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Site Assessment & Closure Report

Caswell 23 Federal #1H & 3H Lea
County, New Mexico
API# 30-025-40708, 30-025-40709
1RP-5009 and NRM2008045508

Prepared For:

Devon Energy Production Company
6488 Seven Rivers Hwy Artesia
NM 88210

Prepared By:

TALON/LPE
408 W. Texas Avenue
Artesia, New Mexico 88210

Rev. October 1, 2020

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Mr. Jim Amos
Bureau of Land Management
620 East Green Street
Carlsbad, NM 88220

Ms. Christina Eads
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Site Assessment & Closure Report**
Caswell 23 Federal #1H & 3H
Lea County, New Mexico
API# 30-025-40708, 30-025-40709
1RP-5009

Dear Mr. Amos & Ms. Eads,

Devon Energy Production Company (Devon) has contracted Talon/LPE (Talon) to perform soil assessment and remediation activities at the above-referenced location. The incident descriptions, soil sampling results, soil remediation, and closure requests are presented herein.

Site Information

The Caswell 23 Federal #1H & 3H is located approximately forty (40) miles east of Artesia, New Mexico. The legal location for this release is Unit Letter A, Section 23, Township 17 South and Range 32 East in Lea County, New Mexico. More specifically, the latitude and longitude for the release are 32.826409 North and -103.728985 West. A Site Map is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Berino-Cacique association with 0 to 3 percent slopes. See Appendix II for the referenced soil survey. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is comprised of eolian and piedmont deposits, Holocene to middle Pleistocene in age. Drainage courses in this area are well-drained.

Ground Water and Site Characterization

The New Mexico Office of the State Engineer Database indicates the nearest reported depth to groundwater is 130-feet below ground surface (BGS). See Appendix II for the referenced groundwater depth. This site is not located within a high potential Karst area.

If a release occurs within the following areas, the responsible party must treat the release as if it occurred less than 50 feet to the groundwater in Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29 NMAC.

Approximate Depth to Groundwater		130 Feet/BGS
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 200 feet of any lakebed, sinkhole, or playa lake	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet from an occupied permanent residence, school, hospital, institution, or church	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 500 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	Within 1000 feet of any fresh water well or spring	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within incorporated municipal boundaries or within a defined Municipal fresh water well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet of a wetland	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within the area overlying a subsurface mine	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within an unstable area	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within a 100-year flood zone	

The release did not occur in any of these areas and the depth to groundwater is greater than 100-feet deep. Based on the site characterization data, the cleanup criteria for this site are as follows.

Table I Closure Criteria for Soils Impacted by a Release			
Depth below horizontal extents of release to ground water less than 10,000 mg/l TDS	Constituent	Method	Limit
>50 feet	Total Chlorides	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

According to further research of the OSE database for groundwater, the nearest well POD is located over 0.5 miles away. Therefore Ms. Eads, of the NMOCD requested that the location be drilled in order to verify depth to groundwater for this area at depths greater than 50' bgs.

Pursuant to the NMOCD's request; on September 09, 2020, Talon personnel and equipment mobilized to the location. A Geoprobe (direct push technology) rig was utilized to advance a 55' soil boring.

On September 14, 2020 Talon personnel returned to site in order to verify that no groundwater existed at depths of 55'. Using a Heron Instruments Interface meter, it was ascertained that no water existed at 55' bgs. The boring log can be referenced in Appendix V. The borehole was plugged with bentonite.

Incident Description

On March 20, 2018, the heater treater pressurized, causing the fluids to exit through the vent line. The wells were shut in to prevent further release. Approximately 8 barrels (bbls) of oil were released, the spill area was measured to be 365' x 80' with an overspray onto the pasture adjacent to the well pad. No fluids were recovered. The initial C-141 is presented in Appendix III for this incident and was assigned 1RP-5009.

On March 13, 2020, the fire tube on the test heater developed a hole causing approximately 57.54 bbls of produced water to be released onto the well pad. All fluids remained on the pad and were mixed with rainwater. A vac truck was able to recover approximately 39 bbls. The initial C-141 is presented in Appendix III for this incident and has not been assigned an application number for reference as of date of this report. A site map referencing the two spill events is presented in Appendix I.

On April 2, 2020, Talon mobilized personnel to the site conducting a site assessment and collecting soil samples. Sample locations are shown on the attached site map, the results of our sampling event are presented in the following data table.

Soil Sampling 4-2-20 Soil Sample Laboratory Results

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	CI mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO combined = 1000 mg/kg			2500 mg/kg	10,000 mg/kg
S-1	4/2/2020	0	ND	ND	ND	93.7	38.4	132.1	2080
		1 R	ND	ND	ND	ND	ND	ND	208
S-2		0	ND	ND	ND	ND	ND	ND	256
		1	ND	ND	ND	ND	ND	ND	64
		2	ND	ND	ND	ND	ND	ND	32
		3 R	ND	ND	ND	ND	ND	ND	48
S-3		0	ND	ND	ND	268	208	476	144
		1	ND	ND	ND	ND	ND	ND	64
		2 R	ND	ND	ND	ND	ND	ND	64
S-4		0	ND	ND	ND	ND	ND	ND	64
		1	ND	ND	ND	ND	ND	ND	224
		2 R	ND	ND	ND	ND	ND	ND	48
S-5		0	ND	ND	ND	ND	ND	ND	64
		1	ND	ND	ND	ND	ND	ND	96
		2	ND	ND	ND	ND	ND	ND	64
		3R	ND	ND	ND	ND	ND	ND	144
S-6		0	ND	ND	ND	ND	ND	ND	112
		1	ND	ND	ND	ND	ND	ND	112
		2 R	ND	ND	ND	ND	ND	ND	64
S-7		0	ND	ND	ND	ND	ND	ND	96
		1	ND	ND	ND	ND	ND	ND	64
		2 R	ND	ND	ND	ND	ND	ND	64
S-8		0	ND	ND	ND	ND	ND	ND	112
		1	ND	ND	ND	ND	ND	ND	64
		2 R	ND	ND	ND	ND	ND	ND	80
S-9		0	ND	ND	ND	ND	ND	ND	528
		1	ND	ND	ND	ND	ND	ND	96
		2 R	ND	ND	ND	ND	ND	ND	64
S-10		0	ND	ND	ND	ND	ND	ND	17000
		1 R	ND	ND	ND	ND	ND	ND	528
S-11		0	7.9	ND	216	5660	1230	7106	10200
		1	ND	ND	ND	ND	ND	ND	256
		2 R	ND	ND	ND	59.6	10.3	69.9	496
S-12		0	ND	ND	ND	3150	983	4133	28600
		1	ND	ND	ND	ND	ND	ND	192
		2 R	ND	ND	ND	ND	ND	ND	304
S-13		0	ND	ND	ND	54.5	22.8	77.3	22600
		1	ND	ND	ND	ND	ND	ND	2640
		2 R	ND	ND	ND	ND	ND	ND	960

D-Analyte Not Detected

See Appendix V for the complete report of laboratory results.

On April 20, 2020 Talon personnel and equipment returned to the site in order to excavate and remediate the areas in the vicinity of S-11 thru S13. This area was excavated to a depth of 1' below ground surface. Confirmation composite samples were grabbed from the bottom and sidewalls of the excavated area. The soil samples were properly contained, preserved, and transported via chain of custody to Cardinal Laboratories and analyzed for BTEX (Method 8021B), TPH (Method 8015M), and Chlorides (Method SM4500). The results are tabled below for ease of reference.

4-20-20 Confirmation Soil Sample Laboratory Results

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Chlorides mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO combined = 1000 mg/kg			2500 mg/kg	20,000 mg/kg
N. Sidewall Composite	4/20/2020	1	ND	ND	ND	ND	ND	ND	1230
S. Sidewall-1 Composite		1	ND	ND	ND	ND	ND	ND	1470
E. Sidewall-1 Composite		1	ND	ND	ND	ND	ND	ND	1280
E. Sidewall-2 Composite		1	ND	ND	ND	473	112	585	1150
W. Sidewall-1 Composite		1	ND	ND	ND	24.8	ND	24.8	1300
W. Sidewall-2 Composite		1	ND	ND	ND	ND	ND	ND	1040
S. Sidewall-2 Composite		1	ND	ND	ND	64	11.5	75.5	1760
S-13 A		1	ND	ND	ND	ND	ND	ND	1170
S-12 A		1	ND	ND	ND	ND	ND	ND	400
S-11 A		1	ND	ND	ND	16.9	ND	16.9	800
S-10 A		1	ND	ND	ND	124	21.9	145.9	1150

ND-Analyte Not Detected

See Appendix V for the complete report of laboratory results.

Remedial Actions

- Based upon the results of our sampling event, there were no exceedances for the NMOCD clean-up criteria on the Caswell 23 Fed #1H, 1RP-5009 release. Therefore, there was no need for soil remediation activities for this incident.
- The area in the vicinity of S-10, S-11, S-12, and S-13 (well pad release) was excavated to a depth of 1-foot below ground surface (BGS). Laboratory analytical results from confirmation sidewall and bottom soil samples indicated that the TPH and Chloride concentrations were below NMOCD Closure Criteria 19.15.29.12 D NMAC (Appendix V).
- The excavated soil was transported to Lea Land, LLC, a NMOCD approved soil waste disposal facility.
- The excavated area was backfilled with clean caliche, contoured and machine compacted to match the surrounding location.
- Final C-141 is attached in Appendix IV.

Closure

Based on this site characterization, soil remediation and analytical results, we request that no further actions be required. We furthermore respectfully request that the regulatory closure concerning the attached incidents be granted.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-746-8768.

Respectfully submitted,

TALON/LPE

Rebecca
Pons

Digitally signed by Rebecca Pons
DN: cn=Rebecca Pons, o=Talon LPE,
ou=Artesia,
email=rp@talonlpe.com, c=US
Date: 2020.10.15 09:51:10 -0600

Rebecca Pons
Project Manager

David J.
Adkins

Digitally signed by David J.
Adkins
DN: cn=David J. Adkins,
o=Talon LPE, ou=Regional
Manager,
email=dadkins@talonlpe.com,
c=US
Date: 2020.10.14 10:40:00
-0600

David J. Adkins
Regional Manager

Attachments:

Appendix I Site Maps, Karst Map, TOPO Map & Locator Map

Appendix II Groundwater Data, FEMA Flood Zone, Soil Survey

Appendix III Initial and Final C-141's

Appendix IV Photographic Documentation

Appendix V Boring Log

Appendix VI Laboratory Data



APPENDIX I

SITE MAP

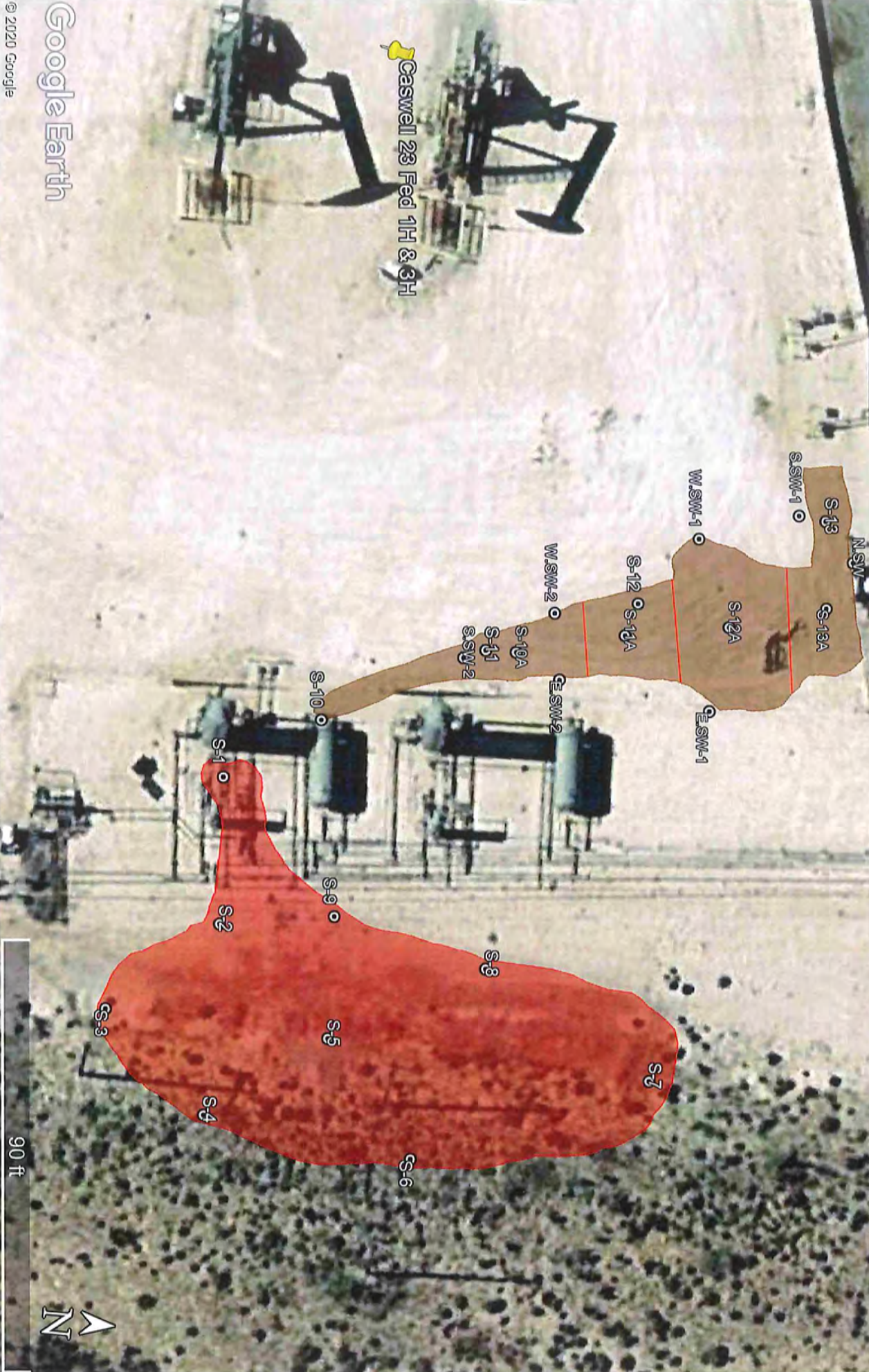
KARST MAP

TOPO MAP

LOCATION MAP

Caswell 23 Fed #1H & 3H

Devon Energy Production Company
Lea County, NM
#1H API 30-015-40708
#3H API 30-015-40709



