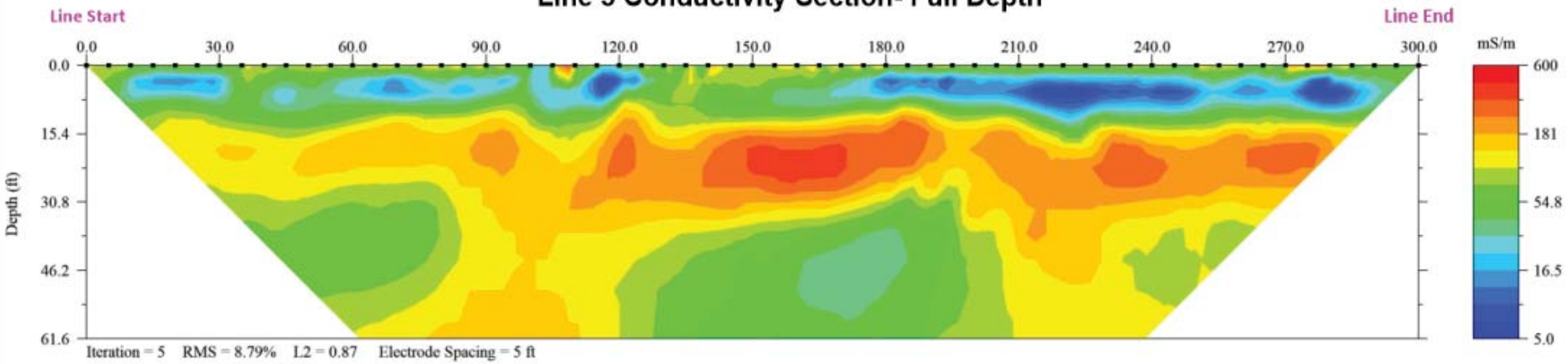
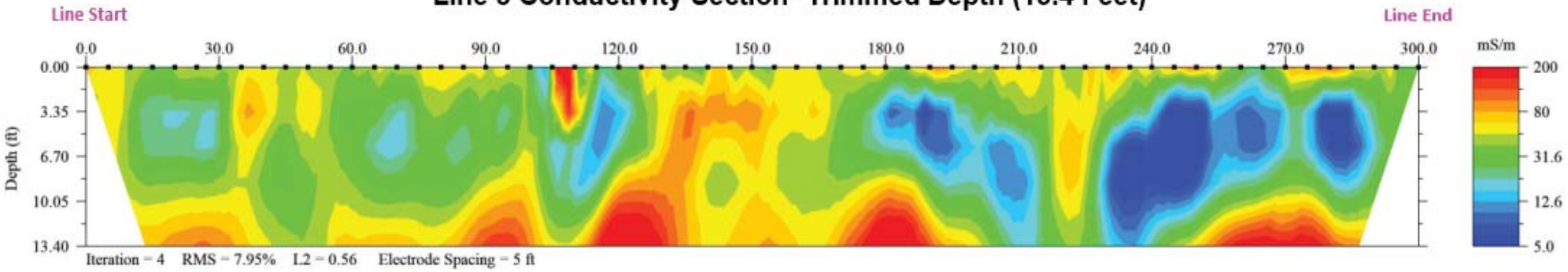
Line 5 Conductivity Section- Full Depth



Line 5 Conductivity Section- Trimmed Depth (13.4 Feet)



Notes: Resistivity Line 5
Length: 300 Feet
Number of Electrodes: 61
Line Start: 628971.587E/457008.668N
Line End: 628974.489E/457307.715N

Willow Creek
Loving, New Mexico

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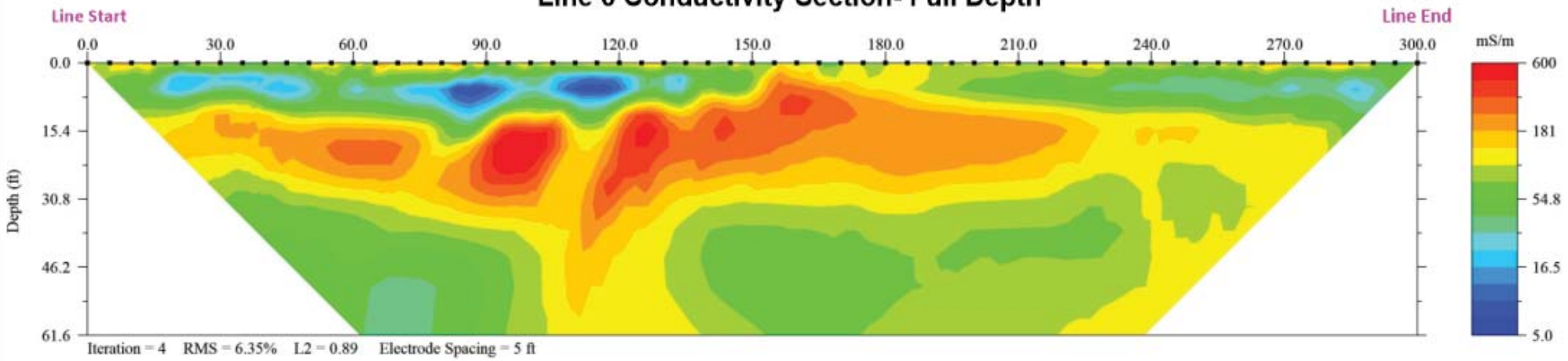
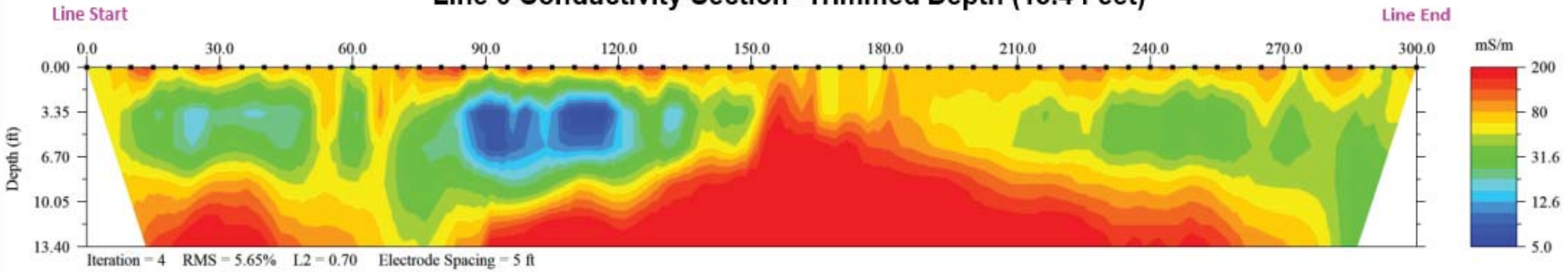
Line 6 Conductivity Section- Full Depth



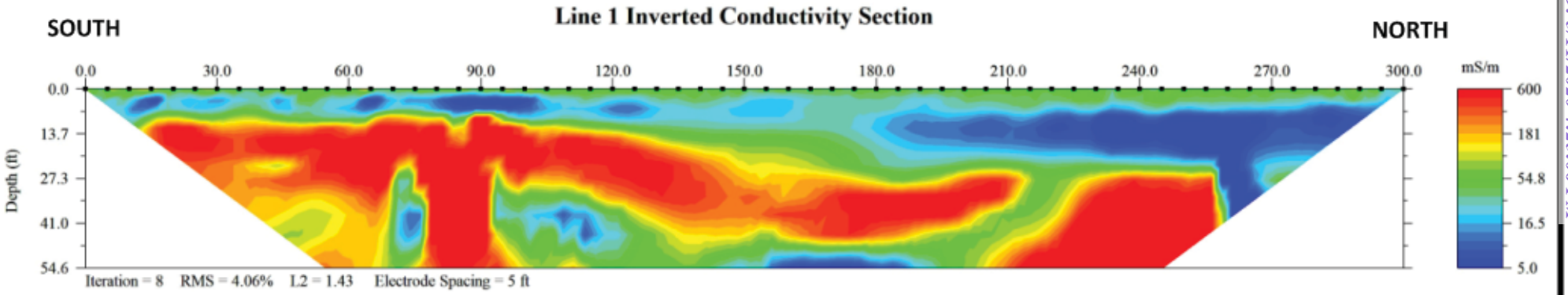
Line 6 Conductivity Section- Trimmed Depth (13.4 Feet)

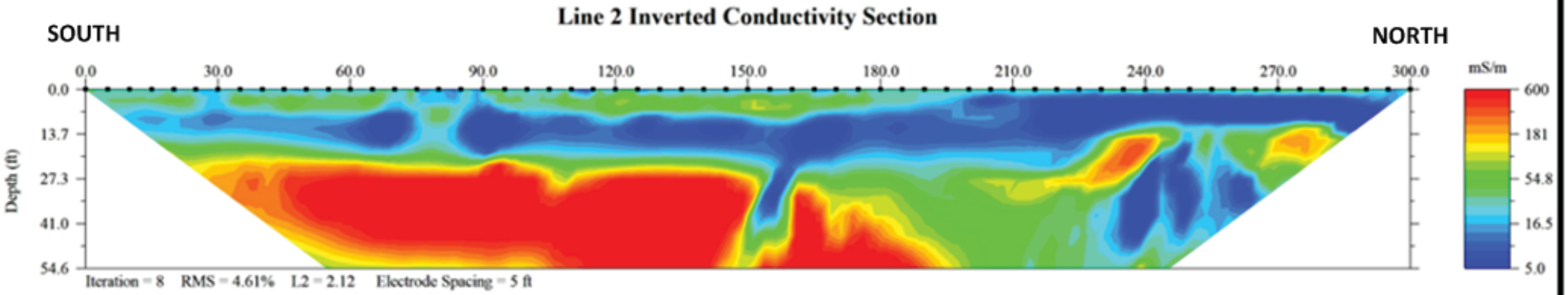


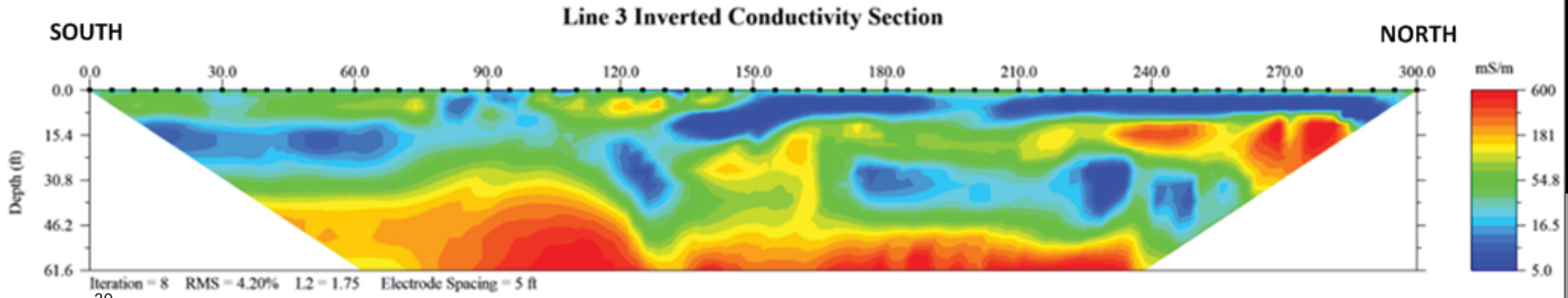
Notes: Resistivity Line 6
Length: 300 Feet
Number of Electrodes: 61
Line Start: 628930.123E/457009.146N
Line End: 628932.536E/457308.165N

