

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 April 3, 2017

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	Energen Resources Corporation	Contact	Andy Cobb
Address	3510 N A Street, Midland, TX 79705	Telephone No.	432-686-3599
Facility Name	State B	Facility Type	Oil and Gas Production Facility
Surface Owner	Dan Field/Branch Ranch	Mineral Owner	State of New Mexico
		API No.	3002502709

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	1	16S	35E	4610	FSL	2301	FEL	LEA

Latitude 32.9565239 Longitude -103.4101334 NAD83

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	136 barrels	Volume Recovered	0
Source of Release	Oil Tank	Date and Hour of Occurrence	5/22/18	Date and Hour of Discovery	6/1/18
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required				
By Whom?	If YES, To Whom?				
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If YES, Volume Impacting the Watercourse.					

RECEIVED

By CHernandez at 2:31 pm, Jun 04, 2018

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*



Corrosion caused a hole to develop in the oil tank and release fluid. The fluid was not immediately discovered.

Describe Area Affected and Cleanup Action Taken.*

The area inside the berm was affected and remediation will be as soon as possible.

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.

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: Andy Cobb	Approval Date: 6/4/2018	Expiration Date:
Title: Director EH&S	Conditions of Approval: See attached directive	Attached <input checked="" type="checkbox"/>
E-mail Address: andy.cobb@energen.com		
Date: 6/4/2018	Phone: 432-686-3599	

* Attach Additional Sheets If Necessary

1RP-5082

nCH1815552862

pCH1815554047



Operator/Responsible Party,

The OCD has received the form C-141 you provided on _6/4/2018_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-5082_ 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 _7/4/2018_. 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; C₆ thru C₃₆), 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; C₆ thru C₃₆), 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

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State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	nCH1815552862
District RP	IRP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Release Notification

Responsible Party

Responsibly Party	Energen Resources Corporation	OGRID	162928
Contact Name	Tommy York	Contact Telephone	432-209-2483
Contact Email	tommy.york@energen.com	Incident # (assigned by OCD)	IRP-5082
Contact Mailing Address	3510 N A Street, Midland, TX 79705		

Location of Release Source

Latitude 32.95652 Longitude -103.41013
(Nad 83 in decimal degrees to 5 decimal places)

Site Name	State B	Site Type	Tank Battery
Date Release Discovered	06/01/18	API# (if applicable)	30-025-02709

Unit Letter	Section	Township	Range	County
"J"	1	16	35	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: State of New Mexico)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls)	136	Volume Recovered (bbls)	0
<input type="checkbox"/> Produced Water	Volume Released (bbls)		Volume Recovered (bbls)	
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)		Volume/Weight Recovered (provide units)	

Cause of Release

A hole developed in the oil tank as a result of corrosion; the fluid was not immediately discovered.

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State of New Mexico
Oil Conservation Division

Incident ID	nCH1815552862
District RP	IRP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Release of greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means? (phone, email, etc)? No	

Initial Response

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

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Release materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11 (A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Tommy York

Title: Production Superintendent

Signature: Tommy YorkDate: 12-19-18email: tommy.york@energen.comTelephone: 432-209-2483**OCD Only**

Received by: _____

Date: _____

REVIEWED**By CHernandez at 10:12 am, Jan 16, 2019**

Form C-141

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State of New Mexico
Oil Conservation Division

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Site Assessment/Characterization*This information must be provided to the appropriate district office no later than 90 days after the release discover date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	63 Ft. (ft. bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinarily high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

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State of New Mexico
Oil Conservation Division

Incident ID	nCH1815552862
District RP	IRP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

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

Printed Name: Tommy York

Title: Production Superintendent

Signature: Tommy York

Date: 12-19-18

email: tommy.york@energen.com

Telephone: 432-209-2483

OCD Only**APPROVED**

Received by:

By CHernandez at 10:12 am, Jan 16, 2019

Form C-141

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State of New Mexico
Oil Conservation Division

Incident ID	nCH1815552862
District RP	IRP-5082
Facility ID	30-025-02709
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Remediation Plan**Remediation Plan Checklist:** Each of the following items must be included in the report.

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

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

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

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

Printed Name: Tommy York

Title: Production Superintendent

Signature:



Date:

12-19-18

email: tommy.york@energen.com

Telephone:

432-209-2483

OCD Only

Received by: _____

Date: _____

☐ Approved☐ Approved with Attached Conditions of Approval☐ Denied☐ Deferral Approved

Signature:

APPROVED

By CHernandez at 10:12 am, Jan 16, 2019

**APPROVED****By CHernandez at 10:11 am, Jan 16, 2019**

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

November 12, 2018

Olivia Yu & Christina Hernandez
 New Mexico Energy, Minerals and Natural Resources Department
 Oil Conservation Division, District 1
 1625 French Drive
 Hobbs, NM 88240

Ryan Mann
 Hobbs Field Office
 New Mexico State Land Office
 2827 North Dal Paso Street, Suite 117
 Hobbs, NM 88240

Re: Site Assessment Report and Proposed Remediation Plan
Site Name: State B
GPS: Latitude: 32.95652 Longitude: -103.41013
Legals: UL "J", Sec. 1, T16S, R35E
Lea County, New Mexico
NMOCD Ref. No. 1RP-5082

Lowry Environmental & Associates, LLC (LEA), on behalf of Energen Resources Corporation, has prepared this Site Assessment Report and Proposed Remediation Plan for the Release Site known as the State B. Details of the release are summarized on the table below:

Nature and Volume of Release	
Date Release Discovered	6/1/2018
Source of Release	Tank Battery
Type of Release	Crude Oil
Volume Released (bbls)	136
Volume Recovered (bbls)	None
Cause of Release	
A hole developed in the oil tank as a result of corrosion; the fluid was not immediately discovered.	
Affected Area	
The release affected and area within an unlined earthen containment.	
Was this a major release?	If YES, for what reasons (s) is this considered a major release?
Yes	Volume Greater than 25 bbls
If Yes, was immediate notice given to the OCD? By whom? To whom? When and by what means?	
N/A	

A copy of the Release Notification (NMOCD Form C-141) is provided as Attachment #8.

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Site Assessment/Characterization

What is the shallowest depth to groundwater beneath the area affected by the release?	>63'
Did this release impact groundwater or surface water?	No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	No
Are the lateral extents of the release within 300 feet of a wetland?	No
Are the lateral extents of the release overlying a subsurface mine?	No
Are the lateral extents of the release overlying an unstable area such as karst geology?	No
Are the lateral extents of the release within a 100-year floodplain?	No
Did the release impact areas not on an exploration, development, production or storage site?	No

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey was conducted in an effort to determine the average depth to groundwater within a 1 Mile radius of the Site and identify any registered water wells within a 1/2 Mile radius of the Site. A search of the NMOSE database suggested the presence of 1 water well (L10272) within 1,000 ft. of the Site. A field survey indicated available geographic information for L10272 was outdated and/or incorrect; there was no water well in that vicinity. A search of the USGS database did not identify any water wells within a 1/2 Mile radius.

Based on the volume and nature of the release, inferred depth to groundwater and NMOCD Siting Criteria, the NMOCD Closure Criteria for the Site is as follows:

Closure Criteria for Soil Impacted by a Release

Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)	50 mg/kg
Total Petroleum Hydrocarbons	2,500 mg/kg
Combined GRO and DRO	1,000 mg/kg
Chloride	10,000 mg/kg

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted on Figures 1 & 2. Depth to groundwater information is provided as Attachment #4. A Photographic Log is provided as Attachment #7.

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

INITIAL SITE ASSESSMENT

On **July 31, 2018**, two (2) investigative soil bores (SP-1 and SP-2) were advanced at the Site in an effort to determine the vertical extent of impacted soil affected above the NMOCD Closure Criteria. Soil bore SP-1 was advanced to a depth of 30 ft. bgs. During the advancement of the soil bore, 10 soil samples were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated soil was not affected above the NMOCD Closure Criteria for TPH and chloride beyond 12 ft. bgs in the area represented by soil bore SP-1.

Soil bore SP-2 was advanced to a depth of 63 ft. bgs. During the advancement of the soil bore, 14 soil samples were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated soil was not affected above the NMOCD Closure Criteria for TPH and chloride beyond 9 ft. bgs in the area represented by soil bore SP-1.

On **November 2, 2018**, four (4) soil samples (North @ 1', East @ 1', South @ 1' and West @ 1') were collected from the inferred edges of the affected area in an effort to determine the horizontal extent of impacted soil affected above the NMOCD Closure Criteria. The collected soil samples were submitted to an NMOCD-approved laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples, with the exception of soil sample North @ 1', which exhibited a GRO+DRO concentration of 2,311.4 mg/kg and a TPH concentration of 2,793.4 mg/kg. Collection of soil samples from deeper intervals was precluded due to the presence of an impenetrable rock layer.

A table summarizing laboratory analytical results from soil samples collected during the initial site assessment is provided on the following page:

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Concentrations of BTEX, TPH and/or Chloride in Soil - Initial Assessment(s)											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E300/4500CI
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
SP1 @ Surf.	7/31/18	0-6"	In-Situ	2.79	307	2,530	29,500	32,030	3,790	35,820	96.0
SP1 @ 3'	7/31/18	3'	In-Situ	-	-	389	4,400	4,789	447	5,236	1,260
SP1 @ 6'	7/31/18	6'	In-Situ	-	-	1,140	6,980	8,120	837	8,957	480
SP1 @ 9'	7/31/18	9'	In-Situ	-	-	112	1,490	1,602	204	1,806	96.0
SP1 @ 12'	7/31/18	12'	In-Situ	-	-	<10.0	31.0	31.0	<10.0	31.0	48.0
SP1 @ 15'	7/31/18	15'	In-Situ	<0.050	<0.300	<10.0	47.4	47.4	<10.0	47.4	32.0
SP1 @ 18'	7/31/18	18'	In-Situ	-	-	<10.0	21.2	21.2	<10.0	21.2	32.0
SP1 @ 21'	7/31/18	21'	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SP1 @ 24'	7/31/18	24'	In-Situ	-	-	<10.0	198	198	68.5	266.5	48.0
SP1 @ 27'	7/31/18	27'	In-Situ	-	-	<10.0	309	309	27.8	336.8	48.0
SP1 @ 30'	7/31/18	30'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SP2 @ Surf.	7/31/18	0-6"	In-Situ	<1.00	157	877	7,500	8,377	601	8,978	800
SP2 @ 3'	7/31/18	3'	In-Situ	-	-	2,680	12,300	14,980	1,430	16,410	352
SP2 @ 9'	7/31/18	9'	In-Situ	-	-	33.3	556	589	45.0	634.3	1,410
SP2 @ 15'	7/31/18	15'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,920
SP2 @ 21'	7/31/18	21'	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	2,120
SP2 @ 27'	7/31/18	27'	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	1,360
SP2 @ 33'	7/31/18	33'	In-Situ	-	-	30.0	388	418	68.8	486.8	1,090
SP2 @ 39'	7/31/18	39'	In-Situ	-	-	<10.0	66.4	66.4	14.8	81.2	720
SP2 @ 45'	7/31/18	45'	In-Situ	<0.050	<0.300	<10.0	29.1	29.1	<10.0	29.1	368
SP2 @ 48'	7/31/18	21'	In-Situ	-	-	<10.0	49.6	49.6	<10.0	49.6	368
SP2 @ 54'	7/31/18	21'	In-Situ	-	-	<10.0	34.5	34.5	<10.0	34.5	256
SP2 @ 57'	7/31/18	57'	In-Situ	-	-	<10.0	50.6	50.6	<10.0	50.6	224
SP2 @ 60'	7/31/18	60'	In-Situ	-	-	<10.0	37.6	37.6	<10.0	37.6	128
SP2 @ 63'	7/31/18	63'	In-Situ	<0.050	<0.300	<10.0	144	144	41.5	185.5	128
East @ 1'	11/2/18	1'	In-Situ	<0.050	<0.300	13.4	406	419.4	62.5	481.9	64.0
North @ 1'	11/2/18	1'	In-Situ	<0.050	0.332	11.4	2,300	2,311.4	482	2,793.4	480
West @ 1'	11/2/18	1'	In-Situ	<0.050	<0.300	<10.0	60.1	60.1	36.6	96.7	1,060
South @ 1'	11/2/18	1'	In-Situ	<0.050	<0.300	<10.0	195	195	119	314	3,080
Closure Criteria				10	50	-	-	1,000	-	2,500	10,000

A "Site & Sample Location Map" is provided as Attachment #3. Field Data, if applicable, is provided as Attachment #9. Soil profile observations are provided on Attachment #5. Laboratory analytical reports are provided as Attachment #6.

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

PROPOSED REMEDIATION PLAN

Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment, Energen Resources Corporation proposes the following remediation activities designed to advance the Site toward an approved closure:

- Utilizing mechanical equipment, excavate impacted soil within the release margins in the area characterized by sample point SP-1 to a depth beyond 9 ft. bgs, until laboratory analytical results from confirmation soil samples indicate concentrations of BTEX, TPH and chloride are below the NMOCD Closure Criteria.
- Excavate impacted soil within the release margins in the area characterized by sample point SP-2 to a depth beyond 3 ft. bgs, until laboratory analytical results from confirmation soil samples indicate concentrations of BTEX, TPH and chloride are below the NMOCD Closure Criteria.
- Excavation sidewalls will be advanced horizontally until laboratory analytical results from confirmation soil samples indicate BTEX, TPH and chloride concentrations are below the NMOCD Closure Criteria. This will include the impacted area characterized by soil sample North @ 1'.
- Excavated soil will be temporarily stockpiled on-site, pending transportation under manifest to an NMOCD-approved disposal facility.
- Upon receiving favorable laboratory analytical results from confirmation soil samples (below the NMOCD Closure Criteria) excavated areas will be backfilled with locally sourced, non-impacted "like" material. Excavation backfill will be placed at or near original relative positions. The affected area will be contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable.

SAMPLING PLAN

Upon completion of excavation activities, representative five-point composite excavation confirmation soil samples will be collected from the excavation sidewalls in each cardinal direction, representing no more than **50 linear ft**. A minimum of **one (1)** representative five-point composite excavation confirmation soil sample will be collected from the base of the excavated area representing every **500 square feet**. Additional, "discrete" confirmation soil samples will be collected from wet or visibly stained areas inferred to have been affected by the release, as necessary.

TIMELINE AND ESTIMATED VOLUME OF SOIL TO BE REMEDIATED

Remediation activities are expected to be completed **within 90 days** of receiving necessary approval(s) of this Site Assessment Summary and Proposed Remediation Plan. Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment it is estimated that approximately **1,070 cubic yards** of soil has been affected above the NMOCD Closure Criteria.

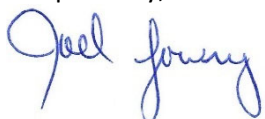
Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

RESTORATION, RECLAMATION AND RE-VEGETATION PLAN

Areas affected by remediation and closure activities will be substantially restored to the condition that existed prior to the release, to the extent practicable. Excavated areas will be backfilled with locally sourced, non-impacted "like" material placed at or near original relative positions. The affected area will be contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable. Affected areas not on production pads and/or lease roads will be reseeded with an agency and/or landowner-approved seed mixture during the first favorable growing season following closure of the site.

If you have any questions, or need any additional information, please feel free to contact Andy Cobb or the undersigned by phone or email.

Respectfully,



Joel W. Lowry
Environmental Professional
Lowry Environmental & Associates, LLC

Attachments:

- Attachment #1- Figure 1 - Topographic Map
- Attachment #2- Figure 2 - Aerial Map
- Attachment #3- Figure 3 - Site & Sample Location Map
- Attachment #4- Depth to Groundwater Information
- Attachment #5- Soil Profile
- Attachment #6- Laboratory Analytical Reports
- Attachment #7- Photographic Log
- Attachment #8- Release Notification (FORM C-141)
- Attachment #9- Field Data

LIMITATIONS

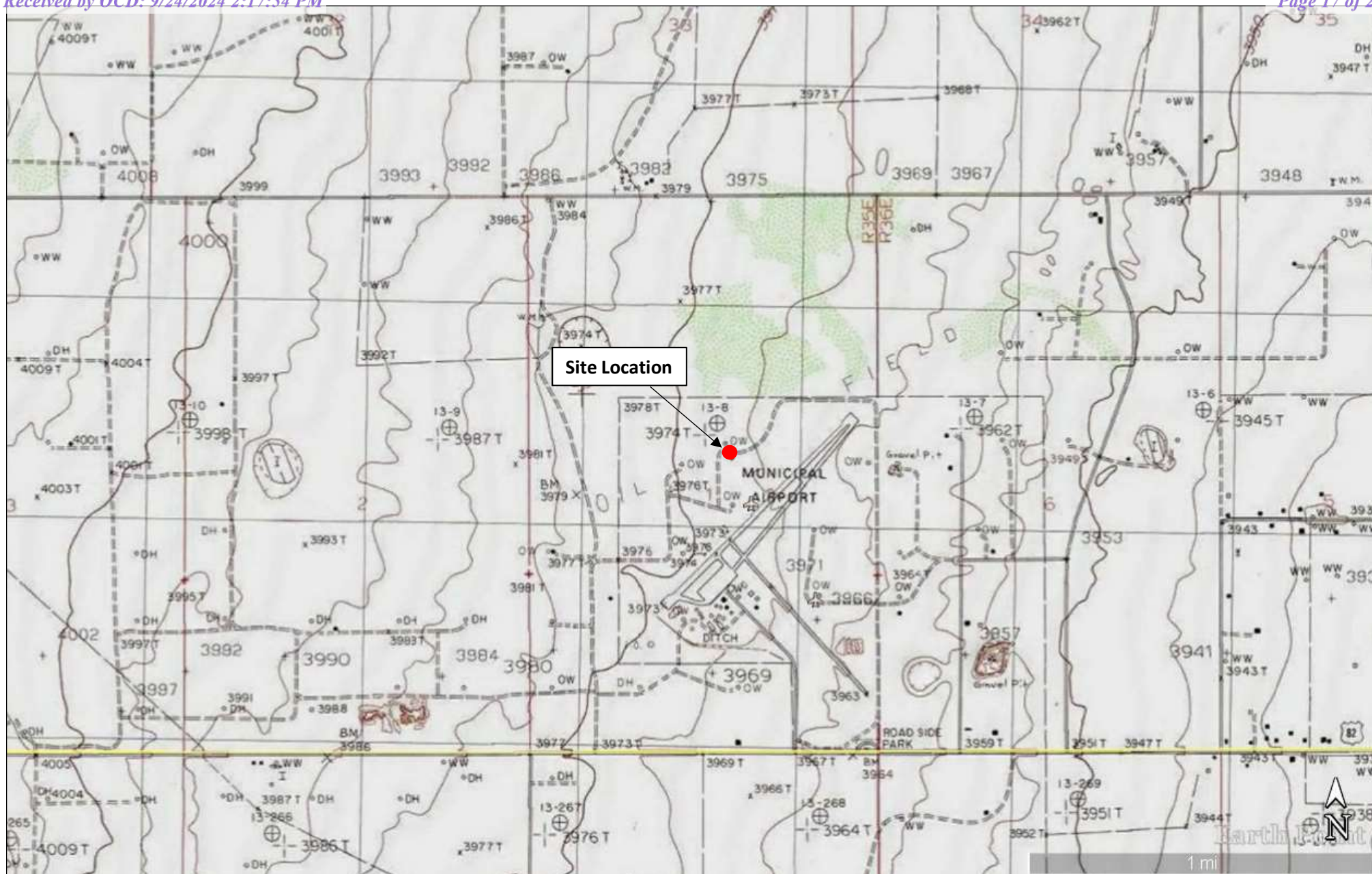
This document has been prepared on behalf of Energen Resources Corporation. Use of information contained in this report, including exhibits and attachments, by any other party without the consent of LEA and/or Energen Resources Corporation is prohibited.

This document has been prepared in a professional manner, using the degree of skill and care exercised by similar environmental professionals. LEA notes that the facts and conditions referenced in this document may change over time and that the conclusions and recommendations are only applicable to the facts and conditions as described at the time this document was prepared.

LEA has prepared this report to the best of its ability. No other warranty, expressed or implied, is made or intended.

