R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996
Artesia ▲ Carlsbad ▲ Durango ▲ Midland

June 26, 2018

PRELIMINARY RESULTS

Olivia Yu
NMOCD District 1
1625 N. French Dr.
Hobbs, NM 88240

RE: Operator: Pride Energy Company
NM 87 State #001 (Tank Battery)
API#: 30-025-23655
Section 33-14S-34E: Unit K
Lea County, New Mexico
Site Characterization Report and Remediation Plan 1RP-4625 with Postponement Request

Ms. Yu:

R.T. Hicks Consultants (Hicks Consultants) is pleased to submit the above-referenced document on behalf of Pride Energy. This document addresses 1RP-4625 The C-141 is reproduced in Appendix A.

The proposed remediation plan relies on data collected during our:

- January 2018 initial characterization, and
- April 2018 delineation and characterization

We followed NMOCD's proposed application to repeal and replace Rule 19.15.29 NMAC (the Rule) to characterize and delineate the release and required remediation will not occur at this site until after the proposed Rule is published, probably in August. Thus, proposed activities will be conducted under the new Rule.

The proposed Rule does not cause conflict with the existing Rule. Rather the proposed Rule provides clarity, recognition of decades of data and certitude whereas the existing Rule relied upon 1993 guidance and upon the varied expertise and sometimes conflicting decisions of Districts. We are fully confident that OCD would not be the sponsor of the proposed Rule if the changes did not support the legal mandate of protecting fresh water, public health and the environment.

The proposed Rule also recognizes the fact that the existing Rule and decades of previous practice did not require submission and approval of a characterization work plan. The proposed Rule does incorporate appropriate elements of the directive of Mr. Griswold (attached to the signed C-141 from OCD; Appendix A).

Seven out of twelve sample locations are located within former production pad areas (Plate 10a) as shown on a 1971 aerial photograph. The tank battery storage site is located within the center of the former production pad areas; and is likely placed on top of a former reserve pit associated with the drilling of the abandoned salt water disposal well. A conservative assumption is to define the storage site at the center of the former production areas as mapped on Plate 10b; using the tank battery berm as the northern boundary and the former production pad areas as the eastern boundary.

After attending the presentation of OCD testimony at the June hearing, we understand section 19.15.29.12.B(2) of the proposed Rule, the impacted surface area of releases within a storage site is "otherwise contained" and may be subject to deferred remediation at the time of plugging and abandonment. If deferred remediation is approved, Table I Closure Criteria[1] will apply to remediation at P&A.

Releases outside the confines of a storage site are subject to remediation per proposed section 19.15.29.12.B(3). Based upon proposed Table I and a depth to groundwater of 70-feet, Closure Criteria is:

Depth (below ground surface)	Depth to Water (bottom of release)	Chloride (mg/kg)	TPH (GRO+DRO+MRO) (mg/kg)	TPH (GRO+DRO) (mg/kg)	BTEX (mg/kg)	Benzene (mg/kg)
0-4 feet		600	2,500		50	10
>4 feet	>50 feet	10,000	2,500	1,000	50	10

Exhibit 1: Closure Criteria from proposed Table I for areas at SE Pasture & SW Pasture.

Characterization Results

Table 1, attached, presents the result of all sampling conducted at the site. Plates 1-9 show that this site meets the characterization criteria established by proposed section 19.15.29.11.A.1-4. Plate 2 shows the depth to groundwater at the location is approximately 70-feet below ground surface; interpolated from the USGS 2007 potentiometric surface[2]. The density of groundwater elevation data from the USGS measurements provides a high degree of certainty regarding the depth to groundwater at the site.

[1] (2) The responsible party shall restore the impacted surface area of a release occurring on a developed well pad, central tank battery, drilling site, compressor site or other exploration, development, production or storage sites to meet the standards of Table I of 19.15.29.12 NMAC and restore and reclaim the area pursuant to 19.15.29.13 NMAC. If contamination is located in areas immediately under or around production equipment such as production tanks, wellheads and pipelines where remediation could cause safety issues or cause a major facility deconstruction, the remediation, restoration and reclamation may be deferred with division approval until the equipment is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first. The deferral may be granted so long as the contamination is fully delineated and does not cause an imminent risk to human health, the environment, or groundwater. Final remediation and reclamation shall take place in accordance with 19.15.29.12 and 19.15.29.13 NMAC once the site is no longer being used for oil and gas operations.

[2] Current (2004-07) Conditions and Changes in Ground-Water Levels from Predevelopment to 2007, Southern High Plains Aquifer, Southeast New Mexico-Lea County Underground Water Basin; 2008; SIM; 3044; Tillery, Anne

Plates 11 show the sample locations with total depth relative to the 2017 and historic releases. Plate 12 presents chemicals of concern (chloride and/or TPH) data in the upper 4-feet at each location during the January and/or April 2018 characterization activities. Appendix B discusses our January and April 2018 characterization activities.

Below is a summary of observations during characterization. Please refer to Table 1 and Appendix D for summary of analytical and trench/auger logs, respectively.

- 2017 East
  Chloride, Benzene, BTEX, and TPH concentrations show no impairment at 0.5 feet bgs. No remediation is necessary.
- 2017 West
  Chloride, Benzene, BTEX, and TPH concentrations show no impairment at 0.5 feet bgs. No restoration is necessary.
- 2017 Northeast (NE)
  Chloride, Benzene, BTEX, and TPH concentrations are below closure criteria levels at 0.5 feet bgs. No remediation is necessary.
- 2017 Northwest (NW Berm)
  The trench sample was located within the berm area of an active tank battery and is likely placed over a former reserve pit associated with the drilling of the now abandoned SWD well. Chloride and BTEX concentrations show that the area is impacted. Remediation of regulated hydrocarbons may be deferred until P&A.
- Historic North
  Chloride, Benzene, BTEX, and TPH concentrations are below closure criteria levels. No remediation is necessary.
- Historic Northeast
  Chloride, Benzene, BTEX, and TPH concentrations are below closure criteria levels. No remediation is necessary.
- Historic Southwest
  Chloride, Benzene, BTEX, and TPH concentrations show no impairment at 2 and 8 feet bgs. No restoration is necessary.
- Historic Southeast
  Chloride, Benzene, BTEX, and TPH concentrations are below closure criteria levels at 0.5 feet bgs. No remediation is necessary.
- SB-01
  Chloride, Benzene, and BTEX concentrations shows no impairment. TPH concentrations (<1665 mg/kg) shows surface impairment at 0-feet. Restoration is necessary.
- SB-02
  At the surface (0-feet) Chloride is 4,200 mg/kg. BTEX, Benzene, and TPH are below cleanup closure levels. Remediation for chloride is necessary.
- SB-03 Playa (within the natural depression)
  Chloride, Benzene, BTEX, and TPH are below closure cleanup levels. No remediation is necessary.

- July 2017 Borehole (TT-1). The location of the borehole is unknown. Conversations with site personnel have placed this boring at three different locations; one being at the wellhead location 1300-feet west As we could not reproduce data from this boring, we are discounting any reported results.

Proposed Remediation Plan

We respectively ask NMOCD for a temporary deferment to the proposed restoration and remediation plan. The purpose of the request is to postpone remediation/restoration design until the final ruling of NMOCD's proposed application to repeal and replace Rule 19.15.29 NMAC (the Rule). The final ruling is expected to be delivered by the first week of August 2018.

Delaying the remediation design for 30-days after the final ruling will allow us to implement regulations in effect at the time of remediation activities.

Please contact me at 970-570-9535 with any questions or comments.

Sincerely,
R.T. Hicks Consultants, Ltd.

Andrew Parker
Project Scientist

Copy: Hobbs NMOCD office – Oliva Yu (Olivia.Yu@state.nm.us)
NMOCD – Brad Billings (bradford.billings@state.nm.us)
NM SLO - Mark Naranjo (mnaranjo@slo.state.nm.us)

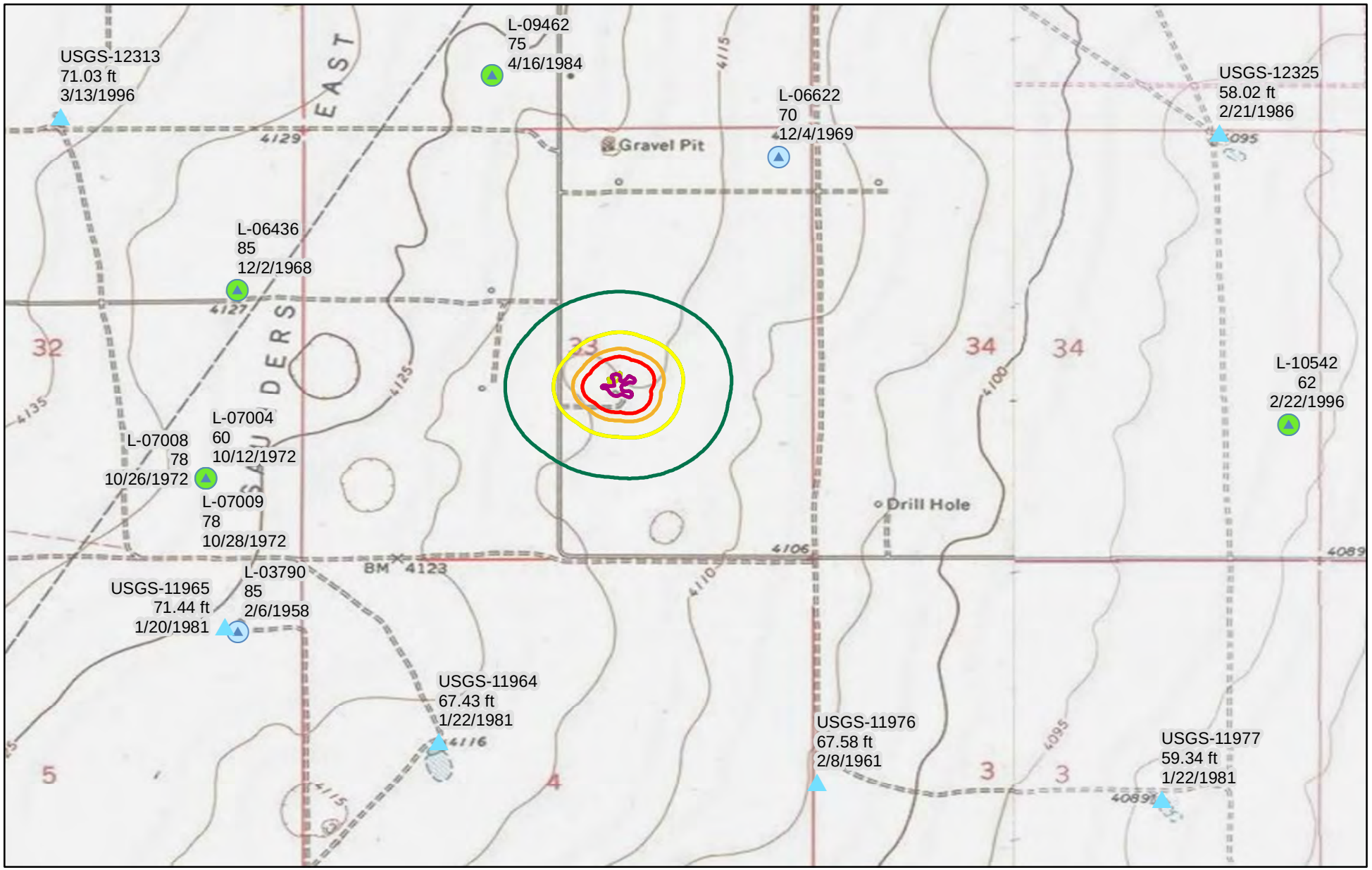
TABLES

Table 1
Summary of Analytical

Sample Name	Date	Cl mg/kg	BTEX mg/kg	Benzene mg/kg	TPH (GRO+DRO+MRO) mg/kg	TPH (GRO+DRO) mg/kg
Table 1 (19.15.29 NMAC)		Lab				
Upper 4-feet		600	50	10	1,000	2,500
Ground water 50 to 100 ft (Soil > 4 ft)		10,000	50	10	1,000	2,500
2017 East @ 0.5 ft	1/8/2018	<30	<0.221	<0.025	<14.5	<62.5
2017 West @ 0.5 ft	1/8/2018	<30	<0.225	<0.025	<15	<66
2017 NE @ 0.5 ft	1/8/2018	<30	<0.213	<0.024	<14.4	<62.4
2017 NW Berm @ 2 ft	1/8/2018	4,600	2.358	0.27	12,150	21,250
2017 NW Berm @ 12 ft	1/8/2018	2,900	35.25	<0.25	8,320	11,220
Historic North @ 0 ft	4/2/2018	<30	<0.207	<0.023	<241.6	<61.6
Historic North @ 0.5 ft	1/8/2018	<30	0.34	<0.024	60.8	122.8
Historic North @ 2.5 ft	4/2/2018	78	<0.216	<0.024	<60.1	<14.1
Historic North @ 4 ft	4/2/2018	36	<0.216	<0.024	<62.3	<14.3
Historic Northeast @ 0.5 ft	1/8/2018	260	<0.222	<0.025	<14.2	<61.2
Historic Southwest @ 2 ft	1/8/2018	500	<0.22	<0.024	<14.8	<63.8
Historic Southwest @ 8 ft	1/8/2018	45				
Historic Southeast @ 0.5 ft	1/8/2018	<30	<0.217	<0.024	<14.5	<63.5
SB-01 2017 @ 0 ft	1/8/2018	93	<0.21	<0.023	144.7	374.7
SB-01 2017 @ 0 ft	4/2/2018	56	<0.216	<0.024	<1664.8	<664.8
SB-01 2017 @ 2 ft	4/2/2018	490	<0.208	<0.023	<62.3	<14.3
SB-01 2017 @ 4 ft	4/2/2018	320	<0.221	<0.025	<63.7	<14.7
SB-01 2017 @ 5 ft	1/8/2018					
SB-01 2017 @ 6 ft	4/2/2018	360	<0.217	<0.024	<61.3	<14.3
SB-01 2017 @ 10 ft	1/8/2018					
SB-01 2017 @ 15 ft	1/8/2018	40				
SB-02 Historic @ 0 ft	1/8/2018	4,200	<0.208	<0.023	<14.4	<63.4
SB-02 Historic @ 4 ft	1/8/2018					
SB-02 Historic @ 9 ft	1/8/2018	<30				
SB-02 Historic @ 15 ft	1/8/2018	<30				
SB-02 Historic @ 21 ft	1/8/2018					
SB-03 Playa @ 0 ft	1/8/2018					
SB-03 Playa @ 0 ft	4/3/2018	<30	<0.212	<0.024	<62.4	<14.4
SB-03 Playa @ 2 ft	4/3/2018	47	<0.211	<0.023	<60	<14
SB-03 Playa @ 4 ft	4/3/2018	200	<0.216	<0.024	<62.5	<14.5
SB-03 Playa @ 5 ft	1/8/2018	660	<0.215	<0.024	<14.3	<61.3
SB-03 Playa @ 6 ft	4/3/2018	530	<0.21	<0.023	<61.2	<14.2
SB-03 Playa @ 9 ft	1/8/2018					
SB-03 Playa @ 15 ft	1/8/2018					
SB-03 Playa @ 21 ft	1/8/2018	220				
SB-03 Playa @ 25 ft	1/8/2018					
SB-03 Playa @ 31 ft	1/8/2018	200				
(July 2017 Borehole)						
TT-1 @ 0 ft	7/7/2017	4,830		<0.00109	401.2	498
TT-1 @ 4 ft	7/7/2017	8,670		<0.00112	<28.1	<28.1
TT-1 @ 8 ft	7/7/2017	705		<0.00123	<30.9	<30.9
TT-1 @ 12 ft	7/7/2017	2,630		<0.00109	<21.7	<21.7

PLATES

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate1_DTW.mxd

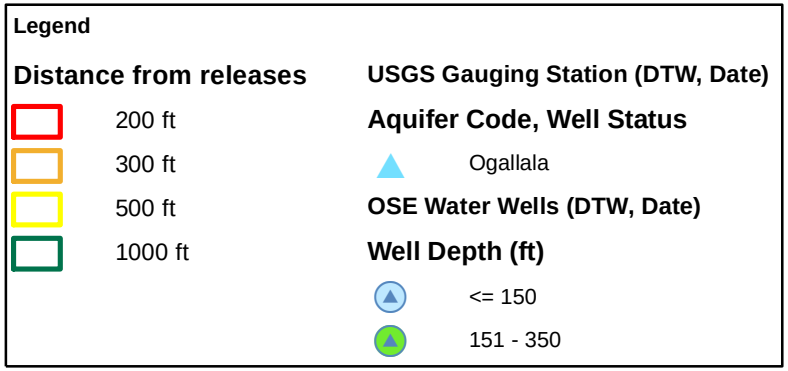


N
W E
S

0 1,000 2,000 Feet

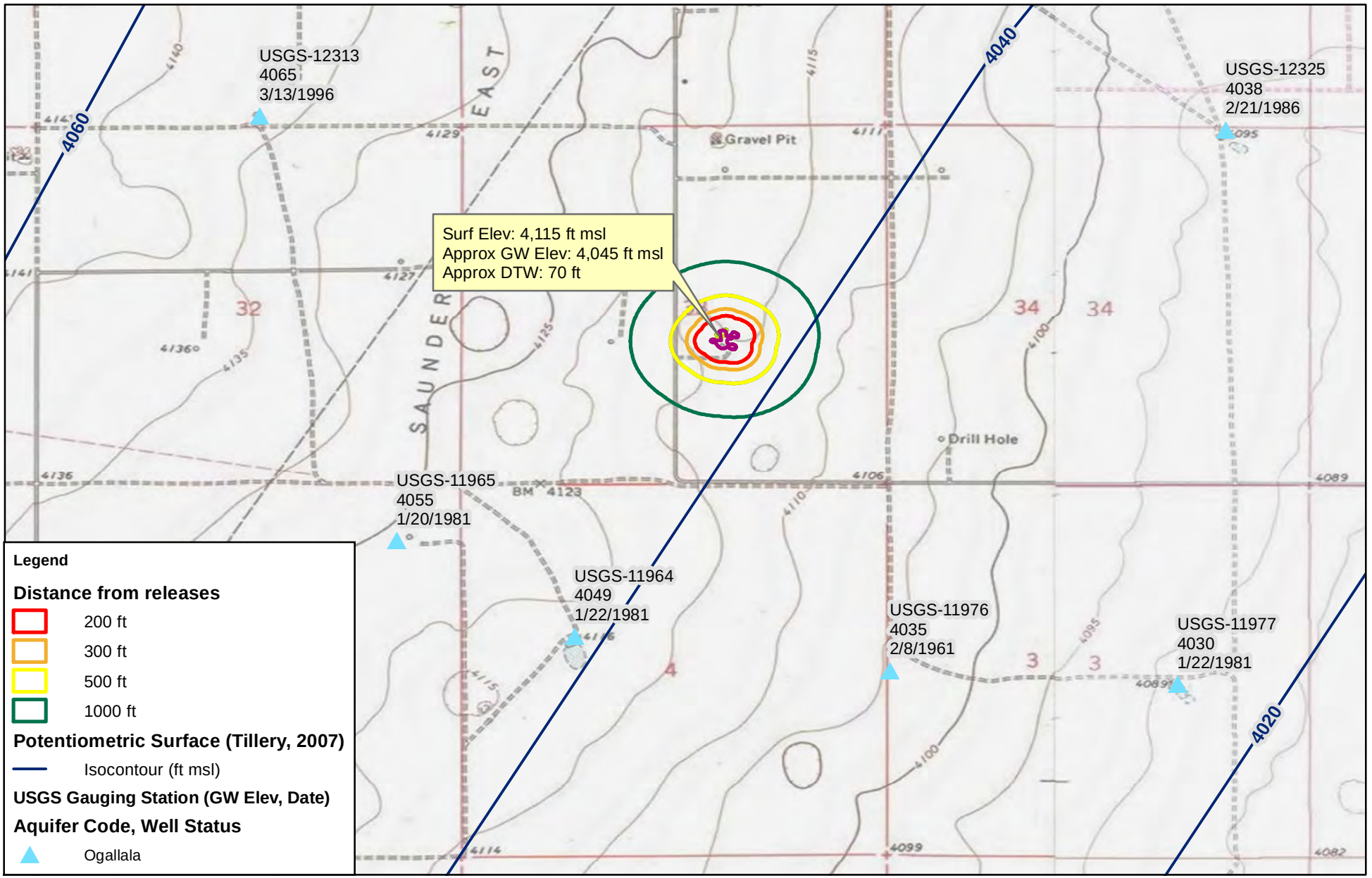
R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Depth To Water	Plate 1
	Pride Energy Company NM 87 State #001 (Tank Battery)	February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate1_LEGEND.mxd