Willow Creek
Loving, New Mexico

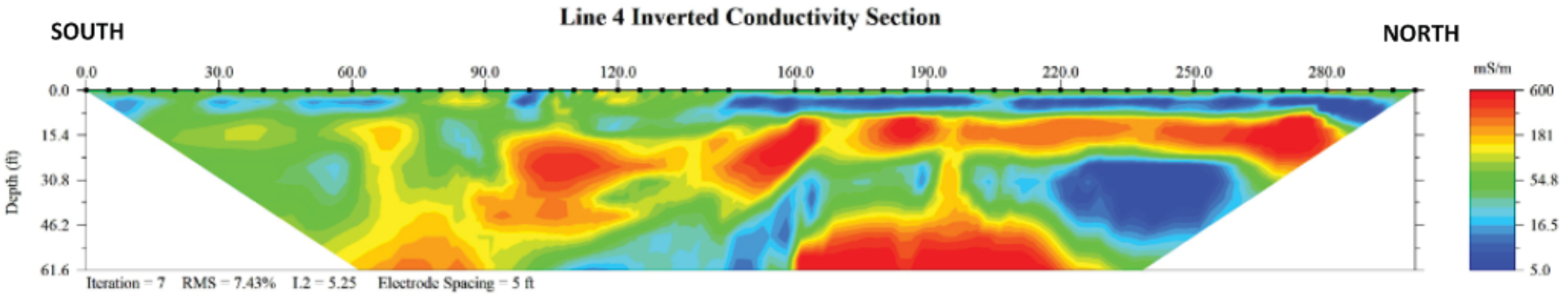
RESISTIVITY PROFILE MAP - WILLOW CREEK, NEW MEXICO - FULL DEPTH RANGE

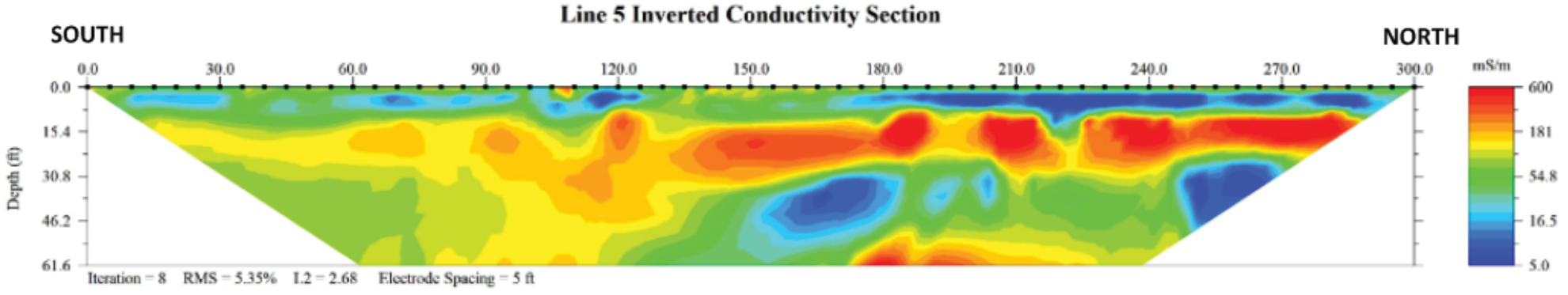


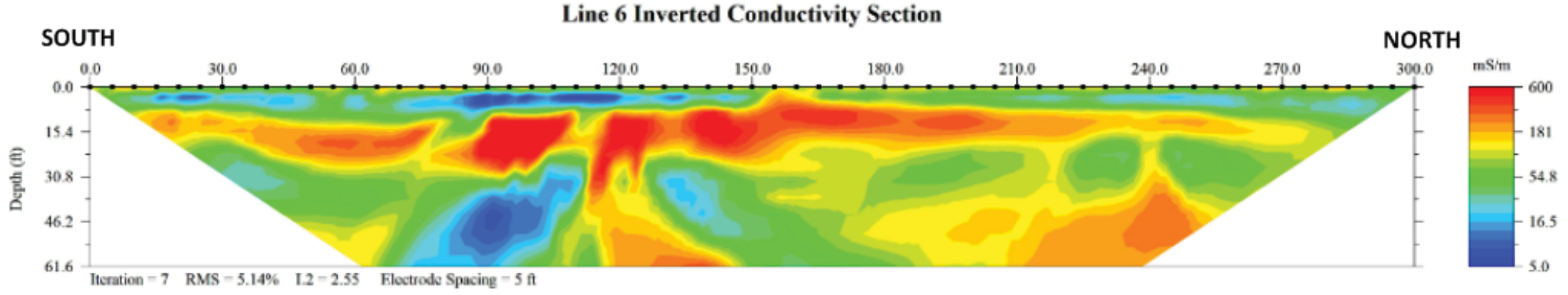




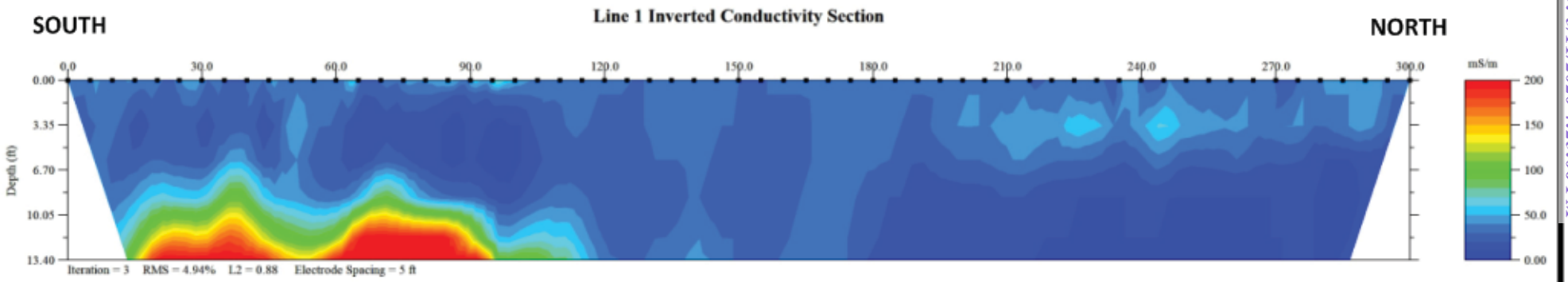
RESISTIVITY PROFILE MAP - WILLOW CREEK, NEW MEXICO - FULL DEPTH RANGE

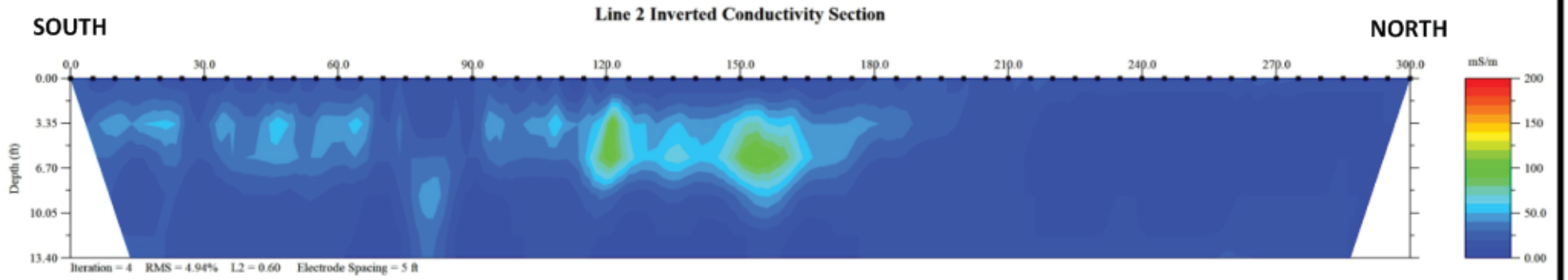


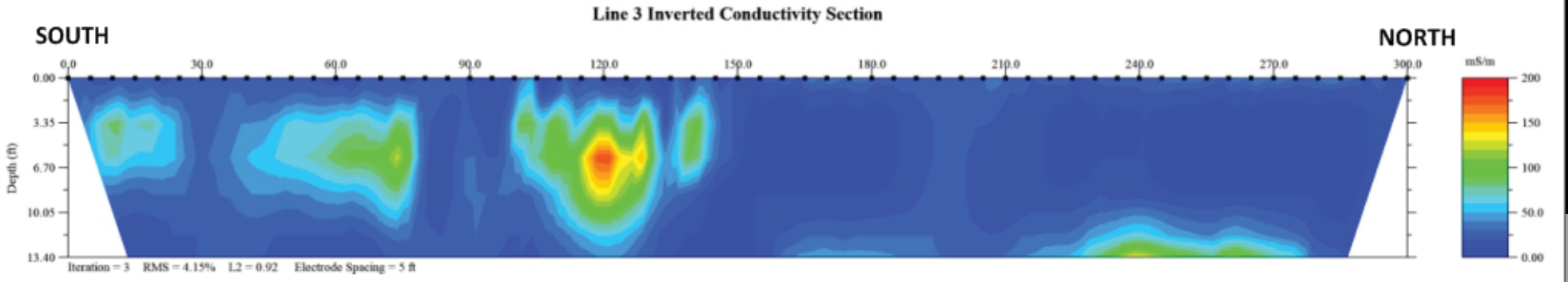




RESISTIVITY PROFILE MAP - WILLOW CREEK, NEW MEXICO - TRIMMED DEPTH RANGE





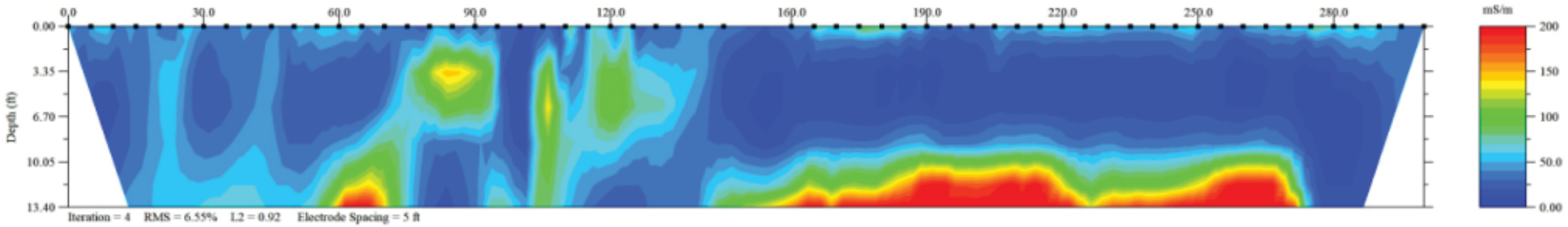


RESISTIVITY PROFILE MAP - WILLOW CREEK, NEW MEXICO - TRIMMED DEPTH RANGE

SOUTH

Line 4 Inverted Conductivity Section

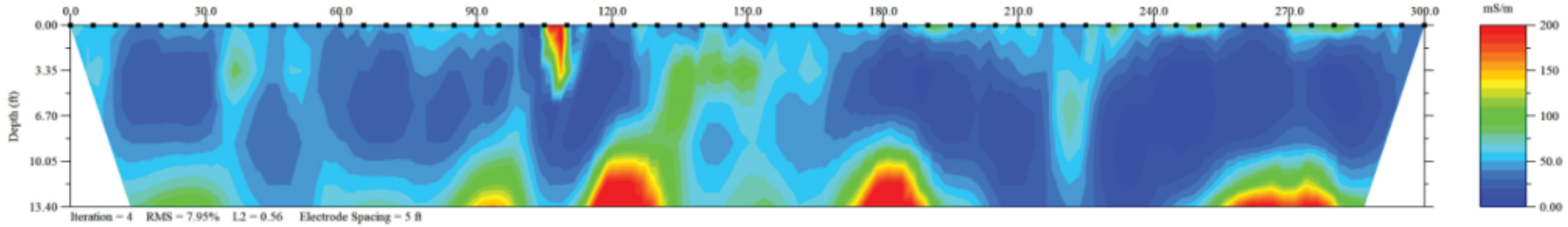
NORTH



SOUTH

Line 5 Inverted Conductivity Section

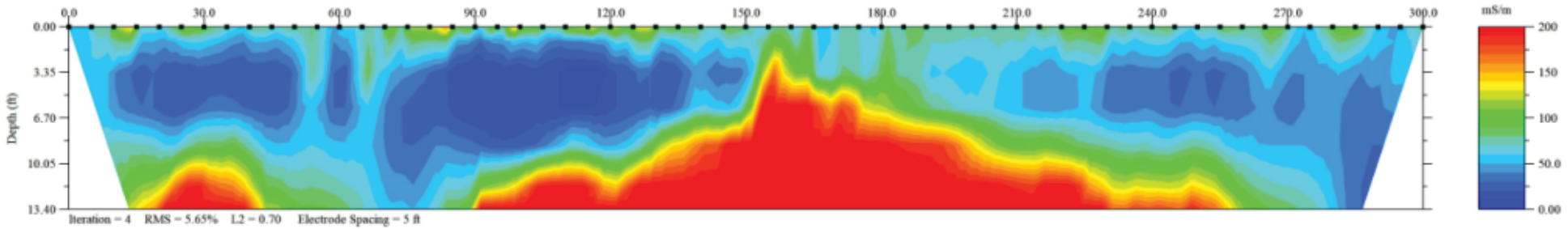
NORTH

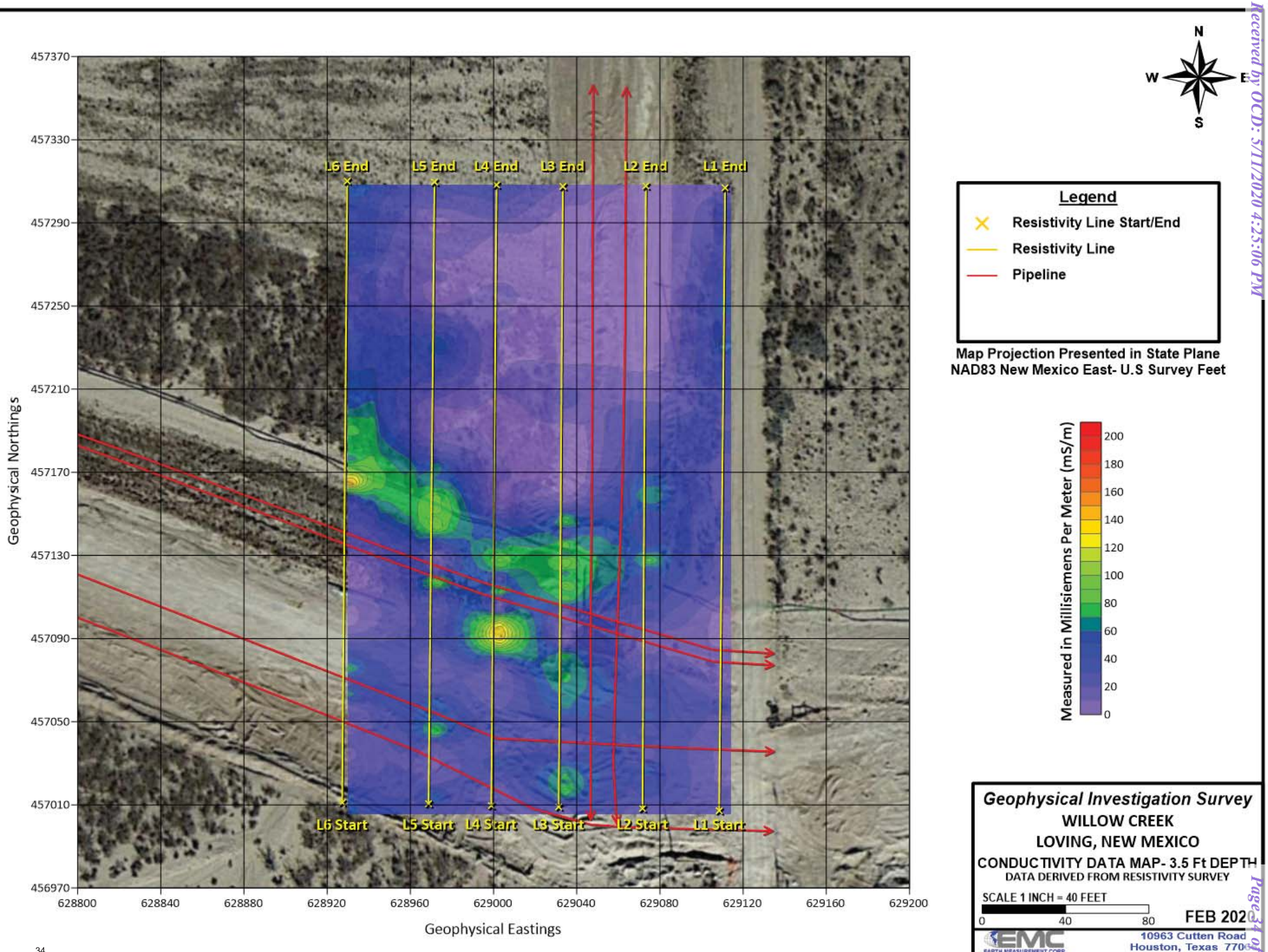