- Legend**
- Caswell 23 Fed #1 H Spill 1RP-5009
 - Caswell 23 Fed #3H Spill
 - Samples

Google Earth

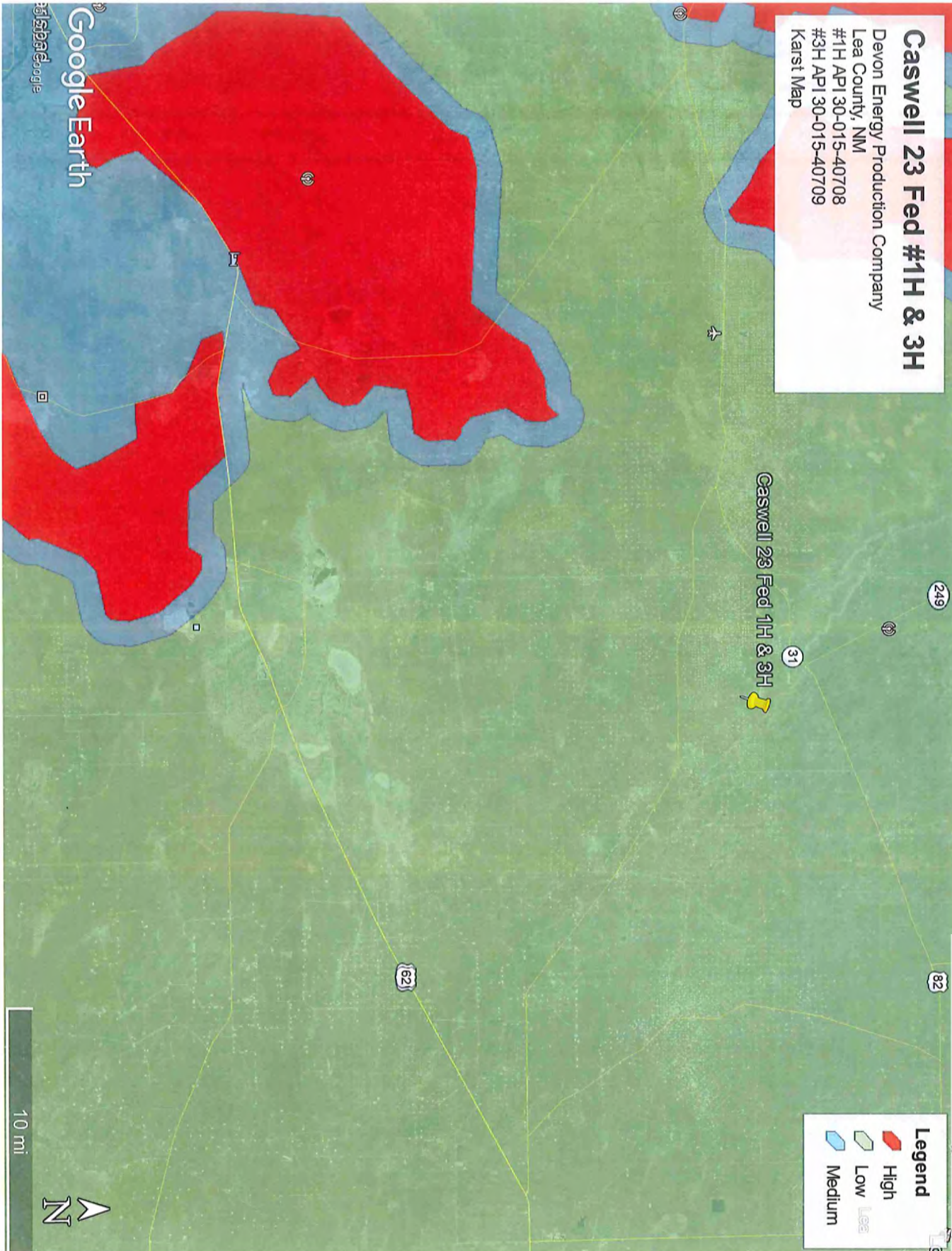
© 2020 Google

Caswell 23 Fed #1H & 3H

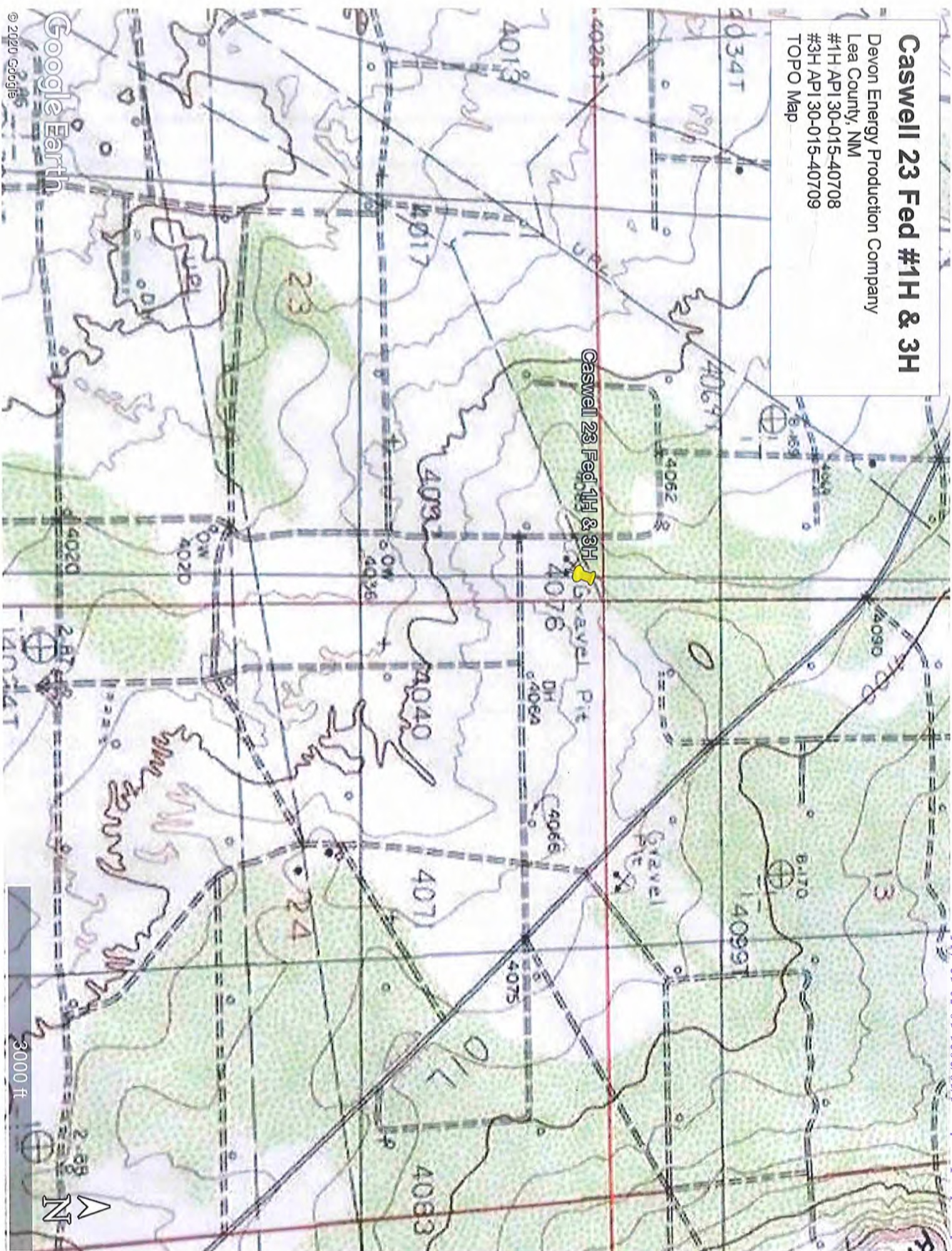
Devon Energy Production Company
Lea County, NM
#1H API 30-015-40708
#3H API 30-015-40709
Karst Map

Legend

High	Low	Medium
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Devon Energy Production Company
Lea County, NM
#1H API 30-015-40708
#3H API 30-015-40709
TOPO Map



Caswell 23 Fed #1H & 3H

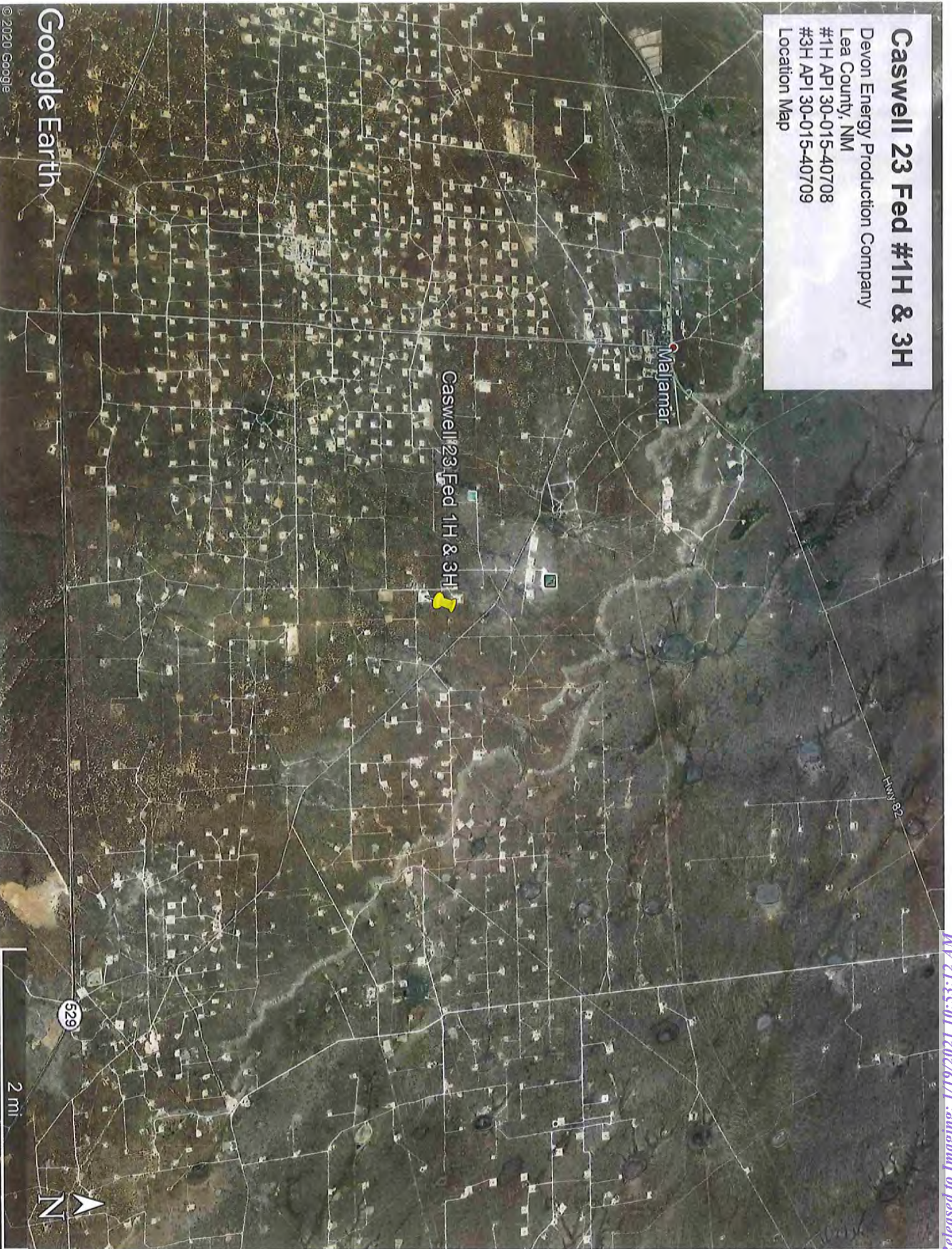
Devon Energy Production Company

Lea County, NM

#1H API 30-015-40708

#3H API 30-015-40709

Location Map





APPENDIX II

GROUNDWATER DATA

SOIL SURVEY

FEMA FLOOD ZONE

3/19/2020

nmwrrs.ose.state.nm.us/nmwrrs/ReportProxy?queryData=%7B"report"%3A"waterColumn"%2C%0A"BasinDiv"%3A"true"%2C%0A"Basin...