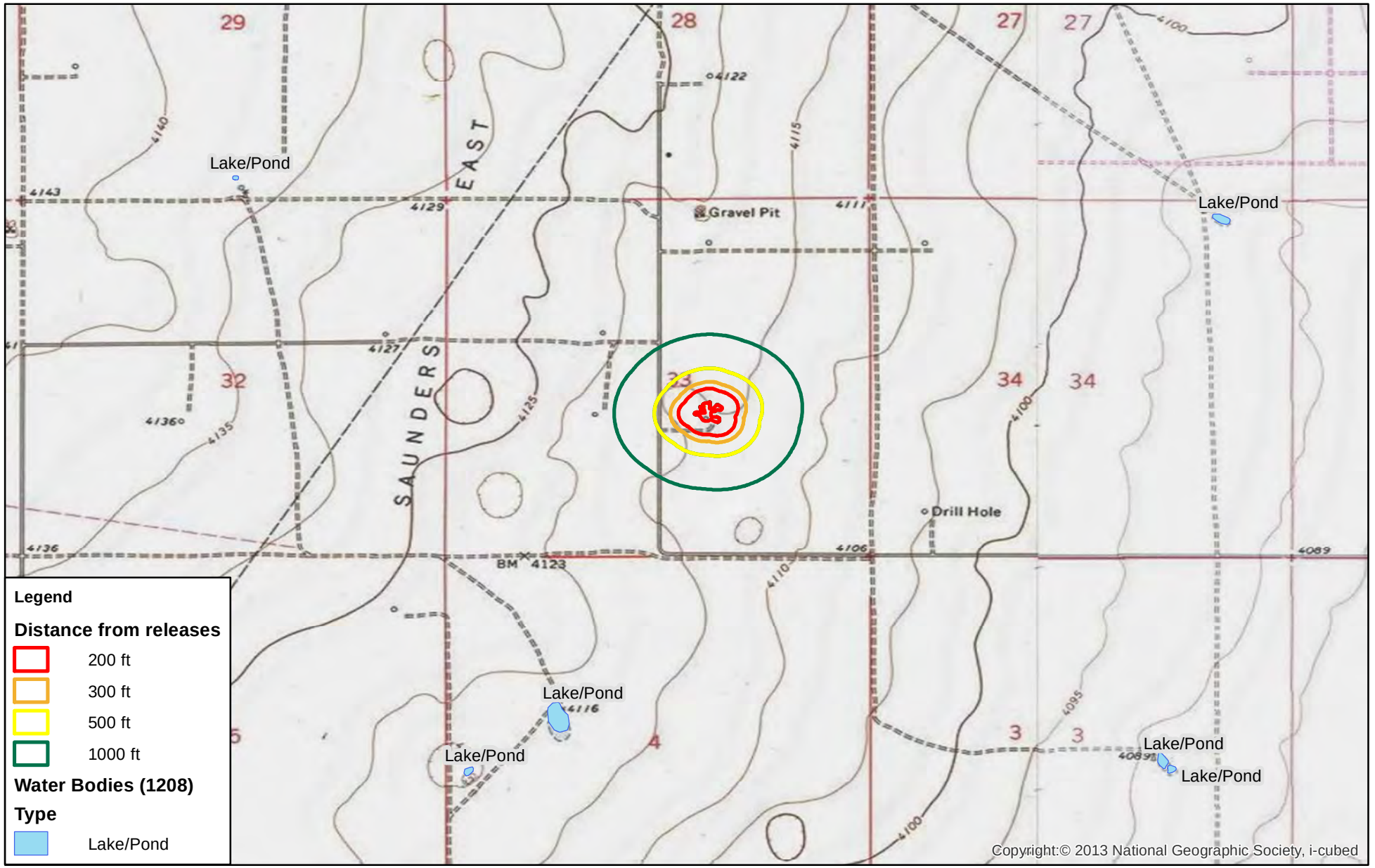
R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Depth To Water	Plate 1 Legend
	Pride Energy Company NM 87 State #001 (Tank Battery)	February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate2_topographyGW.mxd



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Potentiometric Surface and Groundwater Elevation Pride Energy Company NM 87 State #001 (Tank Battery)	Plate 2 February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate3_SurfaceWater.mxd



N
W
E
S

0 1,000 2,000 Feet

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

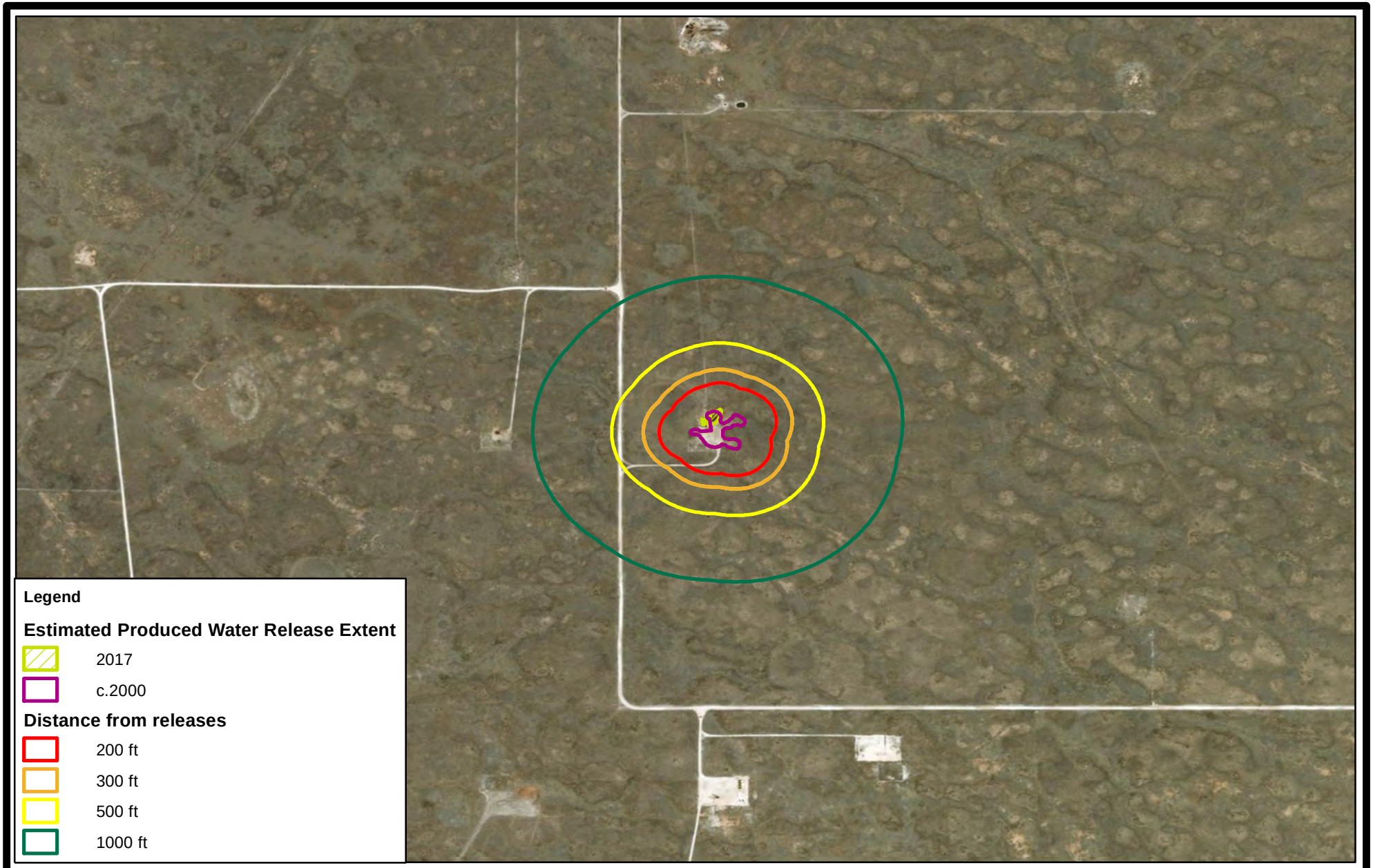
Surface Water and Topography

Plate 3

Pride Energy Company
NM 87 State #001 (Tank Battery)

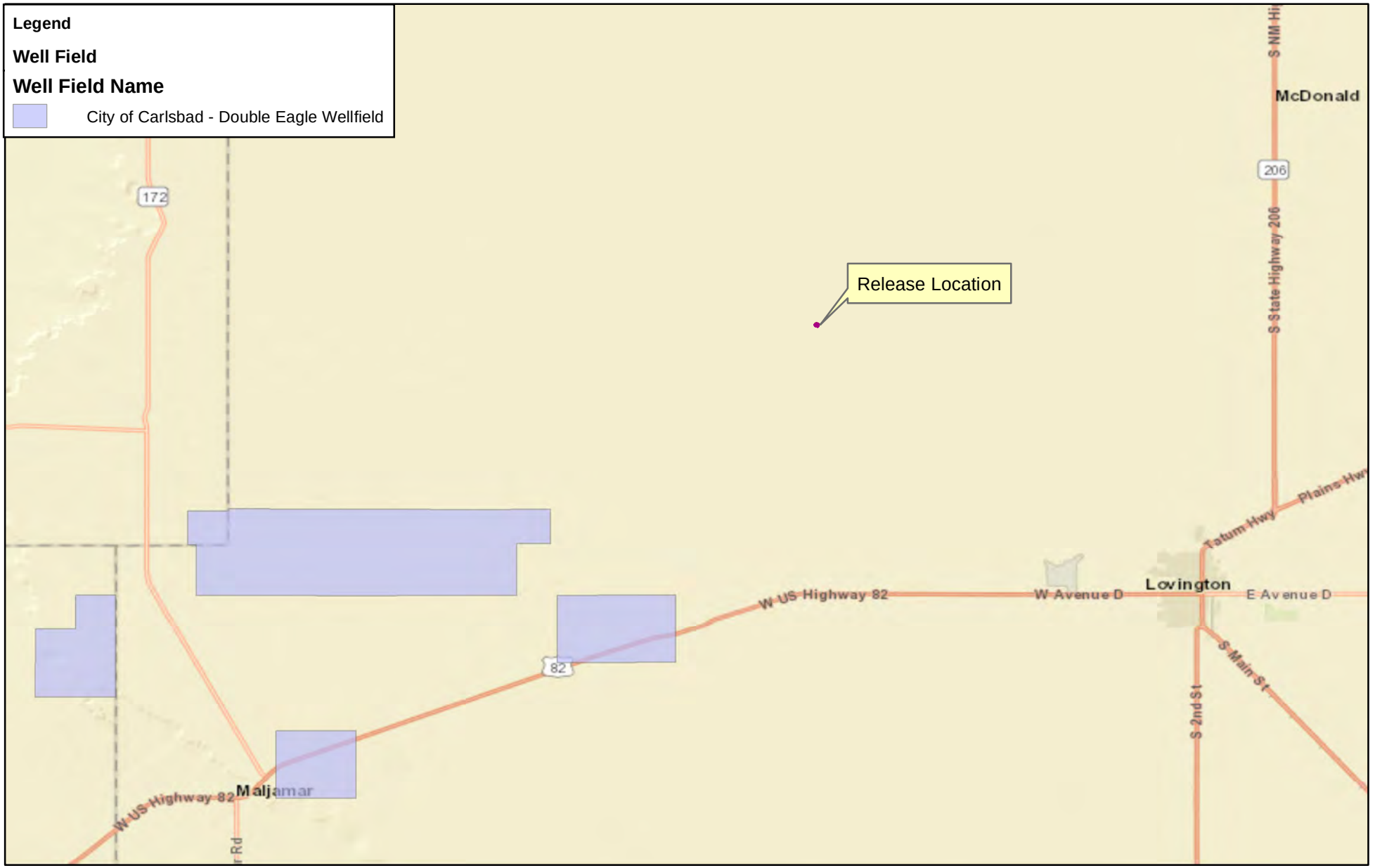
February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate4_NearbyStructures.mxd



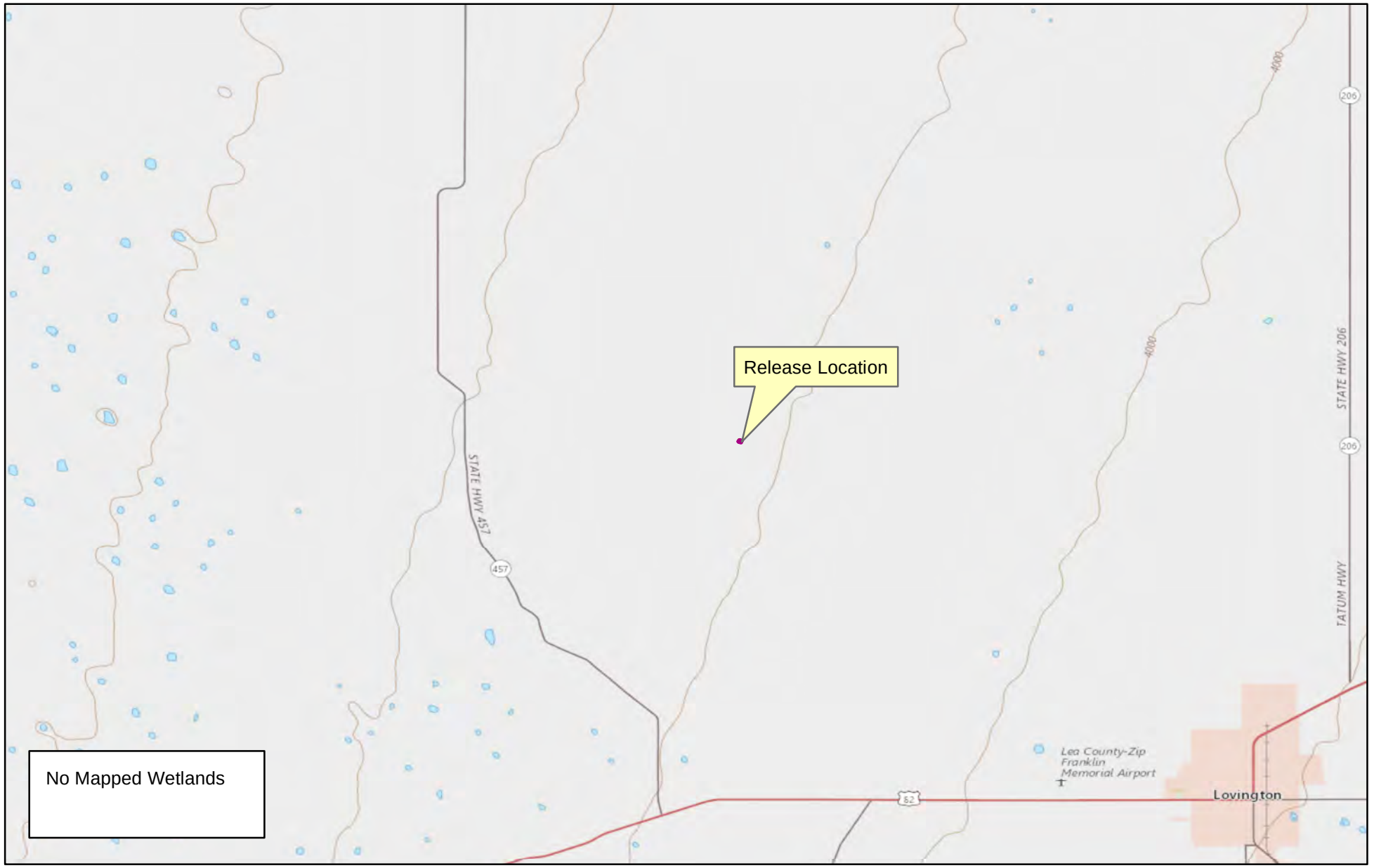
R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Nearby Structures	Plate 4
	Pride Energy Company NM 87 State #001 (Tank Battery)	February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate5_wellFields.mxd



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Nearby Municipalities and Well Fields	Plate 5
	Pride Energy Company NM 87 State #001 (Tank Battery)	February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate6_wetlands.mxd



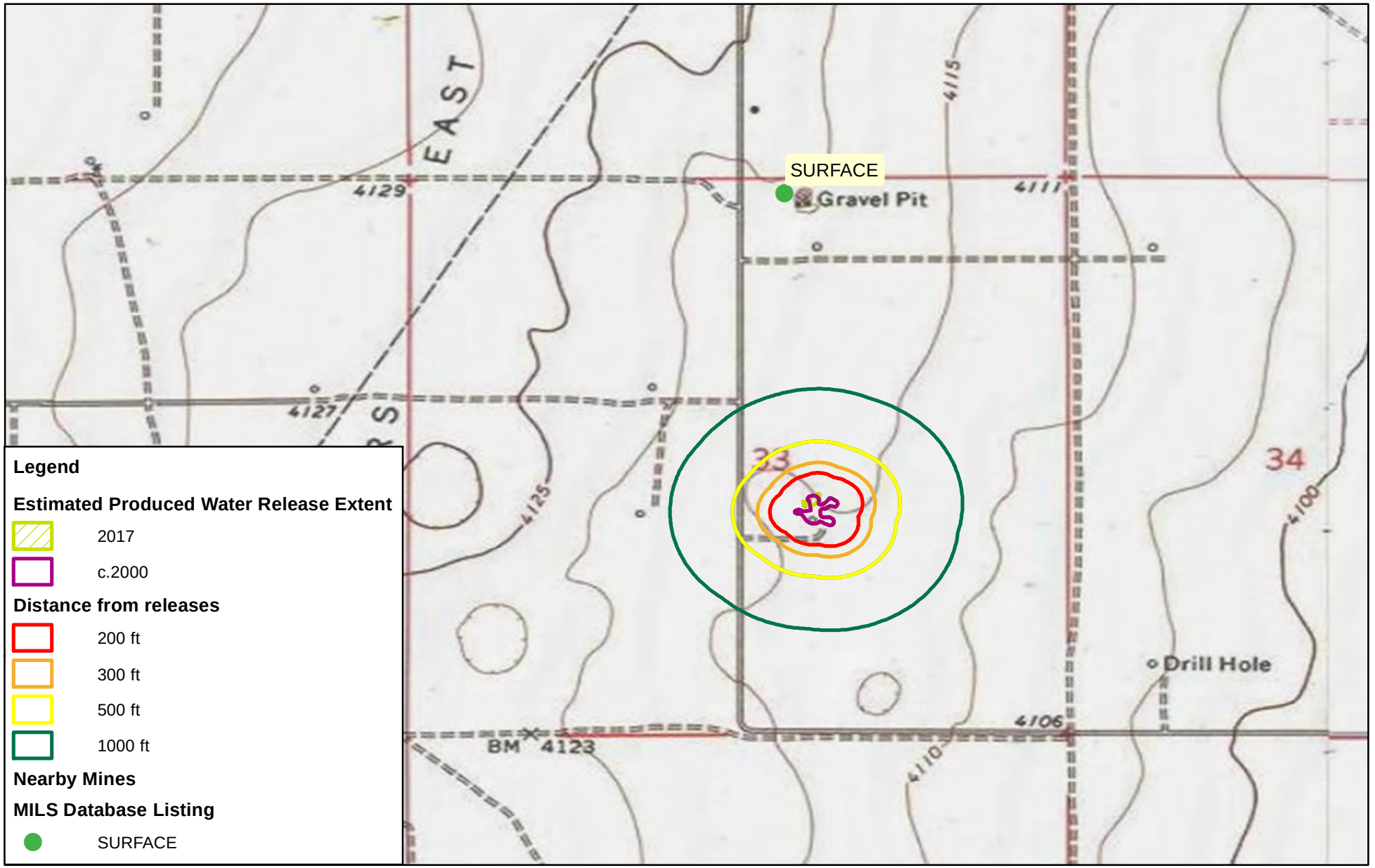
N
W E
S

0 1.5 3 Miles

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

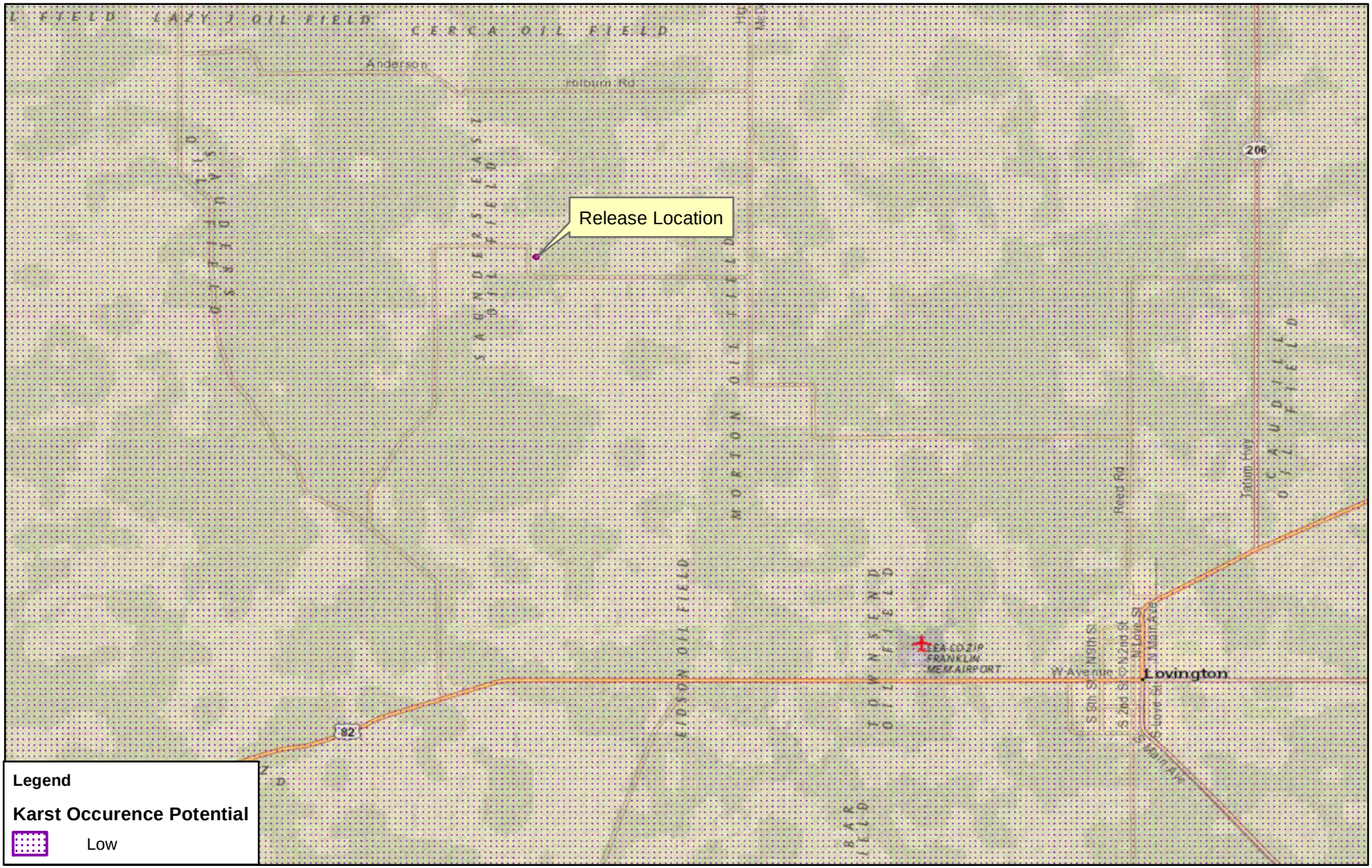
Nearby Wetlands	Plate 6
Pride Energy Company NM 87 State #001 (Tank Battery)	February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate7_minesMinerals.mxd