SOUTH

Line 6 Inverted Conductivity Section

NORTH





Geophysical Investigation Survey

WILLOW CREEK

LOVING, NEW MEXICO

CONDUCTIVITY DATA MAP- 3.5 Ft DEPTH

DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET

0 40 80

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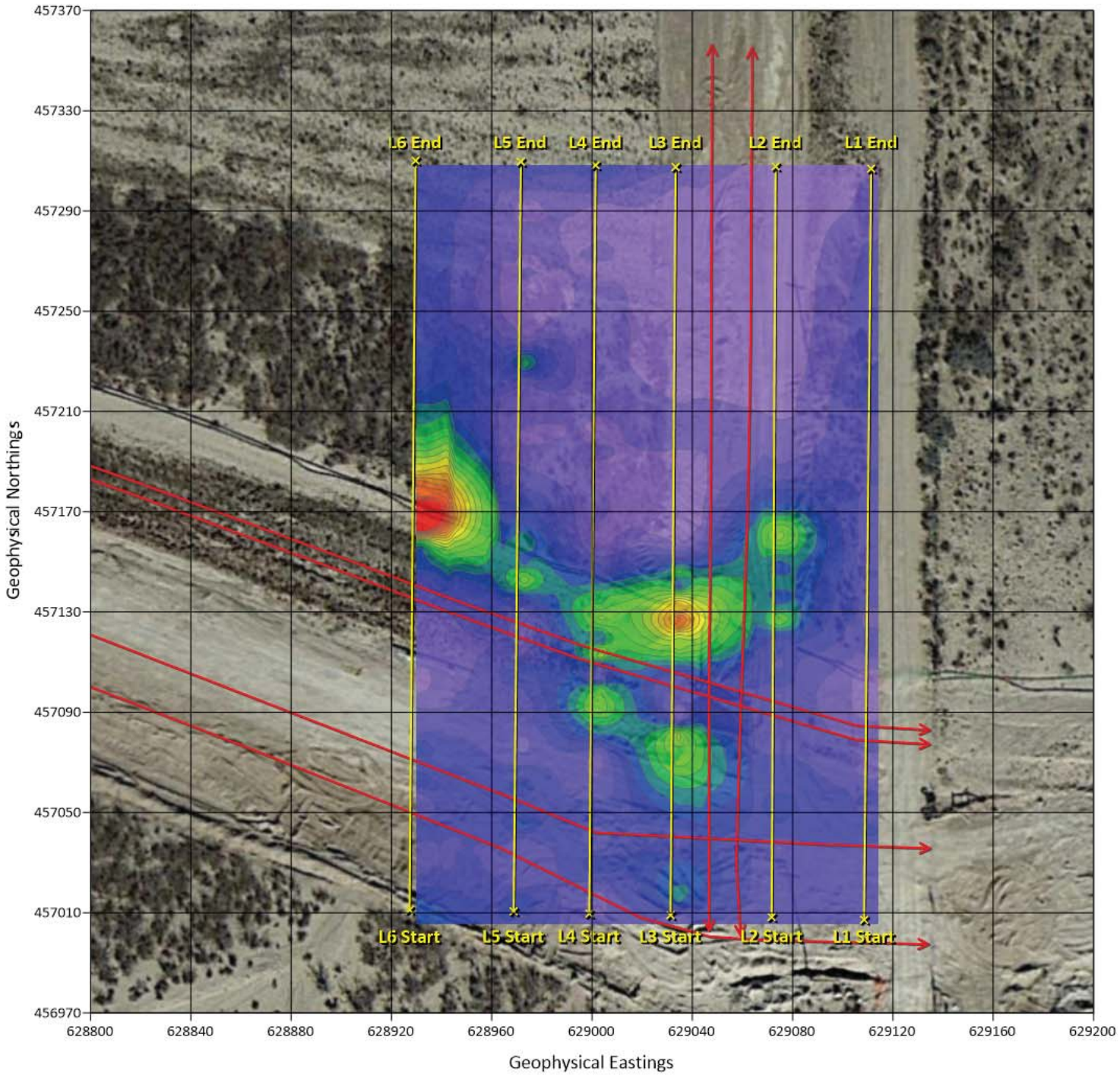
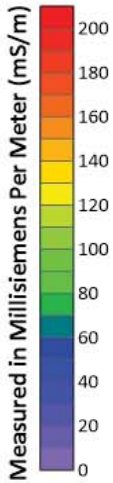
Houston, Texas 770
281-829-5700



Legend

- Resistivity Line Start/End
- Resistivity Line
- Pipeline

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



Geophysical Investigation Survey

WILLOW CREEK

LOVING, NEW MEXICO

CONDUCTIVITY DATA MAP- 6 Ft DEPTH

DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET

0 40 80

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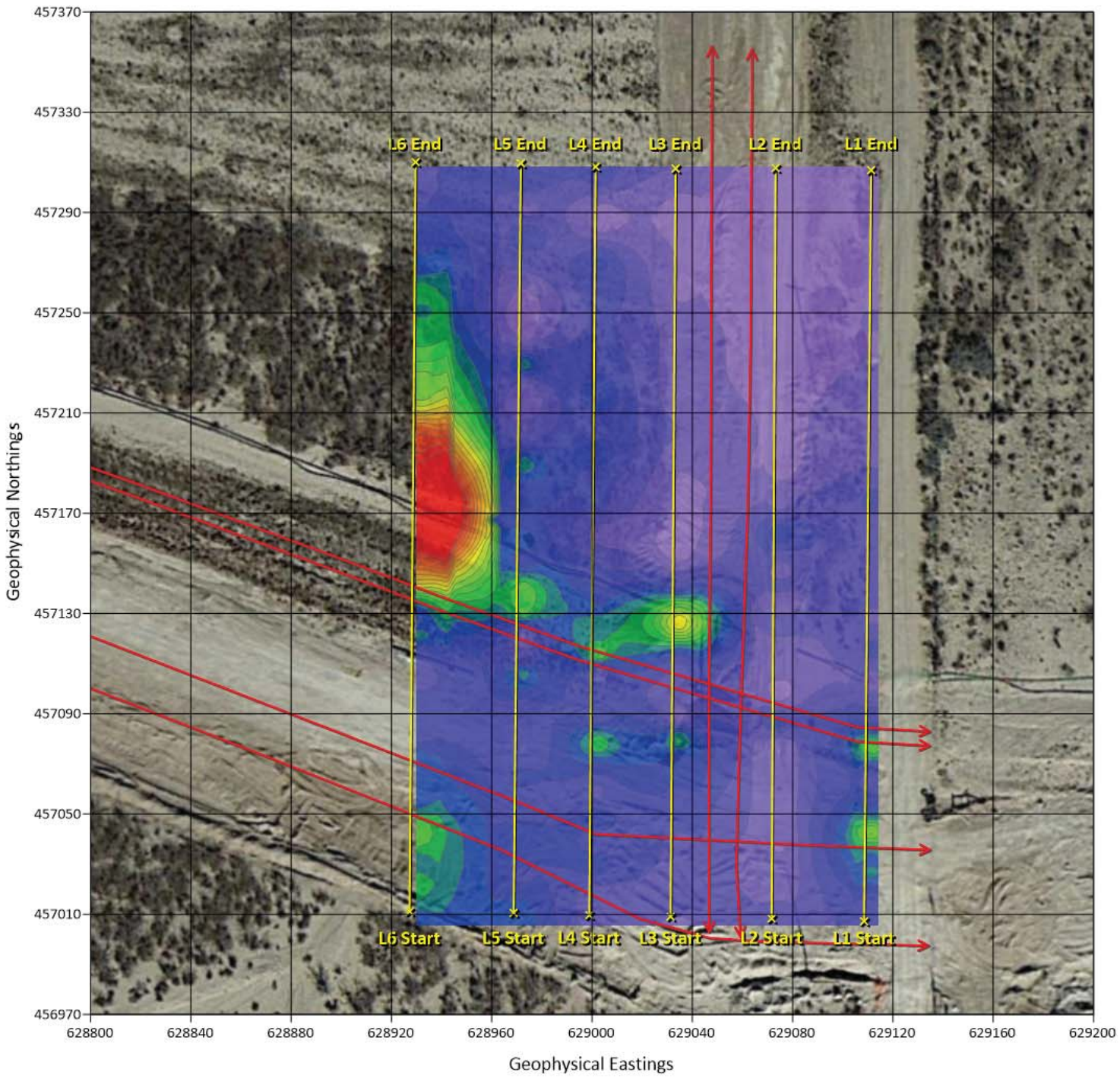
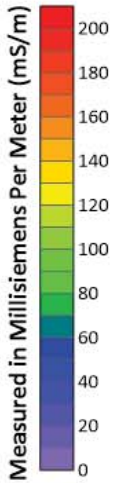
Houston, Texas 770
281-829-5700