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	POD Code	Sub-basin	County	Q 6	Q 4	Q 1	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
RA 11911 POD1	RA	LE		1	3	1	24	17S	32E	619192	3632296	498	35		
L 12974 POD1	L	LE		3	4	3	18	17S	33E	621233	3632940	2270	140	130	10
RA 11957 POD1	RA	LE		3	4	1	19	17S	33E	621177	3632200	2272	55		
RA 11936 POD1	RA	LE		1	4	1	19	17S	33E	621246	3632321	2314	92		
RA 11937 POD1	RA	LE		1	4	1	19	17S	33E	621244	3632281	2319	95		
RA 11684 POD5	RA	LE		3	1	4	11	17S	32E	618353	3635047	2384	275		
RA 11684 POD1	RA	LE		1	1	4	11	17S	32E	618216	3635124	2497	275		
L 02770 S2	L	LE		2	2	3	18	17S	33E	621338	3633583*	2512	214	184	30
L 02770 S3	L	LE		2	2	3	18	17S	33E	621338	3633583*	2512	220	202	18
RA 11684 POD2	RA	LE		1	1	4	11	17S	32E	618313	3635248	2589	275		
L 13047 POD1	L	LE					11	17S	32E	618187	3635254*	2629	140		
RA 11684 POD3	RA	LE		3	3	1	11	17S	32E	618262	3635371	2721	275		
RA 11684 POD4	RA	LE		1	3	2	11	17S	32E	618334	3635521	2849	275		

Average Depth to Water: **172 feet**

Minimum Depth: **130 feet**

Maximum Depth: **202 feet**

Record 13

Count:

UTM NAD83 Radius Search (In meters):

Easting (X): 618970.452

Northing (Y): 3632743.411

Radius: 3000

*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.

3/19/20 9:59 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

Lea County, New Mexico

BH—Berino-Cacique association, hummocky

Map Unit Setting

National map unit symbol: dmpg
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 50 percent
Cacique and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock over calcareous sandy alluvium derived from sedimentary rock

Typical profile

A - 0 to 10 inches: fine sand
Btk - 10 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat):
 Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 40 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 2.0
Available water storage in profile: Moderate (about 8.5 inches)

Interpretive groups*Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 7c*Hydrologic Soil Group:* B*Ecological site:* Loamy Sand (R042XC003NM)*Hydric soil rating:* No**Description of Cacique****Setting***Landform:* Plains*Landform position (three-dimensional):* Rise*Down-slope shape:* Linear*Across-slope shape:* Linear*Parent material:* Calcareous eolian deposits derived from sedimentary rock**Typical profile***A - 0 to 7 inches:* fine sand*Bt - 7 to 28 inches:* sandy clay loam*Bkm - 28 to 38 inches:* cemented material**Properties and qualities***Slope:* 0 to 3 percent*Depth to restrictive feature:* 20 to 40 inches to petrocalcic*Natural drainage class:* Well drained*Runoff class:* High*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)*Depth to water table:* More than 80 inches*Frequency of flooding:* None*Frequency of ponding:* None*Calcium carbonate, maximum in profile:* 40 percent*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)*Sodium adsorption ratio, maximum in profile:* 2.0*Available water storage in profile:* Low (about 3.6 inches)**Interpretive groups***Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 7c*Hydrologic Soil Group:* C*Ecological site:* Sandy (R042XC004NM)*Hydric soil rating:* No**Minor Components****Kermit***Percent of map unit:* 4 percent*Ecological site:* Deep Sand (R042XC005NM)*Hydric soil rating:* No**Maljamar***Percent of map unit:* 3 percent

Map Unit Description: Berino-Cacique association, hummocky—Lea County, New Mexico

Ecological site: Limy Upland 16-21" PZ (R077CY028TX)

Hydric soil rating: No

Palomas

Percent of map unit: 2 percent

Ecological site: Loamy Sand (R042XC003NM)

Hydric soil rating: No

Dune land

Percent of map unit: 1 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico

Survey Area Data: Version 16, Sep 15, 2019





APPENDIX III

INITIAL C-141 & FINAL 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 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	NRM2008045508
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Devon Energy Production Company	OGRID 6137
Contact Name Amanda T. Davis	Contact Telephone 575-748-0176
Contact email amanda.davis@dvn.com	Incident # (assigned by OCD)
Contact mailing address 6488 Seven Rivers HWY	

Location of Release Source

Latitude 32.826409 Longitude -103.728985
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Caswell 23 Federal #3H	Site Type Oil
Date Release Discovered 3/13/2020	API# (if applicable) 30-025-40709

Unit Letter	Section	Township	Range	County
A	23	17S	32E	Lea

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 57.54	Volume Recovered (bbls) 39
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release The fire tube on the test heater developed a hole causing fluid to be released onto the wellpad. All fluid remained on the pad and was mixed with rainwater.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2008045508
District RP	
Facility ID	
Application ID	

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? The amount of fluid released was over 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? An email was sent by Tom Bynum on 3/14/20 to the following: 'BLM Releases (blm_nm_cfo_spill@blm.gov)'; emnrd-ocd-district1spills@state.nm.us; 'rmann@slo.state.nm.us'; 'bboone@slo.state.nm.us'	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: This release was not contained within a secondary containment, but all fluids did stay on the wellpad.	
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: <u>Kendra DeHoyos</u>	Title: <u>EHS Associate</u>
Signature: <u>Kendra DeHoyos</u>	Date: _____
email: <u>kendra.dehoyos@dvn.com</u>	Telephone: <u>575-748-3371</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

Form C-141

Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NRM2008045508
District RP	
Facility ID	30-025-4079
Application ID	

Closure

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

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

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

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

Printed Name: Rebecca PonsTitle: Project Manager, Talon/LPE

Signature: Digitally signed by Rebecca Pons
DN: cn=Rebecca Pons, o=Talon LPE, ou=Antecia, email=rpous@talonlpe.com,
c=US
Date: 2020.06.17 15:18:42 -0500

Date: 6/16/20email: rpous@talonlpe.comTelephone: 575.746.8768**OCD Only**Received by: Cristina EadsDate: 10/16//2021

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

Closure Approved by:  Date: 01/19/2021Printed Name: Cristina EadsTitle: Environmental Specialist

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 Devon Energy Production Company	Contact Hubert Perry
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-748-3371
Facility Name Caswell 23 Federal 1H	Facility Type Oil
Surface Owner Federal	Mineral Owner Federal
API No. 30-025-40708	

LOCATION OF RELEASE

Unit Letter A	Section 23	Township 17S	Range 32E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude 32.82628 Longitude 103.72898 NAD83

NATURE OF RELEASE

Type of Release Oil	Volume of Release 8 bbls	Volume Recovered None Recovered
Source of Release Heater Treater	Date and Hour of Occurrence March 19, 2018 12:15 PM MST	Date and Hour of Discovery March 19, 2018 12:15 PM MST
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD-Jim Griswold BLM-Terry Gregston and Shelly Tucker	
By Whom? Brett Fuls-EHS Professional	Date and Hour NMOCD-March 20, 2018 7:57 AM MST BLM- March 20, 2018 8:12 AM MST	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

RECEIVED

By Olivia Yu at 2:04 pm, Apr 03, 2018

Describe Cause of Problem and Remedial Action Taken.*

The Heater Treater pressurized causing the fluid to exit through the vent line. The wells were immediately shut in to prevent any further release.

Describe Area Affected and Cleanup Action Taken.*

Approximately 8 bbls of oil was released from the Heater Treater vent line. No fluids were recovered. The release originated from the Heater Treater that is located on the well pad. The approximate area affected by the release is 365'x 80' causing an overspray onto the pasture adjacent to the well pad. An environmental contractor will be contacted to assist with delineation and remediation efforts.

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: *Jennifer Reyna*

Printed Name: Jennifer Reyna

Title: Field Admin Support

E-mail Address: Jennifer.Reyna@dmv.com

Date: 4/2/2018

Phone: 575.746.5588

Approved by Environmental Specialist:

Approval Date: **4/3/2018**

Expiration Date:

Conditions of Approval:

see attached directive

Attached ☒

* Attach Additional Sheets If Necessary

1RP-5009

nOY1809350940

pOY1809351198

Incident ID	
District RP	1RP-5009
Facility ID	30-025-40708
Application ID	nOY1809350940

Closure

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

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

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

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

Printed Name: Rebecca Pons Title: Project Manager

Signature: Digitally signed by Rebecca Pons
DN: cn=Rebecca Pons, o=Taloni LPE, ou=Artistic,
email=Rpons@talonlpe.com, c=US
Date: 2020.06.17 15:19:20 -0507 Date: 06/11/20

email: Rpons@talonlpe.com Telephone: 575-441-0980

OCD Only

Received by: Cristina Eads Date: 10/16/2021

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

Closure Approved by: _____ Date: 01/19/2021

Printed Name: Cristina Eads Title: Environmental Specialist



APPENDIX IV

PHOTOGRAPHIC DOCUMENTATION

Spill



Latitude: 32.826378
Longitude: -103.729054
Elevation: 1246.16m
Accuracy: 3.2m
Time: 04-15-2020 09:59

Excavation



Completed



Geo Push for TOW





APPENDIX V

BORING LOG



BORING LOG

Project No.: 700794.338.01
Site Name: Caswell 23 Fed 1H
Location: Eddy County
Date: 09/09/2020
Boring Number: 1A

Weather: Overcast Temp.: 54 °F
Driller: Jose II Salas
Logger: BS
Rig Type: Geo Technical Push
Field Instrument: NA
Bit Size: NA
Latitude: 32.826471 N
Drilling Method: Geo Probe
Longitude: -103.729926 W
Sample Retrieval Method: Grab

Time	Lab Sample Collected	Sample Interval (ft)	Sample Recovery (ft)	USCS	Composition (%)	Sample Material/Comments Include composition, color, grain size, moisture, hardness, plasticity, density	Hydrocarbon Odor	PID (ppm)
12:17	<input checked="" type="checkbox"/>	2'		SP		Sand w/ trace amounts of caliche, tan, poorly sorted, dry	None Slight Mod. Strong	0
12:17	<input checked="" type="checkbox"/>	4'		SP		Sand w/ trace amounts of caliche, tan, poorly sorted, dry	None Slight Mod. Strong	0
12:18	<input checked="" type="checkbox"/>	6'		SP		Sand w/ trace amounts of caliche, tan, poorly sorted, dry	None Slight Mod. Strong	0
12:19	<input checked="" type="checkbox"/>	8'		SW		Sand, well sorted, tan in color and dry	None Slight Mod. Strong	0
12:23	<input checked="" type="checkbox"/>	10'		SW		Sand, poorly sorted, tan in color and dry	None Slight Mod. Strong	0
12:25	<input checked="" type="checkbox"/>	15"		SW		Tan Brown fine sand, well sorted, dry	None Slight Mod. Strong	0
12:26	<input checked="" type="checkbox"/>	20'		SP		Lt. Brown poorly sorted sandy with weathered lime stone	None Slight Mod. Strong	0
12:27	<input checked="" type="checkbox"/>	25'		SC		Brown slightly sandy clay, dry	None Slight Mod. Strong	0
12:28	<input checked="" type="checkbox"/>	30'		SC		Brown slightly sandy clay, dry	None Slight Mod. Strong	0
12:29	<input checked="" type="checkbox"/>	35'		SC		Red Brown slightly sandy clay, dry	None Slight Mod. Strong	0
12:30	<input checked="" type="checkbox"/>	40'		SC		Red Brown slightly sandy clay, dry	None Slight Mod. Strong	0
12:35	<input checked="" type="checkbox"/>	45'		SC		Red Brown, sandy clay, w/ trace mounts of lime stone	None Slight Mod. Strong	0
Surface Elevation: _____								
Notes: TD @ 55' Groundwater not encountered.							Logger Initials: BS	

Time	Lab Sample Collected	Sample Interval (ft)	Sample Recovery (ft)	USCS	Composition (%)	Sample Material/Comments Include composition, color, grain size, moisture, hardness, plasticity, density	Hydrocarbon Odor	PID (ppm)
12:37	<input checked="" type="checkbox"/>	50'		SC		Red Brown, sandy clay w/ trace amounts of limestone, dry	None Slight Mod. Strong	0
12:40	<input checked="" type="checkbox"/>	55'		SC		Red Brown Sandy Clay, dry	None Slight Mod. Strong	0
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
Notes: No groundwater encountered. <div>Logger Initials: BS</div>								



APPENDIX VI

Laboratory Data



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

April 08, 2020

CHRIS JONES

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: CASWELL 23 1H & 3H

Enclosed are the results of analyses for samples received by the laboratory on 04/06/20 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is 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:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	04/06/2020	Sampling Date:	04/02/2020
Reported:	04/08/2020	Sampling Type:	Soil
Project Name:	CASWELL 23 1H & 3H	Sampling Condition:	Cool & Intact
Project Number:	700794.338.01	Sample Received By:	Tamara Oldaker
Project Location:	DEVON - LEA COUNTY, NM		

Sample ID: S- 1 0' (H001001-01)

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	04/06/2020	ND	2.10	105	2.00	4.58	
Toluene*	<0.050	0.050	04/06/2020	ND	2.11	105	2.00	5.04	
Ethylbenzene*	<0.050	0.050	04/06/2020	ND	2.12	106	2.00	4.66	
Total Xylenes*	<0.150	0.150	04/06/2020	ND	6.18	103	6.00	4.84	
Total BTEX	<0.300	0.300	04/06/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2080	16.0	04/07/2020	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	04/07/2020	ND	193	96.4	200	4.15	
DRO >C10-C28*	93.7	10.0	04/07/2020	ND	190	95.1	200	8.28	
EXT DRO >C28-C36	38.4	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 95.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.5 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 1 1' R (H001001-02)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	04/07/2020	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	04/07/2020	ND	189	94.6	200	0.132	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	184	92.0	200	0.414	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 107 % 42.2-156