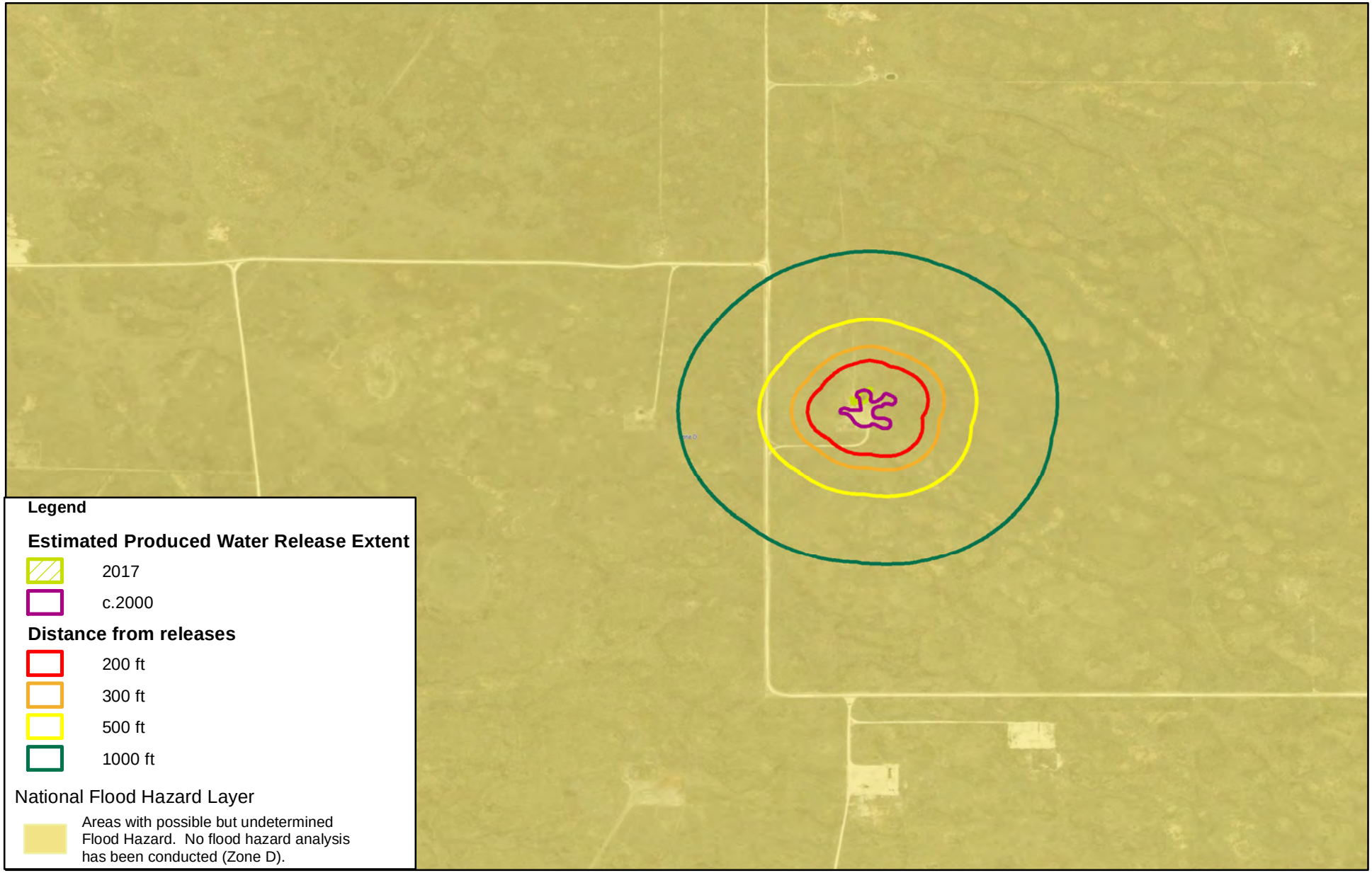
R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Nearby Mines and Minerals	Plate 7
	Pride Energy Company NM 87 State #001 (Tank Battery)	February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate8_karstPotential.mxd



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Karst Potential	Plate 8
	Pride Energy Company NM 87 State #001 (Tank Battery)	February 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate9_femaFlood.mxd



N
W
E
S

0 500 1,000
Feet

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

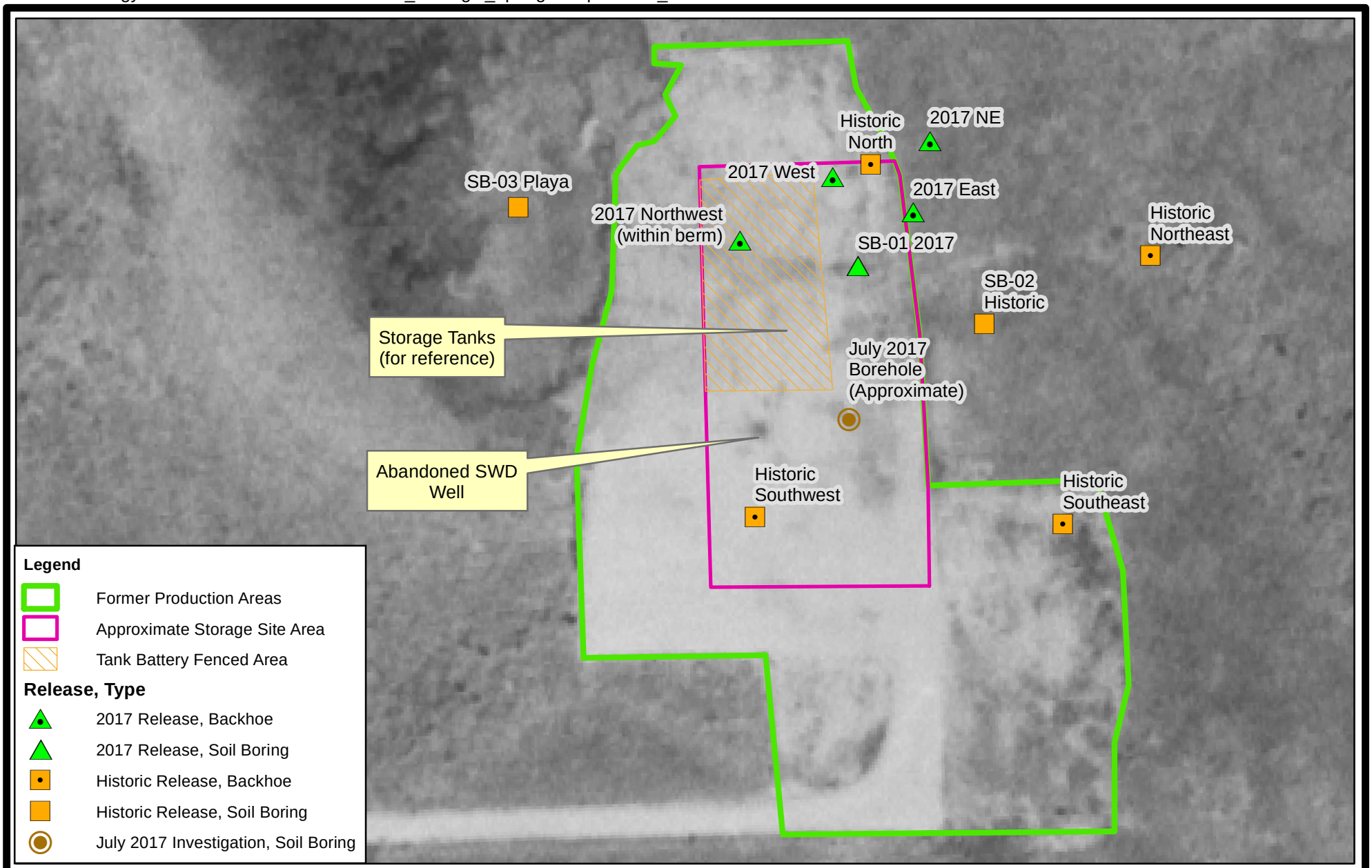
FEMA Flood Map

Plate 9

Pride Energy Company
NM 87 State #001 (Tank Battery)

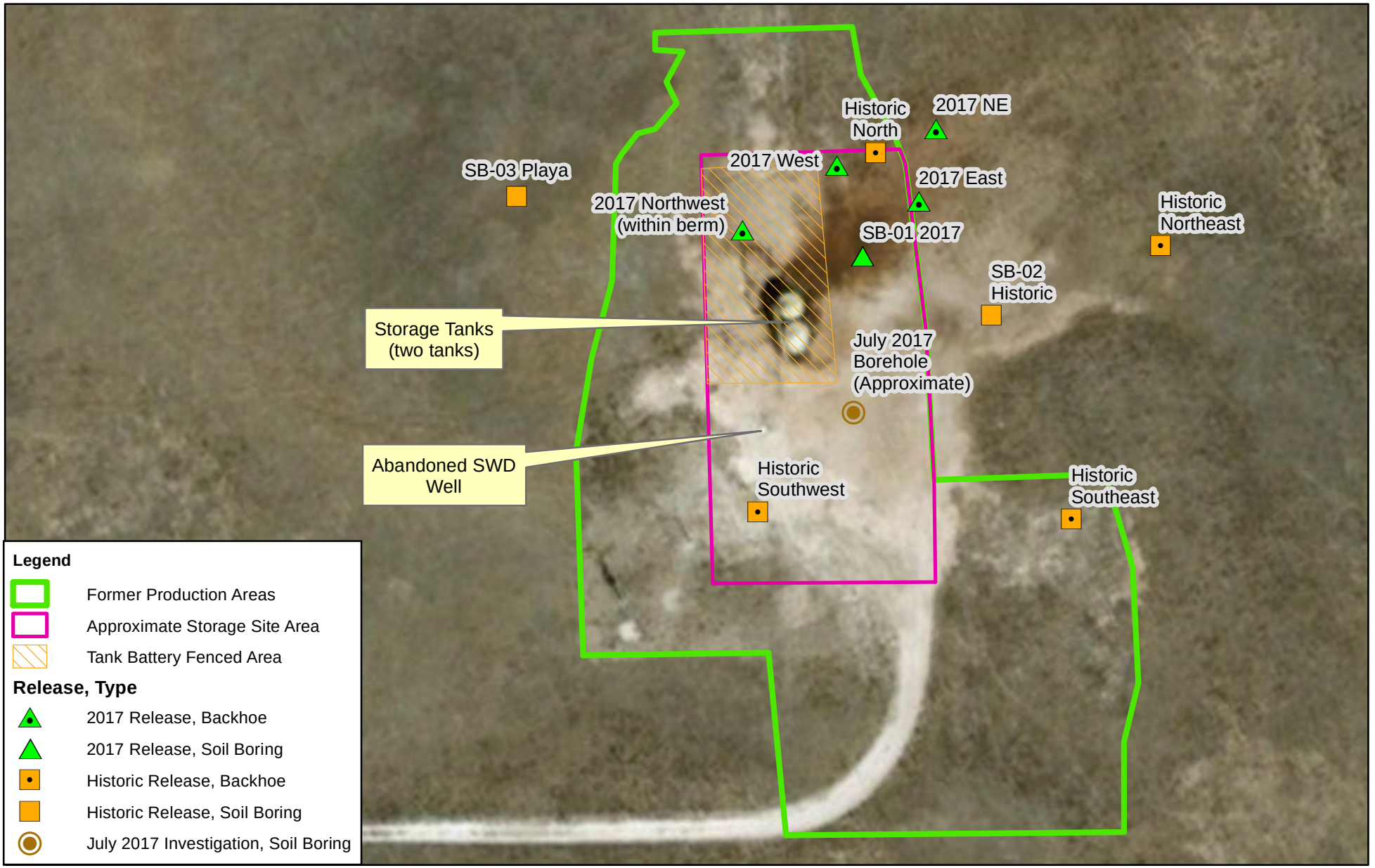
February 2018

M:\Pride Energy\NM 87 State 001 Wellhead 1RP_4624\gis_ap\Figures\plate10a_1971 extents.mxd



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Former Production Areas. (Aerial Photo: USGS 12/15/1971) Pride Energy Company NM 87 State #001 (Tank Battery)	Plate 10a May 2018

M:\Pride Energy\NM 87 State 001 Wellhead 1RP_4624\gis_ap\Figures\plate10b_2017extents.mxd



R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

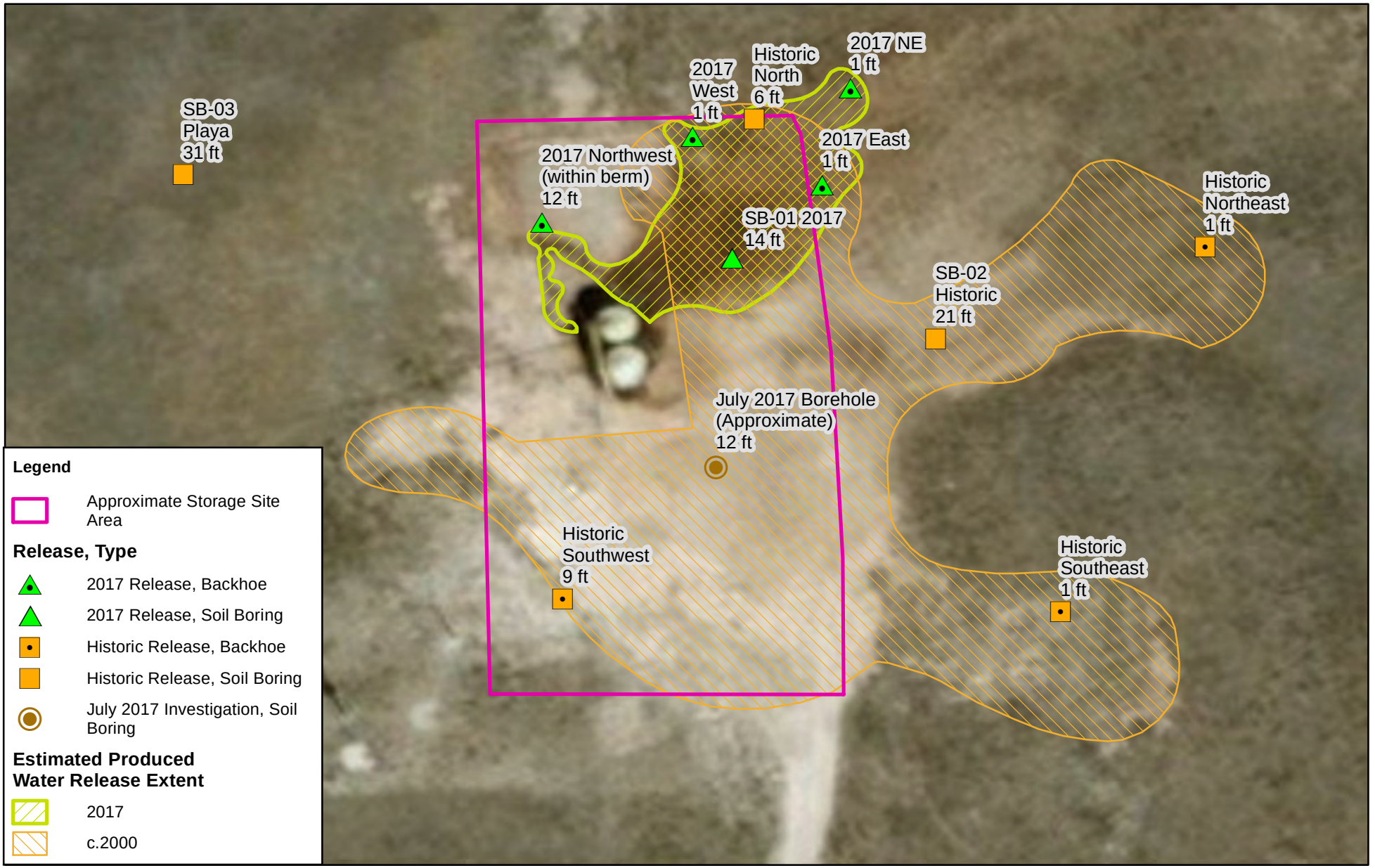
Former Production Areas.
(Aerial Photo: 2017)

Pride Energy Company
NM 87 State #001 (Tank Battery)

Plate 10b

May 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate11_sampleLocations.mxd