Legend

- Resistivity Line Start/End
- Resistivity Line
- Pipeline

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



Geophysical Investigation Survey

WILLOW CREEK

LOVING, NEW MEXICO

CONDUCTIVITY DATA MAP- 9 Ft DEPTH

DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET

0 40 80

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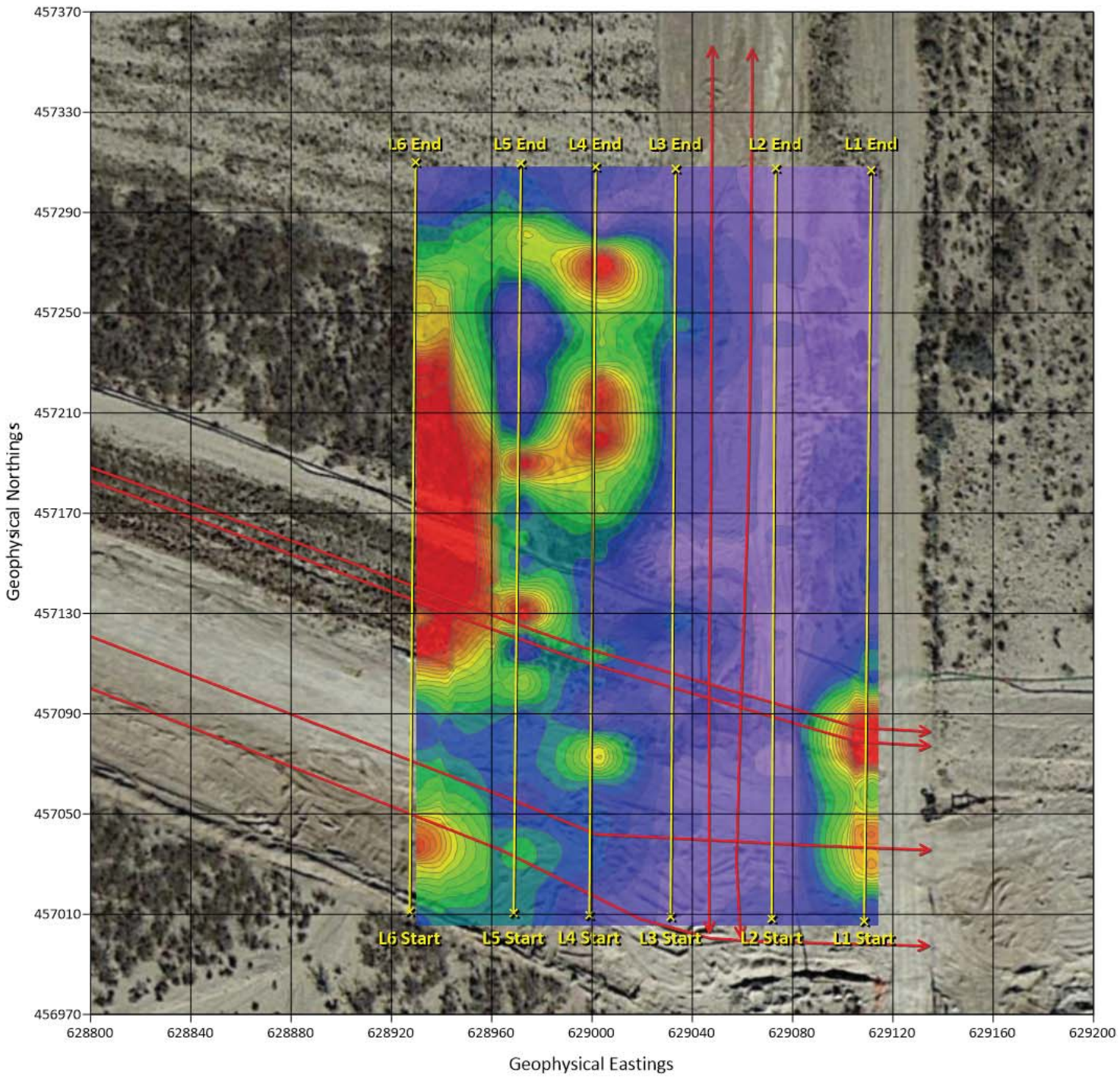
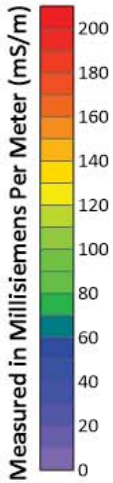
Houston, Texas 770
281-829-5700



Legend

- Resistivity Line Start/End
- Resistivity Line
- Pipeline

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

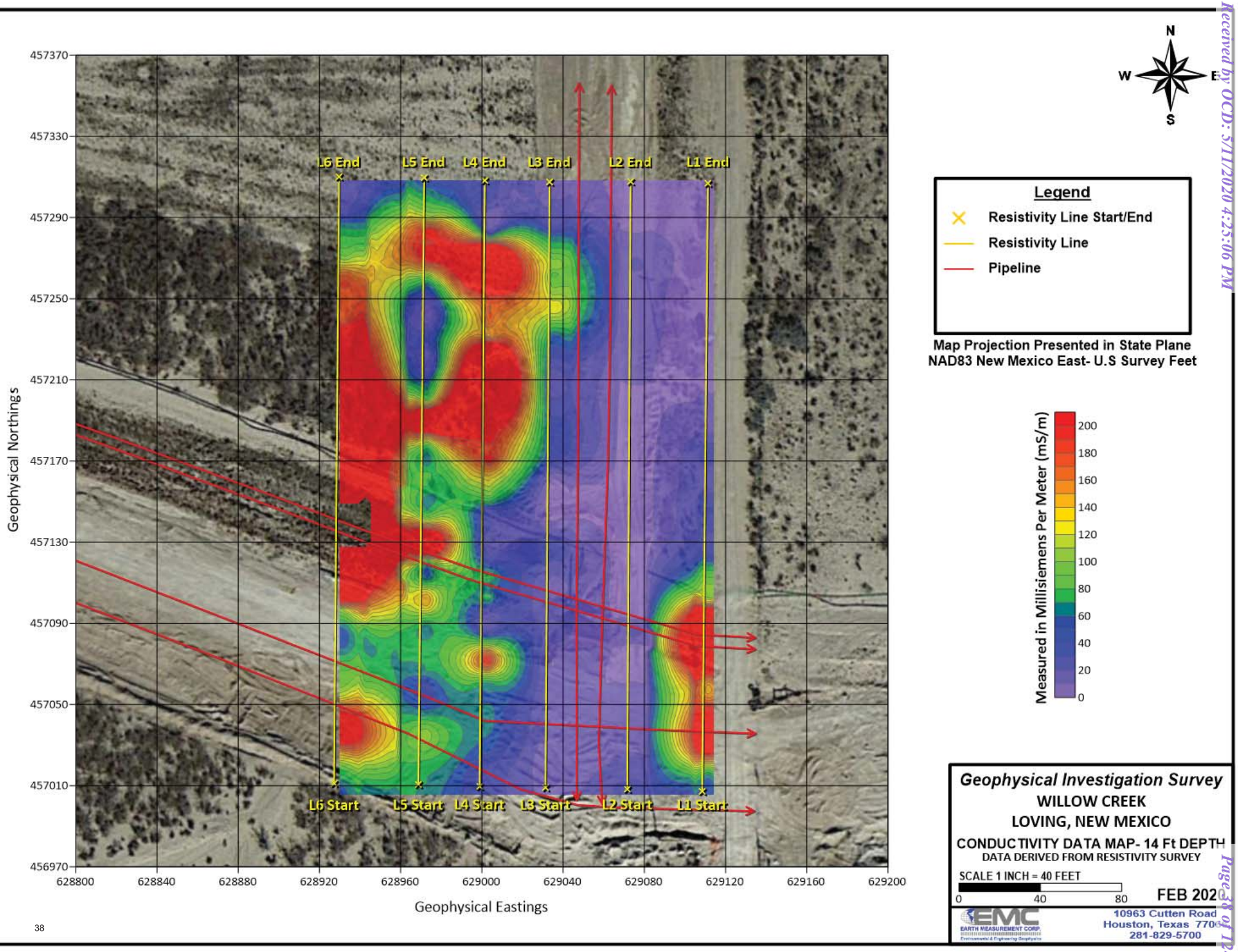


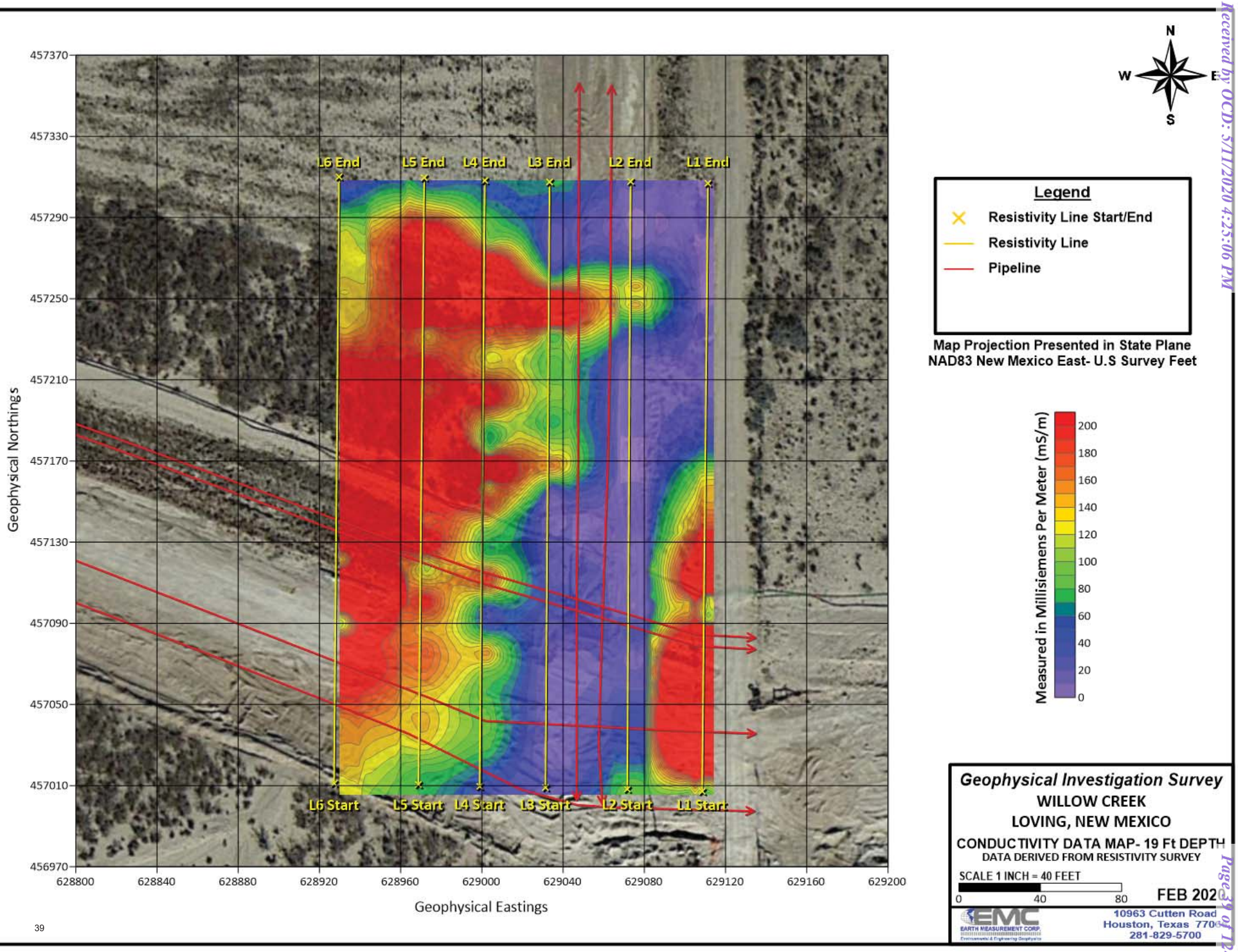
Geophysical Investigation Survey
WILLOW CREEK
LOVING, NEW MEXICO
CONDUCTIVITY DATA MAP- 12 Ft DEPTH
DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET
0 40 80