ATTACHMENT #1

Figure 1 - Topographic Map



LEGEND:

● Site Location

Figure 1

Topographic Map
Energen Resources Corporation
State B
GPS: 32.95652, -103.41013
Lea County, New Mexico



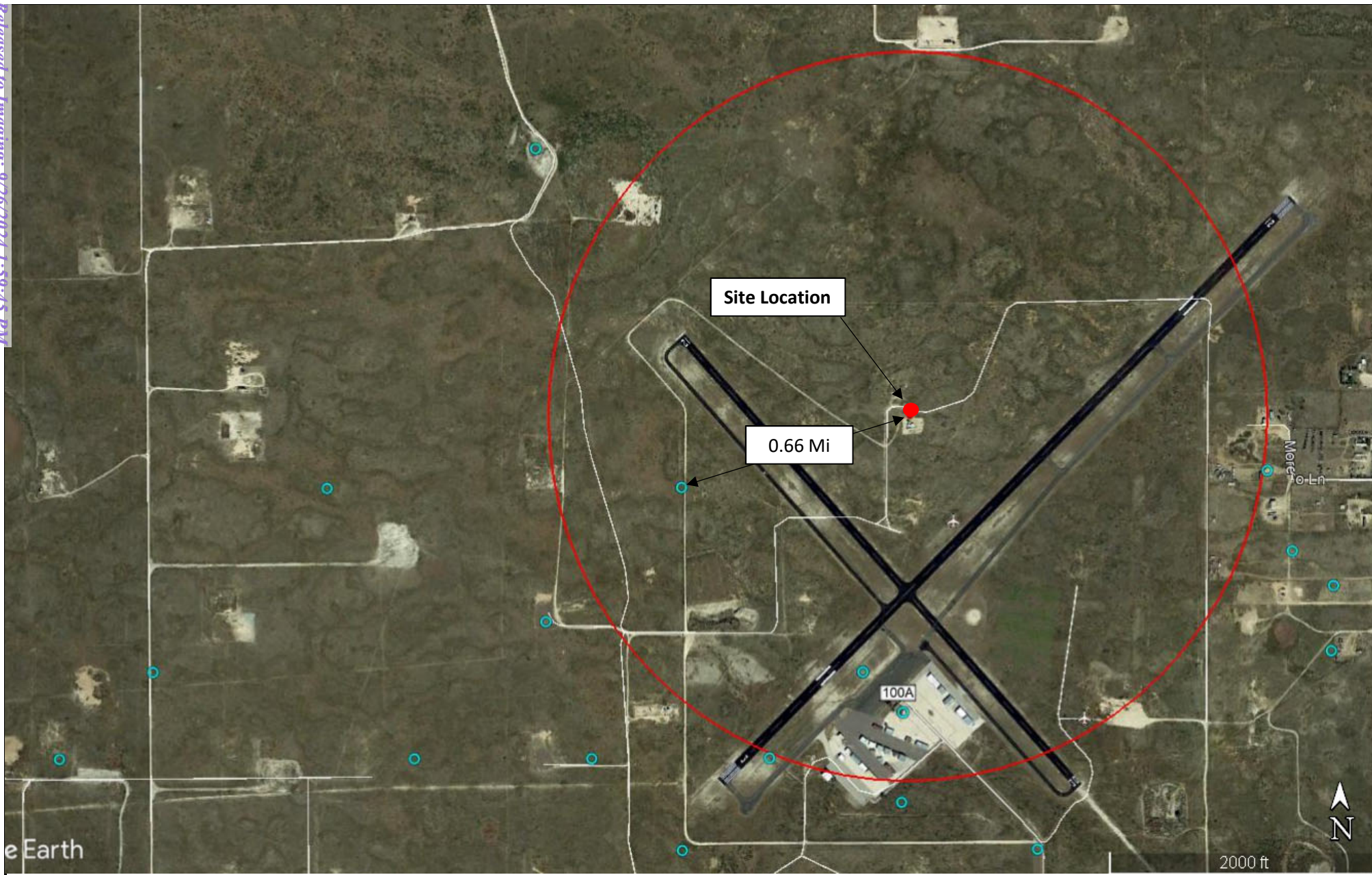
Drafted by: jwl

Checked by: client

Date: 11/5/2018

ATTACHMENT #2

Figure 2 - Aerial Map



LEGEND:

- Site Location
- Fresh Water Well
- 100-Year Floodplain
- High/Critical Karst

- Non-Industrial Building
- Subsurface Mine
- 1/2 Mile Radius

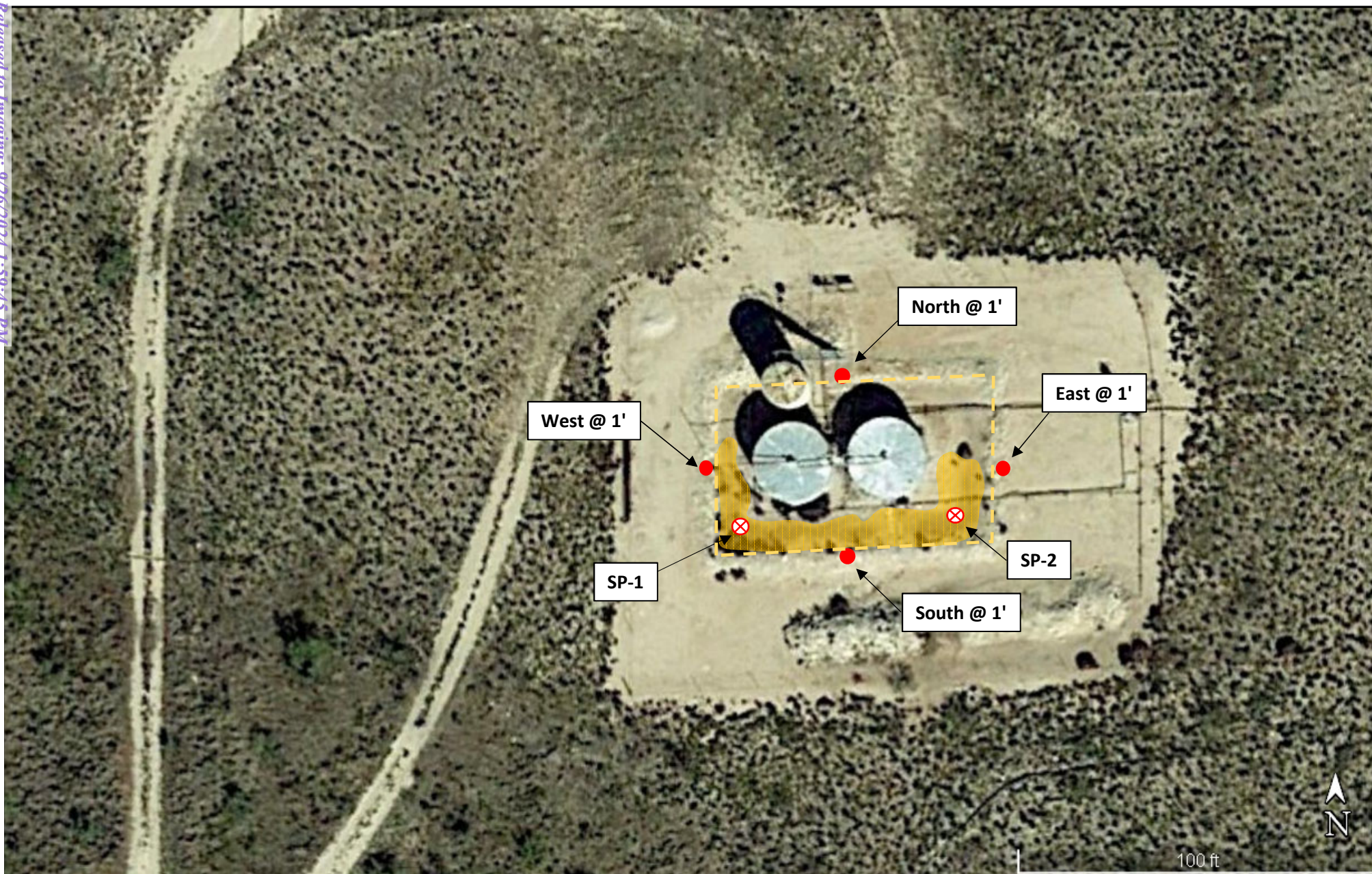
Figure 2
Aerial Map
Energen Resources Corporation
State B
GPS: 32.95652, -103.41013
Lea County, New Mexico



Drafted by: jwl Checked by: client Date: 11/9/2018

ATTACHMENT #3

Figure 3 - Site & Sample Location Map

**LEGEND:**

- Sample Location
- ⊗ Soil Boring
- Affected Area
- Earthen Berm

Figure 3
Site & Sample Location Map
Energen Resources Corporation
State B
GPS: 32.95652, -103.41013
Lea County, New Mexico



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Checked by: client

Date: 11/12/2018

ATTACHMENT #4
Depth to Groundwater Information

**LEGEND:**

● Site Location

Figure 4

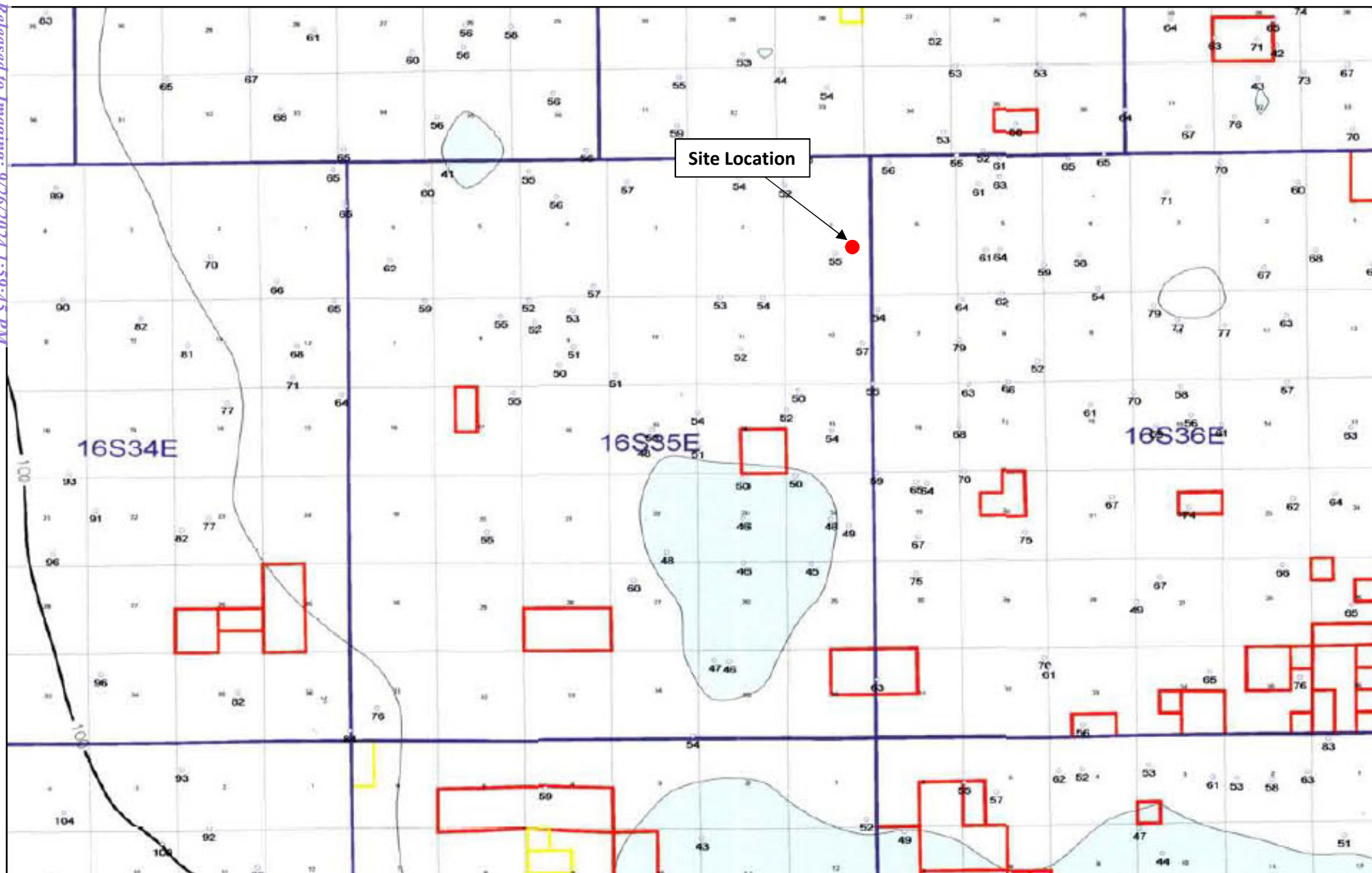
USGS Well Proximity Map
Energen Resources Corporation
State B
GPS: 32.95652, -103.41013
Lea County, New Mexico



Drafted by: jwl

Checked by: client

Date: 11/5/2018



LEGEND:

● Site Location

Figure 5

Inferred Depth to Groundwater Trend Map
Energen Resources Corporation
State B
GPS: 32.95652, -103.41013
Lea County, New Mexico



Drafted by: jwl

Checked by: client

Date: 11/9/2018



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Geographic Area:

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- [Full News](#) 

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 325713103234401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 325713103234401 16S.36E.06.112414

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code --

Latitude 32°57'13", Longitude 103°23'44" NAD27

Land-surface elevation 3,957 feet above NAVD88

The depth of the well is 102 feet below land surface.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

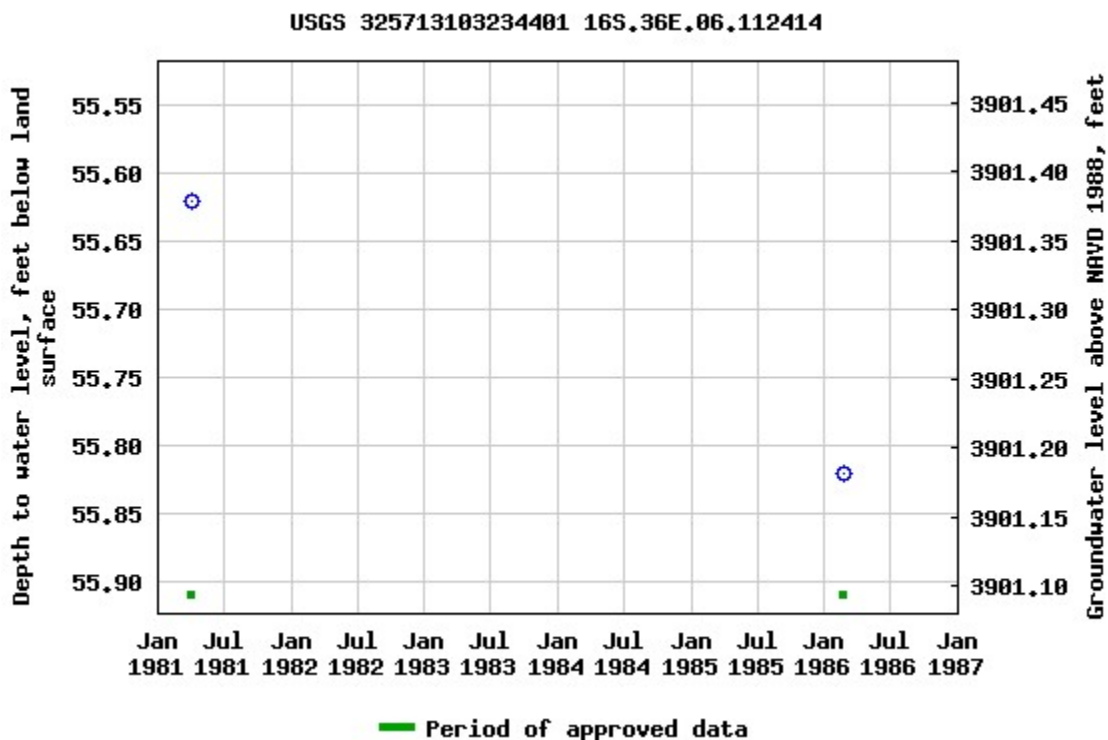
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1.08 0.94 nadww01





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- [Full News](#) 

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site_no list =

- 325647103242101

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USGS 325647103242101 16S.35E.01.41120

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code --

Latitude 32°56'47", Longitude 103°24'21" NAD27

Land-surface elevation 3,968 feet above NAVD88

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

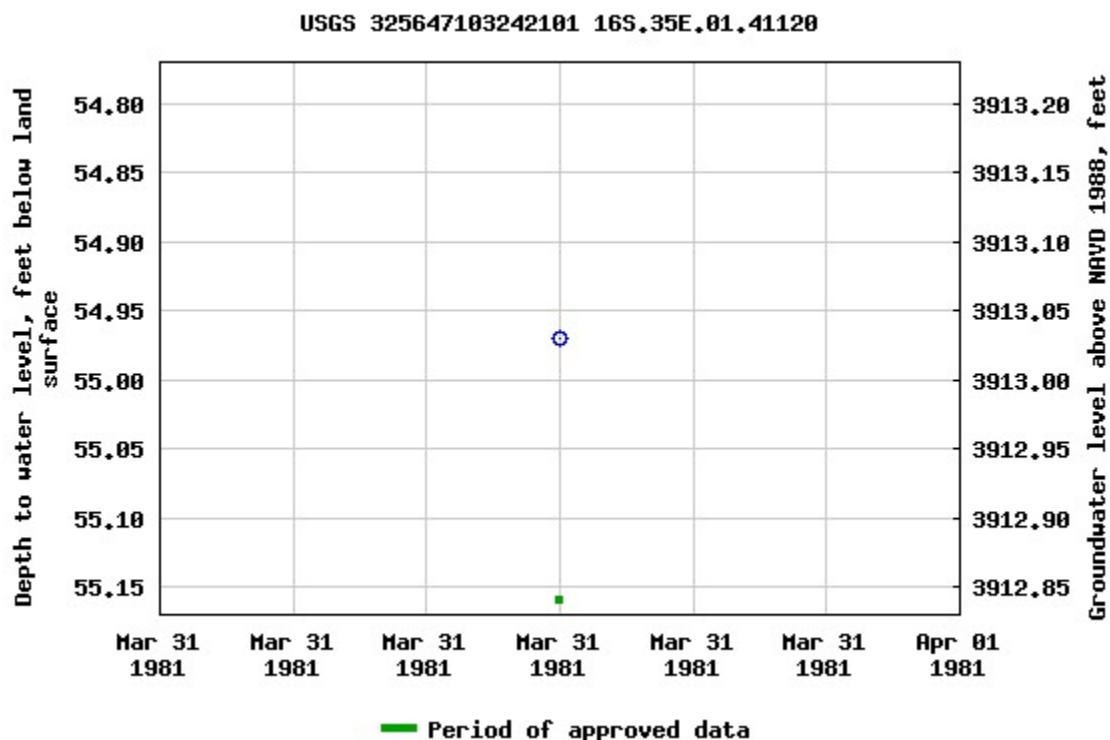
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7.04 0.9 nadww01





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site_no list =

- 325647103245601

Minimum number of levels = 1

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USGS 325647103245601 16S.35E.01.131312

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 12080003

Latitude 32°56'47", Longitude 103°24'56" NAD27

Land-surface elevation 3,976 feet above NAVD88

The depth of the well is 75 feet below land surface.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

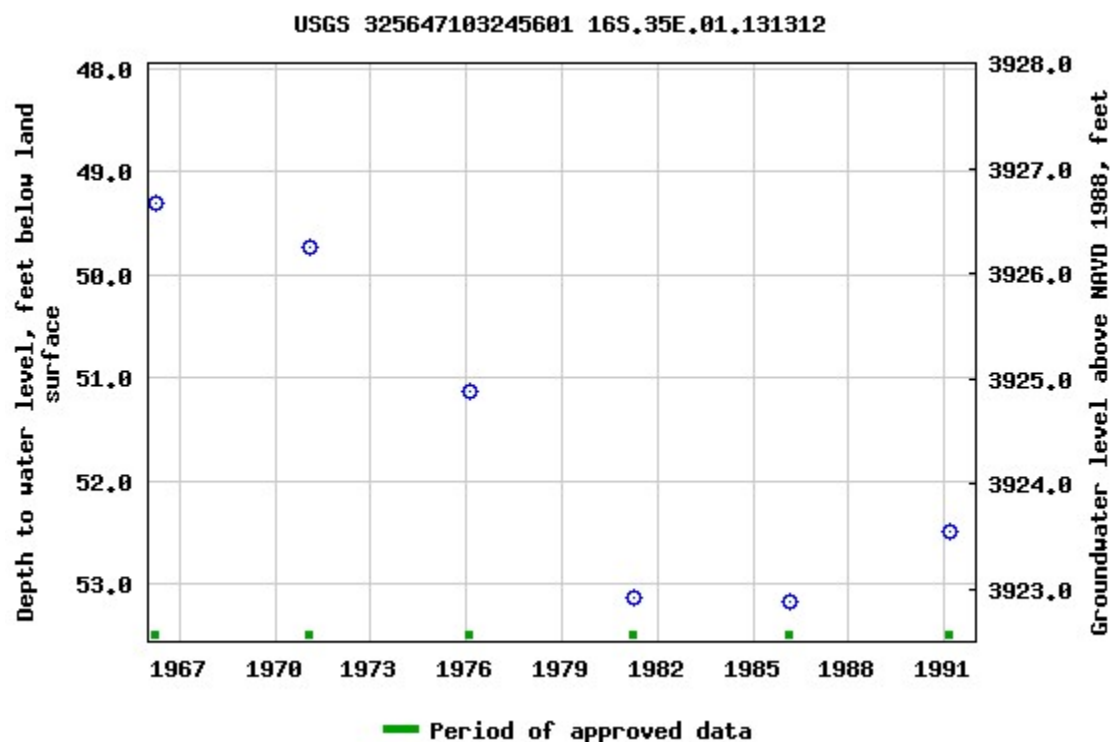
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1 0.88 nadww01





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site_no list =

- 325734103252801

Minimum number of levels = 1

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USGS 325734103252801 16S.35E.02.211134

Available data for this site

Groundwater: Field measurements

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Lea County, New Mexico

Hydrologic Unit Code 12080003

Latitude 32°57'34", Longitude 103°25'28" NAD27

Land-surface elevation 3,989 feet above NAVD88

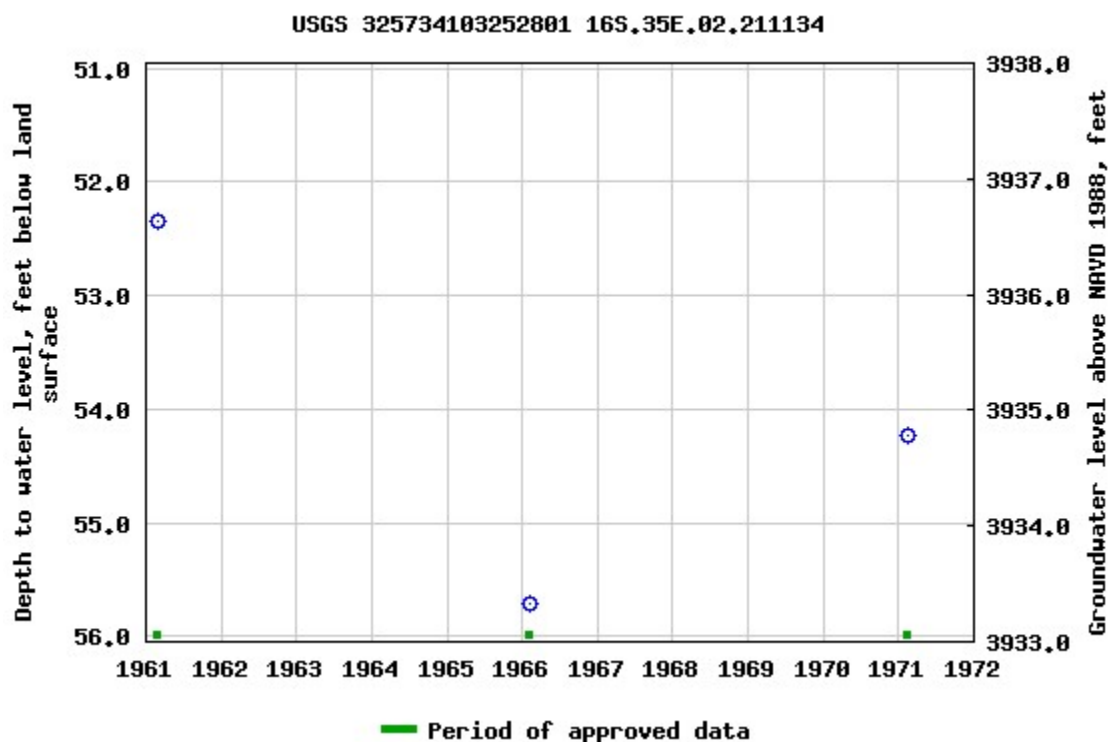
The depth of the well is 100 feet below land surface.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