R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

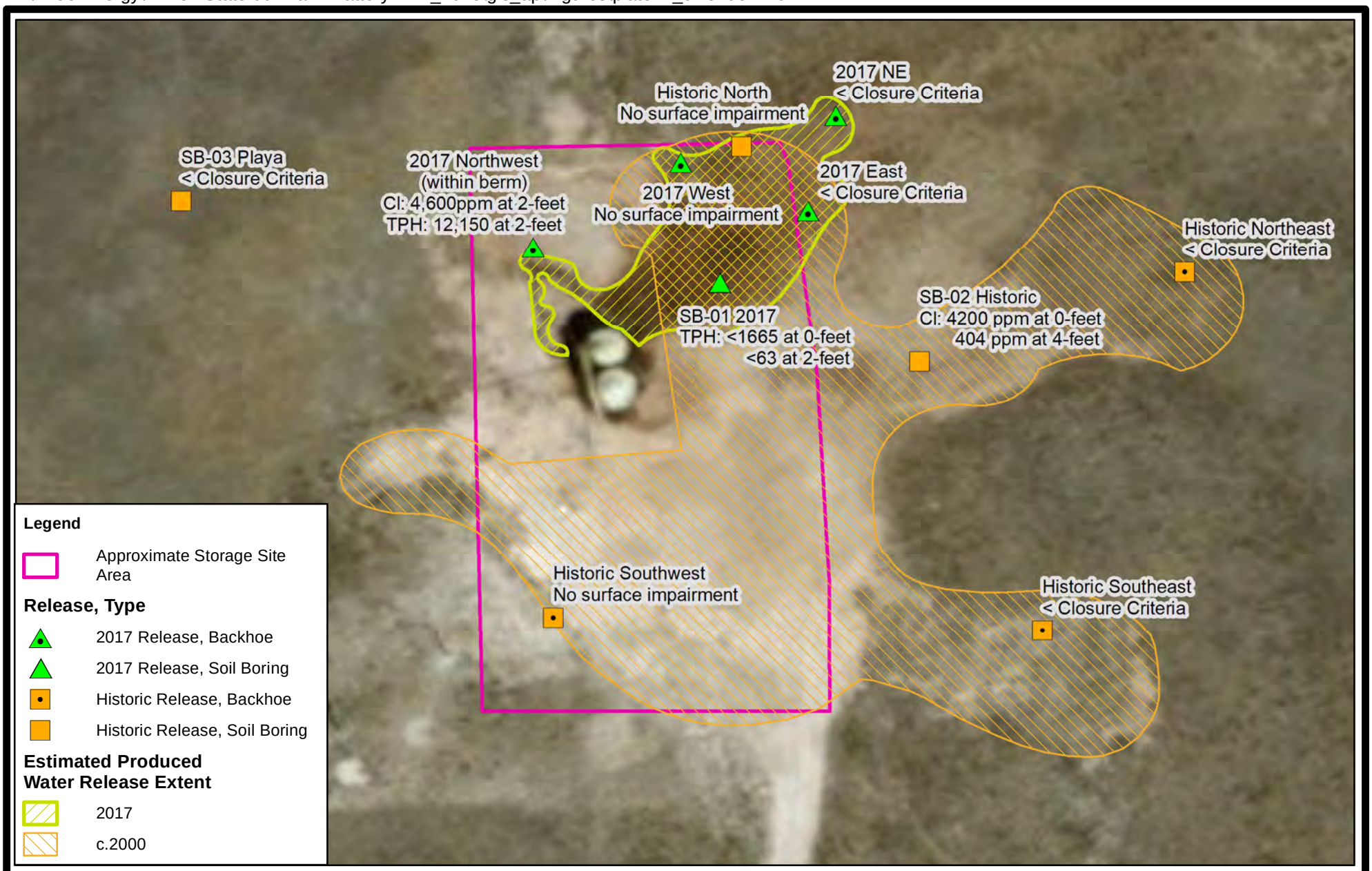
Sample Locations with Total Depth (ft)

Plate 11

Pride Energy Company
NM 87 State #001 (Tank Battery)

May 2018

M:\Pride Energy\NM 87 State 001 Tank Battery 1RP_4625\gis_ap\Figures\plate12_chloride.mxd



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Chloride and TPH Concentrations in the Upper 4-feet (Jan/April 2018) Pride Energy Company NM 87 State #001 (Tank Battery)	Plate 12 May 2018

APPENDIX A

PRIDE ENERGY COMPANY

(918) 524-9200 ♦ Fax (918) 524-9292 ♦ www.pride-energy.com

Physical Address: 4641 E. 91st Street
Tulsa, OK 74137

Mailing Address: P.O. Box 701950
Tulsa, OK 74170-1950

Email Address: mattp@pride-energy.com

January 16, 2017

Via Certified Mail
Return Receipt #
91 7199 9991 7034 2014 0874

New Mexico Oil Conservation
1625 N. French Drive
Hobbs, NM 88240

RE: New Mexico 87 State #001
API # 30-025-23655
Section 33-14S-34E: 2086' FSL and 1,874' FWL (Unit Letter K)
Lea County, New Mexico

Dear Maxey,

In reference to the above well, please find enclosed a completed Form C-141 (Initial Report).

Thank you and if there are any questions, please feel free to contact me at 918-524-9200.

Sincerely,

Matthew L. Pride

Matthew L. Pride
Pride Energy Company

mp15551.tp

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Pride Energy Company	Contact Matthew Pride
Address P.O. Box 701950, Tulsa, OK 74170	Telephone No. 918-524-9200
Facility Name New Mexico 87 State #1	Facility Type Oil Well

Surface Owner	Mineral Owner	API No.
State of New Mexico	State	30-025-23655

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	33	14S	34E	2086	South	1874	West	Lea

Latitude 33.059717 Longitude -103.514153

NATURE OF RELEASE

Type of Release Oil and Water	Volume of Release 95 bbls.	Volume Recovered 95 bbls.
Source of Release Tank Battery	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 1:55 PM , 1/13/17
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Maxey Brown	
By Whom? Willie Dean (contract pumper)	Date and Hour 5:10 PM, 1/13/17	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
By Olivia Yu at 9:49 am, Mar 01, 2017

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

It appears that the surface owner's cattle may have rubbed up against the mechanism that turned the pumping unit on and caused the tank to run over. When the spill was found, the pumping unit was immediately turned off and a vac truck, backhoe and roustabout crew were called to the location to clean up the spill.

Describe Area Affected and Cleanup Action Taken.*

The area that was affected was the soil around the tank battery. The vac truck has picked up all free standing oil, and the roustabout crew (with backhoe) has scraped up the oily soil which will be properly disposed of. (most of the free standing oil ran into a hole that is within 10 feet of the tank that had been dug in the past.) A fence around the tank battery and pumping unit will also be constructed to keep livestock (cattle) away from the surface equipment pertaining to the oil well. The dike (firewall) will be reconstructed around the tank battery in order to contain any spilled fluid from the tanks that may occur in the future.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: Matthew L. Pride

Printed Name: Matthew L. Pride

Title: President of Pride Production Co., Inc.
General Partner of Pride Energy Company

E-mail Address: mattp@pride-energy.com

Date: 1/16/17 Phone: 918-524-9200

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 3/1/2017 Expiration Date:

Conditions of Approval: see attached directive

Attached ☑

* Attach Additional Sheets If Necessary

1RP-4625 fOY1706036376 nOY1706036769 pOY1706037126

mp15550.tp

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _1/31/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number __1R-_4625_ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _4/1/2017_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

● Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

● Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

● Nominal detection limits for field and laboratory analyses must be provided.

● Composite sampling is not generally allowed.

● Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

●Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

● If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

● Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

APPENDIX B

January 2018 Sample Locations

On January 08, 2018 Andrew Parker and Kristin Pope of Hicks Consultants mobilized to the Pride Energy State New Mexico 87 State 001 (Tank Battery) location to conduct a limited characterization of an accidental release in January 2017. The release was predominantly crude oil and occurred at the tank battery, which is located at the production pad for the plugged NM 83 State #1 SWD well (Latitude: 33.05973, Latitude: -103.514153; 33-14S-34E Unit Letter J), about 1325 feet east of the NM 87 State #001 producing well.

Gandy Backhoe Services provided backhoe trenching services. Adkins Engineering provided drilling rig services.

We excavated eight (8) backhoe trenches and drilled three (3) soil borings to characterize the 2017 and historic releases. Excavation depth was determined by the extent of the backhoe reach or bucket refusal caused by the underlying caliche. Borehole depth was determined by chloride field titrations. Vertical delineation was determined complete when chloride titrations showed less than 250 mg/kg for ten vertical feet.

Soil samples were collected for the analysis of chloride, BTEX, and GRO/DRO/MRO. Soil samples were submitted to Hall Environmental Laboratory in Albuquerque, NM; on-ice and under strict chain-of-custody. Appendix D contains the laboratory Certificate of Analysis.

Plate 11 shows the location of the sample locations. Exhibit A, below, shows the latitude, longitude, depth, and sampling type. Table 1 is a summary of the laboratory analysis. Appendix D contains the lithologic logs for the sample locations.

Name	Date	Release	Type	Depth (ft)	Latitude WGS84	Longitude (WGS84)
2017 NE	1/8/2018	2017 Release	Backhoe	1	33.06003943	-103.5138131
Historic Southeast	1/8/2018	Historic Release	Backhoe	1	33.059401	-103.513557
Historic Northeast	1/8/2018	Historic Release	Backhoe	1	33.05984562	-103.5133808
SB-02 Historic	1/8/2018	Historic Release	Soil Boring	21	33.0597343	-103.5137094
Historic North	1/8/2018	Historic Release	Soil Boring	6	33.06000135	-103.5139305
2017 West	1/8/2018	2017 Release	Backhoe	1	33.05998348	-103.5140252
2017 East	1/8/2018	2017 Release	Backhoe	1	33.05992135	-103.5138477
SB-01 2017	1/8/2018	2017 Release	Soil Boring	14	33.05983205	-103.513957
Historic Southwest	1/8/2018	Historic Release	Backhoe	9	33.05941708	-103.5141641
2017 Northwest (within berm)	1/8/2018	2017 Release	Backhoe	12	33.059876	-103.514189
SB-03 Playa	1/8/2018	Historic Release	Soil Boring	31	33.059934	-103.514626

Exhibit A: Sample location and type.

April 2018 Sample Locations

On April 02-03, 2018 Andrew Parker and Kristin Pope of Hicks Consultants mobilized to the Pride Energy State New Mexico 87 State 001 (Wellhead) location to perform additional vertical characterization of three areas (SB-01 2017, Historic North, and SB-03 Playa). Additional characterization at SB-01 and SB-03 was to gather additional data in the upper 4-feet of the soil

column. At Historic North, additional data was collected to evaluate TPH from the surface to 4-feet. Atkins Engineering provided drilling services.

We drilled the boreholes at the locations identified during the January 2018 characterization and offset by 5-feet east. (Plate 11 and Exhibit A).

We collected split-spoon soil samples at 0, 2, 4, 6 feet bgs and total depth. Vertical delineation ceased at 6 feet when:

- PID readings for VOCs were below 100 ppm (using the heated headspace method of field testing), and
- Chloride titrations were below 600 mg/kg (using field titration method).

At Historic North, the split spoon sample had no return due to the very hard caliche. No sample was collect at 6-feet.

Appendix D contains the lithologic logs for the sample locations.

Soil samples were submitted for laboratory testing of TPH (GRO, DRO, MRO), BTEX, Benzene, and Chloride. Soil samples were submitted to Hall Environmental Laboratory in Albuquerque, NM; on-ice and under strict chain-of-custody. Appendix C contains the laboratory Certificates of Analysis.

Protocols for chloride field titrations and VOC screening with a photoionization detector (PID) are located in Appendix E.

Exhibit B: Trench sample at Historic Southeast. Hard caliche encountered at 1-foot below ground surface. Land surface is undergoing natural restoration/re-vegetation. Drilling of SB-02 is visible in upper right of photo.

Exhibit C: Drilling of SB-03, within the natural depression ("playa") west-northwest of the tank battery. Tank battery is visible in photo center.

Exhibit D: Split spoon sample core at SB-03 Playa. 0-feet is at left. 2-feet is at right. Silty sand dominates the upper soil column from the surface to 6-feet.

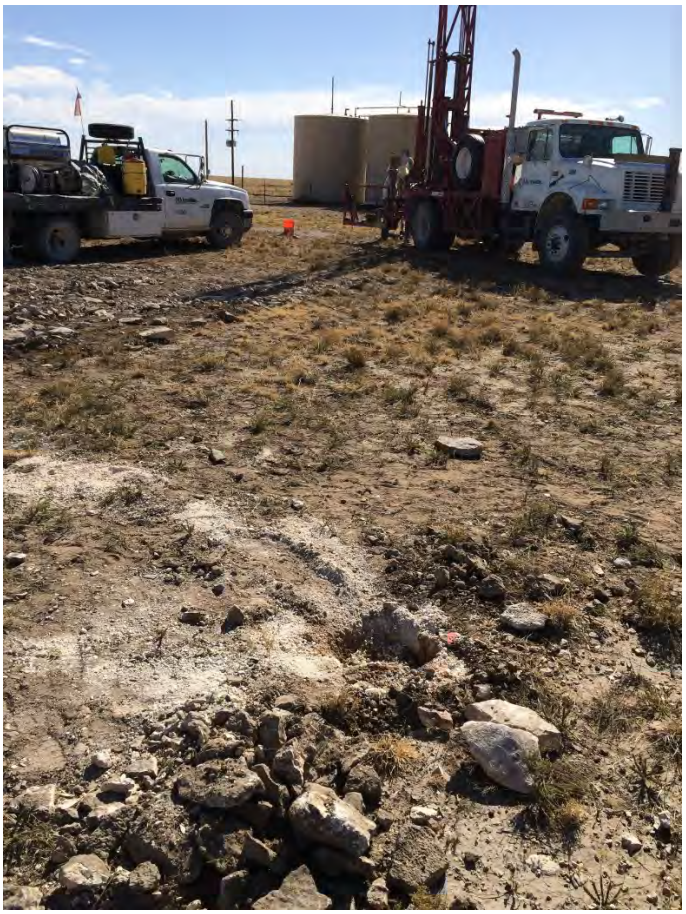


Exhibit E: Background photo is the drilling of SB-01 2017. Photo front center foreground is the borehole for Historic North. Re-vegetation is occurring in the area of Historic North.

Exhibit F: SB-01 2017 split-spoon core sampling at 4-feet. Core sample is from 4-feet (left) to 6-feet (right). Caliche dominates the core sample.

APPENDIX C

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Bob Allen

Safety & Environmental Solutions, Inc.

703 E Clinton

Hobbs, New Mexico, TX 88240

Project: Pride NM 83 SWD State #1

Project Number: PRI-17-001

Location: Lea County

Lab Order Number: 7G07005

NELAP ACCREDITED TNI LABORATORY

NELAP/TCEQ # T104704516-16-7

Report Date: 07/13/17

Safety & Environmental Solutions, Inc.
703 E Clinton
Hobbs, New Mexico TX, 88240

Project: Pride NM 83 SWD State #1
Project Number: PRI-17-001
Project Manager: Bob Allen

Fax: (575) 393-4388

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TT-1 Surface	7G07005-01	Soil	07/05/17 09:00	07-06-2017 17:00
TT-1 4'	7G07005-02	Soil	07/05/17 10:00	07-06-2017 17:00
TT-1 8'	7G07005-03	Soil	07/05/17 10:20	07-06-2017 17:00
TT-1 12'	7G07005-04	Soil	07/05/17 10:35	07-06-2017 17:00

Safety & Environmental Solutions, Inc.
703 E Clinton
Hobbs, New Mexico TX, 88240

Project: Pride NM 83 SWD State #1
Project Number: PRI-17-001
Project Manager: Bob Allen

Fax: (575) 393-4388

TT-1 Surface

7G07005-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Toluene	ND	0.00217	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*75-125*		*P7G1103*	*07/07/17*	*07/07/17*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*97.2 %*	*75-125*		*P7G1103*	*07/07/17*	*07/07/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4830**	27.2	mg/kg dry	25	P7G1110	07/11/17	07/12/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7G1004	07/10/17	07/10/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P7G1106	07/07/17	07/08/17	TPH 8015M	
>C12-C28	**374**	27.2	mg/kg dry	1	P7G1106	07/07/17	07/08/17	TPH 8015M	
>C28-C35	**124**	27.2	mg/kg dry	1	P7G1106	07/07/17	07/08/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*98.7 %*	*70-130*		*P7G1106*	*07/07/17*	*07/08/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*112 %*	*70-130*		*P7G1106*	*07/07/17*	*07/08/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**498**	27.2	mg/kg dry	1	[CALC]	07/07/17	07/08/17	calc	

Safety & Environmental Solutions, Inc.
703 E Clinton
Hobbs, New Mexico TX, 88240

Project: Pride NM 83 SWD State #1
Project Number: PRI-17-001
Project Manager: Bob Allen

Fax: (575) 393-4388

TT-1 4'

7G07005-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00112	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Toluene	ND	0.00225	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*88.3 %*	*75-125*		*P7G1103*	*07/07/17*	*07/07/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*95.6 %*	*75-125*		*P7G1103*	*07/07/17*	*07/07/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8670**	28.1	mg/kg dry	25	P7G1110	07/11/17	07/12/17	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P7G1004	07/10/17	07/10/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.8 %*	*70-130*		*P7G1109*	*07/07/17*	*07/07/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.5 %*	*70-130*		*P7G1109*	*07/07/17*	*07/07/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	07/07/17	07/07/17	calc	

Safety & Environmental Solutions, Inc.
703 E Clinton
Hobbs, New Mexico TX, 88240

Project: Pride NM 83 SWD State #1
Project Number: PRI-17-001
Project Manager: Bob Allen

Fax: (575) 393-4388

TT-1 8'

7G07005-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00123	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Toluene	ND	0.00247	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Ethylbenzene	ND	0.00123	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (p/m)	ND	0.00247	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (o)	ND	0.00123	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*91.8 %*	*75-125*		*P7G1103*	*07/07/17*	*07/07/17*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*87.0 %*	*75-125*		*P7G1103*	*07/07/17*	*07/07/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**705**	1.23	mg/kg dry	1	P7G1110	07/11/17	07/12/17	EPA 300.0	
% Moisture	**19.0**	0.1	%	1	P7G1004	07/10/17	07/10/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	30.9	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C12-C28	ND	30.9	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C28-C35	ND	30.9	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.7 %*	*70-130*		*P7G1109*	*07/07/17*	*07/07/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.8 %*	*70-130*		*P7G1109*	*07/07/17*	*07/07/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	30.9	mg/kg dry	1	[CALC]	07/07/17	07/07/17	calc	

TT-1 12'

7G07005-04 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organics by GC									
Benzene	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Toluene	ND	0.00217	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P7G1103	07/07/17	07/07/17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*88.1 %*	*75-125*		*P7G1103*	*07/07/17*	*07/07/17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*95.1 %*	*75-125*		*P7G1103*	*07/07/17*	*07/07/17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2630**	10.9	mg/kg dry	10	P7G1110	07/11/17	07/12/17	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P7G1004	07/10/17	07/10/17	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P7G1109	07/07/17	07/07/17	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.4 %*	*70-130*		*P7G1109*	*07/07/17*	*07/07/17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.6 %*	*70-130*		*P7G1109*	*07/07/17*	*07/07/17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	07/07/17	07/07/17	calc	

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7G1103 - General Preparation (GC)										
Blank (P7G1103-BLK1)				Prepared & Analyzed: 07/07/17						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00200	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.0521*		*"*	*0.0600*		*86.8*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0524*		*"*	*0.0600*		*87.4*	*75-125*			
LCS (P7G1103-BS1)				Prepared & Analyzed: 07/07/17						
Benzene	0.106	0.00100	mg/kg wet	0.100		106	70-130			
Toluene	0.104	0.00200	"	0.100		104	70-130			
Ethylbenzene	0.104	0.00100	"	0.100		104	70-130			
Xylene (p/m)	0.187	0.00200	"				70-130			
Xylene (o)	0.0900	0.00100	"				70-130			
Surrogate: 1,4-Difluorobenzene	*0.0616*		*"*	*0.0600*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.0534*		*"*	*0.0600*		*89.0*	*75-125*			
LCS Dup (P7G1103-BSD1)				Prepared & Analyzed: 07/07/17						
Benzene	0.115	0.00100	mg/kg wet	0.100		115	70-130	7.80	20	
Toluene	0.112	0.00200	"	0.100		112	70-130	7.13	20	
Ethylbenzene	0.112	0.00100	"	0.100		112	70-130	7.62	20	
Xylene (p/m)	0.200	0.00200	"				70-130		20	
Xylene (o)	0.0985	0.00100	"				70-130		20	
Surrogate: 4-Bromofluorobenzene	*0.0603*		*"*	*0.0600*		*101*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0652*		*"*	*0.0600*		*109*	*75-125*			
Matrix Spike (P7G1103-MS1)	**Source: 7G07005-03**			Prepared & Analyzed: 07/07/17						
Benzene	0.119	0.00123	mg/kg dry	0.123	ND	96.5	80-120			
Toluene	0.112	0.00247	"	0.123	ND	90.4	80-120			
Ethylbenzene	0.113	0.00123	"	0.123	ND	91.7	80-120			
Xylene (p/m)	0.200	0.00247	"		ND		80-120			
Xylene (o)	0.0991	0.00123	"		ND		80-120			
Surrogate: 4-Bromofluorobenzene	*0.0782*		*"*	*0.0741*		*106*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0819*		*"*	*0.0741*		*111*	*75-125*			