FEB 202

EMC
EARTH MEASUREMENT CORP.
10963 Cutten Road
Houston, Texas 770
281-829-5700





Geophysical Investigation Survey

WILLOW CREEK

LOVING, NEW MEXICO

CONDUCTIVITY DATA MAP- 19 Ft DEPTH

DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET

0 40 80

FEB 202

EMC
EARTH MEASUREMENT CORP.
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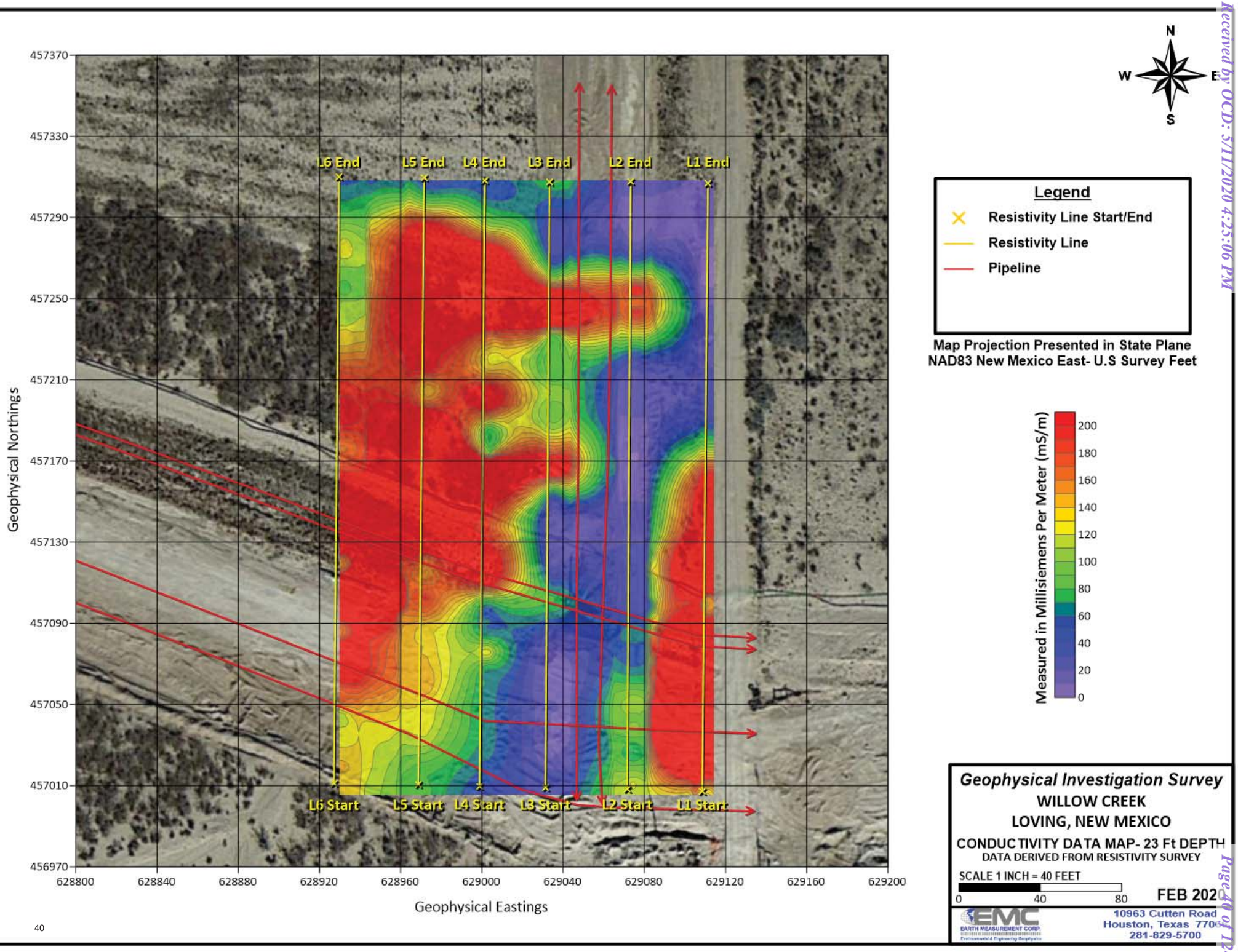
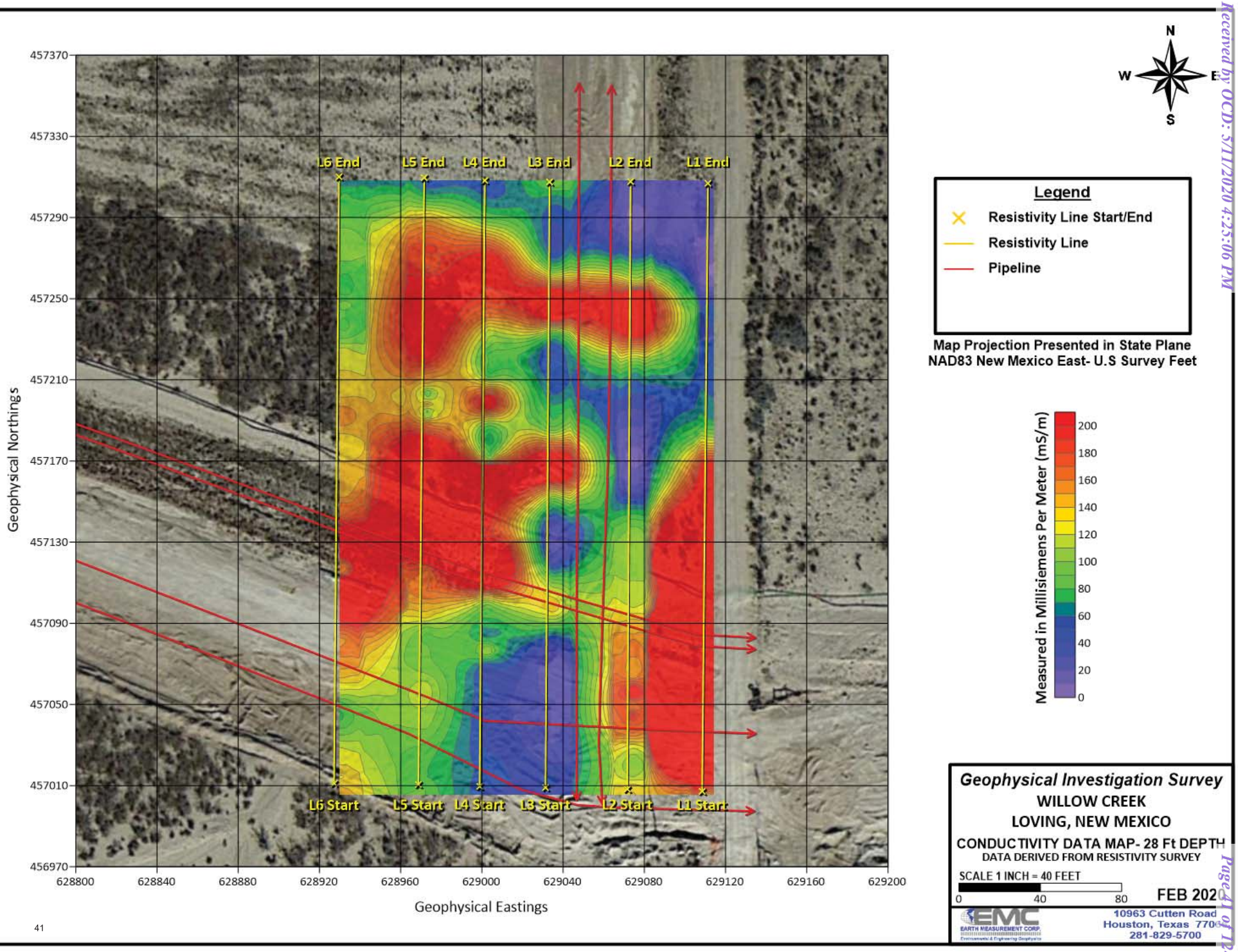
281-829-5700



40



Geophysical Investigation Survey

WILLOW CREEK

LOVING, NEW MEXICO

CONDUCTIVITY DATA MAP- 28 Ft DEPTH

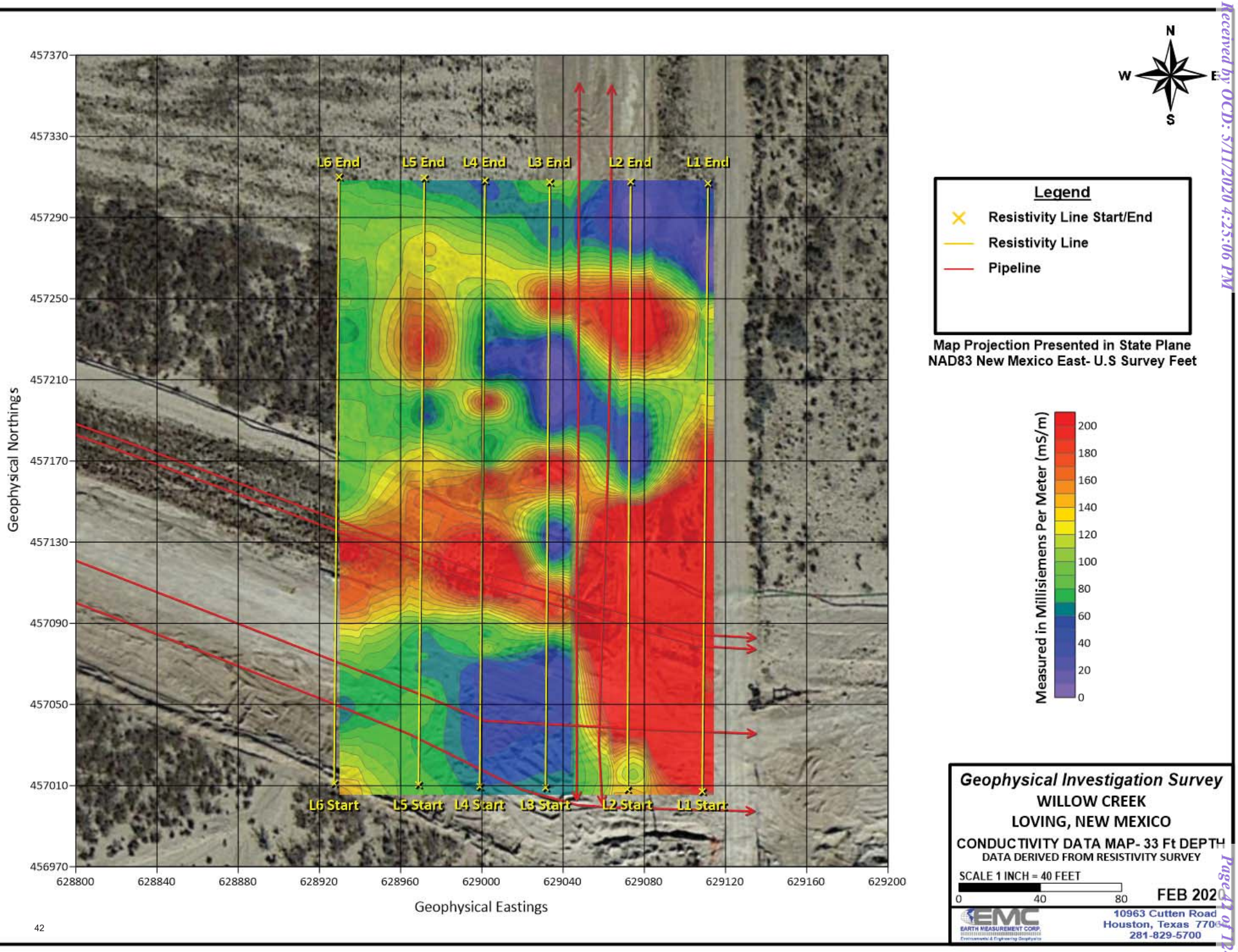
DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET

0 40 80

FEB 202

EMC
EARTH MEASUREMENT CORP.
10963 Cutten Road
Houston, Texas 770
281-829-5700



Geophysical Investigation Survey

WILLOW CREEK

LOVING, NEW MEXICO

CONDUCTIVITY DATA MAP- 33 Ft DEPTH

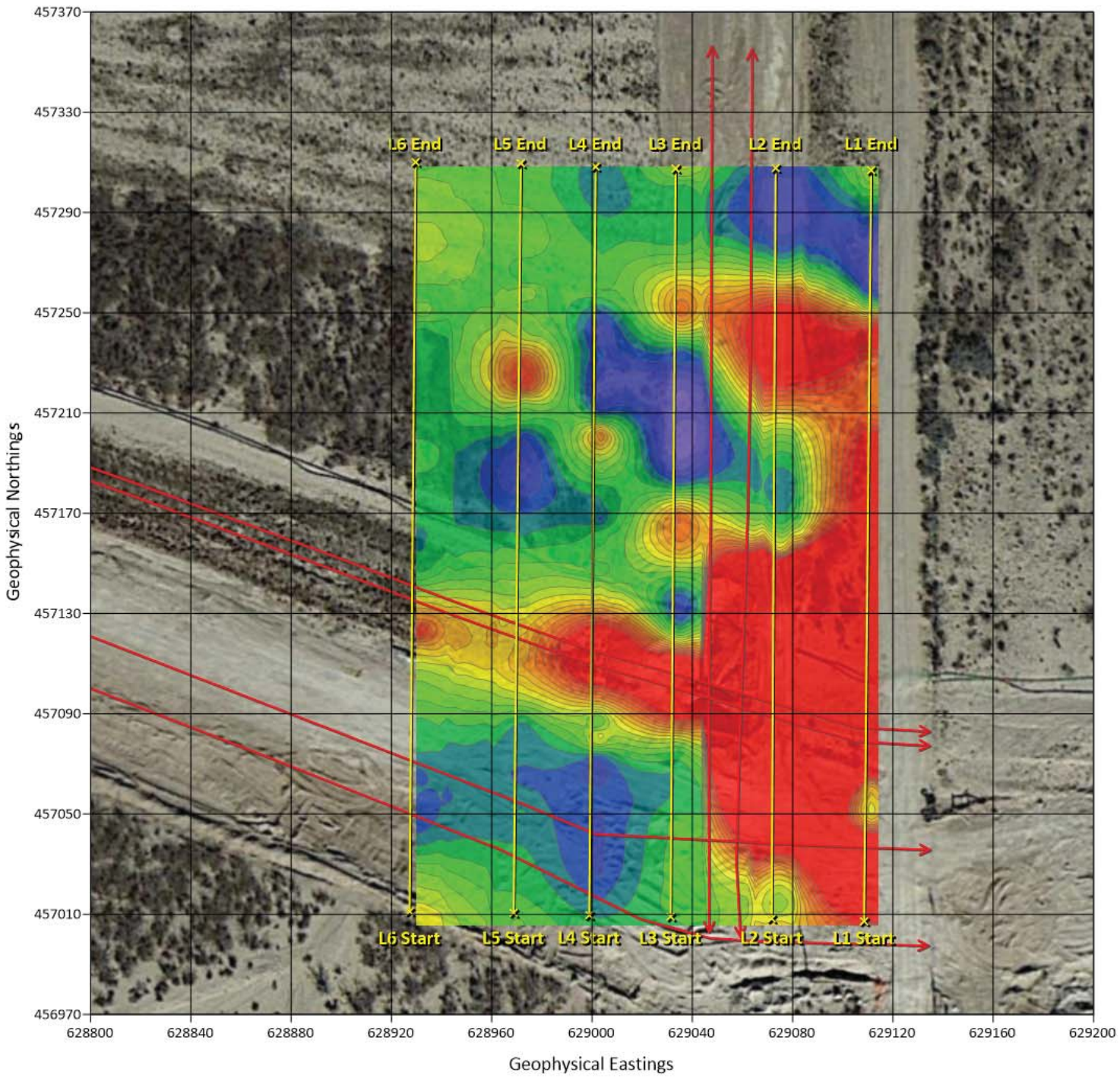
DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET

0 40 80

FEB 202

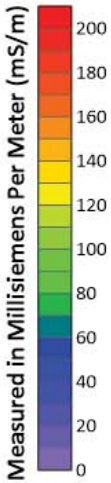
EMC EARTH MEASUREMENT CORP.
10963 Cutten Road
Houston, Texas 770
281-829-5700



Legend

- Resistivity Line Start/End
- Resistivity Line
- Pipeline

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



Geophysical Investigation Survey
WILLOW CREEK
LOVING, NEW MEXICO
CONDUCTIVITY DATA MAP- 38 Ft DEPTH
DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET
0 40 80