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1.02 0.89 nadww01





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
L 10272		L	LE	4	2	1	01	16S	35E	648409	3647475*	228	120	80	40
L 05904	R	L	LE			1	01	16S	35E	648116	3647369*	539	150	70	80
L 03357		L	LE				01	16S	35E	648532	3646966*	579	120	60	60
L 03420		L	LE				01	16S	35E	648532	3646966*	579	120	60	60
L 03663 POD2	R	L	LE	1	1	4	01	16S	35E	648624	3646878*	659	164	60	104

Average Depth to Water: **66 feet**

Minimum Depth: **60 feet**

Maximum Depth: **80 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 648628.7

Northing (Y): 3647537.3

Radius: 805

*UTM location was derived from PLSS - see Help

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

11/5/18 10:51 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

ATTACHMENT #5
Soil Profile

SOIL PROFILE

Site Name: Stake BDate: 7/31/2018

Description		Depth (ft. bgs)
Top soil - Brown		1
Hard pan		2
		3
		4
		5
		6
		7
		8
		9
		10
		11
		12
		13
		14
		15
Caliche w/ sand		16
		17
		18
		19
		20
		21
		22
		23
		24
		25
		26
		27
		28
		29
		30
		31
		32
		33
		34
		35
		36
		37
		38
		39
		40

1 of 2

SOIL PROFILE

Site Name: State "B"Date: 7/31/2018

Description		Depth (ft. bgs)
		4 ₁
		2
		3
		4
		5
		6
		7
		8
		9
		5 ₀
		1
		2
		5 ₃
		4
		5
		6
		7
		8
		9
		0
		6 ₁
		2
		3
		4
		5
		6
		7
		8
		9
		0
		1
		2
		3
		4
		5
		6
		7
		8
		9
		0

TD

2 of 2

ATTACHMENT #6
Laboratory Analytical Reports



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

August 01, 2018

STEVE TAYLOR

CAPROCK SERVICES

P.O. BOX 457

LOVINGTON, NM 88260

RE: STATE B

Enclosed are the results of analyses for samples received by the laboratory on 07/31/18 15:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ SURFACE (H802084-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	2.79	1.00	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	38.3	1.00	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	53.6	1.00	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	212	3.00	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTX	307	6.00	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/01/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	2530	50.0	08/01/2018	ND	184	91.9	200	5.30		
DRO >C10-C28*	29500	50.0	08/01/2018	ND	174	86.9	200	12.8		
EXT DRO >C28-C36	3790	50.0	08/01/2018	ND						

Surrogate: 1-Chlorooctane 321 % 41-142

Surrogate: 1-Chlorooctadecane 1110 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 3' (H802084-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1260	16.0	08/01/2018	ND	432	108	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	389	50.0	08/01/2018	ND	184	91.9	200	5.30		
DRO >C10-C28*	4400	50.0	08/01/2018	ND	174	86.9	200	12.8		
EXT DRO >C28-C36	447	50.0	08/01/2018	ND						
Surrogate: 1-Chlorooctane	140 %	41-142								
Surrogate: 1-Chlorooctadecane	243 %	37.6-147								

Sample ID: SP 1 @ 6' (H802084-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	480	16.0	08/01/2018	ND	432	108	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	1140	50.0	08/01/2018	ND	184	91.9	200	5.30		
DRO >C10-C28*	6980	50.0	08/01/2018	ND	174	86.9	200	12.8		
EXT DRO >C28-C36	837	50.0	08/01/2018	ND						
Surrogate: 1-Chlorooctane	172 %	41-142								
Surrogate: 1-Chlorooctadecane	308 %	37.6-147								

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 9' (H802084-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/01/2018	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	112	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	1490	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	204	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	98.6 %	41-142							
Surrogate: 1-Chlorooctadecane	137 %	37.6-147							

Sample ID: SP 1 @ 12' (H802084-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/01/2018	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	31.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	81.0 %	41-142							
Surrogate: 1-Chlorooctadecane	76.4 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 15' (H802084-06)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	0.054	0.050	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	0.062	0.050	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	0.168	0.150	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTEx	<0.300	0.300	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/01/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	47.4	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 93.0 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 18' (H802084-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/01/2018	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	21.2	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	93.5 %	41-142							
Surrogate: 1-Chlorooctadecane	88.0 %	37.6-147							

Sample ID: SP 1 @ 21' (H802084-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	95.3 %	41-142							
Surrogate: 1-Chlorooctadecane	88.0 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 24' (H802084-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	198	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	68.5	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	87.3 %	41-142							
Surrogate: 1-Chlorooctadecane	84.2 %	37.6-147							

Sample ID: SP 1 @ 27' (H802084-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	309	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	27.8	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	93.4 %	41-142							
Surrogate: 1-Chlorooctadecane	98.1 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 30' (H802084-11)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	<0.050	0.050	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	<0.050	0.050	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	<0.150	0.150	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTEX	<0.300	0.300	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/01/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 90.0 % 41-142

Surrogate: 1-Chlorooctadecane 82.1 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ SURFACE (H802084-12)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	8.41	1.00	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	6.84	1.00	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	142	3.00	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTEX	157	6.00	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
				S-06					

Surrogate: 1-Chlorooctane		156 %	41-142							
Surrogate: 1-Chlorooctadecane		384 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 3' (H802084-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	08/01/2018	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	2680	50.0	08/01/2018	ND	184	91.9	200	5.30		
DRO >C10-C28*	12300	50.0	08/01/2018	ND	174	86.9	200	12.8		
EXT DRO >C28-C36	1430	50.0	08/01/2018	ND						
Surrogate: 1-Chlorooctane										
	247 %	41-142								
Surrogate: 1-Chlorooctadecane										
	503 %	37.6-147								

Sample ID: SP 2 @ 9' (H802084-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	33.3	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	556	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	45.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane									
	93.7 %	41-142							
Surrogate: 1-Chlorooctadecane									
	113 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 15' (H802084-15)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	<0.050	0.050	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	<0.050	0.050	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	<0.150	0.150	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTEx	<0.300	0.300	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1920	16.0	08/01/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 84.5 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 21' (H802084-16)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	88.0 %	41-142							
Surrogate: 1-Chlorooctadecane	83.3 %	37.6-147							

Sample ID: SP 2 @ 27' (H802084-17)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	76.1 %	41-142							
Surrogate: 1-Chlorooctadecane	72.3 %	37.6-147							

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 33' (H802084-18)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	30.0	10.0	08/01/2018	ND	201	100	200	2.41	
DRO >C10-C28*	388	10.0	08/01/2018	ND	199	99.6	200	5.75	
EXT DRO >C28-C36	68.8	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	81.7 %	41-142							
Surrogate: 1-Chlorooctadecane	89.9 %	37.6-147							

Sample ID: SP 2 @ 39' (H802084-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41	
DRO >C10-C28*	66.4	10.0	08/01/2018	ND	199	99.6	200	5.75	
EXT DRO >C28-C36	14.8	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	87.2 %	41-142							
Surrogate: 1-Chlorooctadecane	83.6 %	37.6-147							

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 45' (H802084-20)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	<0.050	0.050	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	<0.050	0.050	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	<0.150	0.150	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTEX	<0.300	0.300	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	08/01/2018	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41	
DRO >C10-C28*	29.1	10.0	08/01/2018	ND	199	99.6	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 83.0 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 48' (H802084-21)

Chloride, SM4500CI-B			mg/kg							
			Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	368	16.0	08/01/2018	ND	416	104	400	0.00		
TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41		
DRO >C10-C28*	49.6	10.0	08/01/2018	ND	199	99.6	200	5.75		
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND						
<hr/>										
Surrogate: 1-Chlorooctane	90.6 %	41-142								
Surrogate: 1-Chlorooctadecane	83.7 %	37.6-147								

Sample ID: SP 2 @ 54' (H802084-22)

Chloride, SM4500CI-B			mg/kg							
			Analyzed By: AC							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	08/01/2018	ND	416	104	400	0.00		
TPH 8015M			mg/kg							
			Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41		
DRO >C10-C28*	34.5	10.0	08/01/2018	ND	199	99.6	200	5.75		
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND						
<hr/>										
Surrogate: 1-Chlorooctane	88.6 %	41-142								
Surrogate: 1-Chlorooctadecane	82.8 %	37.6-147								

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 57' (H802084-23)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41	
DRO >C10-C28*	50.6	10.0	08/01/2018	ND	199	99.6	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	82.8 %	41-142							
Surrogate: 1-Chlorooctadecane	78.0 %	37.6-147							

Sample ID: SP 2 @ 60' (H802084-24)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	190	95.2	200	4.97	
DRO >C10-C28*	37.6	10.0	08/01/2018	ND	204	102	200	1.15	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	97.6 %	41-142							
Surrogate: 1-Chlorooctadecane	94.7 %	37.6-147							

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 63' (H802084-25)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	<0.050	0.050	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	<0.050	0.050	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	<0.150	0.150	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTEx	<0.300	0.300	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/01/2018	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	190	95.2	200	4.97	
DRO >C10-C28*	144	10.0	08/01/2018	ND	204	102	200	1.15	
EXT DRO >C28-C36	41.5	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 99.3 % 41-142

Surrogate: 1-Chlorooctadecane 98.4 % 37.6-147

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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Caprock Services</u>				BILL TO				ANALYSIS REQUEST											
Project Manager: <u>Steve Taylor</u>				P.O. #:				<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <u>Chloride</u> <u>TPH</u> <u>B-Tex</u> </div> <div style="width: 60%;"></div> </div>											
Address: <u>PO Box 457</u>				Company: <u>Emergen</u>															
City: <u>Lovington</u> State: <u>NM</u> Zip: <u>88260</u>				Attn: <u>Tommy York</u>															
Phone #: <u>575-704-2718</u> Fax #:				Address: <u>HLR 4 Box 546 A</u>															
Project #:				City: <u>Seminole</u>															
Project Name: <u>State "B"</u>				State: <u>TX</u> Zip: <u>79360</u>															
Project Location:				Phone #: <u>(432)-209-2483</u>															
Sampler Name: <u>Steve Taylor</u>				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.		Sample I.D.		(GRAB OR (C)OMP. # CONTAINERS)	MATRIX					PRESERV.		SAMPLING							
					GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:					DATE	TIME
<u>H802084</u>																			
<u>1 SPI Surface</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>8:15 AM</u>	<u>X</u>	<u>X</u>	<u>X</u>			
<u>2 SPI @ 3'</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>8:30 AM</u>	<u>X</u>	<u>X</u>				
<u>3 SPI @ 6'</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>8:45 AM</u>	<u>X</u>	<u>X</u>				
<u>4 SPI @ 9'</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>9:05 AM</u>	<u>X</u>	<u>X</u>				
<u>5 SPI @ 12'</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>9:15 AM</u>	<u>X</u>	<u>X</u>				
<u>6 SPI @ 15'</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>9:15 AM</u>	<u>X</u>	<u>X</u>	<u>X</u>			
<u>7 SPI @ 18'</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>9:25 AM</u>	<u>X</u>	<u>X</u>				
<u>8 SPI @ 21'</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>9:30 AM</u>	<u>X</u>	<u>X</u>				
<u>9 SPI @ 24'</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>9:30 AM</u>	<u>X</u>	<u>X</u>				
<u>10 SPI @ 27'</u>				<u>6</u>			<u>X</u>				<u>X</u>	<u>7-31-18</u>	<u>9:35 AM</u>	<u>X</u>	<u>X</u>				

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Relinquished By: <u>[Signature]</u>		Date: <u>7/31/18</u>	Received By: <u>[Signature]</u>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:
Time: <u>3:25</u>					Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:
Relinquished By:		Date:	Received By:		REMARKS: <u>RUSH!!</u>		
Time:							
Delivered By: (Circle One) <u>#75</u>			Sample Condition		CHECKED BY: <u>[Signature]</u>		
Sampler - UPS - Bus - Other: <u>4.30/4.250</u>			Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				



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

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Rush!!




CARDINAL
Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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[illegible]

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Relinquished By: 		Date: 7/31/18	Received By: Jodi Benson		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
		Time: 3:25			Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:		REMARKS: Rush!!	
		Time:				
Delivered By: (Circle One) #75		Sample Condition		CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: 4.30 / 4.25		Cool <input type="checkbox"/> Yes <input type="checkbox"/> No		Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		



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

November 08, 2018

STEVE TAYLOR

CAPROCK SERVICES

P.O. BOX 457

LOVINGTON, NM 88260

RE: STATE B

Enclosed are the results of analyses for samples received by the laboratory on 11/02/18 10:03.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A solid black rectangular box used to redact the signature of the sender.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 11/02/2018
Reported: 11/08/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: EAST @ 1' (H803144-01)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2018	ND	2.07	104	2.00	0.283	
Toluene*	<0.050	0.050	11/07/2018	ND	1.97	98.7	2.00	0.860	
Ethylbenzene*	<0.050	0.050	11/07/2018	ND	1.81	90.6	2.00	0.418	
Total Xylenes*	0.199	0.150	11/07/2018	ND	5.82	97.1	6.00	0.330	
Total BTEX	<0.300	0.300	11/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/06/2018	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	13.4	10.0	11/03/2018	ND	218	109	200	8.04	
DRO >C10-C28*	406	10.0	11/03/2018	ND	224	112	200	4.73	
EXT DRO >C28-C36	62.5	10.0	11/03/2018	ND					

Surrogate: 1-Chlorooctane 95.8 % 41-142

Surrogate: 1-Chlorooctadecane 98.8 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 11/02/2018
Reported: 11/08/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: NORTH @ 1' (H803144-02)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2018	ND	2.07	104	2.00	0.283	
Toluene*	<0.050	0.050	11/07/2018	ND	1.97	98.7	2.00	0.860	
Ethylbenzene*	0.085	0.050	11/07/2018	ND	1.81	90.6	2.00	0.418	
Total Xylenes*	0.247	0.150	11/07/2018	ND	5.82	97.1	6.00	0.330	
Total BTEX	0.332	0.300	11/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	11/06/2018	ND	416	104	400	3.77	
TPH 8015M	mg/kg		Analyzed By: MS						S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	11.4	10.0	11/03/2018	ND	218	109	200	8.04	
DRO >C10-C28*	2300	10.0	11/03/2018	ND	224	112	200	4.73	
EXT DRO >C28-C36	482	10.0	11/03/2018	ND					

Surrogate: 1-Chlorooctane 95.8 % 41-142

Surrogate: 1-Chlorooctadecane 173 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 11/02/2018
Reported: 11/08/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: WEST@ 1' (H803144-03)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2018	ND	2.07	104	2.00	0.283	
Toluene*	<0.050	0.050	11/07/2018	ND	1.97	98.7	2.00	0.860	
Ethylbenzene*	<0.050	0.050	11/07/2018	ND	1.81	90.6	2.00	0.418	
Total Xylenes*	<0.150	0.150	11/07/2018	ND	5.82	97.1	6.00	0.330	
Total BTEX	<0.300	0.300	11/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1060	16.0	11/06/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/03/2018	ND	218	109	200	8.04	
DRO >C10-C28*	60.1	10.0	11/03/2018	ND	224	112	200	4.73	
EXT DRO >C28-C36	36.6	10.0	11/03/2018	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 92.5 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 11/02/2018
Reported: 11/08/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: SOUTH @ 1' (H803144-04)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/07/2018	ND	2.07	104	2.00	0.283		
Toluene*	<0.050	0.050	11/07/2018	ND	1.97	98.7	2.00	0.860		
Ethylbenzene*	<0.050	0.050	11/07/2018	ND	1.81	90.6	2.00	0.418		
Total Xylenes*	<0.150	0.150	11/07/2018	ND	5.82	97.1	6.00	0.330		
Total BTEx	<0.300	0.300	11/07/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3080	16.0	11/06/2018	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/05/2018	ND	184	92.2	200	2.91	
DRO >C10-C28*	195	10.0	11/05/2018	ND	208	104	200	1.90	
EXT DRO >C28-C36	119	10.0	11/05/2018	ND					

Surrogate: 1-Chlorooctane 86.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.6 % 37.6-147

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

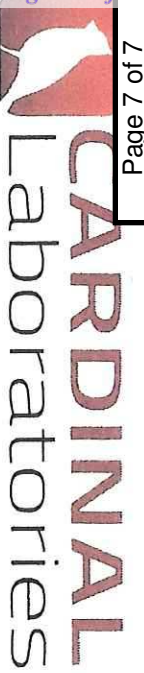
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Celey D. Keene, Lab Director/Quality Manager

7 of 2 page



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Caprock Services</u>		P.O. #:		BILL TO		ANALYSIS REQUEST																							
Project Manager: <u>Steve Taylor</u>		Company: <u>E. Nergren</u>																											
Address: <u>P.O. Box 457</u>		Attn: <u>Tommy York</u>																											
City: <u>Livingston</u>		Address: <u>HCE4 Box 544A</u>																											
Phone #: <u>(575) 704-2718</u>		City: <u>Seaside</u>																											
Project #: _____		State: <u>TX</u> Zip: <u>79366</u>																											
Project Location: <u>State B</u>		Phone #: <u>(432) 209-2493</u>																											
Sample Name: <u>Matt Taylor</u>		Fax #: _____																											
FOR LAB USE ONLY		MATRIX		PRESERV		SAMPLING																							
Lab I.D.		(G)RAB OR (C)OMP.		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME																	
Sample I.D.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :															
1 East @ 2'		G 1		X		X		X		X		X		X		11-2-18 8:00 AM		X		Chloride									
2 North @ 2'		G 1		X		X		X		X		X		X		11-2-18 8:10 AM		X		TPH									
3 West @ 2'		G 1		X		X		X		X		X		X		11-2-18 8:15 AM		X		B-Tex									
4 South @ 2'		G 1		X		X		X		X		X		X		11-2-18 8:20 AM		X											

ATTACHMENT #7
Photographic Log

PHOTOGRAPHIC LOG



Figure 1 View of surface staining from the initial release, facing East.



Figure 2 View of surface staining from the initial release, facing Northwest.

PHOTOGRAPHIC LOG



Figure 3 View of the affected area upon removal of the above-ground tanks.



Figure 4 View of drilling activities.

ATTACHMENT #8
Release Notification (FORM C-141)

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 April 3, 2017

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	Energen Resources Corporation	Contact	Andy Cobb
Address	3510 N A Street, Midland, TX 79705	Telephone No.	432-686-3599
Facility Name	State B	Facility Type	Oil and Gas Production Facility
Surface Owner	Dan Field/Branch Ranch	Mineral Owner	State of New Mexico
		API No.	3002502709

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	1	16S	35E	4610	FSL	2301	FEL	LEA

Latitude 32.9565239 Longitude -103.4101334 NAD83

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	136 barrels	Volume Recovered	0
Source of Release	Oil Tank	Date and Hour of Occurrence	5/22/18	Date and Hour of Discovery	6/1/18
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required				
By Whom?	If YES, To Whom?				
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If YES, Volume Impacting the Watercourse.					

RECEIVED

By CHernandez at 2:31 pm, Jun 04, 2018

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*



Corrosion caused a hole to develop in the oil tank and release fluid. The fluid was not immediately discovered.

Describe Area Affected and Cleanup Action Taken.*

The area inside the berm was affected and remediation will be as soon as possible.

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.