Organics by GC - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7G1103 - General Preparation (GC)										
Matrix Spike Dup (P7G1103-MSD1)		**Source: 7G07005-03**		Prepared & Analyzed: 07/07/17						
Benzene	0.116	0.00123	mg/kg dry	0.123	ND	94.1	80-120	2.48	20	
Toluene	0.110	0.00247	"	0.123	ND	89.1	80-120	1.35	20	
Ethylbenzene	0.109	0.00123	"	0.123	ND	88.7	80-120	3.36	20	
Xylene (p/m)	0.209	0.00247	"		ND		80-120		20	
Xylene (o)	0.0994	0.00123	"		ND		80-120		20	
Surrogate: 4-Bromofluorobenzene	*0.0751*		*"*	*0.0741*		*101*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.0794*		*"*	*0.0741*		*107*	*75-125*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7G1004 - * DEFAULT PREP *** **										
Blank (P7G1004-BLK1)				Prepared & Analyzed: 07/10/17						
% Moisture	ND	0.1	%							
Duplicate (P7G1004-DUP1)		**Source: 7G07004-04**		Prepared & Analyzed: 07/10/17						
% Moisture	2.0	0.1	%		1.0			66.7	20	
Duplicate (P7G1004-DUP2)		**Source: 7G07022-02**		Prepared & Analyzed: 07/10/17						
% Moisture	11.0	0.1	%		11.0			0.00	20	
Batch P7G1110 - * DEFAULT PREP *** **										
Blank (P7G1110-BLK1)				Prepared & Analyzed: 07/11/17						
Chloride	ND	1.00	mg/kg wet							
LCS (P7G1110-BS1)				Prepared & Analyzed: 07/11/17						
Chloride	419	1.00	mg/kg wet	400		105	80-120			
LCS Dup (P7G1110-BSD1)				Prepared & Analyzed: 07/11/17						
Chloride	410	1.00	mg/kg wet	400		102	80-120	2.29	20	
Duplicate (P7G1110-DUP1)		**Source: 7G10001-58**		Prepared & Analyzed: 07/11/17						
Chloride	3.28	1.04	mg/kg dry		4.07			21.5	20	R3
Duplicate (P7G1110-DUP2)		**Source: 7G07005-03**		Prepared: 07/11/17 Analyzed: 07/12/17						
Chloride	715	1.23	mg/kg dry		705			1.45	20	
Matrix Spike (P7G1110-MS1)		**Source: 7G10001-58**		Prepared & Analyzed: 07/11/17						
Chloride	1080	1.04	mg/kg dry	1040	4.07	103	80-120			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7G1106 - TX 1005										
Blank (P7G1106-BLK1)				Prepared & Analyzed: 07/07/17						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*92.9*		*"*	*100*		*92.9*	*70-130*			
Surrogate: o-Terphenyl	*51.2*		*"*	*50.0*		*102*	*70-130*			
LCS (P7G1106-BS1)				Prepared & Analyzed: 07/07/17						
C6-C12	1140	25.0	mg/kg wet	1000		114	75-125			
>C12-C28	1060	25.0	"	1000		106	75-125			
Surrogate: 1-Chlorooctane	*108*		*"*	*100*		*108*	*70-130*			
Surrogate: o-Terphenyl	*59.0*		*"*	*50.0*		*118*	*70-130*			
LCS Dup (P7G1106-BSD1)				Prepared & Analyzed: 07/07/17						
C6-C12	1030	25.0	mg/kg wet	1000		103	75-125	9.86	20	
>C12-C28	1040	25.0	"	1000		104	75-125	2.03	20	
Surrogate: 1-Chlorooctane	*122*		*"*	*100*		*122*	*70-130*			
Surrogate: o-Terphenyl	*55.8*		*"*	*50.0*		*112*	*70-130*			
Matrix Spike (P7G1106-MS1)	**Source: 7G07005-01**			Prepared: 07/07/17 Analyzed: 07/08/17						
C6-C12	1280	27.2	mg/kg dry	1090	ND	118	75-125			
>C12-C28	1350	27.2	"	1090	374	89.6	75-125			
Surrogate: 1-Chlorooctane	*139*		*"*	*109*		*128*	*70-130*			
Surrogate: o-Terphenyl	*64.6*		*"*	*54.3*		*119*	*70-130*			
Matrix Spike Dup (P7G1106-MSD1)	**Source: 7G07005-01**			Prepared: 07/07/17 Analyzed: 07/08/17						
C6-C12	1170	27.2	mg/kg dry	1090	ND	108	75-125	8.88	20	
>C12-C28	1240	27.2	"	1090	374	79.3	75-125	12.2	20	
Surrogate: 1-Chlorooctane	*140*		*"*	*109*		*129*	*70-130*			
Surrogate: o-Terphenyl	*58.5*		*"*	*54.3*		*108*	*70-130*			

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P7G1109 - TX 1005										
Blank (P7G1109-BLK1)				Prepared & Analyzed: 07/07/17						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*95.0*		*"*	*100*		*95.0*	*70-130*			
Surrogate: o-Terphenyl	*49.6*		*"*	*50.0*		*99.2*	*70-130*			
LCS (P7G1109-BS1)				Prepared & Analyzed: 07/07/17						
C6-C12	966	25.0	mg/kg wet	1000		96.6	75-125			
>C12-C28	959	25.0	"	1000		95.9	75-125			
Surrogate: 1-Chlorooctane	*103*		*"*	*100*		*103*	*70-130*			
Surrogate: o-Terphenyl	*57.1*		*"*	*50.0*		*114*	*70-130*			
LCS Dup (P7G1109-BSD1)				Prepared & Analyzed: 07/07/17						
C6-C12	956	25.0	mg/kg wet	1000		95.6	75-125	1.01	20	
>C12-C28	961	25.0	"	1000		96.1	75-125	0.244	20	
Surrogate: 1-Chlorooctane	*99.9*		*"*	*100*		*99.9*	*70-130*			
Surrogate: o-Terphenyl	*47.5*		*"*	*50.0*		*95.0*	*70-130*			
Matrix Spike (P7G1109-MS1)	**Source: 7G07005-03**			Prepared: 07/07/17 Analyzed: 07/08/17						
C6-C12	1240	30.9	mg/kg dry	1230	ND	100	75-125			
>C12-C28	1200	30.9	"	1230	17.6	96.1	75-125			
Surrogate: 1-Chlorooctane	*129*		*"*	*123*		*105*	*70-130*			
Surrogate: o-Terphenyl	*60.2*		*"*	*61.7*		*97.6*	*70-130*			
Matrix Spike Dup (P7G1109-MSD1)	**Source: 7G07005-03**			Prepared: 07/07/17 Analyzed: 07/08/17						
C6-C12	1260	30.9	mg/kg dry	1230	ND	102	75-125	2.05	20	
>C12-C28	1270	30.9	"	1230	17.6	102	75-125	5.60	20	
Surrogate: 1-Chlorooctane	*134*		*"*	*123*		*108*	*70-130*			
Surrogate: o-Terphenyl	*63.3*		*"*	*61.7*		*102*	*70-130*			

Notes and Definitions

R3	The RPD exceeded the acceptance limit due to sample matrix effects.
BULK	Samples received in Bulk soil containers
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By:  Date: 7/13/2017

Brent Barron, Laboratory Director/Technical Director

PBELAB

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP
1400 Rankin Hwy
Midland, Texas 79701

Phone: 432-686-7235

Project Manager: Bob Allen
Company Name: Safety & Environmental Solutions
Company Address: 703 E. Clinton
City/State/Zip: Hobbs NM 88240
Telephone No: 575-397-0510 Fax No:
Sampler Signature: Sosa, Jerry e-mail:

Project Name: Pride NM 83 SWD State #1
Project #: PRI-17-001
Project Loc: Lea County
PO #:
Report Format: X Standard ☐ TRRP ☐ NPDES

(lab use only) ORDER #: 1607005

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3 250ml Pwy	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None 1L Poly	NaOH/ZnAc	Matrix: DW=Drinking Water SL=Sludge	GW = Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	Analyze For: TPH by TX 1005 8015B 8015M	Chloride	BTEX by 8021B	BTEX 8021	TPH 8015	CHLORIDE 300	Rush 24 48 72 (Please call)	Standard
1	TT-1 SURFACE			07/05	0900			X														X	X	X		
2	TT-1 4 Ft			07/05	1000			X														X	X	X		
3	TT-1 8 Ft			07/05	1020			X														X	X	X		
4	TT-1 12 Ft			07/05	1035			X														X	X	X		

Special Instructions:
NEW MEXICO METHODS

Relinquished by:	Date	Time	Received by:	Date	Time
Sosa, Jerry	07/06	1400	Cristi Johnson	7-6-17	1400
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
	7/6/17	1700		7/6/17	1700

Laboratory Comments:

Sample Containers Intact?	N
VOCs Free of Headspace?	N
Labels on container(s)	N
Custody seals on container(s)	N
Custody seals on cooler(s)	N
Sample Hand Delivered	N
by Sampler/Client Rep. ?	N
by Courier? UPS DHL FedEx Lone Star	
Temperature Upon Receipt:	
Received: 2.9 °C	
Adjusted: °C Factor	NCF=1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 01, 2018

Andrew Parker

R.T. Hicks Consultants, LTD
901 Rio Grande Blvd. NW
Suite F-142
Albuquerque, NM 87104
TEL: (505) 266-5004
FAX (505) 266-0745

RE: NM 87 State 001 Tank Battery OrderNo.: 1801659

Dear Andrew Parker:

Hall Environmental Analysis Laboratory received 18 sample(s) on 1/11/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1801659**
Date Reported: **2/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2017 East @ 0.5 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 8:45:00 AM
Lab ID: 1801659-001 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/17/2018 2:33:10 PM	36067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/16/2018 10:32:53 AM	36022
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/16/2018 10:32:53 AM	36022
Surr: DNOP	101	70-130		%Rec	1	1/16/2018 10:32:53 AM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/15/2018 10:21:21 AM	36006
Surr: BFB	87.1	15-316		%Rec	1	1/15/2018 10:21:21 AM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.025		mg/Kg	1	1/15/2018 11:15:19 AM	36006
Toluene	ND	0.049		mg/Kg	1	1/15/2018 11:15:19 AM	36006
Ethylbenzene	ND	0.049		mg/Kg	1	1/15/2018 11:15:19 AM	36006
Xylenes, Total	ND	0.098		mg/Kg	1	1/15/2018 11:15:19 AM	36006
Surr: 4-Bromofluorobenzene	105	70-130		%Rec	1	1/15/2018 11:15:19 AM	36006
Surr: Toluene-d8	92.3	70-130		%Rec	1	1/15/2018 11:15:19 AM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2017 West @ 0.5 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 9:00:00 AM
Lab ID: 1801659-002 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/17/2018 2:45:35 PM	36067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	1/16/2018 5:57:24 PM	36022
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	1/16/2018 5:57:24 PM	36022
Surr: DNOP	77.7	70-130		%Rec	1	1/16/2018 5:57:24 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/15/2018 10:45:09 AM	36006
Surr: BFB	91.3	15-316		%Rec	1	1/15/2018 10:45:09 AM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.025		mg/Kg	1	1/15/2018 12:24:01 PM	36006
Toluene	ND	0.050		mg/Kg	1	1/15/2018 12:24:01 PM	36006
Ethylbenzene	ND	0.050		mg/Kg	1	1/15/2018 12:24:01 PM	36006
Xylenes, Total	ND	0.10		mg/Kg	1	1/15/2018 12:24:01 PM	36006
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	1/15/2018 12:24:01 PM	36006
Surr: Toluene-d8	94.2	70-130		%Rec	1	1/15/2018 12:24:01 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2017 NW @ 0.5 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 9:15:00 AM
Lab ID: 1801659-003 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/17/2018 2:57:59 PM	36067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/16/2018 12:38:08 PM	36022
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	1/16/2018 12:38:08 PM	36022
Surr: DNOP	85.3	70-130		%Rec	1	1/16/2018 12:38:08 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/15/2018 5:53:49 PM	36006
Surr: BFB	91.7	15-316		%Rec	1	1/15/2018 5:53:49 PM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	1/15/2018 12:46:56 PM	36006
Toluene	ND	0.047		mg/Kg	1	1/15/2018 12:46:56 PM	36006
Ethylbenzene	ND	0.047		mg/Kg	1	1/15/2018 12:46:56 PM	36006
Xylenes, Total	ND	0.095		mg/Kg	1	1/15/2018 12:46:56 PM	36006
Surr: 4-Bromofluorobenzene	112	70-130		%Rec	1	1/15/2018 12:46:56 PM	36006
Surr: Toluene-d8	94.6	70-130		%Rec	1	1/15/2018 12:46:56 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2017 NW Berm @ 2 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 9:30:00 AM
Lab ID: 1801659-004 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	4600	150		mg/Kg	100	1/19/2018 12:33:57 AM	36067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	12000	1000		mg/Kg	100	1/16/2018 5:33:18 PM	36022
Motor Oil Range Organics (MRO)	9100	5000		mg/Kg	100	1/16/2018 5:33:18 PM	36022
Surr: DNOP	0	70-130	S	%Rec	100	1/16/2018 5:33:18 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	150	24		mg/Kg	5	1/15/2018 9:33:37 AM	36006
Surr: BFB	193	15-316		%Rec	5	1/15/2018 9:33:37 AM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	0.27	0.049		mg/Kg	2	1/15/2018 1:09:56 PM	36006
Toluene	ND	0.098		mg/Kg	2	1/15/2018 1:09:56 PM	36006
Ethylbenzene	0.69	0.098		mg/Kg	2	1/15/2018 1:09:56 PM	36006
Xylenes, Total	1.3	0.20		mg/Kg	2	1/15/2018 1:09:56 PM	36006
Surr: 4-Bromofluorobenzene	123	70-130		%Rec	2	1/15/2018 1:09:56 PM	36006
Surr: Toluene-d8	94.7	70-130		%Rec	2	1/15/2018 1:09:56 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2017 NW Berm @ 12 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 9:32:00 AM
Lab ID: 1801659-005 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	2900	150		mg/Kg	100	1/19/2018 12:46:22 AM	36067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	7900	98		mg/Kg	10	1/16/2018 1:28:43 PM	36022
Motor Oil Range Organics (MRO)	2900	490		mg/Kg	10	1/16/2018 1:28:43 PM	36022
Surr: DNOP	0	70-130	S	%Rec	10	1/16/2018 1:28:43 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	420	50		mg/Kg	10	1/15/2018 9:57:38 AM	36006
Surr: BFB	298	15-316		%Rec	10	1/15/2018 9:57:38 AM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.25		mg/Kg	10	1/15/2018 1:32:54 PM	36006
Toluene	ND	0.50		mg/Kg	10	1/15/2018 1:32:54 PM	36006
Ethylbenzene	7.5	0.50		mg/Kg	10	1/15/2018 1:32:54 PM	36006
Xylenes, Total	27	1.0		mg/Kg	10	1/15/2018 1:32:54 PM	36006
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	10	1/15/2018 1:32:54 PM	36006
Surr: Toluene-d8	102	70-130		%Rec	10	1/15/2018 1:32:54 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2000 North @ 0.5 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 10:45:00 AM
Lab ID: 1801659-006 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/17/2018 4:24:50 PM	36067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	56	9.7		mg/Kg	1	1/16/2018 2:17:42 PM	36022
Motor Oil Range Organics (MRO)	62	48		mg/Kg	1	1/16/2018 2:17:42 PM	36022
Surr: DNOP	97.2	70-130		%Rec	1	1/16/2018 2:17:42 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/15/2018 6:17:41 PM	36006
Surr: BFB	98.0	15-316		%Rec	1	1/15/2018 6:17:41 PM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	1/15/2018 1:55:54 PM	36006
Toluene	ND	0.048		mg/Kg	1	1/15/2018 1:55:54 PM	36006
Ethylbenzene	ND	0.048		mg/Kg	1	1/15/2018 1:55:54 PM	36006
Xylenes, Total	0.22	0.095		mg/Kg	1	1/15/2018 1:55:54 PM	36006
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	1/15/2018 1:55:54 PM	36006
Surr: Toluene-d8	92.6	70-130		%Rec	1	1/15/2018 1:55:54 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2000 NE @ 0.5 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 11:00:00 AM
Lab ID: 1801659-007 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	260	30		mg/Kg	20	1/17/2018 4:37:15 PM	36067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	1/16/2018 2:42:17 PM	36022
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/16/2018 2:42:17 PM	36022
Surr: DNOP	98.6	70-130		%Rec	1	1/16/2018 2:42:17 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/15/2018 6:41:29 PM	36006
Surr: BFB	93.0	15-316		%Rec	1	1/15/2018 6:41:29 PM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.025		mg/Kg	1	1/15/2018 2:18:49 PM	36006
Toluene	ND	0.049		mg/Kg	1	1/15/2018 2:18:49 PM	36006
Ethylbenzene	ND	0.049		mg/Kg	1	1/15/2018 2:18:49 PM	36006
Xylenes, Total	ND	0.099		mg/Kg	1	1/15/2018 2:18:49 PM	36006
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	1/15/2018 2:18:49 PM	36006
Surr: Toluene-d8	93.1	70-130		%Rec	1	1/15/2018 2:18:49 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2000 SW @ 2 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 11:15:00 AM
Lab ID: 1801659-008 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	500	30		mg/Kg	20	1/17/2018 4:49:40 PM	36067
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	1/16/2018 3:06:55 PM	36022
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/16/2018 3:06:55 PM	36022
Surr: DNOP	87.9	70-130		%Rec	1	1/16/2018 3:06:55 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/15/2018 7:05:19 PM	36006
Surr: BFB	91.8	15-316		%Rec	1	1/15/2018 7:05:19 PM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	1/15/2018 2:41:47 PM	36006
Toluene	ND	0.049		mg/Kg	1	1/15/2018 2:41:47 PM	36006
Ethylbenzene	ND	0.049		mg/Kg	1	1/15/2018 2:41:47 PM	36006
Xylenes, Total	ND	0.098		mg/Kg	1	1/15/2018 2:41:47 PM	36006
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	1/15/2018 2:41:47 PM	36006
Surr: Toluene-d8	96.9	70-130		%Rec	1	1/15/2018 2:41:47 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2000 SW @ 8 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 11:20:00 AM
Lab ID: 1801659-009 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	45	30		mg/Kg	20	1/18/2018 11:19:42 AM	36090

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: 2000 SE @ 0.5 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 12:45:00 PM
Lab ID: 1801659-010
Matrix: SOIL
Received Date: 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	1/18/2018 12:34:08 PM	36090
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	1/16/2018 3:56:02 PM	36022
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/16/2018 3:56:02 PM	36022
Surr: DNOP	78.5	70-130		%Rec	1	1/16/2018 3:56:02 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/15/2018 7:29:02 PM	36006
Surr: BFB	90.8	15-316		%Rec	1	1/15/2018 7:29:02 PM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	1/15/2018 3:04:47 PM	36006
Toluene	ND	0.048		mg/Kg	1	1/15/2018 3:04:47 PM	36006
Ethylbenzene	ND	0.048		mg/Kg	1	1/15/2018 3:04:47 PM	36006
Xylenes, Total	ND	0.097		mg/Kg	1	1/15/2018 3:04:47 PM	36006
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	1/15/2018 3:04:47 PM	36006
Surr: Toluene-d8	94.2	70-130		%Rec	1	1/15/2018 3:04:47 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB 1 @ 0 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 9:30:00 AM
Lab ID: 1801659-011
Matrix: SOIL
Received Date: 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	93	30		mg/Kg	20	1/18/2018 12:46:32 PM	36090
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	140	9.5		mg/Kg	1	1/16/2018 4:20:18 PM	36022
Motor Oil Range Organics (MRO)	230	48		mg/Kg	1	1/16/2018 4:20:18 PM	36022
Surr: DNOP	95.1	70-130		%Rec	1	1/16/2018 4:20:18 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	1/15/2018 7:52:47 PM	36006
Surr: BFB	88.6	15-316		%Rec	1	1/15/2018 7:52:47 PM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	1/15/2018 3:27:36 PM	36006
Toluene	ND	0.047		mg/Kg	1	1/15/2018 3:27:36 PM	36006
Ethylbenzene	ND	0.047		mg/Kg	1	1/15/2018 3:27:36 PM	36006
Xylenes, Total	ND	0.093		mg/Kg	1	1/15/2018 3:27:36 PM	36006
Surr: 4-Bromofluorobenzene	111	70-130		%Rec	1	1/15/2018 3:27:36 PM	36006
Surr: Toluene-d8	95.1	70-130		%Rec	1	1/15/2018 3:27:36 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB 1 @ 15 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018
Lab ID: 1801659-012
Matrix: SOIL
Received Date: 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	40	30		mg/Kg	20	1/18/2018 12:58:57 PM	36090