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 2 0' (H001001-03)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	04/07/2020	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	04/07/2020	ND	189	94.6	200	0.132	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	184	92.0	200	0.414	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 99.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 103 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 2 1' (H001001-04)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.2 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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

Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 2 2' (H001001-05)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.3 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 2 3' R (H001001-06)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 99.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 3 0' (H001001-07)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	268	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	208	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 127 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 3 1' (H001001-08)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.4 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 3 2' R (H001001-09)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 94.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 99.4 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 4 0' (H001001-10)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.1 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 4 1' (H001001-11)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 96.8 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 4 2' R (H001001-12)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 97.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 5 0' (H001001-13)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 95.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 99.4 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 5 1' (H001001-14)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.9 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 5 2' (H001001-15)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.0 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 5 3' R (H001001-16)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 89.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.1 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 6 0' (H001001-17)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.8 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 6 1' (H001001-18)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 96.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 6 2' R (H001001-19)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 96.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 99.7 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 7 0' (H001001-20)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 88.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.3 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 7 1' (H001001-21)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.8 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 7 2' R (H001001-22)

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	04/07/2020	ND	2.06	103	2.00	0.100	
Toluene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	0.170	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	0.0233	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.95	99.2	6.00	0.128	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 94.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.5 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 8 0' (H001001-23)

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	04/07/2020	ND	2.06	103	2.00	0.100	
Toluene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	0.170	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	0.0233	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.95	99.2	6.00	0.128	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 87.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 88.0 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 8 1' (H001001-24)

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	04/07/2020	ND	2.08	104	2.00	3.75		
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 91.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.0 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 8 2' R (H001001-25)

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	04/07/2020	ND	2.08	104	2.00	3.75		
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	04/07/2020	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	04/07/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 91.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.5 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 9 0' (H001001-26)

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	04/07/2020	ND	2.08	104	2.00	3.75		
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62		
Total BTEx	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 93.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 96.7 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 9 1' (H001001-27)

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	04/07/2020	ND	2.08	104	2.00	3.75		
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 93.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.5 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 9 2' R (H001001-28)

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	04/07/2020	ND	2.08	104	2.00	3.75		
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 93.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.4 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 10 0' (H001001-29)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	17000	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 90.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.9 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 10 1' R (H001001-30)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 88.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.5 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 11 0' (H001001-31)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	0.130	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	2.03	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	5.74	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTX	7.90	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 200 % 73.3-129

Chloride, SM4500CI-B		mg/kg	Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10200	16.0	04/07/2020	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*	216	50.0	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	5660	50.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	1230	50.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 169 % 44.3-144

Surrogate: 1-Chlorooctadecane 236 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 11 1' (H001001-32)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 93.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.2 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 11 2' R (H001001-33)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTEX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	59.6	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	10.3	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 92.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 12 0' (H001001-34)

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	04/07/2020	ND	2.03	101	2.00	3.42		
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83		
Total BTEX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	28600	16.0	04/07/2020	ND	432	108	400	0.00		

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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	3150	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	983	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 86.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 212 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 12 1' (H001001-35)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTEX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 90.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.9 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 12 2' R (H001001-36)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 92.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.2 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 13 0' (H001001-37)

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	04/07/2020	ND	2.03	101	2.00	3.42		
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83		
Total BTEx	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	22600	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	54.5	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	22.8	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 91.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.3 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 13 1' (H001001-38)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2640	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 89.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.7 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 13 2' R (H001001-39)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 94.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.3 % 42.2-156

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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-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

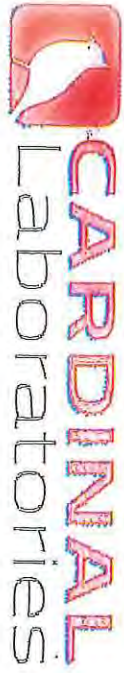
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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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

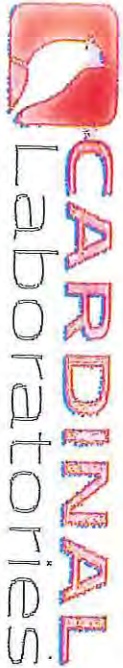
CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Thelon LPE		P.O. #: 700794.338.01	
Project Manager: C. JONES		Company: Thelon LPE	
Address: 408 W. TEXAS AVE		Attn: C. JONES	
City: ARTESIA	State: NM Zip: 88210	Address:	
Phone #: 575-631-6977	Fax #:	City:	
Project #: 700794.338.01	Project Owner: DEVON	State: Zip:	
Project Name: CASWELL 23 1H-43H		Phone #:	
Project Location: LEA COUNTY		Fax #:	
Sampler Name: MICHAEL COLLIER			

Lab I.D.	Sample I.D.	(S) RAB OR (C) COMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS REQUEST	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:				ICE / COOL
4001001	S-1 0'	G	1									4-2-20	9:00am	TPH
	S-1 1'R	G	1									4-2-20	9:05am	BTEX
	S-2 0'	G	1									4-2-20	9:15am	TOTAL CHLORIDES
	S-2 1'	G	1									4-2-20	9:20am	
	S-2 2'	G	1									4-2-20	9:25am	
	S-2 3'R	G	1									4-2-20	9:30am	
	S-3 0'	G	1									4-2-20	9:40am	
	S-3 1'	G	1									4-2-20	9:45am	
	S-3 2'R	G	1									4-2-20	9:50am	
	S-4 0'	G	1									4-2-20	10:00am	

Relinquished By: MAL C. C.	Date: 4-6-20	Received By: Michael Collier	Date: 4-6-20
Time: 11:30	Time: 13:45	Sample Condition: Good	Checked By: Michael Collier
Sampler - LPS - Bus - Other: 1.4c. #113		Sample Condition: Good	Checked By: Michael Collier
		Sample Condition: Good	Checked By: Michael Collier

Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
REMARKS: Pg 1 of 4	



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: TOLON LPE

Project Manager: C. JONES

Address: 408 W. TEXAS AVE

City: ARTESIA

Phone #: 575-631-6477

Project #: 700794.338.01

Project Name: CASWELL 23 W-434

Project Location: LEA COUNTY

Sampler Name: MICHAEL COLLIER

P.O. #: 700794.338.01

Company: TOLON LPE

Attn: C. JONES

Address:

City:

State:

Zip:

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH	BTEx	TOTAL CHLORIDES
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:					
4001001	5-4 1'	G	1							4-2-20	10:05a	✓	✓	✓
	5-4 2'R										10:30a			
	5-5 0'										10:35a			
	5-5 1'										10:45a			
	5-5 2'										10:50a			
	5-5 3'R										10:55a			
	5-6 0'													
	5-6 1'													
	5-6 2'R													
	5-7 0'													

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Relinquished By: *[Signature]* **Received By:** *[Signature]*

Date: 4-2-20 **Time:** 1:00

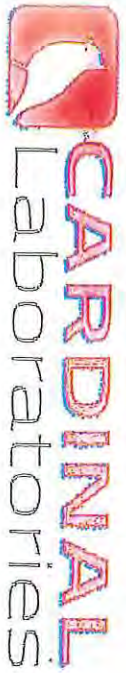
Delivered By: *[Signature]* **Received By:** *[Signature]*

Date: 4-2-20 **Time:** 1:345

Sample Condition: ☒ Yes ☐ No **Checked By:** *[Signature]*

Sampler - UPS - Bus - Other: *[Signature]* **Phone Result:** ☐ Yes ☐ No **Phone #:** *[Signature]*

REMARKS: *[Signature]* **Fax Result:** ☐ Yes ☐ No **Fax #:** *[Signature]*



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Main, Hobbs, NM 88240
(575) 333-2326 FAX (575) 393-2475

Company Name: T ALON CPE		P.O. #: 760794.338.01	
Project Manager: C. JONES			
Address: 408 W. TEXAS AVE	City: ARTESIA	State: NM	Zip: 88210
Phone #: 575-631-6977	Fax #:	Attn: C. JONES	
Project #: 700794.338.01	Project Owner: DEVON	City:	State:
Project Name: CASWELL 23 1K-43H	Project Location: LEA COUNTY	Phone #:	Zip:
Sampler Name: MICHAEL COLLIER	FOR LAB USE ONLY:	Fax #:	

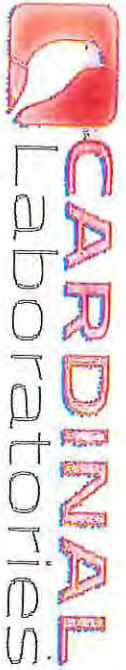
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH	BTEx	TOTAL CHLORIDES
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
Abd1001	21	5-7 1'	5							4-2-20	11:10a	✓	✓	✓
	22	5-7 2'R	1			✓					11:15a	✓	✓	✓
	23	5-8 0'	1			✓					11:25a	✓	✓	✓
	24	5-8 1'	1			✓					11:30a	✓	✓	✓
	25	5-8 2'R	1			✓					11:35a	✓	✓	✓
	26	5-9 0'	1			✓					11:45a	✓	✓	✓
	27	5-9 1'	1			✓					11:50a	✓	✓	✓
	28	5-9 2'R	1			✓					11:55a	✓	✓	✓
	29	5-10 0'	1			✓					12:05a	✓	✓	✓
	30	5-10 1'R	5	1		✓				4-2-20	12:10a	✓	✓	✓

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Relinquished By:	Date: 4-2-20	Received By:	Date: 4-2-20
Delivered By: (Circle One)	Time: 1:30	Sample Condition:	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Time: 1:45	Good / Bad: Yes [] No []	Checked By: Pg 3 of 4

REMARKS:

Phone Result: ☐ Yes ☐ No Add'l Phone #: _____
Fax Result: ☐ Yes ☐ No Add'l Fax #: _____



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: TOLON LPE

Project Manager: C. JONES

Address: 408 W. TEXAS AVE

City: ARTESIA

Phone #: 575-631-6977 **Fax #:**

Project #: 700794.338.01 **Project Owner:** DEVON

Project Name: CASWELL 23 W-434

Project Location: LEA COUNTY

Sampler Name: MICHAEL GOUVER

P.O. #: 700794.338.01

Company: TOLON LPE

Attn: C. JONES

Address:

City:

State: **Zip:**

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.	SAMPLING	DATE	TIME	TPH	BTEx	TOTAL CHLORIDES
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:							
#001001	S-11 0'	G	1			✓						4-2-20	12:20pm	✓	✓	✓
	S-11 1'												12:25pm			
	S-11 2'R												12:30pm			
	S-12 0'												12:40pm			
	S-12 1'												12:45pm			
	S-12 2'R												12:50pm			
	S-13 0'												1:00pm			
	S-13 1'												1:05pm			
	S-13 2'R	G	1			✓						4-2-20	1:10pm	✓	✓	✓

RECEIVED BY: 4-2-20

RECEIVED BY: 4-6-20

DELIVERED BY: (Circle One) 1345

SAMPLER - UPS - BUS - OTHER: 1.4: #113

REMARKS:

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

Fax Result: ☐ Yes ☐ No **Add'l Fax #:**

REMARKS:



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

April 23, 2020

CHRIS JONES

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: CASWELL 23 1H & 3H

Enclosed are the results of analyses for samples received by the laboratory on 04/20/20 15:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is 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:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	04/20/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	CASWELL 23 1H & 3H	Sampling Condition:	Cool & Intact
Project Number:	700794.338.01	Sample Received By:	Kelly Jacobson
Project Location:	DEVON - LEA COUNTY, NM		

Sample ID: N. SW 1' (H001156-01)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTEX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1230	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 97.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 110 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S. SW-1 1' (H001156-02)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B			mg/kg							
			Analyzed By: GM							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1470	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11		
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4		
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND						

Surrogate: 1-Chlorooctane 82.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.6 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: E. SW-1 1' (H001156-03)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTEx	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1280	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 94.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 108 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: E. SW-2 1' (H001156-04)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1150	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	473	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	112	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 98.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 120 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: W. SW-1 1' (H001156-05)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1300	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	24.8	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 91.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: W. SW-2 1' (H001156-06)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1040	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 91.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S. SW-2 1' (H001156-07)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTEx	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1760	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	64.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	11.5	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 96.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 113 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S - 13 A 1' (H001156-08)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1170	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 92.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S - 12 A 1' (H001156-09)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 93.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 106 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S - 11 A 1' (H001156-10)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	16.9	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 86.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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APPENDIX I

SITE MAP

KARST MAP

TOPO MAP

LOCATION MAP



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S - 10 A 1' (H001156-11)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1150	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	124	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	21.9	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 90.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 106 % 42.2-156

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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", is written over a horizontal line.

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2475

[illegible]

talonlpe.com • 866.742.0742



Site Assessment & Closure Report

Caswell 23 Federal #1H & 3H Lea
County, New Mexico
API# 30-025-40708, 30-025-40709
1RP-5009

Prepared For:

Devon Energy Production Company
6488 Seven Rivers Hwy Artesia
NM 88210

Prepared By:

TALON/LPE
408 W. Texas Avenue
Artesia, New Mexico 88210

Rev. October 1, 2020

talonlpe.com • Toll Free: (866) 742-0742

Mr. Jim Amos
Bureau of Land Management
620 East Green Street
Carlsbad, NM 88220

Ms. Christina Eads
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

Subject: **Site Assessment & Closure Report**
Caswell 23 Federal #1H & 3H
Lea County, New Mexico
API# 30-025-40708, 30-025-40709
1RP-5009

Dear Mr. Amos & Ms. Eads,

Devon Energy Production Company (Devon) has contracted Talon/LPE (Talon) to perform soil assessment and remediation activities at the above-referenced location. The incident descriptions, soil sampling results, soil remediation, and closure requests are presented herein.