FEB 202

EMC EARTH MEASUREMENT CORP.
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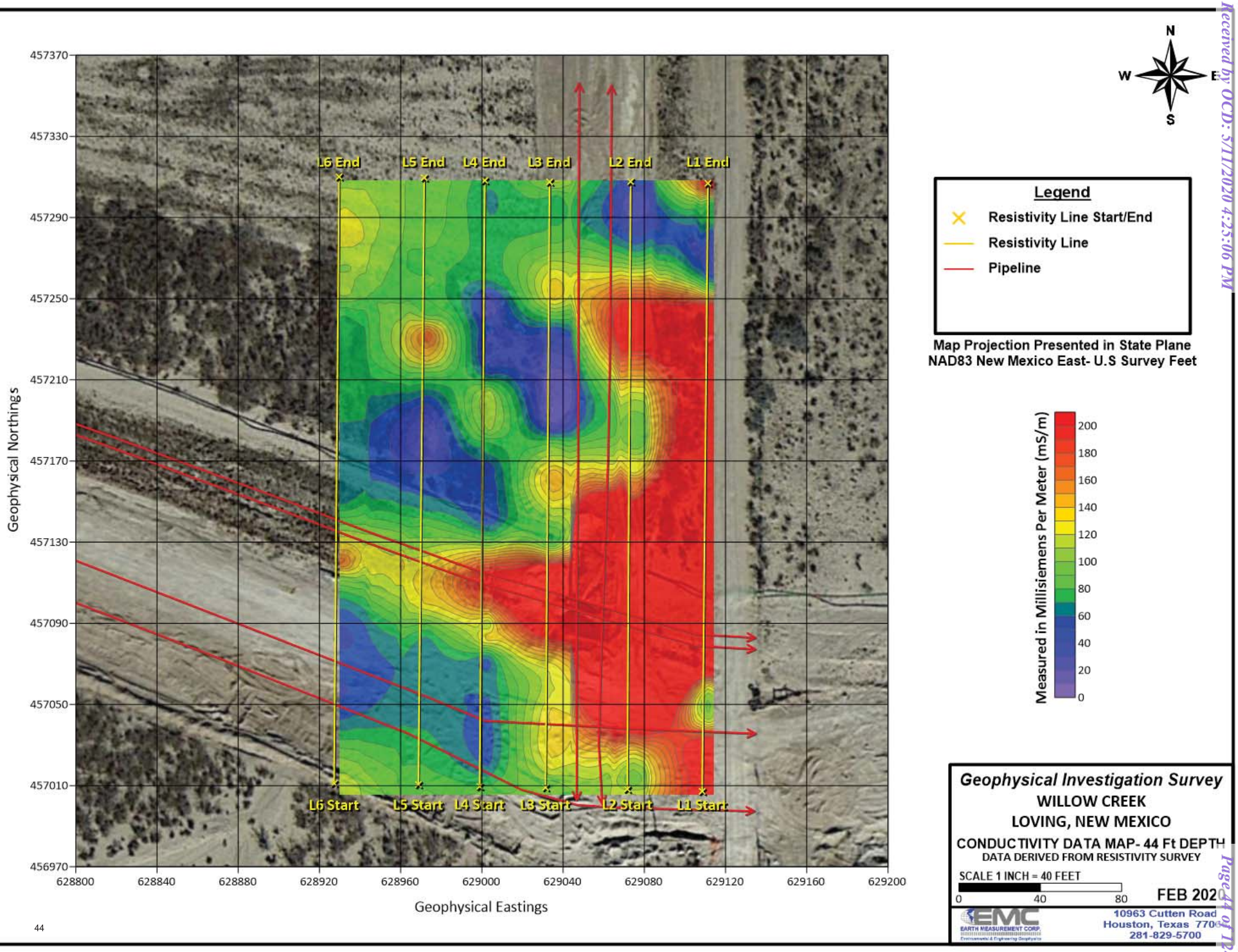
Houston, Texas 770
281-829-5700



Geophysical Investigation Survey

WILLOW CREEK

LOVING, NEW MEXICO

CONDUCTIVITY DATA MAP- 44 Ft DEPTH

DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET

0 40 80

FEB 2020

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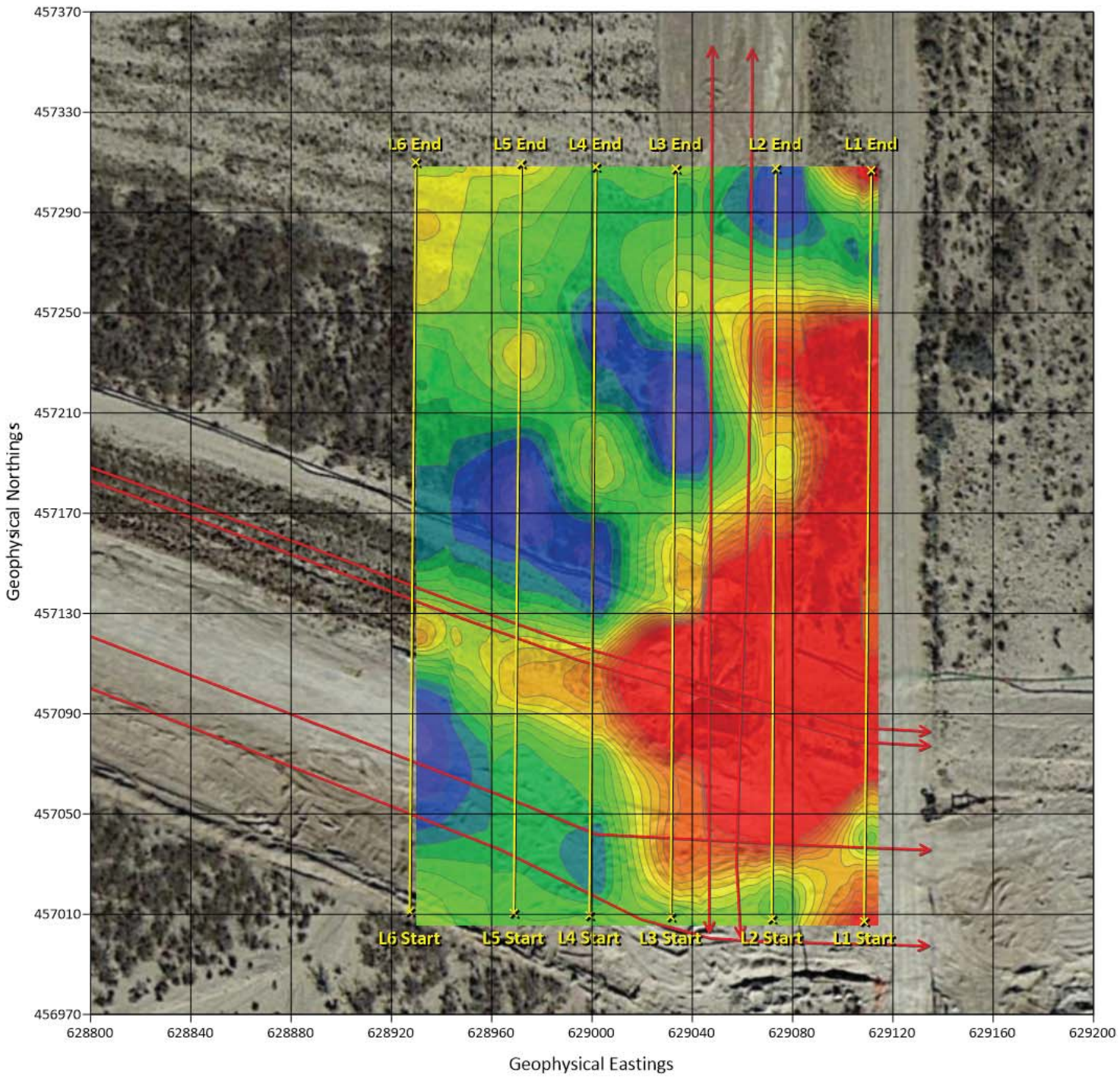
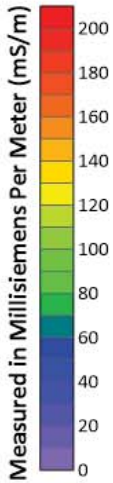
Houston, Texas 770
281-829-5700



Legend

- Resistivity Line Start/End
- Resistivity Line
- Pipeline

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

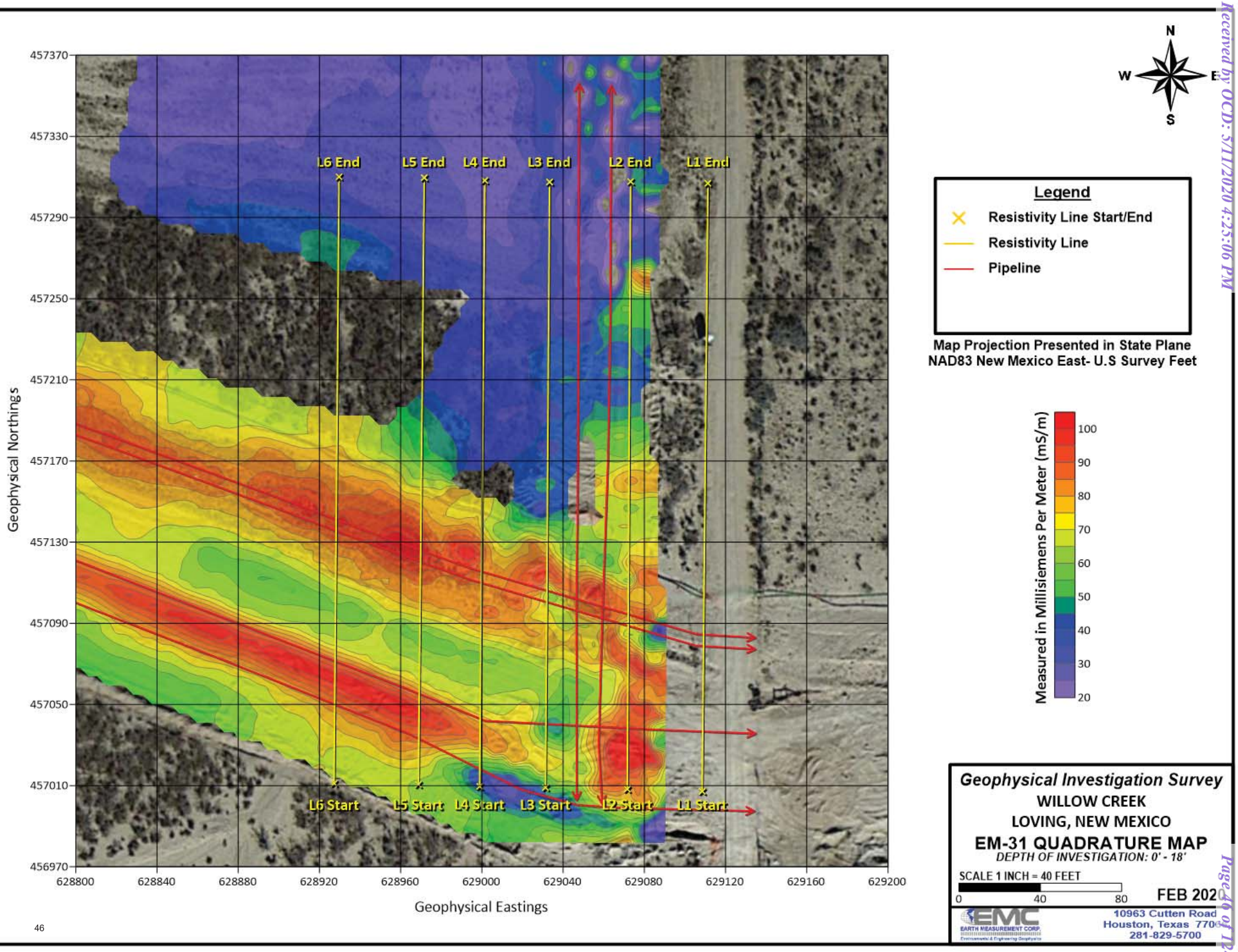


Geophysical Investigation Survey
WILLOW CREEK
LOVING, NEW MEXICO
CONDUCTIVITY DATA MAP- 50 Ft DEPTH
DATA DERIVED FROM RESISTIVITY SURVEY

SCALE 1 INCH = 40 FEET
0 40 80

FEB 202

EMC EARTH MEASUREMENT CORP.
10963 Cutten Road
Houston, Texas 770
281-829-5700



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

EARTH MEASUREMENT CORP.
Environmental & Engineering Geophysics

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.

www.emcgeophysics.com
Louisiana Ph: (225) 302-5621 Texas Ph: (281) 829-5700

EARTH MEASUREMENT CORP.
Environmental & Engineering Geophysics

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.