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB 2 @ 0 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 11:38:00 AM
Lab ID: 1801659-013 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	4200	150		mg/Kg	100	1/19/2018 10:35:22 PM	36090
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/16/2018 4:44:54 PM	36022
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	1/16/2018 4:44:54 PM	36022
Surr: DNOP	81.3	70-130		%Rec	1	1/16/2018 4:44:54 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	1/15/2018 8:16:29 PM	36006
Surr: BFB	89.2	15-316		%Rec	1	1/15/2018 8:16:29 PM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	1/15/2018 3:50:36 PM	36006
Toluene	ND	0.046		mg/Kg	1	1/15/2018 3:50:36 PM	36006
Ethylbenzene	ND	0.046		mg/Kg	1	1/15/2018 3:50:36 PM	36006
Xylenes, Total	ND	0.093		mg/Kg	1	1/15/2018 3:50:36 PM	36006
Surr: 4-Bromofluorobenzene	108	70-130		%Rec	1	1/15/2018 3:50:36 PM	36006
Surr: Toluene-d8	95.6	70-130		%Rec	1	1/15/2018 3:50:36 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB 2 @ 9 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 10:53:00 AM
Lab ID: 1801659-014
Matrix: SOIL
Received Date: 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	1/18/2018 1:23:46 PM	36090

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB 2 @ 15 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 12:30:00 PM
Lab ID: 1801659-015
Matrix: SOIL
Received Date: 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	1/18/2018 1:36:11 PM	36090

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB 3 @ 5 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 1:58:00 PM
Lab ID: 1801659-016 **Matrix:** SOIL **Received Date:** 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	660	30		mg/Kg	20	1/18/2018 1:48:36 PM	36090
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/16/2018 5:09:04 PM	36022
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	1/16/2018 5:09:04 PM	36022
Surr: DNOP	85.0	70-130		%Rec	1	1/16/2018 5:09:04 PM	36022
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	1/15/2018 8:40:13 PM	36006
Surr: BFB	87.6	15-316		%Rec	1	1/15/2018 8:40:13 PM	36006
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	1/15/2018 4:13:32 PM	36006
Toluene	ND	0.048		mg/Kg	1	1/15/2018 4:13:32 PM	36006
Ethylbenzene	ND	0.048		mg/Kg	1	1/15/2018 4:13:32 PM	36006
Xylenes, Total	ND	0.095		mg/Kg	1	1/15/2018 4:13:32 PM	36006
Surr: 4-Bromofluorobenzene	109	70-130		%Rec	1	1/15/2018 4:13:32 PM	36006
Surr: Toluene-d8	92.7	70-130		%Rec	1	1/15/2018 4:13:32 PM	36006

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB 3 @ 21 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 1:48:00 PM
Lab ID: 1801659-017
Matrix: SOIL
Received Date: 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	220	30		mg/Kg	20	1/18/2018 2:25:50 PM	36090

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB 3 @ 31 ft
Project: NM 87 State 001 Tank Battery
Collection Date: 1/8/2018 3:33:00 PM
Lab ID: 1801659-018
Matrix: SOIL
Received Date: 1/11/2018 2:15:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	200	30		mg/Kg	20	1/18/2018 2:38:15 PM	36090

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1801659**

01-Feb-18

Client: R.T. Hicks Consultants, LTD

Project: NM 87 State 001 Tank Battery

Sample ID	**MB-36067**	SampType:	**mblk**			TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**36067**			RunNo:	**48508**				
Prep Date:	**1/17/2018**	Analysis Date:	**1/17/2018**			SeqNo:	**1560534**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	**LCS-36067**	SampType:	**lcs**			TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**36067**			RunNo:	**48508**				
Prep Date:	**1/17/2018**	Analysis Date:	**1/17/2018**			SeqNo:	**1560535**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	15	1.5	15.00	0	98.2	90	110				

Sample ID	**MB-36090**	SampType:	**mblk**			TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**36090**			RunNo:	**48535**				
Prep Date:	**1/18/2018**	Analysis Date:	**1/18/2018**			SeqNo:	**1561668**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	**LCS-36090**	SampType:	**lcs**			TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**36090**			RunNo:	**48535**				
Prep Date:	**1/18/2018**	Analysis Date:	**1/18/2018**			SeqNo:	**1561669**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	15	1.5	15.00	0	97.9	90	110				

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1801659**

01-Feb-18

Client: R.T. Hicks Consultants, LTD

Project: NM 87 State 001 Tank Battery

Sample ID	**LCS-36022**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**36022**		RunNo:	**48464**				
Prep Date:	**1/15/2018**	Analysis Date:	**1/16/2018**		SeqNo:	**1557778**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.4	70	130			
Surr: DNOP	4.4		5.000		88.3	70	130			

Sample ID	**MB-36022**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**36022**		RunNo:	**48464**				
Prep Date:	**1/15/2018**	Analysis Date:	**1/16/2018**		SeqNo:	**1557779**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.4		10.00		93.6	70	130			

Sample ID	**1801659-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**2017 East @ 0.5 ft**	Batch ID:	**36022**		RunNo:	**48464**				
Prep Date:	**1/15/2018**	Analysis Date:	**1/16/2018**		SeqNo:	**1558759**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.4	46.90	5.011	82.4	55.8	125			
Surr: DNOP	4.2		4.690		90.6	70	130			

Sample ID	**1801659-001AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**2017 East @ 0.5 ft**	Batch ID:	**36022**		RunNo:	**48464**				
Prep Date:	**1/15/2018**	Analysis Date:	**1/16/2018**		SeqNo:	**1558761**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	9.5	47.35	5.011	83.4	55.8	125	1.82	20	
Surr: DNOP	4.4		4.735		91.9	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1801659**

01-Feb-18

Client: R.T. Hicks Consultants, LTD

Project: NM 87 State 001 Tank Battery

Sample ID	**MB-36006**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**36006**	RunNo:	**48452**					
Prep Date:	**1/12/2018**	Analysis Date:	**1/15/2018**	SeqNo:	**1557550**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	930		1000		93.2	15	316			

Sample ID	**LCS-36006**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**36006**	RunNo:	**48452**					
Prep Date:	**1/12/2018**	Analysis Date:	**1/15/2018**	SeqNo:	**1557551**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	94.0	75.9	131			
Surr: BFB	1000		1000		101	15	316			

Sample ID	**1801659-002AMS**	SampType:	**MS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**2017 West @ 0.5 ft**	Batch ID:	**36006**	RunNo:	**48452**					
Prep Date:	**1/12/2018**	Analysis Date:	**1/15/2018**	SeqNo:	**1557554**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	4.8	24.13	0	85.4	77.8	128			
Surr: BFB	950		965.3		98.9	15	316			

Sample ID	**1801659-002AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**2017 West @ 0.5 ft**	Batch ID:	**36006**	RunNo:	**48452**					
Prep Date:	**1/12/2018**	Analysis Date:	**1/15/2018**	SeqNo:	**1557555**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	4.8	23.85	0	92.6	77.8	128	6.94	20	
Surr: BFB	920		954.2		96.2	15	316	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1801659**

01-Feb-18

Client: R.T. Hicks Consultants, LTD

Project: NM 87 State 001 Tank Battery

Sample ID	**lcs-36006**	SampType:	**LCS4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**BatchQC**	Batch ID:	**36006**		RunNo:	**48454**				
Prep Date:	**1/12/2018**	Analysis Date:	**1/15/2018**		SeqNo:	**1557603**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.025	1.000	0	82.8	80	120			
Toluene	0.89	0.050	1.000	0	88.7	80	120			
Ethylbenzene	0.90	0.050	1.000	0	90.2	80	120			
Xylenes, Total	2.6	0.10	3.000	0	87.1	80	120			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.5	70	130			
Surr: Toluene-d8	0.48		0.5000		95.9	70	130			

Sample ID	**MB-36006**	SampType:	**MBLK**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**PBS**	Batch ID:	**36006**		RunNo:	**48454**				
Prep Date:	**1/12/2018**	Analysis Date:	**1/15/2018**		SeqNo:	**1557604**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.55		0.5000		110	70	130			
Surr: Toluene-d8	0.47		0.5000		93.4	70	130			

Sample ID	**1801659-001ams**	SampType:	**MS4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**2017 East @ 0.5 ft**	Batch ID:	**36006**		RunNo:	**48454**				
Prep Date:	**1/12/2018**	Analysis Date:	**1/15/2018**		SeqNo:	**1557606**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.84	0.024	0.9597	0	87.3	80	120			
Toluene	0.87	0.048	0.9597	0	91.1	80	120			
Ethylbenzene	ND	0.048	0.9597	0.01008	-1.05	80	120			S
Xylenes, Total	ND	0.096	2.879	0.02842	-0.0721	80	120			S
Surr: 4-Bromofluorobenzene	0.53		0.4798		110	70	130			
Surr: Toluene-d8	0.45		0.4798		94.8	70	130			

Sample ID	**1801659-001amsd**	SampType:	**MSD4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**2017 East @ 0.5 ft**	Batch ID:	**36006**		RunNo:	**48454**				
Prep Date:	**1/12/2018**	Analysis Date:	**1/15/2018**		SeqNo:	**1557607**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.83	0.023	0.9234	0	89.9	80	120	0.927	0	
Toluene	0.89	0.046	0.9234	0	95.9	80	120	1.25	0	
Ethylbenzene	ND	0.046	0.9234	0.01008	-0.129	80	120	0	0	S
Xylenes, Total	ND	0.092	2.770	0.02842	-0.167	80	120	0	0	S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1801659**
01-Feb-18

Client: R.T. Hicks Consultants, LTD
Project: NM 87 State 001 Tank Battery

Sample ID **1801659-001amsd** SampType: **MSD4** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **2017 East @ 0.5 ft** Batch ID: **36006** RunNo: **48454**
Prep Date: **1/12/2018** Analysis Date: **1/15/2018** SeqNo: **1557607** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.51		0.4617		111	70	130	0	0	
Surr: Toluene-d8	0.46		0.4617		98.6	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: RT HICKS | Work Order Number: 1801659 | RcptNo: 1

Received By: **Dennis Suazo** 1/11/2018 2:15:00 PM

Completed By: **Dennis Suazo** 1/12/2018 9:12:36 AM

Reviewed By: MJ/DDS 01/12/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: ____ (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? ____
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: ____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.7	Good	Not Present			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: RT Hicks Consultants	Turn-Around Time: ☒ Standard ☐ Rush
Mailing Address: cy. file	Project Name: NM 87 State 001 Tank Battery
	Project #:
Phone #: 970-570-9535	
email or Fax#: andrew@rthicksconsult.com	Project Manager: Andrew Parker
QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)	
Accreditation: ☐ NELAP ☐ Other	Sampler: Andrew Parker
☐ EDD (Type)	On Ice: ☒ Yes ☐ No
	Sample Temperature: 5.1 - 0.4 (c7) = 4.7

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1801659	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX only	8270 (Semi-VOA)	Chloride	Air Bubbles (Y or N)
1/8/18	08:45	Soil	2017 East @ 0.5 ft	4oz Jar-1	ICE	001			X							X		X	
	09:00		2017 West @ 0.5 ft			002			X							X		X	
	09:15		2017 NW @ 0.5 ft			003			X							X		X	
	09:30		2017 SW Berm @ 2ft			004			X							X		X	
	09:32		2017 NW Berm @ 12ft			005			X							X		X	
	10:45		2000 North @ 0.5 ft			006			X							X		X	
	11:00		2000 NE @ 0.5 ft			007			X							X		X	
	11:15		2000 SW @ 2 ft			008			X							X		X	
	11:20		2000 SW @ 8 ft			009												X	
	12:45		2000 SE @ 0.5 ft			010			X							X		X	
	09:30		SB 2 @ 0 ft			011			X							X		X	
↓		↓	SB 1 @ 15 ft			012												X	

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
1/10/18	1415			1/11/18	1415	1 of 2
Date: 1/11	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: R.T. Hicks Consultants

Mailing Address: on file

Phone #: 970-570-9535

email or Fax#: andrew@rthicksconsult.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: NM 87 State 001 Tank Battery

Project #:

Project Manager: Andrew Parker

Sampler: Andrew Parker

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.1-0.4(cf)=4.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1801659	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel) plus MRO	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX ONLY	8270 (Semi-VOA)	Chloride			
1/8/18	11:38	Soil	SB 2 @ [illegible] ft	4oz - 1	ICE	013			X							X		X			
	10:53		SB 2 @ 9 ft			014												X			
	12:30		SB2 @ 15 ft			015												X			
			SB2 @ [illegible] ft						X							X		X			
	13:58	Soil	SB3 @ 5 ft			016			X							X		X			
			SB3 @ 15 ft															X			
	13:49		SB3 @ 21 ft			017												X			
	15:33		SB3 @ 31 ft			018												X			

Date	Time	Relinquished by:	Received by:	Date	Time
1/11/18	14:15	[signature]	[signature]	1/11/18	1415
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks: 2 of 2

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 24, 2018

Andrew Parker

R.T. Hicks Consultants, LTD
901 Rio Grande Blvd. NW
Suite F-142
Albuquerque, NM 87104
TEL: (505) 266-5004
FAX (505) 266-0745

RE: Pride NM 87 St 001 Battery OrderNo.: 1804243

Dear Andrew Parker:

Hall Environmental Analysis Laboratory received 11 sample(s) on 4/4/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB Hist N-0'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/2/2018 3:15:00 PM
Lab ID: 1804243-001 **Matrix:** SOIL **Received Date:** 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	4/9/2018 11:23:19 PM	37502
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/9/2018 11:07:43 PM	37463
Surr: BFB	124	70-130		%Rec	1	4/9/2018 11:07:43 PM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	57	9.4		mg/Kg	1	4/10/2018 1:43:36 PM	37471
Motor Oil Range Organics (MRO)	180	47		mg/Kg	1	4/10/2018 1:43:36 PM	37471
Surr: DNOP	102	70-130		%Rec	1	4/10/2018 1:43:36 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	4/9/2018 11:07:43 PM	37463
Toluene	ND	0.046		mg/Kg	1	4/9/2018 11:07:43 PM	37463
Ethylbenzene	ND	0.046		mg/Kg	1	4/9/2018 11:07:43 PM	37463
Xylenes, Total	ND	0.092		mg/Kg	1	4/9/2018 11:07:43 PM	37463
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	1	4/9/2018 11:07:43 PM	37463
Surr: Toluene-d8	80.0	70-130		%Rec	1	4/9/2018 11:07:43 PM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB Hist N-2.5'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/2/2018 3:30:00 PM
Lab ID: 1804243-002 **Matrix:** SOIL **Received Date:** 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	78	30		mg/Kg	20	4/9/2018 11:35:43 PM	37502
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/10/2018 12:16:58 AM	37463
Surr: BFB	117	70-130		%Rec	1	4/10/2018 12:16:58 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/9/2018 3:25:51 PM	37471
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2018 3:25:51 PM	37471
Surr: DNOP	97.5	70-130		%Rec	1	4/9/2018 3:25:51 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	4/10/2018 12:16:58 AM	37463
Toluene	ND	0.048		mg/Kg	1	4/10/2018 12:16:58 AM	37463
Ethylbenzene	ND	0.048		mg/Kg	1	4/10/2018 12:16:58 AM	37463
Xylenes, Total	ND	0.096		mg/Kg	1	4/10/2018 12:16:58 AM	37463
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	4/10/2018 12:16:58 AM	37463
Surr: Toluene-d8	83.8	70-130		%Rec	1	4/10/2018 12:16:58 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB Hist N-4'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/2/2018 3:45:00 PM
Lab ID: 1804243-003
Matrix: SOIL
Received Date: 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	36	30		mg/Kg	20	4/9/2018 11:48:07 PM	37502
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/10/2018 1:26:13 AM	37463
Surr: BFB	133	70-130	S	%Rec	1	4/10/2018 1:26:13 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/9/2018 3:47:47 PM	37471
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2018 3:47:47 PM	37471
Surr: DNOP	99.9	70-130		%Rec	1	4/9/2018 3:47:47 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	4/10/2018 1:26:13 AM	37463
Toluene	ND	0.048		mg/Kg	1	4/10/2018 1:26:13 AM	37463
Ethylbenzene	ND	0.048		mg/Kg	1	4/10/2018 1:26:13 AM	37463
Xylenes, Total	ND	0.096		mg/Kg	1	4/10/2018 1:26:13 AM	37463
Surr: 4-Bromofluorobenzene	135	70-130	S	%Rec	1	4/10/2018 1:26:13 AM	37463
Surr: Toluene-d8	85.2	70-130		%Rec	1	4/10/2018 1:26:13 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB-01-0'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/2/2018 4:15:00 PM
Lab ID: 1804243-004
Matrix: SOIL
Received Date: 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	56	30		mg/Kg	20	4/10/2018 12:25:22 AM	37502
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/10/2018 1:49:18 AM	37463
Surr: BFB	109	70-130		%Rec	1	4/10/2018 1:49:18 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	660	97		mg/Kg	10	4/9/2018 4:10:01 PM	37471
Motor Oil Range Organics (MRO)	1000	490		mg/Kg	10	4/9/2018 4:10:01 PM	37471
Surr: DNOP	0	70-130	S	%Rec	10	4/9/2018 4:10:01 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	4/10/2018 1:49:18 AM	37463
Toluene	ND	0.048		mg/Kg	1	4/10/2018 1:49:18 AM	37463
Ethylbenzene	ND	0.048		mg/Kg	1	4/10/2018 1:49:18 AM	37463
Xylenes, Total	ND	0.096		mg/Kg	1	4/10/2018 1:49:18 AM	37463
Surr: 4-Bromofluorobenzene	110	70-130		%Rec	1	4/10/2018 1:49:18 AM	37463
Surr: Toluene-d8	82.8	70-130		%Rec	1	4/10/2018 1:49:18 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB-01-2'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/2/2018 4:30:00 PM
Lab ID: 1804243-005
Matrix: SOIL
Received Date: 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	490	30		mg/Kg	20	4/10/2018 12:37:47 AM	37502
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	4/10/2018 2:12:23 AM	37463
Surr: BFB	117	70-130		%Rec	1	4/10/2018 2:12:23 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/9/2018 4:32:02 PM	37471
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2018 4:32:02 PM	37471
Surr: DNOP	91.7	70-130		%Rec	1	4/9/2018 4:32:02 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	4/10/2018 2:12:23 AM	37463
Toluene	ND	0.046		mg/Kg	1	4/10/2018 2:12:23 AM	37463
Ethylbenzene	ND	0.046		mg/Kg	1	4/10/2018 2:12:23 AM	37463
Xylenes, Total	ND	0.093		mg/Kg	1	4/10/2018 2:12:23 AM	37463
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	4/10/2018 2:12:23 AM	37463
Surr: Toluene-d8	80.1	70-130		%Rec	1	4/10/2018 2:12:23 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB-01-4'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/3/2018 4:40:00 PM
Lab ID: 1804243-006
Matrix: SOIL
Received Date: 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	320	30		mg/Kg	20	4/11/2018 3:35:41 PM	37540
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	4/10/2018 2:35:31 AM	37463
Surr: BFB	116	70-130		%Rec	1	4/10/2018 2:35:31 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	4/9/2018 4:54:11 PM	37471
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	4/9/2018 4:54:11 PM	37471
Surr: DNOP	96.6	70-130		%Rec	1	4/9/2018 4:54:11 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.025		mg/Kg	1	4/10/2018 2:35:31 AM	37463
Toluene	ND	0.049		mg/Kg	1	4/10/2018 2:35:31 AM	37463
Ethylbenzene	ND	0.049		mg/Kg	1	4/10/2018 2:35:31 AM	37463
Xylenes, Total	ND	0.098		mg/Kg	1	4/10/2018 2:35:31 AM	37463
Surr: 4-Bromofluorobenzene	117	70-130		%Rec	1	4/10/2018 2:35:31 AM	37463
Surr: Toluene-d8	80.8	70-130		%Rec	1	4/10/2018 2:35:31 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB-01-6'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/2/2018 4:50:00 PM
Lab ID: 1804243-007
Matrix: SOIL
Received Date: 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	360	30		mg/Kg	20	4/11/2018 3:48:06 PM	37540
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/10/2018 2:58:36 AM	37463
Surr: BFB	117	70-130		%Rec	1	4/10/2018 2:58:36 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/9/2018 5:16:17 PM	37471
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2018 5:16:17 PM	37471
Surr: DNOP	93.5	70-130		%Rec	1	4/9/2018 5:16:17 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	4/10/2018 2:58:36 AM	37463
Toluene	ND	0.048		mg/Kg	1	4/10/2018 2:58:36 AM	37463
Ethylbenzene	ND	0.048		mg/Kg	1	4/10/2018 2:58:36 AM	37463
Xylenes, Total	ND	0.097		mg/Kg	1	4/10/2018 2:58:36 AM	37463
Surr: 4-Bromofluorobenzene	118	70-130		%Rec	1	4/10/2018 2:58:36 AM	37463
Surr: Toluene-d8	84.3	70-130		%Rec	1	4/10/2018 2:58:36 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB-03-0'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/3/2018 8:00:00 AM
Lab ID: 1804243-008
Matrix: SOIL
Received Date: 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	4/11/2018 4:50:09 PM	37540
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2018 3:21:41 AM	37463
Surr: BFB	120	70-130		%Rec	1	4/10/2018 3:21:41 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/10/2018 2:08:05 PM	37471
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/10/2018 2:08:05 PM	37471
Surr: DNOP	88.9	70-130		%Rec	1	4/10/2018 2:08:05 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	4/10/2018 3:21:41 AM	37463
Toluene	ND	0.047		mg/Kg	1	4/10/2018 3:21:41 AM	37463
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2018 3:21:41 AM	37463
Xylenes, Total	ND	0.094		mg/Kg	1	4/10/2018 3:21:41 AM	37463
Surr: 4-Bromofluorobenzene	122	70-130		%Rec	1	4/10/2018 3:21:41 AM	37463
Surr: Toluene-d8	83.6	70-130		%Rec	1	4/10/2018 3:21:41 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB-03-2'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/3/2018 8:10:00 AM
Lab ID: 1804243-009
Matrix: SOIL
Received Date: 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	47	30		mg/Kg	20	4/11/2018 5:02:34 PM	37540
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2018 3:44:46 AM	37463
Surr: BFB	112	70-130		%Rec	1	4/10/2018 3:44:46 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	4/9/2018 6:00:48 PM	37471
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	4/9/2018 6:00:48 PM	37471
Surr: DNOP	93.7	70-130		%Rec	1	4/9/2018 6:00:48 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	4/10/2018 3:44:46 AM	37463
Toluene	ND	0.047		mg/Kg	1	4/10/2018 3:44:46 AM	37463
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2018 3:44:46 AM	37463
Xylenes, Total	ND	0.094		mg/Kg	1	4/10/2018 3:44:46 AM	37463
Surr: 4-Bromofluorobenzene	113	70-130		%Rec	1	4/10/2018 3:44:46 AM	37463
Surr: Toluene-d8	69.1	70-130	S	%Rec	1	4/10/2018 3:44:46 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB-03-4'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/3/2018 8:15:00 AM
Lab ID: 1804243-010
Matrix: SOIL
Received Date: 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	200	30		mg/Kg	20	4/11/2018 5:14:58 PM	37540
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	4/10/2018 4:07:54 AM	37463
Surr: BFB	124	70-130		%Rec	1	4/10/2018 4:07:54 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	4/9/2018 6:23:05 PM	37471
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/9/2018 6:23:05 PM	37471
Surr: DNOP	86.8	70-130		%Rec	1	4/9/2018 6:23:05 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	4/10/2018 4:07:54 AM	37463
Toluene	ND	0.048		mg/Kg	1	4/10/2018 4:07:54 AM	37463
Ethylbenzene	ND	0.048		mg/Kg	1	4/10/2018 4:07:54 AM	37463
Xylenes, Total	ND	0.096		mg/Kg	1	4/10/2018 4:07:54 AM	37463
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	1	4/10/2018 4:07:54 AM	37463
Surr: Toluene-d8	82.8	70-130		%Rec	1	4/10/2018 4:07:54 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: R.T. Hicks Consultants, LTD
Client Sample ID: SB-03-6'
Project: Pride NM 87 St 001 Battery
Collection Date: 4/3/2018 8:25:00 AM
Lab ID: 1804243-011
Matrix: SOIL
Received Date: 4/4/2018 9:55:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	530	30		mg/Kg	20	4/11/2018 5:27:23 PM	37540
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	4/10/2018 4:30:58 AM	37463
Surr: BFB	124	70-130		%Rec	1	4/10/2018 4:30:58 AM	37463
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	4/9/2018 6:45:20 PM	37471
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	4/9/2018 6:45:20 PM	37471
Surr: DNOP	85.0	70-130		%Rec	1	4/9/2018 6:45:20 PM	37471
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.023		mg/Kg	1	4/10/2018 4:30:58 AM	37463
Toluene	ND	0.047		mg/Kg	1	4/10/2018 4:30:58 AM	37463
Ethylbenzene	ND	0.047		mg/Kg	1	4/10/2018 4:30:58 AM	37463
Xylenes, Total	ND	0.093		mg/Kg	1	4/10/2018 4:30:58 AM	37463
Surr: 4-Bromofluorobenzene	125	70-130		%Rec	1	4/10/2018 4:30:58 AM	37463
Surr: Toluene-d8	82.5	70-130		%Rec	1	4/10/2018 4:30:58 AM	37463