Site Information

The Caswell 23 Federal #1H & 3H is located approximately forty (40) miles east of Artesia, New Mexico. The legal location for this release is Unit Letter A, Section 23, Township 17 South and Range 32 East in Lea County, New Mexico. More specifically, the latitude and longitude for the release are 32.826409 North and -103.728985 West. A Site Map is presented in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Berino-Cacique association with 0 to 3 percent slopes. See [Appendix II](#) for the referenced soil survey. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is comprised of eolian and piedmont deposits, Holocene to middle Pleistocene in age. Drainage courses in this area are well-drained.

Ground Water and Site Characterization

The New Mexico Office of the State Engineer Database indicates the nearest reported depth to groundwater is 130-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater depth. This site is not located within a high potential Karst area.

If a release occurs within the following areas, the responsible party must treat the release as if it occurred less than 50 feet to the groundwater in Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29 NMAC.

Approximate Depth to Groundwater		130 Feet/BGS
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet of any continuously flowing watercourse or any other significant watercourse	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 200 feet of any lakebed, sinkhole, or playa lake	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet from an occupied permanent residence, school, hospital, institution, or church	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 500 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	Within 1000 feet of any fresh water well or spring	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within incorporated municipal boundaries or within a defined Municipal fresh water well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet of a wetland	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within the area overlying a subsurface mine	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within an unstable area	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within a 100-year flood zone	

The release did not occur in any of these areas and the depth to groundwater is greater than 100-feet deep. Based on the site characterization data, the cleanup criteria for this site are as follows.

Table I Closure Criteria for Soils Impacted by a Release			
Depth below horizontal extents of release to ground water less than 10,000 mg/l TDS	Constituent	Method	Limit
>50 feet	Total Chlorides	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

According to further research of the OSE database for groundwater, the nearest well POD is located over .5 miles away. Therefore Ms. Eads, of the NMOCD requested that the location be drilled in order to verify depth to groundwater for this area at depths greater than 50' bgs.

Pursuant to the NMOCD's request; on September 09, 2020, Talon personnel and equipment mobilized to the location. A Geo technical push rig was utilized to advance to 55' bgs.

On September 14, 2020 Talon personnel returned to site in order to verify that no groundwater existed at depths of 55'. Using an Interface Meter, it was ascertained that no water existed at 55' bgs. The boring log can be referenced in [Appendix V](#). The hole was plugged with Bentonite.

Incident Description

On March 20, 2018, the heater treater pressurized, causing the fluids to exit through the vent line. The wells were shut in to prevent further release. Approximately 8 barrels (bbls) of oil were released, the spill area was measured to be 365' x 80' with an overspray onto the pasture adjacent to the well pad. No fluids were recovered. The initial C-141 is presented in [Appendix III](#) for this incident and was assigned 1RP-5009.

On March 13, 2020, the fire tube on the test heater developed a hole causing approximately 57.54 bbls of produced water to be released onto the well pad. All fluids remained on the pad and were mixed with rainwater. A vac truck was able to recover approximately 39 bbls. The initial C-141 is presented in [Appendix III](#) for this incident and has not been assigned an application number for reference as of date of this report. A site map referencing the two spill events is presented in [Appendix I](#).

On April 2, 2020, Talon mobilized personnel to the site conducting a site assessment and collecting soil samples. Sample locations are shown on the attached site map, the results of our sampling event are presented in the following data table.

Soil Sampling 4-2-20 Soil Sample Laboratory Results

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO combined = 1000 mg/kg			2500 mg/kg	20,000 mg/kg
S-1	4/2/2020	0	ND	ND	ND	93.7	38.4	132.1	2080
		1 R	ND	ND	ND	ND	ND	ND	208
S-2		0	ND	ND	ND	ND	ND	ND	256
		1	ND	ND	ND	ND	ND	ND	64
		2	ND	ND	ND	ND	ND	ND	32
		3 R	ND	ND	ND	ND	ND	ND	48
S-3		0	ND	ND	ND	268	208	476	144
		1	ND	ND	ND	ND	ND	ND	64
		2 R	ND	ND	ND	ND	ND	ND	64
S-4		0	ND	ND	ND	ND	ND	ND	64
		1	ND	ND	ND	ND	ND	ND	224
		2 R	ND	ND	ND	ND	ND	ND	48
S-5		0	ND	ND	ND	ND	ND	ND	64
		1	ND	ND	ND	ND	ND	ND	96
		2	ND	ND	ND	ND	ND	ND	64
		3R	ND	ND	ND	ND	ND	ND	144
S-6		0	ND	ND	ND	ND	ND	ND	112
		1	ND	ND	ND	ND	ND	ND	112
		2 R	ND	ND	ND	ND	ND	ND	64
S-7		0	ND	ND	ND	ND	ND	ND	96
		1	ND	ND	ND	ND	ND	ND	64
		2 R	ND	ND	ND	ND	ND	ND	64
S-8		0	ND	ND	ND	ND	ND	ND	112
		1	ND	ND	ND	ND	ND	ND	64
		2 R	ND	ND	ND	ND	ND	ND	80
S-9		0	ND	ND	ND	ND	ND	ND	528
		1	ND	ND	ND	ND	ND	ND	96
		2 R	ND	ND	ND	ND	ND	ND	64
S-10		0	ND	ND	ND	ND	ND	ND	17000
		1 R	ND	ND	ND	ND	ND	ND	528
S-11		0	7.9	ND	216	5660	1230	7106	10200
		1	ND	ND	ND	ND	ND	ND	256
		2 R	ND	ND	ND	59.6	10.3	69.9	496
S-12		0	ND	ND	ND	3150	983	4133	28600
		1	ND	ND	ND	ND	ND	ND	192
		2 R	ND	ND	ND	ND	ND	ND	304
S-13		0	ND	ND	ND	54.5	22.8	77.3	22600
		1	ND	ND	ND	ND	ND	ND	2640
		2 R	ND	ND	ND	ND	ND	ND	960

ND-Analyte Not Detected

See [Appendix V](#) for the complete report of laboratory results.

4-20-20 Confirmation Soil Sample Laboratory Results

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	DRO + GRO combined = 1000 mg/kg			2500 mg/kg	20,000 mg/kg
N. Sidewall Composite	4/20/2020	1	ND	ND	ND	ND	ND	ND	1230
S. Sidewall-1 Composite		1	ND	ND	ND	ND	ND	ND	1470
E. Sidewall-1 Composite		1	ND	ND	ND	ND	ND	ND	1280
E. Sidewall-2 Composite		1	ND	ND	ND	473	112	585	1150
W. Sidewall-1 Composite		1	ND	ND	ND	24.8	ND	24.8	1300
W. Sidewall-2 Composite		1	ND	ND	ND	ND	ND	ND	1040
S. Sidewall-2 Composite		1	ND	ND	ND	64	11.5	75.5	1760
S-13 A		1	ND	ND	ND	ND	ND	ND	1170
S-12 A		1	ND	ND	ND	ND	ND	ND	400
S-11 A		1	ND	ND	ND	16.9	ND	16.9	800
S-10 A		1	ND	ND	ND	124	21.9	145.9	1150

ND-Analyte Not Detected

See [Appendix V](#) for the complete report of laboratory results.

Remedial Actions

- Based upon the results of our sampling event, there were no exceedances for the NMOCD clean-up criteria on the Caswell 23 Fed #1H, 1RP-5009 release. Therefore, there was no need for soil remediation activities for this incident.
- The area in the vicinity of S-10, S-11, S-12, and S-13 was excavated to a depth of 1-foot below ground surface (BGS). Laboratory analytical results from confirmation sidewall soil samples indicated that the TPH and Chloride concentrations were below NMOCD Closure Criteria 19.15.29.12 D NMAC ([Appendix V](#)).
- The excavated soil was transported to Lea Land, LLC, a NMOCD approved soil waste disposal facility.
- The excavated area was backfilled with clean caliche, machine contoured and compacted to match the surrounding location.
- Final C-141 is attached in [Appendix IV](#).

Closure

Based on this site characterization, soil remediation and analytical results, we request that no further actions be required. We furthermore respectfully request that the amendments to the regulatory closure concerning the attached incidents be granted.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-746-8768.

Respectfully submitted,

TALON/LPE

Rebecca Pons
Project Manager

David J. Adkins
District Manager

Attachments:

Appendix I Site Maps, Karst Map, TOPO Map & Locator Map
Appendix II Groundwater Data, FEMA Flood Zone, Soil Survey
Appendix III Initial and Final C-141's
Appendix IV Photographic Documentation
Appendix V Boring Log
Appendix VI Laboratory Data



APPENDIX I

SITE MAP

KARST MAP

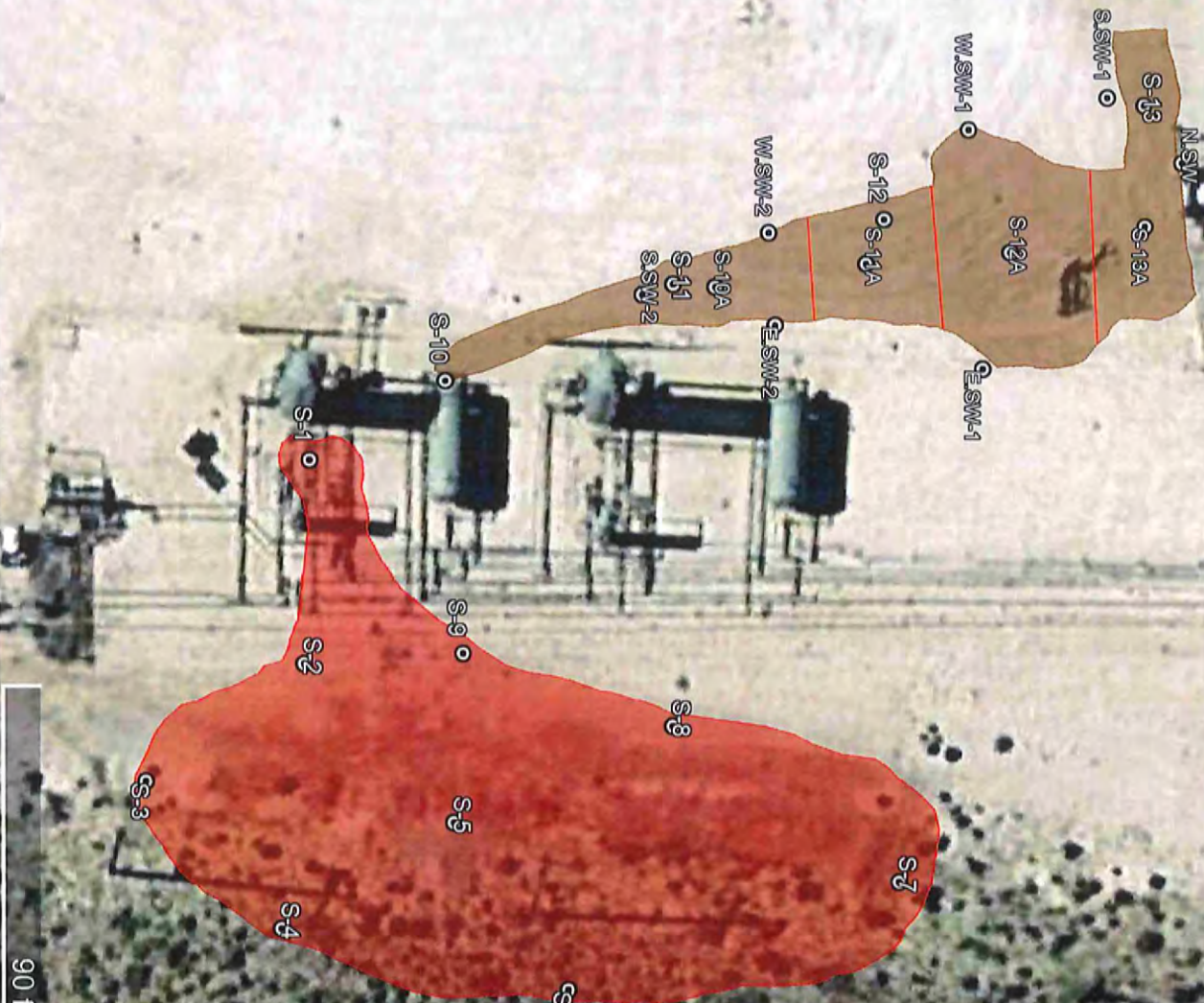
TOPO MAP

LOCATION MAP

Caswell 23 Fed #1H & 3H

Devon Energy Production Company
Lea County, NM
#1H API 30-015-40708
#3H API 30-015-40709

- Legend**
- Caswell 23 Fed #1 H Spill 1RP-5009
 - Caswell 23 Fed #3H Spill
 - Samples