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: Andy Cobb	Approval Date: 6/4/2018	Expiration Date:
Title: Director EH&S	Conditions of Approval: See attached directive	
E-mail Address: andy.cobb@energen.com	Attached <input checked="" type="checkbox"/>	
Date: 6/4/2018	Phone: 432-686-3599	

* Attach Additional Sheets If Necessary

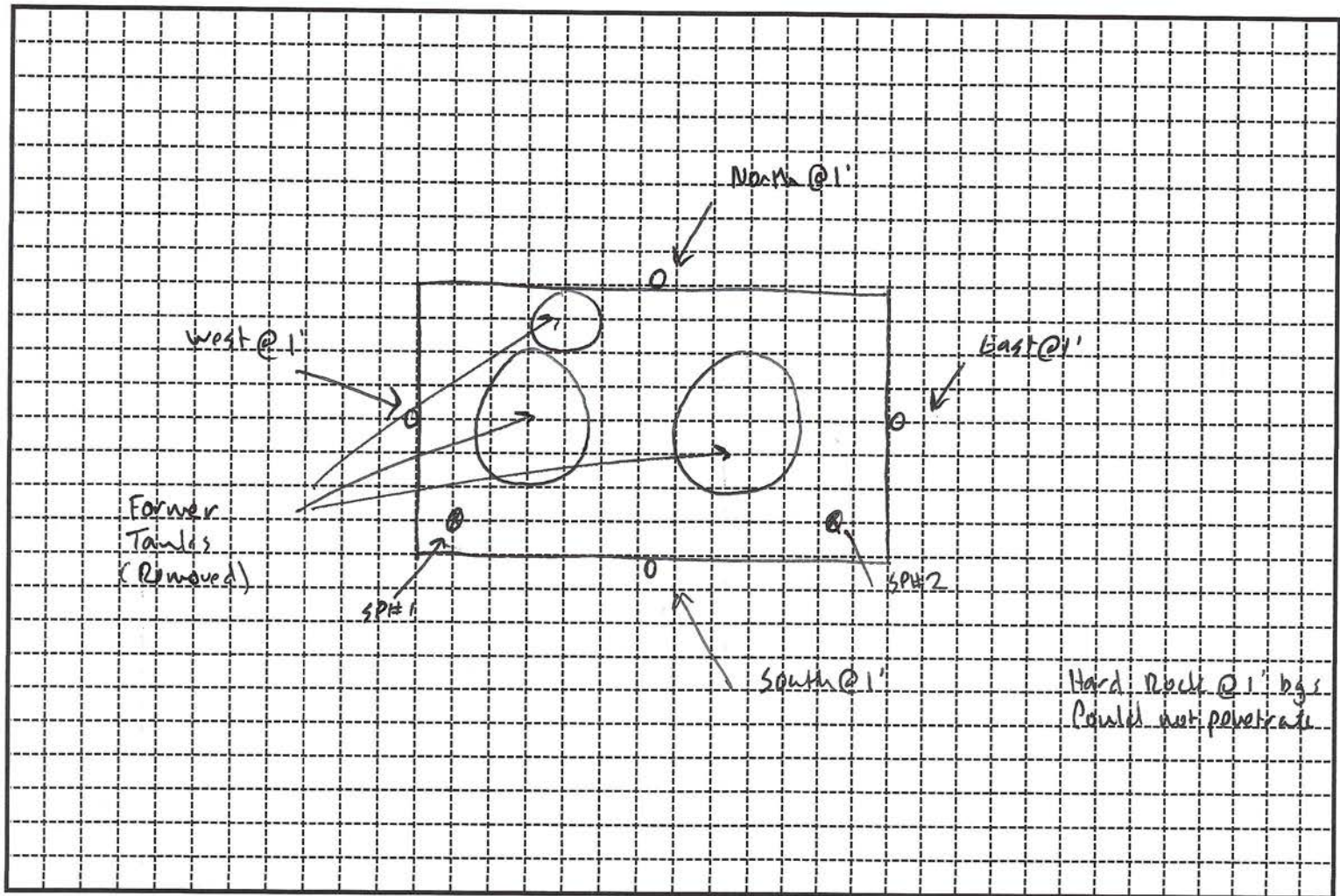
1RP-5082

nCH1815552862

pCH1815554047

ATTACHMENT #9
Field Data

FIELD NOTES

Site Name: State BDate: 11/2/2018

Hard Rock @ 1' bgs. Could not penetrate

Field ID	Odor/PID	Chloride
North @ 1'	None	330
East @ 1'	Slight	<120
South @ 1'	None	2,652
West @ 1'	None	942

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride

From: [Hernandez, Christina, EMNRD](#)
To: ["Mann, Ryan"; "Joel Lowry"](#)
Subject: RE: 1RP-5082 - Energen State B - Site Assessment Report and Proposed Remediation Plan
Date: Wednesday, January 16, 2019 10:36:00 AM
Attachments: [1RP-5082 - State B - C-141 Pages1-5Signed.pdf](#)
[image001.png](#)
[1RP-5082 - State B - Site Assessment Report and Proposed Remediation Plan \(2\).pdf](#)

Mr. Lowry:

NMOCD approves of the delineation completed for **1RP-5082**. The proposed remediation and sampling plan are also approved with these conditions:

- Confirmation sampling must include the sidewall at the border between the different depths of excavation for SP1 and SP2 areas.
- Excavated material must be placed on liner pending transport.
- Dated photo documentation of the remedial activities.
- Scaled map with the confirmation sample locations in relation to the delineation sample points.

Thanks,
Christina Hernandez
EMNRD-OCD
Environmental Specialist
1625 N. French Drive
Hobbs, NM 88240
575-393-6161 ext. 111
Christina.Hernandez@state.nm.us

From: Mann, Ryan <rmann@slo.state.nm.us>
Sent: Thursday, January 3, 2019 11:18 AM
To: 'Joel Lowry' <joel@lowryenvironmental.com>; Hernandez, Christina, EMNRD <Christina.Hernandez@state.nm.us>
Subject: [EXT] RE: 1RP-5082 - Energen State B - Site Assessment Report and Proposed Remediation Plan

Good morning Mr. Lowry,

NMSLO approves of the proposed with the following comments:

- Confirmation samples need to be taken on the sidewall of all excavation of differing depths. SP1 and SP2 will most like have differing depth. The North @1' looks like it will be a separate excavation and will not adjoin.

Approval is also necessary from NMOCD.

From: Joel Lowry [<mailto:joel@lowryenvironmental.com>]
Sent: Wednesday, December 19, 2018 2:35 PM
To: christina.hernandez@state.nm.us; Mann, Ryan <rmann@slo.state.nm.us>
Subject: 1RP-5082 - Energen State B - Site Assessment Report and Proposed Remediation Plan

Please find attached the *Site Assessment Report and Proposed Remediation Plan* along with pages from the Form C-141, that has been prepared for Energen's State B. The Site is located on State Land in UL "J", Section 1, Township 16 South, Range 35 East in Lea County, New Mexico. Upon your review and approval, Energen is prepared to continue remediation activities as outlined within the attached. If you have any questions or need any additional information, please feel free to contact myself or Tommy York by phone or email. Thanks.

Respectfully,

Joel Lowry

Environmental Professional



PO Box 896
Lovington, NM 88260
Direct 432-466-4450

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May 27, 2019

Dylan Rose-Coss
 New Mexico Energy, Minerals and Natural Resources Department
 Oil Conservation Division, District 1
 1625 French Drive
 Hobbs, NM 88240

Ryan Mann
 Hobbs Field Office
 New Mexico State Land Office
 2827 North Dal Paso Street, Suite 117
 Hobbs, NM 88240

Re: Site Assessment and Closure Report
Site Name: State B
GPS: Latitude: 32.95652 Longitude: -103.41013
Legals: UL "J", Sec. 1, T16S, R35E
Lea County, New Mexico
NMOCD Ref. No. 1RP-5082

Lowry Environmental & Associates, LLC (LEA), on behalf of Energen Resources Corporation, has prepared this Site Assessment and Closure Report for the Release Site known as the State B. Details of the release are summarized on the table below:

Nature and Volume of Release	
Date Release Discovered	6/1/2018
Type of Release	Crude Oil
Cause of Release	A hole developed in the oil tank as a result of corrosion; the fluid was not immediately discovered.
Affected Area	The release affected and area within an unlined earthen containment.
Was this a major release?	If YES, for what reasons (s) is this considered a major release?
Yes	Volume Greater than 25 bbls
If Yes, was immediate notice given to the OCD? By whom? To whom? When and by what means?	
N/A	

A copy of the Release Notification (NMOCD Form C-141) is provided as Attachment #8.

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Incident ID	nCH1815552862
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District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Site Assessment/Characterization

What is the shallowest depth to groundwater beneath the area affected by the release?	>63'
Did this release impact groundwater or surface water?	No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	No
Are the lateral extents of the release within 300 feet of a wetland?	No
Are the lateral extents of the release overlying a subsurface mine?	No
Are the lateral extents of the release overlying an unstable area such as karst geology?	No
Are the lateral extents of the release within a 100-year floodplain?	No
Did the release impact areas not on an exploration, development, production or storage site?	No

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey was conducted in an effort to determine the average depth to groundwater within a 1 Mile radius of the Site and identify any registered water wells within a 1/2 Mile radius of the Site. A search of the NMOSE database suggested the presence of 1 water well (L10272) within 1,000 ft. of the Site. A field survey indicated available geographic information for L10272 was outdated and/or incorrect; there was no water well in that vicinity. A search of the USGS database did not identify any water wells within a 1/2 Mile radius.

Based on the volume and nature of the release, inferred depth to groundwater and NMOCD Siting Criteria, the NMOCD Closure Criteria for the Site is as follows:

Closure Criteria for Soil Impacted by a Release	
Benzene	10 mg/kg
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)	50 mg/kg
Total Petroleum Hydrocarbons	2,500 mg/kg
Combined GRO and DRO	1,000 mg/kg
Chloride	10,000 mg/kg

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted on Figures 1 & 2. Depth to groundwater information is provided as Attachment #4. A Photographic Log is provided as Attachment #7.

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

INITIAL SITE ASSESSMENT

On **July 31, 2018**, two (2) investigative soil bores (SP-1 and SP-2) were advanced at the Site in an effort to determine the vertical extent of impacted soil affected above the NMOCD Closure Criteria. Soil bore SP-1 was advanced to a depth of 30 ft. bgs. During the advancement of the soil bore, 10 soil samples were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated soil was not affected above the NMOCD Closure Criteria for TPH and chloride beyond 12 ft. bgs in the area represented by soil bore SP-1.

Soil bore SP-2 was advanced to a depth of 63 ft. bgs. During the advancement of the soil bore, 14 soil samples were collected and submitted to the laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated soil was not affected above the NMOCD Closure Criteria for TPH and chloride beyond 9 ft. bgs in the area represented by soil bore SP-1.

On **November 2, 2018**, four (4) soil samples (North @ 1', East @ 1', South @ 1' and West @ 1') were collected from the inferred edges of the affected area in an effort to determine the horizontal extent of impacted soil affected above the NMOCD Closure Criteria. The collected soil samples were submitted to an NMOCD-approved laboratory for analysis of BTEX, TPH and chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples, with the exception of soil sample North @ 1', which exhibited a GRO+DRO concentration of 2,311.4 mg/kg and a TPH concentration of 2,793.4 mg/kg. Collection of soil samples from deeper intervals was precluded due to the presence of an impenetrable rock layer.

A table summarizing laboratory analytical results from soil samples collected during the initial site assessment is provided on the following page:

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Concentrations of BTEX, TPH and/or Chloride in Soil - Initial Assessment(s)											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E300/4500Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
SP1 @ Surf.	7/31/18	0-6"	In-Situ	2.79	307	2,530	29,500	32,030	3,790	35,820	96.0
SP1 @ 3'	7/31/18	3'	In-Situ	-	-	389	4,400	4,789	447	5,236	1,260
SP1 @ 6'	7/31/18	6'	In-Situ	-	-	1,140	6,980	8,120	837	8,957	480
SP1 @ 9'	7/31/18	9'	In-Situ	-	-	112	1,490	1,602	204	1,806	96.0
SP1 @ 12'	7/31/18	12'	In-Situ	-	-	<10.0	31.0	31.0	<10.0	31.0	48.0
SP1 @ 15'	7/31/18	15'	In-Situ	<0.050	<0.300	<10.0	47.4	47.4	<10.0	47.4	32.0
SP1 @ 18'	7/31/18	18'	In-Situ	-	-	<10.0	21.2	21.2	<10.0	21.2	32.0
SP1 @ 21'	7/31/18	21'	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SP1 @ 24'	7/31/18	24'	In-Situ	-	-	<10.0	198	198	68.5	266.5	48.0
SP1 @ 27'	7/31/18	27'	In-Situ	-	-	<10.0	309	309	27.8	336.8	48.0
SP1 @ 30'	7/31/18	30'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SP2 @ Surf.	7/31/18	0-6"	In-Situ	<1.00	157	877	7,500	8,377	601	8,978	800
SP2 @ 3'	7/31/18	3'	In-Situ	-	-	2,680	12,300	14,980	1,430	16,410	352
SP2 @ 9'	7/31/18	9'	In-Situ	-	-	33.3	556	589	45.0	634.3	1,410
SP2 @ 15'	7/31/18	15'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,920
SP2 @ 21'	7/31/18	21'	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	2,120
SP2 @ 27'	7/31/18	27'	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	1,360
SP2 @ 33'	7/31/18	33'	In-Situ	-	-	30.0	388	418	68.8	486.8	1,090
SP2 @ 39'	7/31/18	39'	In-Situ	-	-	<10.0	66.4	66.4	14.8	81.2	720
SP2 @ 45'	7/31/18	45'	In-Situ	<0.050	<0.300	<10.0	29.1	29.1	<10.0	29.1	368
SP2 @ 48'	7/31/18	21'	In-Situ	-	-	<10.0	49.6	49.6	<10.0	49.6	368
SP2 @ 54'	7/31/18	21'	In-Situ	-	-	<10.0	34.5	34.5	<10.0	34.5	256
SP2 @ 57'	7/31/18	57'	In-Situ	-	-	<10.0	50.6	50.6	<10.0	50.6	224
SP2 @ 60'	7/31/18	60'	In-Situ	-	-	<10.0	37.6	37.6	<10.0	37.6	128
SP2 @ 63'	7/31/18	63'	In-Situ	<0.050	<0.300	<10.0	144	144	41.5	185.5	128
East @ 1'	11/2/18	1'	In-Situ	<0.050	<0.300	13.4	406	419.4	62.5	481.9	64.0
North @ 1'	11/2/18	1'	In-Situ	<0.050	0.332	11.4	2,300	2,311.4	482	2,793.4	480
West @ 1'	11/2/18	1'	In-Situ	<0.050	<0.300	<10.0	60.1	60.1	36.6	96.7	1,060
South @ 1'	11/2/18	1'	In-Situ	<0.050	<0.300	<10.0	195	195	119	314	3,080
Closure Criteria				10	50	-	-	1,000	-	2,500	10,000

A "Site & Sample Location Map" is provided as Attachment #3. Field Data, if applicable, is provided as Attachment #9. Soil profile observations are provided on Attachment #5. Laboratory analytical reports are provided as Attachment #6.

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

PROPOSED REMEDIATION PLAN

Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment, Energen Resources Corporation proposes the following remediation activities designed to advance the Site toward an approved closure:

- Utilizing mechanical equipment, excavate impacted soil within the release margins in the area characterized by sample point SP-1 to a depth beyond 9 ft. bgs, until laboratory analytical results from confirmation soil samples indicate concentrations of BTEX, TPH and chloride are below the NMOCD Closure Criteria.
- Excavate impacted soil within the release margins in the area characterized by sample point SP-2 to a depth beyond 3 ft. bgs, until laboratory analytical results from confirmation soil samples indicate concentrations of BTEX, TPH and chloride are below the NMOCD Closure Criteria.
- Excavation sidewalls will be advanced horizontally until laboratory analytical results from confirmation soil samples indicate BTEX, TPH and chloride concentrations are below the NMOCD Closure Criteria. This will include the impacted area characterized by soil sample North @ 1'.
- Excavated soil will be temporarily stockpiled on-site, pending transportation under manifest to an NMOCD-approved disposal facility.
- Upon receiving favorable laboratory analytical results from confirmation soil samples (below the NMOCD Closure Criteria) excavated areas will be backfilled with locally sourced, non-impacted "like" material. Excavation backfill will be placed at or near original relative positions. The affected area will be contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable.

SAMPLING PLAN

Upon completion of excavation activities, representative five-point composite excavation confirmation soil samples will be collected from the excavation sidewalls in each cardinal direction, representing no more than **50 linear ft.** A minimum of **one (1)** representative five-point composite excavation confirmation soil sample will be collected from the base of the excavated area representing every **500 square feet.** Additional, "discrete" confirmation soil samples will be collected from wet or visibly stained areas inferred to have been affected by the release, as necessary.

TIMELINE AND ESTIMATED VOLUME OF SOIL TO BE REMEDIATED

Remediation activities are expected to be completed **within 90 days** of receiving necessary approval(s) of this Site Assessment Summary and Proposed Remediation Plan. Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment it is estimated that approximately **1,070 cubic yards** of soil has been affected above the NMOCD Closure Criteria.

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

NMOCD APPROVALS/STIPULATIONS

On December 19, 2018, a Site Assessment Report and Proposed Remediation Plan was submitted to the NMOCD and NMSLO proposing remediation activities designed to advance the Site toward and approved closure.

The Site Assessment Report and Proposed Remediation Plan was subsequently approved. Please reference the associated Site Assessment Report and Proposed Remediation Plan that was submitted 1RP-5082 for for additional details.

REMEDIATION ACTIVITIES SUMMARY

On **February 4, 2019**, remediation activities commenced at the release site. Impacted soil within the release margins was excavated and stockpiled on-site, atop an impermeable plastic liner, pending final disposition. The floor and sidewalls of the excavation were advanced until field test results suggested concentrations of BTEX, TPH and chloride were below the NMOCD Closure Criteria.

On **February 19, 2019**, twenty-nine (29) excavation confirmation soil samples (Floor #1 - Floor #20, NSW 1, NSW 2, ESW 1, ESW 2, SSW 1, SSW 2, WSW 1, WSW 2 and) WSW 3 GC were collected from the floor and sidewalls of the excavated area and submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples with the exception of soil samples Floor #2, which exhibited a TPH concentration of 4,842 mg/kg, Floor #7, which exhibited a GRO+DRO concentration of 1,051 mg/kg, Floor #8, which exhibited a GRO+DRO concentration of 1,241 mg/kg, soil sample Floor #10, which exhibited a TPH concentration of 3,506 mg/kg, soil sample Floor #11, which exhibited a TPH concentration of 2,737 mg/kg, Floor #13, which exhibited a TPH concentration of 4,830 mg/kg, SSW 1, which exhibited a GRO+DRO concentration of 1,010 mg/kg and WSW 3 GC, which exhibited a GRO+DRO concentration of 1,281.0 mg/kg.

In addition, two (2) grab soil samples (Floor Stain @ 10' and Floor Stain @ 4') were collected from stained areas within the floor of the excavation and submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated BTEX and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples. TPH concentrations exceeded the NMOCD Closure Criteria in each of the submitted soil samples.

Impacted soil affected above the NMOCD Closure Criteria represented by soil samples Floor #2, Floor #7, Floor #8, Floor #10, Floor #11, Floor #13, Floor Stain @ 10' and Floor Stain @ 4' was excavated.

On **March 1, 2019**, ten (10) excavation confirmation soil samples (Floor 8B, Floor 7 B, Floor 10 B, Floor 11 B, Floor 2 B, Floor Stain @ 11.5'B, Floor Stain@ 5'B, SSW 1 B and WSW 3 GC B) were collected from the floor and sidewalls of the excavated area and submitted to the laboratory for analysis of TPH concentrations, which were determined to be below the NMOCD Closure Criteria in each of the submitted soil samples.

On **March 19, 2019**, twelve (12) excavation confirmation soil samples (Floor #2 N. Wall, Floor #2 E. Wall, Floor #2 S. Wall, Floor #3 E. Wall, Floor #6 S. Wall, Floor #7 E. Wall, Floor #11 S. Wall, Floor #11 E. Wall, Floor #11 N. Wall, Floor #9 E. Wall, Floor #13 S. Wall and Floor #13 E. Wall) were collected from the interior sidewalls of the excavated area and submitted to the laboratory for analysis of TPH concentrations, which were determined to be below the NMOCD Closure Criteria in each of the submitted soil samples.

A table summarizing laboratory analytical results from confirmation soil samples is provided on the following page:

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Concentrations of BTEX, TPH and/or Chloride in Soil - Confirmation Samples											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E300/4500Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
Floor #1	2/19/19	10'	In-Situ	<0.050	<0.300	<10.0	82.1	82.1	12.5	94.6	192
Floor #2	2/19/19	10'	Excavated	<0.050	7.00	560	3,710	4,270	572	4,842	416
Floor #3	2/19/19	10'	In-Situ	<0.050	<0.300	<10.0	307	307	45.9	352.9	400
Floor #4	2/19/19	10'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	400
Floor #5	2/19/19	10'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
Floor #6	2/19/19	10'	In-Situ	<0.050	<0.300	<10.0	228	228	23.8	251.8	2,120
Floor #7	2/19/19	10'	Excavated	<0.050	0.391	10.6	1,040	1,051	319	1,369.6	560
Floor #8	2/19/19	10'	Excavated	<0.050	0.450	30.6	1,210	1,241	225	1,465.6	1,840
Floor #9	2/19/19	4'	In-Situ	<0.050	<0.300	<10.0	140	140	50.8	190.8	1,340
Floor #10	2/19/19	4'	Excavated	<0.050	0.330	26.0	2,490	2,516.0	990	3,506	2,120
Floor #11	2/19/19	4'	Excavated	<0.050	1.09	17.2	2,100	2,117.2	620	2,737	1,230
Floor #12	2/19/19	4'-12'	In-Situ	<0.050	<0.300	<10.0	895	895	286	1,181	1,680
Floor #13	2/19/19	4'	Excavated	<0.050	34.7	503	3,350	3,853.0	977	4,830	240
Floor #14	2/19/19	4'	In-Situ	<0.050	<0.300	<10.0	111	111	50.6	161.6	128
Floor #15	2/19/19	4'	In-Situ	<0.050	<0.300	<10.0	479	479	108	587	592
Floor #16	2/19/19	4'-12'	In-Situ	<0.050	<0.300	<10.0	50.4	50.4	18.6	69.0	384
Floor #17	2/19/19	4'	In-Situ	<0.050	0.598	10.4	403	413.4	79.2	492.6	240
Floor #18	2/19/19	4'	In-Situ	<0.050	<0.300	<10.0	481	481	98.9	579.9	464
Floor #19	2/19/19	4'	In-Situ	<0.050	<0.300	<10.0	50.2	50.2	<10.0	50.2	544
Floor #20	2/19/19	4'	In-Situ	<0.050	<0.300	<10.0	106	106	24.1	130.1	288
NSW 1	2/19/19	n/a	In-Situ	<0.050	<0.300	<10.0	306	306	132	438	400
NSW 2	2/19/19	n/a	In-Situ	<0.050	<0.300	<10.0	49.7	49.7	<10.0	49.7	320
ESW 1	2/19/19	n/a	In-Situ	<0.050	<0.300	<10.0	58.7	58.7	<10.0	58.7	144
ESW 2	2/19/19	n/a	In-Situ	<0.050	0.338	<10.0	344	344	85.7	429.7	272
SSW 1	2/19/19	n/a	Excavated	<0.050	<0.300	<10.0	1,010	1,010	202	1,212	1,070
SSW 2	2/19/19	n/a	In-Situ	<0.050	<0.300	<10.0	98.9	98.9	52.8	151.7	1,120
WSW 1	2/19/19	n/a	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
WSW 2	2/19/19	n/a	In-Situ	<0.050	<0.300	<10.0	148	148	15.7	163.7	832
WSW 3 GC	2/19/19	n/a	Excavated	<0.050	<0.300	11.0	1,270	1,281.0	368	1,649.0	1,220
Floor Stain @ 10'	2/19/19	10'	Excavated	<0.050	6.00	132	2,310	2,442	661	3,103	800
Floor Stain @ 4'	2/19/19	4'	Excavated	<0.050	8.27	147	2,960	3,107	967	4,074	672
Floor 8 B	3/1/19	11.5'	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	-
Floor 7 B	3/1/19	11.5'	In-Situ	-	-	<10.0	265	265	42.2	307.2	-
Floor 10 B	3/1/19	5'	In-Situ	-	-	<10.0	184	184	22.9	206.9	-
Floor 13 B	3/1/19	5'	In-Situ	-	-	<10.0	95.2	95.2	10.4	105.6	-
Floor 11 B	3/1/19	5'	In-Situ	-	-	<10.0	258	258	46.5	304.5	-
Floor 2 B	3/1/19	11.5'	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	-
Floor Stain @ 11.5'	3/1/19	11.5'	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	-
Floor Stain @ 5'B	3/1/19	5'	In-Situ	-	-	<10.0	29.6	29.6	<10.0	29.6	-

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Concentrations of BTEX, TPH and/or Chloride in Soil - Confirmation Samples (Cont.)											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E300/4500Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
SSW 1 B	3/1/19	n/a	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	-
WSW 3 GC B	3/1/19	n/a	In-Situ	-	-	<10.0	<10.0	736	145	881	-
Floor #2 N. Wall	3/19/19	n/a	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	160
Floor #2 E. Wall	3/19/19	n/a	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
Floor #2 S. Wall	3/19/19	n/a	In-Situ	-	-	<10.0	14.5	14.5	<10.0	14.5	160
Floor #3 E. Wall	3/19/19	n/a	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
Floor #6 S. Wall	3/19/19	n/a	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
Floor #7 E Wall	3/19/19	n/a	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	224
Floor #11 S. Wall	3/19/19	n/a	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	832
Floor #11 E Wall	3/19/19	n/a	In-Situ	-	-	<10.0	11.0	11.0	<10.0	11.0	704
Floor #11 N. Wall	3/19/19	n/a	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
Floor #9 E Wall	3/19/19	n/a	In-Situ	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	704
Floor #13 S Wall	3/19/19	n/a	In-Situ	-	-	<10.0	39.3	39.3	<10.0	39.3	1,070
Floor #13 E Wall	3/19/19	n/a	In-Situ	-	-	<10.0	54.9	54.9	<10.0	54.9	912
Closure Criteria				10	50	-	-	1,000	-	2,500	10,000

A "Site & Sample Location Map" is provided as Attachment #3. Field Data, if applicable, is provided as Attachment #9. Soil profile observations are provided on Attachment #5. Laboratory analytical reports are provided as Attachment #6.