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804243**

24-Apr-18

Client: R.T. Hicks Consultants, LTD

Project: Pride NM 87 St 001 Battery

Sample ID	**MB-37502**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37502**	RunNo:	**50408**					
Prep Date:	**4/9/2018**	Analysis Date:	**4/9/2018**	SeqNo:	**1634794**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-37502**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37502**	RunNo:	**50408**					
Prep Date:	**4/9/2018**	Analysis Date:	**4/9/2018**	SeqNo:	**1634795**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.0	90	110			

Sample ID	**MB-37540**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**37540**	RunNo:	**50519**					
Prep Date:	**4/11/2018**	Analysis Date:	**4/11/2018**	SeqNo:	**1638382**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-37540**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**37540**	RunNo:	**50519**					
Prep Date:	**4/11/2018**	Analysis Date:	**4/11/2018**	SeqNo:	**1638383**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804243**

24-Apr-18

Client: R.T. Hicks Consultants, LTD

Project: Pride NM 87 St 001 Battery

Sample ID **MB-37471**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **37471**	RunNo: **50391**
Prep Date: **4/6/2018**	Analysis Date: **4/9/2018**	SeqNo: **1633657** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.9		10.00		98.9	70	130			

Sample ID **LCS-37471**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **37471**	RunNo: **50391**
Prep Date: **4/6/2018**	Analysis Date: **4/9/2018**	SeqNo: **1633785** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.6	70	130			
Surr: DNOP	4.3		5.000		86.2	70	130			

Sample ID **1804243-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SB Hist N-0'**	Batch ID: **37471**	RunNo: **50426**
Prep Date: **4/6/2018**	Analysis Date: **4/10/2018**	SeqNo: **1635711** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	84	9.5	47.39	57.08	56.1	55.8	125			
Surr: DNOP	4.2		4.739		89.4	70	130			

Sample ID **1804243-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SB Hist N-0'**	Batch ID: **37471**	RunNo: **50426**
Prep Date: **4/6/2018**	Analysis Date: **4/10/2018**	SeqNo: **1635712** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	75	9.7	48.40	57.08	36.8	55.8	125	11.1	20	S
Surr: DNOP	4.3		4.840		87.9	70	130	0	0	

Sample ID **LCS-37482**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **37482**	RunNo: **50425**
Prep Date: **4/9/2018**	Analysis Date: **4/10/2018**	SeqNo: **1635884** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		93.1	70	130			

Sample ID **MB-37482**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **37482**	RunNo: **50425**
Prep Date: **4/9/2018**	Analysis Date: **4/10/2018**	SeqNo: **1635886** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804243**

24-Apr-18

Client: R.T. Hicks Consultants, LTD

Project: Pride NM 87 St 001 Battery

Sample ID	**MB-37482**	SampType:	**MBLK**	TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID:	**37482**	RunNo:	**50425**					
Prep Date:	**4/9/2018**	Analysis Date:	**4/10/2018**	SeqNo:	**1635886**	Units:	**%Rec**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		103	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804243**

24-Apr-18

Client: R.T. Hicks Consultants, LTD

Project: Pride NM 87 St 001 Battery

Sample ID	**1804243-002ams**	SampType:	**MS4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**SB Hist N-2.5'**	Batch ID:	**37463**		RunNo:	**50421**				
Prep Date:	**4/6/2018**	Analysis Date:	**4/10/2018**		SeqNo:	**1634652**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.023	0.9208	0	86.6	80	120			
Toluene	0.84	0.046	0.9208	0.005776	90.8	80	120			
Ethylbenzene	0.94	0.046	0.9208	0.004503	101	80	120			
Xylenes, Total	2.8	0.092	2.762	0.02714	101	80	120			
Surr: 4-Bromofluorobenzene	0.47		0.4604		102	70	130			
Surr: Toluene-d8	0.38		0.4604		82.6	70	130			

Sample ID	**1804243-002amsd**	SampType:	**MSD4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**SB Hist N-2.5'**	Batch ID:	**37463**		RunNo:	**50421**				
Prep Date:	**4/6/2018**	Analysis Date:	**4/10/2018**		SeqNo:	**1634653**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.024	0.9597	0	88.5	80	120	6.30	0	
Toluene	0.86	0.048	0.9597	0.005776	89.5	80	120	2.67	0	
Ethylbenzene	0.97	0.048	0.9597	0.004503	100	80	120	2.94	0	
Xylenes, Total	2.8	0.096	2.879	0.02714	96.6	80	120	0.164	0	
Surr: 4-Bromofluorobenzene	0.50		0.4798		104	70	130	0	0	
Surr: Toluene-d8	0.40		0.4798		82.8	70	130	0	0	

Sample ID	**lcs-37463**	SampType:	**LCS4**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**BatchQC**	Batch ID:	**37463**		RunNo:	**50421**				
Prep Date:	**4/6/2018**	Analysis Date:	**4/9/2018**		SeqNo:	**1634695**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.93	0.025	1.000	0	92.8	80	120			
Toluene	0.99	0.050	1.000	0	98.6	80	120			
Ethylbenzene	1.1	0.050	1.000	0	108	80	120			
Xylenes, Total	3.2	0.10	3.000	0	108	80	120			
Surr: 4-Bromofluorobenzene	0.52		0.5000		105	70	130			
Surr: Toluene-d8	0.45		0.5000		89.6	70	130			

Sample ID	**mb-37463**	SampType:	**MBLK**		TestCode:	**EPA Method 8260B: Volatiles Short List**				
Client ID:	**PBS**	Batch ID:	**37463**		RunNo:	**50421**				
Prep Date:	**4/6/2018**	Analysis Date:	**4/9/2018**		SeqNo:	**1634697**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804243**

24-Apr-18

Client: R.T. Hicks Consultants, LTD

Project: Pride NM 87 St 001 Battery

Sample ID **mb-37463**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **37463**	RunNo: **50421**
Prep Date: **4/6/2018**	Analysis Date: **4/9/2018**	SeqNo: **1634697** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.60		0.5000		119	70	130			
Surr: Toluene-d8	0.42		0.5000		83.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1804243**

24-Apr-18

Client: R.T. Hicks Consultants, LTD

Project: Pride NM 87 St 001 Battery

Sample ID **1804243-001ams**	SampType: **MS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **SB Hist N-0'**	Batch ID: **37463**	RunNo: **50421**
Prep Date: **4/6/2018**	Analysis Date: **4/9/2018**	SeqNo: **1634590** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.7	23.43	3.364	96.6	64.7	142			
Surr: BFB	500		468.6		106	70	130			

Sample ID **1804243-001amsd**	SampType: **MSD**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **SB Hist N-0'**	Batch ID: **37463**	RunNo: **50421**
Prep Date: **4/6/2018**	Analysis Date: **4/9/2018**	SeqNo: **1634591** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.7	23.65	3.364	96.1	64.7	142	0.327	20	
Surr: BFB	520		473.0		110	70	130	0	0	

Sample ID **lcs-37463**	SampType: **LCS**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS**	Batch ID: **37463**	RunNo: **50421**
Prep Date: **4/6/2018**	Analysis Date: **4/9/2018**	SeqNo: **1634632** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.2	70	130			
Surr: BFB	530		500.0		106	70	130			

Sample ID **mb-37463**	SampType: **MBLK**	TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS**	Batch ID: **37463**	RunNo: **50421**
Prep Date: **4/6/2018**	Analysis Date: **4/9/2018**	SeqNo: **1634634** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	590		500.0		118	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: RT HICKS | Work Order Number: 1804243 | RcptNo: 1

Received By: Anne Thorne 4/4/2018 9:55:00 AM

Completed By: Anne Thorne 4/5/2018 9:59:51 AM

Reviewed By: DDS 4/5/18

labeled By: MW 4/5/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: ____ (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? MW 4/5/18
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

Chain-of-Custody Record

Client: RT Hicks Consultants	Turn-Around Time: ☒ Standard ☐ Rush
901 Rio Grande Blvd NW	Project Name: Pride-NM 87 St. #001 Battery
Mailing Address: Suite F-142	Project #: (87 Bat)
Albuquerque, NM 87104	
Phone #: 970-570-9535	
email or Fax#: andrew@rthicksconsult.com	Project Manager: Andrew Parker
QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)	Sampler: Andrew Parker
Accreditation: ☐ NELAP ☐ Other	On Ice: ☒ Yes ☐ No
☐ EDD (Type)	Sample Temperature: 1.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804243	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA) BTEX only	8270 (Semi-VOA)	8015M (GRO, DRO, MRO)	Chloride			Air Bubbles (Y or N)
4-2-18	1515	soil	SB Hist. N - 0 ft	4oz / 2	ice	201										X		X	X			
↓	1530		SB Hist. N - 2.5 ft	"		202										X		X	X			
↓	1545		SB Hist. N - 4 ft	"		203										X		X	X			
4-2-18	1615		SB 01 - 0 ft	"		204										X		X	X			
↓	1630		SB 01 - 2 ft	"		205										X		X	X			
↓	1640		SB 01 - 4 ft	"		206										X		X	X			
↓	1650		SB 01 - 6 ft	"		207										X		X	X			
4-3-18	08:00		SB 03 - 0 ft	"		208										X		X	X			
↓	08:10		SB 03 - 2 ft	"		209										X		X	X			
↓	08:15		SB-03-4	"		210										X		X	X			
↓	08:25	↓	SB-03-6 ft	"	↓	211										X		X	X			

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
4/4	0955			04/04/18	0955	
Date:	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

APPENDIX D

Logger:	Kristin Pope/Andrew Parker	**Client:**	**Boring ID:**
Driller:	Atkins Environmental	Pride Energy	
Drilling Method:	Hollow Stem Auger	**Project Name:**	
Start Date:	4/2/2018	1RP-4625 (NM 87 State 001 Tank Battery)	SB-01 2017
End Date:	4/2/2018	**Location:**	
		33.059926, -103.513917 (WGS84/NAD83)	

Depth (feet)	Description	Lithology	Comments	Chloride Tiitrate/Lab	Borehole Completion	Boring Diameter 3.5 inches	Depth (feet)
0.0	0 - 0.5 ft Silty Sand; caliche rocks; light brown			65/93 mg/kg			0.0
1.0	0.5 - 3.5 ft Caliche; white		Hard	--/490			1.0
2.0							2.0
3.0							3.0
4.0	3.5 - 10 ft Caliche; light pink			492/320		0 - 10 ft Bentonite Plug	4.0
5.0				73/-- mg/kg			5.0
6.0				383/360			6.0
7.0							7.0
8.0							8.0
9.0							9.0
10.0				21/-- mg/kg			10.0
11.0	10 - 12.5 ft Medium sand; light pink		Interbedded calcihe cobbles				11.0
12.0						10 to 14 ft Backfill	12.0
13.0	12.5 - 14 ft Sandstone; tan; dry		Hard (blowcount = 50/3 inches)				13.0
14.0				99/40 mg/kg			14.0
15.0							15.0
16.0							16.0
17.0							17.0
18.0							18.0
19.0							19.0
20.0							20.0
21.0							21.0
22.0							22.0
23.0							23.0
24.0							24.0
25.0							25.0
26.0							26.0
27.0							27.0
28.0							28.0
29.0							29.0
30.0							30.0
31.0							31.0
32.0							32.0
33.0							33.0
34.0							34.0
35.0							35.0
36.0							36.0
37.0							37.0
38.0							38.0
39.0							39.0
40.0							40.0
41.0							41.0
42.0							42.0
43.0							43.0
44.0							44.0
45.0							45.0
46.0							46.0
47.0							47.0
48.0							48.0
49.0							49.0
50.0							50.0
51.0							51.0
52.0							52.0
53.0							53.0
54.0							54.0
55.0							55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Logger:	Andrew Parker	**Client:**	**Trench ID:**
Driller:	Gandy Backhoe	Pride Energy	2017 East
Drilling Method:	Backhoe	**Project Name:**	
Start Date:	1/8/2018	1RP-4625 (NM 87 State 001 Tank Battery)	
End Date:	1/8/2018	**Location:**	
		33.059944, -103.513758	

Depth (feet)	Description	Lithology	Comments	Chloride (LAB)	Trench Completion	Depth (feet)
0.0	0 - 1 ft Fine sand, silt; brown At 1 foot caliche; tan			<30 (0.5 ft)	Backfill with excavated material	0.0
1.0			Very hard caliche			1.0
2.0						2.0
3.0						3.0
4.0						4.0
5.0						5.0
6.0						6.0
7.0						7.0
8.0						8.0
9.0						9.0
10.0						10.0
11.0						11.0
12.0						12.0
13.0						13.0
14.0						14.0
15.0						15.0
16.0						16.0
17.0						17.0
18.0						18.0
19.0						19.0
20.0						20.0
21.0						21.0
22.0						22.0
23.0						23.0
24.0						24.0
25.0						25.0
26.0						26.0
27.0						27.0
28.0						28.0
29.0						29.0
30.0						30.0
31.0						31.0
32.0						32.0
33.0						33.0
34.0						34.0
35.0						35.0
36.0						36.0
37.0						37.0
38.0						38.0
39.0						39.0
40.0						40.0
41.0						41.0
42.0						42.0
43.0						43.0
44.0						44.0
45.0						45.0
46.0						46.0
47.0						47.0
48.0						48.0
49.0						49.0
50.0						50.0
51.0						51.0
52.0						52.0
53.0						53.0
54.0						54.0
55.0						55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy	**Appendix D**
Trench Sampling Log	**May 2018**

Logger:	Andrew Parker	**Client:**	**Trench ID:**
Driller:	Gandy Backhoe	Pride Energy	
Drilling Method:	Backhoe	**Project Name:**	
Start Date:	1/8/2018	1RP-4625 (NM 87 State 001 Tank Battery)	2017 West
End Date:	1/8/2018	**Location:**	
		33.060345, -103.513492	

Depth (feet)	Description	Lithology	Comments	Chloride (LAB)	Trench Completion	Depth (feet)
0.0	0 - 1 ft Fine sand, silt; brown At 1 foot caliche; tan			< 30 @ 0.5 ft	Backfill with excavated material	0.0
1.0			Very hard caliche			1.0
2.0						2.0
3.0						3.0
4.0						4.0
5.0						5.0
6.0						6.0
7.0						7.0
8.0						8.0
9.0						9.0
10.0						10.0
11.0						11.0
12.0						12.0
13.0						13.0
14.0						14.0
15.0						15.0
16.0						16.0
17.0						17.0
18.0						18.0
19.0						19.0
20.0						20.0
21.0						21.0
22.0						22.0
23.0						23.0
24.0						24.0
25.0						25.0
26.0						26.0
27.0						27.0
28.0						28.0
29.0						29.0
30.0						30.0
31.0						31.0
32.0						32.0
33.0						33.0
34.0						34.0
35.0						35.0
36.0						36.0
37.0						37.0
38.0						38.0
39.0						39.0
40.0						40.0
41.0						41.0
42.0						42.0
43.0						43.0
44.0						44.0
45.0						45.0
46.0						46.0
47.0						47.0
48.0						48.0
49.0						49.0
50.0						50.0
51.0						51.0
52.0						52.0
53.0						53.0
54.0						54.0
55.0						55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy	**Appendix D**
Trench Sampling Log	**May 2018**

Logger:	Andrew Parker	**Client:**	**Trench ID:**
Driller:	Gandy Backhoe	Pride Energy	2017 Northeast
Drilling Method:	Backhoe	**Project Name:**	
Start Date:	1/8/2018	1RP-4625 (NM 87 State 001 Tank Battery)	
End Date:	1/8/2018	**Location:**	
		33.060264, -103.513115	

Depth (feet)	Description	Lithology	Comments	Chloride (LAB)	Trench Completion	Depth (feet)
0.0	0 - 1 ft Fine sand, silt; brown At 1 foot caliche; tan			<30 at 0.5 ft	Backfill with excavated material	0.0
1.0			Very hard caliche			1.0
2.0						2.0
3.0						3.0
4.0						4.0
5.0						5.0
6.0						6.0
7.0						7.0
8.0						8.0
9.0						9.0
10.0						10.0
11.0						11.0
12.0						12.0
13.0						13.0
14.0						14.0
15.0						15.0
16.0						16.0
17.0						17.0
18.0						18.0
19.0						19.0
20.0						20.0
21.0						21.0
22.0						22.0
23.0						23.0
24.0						24.0
25.0						25.0
26.0						26.0
27.0						27.0
28.0						28.0
29.0						29.0
30.0						30.0
31.0						31.0
32.0						32.0
33.0						33.0
34.0						34.0
35.0						35.0
36.0						36.0
37.0						37.0
38.0						38.0
39.0						39.0
40.0						40.0
41.0						41.0
42.0						42.0
43.0						43.0
44.0						44.0
45.0						45.0
46.0						46.0
47.0						47.0
48.0						48.0
49.0						49.0
50.0						50.0
51.0						51.0
52.0						52.0
53.0						53.0
54.0						54.0
55.0						55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy	**Appendix D**
Trench Sampling Log	**May 2018**