Google Earth

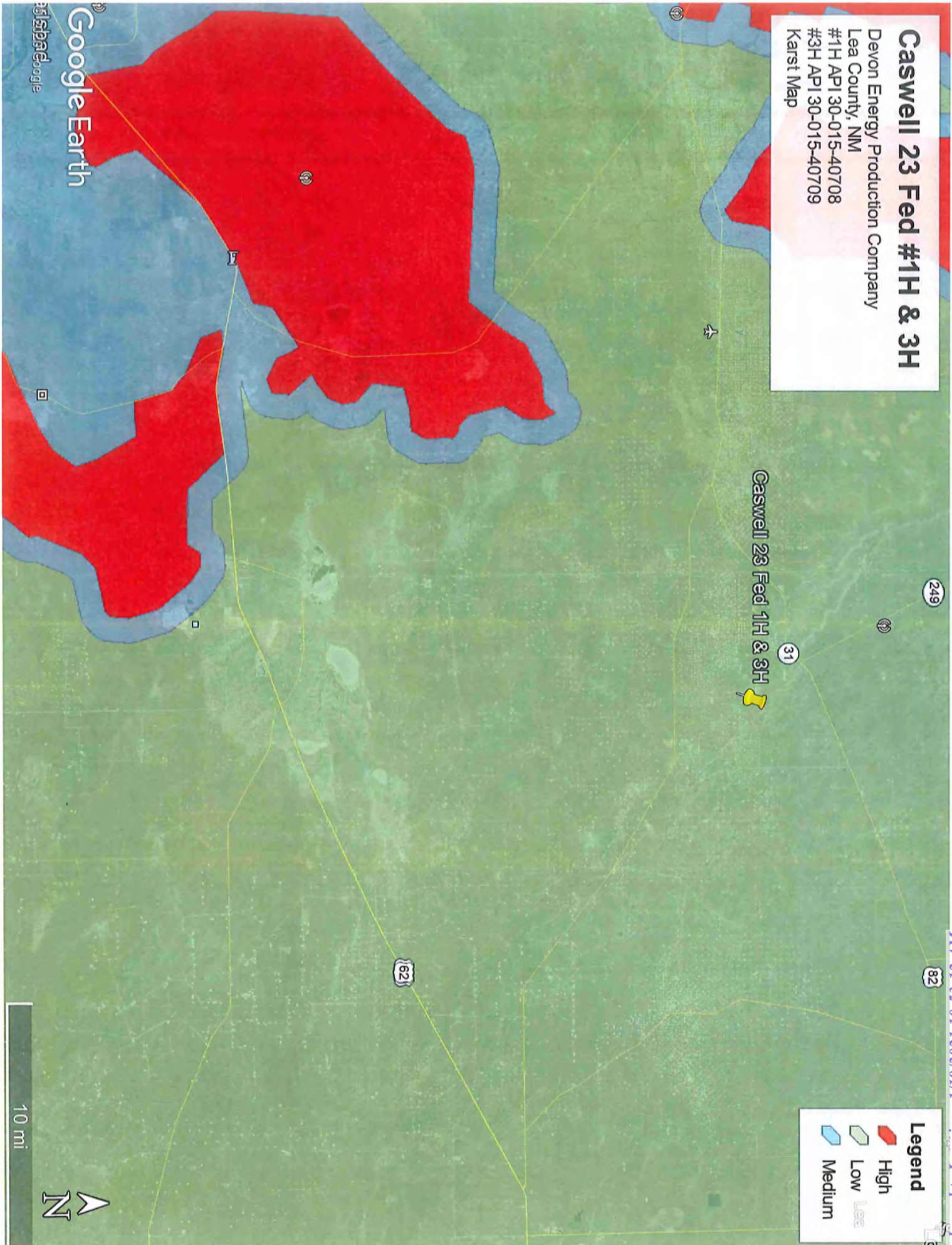
© 2020 Google

Caswell 23 Fed #1H & 3H

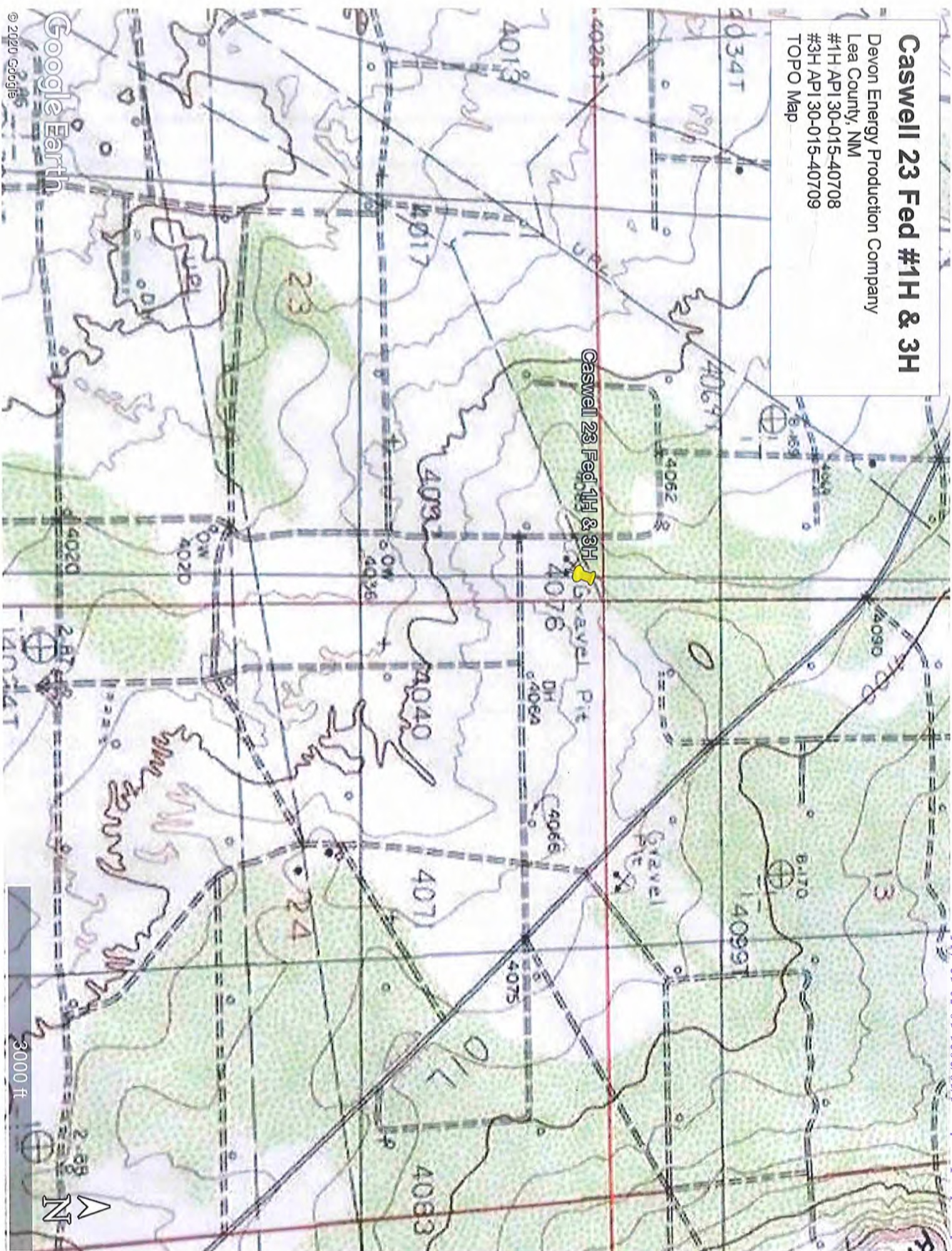
Devon Energy Production Company
Lea County, NM
#1H API 30-015-40708
#3H API 30-015-40709
Karst Map

Legend

	High
	Low
	Medium

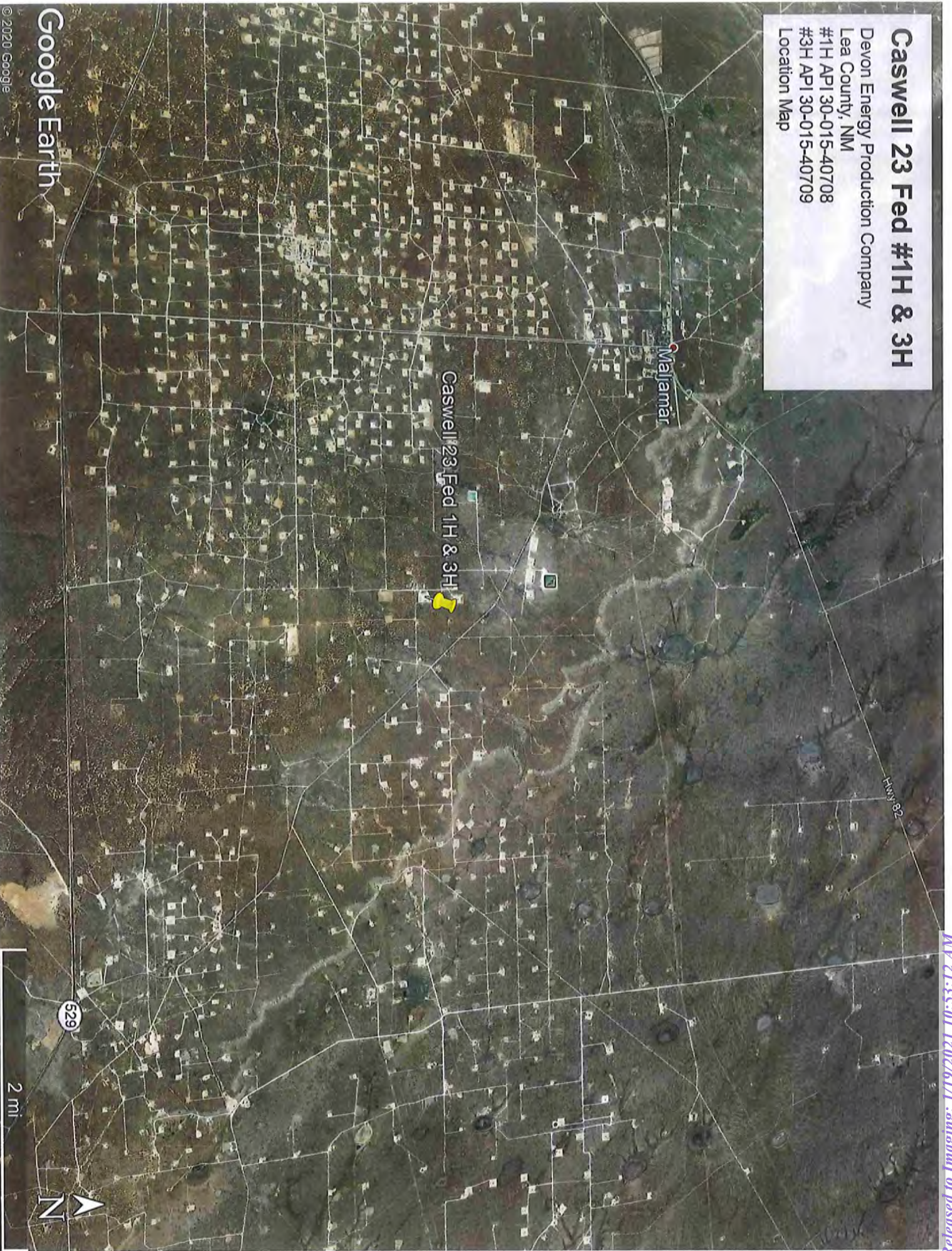


Devon Energy Production Company
Lea County, NM
#1H API 30-015-40708
#3H API 30-015-40709
TOPO Map



Caswell 23 Fed #1H & 3H

Devon Energy Production Company
Lea County, NM
#1H API 30-015-40708
#3H API 30-015-40709
Location Map





APPENDIX II

GROUNDWATER DATA

SOIL SURVEY

FEMA FLOOD ZONE

3/19/2020

nmwrrs.ose.state.nm.us/nmwrrs/ReportProxy?queryData=%7B"report"%3A"waterColumn"%2C%0A"BasinDiv"%3A"true"%2C%0A"Basin...



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	POD Code	Sub-basin	County	Q 6	Q 4	Q 1	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
RA 11911 POD1	RA	LE		1	3	1	24	17S	32E	619192	3632296	498	35		
L 12974 POD1	L	LE		3	4	3	18	17S	33E	621233	3632940	2270	140	130	10
RA 11957 POD1	RA	LE		3	4	1	19	17S	33E	621177	3632200	2272	55		
RA 11936 POD1	RA	LE		1	4	1	19	17S	33E	621246	3632321	2314	92		
RA 11937 POD1	RA	LE		1	4	1	19	17S	33E	621244	3632281	2319	95		
RA 11684 POD5	RA	LE		3	1	4	11	17S	32E	618353	3635047	2384	275		
RA 11684 POD1	RA	LE		1	1	4	11	17S	32E	618216	3635124	2497	275		
L 02770 S2	L	LE		2	2	3	18	17S	33E	621338	3633583*	2512	214	184	30
L 02770 S3	L	LE		2	2	3	18	17S	33E	621338	3633583*	2512	220	202	18
RA 11684 POD2	RA	LE		1	1	4	11	17S	32E	618313	3635248	2589	275		
L 13047 POD1	L	LE					11	17S	32E	618187	3635254*	2629	140		
RA 11684 POD3	RA	LE		3	3	1	11	17S	32E	618262	3635371	2721	275		
RA 11684 POD4	RA	LE		1	3	2	11	17S	32E	618334	3635521	2849	275		

Average Depth to Water: **172 feet**

Minimum Depth: **130 feet**

Maximum Depth: **202 feet**

Record 13

Count:

UTM NAD83 Radius Search (In meters):

Easting (X): 618970.452

Northing (Y): 3632743.411

Radius: 3000

*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.