EARTH MEASUREMENT CORP.
Environmental & Engineering Geophysics

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

EARTH MEASUREMENT CORP.
Environmental & Engineering Geophysics

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:
www.emcgeophysics.com

APPENDIX D

DELINEATION SUMMARY TABLE

Appendix D. Delineation Summary Table											
Sample Type	Sample Name	Depth (ft)	Sample Date	Chloride		BTEX (8021B)		TPH (8015M)			
				Field Screening	M4500	Benzene	Total BTEX	GRO	DRO	EXT DRO	C6-C35
Boring	1	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		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	2	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	2/4/2020	**2748**	**3040**	-	-	-	-	-	-
Boring		3	2/4/2020	**1864**	**2000**	-	-	-	-	-	-
Boring		4	2/4/2020	**1864**	**2120**	-	-	-	-	-	-
Boring	3	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		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	4	SF	2/4/2020	**1864**	**1550**	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring		1	2/4/2020	**704**	**688**	-	-	-	-	-	-
Boring		2	2/4/2020	**764**	**832**	-	-	-	-	-	-
Boring		3	2/4/2020	**824**	**800**	-	-	-	-	-	-
Boring		4	2/4/2020	**1676**	**1420**	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring	5	SF	2/4/2020	**644**	**704**	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring		1	2/4/2020	136	160	-	-	-	-	-	-
Boring		2	2/4/2020	ND	48	-	-	-	-	-	-
Boring		3	2/4/2020	ND	32	-	-	-	-	-	-
Boring		4	2/4/2020	ND	16	-	-	-	-	-	-
Boring	6	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		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	8	SF	2/4/2020	ND	16	<0.050	<0.300	<10.0	<10.0	<10.0	<30
Boring		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	-	-	-	-	-	-
Sidewall	ES7	2	3/20/2020	**616**	**704**	-	-	-	-	-	-
Sidewall	ES8	2	3/20/2020	ND	32	-	-	-	-	-	-
Sidewall	ES9	2	3/19/2020	ND	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	-	-	-	-	-	-
NMOCD Thresholds - GW <50'				**600**		**10**	**50**				**2500**

BOLD results indicate results above RRAL

- indicates tests were not ran

All units in mg/kg unless otherwise noted

Appendix D. Delineation Summary Table											
Sample Type	Sample Name	Depth (ft)	Sample Date	Chloride		BTEX (8021B)		TPH (8015M)			
				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 Thresholds - GW <50'				**600**		**10**	**50**				**2500**

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

Appendix E. Remediation Sampling Summary Table					
Row	Column	Depth (ft)	Sample Date	Chloride	
				Field Screening	M4500
A	1	4	4/30/2020	164	240
A	2	4	5/1/2020	164	-
A	3	4	4/29/2020	304	-
A	4	4	4/30/2020	380	496
A	5	4	5/1/2020	340	-
A	6	4	4/27/2020	340	448
B	1	4	4/30/2020	340	528
B	2	4	5/1/2020	304	-
B	3	4	4/27/2020	340	368
B	4	4	4/30/2020	380	336
B	5	4	5/1/2020	272	-
B	6	4	4/29/2020	272	-
C	1	4	4/27/2020	244	-
C	2	4	4/27/2020	188	288
C	3	4	4/29/2020	304	-
C	4	4	4/29/2020	304	-
C	5	4	5/1/2020	272	304
C	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	-
E	1	4	4/29/2020	140	208
E	2	4	4/27/2020	304	-
E	3	4	4/27/2020	304	336
E	4	4	4/27/2020	304	-
E	5	4	4/30/2020	244	-
E	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	-
NMOCD Thresholds - 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					
Row	Column	Depth (ft)	Sample Date	Chloride	
				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
H	1	4	4/27/2020	236	240
H	2	4	4/27/2020	300	-
H	3	4	4/27/2020	180	448
H	4	4	4/29/2020	304	-
H	5	4	4/27/2020	336	384
H	6	4	4/27/2020	336	-
I	1	4	4/27/2020	200	-
I	2	4	4/27/2020	236	368
I	3	4	4/27/2020	180	-
I	4	4	4/27/2020	268	592
I	5	4	4/27/2020	132	208
I	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
M	1	4	4/30/2020	188	-
M	2	4	4/27/2020	180	-
M	3	4	5/1/2020	244	336
M	4	4	4/27/2020	376	544
M	5	4	4/29/2020	304	-
M	6	4	4/27/2020	272	336
NMOCD Thresholds - 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

APPENDIX G

LETTER RE: LUCID PIPELINE

LUCID energy group
3100 McKinnon Street, Suite 800 – Dallas, Texas 75201 Tel: 214.420.4950 Fax: 214.420.4949
201 S. 4th Street – Artesia, New Mexico 88210 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

CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_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.

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	03/20/2020	Sampling Date:	03/11/2020
Reported:	03/23/2020	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: ES - 3 (H000874-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

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 (H000874-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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 (H000874-03)

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	03/23/2020	ND	432	108	400	0.00	

Sample ID: ES - 9 (H000874-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	03/23/2020	ND	432	108	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RxSoil
Project Manager: Matt [signature]
Address:
City: State: Zip:
Phone #: Fax #:
Project #: Project Owner:
Project Name: Willow Creek
Project Location:
Sampler Name: Matt Longerier

BILL TO
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY

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	Chlorides
H000874															
1	ES-3					X							3/20	1:00pm	X
2	ES-7.3					|							3/20	|	|
3	ES-8					|							3/20	|	|
4	ES-9					X							3/20	1:00pm	X

(Column groups: MATRIX = GROUNDWATER, WASTEWATER, SOIL, OIL, SLUDGE, OTHER; PRESERV. = ACID/BASE, ICE / COOL, OTHER; SAMPLING = DATE, TIME)

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 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 use, 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 based upon any of the above stated reasons or otherwise.

Relinquished By: [signature] Date: 3/20 Time: 4:45pm Received By: [signature]
Relinquished By: Date: Time: Received By:

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

REMARKS:

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

Observed Temp. °C 3.6°C
Corrected Temp. °C

Sample Condition
Cool: ☒ Yes ☐ No
Intact: ☒ Yes ☐ No

CHECKED BY: (Initials) HJ

Turnaround Time: Standard ☐ Rush ☒
Thermometer ID #97 #113
Correction Factor + 0.4 °C

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

FORM-006 R 3.0

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

CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_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.

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

CARDINAL Laboratories

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

Received:	03/23/2020	Sampling Date:	03/12/2020
Reported:	03/24/2020	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: ES - 1 (H000890-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	03/24/2020	ND	400	100	400	3.92	

Sample ID: ES - 2 (H000890-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**240**	16.0	03/24/2020	ND	400	100	400	3.92	

Sample ID: ES - 4 (H000890-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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: ES - 5 (H000890-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	03/24/2020	ND	400	100	400	3.92	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	03/23/2020	Sampling Date:	03/12/2020
Reported:	03/24/2020	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: ES - 6 (H000890-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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 (H000890-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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 (H000890-07)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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 (H000890-08)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	03/24/2020	ND	400	100	400	3.92	

Sample ID: EB - 19 (H000890-09)

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	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	03/23/2020	Sampling Date:	03/19/2020
Reported:	03/24/2020	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 - 20 (H000890-10)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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** **Analyzed 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** **Analyzed 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, SM4500Cl-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	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	03/23/2020	Sampling Date:	03/12/2020
Reported:	03/24/2020	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 - 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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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 recovery.
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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	RXSoil	P.O. #:	
Project Manager:	Matt Longcrier	Company:	
Address:		Attn:	
City:	State: Zip:	Address:	
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:	Willow Creek	Phone #:	
Project Location:		Fax #:	
Sampler Name:	Matt		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides
H000890															
1	ES-1					X							3/12	3:00pm	X
2	ES-2												3/11	1:00pm	
3	ES-4												3/12	3:00pm	
4	ES-5												3/12	3:00pm	
5	ES-6												3/12	3:00pm	
6	EB-16												3/20	1:00pm	
7	EB-17												3/20	1:00pm	
8	EB-18												3/20	1:00pm	
9	EB-19												3/20	1:00pm	
10	EB-20					X							3/14	10:00am	X

Relinquished By:	Date: 3/23	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 4:30		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 29°C	Sample Condition: Cool Yes ☒ / Intact Yes ☒	CHECKED BY: (Initials)	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C	Cool No ☐ / Intact No ☐	hs	Thermometer ID #97 / Correction Factor +0.4 °C #113

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

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	RxSoil	P.O. #:	
Project Manager:	Matt Longcrier	Company:	
Address:		Attn:	
City: State: Zip:		Address:	
Phone #: Fax #:		City:	
Project #: Project Owner:		State: Zip:	
Project Name:	willow creek	Phone #:	
Project Location:		Fax #:	
Sampler Name:	Matt		

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides
H000890															
11	EB-21					X							3/19	10:00am	X
12	EB-22					|							3/19	10:00am	|
13	EB-23					|							3/12	1:00pm	|
14	EB-24					|							3/12	1:00pm	|
15	EB-25					X							3/12	1:00pm	X

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 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 use, 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 based upon any of the above stated reasons or otherwise.

Relinquished By: Matt [signature]	Date: 3/23 Time: 4:30	Received By: [signature]	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 2.9°C Corrected Temp. °C	Sample Condition Cool Intact ☒ Yes ☒ Yes ☐ No ☐ No	CHECKED BY: (Initials) lh3
Turnaround Time: Standard ☑ Rush ☐	Thermometer ID #97 #113 Correction Factor +0.4 °C	Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No	Observed Temp. °C Corrected Temp. °C

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CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_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.

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

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 - 1 (H000978-01)

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	04/03/2020	ND	416	104	400	3.92	

Sample ID: EB - 2 (H000978-02)

Chloride, SM4500Cl-B mg/kg **Analyzed 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 (H000978-03)

Chloride, SM4500Cl-B mg/kg **Analyzed 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 (H000978-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	04/03/2020	ND	416	104	400	3.92	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**400**	16.0	04/03/2020	ND	416	104	400	3.92	

Sample ID: EB - 12 (H000978-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	04/03/2020	ND	416	104	400	3.92	

Sample ID: EB - 14 (H000978-07)

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	04/03/2020	ND	416	104	400	3.92	

Sample ID: EB - 15 (H000978-08)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	04/03/2020	ND	416	104	400	3.92	

Sample ID: EB - 26 (H000978-09)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**144**	16.0	04/03/2020	ND	416	104	400	3.92	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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:	NONE GIVEN	Sample Received By:	Kelly Jacobson
Project Location:	NOT GIVEN		

Sample ID: EB - 27 (H000978-10)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**128**	16.0	04/03/2020	ND	416	104	400	3.92	

Sample ID: EB - 30 (H000978-11)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	04/03/2020	ND	416	104	400	3.92	

Sample ID: EB - 31 (H000978-12)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	04/03/2020	ND	416	104	400	3.92	

Sample ID: EB - 34 (H000978-13)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	04/03/2020	ND	416	104	400	3.92	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RXSoil	**BILL TO**	ANALYSIS REQUEST
Project Manager:	Matt	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	Willow Creek	State: Zip:	
Project Location:		Phone #:	
Sampler Name:	Matt	Fax #:	

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		Chloride
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	
H000978															
1	EB-1					X							3/31	12:00	X
2	EB-2														
3	EB-3														
4	EB-4														
5	EB-5														
6	EB-12														
7	EB-14														
8	EB-15												3/31	12:00	
9	EB-26												4/1	12:00	
10	EB-27					X							4/1	12:00	X

Relinquished By: Matt	Date: 4/1/20 Time: 4:05	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C -8.0°C Corrected Temp. °C	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) MS
Turnaround Time: Standard ☑ Rush ☐ Thermometer ID #97 Correction Factor +0.4 °C #113	Bacteria (only) Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No	Observed Temp. °C Corrected Temp. °C	

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

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	RxSoil	P.O. #:	
Project Manager:	Matt	Company:	
Address:		Attn:	
City:	State: Zip:	Address:	
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:	willow creek	Phone #:	
Project Location:		Fax #:	
Sampler Name:	Matt		

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
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	Chlorides
H000978															
11	EB-30					X							3/31	10:00 am	X
12	EB-31					X							4/1	12:00pm	X
13	EB-34					X							3/31	10:00 am	X

Relinquished By:	Date: 4/1	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 4:05 pm		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		
Delivered By: (Circle One)	Observed Temp. °C	Sample Condition	CHECKED BY:
Sampler - UPS - Bus - Other:	Corrected Temp. °C -8.0°C	Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	(Initials)
			Turnaround Time: Standard ☑ Rush ☐
			Thermometer ID #97 Correction Factor ~~+0.4~~ °C #113
			Bacteria (only) Sample Condition Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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

CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_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.

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	04/08/2020	Sampling Date:	04/07/2020
Reported:	04/09/2020	Sampling Type:	Soil
Project Name:	WILLOW CREEK	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: EB - 6 (H001040-01)

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	04/09/2020	ND	432	108	400	0.00	

Sample ID: EB - 7 (H001040-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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 (H001040-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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 (H001040-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	04/09/2020	ND	432	108	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	04/08/2020	Sampling Date:	04/07/2020
Reported:	04/09/2020	Sampling Type:	Soil
Project Name:	WILLOW CREEK	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: EB - 11 (H001040-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	04/09/2020	ND	416	104	400	0.00	

Sample ID: EB - 13 (H001040-06)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	04/09/2020	ND	416	104	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	RXSoil	P.O. #:	
Project Manager:	Matt Longcrier	Company:	
Address:		Attn:	
City:	State: Zip:	Address:	
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:	Willow Creek	Phone #:	
Project Location:		Fax #:	
Sampler Name:			

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
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	Chlorides
H001040															
1	EB-6					X							4/7	11:50	x
2	EB-7					|							|	|	|
3	EB-8					|							|	|	|
4	EB-9					|							|	|	|
5	EB-11					|							|	|	|
6	EB-13					x							4/7	11:50	x

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 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 use, 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 based upon any of the above stated reasons or otherwise.