Logger:	Andrew Parker	**Client:**	**Trench ID:**
Driller:	Gandy Backhoe	Pride Energy	2017 Northwest (within tank battery berm)
Drilling Method:	Backhoe	**Project Name:**	
Start Date:	1/8/2018	1RP-4625 (NM 87 State 001 Tank Battery)	
End Date:	1/8/2018	**Location:**	
		33.059876, -103.514189	

Depth (feet)	Description	Lithology	Comments	Chloride Lab (mg/kg)	Trench Completion	Depth (feet)
0.0	0 - 1 ft Fine sand, silt; medium brown		Pockets of impacted soil from 1 to 2 feet			0.0
1.0						1.0
2.0				4600		2.0
3.0	2 - 12 ft Fine sand, silt, interbedded caliche; light grey, hydrocarbon odor		Hydrocarbon impacted soil		Backfill with excavated material	3.0
4.0						4.0
5.0						5.0
6.0						6.0
7.0						7.0
8.0						8.0
9.0						9.0
10.0						10.0
11.0						11.0
12.0				2900		12.0
13.0						13.0
14.0						14.0
15.0						15.0
16.0						16.0
17.0						17.0
18.0						18.0
19.0						19.0
20.0						20.0
21.0						21.0
22.0						22.0
23.0						23.0
24.0						24.0
25.0						25.0
26.0						26.0
27.0						27.0
28.0						28.0
29.0						29.0
30.0						30.0
31.0						31.0
32.0						32.0
33.0						33.0
34.0						34.0
35.0						35.0
36.0						36.0
37.0						37.0
38.0						38.0
39.0						39.0
40.0						40.0
41.0						41.0
42.0						42.0
43.0						43.0
44.0						44.0
45.0						45.0
46.0						46.0
47.0						47.0
48.0						48.0
49.0						49.0
50.0						50.0
51.0						51.0
52.0						52.0
53.0						53.0
54.0						54.0
55.0						55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy

Appendix D

Trench Sampling Log

May 2018

Logger:	Andrew Parker	**Client:**	**Trench ID:**
Driller:	Atkins Egineering	Pride Energy	
Drilling Method:	Hollow Stem Auger	**Project Name:**	
Start Date:	4/2/2018	1RP-4625 (NM 87 State 001 Tank Battery)	Historic Release North
End Date:	4/2/2018	**Location:**	
		33.060086, -103.513542	

Depth (feet)	Description	Lithology	Comments	**Chloride** field/lab	Trench Completion	**Depth (feet)**
0.0	0 - 0.5 ft		Sparse Vegetation at	<30/--		0.0
1.0	Silt; brown		surface			1.0
2.0			Caliche clasts at 2ft	--/78		2.0
3.0			Light grey, very hard			3.0
4.0	0.5 - 6 ft Caliche		Light pink, med. Density	100/36	Hydrated bentonite	4.0
5.0			Very hard			5.0
6.0			refusal at 6ft			6.0
7.0			No split spoon return at 6 ft			7.0
8.0						8.0
9.0						9.0
10.0						10.0
11.0						11.0
12.0						12.0
13.0						13.0
14.0						14.0
15.0						15.0
16.0						16.0
17.0						17.0
18.0						18.0
19.0						19.0
20.0						20.0
21.0						21.0
22.0						22.0
23.0						23.0
24.0						24.0
25.0						25.0
26.0						26.0
27.0						27.0
28.0						28.0
29.0						29.0
30.0						30.0
31.0						31.0
32.0						32.0
33.0						33.0
34.0						34.0
35.0						35.0
36.0						36.0
37.0						37.0
38.0						38.0
39.0						39.0
40.0						40.0
41.0						41.0
42.0						42.0
43.0						43.0
44.0						44.0
45.0						45.0
46.0						46.0
47.0						47.0
48.0						48.0
49.0						49.0
50.0						50.0
51.0						51.0
52.0						52.0
53.0						53.0
54.0						54.0
55.0						55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy | **Appendix D**

Trench Sampling Log | **May 2018**

Logger:	Andrew Parker	**Client:**	**Trench ID:**
Driller:	Gandy Backhoe	Pride Energy	Historic Release Northeast
Drilling Method:	Backhoe	**Project Name:**	
Start Date:	1/8/2018	1RP-4625 (NM 87 State 001 Tank Battery)	
End Date:	1/8/2018	**Location:**	
		33.059774, -103.513591	

Depth (feet)	Description	Lithology	Comments	**Chloride** Lab (mg/kg)	Trench Completion	**Depth (feet)**
0.0	0 - 1 ft Silt; brown At 1 foot caliche; tan			260 at 0.5 ft	Backfill with excavated material	0.0
1.0			Very hard caliche			1.0
2.0						2.0
3.0						3.0
4.0						4.0
5.0						5.0
6.0						6.0
7.0						7.0
8.0						8.0
9.0						9.0
10.0						10.0
11.0						11.0
12.0						12.0
13.0						13.0
14.0						14.0
15.0						15.0
16.0						16.0
17.0						17.0
18.0						18.0
19.0						19.0
20.0						20.0
21.0						21.0
22.0						22.0
23.0						23.0
24.0						24.0
25.0						25.0
26.0						26.0
27.0						27.0
28.0						28.0
29.0						29.0
30.0						30.0
31.0						31.0
32.0						32.0
33.0						33.0
34.0						34.0
35.0						35.0
36.0						36.0
37.0						37.0
38.0						38.0
39.0						39.0
40.0						40.0
41.0						41.0
42.0						42.0
43.0						43.0
44.0						44.0
45.0						45.0
46.0						46.0
47.0						47.0
48.0						48.0
49.0						49.0
50.0						50.0
51.0						51.0
52.0						52.0
53.0						53.0
54.0						54.0
55.0						55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy	**Appendix D**
Trench Sampling Log	**May 2018**

Logger:	Andrew Parker	**Client:**	**Trench ID:**
Driller:	Gandy Backhoe	Pride Energy	Historic Release Southwest
Drilling Method:	Backhoe	**Project Name:**	
Start Date:	1/8/2018	1RP-4625 (NM 87 State 001 Tank Battery)	
End Date:	1/8/2018	**Location:**	
		33.059409, -103.514169	

Depth (feet)	Description	Lithology	Comments	Chloride (LAB)	Trench Completion	Depth (feet)
0.0	0 - 0.5 ft Caliche, silt; dark brown					0.0
1.0	0.5 - 2 ft Silt; brown					1.0
2.0				500		2.0
3.0	2 - 4 ft Caliche, tan				Backfill with excavated material	3.0
4.0						4.0
5.0	4 - 8 ft Caliche, light pink					5.0
6.0						6.0
7.0						7.0
8.0				45		8.0
9.0	8 - 9 ft Caliche, tan		Very hard at 8 feet			9.0
10.0						10.0
11.0						11.0
12.0						12.0
13.0						13.0
14.0						14.0
15.0						15.0
16.0						16.0
17.0						17.0
18.0						18.0
19.0						19.0
20.0						20.0
21.0						21.0
22.0						22.0
23.0						23.0
24.0						24.0
25.0						25.0
26.0						26.0
27.0						27.0
28.0						28.0
29.0						29.0
30.0						30.0
31.0						31.0
32.0						32.0
33.0						33.0
34.0						34.0
35.0						35.0
36.0						36.0
37.0						37.0
38.0						38.0
39.0						39.0
40.0						40.0
41.0						41.0
42.0						42.0
43.0						43.0
44.0						44.0
45.0						45.0
46.0						46.0
47.0						47.0
48.0						48.0
49.0						49.0
50.0						50.0
51.0						51.0
52.0						52.0
53.0						53.0
54.0						54.0
55.0						55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy	**Appendix D**
Trench Sampling Log	**May 2018**

Logger:	Andrew Parker	**Client:**	**Trench ID:**
Driller:	Gandy Backhoe	Pride Energy	
Drilling Method:	Backhoe	**Project Name:**	
Start Date:	1/8/2018	1RP-4625 (NM 87 State 001 Tank Battery)	Historic Release Southeast
End Date:	1/8/2018	**Location:**	
		33.059401, -103.513557	

Depth (feet)	Description	Lithology	Comments	**Chloride** (LAB)	Trench Completion	**Depth (feet)**
0.0	0 - 0.5 ft Silt, caliche clasts (6 inches), tan				Backfill with excavated material	0.0
1.0	0.5 - 1 ft Caliche, tan		Very hard	<30 @ 0.5 ft		1.0
2.0						2.0
3.0						3.0
4.0						4.0
5.0						5.0
6.0						6.0
7.0						7.0
8.0						8.0
9.0						9.0
10.0						10.0
11.0						11.0
12.0						12.0
13.0						13.0
14.0						14.0
15.0						15.0
16.0						16.0
17.0						17.0
18.0						18.0
19.0						19.0
20.0						20.0
21.0						21.0
22.0						22.0
23.0						23.0
24.0						24.0
25.0						25.0
26.0						26.0
27.0						27.0
28.0						28.0
29.0						29.0
30.0						30.0
31.0						31.0
32.0						32.0
33.0						33.0
34.0						34.0
35.0						35.0
36.0						36.0
37.0						37.0
38.0						38.0
39.0						39.0
40.0						40.0
41.0						41.0
42.0						42.0
43.0						43.0
44.0						44.0
45.0						45.0
46.0						46.0
47.0						47.0
48.0						48.0
49.0						49.0
50.0						50.0
51.0						51.0
52.0						52.0
53.0						53.0
54.0						54.0
55.0						55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy	**Appendix D**
Trench Sampling Log	**May 2018**

Logger:	Kristin Pope	**Client:**	**Boring ID:**
Driller:	Atkins Environmental	Pride Energy	SB-02 Historic
Drilling Method:	Hollow Stem Auger	**Project Name:**	
Start Date:	1/8/2018	1RP-4625 (NM 87 State 001 Tank Battery)	
End Date:	1/8/2018	**Location:**	
		33.059743, -103.513652 (WGS84/NAD83)	

Depth (feet)	Description	Lithology	Comments	Chloride Titrate/Lab	Borehole Completion	Boring Diameter 3.5 Inches	Depth (feet)
0.0	0 - 0.25 ft Silty sand; dark brown		No vegetation	2968/4200 mg/kg			0.0
1.0	0.25 - 5 ft Caliche; light pink, dry		Hard				1.0
2.0							2.0
3.0							3.0
4.0				404/-- mg/kg			4.0
5.0							5.0
6.0	5 - 9 ft Medium sand; tan, pink; dry						6.0
7.0							7.0
8.0							8.0
9.0				157/<30 mg/kg			9.0
10.0	9 - 16 ft Caliche; white; interbedded sand (15%)		Hard			0 - 21 feet Bentonite Plug	10.0
11.0							11.0
12.0							12.0
13.0							13.0
14.0							14.0
15.0							15.0
16.0				45/<30 mg/kg			16.0
17.0	16 - 21 ft Caliche, sand (10%); light pink; dry		Hard Blowcounts = 50/6 inches				17.0
18.0							18.0
19.0							19.0
20.0							20.0
21.0				57/-- mg/kg			21.0
22.0							22.0
23.0							23.0
24.0							24.0
25.0							25.0
26.0							26.0
27.0							27.0
28.0							28.0
29.0							29.0
30.0							30.0
31.0							31.0
32.0							32.0
33.0							33.0
34.0							34.0
35.0							35.0
36.0							36.0
37.0							37.0
38.0							38.0
39.0							39.0
40.0							40.0
41.0							41.0
42.0							42.0
43.0							43.0
44.0							44.0
45.0							45.0
46.0							46.0
47.0							47.0
48.0							48.0
49.0							49.0
50.0							50.0
51.0							51.0
52.0							52.0
53.0							53.0
54.0							54.0
55.0							55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy

Appendix D

Borehole Sampling Log

May 2018

Logger:	Kristin Pope/Andrew Parker	**Client:**	**Boring ID:**
Driller:	Atkins Environmental	Pride Energy	SB-03 Playa
Drilling Method:	Hollow Stem Auger	**Project Name:**	
Start Date:	4/3/2018	1RP-4625 (NM 87 State 001 Tank Battery)	
End Date:	4/3/2018	**Location:**	
		33.059934, -103.514626 (WGS84/NAD83)	

Depth (feet)	Description	Lithology	Comments	Chloride Titrate/Lab	Borehole Completion	Boring Diameter 3.5 Inches	Depth (feet)
0.0	0 - 6 ft Silty sand; dark brown		Interbedded calcihe from 4 to 6 ft	108/-- mg/kg			0.0
1.0							1.0
2.0				--/47			2.0
3.0							3.0
4.0				--/200			4.0
5.0				632/660 mg/kg			5.0
6.0				614/530			6.0
7.0	6 - 16 ft Silt; light grey						7.0
8.0							8.0
9.0				672/-- mg/kg			9.0
10.0							10.0
11.0							11.0
12.0							12.0
13.0							13.0
14.0							14.0
15.0				341/-- mg/kg		Bentonite Plug	15.0
16.0							16.0
17.0	16 - 31 ft Medium sand, well sorted, round; light tan						17.0
18.0							18.0
19.0							19.0
20.0				207/220 mg/kg			20.0
21.0							21.0
22.0							22.0
23.0							23.0
24.0							24.0
25.0				168/-- mg/kg			25.0
26.0							26.0
27.0							27.0
28.0							28.0
29.0							29.0
30.0				129/200 mg/kg			30.0
31.0							31.0
32.0	Located in lowest point of playa						32.0
33.0							33.0
34.0							34.0
35.0							35.0
36.0							36.0
37.0							37.0
38.0							38.0
39.0							39.0
40.0							40.0
41.0							41.0
42.0							42.0
43.0							43.0
44.0							44.0
45.0							45.0
46.0							46.0
47.0							47.0
48.0							48.0
49.0							49.0
50.0							50.0
51.0							51.0
52.0							52.0
53.0							53.0
54.0							54.0
55.0							55.0

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW
Suite F-142
Albuquerque, NM 87104
505-266-5004

Pride Energy | **Appendix D**

Borehole Sampling Log | **May 2018**

APPENDIX E

FIELD PROCEDURE
Chloride Titration Using
0.282 Normal Silver Nitrate Solution

1.0 Purpose

This procedure is to be used to determine the concentration of chloride in soil and other solids (e.g. drilling waste).

2.0 Scope

This procedure is to be used as the standard field measurement for soil chloride concentrations.

3.0 Sample Collection and Preparation

3.1 Collect at least 80 grams of soil from the sample collection point. Take care to ensure that the sample is representative of the general area of concern to include visible concentrations of hydrocarbons and soil types. If necessary, prepare a composite sample for soils obtained at several points in the sample area.

3.2 The soil sample(s) shall be immediately inserted into a one-quart or larger polyethylene freezer bag. Care should be taken to insure that no cross-contamination occurs between the soil sample and the collection tools or sample processing equipment.

3.3 The sealed sample bag should be massaged to break up any clods.

4.0 Sample Preparation

4.1 Tare a clean glass vial having a minimum 40 ml capacity. Add at least 10 grams of the soil sample and record the weight.

4.2 Add at least 10 grams of reverse osmosis water or distilled water to the soil sample and shake or agitate for 20 seconds.

4.3 Allow the sample to set for a period of 5 minutes or until the separation of soil and water.

4.4 Carefully pour the free liquid extract from the sample, through a paper filter if necessary, into a clean plastic cup.

5.0 Titration Procedure

5.1 Using a graduated pipette, remove 10 ml extract and dispense into a clean plastic cup.

5.2 Add 2-3 drops potassium chromate (K_2CrO_4) to mixture.

5.3 If the sample contains any sulfides (hydrogen or iron sulfides are common to oilfield soil samples) add 2-3 drops of hydrogen peroxide (H_2O_2) to mixture.

5.4 Using a 1 ml pipette, carefully add .282 normal silver nitrate (one drop at a time) to the sample while constantly agitating it. Stop adding silver nitrate when the solution begins to change from yellow to red. Be consistent with endpoint recognition.

5.5 Record the ml of silver nitrate used.

6.0 Calculation

To obtain the chloride concentration, insert measured data into the following formula:

$$\frac{.282 \times 35{,}450 \times \text{ml } AgNO_3}{\text{ml water extract}} \times \frac{\text{grams of water in mixture}}{\text{grams of soil in mixture}}$$

Using Step 5.0, determine the chloride concentration of the RO water used to mix with the soil sample. Record this concentration and subtract it from the formula results to find the net chloride in the soil sample.

Record all results on a field form.

Additional Notes

1) Make sure the scale is weighing in grams.
2) "Zero" the scale with clean, empty 40 ml container (including the cap) sitting on the scale.
3) Add 10 to 20 grams of sample soil to the container. Record the weight.
4) "Re-zero" the scale.
5) Add distilled water to almost fill the container. Record the weight.
6) Screw the cap on, and shake the container to thoroughly mix the sample with the distilled water. Set aside to allow settling of the sample. This will take only a few minutes for coarse grained material and up to 20 minutes for very fine grained sediments. The solution does not need to be perfectly clear to continue the procedure.
7) Add 3 drops of Potassium Chromate to a small, clean, plastic cup.
8) Extract 10 ml (using a large pipette – at least 10 ml) of solution from the sample container and put it into the plastic cup. Record ml of solution placed in the cup.
    a. This can be kept track of by careful recording of "before" and "after" fluid levels in the pipette.
    b. Or: Place the plastic cup on the scale with the potassium chromate and "zero" the scale. Add solution to the cup until 10 grams is indicated on the scale.
9) Swirl the solution and the potassium chromate to mix them.
10) Using a 1 ml pipette, add silver nitrate to the mixed solution drop by drop while swirling. The entire solution will change from a pale lemon yellow color to a brick red color when sufficient silver nitrate has been added. STOP when it all turns brick red. It does not need to be a deep brick red color. This will result in an overly high result. Record ml of silver nitrate used.
11) The chloride concentration of the sample is given by:

$$C_{sam} = (35{,}450 * 0.282) * \frac{\text{(grams of water)}}{\text{(grams of soil)}} * \frac{\text{(ml of silver nitrate)}}{\text{(ml of solution)}}$$

or:

$$C_{sam} = (9997) * \frac{\text{(grams of water (Step 5))}}{\text{(grams of soil (Step 3))}} * \frac{\text{(ml of silver nitrate (Step 10))}}{\text{(ml of solution (Step 8))}}$$

Units are: mg(of chloride)/kg(of soil)

Equipment List:

Scale
10 ml pipettes
1 ml pipettes
Controllers for pipettes (small and large),
press pipette into open end (carefully)
40 ml sample containers
Small plastic cups
Silver Nitrate
Potassium Chromate
Distilled water
Waste container for final solution. A robust plastic jug with lid will do for field use.
DO NOT pour this down a drain. Dispose of with a chemical lab.
Waste bags for used plastic cups (rinse and pour rinsing fluid into robust jug)

Calculator
Nitrile gloves
Safety glasses
Paper towels

Safety Data

http://ptcl.chem.ox.ac.uk/~hmc/hsci/chemicals/silver_nitrate.html

http://ptcl.chem.ox.ac.uk/~hmc/hsci/chemicals/potassium_chromate.html

Photo-Ionization Detector (PID) Standard Operating Procedures

Headspace analysis procedures should be conducted according to NMOCD approved industry standards or other NMOCD-approved procedures. Accepted NMOCD procedures are as follows:

a) Fill a 0.5 liter or larger jar half full of sample and seal the top tightly with aluminum foil or fill a one quart zip-lock bag one-half full of sample and seal the top of the bag leaving the remainder of the bag filled with air.

b) Ensure that the sample temperature is between 15 to 25 degrees Celsius (59-77 degrees Fahrenheit).

c) Allow aromatic hydrocarbon vapors to develop within the headspace of the sample jar or bag for 5 to 10 minutes. During this period, the sample jar should be shaken vigorously for 1 minute or the contents of the bag should be gently massaged to break up soil clods.

d) If using a jar, pierce the aluminum foil seal with the probe of either a PID or FID organic vapor meter (OVM), and then record the highest (peak) measurement. If using a bag, carefully open one end of the bag and insert the probe of the OVM into the bag and re-seal the bag around the probe as much as possible to prevent vapors from escaping. Record the peak measurement. The OVM must be calibrated to assume a benzene response factor.