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

RESTORATION, RECLAMATION AND RE-VEGETATION PLAN

Upon receiving laboratory analytical results from confirmation soil samples, the excavated area was backfilled with locally-sourced, non-impacted, "like" material. Excavation was backfill was contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable.

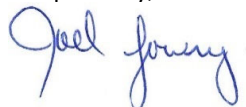
The release was limited to an active caliche production pad. Restoration, final reclamation and re-vegetation will be conducted in accordance with NMAC 19.15.29.13 once the facility is no longer needed for production or subsequent drilling operations.

CLOSURE REQUEST

Impacted soil affected above the NMOCD Closure Criteria was excavated and transported to an NMOCD-approved disposal facility. Laboratory analytical results from confirmation soil samples indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria. Between February 13, and March 12, 2019, approximately 4,540 cubic yards of impacted soil was transported to an NMOCD-approved disposal facility. The final dimensions of the excavation were approximately 108 Ft. in length, 96 Ft. in width and ranged in depth from 4 Ft. to 11.5 Ft.

Based on laboratory analytical results, field activities conducted to date and conditions at the site, LEA recommends Energen Resources Corporation provide a copy of this Remediation Summary and Closure Report to the NMOCD and request closure be granted to the State B Site.

Respectfully,



Joel W. Lowry
Environmental Professional
Lowry Environmental & Associates, LLC

Attachments:

- Attachment #1- Figure 1 - Topographic Map
- Attachment #2- Figure 2 - Aerial Map
- Attachment #3- Figure 3 - Site & Sample Location Map
- Attachment #4- Depth to Groundwater Information
- Attachment #5- Soil Profile
- Attachment #6- Laboratory Analytical Reports
- Attachment #7- Photographic Log
- Attachment #8- Release Notification (FORM C-141)
- Attachment #9- Field Data

LIMITATIONS

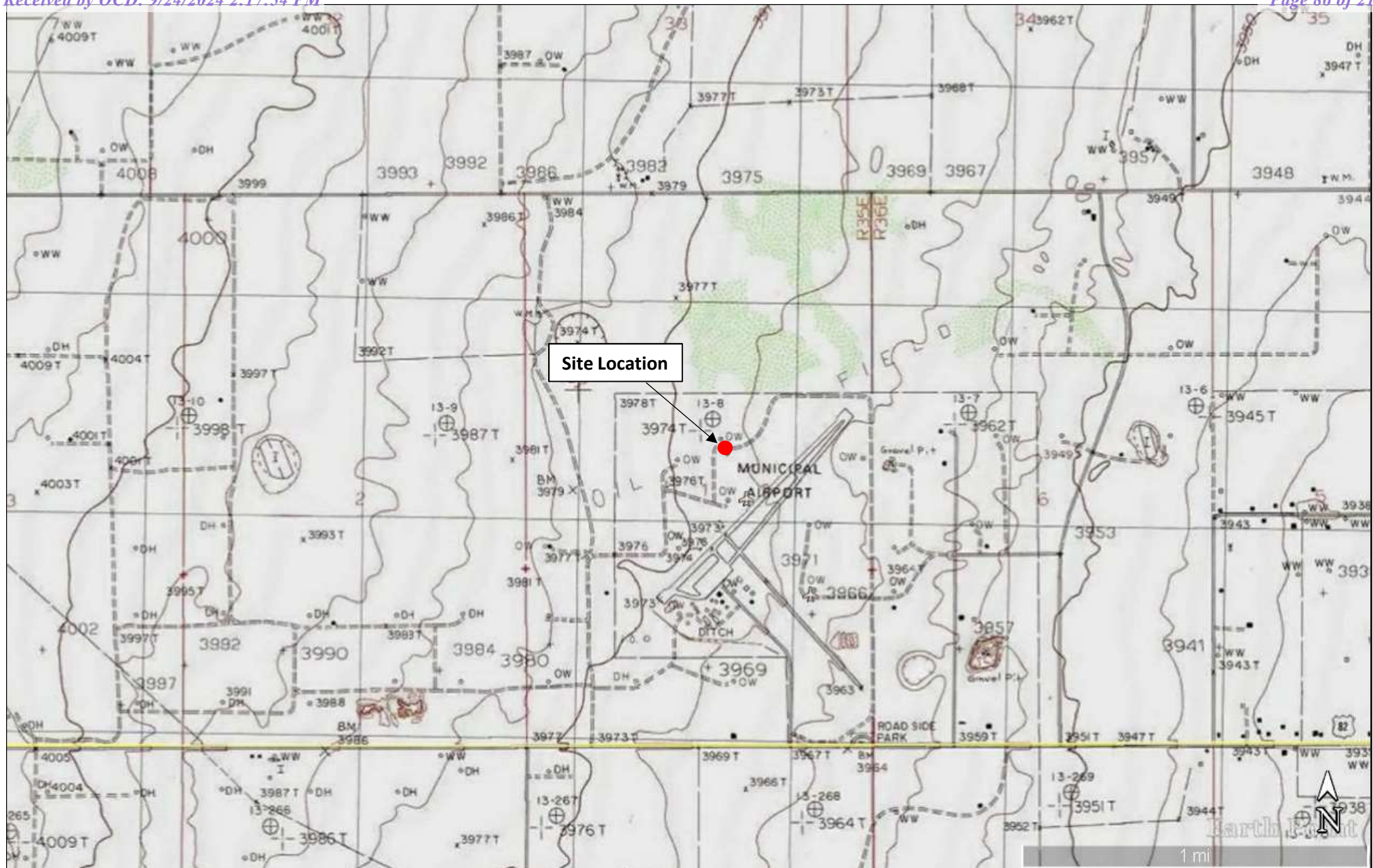
This document has been prepared on behalf of Energen Resources Corporation. Use of information contained in this report, including exhibits and attachments, by any other party without the consent of LEA and/or Energen Resources Corporation is prohibited.

This document has been prepared in a professional manner, using the degree of skill and care exercised by similar environmental professionals. LEA notes that the facts and conditions referenced in this document may change over time and that the conclusions and recommendations are only applicable to the facts and conditions as described at the time this document was prepared.

LEA has prepared this report to the best of its ability. No other warranty, expressed or implied, is made or intended.

ATTACHMENT #1

Figure 1 - Topographic Map



LEGEND:

● Site Location

Figure 1
Topographic Map
Energen Resources Corporation
State B
GPS: 32.95652, -103.41013
Lea County, New Mexico

LOWRY
environmental

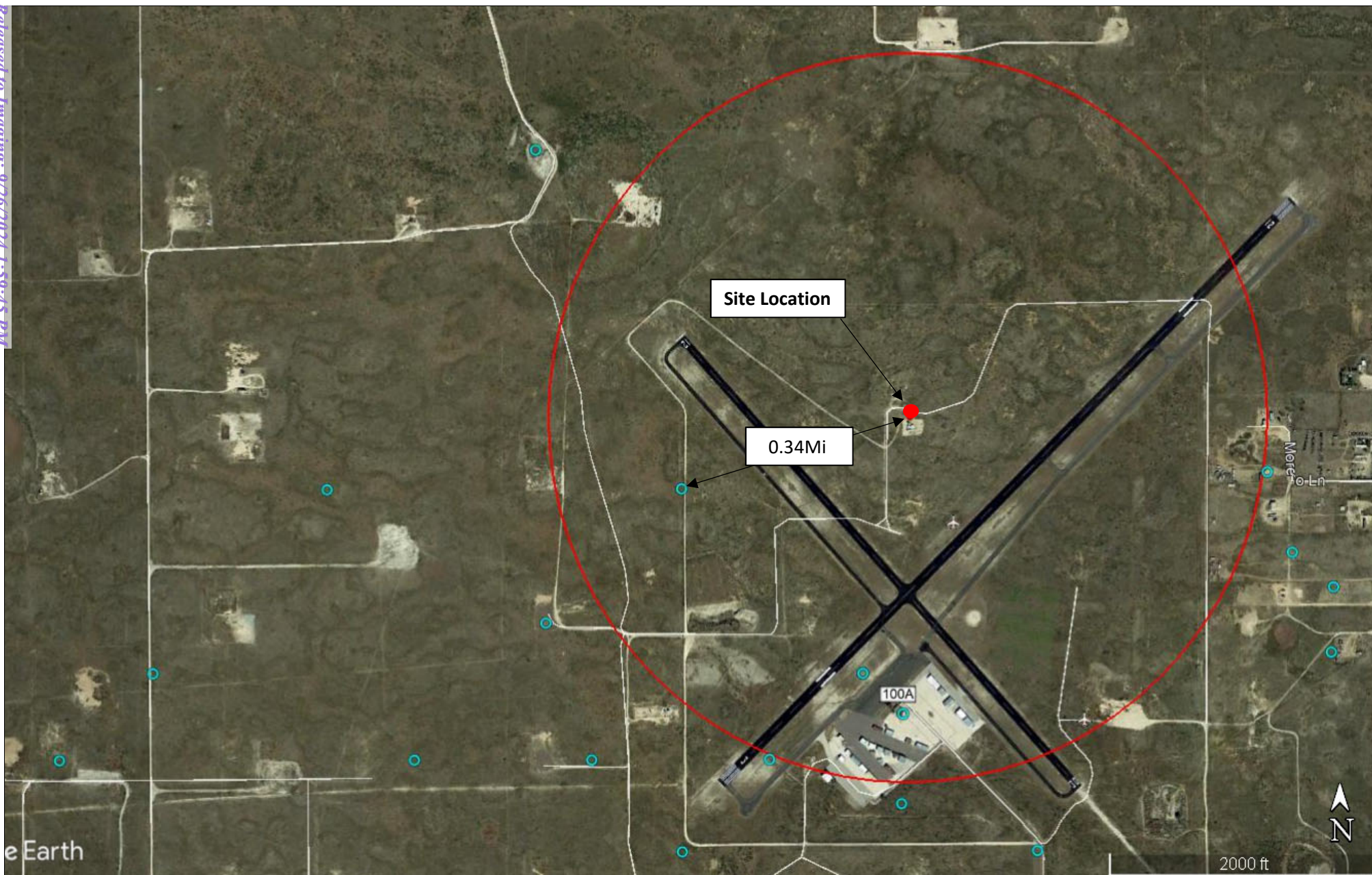
Drafted by: jwl

Checked by: client

Date: 11/5/2018

ATTACHMENT #2

Figure 2 - Aerial Map



LEGEND:

- Site Location
- Fresh Water Well
- 100-Year Floodplain
- High/Critical Karst

- Non-Industrial Building
- Subsurface Mine
- 1/2 Mile Radius

Figure 2
Aerial Map
Energen Resources Corporation
State B
GPS: 32.95652, -103.41013
Lea County, New Mexico



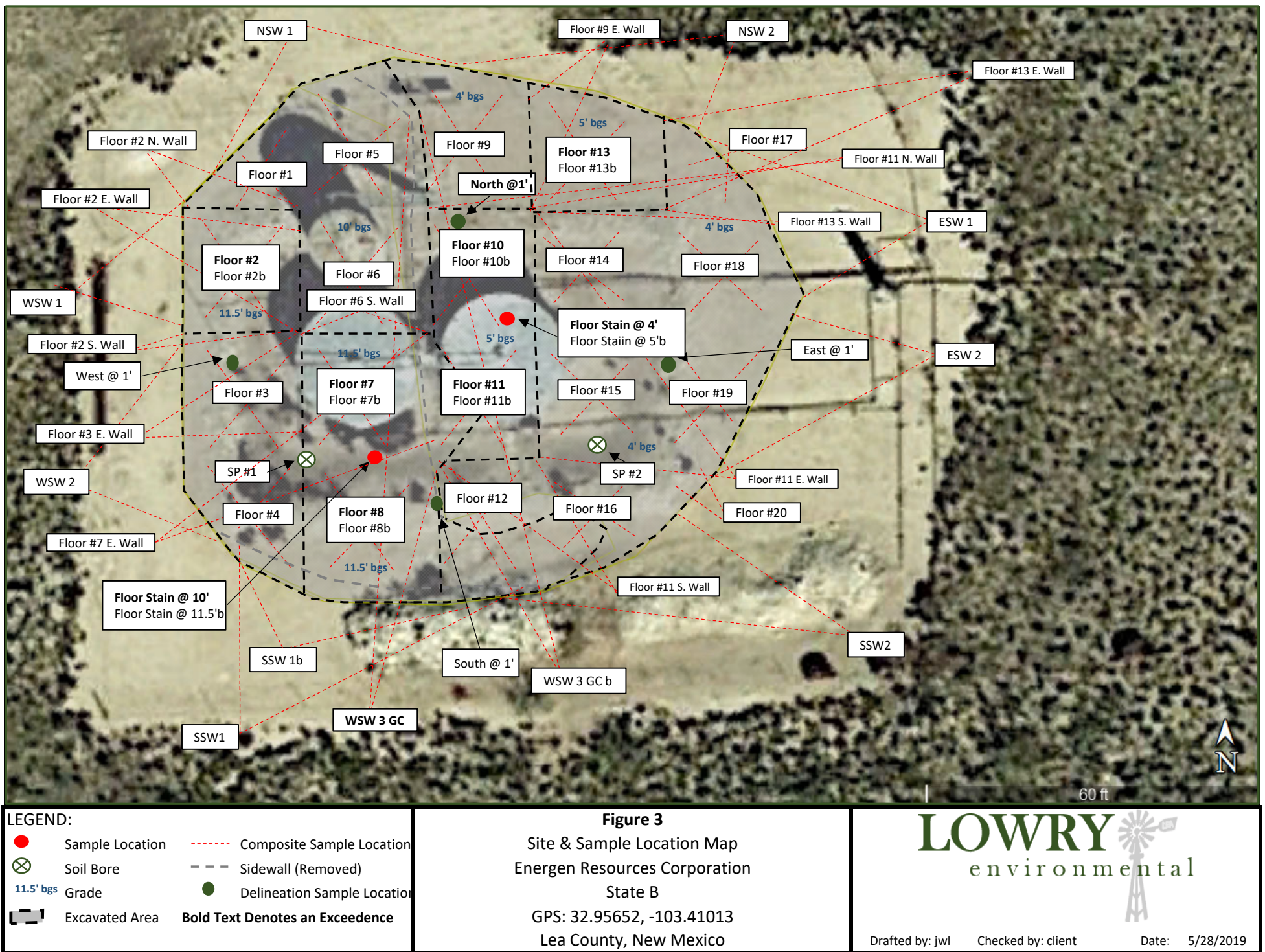
Drafted by: jwl

Checked by: client

Date: 11/9/2018

ATTACHMENT #3

Figure 3 - Site & Sample Location Map



ATTACHMENT #4
Depth to Groundwater Information

**LEGEND:**

● Site Location

Figure 4

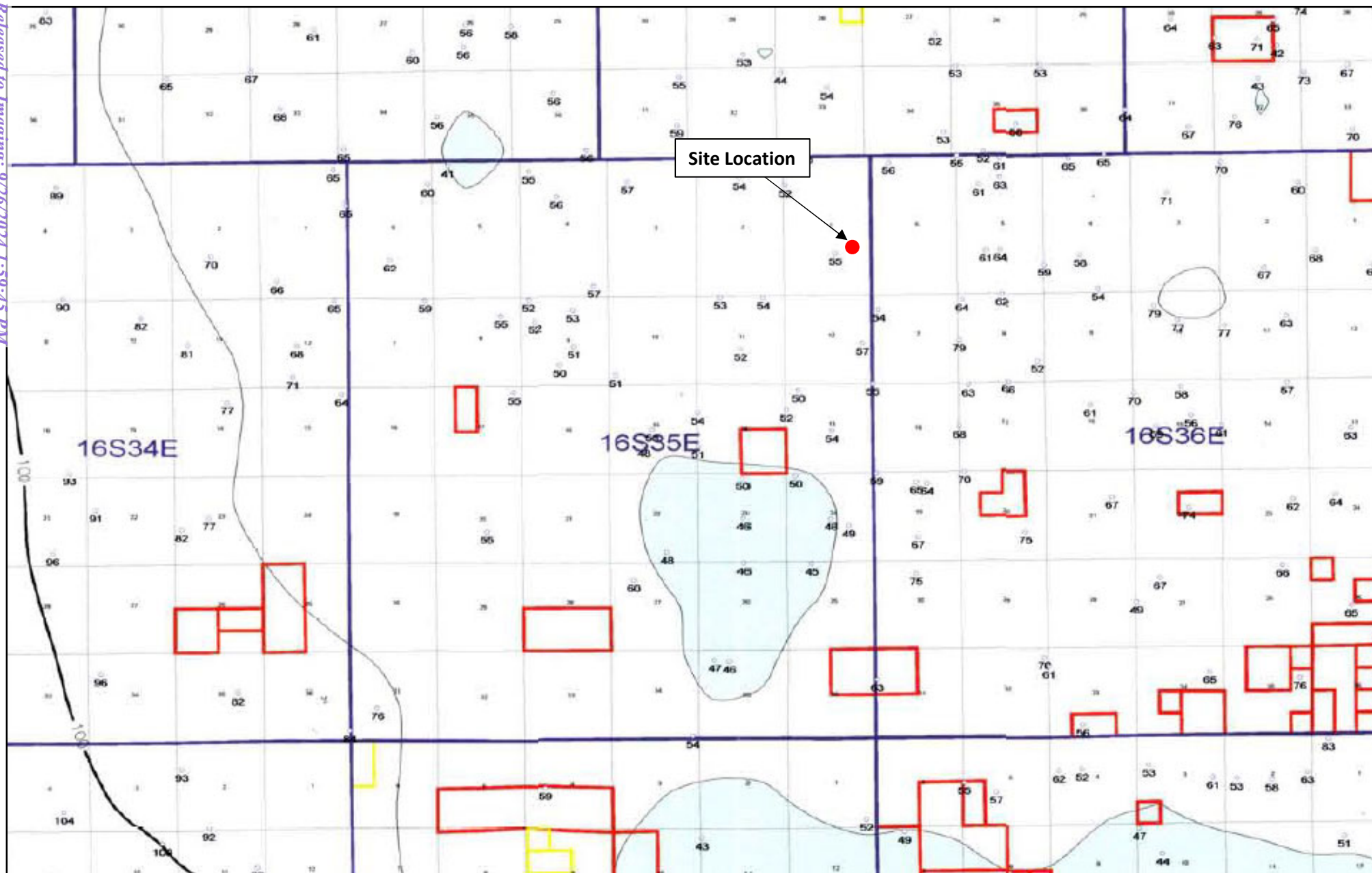
USGS Well Proximity Map
Energen Resources Corporation
State B
GPS: 32.95652, -103.41013
Lea County, New Mexico



Drafted by: jwl

Checked by: client

Date: 11/5/2018



LEGEND:

● Site Location

Figure 5

Inferred Depth to Groundwater Trend Map
Energen Resources Corporation
State B
GPS: 32.95652, -103.41013
Lea County, New Mexico



Drafted by: jwl

Checked by: client

Date: 11/9/2018




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Groundwater	United States	GO

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- [Full News](#) 

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 325713103234401

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 325713103234401 16S.36E.06.112414

Available data for this site

Groundwater: Field measurements	GO
---------------------------------	----

Lea County, New Mexico

Hydrologic Unit Code --

Latitude 32°57'13", Longitude 103°23'44" NAD27

Land-surface elevation 3,957 feet above NAVD88

The depth of the well is 102 feet below land surface.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