3/19/20 9:59 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Lea County, New Mexico

BH—Berino-Cacique association, hummocky

Map Unit Setting

National map unit symbol: dmpg
Elevation: 3,000 to 4,400 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 190 to 205 days
Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 50 percent
Cacique and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Plains
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy eolian deposits derived from sedimentary rock over calcareous sandy alluvium derived from sedimentary rock

Typical profile

A - 0 to 10 inches: fine sand
Btk - 10 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat):
 Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 40 percent
Gypsum, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 2.0
Available water storage in profile: Moderate (about 8.5 inches)

Interpretive groups*Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 7c*Hydrologic Soil Group:* B*Ecological site:* Loamy Sand (R042XC003NM)*Hydric soil rating:* No**Description of Cacique****Setting***Landform:* Plains*Landform position (three-dimensional):* Rise*Down-slope shape:* Linear*Across-slope shape:* Linear*Parent material:* Calcareous eolian deposits derived from sedimentary rock**Typical profile***A - 0 to 7 inches:* fine sand*Bt - 7 to 28 inches:* sandy clay loam*Bkm - 28 to 38 inches:* cemented material**Properties and qualities***Slope:* 0 to 3 percent*Depth to restrictive feature:* 20 to 40 inches to petrocalcic*Natural drainage class:* Well drained*Runoff class:* High*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)*Depth to water table:* More than 80 inches*Frequency of flooding:* None*Frequency of ponding:* None*Calcium carbonate, maximum in profile:* 40 percent*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)*Sodium adsorption ratio, maximum in profile:* 2.0*Available water storage in profile:* Low (about 3.6 inches)**Interpretive groups***Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 7c*Hydrologic Soil Group:* C*Ecological site:* Sandy (R042XC004NM)*Hydric soil rating:* No**Minor Components****Kermit***Percent of map unit:* 4 percent*Ecological site:* Deep Sand (R042XC005NM)*Hydric soil rating:* No**Maljamar***Percent of map unit:* 3 percent

Map Unit Description: Berino-Cacique association, hummocky—Lea County, New Mexico

Ecological site: Limy Upland 16-21" PZ (R077CY028TX)

Hydric soil rating: No

Palomas

Percent of map unit: 2 percent

Ecological site: Loamy Sand (R042XC003NM)

Hydric soil rating: No

Dune land

Percent of map unit: 1 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Lea County, New Mexico

Survey Area Data: Version 16, Sep 15, 2019



National Flood Hazard Layer FIRMette



32°49'49.72"N

103°44'3.06"W



Legend

SEE FIRM REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

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

0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X

Future Conditions 1% Annual Chance Flood Hazard Zone X

Area with Reduced Flood Risk due to Levee, See Notes, Zone X

Area with Flood Risk due to Levee Zone D

OTHER AREAS OF FLOOD HAZARD

NO SCREEN
Area of Minimal Flood Hazard Zone X
Effective LOMRS

OTHER AREAS

GENERAL
Channel, Culvert, or Storm Sewer
STRUCTURES
Levee, Dike, or Floodwall

20.2
17.5
Cross Sections with 1% Annual Chance Water Surface Elevation

Coastal Transect
Base Flood Elevation Line (BFE)

Limit of Study

Jurisdiction Boundary

Coastal Transect Baseline

Profile Baseline

Hydrographic Feature

OTHER FEATURES

Digital Data Available

No Digital Data Available

Unmapped

MAP PANELS



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/19/2020 at 12:05:39 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



APPENDIX III

INITIAL C-141 & FINAL 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 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	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Devon Energy Production Company	OGRID 6137
Contact Name Amanda T. Davis	Contact Telephone 575-748-0176
Contact email amanda.davis@dvn.com	Incident # (assigned by OCD)
Contact mailing address 6488 Seven Rivers HWY	

Location of Release Source

Latitude 32.826409 Longitude -103.728985
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Caswell 23 Federal #3H	Site Type Oil
Date Release Discovered 3/13/2020	API# (if applicable) 30-025-40709

Unit Letter	Section	Township	Range	County
A	23	17S	32E	Lea

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 57.54	Volume Recovered (bbls) 39
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release The fire tube on the test heater developed a hole causing fluid to be released onto the wellpad. All fluid remained on the pad and was mixed with rainwater.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC?

☒ Yes ☐ No

If YES, for what reason(s) does the responsible party consider this a major release?

The amount of fluid released was over 25 bbls.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

An email was sent by Tom Bynum on 3/14/20 to the following: 'BLM Releases (blm_nm_cfo_spill@blm.gov)'; emnrd-ocd-district1spills@state.nm.us; 'rmann@slo.state.nm.us'; 'bboone@slo.state.nm.us'

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.
- ☐ Released 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:

This release was not contained within a secondary containment, but all fluids did stay on the wellpad.

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: Kendra DeHoyos

Title: EHS Associate

Signature: Kendra DeHoyos

Date: _____

email: kendra.dehoyos@dvn.com

Telephone: 575-748-3371

OCD Only

Received by: _____ Date: _____

Form C-141

Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	30-025-4079
Application ID	

Closure

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

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

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

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

Printed Name: Rebecca PonsTitle: Project Manager, Talon/LPE

Signature: Digitally signed by Rebecca Pons
DN: cn=Rebecca Pons, o=Talon LPE, ou=Antecia, email=rppons@talonlpe.com,
c=US
Date: 2020.06.17 15:18:42 -0600

Date: 6/16/20email: rppons@talonlpe.comTelephone: 575.746.8768**OCD Only**

Received by: _____

Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____

Title: _____

District I
1625 N. French Dr., Hobbs, NM 88240
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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 Devon Energy Production Company	Contact Hubert Perry
Address 6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No. 575-748-3371
Facility Name Caswell 23 Federal 1H	Facility Type Oil
Surface Owner Federal	Mineral Owner Federal
API No. 30-025-40708	

LOCATION OF RELEASE

Unit Letter A	Section 23	Township 17S	Range 32E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
------------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude 32.82628 Longitude 103.72898 NAD83

NATURE OF RELEASE

Type of Release Oil	Volume of Release 8 bbls	Volume Recovered None Recovered
Source of Release Heater Treater	Date and Hour of Occurrence March 19, 2018 12:15 PM MST	Date and Hour of Discovery March 19, 2018 12:15 PM MST
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD-Jim Griswold BLM-Terry Gregston and Shelly Tucker	
By Whom? Brett Fuls-EHS Professional	Date and Hour NMOCD-March 20, 2018 7:57 AM MST BLM- March 20, 2018 8:12 AM MST	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

RECEIVED

By Olivia Yu at 2:04 pm, Apr 03, 2018

Describe Cause of Problem and Remedial Action Taken.*

The Heater Treater pressurized causing the fluid to exit through the vent line. The wells were immediately shut in to prevent any further release.

Describe Area Affected and Cleanup Action Taken.*

Approximately 8 bbls of oil was released from the Heater Treater vent line. No fluids were recovered. The release originated from the Heater Treater that is located on the well pad. The approximate area affected by the release is 365'x 80' causing an overspray onto the pasture adjacent to the well pad. An environmental contractor will be contacted to assist with delineation and remediation efforts.

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: *Jennifer Reyna*

Printed Name: Jennifer Reyna

Title: Field Admin Support

E-mail Address: Jennifer.Reyna@dmv.com

Date: 4/2/2018

Phone: 575.746.5588

Approved by Environmental Specialist:

Approval Date: **4/3/2018**

Expiration Date:

Conditions of Approval:

see attached directive

Attached ☒

* Attach Additional Sheets If Necessary

1RP-5009

nOY1809350940

pOY1809351198

Incident ID	
District RP	1RP-5009
Facility ID	30-025-40708
Application ID	nOY1809350940

Closure

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

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

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

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

Printed Name: Rebecca Pons Title: Project Manager

Signature: Digitally signed by Rebecca Pons
DN: cn=Rebecca Pons, o=Taloni LPE, ou=Artistic,
email=Rpons@talonlpe.com, c=US
Date: 2020.06.17 15:19:20 -0507 Date: 06/11/20

email: Rpons@talonlpe.com Telephone: 575-441-0980

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



APPENDIX IV

PHOTOGRAPHIC DOCUMENTATION

Spill



Latitude: 32.826378
Longitude: -103.729054
Elevation: 1246.16m
Accuracy: 3.2m
Time: 04-15-2020 09:59

Excavation



Completed



Geo Push for TOW





APPENDIX V

BORING LOG



BORING LOG

Project No.: 700794.338.01
 Site Name: Caswell 23 Fed 1H
 Location: Eddy County
 Date: 09/09/2020
 Boring Number: 1A

Weather: Overcast Temp.: 54 °F
 Driller: Jose II Salas
 Logger: BS
 Rig Type: Geo Technical Push
 Field Instrument: _____
 Bit Size: NA
 Latitude: 32.826471 N
 Drilling Method: Geo Probe
 Longitude: -103.729926 W
 Sample Retrieval Method: Grab

Time	Lab Sample Collected	Sample Interval (ft)	Sample Recovery (ft)	USCS	Composition (%)	Sample Material/Comments Include composition, color, grain size, moisture, hardness, plasticity, density	Hydrocarbon Odor	PID (ppm)
12:17	<input checked="" type="checkbox"/>	2'		SP		Sand w/ trace amounts of caliche, tan, poorly sorted, dry	None Slight Mod. Strong	0
12:17	<input checked="" type="checkbox"/>	4'		SP		Sand w/ trace amounts of caliche, tan, poorly sorted, dry	None Slight Mod. Strong	0
12:18	<input checked="" type="checkbox"/>	6'		SP		Sand w/ trace amounts of caliche, tan, poorly sorted, dry	None Slight Mod. Strong	0
12:19	<input checked="" type="checkbox"/>	8'		SW		Sand, well sorted, tan in color and dry	None Slight Mod. Strong	0
12:23	<input checked="" type="checkbox"/>	10'		SW		Sand, poorly sorted, tan in color and dry	None Slight Mod. Strong	0
12:25	<input checked="" type="checkbox"/>	15"		SW		Tan Brown fine sand, well sorted, dry	None Slight Mod. Strong	0
12:26	<input checked="" type="checkbox"/>	20'		SP		Lt. Brown poorly sorted sandy with weathered lime stone	None Slight Mod. Strong	0
12:27	<input checked="" type="checkbox"/>	25'		SC		Brown slightly sandy clay, dry	None Slight Mod. Strong	0
12:28	<input checked="" type="checkbox"/>	30'		SC		Brown slightly sandy clay, dry	None Slight Mod. Strong	0
12:29	<input checked="" type="checkbox"/>	35'		SC		Red Brown slightly sandy clay, dry	None Slight Mod. Strong	0
12:30	<input checked="" type="checkbox"/>	40'		SC		Red Brown slightly sandy clay, dry	None Slight Mod. Strong	0
12:35	<input checked="" type="checkbox"/>	45'		SC		Red Brown, sandy clay, w/ trace mounts of lime stone	None Slight Mod. Strong	0

Surface Elevation: _____

Notes: TD @ 55' Groundwater not encountered.

Logger Initials: BS

Time	Lab Sample Collected	Sample Interval (ft)	Sample Recovery (ft)	USCS	Composition (%)	Sample Material/Comments Include composition, color, grain size, moisture, hardness, plasticity, density	Hydrocarbon Odor	PID (ppm)
12:37	<input checked="" type="checkbox"/>	50'		SC		Red Brown, sandy clay w/ trace amounts of limestone, dry	None Slight Mod. Strong	0
12:40	<input checked="" type="checkbox"/>	55'		SC		Red Brown Sandy Clay, dry	None Slight Mod. Strong	0
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
	<input type="checkbox"/>						None Slight Mod. Strong	
Notes: No groundwater encountered.								
Logger Initials:								BS



APPENDIX VI

Laboratory Data



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

April 08, 2020

CHRIS JONES

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: CASWELL 23 1H & 3H

Enclosed are the results of analyses for samples received by the laboratory on 04/06/20 13:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is 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:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 1 0' (H001001-01)

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	04/06/2020	ND	2.10	105	2.00	4.58	
Toluene*	<0.050	0.050	04/06/2020	ND	2.11	105	2.00	5.04	
Ethylbenzene*	<0.050	0.050	04/06/2020	ND	2.12	106	2.00	4.66	
Total Xylenes*	<0.150	0.150	04/06/2020	ND	6.18	103	6.00	4.84	
Total BTEX	<0.300	0.300	04/06/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2080	16.0	04/07/2020	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	04/07/2020	ND	193	96.4	200	4.15	
DRO >C10-C28*	93.7	10.0	04/07/2020	ND	190	95.1	200	8.28	
EXT DRO >C28-C36	38.4	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 95.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.5 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 1 1' R (H001001-02)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	04/07/2020	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	04/07/2020	ND	189	94.6	200	0.132	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	184	92.0	200	0.414	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 102 % 44.3-144

Surrogate: 1-Chlorooctadecane 107 % 42.2-156

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 2 0' (H001001-03)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	04/07/2020	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	04/07/2020	ND	189	94.6	200	0.132	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	184	92.0	200	0.414	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 99.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 103 % 42.2-156

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 2 1' (H001001-04)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.2 % 42.2-156

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 2 2' (H001001-05)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.3 % 42.2-156

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 2 3' R (H001001-06)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 99.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 3 0' (H001001-07)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	268	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	208	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 127 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 3 1' (H001001-08)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.4 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 3 2' R (H001001-09)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 94.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 99.4 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 4 0' (H001001-10)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.1 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 4 1' (H001001-11)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	224	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 96.8 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 4 2' R (H001001-12)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 97.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 5 0' (H001001-13)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 95.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 99.4 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 5 1' (H001001-14)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.9 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 5 2' (H001001-15)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.0 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 5 3' R (H001001-16)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	144	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 89.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.1 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 6 0' (H001001-17)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 93.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.8 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 6 1' (H001001-18)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 96.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 6 2' R (H001001-19)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTEx	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 96.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 99.7 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 7 0' (H001001-20)

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	04/07/2020	ND	2.03	102	2.00	4.12		
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 88.1 % 44.3-144

Surrogate: 1-Chlorooctadecane 92.3 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 7 1' (H001001-21)