Relinquished By: Matt	Date: 4/8/20 Time: 0845	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.8 Corrected Temp. °C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO.
Turnaround Time: Standard ☑ Rush ☐	Thermometer ID #97 Correction Factor +0.4 °C	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No	Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.0

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

CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_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.

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	04/09/2020	Sampling Date:	04/08/2020
Reported:	04/14/2020	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 - 10 (H001048-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**464**	16.0	04/13/2020	ND	400	100	400	0.00	

Sample ID: EB - 29 (H001048-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**544**	16.0	04/13/2020	ND	400	100	400	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	Qualifier
Chloride	**720**	16.0	04/13/2020	ND	400	100	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	RxSoil	P.O. #:	
Project Manager:	Matt	Company:	
Address:		Attn:	
City:	State: Zip:	Address:	
Phone #:	Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:	Willow Creek	Phone #:	
Project Location:		Fax #:	
Sampler Name:	Matt		

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST
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	Chlorides
H001048															
1	EB 10					X							4/8	4:00pm	X
2	EB 29					X							1	1	X
3	EB-32					X							4/8	4:00pm	X

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 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 use, 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 based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 4/9	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 940		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 5.5	Sample Condition	CHECKED BY:	Turnaround Time: Standard ☑ Rush ☐
Sampler - UPS - Bus - Other:	Corrected Temp. °C ±1.3	Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	(Initials) KS	Thermometer ID #97 Correction Factor +0.4 °C

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

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

CARDINAL Laboratories

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

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.

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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.

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Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	04/09/2020	Sampling Date:	04/08/2020
Reported:	04/14/2020	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 - 28 (H001049-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**736**	16.0	04/13/2020	ND	400	100	400	0.00	

Sample ID: EB - 33 (H001049-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1040**	16.0	04/13/2020	ND	400	100	400	0.00	

Sample ID: EB - 35 (H001049-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1010**	16.0	04/13/2020	ND	400	100	400	0.00	

Sample ID: EB - 36 (H001049-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1680**	16.0	04/13/2020	ND	400	100	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	04/09/2020	Sampling Date:	04/08/2020
Reported:	04/14/2020	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 - 37 (H001049-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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 (H001049-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

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

Sample ID: EB - 39 (H001049-07)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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, SM4500Cl-B **mg/kg** **Analyzed 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** **Analyzed 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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RXSoil	**BILL TO**	
Project Manager:	Matt	P.O. #:	
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 Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: Chlorides
H001049															
1	EB28					X							4/8	4:00	X
2	EB 33														
3	EB 35														
4	EB 36														
5	EB 37														
6	EB 38														
7	EB 39														
8	EB 40														
9	EB 41					X							4/8	4:00	X

Relinquished By:	Date: 4/9	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 940		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 5.5	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Corrected Temp. °C		

Turnaround Time: Standard ☑ Rush ☐

Thermometer ID #87
Correction Factor +0.4°C #113

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

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CARDINAL Laboratories

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

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.

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

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Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	04/15/2020	Sampling Date:	04/15/2020
Reported:	04/16/2020	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 - 32.2 (H001114-01)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	04/16/2020	ND	448	112	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RXSoil	**BILL TO**	ANALYSIS REQUEST
Project Manager:	Matt	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	Willow Creek	State: Zip:	
Project Location:		Phone #:	
Sampler Name:	Hayes Adams	Fax #:	

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	Chlorides
H001114															
1	EB-32.2					x							15-Apr	2:00	x

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 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 use, 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 based upon any of the above stated reasons or otherwise.

Relinquished By:	Dat 15-Apr	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1:30		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One) 2.5°c
Sampler - UPS - Bus - Other: #113

Sample Condition: Cool ☒ Yes ☐ No; Intact ☒ Yes ☐ No

CHECKED BY: (Initials) HS

FORM-006 R 2.0

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476

APPENDIX H.2

LABORATORY REPORTS

REMEDIATION

CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_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.

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

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:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: A1 (H001220-01)

Chloride, SM4500Cl-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	0.00	

Sample ID: A4 (H001220-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**496**	16.0	05/01/2020	ND	400	100	400	0.00	

Sample ID: A6 (H001220-03)

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	

Sample ID: B1 (H001220-04)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	05/01/2020	ND	400	100	400	3.92	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: B3 (H001220-05)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: B4 (H001220-06)

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	400	100	400	3.92	

Sample ID: C2 (H001220-07)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: D1 (H001220-08)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: D3 (H001220-09)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	05/01/2020	ND	400	100	400	3.92	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: E1 (H001220-10)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: E3 (H001220-11)

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	400	100	400	3.92	

Sample ID: F1 (H001220-12)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: F3 (H001220-13)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**352**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: F5 (H001220-14)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**528**	16.0	05/01/2020	ND	400	100	400	3.92	

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CARDINAL Laboratories

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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:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: G2 (H001220-15)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: G4 (H001220-16)

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, SM4500Cl-B **mg/kg** **Analyzed 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, SM4500Cl-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	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: H5 (H001220-20)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**720**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: I2 (H001220-21)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**368**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: I4 (H001220-22)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**592**	16.0	05/01/2020	ND	400	100	400	3.92	

Sample ID: I5 (H001220-23)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	05/01/2020	ND	416	104	400	0.00	

Sample ID: J1 (H001220-24)

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	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: J3 (H001220-25)

Chloride, SM4500Cl-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	416	104	400	0.00	

Sample ID: J6 (H001220-26)

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

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

Sample ID: K2 (H001220-27)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	05/01/2020	ND	416	104	400	0.00	

Sample ID: K5 (H001220-28)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**320**	16.0	05/01/2020	ND	416	104	400	0.00	

Sample ID: K6 (H001220-29)

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

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

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CARDINAL Laboratories

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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:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: L1 (H001220-30)

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

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

Sample ID: L3 (H001220-31)

Chloride, SM4500Cl-B **mg/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, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RX Soil		**BILL TO**	
Project Manager: Matt Longcrier		P.O. #:	
Address:		Company:	
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 Vaquera		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
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	CHLORIDES
H001220															
1	A1														✓
2	A4														✓
3	A6														✓
4	B1														✓
5	B3														✓
6	B4														✓
7	C2														✓
8	[redacted]														✓
	[redacted]														✓

Relinquished By:	Date: 5-1-2020	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 0820	Tamara Oldaker	All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 4.2	Sample Condition Cool ☑ Yes ☐ No / Intact ☑ Yes ☐ No	CHECKED BY: (Initials) TO.	Turnaround Time: Standard ☐ / Rush ☑
Sampler - UPS - Bus - Other:	Corrected Temp. °C			Thermometer ID ~~#97~~ #113 / Correction Factor ~~+0.4 °C~~ TO.

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

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	Rx Soil	P.O. #:	
Project Manager:	Matt Longcrier	Company:	
Address:		Attn:	
City:	State: Zip:	Address:	
Phone #:	817.992.7649 Fax #:	City:	
Project #:	Project Owner:	State: Zip:	
Project Name:	Willow Creek	Phone #:	
Project Location:	Loving, NM	Fax #:	
Sampler Name:	Nate Vaquera		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: CHLORIDES
H001220															
89	D1														/
9X0	D3														/
	[redacted]														/
10	E1														/
112	E3														/
	[redacted]														/
12 13	F1														/
13 14	F3														/
14 15	F5														/

Relinquished By:	Date: 5.1.2020 Time: 0820	Received By: Tamara Oldaker	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 4.2 Corrected Temp. °C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☐ Yes ☐ No	CHECKED BY: (Initials) TO.	Turnaround Time: Standard ☐ Rush ☑ Thermometer ID #97 #113 Correction Factor +0.4 °C TO.

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

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RX Soil
Project Manager:	Matt Longever
Address:	
City:	State: Zip:
Phone #:	817.992.7649 Fax #:
Project #:	Project Owner:
Project Name:	Willow Creek
Project Location:	Loving, NM
Sampler Name:	Nate Vaquera

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	CHLORIDES
H001220															
15 X	G2														✓
16 X	G4														✓
17 X	G6														✓
18 X	H1														✓
19 X	H3														✓
20	H5														✓
21	I2														✓
22	I4														✓
23	I5														✓

Relinquished By:	Date: 5.1.2020	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 0820		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 4.2	Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials) T.O.	Turnaround Time: Standard ☐ Rush ☑
Sampler - UPS - Bus - Other:	Corrected Temp. °C			Thermometer ID ~~#97~~ #113 Correction Factor ~~+0.4~~ °C T.O.

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

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RX Soil	**BILL TO**	ANALYSIS REQUEST
Project Manager:	Matt Longcrier	P.O. #:	
Address:		Company:	
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 Vaquera	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		CHLORIDES
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	
H001220															
24	J1														
25	J3														
26	J6														
27	K2														
28	K5														
29	K6														
30	L1														
31	L3														
32	L6														

Relinquished By:	Date: 5.1.2020	Received By:	Verbal Result: ☐ Yes ☐ No	Add'l Phone #:	
	Time: 0820		All Results are emailed. Please provide Email address:		
Relinquished By:	Date:	Received By:	REMARKS:		
	Time:				
Delivered By: (Circle One)	Observed Temp. °C 4.2	Sample Condition	CHECKED BY:	Turnaround Time: Standard Rush	☐ Bacteria (only) ☑ Cool Intact
Sampler - UPS - Bus - Other:	Corrected Temp. °C	Cool ☑ Yes Intact ☑ Yes ☐ No ☐ No	(Initials) TO.	Thermometer ID #97 #113 Correction Factor +0.4 °C +0.2	Observed Temp. °C ☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

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CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	Rx Soil
Project Manager:	Matt Longcrier
Address:	
City:	State: Zip:
Phone #:	817-992-7649 Fax #:
Project #:	Project Owner:
Project Name:	Willow Creek
Project Location:	Loving, NM
Sampler Name:	Nate Vaquera

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	CHLORIDES
H00220	[redacted]														
33	M4														
34	M6														

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 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 use, 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 based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 5.1.2020 Time: 0820	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address:
Relinquished By:	Date: Time:	Received By:	REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 4.2 Corrected Temp. °C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO	Turnaround Time: Standard ☐ Rush ☑ Thermometer ID #97 #113 Correction Factor +0.4 °C TO	Bacteria (only) Sample Condition Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_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.

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	05/01/2020	Sampling Date:	05/01/2020
Reported:	05/01/2020	Sampling Type:	Soil
Project Name:	WILLOW CREEK	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: C5 (H001224-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	05/01/2020	ND	416	104	400	0.00	

Sample ID: C6 (H001224-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	05/01/2020	ND	416	104	400	0.00	

Sample ID: D4 (H001224-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	05/01/2020	ND	416	104	400	0.00	

Sample ID: E6 (H001224-04)

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	05/01/2020	ND	416	104	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	05/01/2020	Sampling Date:	05/01/2020
Reported:	05/01/2020	Sampling Type:	Soil
Project Name:	WILLOW CREEK	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: M3 (H001224-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RX Soil
Project Manager:	Matt Longcrier
Address:	
City:	State: Zip:
Phone #:	817.992.7649 Fax #:
Project #:	Project Owner:
Project Name:	Willow Creek
Project Location:	Loving, NM
Sampler Name:	Nate Vaquera

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

CHLORIDES

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME
H001224														
1	C5													
2	C6													
3	D4													
4	E6													
5	M3													

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 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 use, 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 based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 5.1.2020	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1340		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 4.8	Sample Condition: Cool ☑ Yes Intact ☑ Yes / ☐ No ☐ No	CHECKED BY: (Initials) TO	Turnaround Time: Standard ☐ / Rush ☑
Sampler - UPS - Bus - Other:	Corrected Temp. °C			Thermometer ID ~~#97~~ #113 / Correction Factor ~~+0.4 °C~~ TO

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

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CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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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.

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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Received:	05/04/2020	Sampling Date:	05/02/2020
Reported:	05/04/2020	Sampling Type:	Soil
Project Name:	WILLOW CREEK	Sampling Condition:	** (See Notes)
Project Number:	LOVING NM	Sample Received By:	Tamara Oldaker
Project Location:	LOVING, NM		

Sample ID: G4 (H001229-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	05/04/2020	ND	416	104	400	3.77	

Sample ID: G6 (H001229-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: GM**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**336**	16.0	05/04/2020	ND	416	104	400	3.77	

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	Qualifier
Chloride	**384**	16.0	05/04/2020	ND	416	104	400	3.77	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	RX Soil
Project Manager:	Matt Longcrier
Address:	
City:	State: Zip:
Phone #:	817.992.7649 Fax #:
Project #:	Project Owner:
Project Name:	Willow Creek
Project Location:	Loving, NM
Sampler Name:	Nate Vaquera

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	CHLORIDES
H001229															
1	G4														
2	G6														
3	H5														

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 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 use, 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 based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 5.4.2020	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 0800		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	REMARKS:
	Time:		

Delivered By: (Circle One)	Observed Temp. °C 11.4	Sample Condition: Cool ☐ Yes ☑ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Rush ☑
Sampler - UPS - Bus - Other:	Corrected Temp. °C			Thermometer ID #97 Correction Factor + 0.4 °C

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

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END OF REPORT