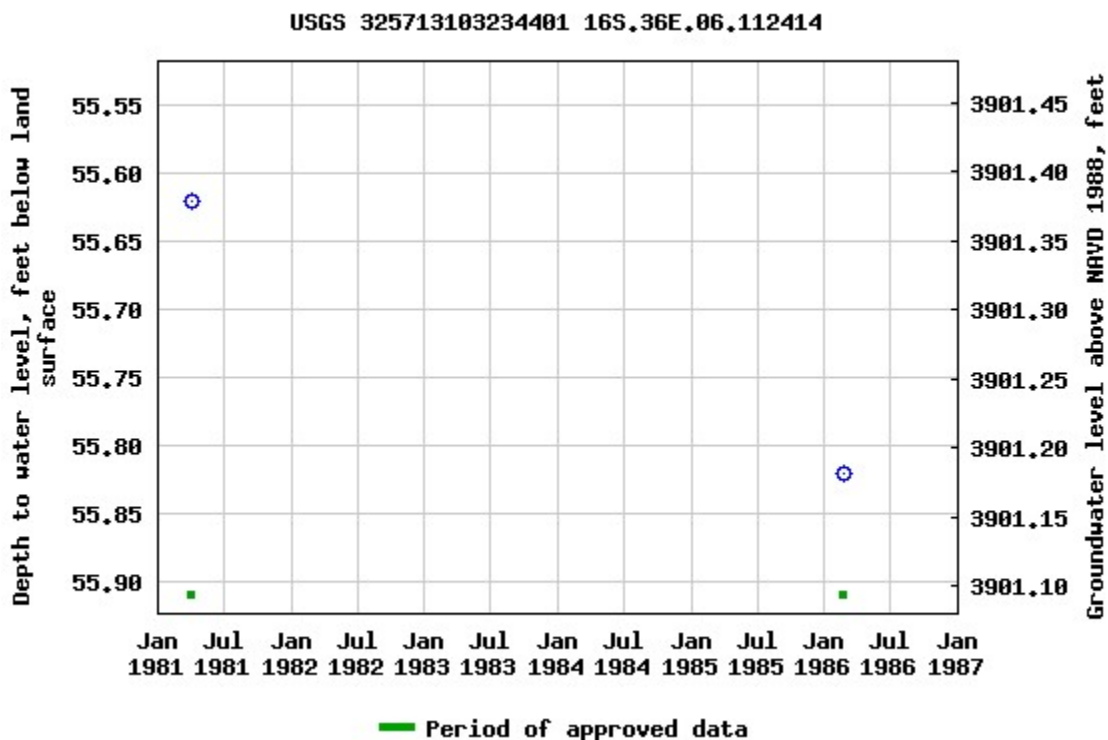
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1.08 0.94 nadww01





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- [Full News](#) 

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Search Results -- 1 sites found

site_no list =

- 325647103242101

Minimum number of levels = 1

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USGS 325647103242101 16S.35E.01.41120

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code --

Latitude 32°56'47", Longitude 103°24'21" NAD27

Land-surface elevation 3,968 feet above NAVD88

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

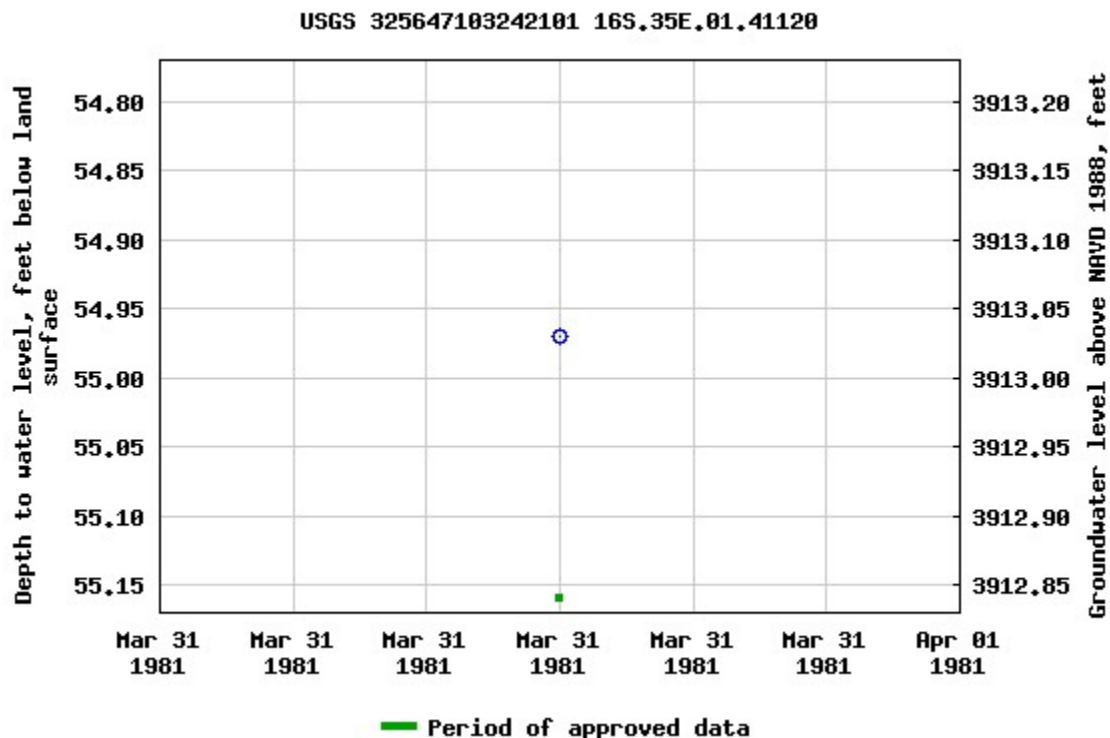
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7.04 0.9 nadww01





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site_no list =

- 325647103245601

Minimum number of levels = 1

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USGS 325647103245601 16S.35E.01.131312

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 12080003

Latitude 32°56'47", Longitude 103°24'56" NAD27

Land-surface elevation 3,976 feet above NAVD88

The depth of the well is 75 feet below land surface.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

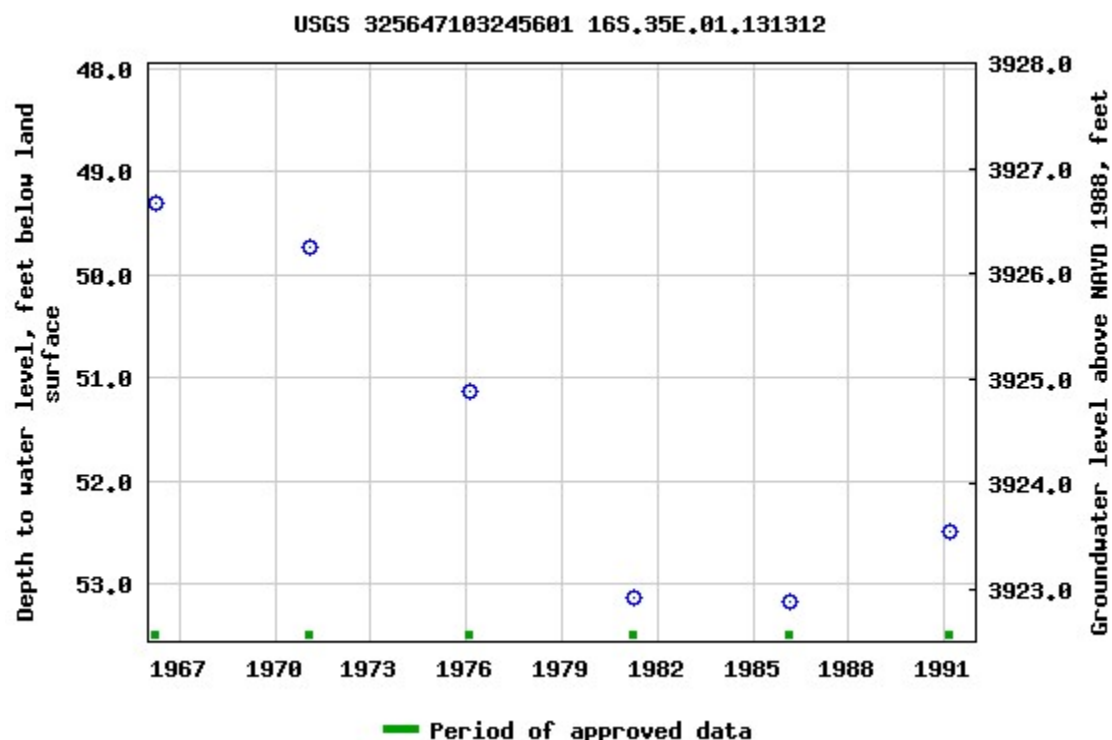
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1 0.88 nadww01



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Geographic Area:

United States

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Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 325734103252801

Minimum number of levels = 1

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USGS 325734103252801 16S.35E.02.211134

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 12080003

Latitude 32°57'34", Longitude 103°25'28" NAD27

Land-surface elevation 3,989 feet above NAVD88

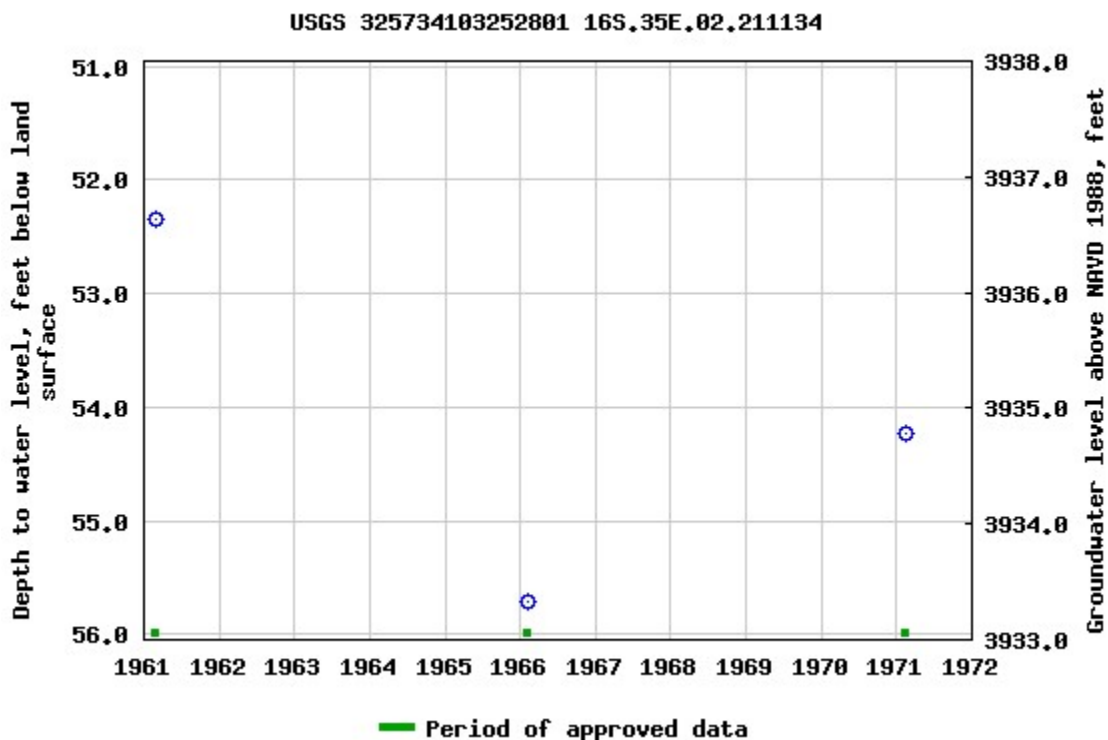
The depth of the well is 100 feet below land surface.

This well is completed in the Ogallala Formation (121OGLL) local aquifer.

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1.02 0.89 nadww01





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
L 10272		L	LE	4	2	1	01	16S	35E	648409	3647475*	228	120	80	40
L 05904	R	L	LE			1	01	16S	35E	648116	3647369*	539	150	70	80
L 03357		L	LE				01	16S	35E	648532	3646966*	579	120	60	60
L 03420		L	LE				01	16S	35E	648532	3646966*	579	120	60	60
L 03663 POD2	R	L	LE	1	1	4	01	16S	35E	648624	3646878*	659	164	60	104

Average Depth to Water: **66 feet**

Minimum Depth: **60 feet**

Maximum Depth: **80 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 648628.7

Northing (Y): 3647537.3

Radius: 805

*UTM location was derived from PLSS - see Help

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

11/5/18 10:51 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

ATTACHMENT #5
Soil Profile

SOIL PROFILE

Site Name: Stake BDate: 7/31/2018

Description		Depth (ft. bgs)
Topsoil - Brown		1
Hardpan		2
		3
		4
		5
		6
		7
		8
		9
		10
		11
		12
		13
		14
		15
Caliche w/ Sand		16
		17
		18
		19
		20
		21
		22
		23
		24
		25
		26
		27
		28
		29
		30
		31
		32
		33
		34
		35
		36
		37
		38
		39
		40

1 of 2

SOIL PROFILE

Site Name: State "B"Date: 7/31/2018

Description		Depth (ft. bgs)
		4 ₁
		2
		3
		4
		5
		6
		7
		8
		9
		5 ₀
		1
		2
		5 ₃
		4
		5
		6
		7
		8
		9
		0
		6 ₁
		2
		3
		4
		5
		6
		7
		8
		9
		0
		1
		2
		3
		4
		5
		6
		7
		8
		9
		0

TD

2 of 2

ATTACHMENT #6
Laboratory Analytical Reports



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

August 01, 2018

STEVE TAYLOR

CAPROCK SERVICES

P.O. BOX 457

LOVINGTON, NM 88260

RE: STATE B

Enclosed are the results of analyses for samples received by the laboratory on 07/31/18 15:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ SURFACE (H802084-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	2.79	1.00	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	38.3	1.00	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	53.6	1.00	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	212	3.00	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTX	307	6.00	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/01/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	2530	50.0	08/01/2018	ND	184	91.9	200	5.30		
DRO >C10-C28*	29500	50.0	08/01/2018	ND	174	86.9	200	12.8		
EXT DRO >C28-C36	3790	50.0	08/01/2018	ND						

Surrogate: 1-Chlorooctane 321 % 41-142

Surrogate: 1-Chlorooctadecane 1110 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 3' (H802084-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1260	16.0	08/01/2018	ND	432	108	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	389	50.0	08/01/2018	ND	184	91.9	200	5.30		
DRO >C10-C28*	4400	50.0	08/01/2018	ND	174	86.9	200	12.8		
EXT DRO >C28-C36	447	50.0	08/01/2018	ND						
Surrogate: 1-Chlorooctane	140 %	41-142								
Surrogate: 1-Chlorooctadecane	243 %	37.6-147								

Sample ID: SP 1 @ 6' (H802084-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	08/01/2018	ND	432	108	400	0.00	
TPH 8015M	mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	1140	50.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	6980	50.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	837	50.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane									
	172 %	41-142							
Surrogate: 1-Chlorooctadecane									
	308 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 9' (H802084-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	08/01/2018	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	112	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	1490	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	204	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	98.6 %	41-142							
Surrogate: 1-Chlorooctadecane	137 %	37.6-147							

Sample ID: SP 1 @ 12' (H802084-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/01/2018	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	31.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	81.0 %	41-142							
Surrogate: 1-Chlorooctadecane	76.4 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 15' (H802084-06)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	0.054	0.050	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	0.062	0.050	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	0.168	0.150	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTEX	<0.300	0.300	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/01/2018	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	47.4	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 93.0 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 18' (H802084-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/01/2018	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	21.2	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	93.5 %	41-142							
Surrogate: 1-Chlorooctadecane	88.0 %	37.6-147							

Sample ID: SP 1 @ 21' (H802084-08)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	95.3 %	41-142							
Surrogate: 1-Chlorooctadecane	88.0 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 24' (H802084-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	198	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	68.5	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	87.3 %	41-142							
Surrogate: 1-Chlorooctadecane	84.2 %	37.6-147							

Sample ID: SP 1 @ 27' (H802084-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	309	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	27.8	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	93.4 %	41-142							
Surrogate: 1-Chlorooctadecane	98.1 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 1 @ 30' (H802084-11)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16		
Toluene*	<0.050	0.050	08/01/2018	ND	2.28	114	2.00	3.97		
Ethylbenzene*	<0.050	0.050	08/01/2018	ND	2.27	114	2.00	4.41		
Total Xylenes*	<0.150	0.150	08/01/2018	ND	6.67	111	6.00	4.50		
Total BTEx	<0.300	0.300	08/01/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/01/2018	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 90.0 % 41-142

Surrogate: 1-Chlorooctadecane 82.1 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ SURFACE (H802084-12)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	8.41	1.00	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	6.84	1.00	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	142	3.00	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTEX	157	6.00	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
									S-06

TPH 8015M	mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	877	50.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	7500	50.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	601	50.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 156 % 41-142

Surrogate: 1-Chlorooctadecane 384 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 3' (H802084-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	08/01/2018	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	2680	50.0	08/01/2018	ND	184	91.9	200	5.30		
DRO >C10-C28*	12300	50.0	08/01/2018	ND	174	86.9	200	12.8		
EXT DRO >C28-C36	1430	50.0	08/01/2018	ND						
Surrogate: 1-Chlorooctane										
	247 %	41-142								
Surrogate: 1-Chlorooctadecane										
	503 %	37.6-147								

Sample ID: SP 2 @ 9' (H802084-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	33.3	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	556	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	45.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane									
	93.7 %	41-142							
Surrogate: 1-Chlorooctadecane									
	113 %	37.6-147							

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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 15' (H802084-15)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	<0.050	0.050	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	<0.050	0.050	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	<0.150	0.150	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTEx	<0.300	0.300	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1920	16.0	08/01/2018	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 84.5 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 21' (H802084-16)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30	
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	88.0 %	41-142							
Surrogate: 1-Chlorooctadecane	83.3 %	37.6-147							

Sample ID: SP 2 @ 27' (H802084-17)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1360	16.0	08/01/2018	ND	416	104	400	0.00		
TPH 8015M			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	184	91.9	200	5.30		
DRO >C10-C28*	<10.0	10.0	08/01/2018	ND	174	86.9	200	12.8		
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND						
Surrogate: 1-Chlorooctane	76.1 %	41-142								
Surrogate: 1-Chlorooctadecane	72.3 %	37.6-147								

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 33' (H802084-18)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	30.0	10.0	08/01/2018	ND	201	100	200	2.41	
DRO >C10-C28*	388	10.0	08/01/2018	ND	199	99.6	200	5.75	
EXT DRO >C28-C36	68.8	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	81.7 %	41-142							
Surrogate: 1-Chlorooctadecane	89.9 %	37.6-147							

Sample ID: SP 2 @ 39' (H802084-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	720	16.0	08/01/2018	ND	416	104	400	0.00		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41		
DRO >C10-C28*	66.4	10.0	08/01/2018	ND	199	99.6	200	5.75		
EXT DRO >C28-C36	14.8	10.0	08/01/2018	ND						
Surrogate: 1-Chlorooctane	87.2 %	41-142								
Surrogate: 1-Chlorooctadecane	83.6 %	37.6-147								

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 45' (H802084-20)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	<0.050	0.050	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	<0.050	0.050	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	<0.150	0.150	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTX	<0.300	0.300	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	08/01/2018	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41	
DRO >C10-C28*	29.1	10.0	08/01/2018	ND	199	99.6	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 83.0 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 48' (H802084-21)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41	
DRO >C10-C28*	49.6	10.0	08/01/2018	ND	199	99.6	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	90.6 %	41-142							
Surrogate: 1-Chlorooctadecane	83.7 %	37.6-147							

Sample ID: SP 2 @ 54' (H802084-22)

Chloride, SM4500CI-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	08/01/2018	ND	416	104	400	0.00		
TPH 8015M			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41		
DRO >C10-C28*	34.5	10.0	08/01/2018	ND	199	99.6	200	5.75		
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND						
Surrogate: 1-Chlorooctane	88.6 %	41-142								
Surrogate: 1-Chlorooctadecane	82.8 %	37.6-147								

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 57' (H802084-23)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	08/01/2018	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	201	100	200	2.41	
DRO >C10-C28*	50.6	10.0	08/01/2018	ND	199	99.6	200	5.75	
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND					
Surrogate: 1-Chlorooctane	82.8 %	41-142							
Surrogate: 1-Chlorooctadecane	78.0 %	37.6-147							

Sample ID: SP 2 @ 60' (H802084-24)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	08/01/2018	ND	416	104	400	0.00		
TPH 8015M			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	190	95.2	200	4.97		
DRO >C10-C28*	37.6	10.0	08/01/2018	ND	204	102	200	1.15		
EXT DRO >C28-C36	<10.0	10.0	08/01/2018	ND						
Surrogate: 1-Chlorooctane	97.6 %	41-142								
Surrogate: 1-Chlorooctadecane	94.7 %	37.6-147								

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 07/31/2018
Reported: 08/01/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 07/31/2018
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 2 @ 63' (H802084-25)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/01/2018	ND	2.24	112	2.00	3.16	
Toluene*	<0.050	0.050	08/01/2018	ND	2.28	114	2.00	3.97	
Ethylbenzene*	<0.050	0.050	08/01/2018	ND	2.27	114	2.00	4.41	
Total Xylenes*	<0.150	0.150	08/01/2018	ND	6.67	111	6.00	4.50	
Total BTX	<0.300	0.300	08/01/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/01/2018	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/01/2018	ND	190	95.2	200	4.97	
DRO >C10-C28*	144	10.0	08/01/2018	ND	204	102	200	1.15	
EXT DRO >C28-C36	41.5	10.0	08/01/2018	ND					

Surrogate: 1-Chlorooctane 99.3 % 41-142

Surrogate: 1-Chlorooctadecane 98.4 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
- Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Mike Snyder", is written over a horizontal line.

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager



Released to Imaging: 9/26/2024 1:59:45 PM



Released to Imaging: 9/26/2024 1:59:45 PM



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Caprock Services</u>		BILL TO		ANALYSIS REQUEST																						
Project Manager: <u>Steve Taylor</u>		P.O. #:																								
Address: <u>PO Box 457</u>		Company: <u>Emergen</u>																								
City: <u>Locington</u> State: <u>NM</u> Zip: <u>88260</u>		Attn: <u>Tommy York</u>																								
Phone #: <u>575-704-2718</u> Fax #:		Address: <u>HPZ 546 H</u>																								
Project #:		City: <u>Seminole</u>																								
Project Name: <u>State "B"</u>		State: <u>Tx</u> Zip: <u>7936</u>																								
Project Location:		Phone #: <u>432-209-2483</u>																								
Sampler Name: <u>Steve Taylor</u>		Fax #:																								
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING																		
Lab I.D.	Sample I.D.	(GRAB OR C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME												
<u>H902084</u>																										
<u>21</u>	<u>SP2 @ 48'</u>	<u>6</u>	<u>1</u>			X				X			<u>7-31-18</u>	<u>10:55AM</u>	X	X										
<u>22</u>	<u>SP2 @ 51'</u>	<u>6</u>	<u>1</u>			X				X			<u>7-31-18</u>	<u>11:00AM</u>	X	X	<u>No 51' @ J.</u>									
<u>22B</u>	<u>SP2 @ 54'</u>	<u>6</u>	<u>1</u>			X				X			<u>7-31-18</u>	<u>11:10AM</u>	X	X										
<u>23B</u>	<u>SP2 @ 57'</u>	<u>6</u>	<u>1</u>			X				X			<u>7-31-18</u>	<u>11:15AM</u>	X	X										
<u>24B</u>	<u>SP2 @ 60'</u>	<u>6</u>	<u>1</u>			X				X			<u>7-31-18</u>	<u>11:20AM</u>	X	X										
<u>25B</u>	<u>SP2 @ 63'</u>	<u>6</u>	<u>1</u>			X				X			<u>7-31-18</u>	<u>11:30AM</u>	X	X										

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Relinquished By: <u>[Signature]</u>	Date: <u>7/31/18</u>	Received By: <u>[Signature]</u>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <u>3:25</u>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS:	
	Time:		<u>Rush!!</u>	
Delivered By: (Circle One) <u>#75</u>				
Sampler - UPS - Bus - Other: <u>4.30c / 4.250c</u>	Sample Condition	CHECKED BY: <u>[Signature]</u>		
	Cool Intact			
	<input type="checkbox"/> Yes <input type="checkbox"/> No			



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

November 08, 2018

STEVE TAYLOR

CAPROCK SERVICES

P.O. BOX 457

LOVINGTON, NM 88260

RE: STATE B

Enclosed are the results of analyses for samples received by the laboratory on 11/02/18 10:03.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 11/02/2018
Reported: 11/08/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: EAST @ 1' (H803144-01)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2018	ND	2.07	104	2.00	0.283	
Toluene*	<0.050	0.050	11/07/2018	ND	1.97	98.7	2.00	0.860	
Ethylbenzene*	<0.050	0.050	11/07/2018	ND	1.81	90.6	2.00	0.418	
Total Xylenes*	0.199	0.150	11/07/2018	ND	5.82	97.1	6.00	0.330	
Total BTX	<0.300	0.300	11/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	11/06/2018	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	13.4	10.0	11/03/2018	ND	218	109	200	8.04	
DRO >C10-C28*	406	10.0	11/03/2018	ND	224	112	200	4.73	
EXT DRO >C28-C36	62.5	10.0	11/03/2018	ND					

Surrogate: 1-Chlorooctane 95.8 % 41-142

Surrogate: 1-Chlorooctadecane 98.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 11/02/2018
Reported: 11/08/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: NORTH @ 1' (H803144-02)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/07/2018	ND	2.07	104	2.00	0.283	
Toluene*	<0.050	0.050	11/07/2018	ND	1.97	98.7	2.00	0.860	
Ethylbenzene*	0.085	0.050	11/07/2018	ND	1.81	90.6	2.00	0.418	
Total Xylenes*	0.247	0.150	11/07/2018	ND	5.82	97.1	6.00	0.330	
Total BTEX	0.332	0.300	11/07/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	11/06/2018	ND	416	104	400	3.77	
TPH 8015M	mg/kg		Analyzed By: MS						S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	11.4	10.0	11/03/2018	ND	218	109	200	8.04	
DRO >C10-C28*	2300	10.0	11/03/2018	ND	224	112	200	4.73	
EXT DRO >C28-C36	482	10.0	11/03/2018	ND					

Surrogate: 1-Chlorooctane 95.8 % 41-142

Surrogate: 1-Chlorooctadecane 173 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 11/02/2018
Reported: 11/08/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: WEST@ 1' (H803144-03)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/07/2018	ND	2.07	104	2.00	0.283		
Toluene*	<0.050	0.050	11/07/2018	ND	1.97	98.7	2.00	0.860		
Ethylbenzene*	<0.050	0.050	11/07/2018	ND	1.81	90.6	2.00	0.418		
Total Xylenes*	<0.150	0.150	11/07/2018	ND	5.82	97.1	6.00	0.330		
Total BTEX	<0.300	0.300	11/07/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1060	16.0	11/06/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/03/2018	ND	218	109	200	8.04	
DRO >C10-C28*	60.1	10.0	11/03/2018	ND	224	112	200	4.73	
EXT DRO >C28-C36	36.6	10.0	11/03/2018	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 92.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

CAPROCK SERVICES
STEVE TAYLOR
P.O. BOX 457
LOVINGTON NM, 88260
Fax To:

Received: 11/02/2018
Reported: 11/08/2018
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: ENERGEN

Sampling Date: 11/02/2018
Sampling Type: Soil
Sampling Condition: ** (See Notes)
Sample Received By: Tamara Oldaker

Sample ID: SOUTH @ 1' (H803144-04)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	11/07/2018	ND	2.07	104	2.00	0.283		
Toluene*	<0.050	0.050	11/07/2018	ND	1.97	98.7	2.00	0.860		
Ethylbenzene*	<0.050	0.050	11/07/2018	ND	1.81	90.6	2.00	0.418		
Total Xylenes*	<0.150	0.150	11/07/2018	ND	5.82	97.1	6.00	0.330		
Total BTEX	<0.300	0.300	11/07/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3080	16.0	11/06/2018	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	11/05/2018	ND	184	92.2	200	2.91	
DRO >C10-C28*	195	10.0	11/05/2018	ND	208	104	200	1.90	
EXT DRO >C28-C36	119	10.0	11/05/2018	ND					

Surrogate: 1-Chlorooctane 86.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "C. D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

February 25, 2019

JOEL LOWRY

CAPROCK SERVICES

P.O. BOX 457

LOVINGTON, NM 88260

RE: ENERGEN STATE B

Enclosed are the results of analyses for samples received by the laboratory on 02/20/19 9:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #1 (H900653-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	178	89.0	200	2.40	
DRO >C10-C28*	82.1	10.0	02/22/2019	ND	184	92.2	200	8.66	
EXT DRO >C28-C36	12.5	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 96.5 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #2 (H900653-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	0.751	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	2.04	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	4.21	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTEX	7.00	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 128 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	02/22/2019	ND	416	104	400	3.77		
TPH 8015M		mg/kg		Analyzed By: MS						S-04

Surrogate: 1-Chlorooctane 137 % 41-142

Surrogate: 1-Chlorooctadecane 216 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #3 (H900653-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTEx	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	178	89.0	200	2.40	
DRO >C10-C28*	307	10.0	02/22/2019	ND	184	92.2	200	8.66	
EXT DRO >C28-C36	45.9	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 95.1 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #4 (H900653-04)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13		
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60		
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	2.22	111	2.00	5.09		
Total Xylenes*	<0.150	0.150	02/22/2019	ND	6.20	103	6.00	4.26		
Total BTEx	<0.300	0.300	02/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	<10.0	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #5 (H900653-05)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13		
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60		
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	2.22	111	2.00	5.09		
Total Xylenes*	<0.150	0.150	02/22/2019	ND	6.20	103	6.00	4.26		
Total BTEx	<0.300	0.300	02/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	<10.0	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 94.4 % 41-142

Surrogate: 1-Chlorooctadecane 93.6 % 37.6-147

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Received: 02/20/2019
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 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #6 (H900653-06)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2120	16.0	02/22/2019	ND	416	104	400	3.77	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	228	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	23.8	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 92.3 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #7 (H900653-07)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	0.067	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	0.100	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	0.224	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTEx	0.391	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	10.6	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	1040	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	319	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 147 % 37.6-147

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 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #8 (H900653-08)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	0.100	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	0.319	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTEX	0.450	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 419 % 73.3-129

Chloride, SM4500CI-B			mg/kg					Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1840	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	30.6	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	1210	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	225	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 154 % 37.6-147

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 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #9 (H900653-09)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13		
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60		
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	2.22	111	2.00	5.09		
Total Xylenes*	<0.150	0.150	02/22/2019	ND	6.20	103	6.00	4.26		
Total BTEx	<0.300	0.300	02/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 121 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1340	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	140	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	50.8	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 98.5 % 37.6-147

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 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #10 (H900653-10)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	0.129	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	0.201	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTEX	0.330	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 149 % 73.3-129

Chloride, SM4500Cl-B			mg/kg					Analyzed By: AC	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	26.0	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	2490	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	990	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 96.7 % 41-142

Surrogate: 1-Chlorooctadecane 283 % 37.6-147

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 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #11 (H900653-11)

BTX 8021B		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	0.260	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	0.303	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	0.528	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTX	1.09	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 133 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1230	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	17.2	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	2100	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	620	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 97.8 % 41-142

Surrogate: 1-Chlorooctadecane 249 % 37.6-147

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 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #12 (H900653-12)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	0.051	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTEx	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 125 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1680	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	895	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	286	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 91.8 % 41-142

Surrogate: 1-Chlorooctadecane 140 % 37.6-147

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 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #13 (H900653-13)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	1.33	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	3.32	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	30.1	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTEX	34.7	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	02/22/2019	ND	416	104	400	3.77		
TPH 8015M	mg/kg		Analyzed By: MS							S-04

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	503	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	3350	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	977	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 249 % 41-142

Surrogate: 1-Chlorooctadecane 336 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #14 (H900653-14)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	2.05	102	2.00	3.13	
Toluene*	<0.050	0.050	02/22/2019	ND	2.17	109	2.00	3.60	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	2.22	111	2.00	5.09	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	6.20	103	6.00	4.26	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	111	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	50.6	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 93.6 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #15 (H900653-15)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	592	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/21/2019	ND	222	111	200	3.16	
DRO >C10-C28*	479	10.0	02/21/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	108	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 120 % 37.6-147

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CAPROCK SERVICES
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 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #16 (H900653-16)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	50.4	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	18.6	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 96.8 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #17 (H900653-17)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	0.091	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	0.507	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	0.598	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	10.4	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	403	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	79.2	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 89.9 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #18 (H900653-18)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	481	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	98.9	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 119 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #19 (H900653-19)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	544	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	50.2	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	<10.0	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 89.2 % 41-142

Surrogate: 1-Chlorooctadecane 92.5 % 37.6-147

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CAPROCK SERVICES
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 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR #20 (H900653-20)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	106	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	24.1	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 91.2 % 41-142

Surrogate: 1-Chlorooctadecane 97.2 % 37.6-147

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CAPROCK SERVICES
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 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR STAIN @ 10' (H900653-21)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	0.653	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	1.33	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	4.02	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEx	6.00	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	800	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	132	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	2310	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	661	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 140 % 41-142

Surrogate: 1-Chlorooctadecane 260 % 37.6-147

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 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: FLOOR STAIN @ 4' (H900653-22)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	0.572	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	2.28	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	5.42	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEx	8.27	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	672	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M	mg/kg	Analyzed By: MS						S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	147	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	2960	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	967	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 157 % 41-142

Surrogate: 1-Chlorooctadecane 300 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: NSW 1 (H900653-23)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	222	111	200	3.16	
DRO >C10-C28*	306	10.0	02/22/2019	ND	220	110	200	5.83	
EXT DRO >C28-C36	132	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 114 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: NSW 2 (H900653-24)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515		
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57		
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211		
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857		
Total BTEx	<0.300	0.300	02/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	320	16.0	02/22/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	205	103	200	1.97	
DRO >C10-C28*	49.7	10.0	02/22/2019	ND	212	106	200	3.67	
EXT DRO >C28-C36	<10.0	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 98.3 % 41-142

Surrogate: 1-Chlorooctadecane 106 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: ESW 1 (H900653-25)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEx	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	02/22/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	205	103	200	1.97	
DRO >C10-C28*	58.7	10.0	02/22/2019	ND	212	106	200	3.67	
EXT DRO >C28-C36	<10.0	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 84.0 % 41-142

Surrogate: 1-Chlorooctadecane 86.3 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: ESW 2 (H900653-26)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	0.068	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	0.270	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	0.338	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	02/22/2019	ND	416	104	400	8.00	QM-07	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	205	103	200	1.97	
DRO >C10-C28*	344	10.0	02/22/2019	ND	212	106	200	3.67	
EXT DRO >C28-C36	85.7	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 98.6 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SSW 1 (H900653-27)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	02/22/2019	ND	416	104	400	8.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	205	103	200	1.97	
DRO >C10-C28*	1010	10.0	02/22/2019	ND	212	106	200	3.67	
EXT DRO >C28-C36	202	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 155 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SSW 2 (H900653-28)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1120	16.0	02/22/2019	ND	416	104	400	8.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	205	103	200	1.97	
DRO >C10-C28*	98.9	10.0	02/22/2019	ND	212	106	200	3.67	
EXT DRO >C28-C36	52.8	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 92.5 % 41-142

Surrogate: 1-Chlorooctadecane 97.0 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: WSW 1 (H900653-29)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/22/2019	ND	416	104	400	8.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	205	103	200	1.97	
DRO >C10-C28*	<10.0	10.0	02/22/2019	ND	212	106	200	3.67	
EXT DRO >C28-C36	<10.0	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 96.0 % 41-142

Surrogate: 1-Chlorooctadecane 98.4 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: WSW 2 (H900653-30)

BTEx 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	02/22/2019	ND	1.90	94.8	2.00	0.515		
Toluene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	1.57		
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.93	96.4	2.00	0.0211		
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.56	92.6	6.00	0.0857		
Total BTEx	<0.300	0.300	02/22/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	02/22/2019	ND	416	104	400	8.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/22/2019	ND	205	103	200	1.97	
DRO >C10-C28*	148	10.0	02/22/2019	ND	212	106	200	3.67	
EXT DRO >C28-C36	15.7	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 98.5 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Analytical Results For:

CAPROCK SERVICES
 JOEL LOWRY
 P.O. BOX 457
 LOVINGTON NM, 88260
 Fax To:

Received: 02/20/2019
 Reported: 02/25/2019
 Project Name: ENERGEN STATE B
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

Sampling Date: 02/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: WSW 3 GC (H900653-31)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/23/2019	ND	1.90	94.8	2.00	0.515	
Toluene*	<0.050	0.050	02/23/2019	ND	1.93	96.4	2.00	1.57	
Ethylbenzene*	0.068	0.050	02/23/2019	ND	1.93	96.4	2.00	0.0211	
Total Xylenes*	<0.150	0.150	02/23/2019	ND	5.56	92.6	6.00	0.0857	
Total BTEx	<0.300	0.300	02/23/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1220	16.0	02/22/2019	ND	416	104	400	8.00	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	11.0	10.0	02/22/2019	ND	205	103	200	1.97	
DRO >C10-C28*	1270	10.0	02/22/2019	ND	212	106	200	3.67	
EXT DRO >C28-C36	368	10.0	02/22/2019	ND					

Surrogate: 1-Chlorooctane 93.4 % 41-142

Surrogate: 1-Chlorooctadecane 164 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name:

Caprock Services, LLC

Project Manager: Joel Lowry

Address: PO 896

City: Lovington

State: NM Zip #

Phone #: 432-466-4450

Fax #:

Project #:

Project Owner:

Project Name: Engen State B

Project Location: Lea Co, NM

Sample Name: Joel Lowry

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H900053

1900053																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Relinquished By:

Date: 2/19/19

Time: 09:30

Received By:

Joel Lowry

Relinquished By:

Date:

Time:

Received By:

Joel Lowry

Delivered By: (Circle One)

Sample Condition

Cool ☒ Intact ☒

Yes ☒ No ☐

Checked By:

Joel Lowry

Sampler - UPS - Bus - Other:

4.4e / #97

Sample Condition

Cool ☒ Intact ☒

Yes ☒ No ☐

Checked By:

Joel Lowry

REMARKS: Phone Result: ☐ Yes ☐ No ☐ Add'l Phone #: Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #:

joel@lowryenvironmental.com

tyork@diamondbackenergy.com



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Caprock Services, LLC

Project Manager: Joel Lowry

Address: PO 896

City: Lovington State: NM Zip #

Phone #: 432-466-4450 Fax #:

Project #: Project Owner:

Project Name: Energen State B

Project Location: Lea Co. NM

Sampler Name: Joel Lowry

P.O. #: *Discontinued*

Company: Caprock Services

Attn: Steve Taylor

Address:

City:

State: Zip:

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

990653

		(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST									
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :												
21	Floor Stain @ 10	G	1		X					2/19/19		X	X	X							
22	Floor Stain @ 4'	G	1		X					2/19/19		X	X	X							
23	NSW 1	C	1		X					2/19/19		X	X	X							
24	NSW 2	C	1		X					2/19/19		X	X	X							
25	ESW 1	C	1		X					2/19/19		X	X	X							
26	ESW 2	C	1		X					2/19/19		X	X	X							
27	SSW 1	C	1		X					2/19/19		X	X	X							
28	SSW 2	C	1		X					2/19/19		X	X	X							
29	WSW 1	C	1		X					2/19/19		X	X	X							
30	WSW 2	C	1		X					2/19/19		X	X	X							

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Relinquished By: *Joel Lowry*

Date: *2/20/19*

Time: *01:40*

Received By: *Steve Henderson*

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

Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #:

REMARKS: joel@lowryenvironmental.com

Relinquished By: *Joel Lowry*

Date: *2/20/19*

Time: *01:40*

Received By: *Steve Henderson*

Delivered By: (Circle One)

Sampler - UPS - Bus - Other: *4.42 / #97*

Sample Condition Cool Intact ☒ Yes ☐ No

CHECKED BY: *[Signature]*

FORM-006 R 2.0

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



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name:

Caprock Services, LLC

Project Manager: Joel Lowry

Address: PO 896

City: Lovington State: NM Zip #

Phone #: 432-466-4450 Fax #:

Project #: Project Owner:

Project Name: Energen State B

Project Location: Lea Co. NM

Sampler Name: Joel Lowry

P.O. #: 01000000000000000000000000000000

Company: Caprock Services

Attn: Steve Taylor

Address:

City:

State: Zip:

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H900653
31

WSW 3 GC

(G)RAB OR (C)OMP.
CONTAINERS

GROUNDWATER
WASTEWATER
SOIL
OIL
SLUDGE
OTHER :
ACID/BASE:
ICE / COOL
OTHER :

DATE
TIME

Chloride
TPH 8015
BTEX 8021

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Relinquished By:

Joel Lowry

Date: 9/19/19
Time: 09:40

Date: Received By:

Joel Lowry

Time:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

4:42 / #97

Sample Condition

Cool ☒ Intact ☒
Yes ☒ No ☐

CHECKED BY:

(Initials)

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

Fax Result: ☐ Yes ☐ No ☐ Add'l Fax #:

REMARKS: joel@lowryenvironmental.com

FORM-006 R 2/0

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



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

March 06, 2019

TOMMY YORK

DIAMONDBACK ENERGY

HCR 4 BOX 546A

SEMINOLE, TX 79360

RE: STATE B

Enclosed are the results of analyses for samples received by the laboratory on 03/04/19 12:57.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

DIAMONDBACK ENERGY
TOMMY YORK
HCR 4 BOX 546A
SEMINOLE TX, 79360
Fax To:

Received: 03/04/2019
Reported: 03/06/2019
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 03/01/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: FLOOR 8 B (H900837-01)

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	<10.0	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	03/05/2019	ND					
Surrogate: 1-Chlorooctane	87.6 %	41-142							
Surrogate: 1-Chlorooctadecane	90.0 %	37.6-147							

Sample ID: FLOOR 7 B (H900837-02)

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	265	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	42.2	10.0	03/05/2019	ND					
Surrogate: 1-Chlorooctane	94.8 %	41-142							
Surrogate: 1-Chlorooctadecane	111 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

DIAMONDBACK ENERGY
TOMMY YORK
HCR 4 BOX 546A
SEMINOLE TX, 79360
Fax To:

Received: 03/04/2019
Reported: 03/06/2019
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 03/01/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: FLOOR 10 B (H900837-03)

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	184	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	22.9	10.0	03/05/2019	ND					
Surrogate: 1-Chlorooctane	92.4 %	41-142							
Surrogate: 1-Chlorooctadecane	104 %	37.6-147							

Sample ID: FLOOR 13 B (H900837-04)

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	95.2	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	10.4	10.0	03/05/2019	ND					
Surrogate: 1-Chlorooctane	95.6 %	41-142							
Surrogate: 1-Chlorooctadecane	105 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

DIAMONDBACK ENERGY
TOMMY YORK
HCR 4 BOX 546A
SEMINOLE TX, 79360
Fax To:

Received: 03/04/2019
Reported: 03/06/2019
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 03/01/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: FLOOR 11 B (H900837-05)

TPH 8015M	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	258	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	46.5	10.0	03/05/2019	ND					
<hr/>									
Surrogate: 1-Chlorooctane	97.3 %	41-142							
Surrogate: 1-Chlorooctadecane	115 %	37.6-147							

Sample ID: FLOOR 2 B (H900837-06)

TPH 8015M	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	<10.0	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	03/05/2019	ND					
<hr/>									
Surrogate: 1-Chlorooctane	89.8 %	41-142							
Surrogate: 1-Chlorooctadecane	91.1 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

DIAMONDBACK ENERGY
TOMMY YORK
HCR 4 BOX 546A
SEMINOLE TX, 79360
Fax To:

Received: 03/04/2019
Reported: 03/06/2019
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 03/01/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: FLOOR STAIN @ 11.5' B (H900837-07)

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	<10.0	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	03/05/2019	ND					
Surrogate: 1-Chlorooctane	91.4 %	41-142							
Surrogate: 1-Chlorooctadecane	94.7 %	37.6-147							

Sample ID: FLOOR STAIN @ 5' B (H900837-08)

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	29.6	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	03/05/2019	ND					
Surrogate: 1-Chlorooctane	89.1 %	41-142							
Surrogate: 1-Chlorooctadecane	91.3 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

DIAMONDBACK ENERGY
TOMMY YORK
HCR 4 BOX 546A
SEMINOLE TX, 79360
Fax To:

Received: 03/04/2019
Reported: 03/06/2019
Project Name: STATE B
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 03/01/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SSW 1 B (H900837-09)

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	<10.0	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	<10.0	10.0	03/05/2019	ND					
Surrogate: 1-Chlorooctane	93.2 %	41-142							
Surrogate: 1-Chlorooctadecane	94.7 %	37.6-147							

Sample ID: WSW 3 G C B (H900837-10)

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/05/2019	ND	209	105	200	1.91	
DRO >C10-C28*	736	10.0	03/05/2019	ND	216	108	200	1.89	
EXT DRO >C28-C36	145	10.0	03/05/2019	ND					
Surrogate: 1-Chlorooctane	96.4 %	41-142							
Surrogate: 1-Chlorooctadecane	129 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Diamondback Energy		P.O. #:		BILL TO										ANALYSIS REQUEST																																																																	
Project Manager: Joel Lowry		Company:																																																																													
Address: HCR 4 Box 546A, Seminole, TX 79360																																																																															
Phone #: Fax #:		Diamondback Energy HCR 4 Box 546A Seminole, TX, 79360																																																																													
Project Owner: Diamondback Energy																																																																															
Project Name: State B																																																																															
Project Location: Lea Co, NM		Attn:																																																																													
Sampler Name: Jordyne Taylor		Tommy York																																																																													
FOR LAB USE ONLY																																																																															
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME		TPH 8015 M. Ext (New Mexico)										Chloride 4500 Cl-B										BTEX 8021										TPH TX 1005										RUSH									
H900837																																																																															
1 Floor 8 B				C		1		X																								X																																															
2 Floor 7 B				C		1		X																								X																																															
3 Floor 10 B				C		1		X																								X																																															
4 Floor 13B				C		1		X																								X																																															
5 Floor 11B				C		1		X																								X																																															
6 Floor 2B				C		1		X																								X																																															
7 Floor Stain @ 11.5'b				C		1		X																								X																																															
8 Floor Stain @ 5'b				C		1		X																								X																																															
9 SSW1B				C		1		X																								X																																															
10 WSW3GCB				C		1		X																								X																																															

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Retrieved By: <i>Joel Lowry</i>	Date: 3/4/19	Received By: <i>Joel Lowry</i>	Time: 12:57
Relinquished By:	Date:	Received By:	Time:
Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)	
Sampler - UPS - Bus - Other: 5461 #97	<input checked="" type="checkbox"/> Cool <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	<i>JS</i>	

FORM-006 R-20

Joel@lowryenvironmental.com

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



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

March 22, 2019

JOEL LOWRY

LOWRY ENVIROMENTAL & ASSOCIATES

PO BOX 296

LOVINGTON, NM 88260

RE: STATE B

Enclosed are the results of analyses for samples received by the laboratory on 03/20/19 13:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

LOWRY ENVIROMENTAL & ASSOCIATES
 JOEL LOWRY
 PO BOX 296
 LOVINGTON NM, 88260
 Fax To:

Received: 03/20/2019
 Reported: 03/22/2019
 Project Name: STATE B
 Project Number: NONE GIVEN
 Project Location: DIAMONDBACK ENERGY - LEA CO NM

Sampling Date: 03/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FLOOR # 2 N WALL (H901073-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	<10.0	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	98.0 %	41-142							
Surrogate: 1-Chlorooctadecane	90.7 %	37.6-147							

Sample ID: FLOOR # 2 E WALL (H901073-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	<10.0	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	101 %	41-142							
Surrogate: 1-Chlorooctadecane	92.6 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

LOWRY ENVIROMENTAL & ASSOCIATES
 JOEL LOWRY
 PO BOX 296
 LOVINGTON NM, 88260
 Fax To:

Received: 03/20/2019
 Reported: 03/22/2019
 Project Name: STATE B
 Project Number: NONE GIVEN
 Project Location: DIAMONDBACK ENERGY - LEA CO NM

Sampling Date: 03/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FLOOR # 2 S WALL (H901073-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	14.5	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	107 %	41-142							
Surrogate: 1-Chlorooctadecane	102 %	37.6-147							

Sample ID: FLOOR # 3 E WALL (H901073-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	<10.0	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	104 %	41-142							
Surrogate: 1-Chlorooctadecane	98.2 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

LOWRY ENVIROMENTAL & ASSOCIATES
 JOEL LOWRY
 PO BOX 296
 LOVINGTON NM, 88260
 Fax To:

Received: 03/20/2019
 Reported: 03/22/2019
 Project Name: STATE B
 Project Number: NONE GIVEN
 Project Location: DIAMONDBACK ENERGY - LEA CO NM

Sampling Date: 03/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FLOOR # 6 S WALL (H901073-05)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	<10.0	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	107 %	41-142							
Surrogate: 1-Chlorooctadecane	101 %	37.6-147							

Sample ID: FLOOR # 7 E WALL (H901073-06)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	<10.0	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	99.6 %	41-142							
Surrogate: 1-Chlorooctadecane	93.4 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

LOWRY ENVIROMENTAL & ASSOCIATES
 JOEL LOWRY
 PO BOX 296
 LOVINGTON NM, 88260
 Fax To:

Received: 03/20/2019
 Reported: 03/22/2019
 Project Name: STATE B
 Project Number: NONE GIVEN
 Project Location: DIAMONDBACK ENERGY - LEA CO NM

Sampling Date: 03/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FLOOR # 11 S WALL (H901073-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	832	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	<10.0	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane		100 %	41-142						
Surrogate: 1-Chlorooctadecane		92.8 %	37.6-147						

Sample ID: FLOOR # 11 E WALL (H901073-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	11.0	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	91.5 %	41-142							
Surrogate: 1-Chlorooctadecane	89.3 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

LOWRY ENVIROMENTAL & ASSOCIATES
 JOEL LOWRY
 PO BOX 296
 LOVINGTON NM, 88260
 Fax To:

Received: 03/20/2019
 Reported: 03/22/2019
 Project Name: STATE B
 Project Number: NONE GIVEN
 Project Location: DIAMONDBACK ENERGY - LEA CO NM

Sampling Date: 03/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FLOOR # 11 N WALL (H901073-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	<10.0	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	109 %	41-142							
Surrogate: 1-Chlorooctadecane	105 %	37.6-147							

Sample ID: FLOOR # 9 E WALL (H901073-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	704	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	<10.0	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	99.0 %	41-142							
Surrogate: 1-Chlorooctadecane	96.8 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

LOWRY ENVIROMENTAL & ASSOCIATES
 JOEL LOWRY
 PO BOX 296
 LOVINGTON NM, 88260
 Fax To:

Received: 03/20/2019
 Reported: 03/22/2019
 Project Name: STATE B
 Project Number: NONE GIVEN
 Project Location: DIAMONDBACK ENERGY - LEA CO NM

Sampling Date: 03/19/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: FLOOR # 13 S WALL (H901073-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1070	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/20/2019	ND	208	104	200	2.86	
DRO >C10-C28*	39.3	10.0	03/20/2019	ND	206	103	200	3.94	
EXT DRO >C28-C36	<10.0	10.0	03/20/2019	ND					
Surrogate: 1-Chlorooctane	89.8 %	41-142							
Surrogate: 1-Chlorooctadecane	90.2 %	37.6-147							

Sample ID: FLOOR # 13 E WALL (H901073-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	03/22/2019	ND	416	104	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/21/2019	ND	218	109	200	1.21	
DRO >C10-C28*	54.9	10.0	03/21/2019	ND	193	96.3	200	9.83	
EXT DRO >C28-C36	<10.0	10.0	03/21/2019	ND					
Surrogate: 1-Chlorooctane	80.2 %	41-142							
Surrogate: 1-Chlorooctadecane	80.3 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager



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

Notes and Definitions

- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

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

Released to Imaging: 9/26/2024 1:59:45 PM

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

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Ted@laurierinmental.com

ATTACHMENT #7
Photographic Log

PHOTOGRAPHIC LOG



Figure 1 View of surface staining from the initial release, facing East.



Figure 2 View of excavation activities, facing Southeast.

PHOTOGRAPHIC LOG



Figure 3 View of excavation activities, facing West.

PHOTOGRAPHIC LOG



Figure 4 View of portion of the excavated area, facing Southeast.

PHOTOGRAPHIC LOG



Figure 5 View of portion of the excavated area, facing Northeast.

PHOTOGRAPHIC LOG

17:04:2019 10:20:42
+32.956097,-103.409758



Figure 6 View of the affected area after remediation activities, facing South.

ATTACHMENT #8
Release Notification (FORM C-141)

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 April 3, 2017

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	Energen Resources Corporation	Contact	Andy Cobb
Address	3510 N A Street, Midland, TX 79705	Telephone No.	432-686-3599
Facility Name	State B	Facility Type	Oil and Gas Production Facility
Surface Owner	Dan Field/Branch Ranch	Mineral Owner	State of New Mexico
		API No.	3002502709

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	1	16S	35E	4610	FSL	2301	FEL	LEA

Latitude 32.9565239 Longitude -103.4101334 NAD83

NATURE OF RELEASE

Type of Release	Crude Oil	Volume of Release	136 barrels	Volume Recovered	0
Source of Release	Oil Tank	Date and Hour of Occurrence	5/22/18	Date and Hour of Discovery	6/1/18
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required				
By Whom?	If YES, To Whom?				
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
If YES, Volume Impacting the Watercourse.					

RECEIVED

By CHernandez at 2:31 pm, Jun 04, 2018

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

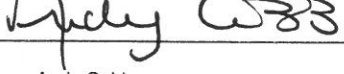

Corrosion caused a hole to develop in the oil tank and release fluid. The fluid was not immediately discovered.

Describe Area Affected and Cleanup Action Taken.*

The area inside the berm was affected and remediation will be as soon as possible.

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.

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: Andy Cobb	Approval Date: 6/4/2018	Expiration Date:
Title: Director EH&S	Conditions of Approval: See attached directive	Attached <input checked="" type="checkbox"/>
E-mail Address: andy.cobb@energen.com		
Date: 6/4/2018	Phone: 432-686-3599	

* Attach Additional Sheets If Necessary

1RP-5082

nCH1815552862

pCH1815554047

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	nCH1815552862
District RP	IRP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Release Notification

Responsible Party

Responsible Party	Energen Resources Corporation	OGRID	162928
Contact Name	Tommy York	Contact Telephone	432-209-2483
Contact Email	tommy.york@energen.com	Incident # (assigned by OCD)	IRP-5082
Contact Mailing Address	3510 N A Street, Midland, TX 79705		

Location of Release Source

Latitude 32.95652 Longitude -103.41013
(Nad 83 in decimal degrees to 5 decimal places)

Site Name	State B	Site Type	Tank Battery
Date Release Discovered	06/01/18	API# (if applicable)	30-025-02709

Unit Letter	Section	Township	Range	County
"J"	1	16	35	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (Name: State of New Mexico)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls)	136	Volume Recovered (bbls)	0
<input type="checkbox"/> Produced Water	Volume Released (bbls)		Volume Recovered (bbls)	
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)		Volume/Weight Recovered (provide units)	

Cause of Release

A hole developed in the oil tank as a result of corrosion; the fluid was not immediately discovered.

Form C-141

Page 2

State of New Mexico
Oil Conservation Division

Incident ID	nCH1815552862
District RP	IRP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Release of greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means? (phone, email, etc)? No	

Initial Response

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

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Release materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11 (A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Tommy York

Title: Production Superintendent

Signature: Tommy YorkDate: 12-19-18email: tommy.york@energen.comTelephone: 432-209-2483**OCD Only**

Received by: _____

Date: _____

REVIEWED**By CHernandez at 10:12 am, Jan 16, 2019**

Form C-141

Page 3

State of New Mexico
Oil Conservation Division

Incident ID	nCH1815552862
District RP	1RP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

Site Assessment/Characterization*This information must be provided to the appropriate district office no later than 90 days after the release discover date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	63 Ft.	(ft. bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinarily high-water mark)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

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

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

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

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

Form C-141

Page 4

State of New Mexico
Oil Conservation Division

Incident ID	nCH1815552862
District RP	IRP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

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

Printed Name: Tommy York

Title: Production Superintendent

Signature: Tommy York

Date: 12-19-18

email: tommy.york@energen.com

Telephone: 432-209-2483

OCD Only**APPROVED**Received by: **By CHernandez at 10:12 am, Jan 16, 2019**

Form C-141

Page 5

State of New Mexico
Oil Conservation Division

Incident ID	nCH1815552862
District RP	IRP-5082
Facility ID	30-025-02709
Application ID	pCH1815554047

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

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

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

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

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

Printed Name: Tommy York

Title: Production Superintendent

Signature:



Date: 12-19-18

email: tommy.york@energen.com

Telephone: 432-209-2483

OCD Only

Received by: _____

Date: _____

☐ Approved☐ Approved with Attached Conditions of Approval☐ Denied☐ Deferral Approved

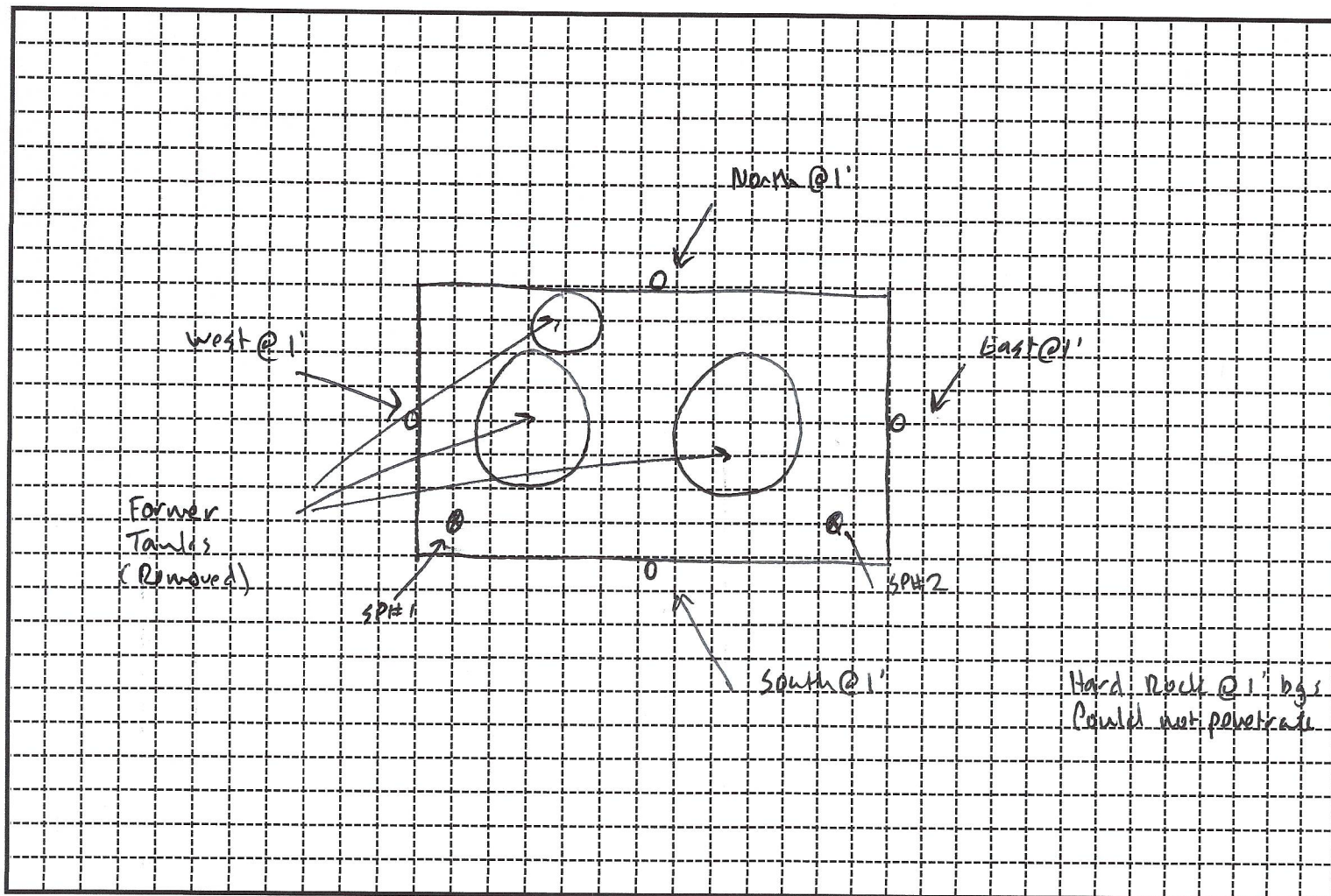
Signature:

APPROVED

By CHernandez at 10:12 am, Jan 16, 2019

ATTACHMENT #9
Field Data

FIELD NOTES

Site Name: State BDate: 11/2/2018

Hard Rock @ 1' bgs. Could not penetrate

Field ID	Odor/PID	Chloride
North @ 1'	None	330
East @ 1'	Slight	<120
South @ 1'	None	2,652
West @ 1'	None	942

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride

Field ID	Odor/PID	Chloride

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 383227

QUESTIONS

Operator: Sabinal Energy Operating, LLC 1780 HUGHES LANDING BLVD THE WOODLANDS, TX 77380	OGRID:	328992
	Action Number:	383227
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	nCH1815552862
Incident Name	NCH1815552862 ENERGEN STATE B @ 30-025-02709
Incident Type	Oil Release
Incident Status	Remediation Closure Report Received
Incident Well	[30-025-02709] STATE B #004

Location of Release Source	
Please answer all the questions in this group.	
Site Name	ENERGEN STATE B
Date Release Discovered	06/01/2018
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Corrosion Tank (Any) Crude Oil Released: 136 BBL Recovered: 0 BBL Lost: 136 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion Tank (Any) Produced Water Released: 0 BBL Recovered: 0 BBL Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	Cause: Corrosion Tank (Any) Condensate Released: 0 BBL Recovered: 0 BBL Lost: 0 BBL.
Natural Gas Vented (Mcf) Details	Cause: Corrosion Tank (Any) Natural Gas Vented Released: 0 Mcf Recovered: 0 Mcf Lost: 0 Mcf.
Natural Gas Flared (Mcf) Details	Cause: Corrosion Tank (Any) Natural Gas Flared Released: 0 Mcf Recovered: 0 Mcf Lost: 0 Mcf.
Other Released Details	Cause: Corrosion Tank (Any) Unknown Released: 0 BBL Recovered: 0 BBL Lost: 0 BBL.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	N/A

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QUESTIONS, Page 2

Action 383227

QUESTIONS (continued)

Operator: Sabinal Energy Operating, LLC 1780 HUGHES LANDING BLVD THE WOODLANDS, TX 77380	OGRID:	328992
	Action Number:	383227
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	N/A

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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

I hereby agree and sign off to the above statement	Name: Kyle Sanders Title: Manager EH&S Email: kyles@sabinalenergy.com Date: 09/24/2024
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QUESTIONS, Page 3

Action 383227

QUESTIONS (continued)

Operator: Sabinal Energy Operating, LLC 1780 HUGHES LANDING BLVD THE WOODLANDS, TX 77380	OGRID: 328992
	Action Number: 383227
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 51 and 75 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Greater than 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between 500 and 1000 (ft.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between 1 and 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1000 (ft.) and ½ (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	3080
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	35820
GRO+DRO (EPA SW-846 Method 8015M)	32030
BTEX (EPA SW-846 Method 8021B or 8260B)	307
Benzene (EPA SW-846 Method 8021B or 8260B)	2.8

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	02/04/2019
On what date will (or did) the final sampling or liner inspection occur	03/19/2019
On what date will (or was) the remediation complete(d)	03/26/2019
What is the estimated surface area (in square feet) that will be reclaimed	7800
What is the estimated volume (in cubic yards) that will be reclaimed	1155
What is the estimated surface area (in square feet) that will be remediated	7800
What is the estimated volume (in cubic yards) that will be remediated	4540

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 4

Action 383227

QUESTIONS (continued)

Operator: Sabinal Energy Operating, LLC 1780 HUGHES LANDING BLVD THE WOODLANDS, TX 77380	OGRID:	328992
	Action Number:	383227
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS**Remediation Plan (continued)**

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:

(Select all answers below that apply.)

(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	GANDY MARLEY LANDFARM/LANDFILL [FEEM0112338393]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

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

I hereby agree and sign off to the above statement	Name: Kyle Sanders Title: Manager EH&S Email: kyles@sabinalenergy.com Date: 09/24/2024
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The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS, Page 5

Action 383227

QUESTIONS (continued)

Operator: Sabinal Energy Operating, LLC 1780 HUGHES LANDING BLVD THE WOODLANDS, TX 77380	OGRID: 328992
	Action Number: 383227
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 383227

QUESTIONS (continued)

Operator: Sabinal Energy Operating, LLC 1780 HUGHES LANDING BLVD THE WOODLANDS, TX 77380	OGRID:	328992
	Action Number:	383227
	Action Type:	[C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	386377
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	09/27/2024
What was the (estimated) number of samples that were to be gathered	53
What was the sampling surface area in square feet	7800

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.

Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	7800
What was the total volume (cubic yards) remediated	4540
All areas not reasonably needed for production or subsequent drilling operations have been reclaimed to contain a minimum of four feet of non-waste contain earthen material with concentrations less than 600 mg/kg chlorides, 100 mg/kg TPH, 50 mg/kg BTEX, and 10 mg/kg Benzene	Yes
What was the total surface area (in square feet) reclaimed	7800
What was the total volume (in cubic yards) reclaimed	1155
Summarize any additional remediation activities not included by answers (above)	Remediation activities were conducted in accordance with an approved workplan Between 2/13/ and 3/12/2019. The submitted Closure Report was emailed to B. Billings but not uploaded into the NMOCD Imaging system utilized at the time.

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

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

I hereby agree and sign off to the above statement	Name: Kyle Sanders Title: Manager EH&S Email: kyles@sabinalenergy.com Date: 09/24/2024
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QUESTIONS, Page 7

Action 383227

QUESTIONS (continued)

Operator: Sabinal Energy Operating, LLC 1780 HUGHES LANDING BLVD THE WOODLANDS, TX 77380	OGRID: 328992
	Action Number: 383227
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Reclamation Report	
Only answer the questions in this group if all reclamation steps have been completed.	
Requesting a reclamation approval with this submission	No

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CONDITIONS

Action 383227

CONDITIONS

Operator: Sabinal Energy Operating, LLC 1780 HUGHES LANDING BLVD THE WOODLANDS, TX 77380	OGRID: 328992
	Action Number: 383227
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your Remediation Closure Report for Incident #NCH1815552862 ENERGEN STATE B, thank you. This Remediation Closure Report is approved.	9/26/2024