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	04/07/2020	ND	2.03	102	2.00	4.12	
Toluene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.78	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	4.14	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.05	101	6.00	4.35	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 92.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.8 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 7 2' R (H001001-22)

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	04/07/2020	ND	2.06	103	2.00	0.100	
Toluene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	0.170	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	0.0233	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.95	99.2	6.00	0.128	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 94.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.5 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 8 0' (H001001-23)

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	04/07/2020	ND	2.06	103	2.00	0.100	
Toluene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	0.170	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.07	103	2.00	0.0233	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.95	99.2	6.00	0.128	
Total BTEX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	04/07/2020	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	04/07/2020	ND	193	96.7	200	0.131	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	185	92.4	200	2.96	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 87.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 88.0 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 8 1' (H001001-24)

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	04/07/2020	ND	2.08	104	2.00	3.75		
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62		
Total BTEx	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/07/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 91.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.0 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 8 2' R (H001001-25)

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	04/07/2020	ND	2.08	104	2.00	3.75		
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	80.0	16.0	04/07/2020	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	04/07/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/07/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/07/2020	ND					

Surrogate: 1-Chlorooctane 91.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.5 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 9 0' (H001001-26)

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	04/07/2020	ND	2.08	104	2.00	3.75		
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 93.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 96.7 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 9 1' (H001001-27)

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	04/07/2020	ND	2.08	104	2.00	3.75		
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62		
Total BTX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	96.0	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 93.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.5 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 9 2' R (H001001-28)

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	04/07/2020	ND	2.08	104	2.00	3.75	
Toluene*	<0.050	0.050	04/07/2020	ND	2.09	104	2.00	3.93	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.11	106	2.00	4.53	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	6.17	103	6.00	4.62	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 93.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.4 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 10 0' (H001001-29)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	17000	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 90.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 94.9 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 10 1' R (H001001-30)

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	04/07/2020	ND	2.03	101	2.00	3.42		
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83		
Total BTEx	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 88.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.5 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 11 0' (H001001-31)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	0.130	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	2.03	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	5.74	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTX	7.90	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 200 % 73.3-129

Chloride, SM4500CI-B			mg/kg					Analyzed By: GM	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10200	16.0	04/07/2020	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*	216	50.0	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	5660	50.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	1230	50.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 169 % 44.3-144

Surrogate: 1-Chlorooctadecane 236 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 11 1' (H001001-32)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	256	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 93.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.2 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 11 2' R (H001001-33)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTEX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	496	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	59.6	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	10.3	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 92.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 12 0' (H001001-34)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	28600	16.0	04/07/2020	ND	432	108	400	0.00		

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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	3150	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	983	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 86.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 212 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 12 1' (H001001-35)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 90.9 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.9 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 12 2' R (H001001-36)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTEx	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	304	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 92.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.2 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 13 0' (H001001-37)

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	04/07/2020	ND	2.03	101	2.00	3.42		
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83		
Total BTEx	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	22600	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	54.5	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	22.8	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 91.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 98.3 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 13 1' (H001001-38)

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	04/07/2020	ND	2.03	101	2.00	3.42	
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33	
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76	
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83	
Total BTX	<0.300	0.300	04/07/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2640	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 89.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 95.7 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/06/2020
Reported: 04/08/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/02/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S- 13 2' R (H001001-39)

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	04/07/2020	ND	2.03	101	2.00	3.42		
Toluene*	<0.050	0.050	04/07/2020	ND	2.03	102	2.00	4.33		
Ethylbenzene*	<0.050	0.050	04/07/2020	ND	2.04	102	2.00	3.76		
Total Xylenes*	<0.150	0.150	04/07/2020	ND	5.89	98.2	6.00	3.83		
Total BTEX	<0.300	0.300	04/07/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	04/07/2020	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	04/08/2020	ND	201	101	200	0.662	
DRO >C10-C28*	<10.0	10.0	04/08/2020	ND	200	100	200	1.36	
EXT DRO >C28-C36	<10.0	10.0	04/08/2020	ND					

Surrogate: 1-Chlorooctane 94.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 97.3 % 42.2-156

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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.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

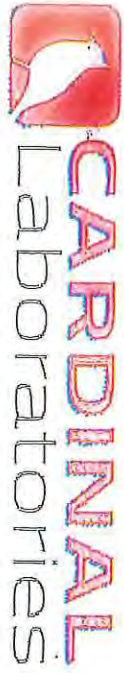
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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: Thelon LPE		P.O. #: 700794.338.01	
Project Manager: C. JONES		Company: Thelon LPE	
Address: 408 W. TEXAS AVE		Attn: C. JONES	
City: ARTESIA	State: NM Zip: 88210	Address:	
Phone #: 575-631-6977	Fax #:	City:	
Project #: 700794.338.01	Project Owner: DEVON	State: Zip:	
Project Name: CASWELL 23 1H-43H		Phone #:	
Project Location: LEA COUNTY		Fax #:	
Sampler Name: MICHAEL COLLIER			

Lab I.D.	Sample I.D.	(S) RAB OR (C) COMP.	# CONTAINERS	MATRIX						DATE	TIME	ANALYSIS REQUEST					
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:			ACID/BASE:	ICE / COOL	OTHER:	TPH	BTEX	TOTAL CHLORIDES
4001001	S-1 0'	G	1								4-2-20	9:00am					
	S-1 1'R											9:05am					
	S-2 0'											9:15am					
	S-2 1'											9:20am					
	S-2 2'											9:25am					
	S-2 3'R											9:30am					
	S-3 0'											9:40am					
	S-3 1'											9:45am					
	S-3 2'R											9:50am					
	S-4 0'	G	1								4-2-20	10:00am					

Relinquished By: MAL C. C.	Date: 4-6-20	Received By: Michael Collier	Date: 4-6-20
Relinquished By: MAL C. C.	Date: 4-6-20	Received By: Michael Collier	Date: 4-6-20
Delivered By: (Circle One)	Time: 1345	Sample Condition	CHECKED BY: Michael Collier
Sampler - UPS - Bus - Other: 1.4c. #113		Good <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initials: MC

Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
REMARKS: Pg 1 of 4	



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: TOLON LPE

Project Manager: C. JONES

Address: 408 W. TEXAS AVE

City: ARTESIA

Phone #: 515-631-6777

Project #: 100794.338.01

Project Name: CASWELL 23 14434

Project Location: LEA COUNTY

Sample Name: MICHAEL COLLIER

P.O. #: 100794.338.01

Company: TOLON LPE

Attn: C. JONES

Address:

City:

State:

Zip:

Phone #:

Fax #:

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	TPH	BTX	TOTAL CHLORIDES
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:					
H001001	11	S-4 1'	1								4-2-20	10:05a	✓	✓	✓
	12	S-4 2'R	1									10:10a	✓	✓	✓
	13	S-5 0'	1									10:30a	✓	✓	✓
	14	S-5 1'	1									10:35a	✓	✓	✓
	15	S-5 2'	1									10:45a	✓	✓	✓
	16	S-5 3'R	1									10:50a	✓	✓	✓
	17	S-6 0'	1									10:55a	✓	✓	✓
	18	S-6 1'	1										✓	✓	✓
	19	S-6 2'R	1										✓	✓	✓
	20	S-7 0'	1								4-2-20	11:05a	✓	✓	✓

PLEASE NOTE: Liability and cleanup costs are the responsibility of the client. The amount paid by the client for the analysis, including charges for reagents and any other value whatsoever shall be deemed waived unless made in writing and received by the client within 30 days after completion of the applicable analysis. In no event shall the client be liable for incidental or consequential damages, including without limitation, business interruptions, loss of profits, or loss of data, incurred by the client as a result of the analysis.

Relinquished By: *[Signature]* **Received By:** *[Signature]*

Date: 4-6-20 **Time:** 1:30

Delivered By: *[Signature]* **Received By:** *[Signature]*

Date: 4-6-20 **Time:** 1:30

Sample Condition: ☒ Cool ☒ Hot ☐ Other

Checked By: *[Signature]*

Remarks: 1.4c. #113

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

Fax Result: ☐ Yes ☐ No **Add'l Fax #:**



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2475

Company Name: TOLON CPE							P.O. #: 760794.336.01						
Project Manager: C. JONES							Company: TOLON CPE						
Address: 408 W. TEXAS AVE							Attn: C. JONES						
City: ARTESIA							State: NM Zip: 88210						
Phone #: 575-631-6977							Fax #:						
Project #: 760794.338.01							Project Owner: DEVON						
Project Name: CASWELL 23 HWY 34							City:						
Project Location: LEA COUNTY							State: Zip:						
Sampler Name: MICHAEL COLLIER							Phone #:						
FOR LAB USE ONLY							Fax #:						

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	WATRIN						DATE	TIME	TPH	BTEx	TOTAL CHLORIDES
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
H01D01														
21	S-7 1'	G	1							4-2-20	11:10am	✓	✓	✓
22	S-7 2'R										11:15am			
23	S-8 0'										11:25am			
24	S-8 1'										11:30am			
25	S-8 2'R										11:35am			
26	S-9 0'										11:45am			
27	S-9 1'										11:50am			
28	S-9 2'R										11:55am			
29	S-10 0'										12:05pm			
30	S-10 1'R	G	1							4-2-20	12:10pm	✓	✓	✓

PLEASE NOTE: Liability and damages, Contractor's liability and clients exclusions limited for any claims arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims involving claims for negligence and any other claims whatsoever shall be deemed waived unless made in writing and received by Cardinal within 90 days after completion of the applicable service. In no event shall Cardinal be liable for installation or construction of design, including without limitation, business interruption, loss of use, or loss of profits incurred by client. Its subcontractors, affiliates or successors arising out of or related to the performance of services listed herein shall remain solely the responsibility of the client.

Relinquished By:	Date: 4-2-20	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Time: 1:30	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One)	Date: 4-6-20	Received By:		
Sampler - UPS - Bus - Other:	Time: 1:34P	Received By:		
		Sample Condition:		
		Cool. Inact:		
		Checked By:		
		(Initials)		

REMARKS: Pg 3 of 4



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: TALON LPE
Project Manager: C. JONES
Address: 408 W. TEXAS AVE
City: ARTESIA
Phone #: 575-631-6977
State: NM **Zip:** 88210
Project #: 100794.338.01
Project Name: CASABEEL 23 1443H
Project Location: LEA COUNTY
Sampler Name: MICHAEL COURSE
FOR LAB USE ONLY

P.O. #: 100794.338.01
Company: TALON LPE
Attn: C. JONES
Address:
City:
State: Zip:
Phone #: Fax #:

Lab I.D.	Sample I.D.	(S)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	TPH	BTX	TOTAL CHLORIDES
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:					
#001001	S-11 0'	G	1								4-2-20	12:20pm	✓	✓	✓
	S-11 1'											12:25pm	✓	✓	
	S-11 2'R											12:30pm	✓	✓	
	S-12 0'											12:40pm	✓	✓	
	S-12 1'											12:45pm	✓	✓	
	S-12 2'R											12:50pm	✓	✓	
	S-13 0'											1:00pm	✓	✓	
	S-13 1'											1:05pm	✓	✓	
	S-13 2'R	G	1								4-2-20	1:10pm	✓	✓	✓

Relinquished By: [Signature]
Relinquished By: [Signature]
Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: [Signature]
 [Signature] 1.4: #113

Received By: [Signature]
Received By: [Signature]
Sample Condition: Cool Intact
☒ Yes ☐ No
☒ Yes ☐ No
CHECKED BY: [Signature]
REMARKS: Pc 4074

PHONE RESULTS: ☐ Yes ☐ No **ADD'l PHONE #:**
PACK RESULTS: ☐ Yes ☐ No **ADD'l FAX #:**



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

April 23, 2020

CHRIS JONES

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: CASWELL 23 1H & 3H

Enclosed are the results of analyses for samples received by the laboratory on 04/20/20 15:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is 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:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:	04/20/2020	Sampling Date:	04/20/2020
Reported:	04/23/2020	Sampling Type:	Soil
Project Name:	CASWELL 23 1H & 3H	Sampling Condition:	Cool & Intact
Project Number:	700794.338.01	Sample Received By:	Kelly Jacobson
Project Location:	DEVON - LEA COUNTY, NM		

Sample ID: N. SW 1' (H001156-01)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTEX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1230	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 97.6 % 44.3-144

Surrogate: 1-Chlorooctadecane 110 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S. SW-1 1' (H001156-02)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1470	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 82.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 93.6 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: E. SW-1 1' (H001156-03)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1280	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 94.3 % 44.3-144

Surrogate: 1-Chlorooctadecane 108 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: E. SW-2 1' (H001156-04)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTEx	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1150	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	473	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	112	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 98.5 % 44.3-144

Surrogate: 1-Chlorooctadecane 120 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: W. SW-1 1' (H001156-05)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTEX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1300	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	24.8	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 91.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: W. SW-2 1' (H001156-06)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTX	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1040	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 91.7 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S. SW-2 1' (H001156-07)

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	04/22/2020	ND	2.15	107	2.00	7.04	
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44	
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91	
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00	
Total BTEx	<0.300	0.300	04/22/2020	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	64.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	11.5	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 96.8 % 44.3-144

Surrogate: 1-Chlorooctadecane 113 % 42.2-156

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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S - 13 A 1' (H001156-08)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1170	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 92.0 % 44.3-144

Surrogate: 1-Chlorooctadecane 104 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S - 12 A 1' (H001156-09)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTEx	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	<10.0	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 93.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 106 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S - 11 A 1' (H001156-10)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTEx	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	800	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	16.9	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	<10.0	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 86.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

TALON LPE
CHRIS JONES
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 04/20/2020
Reported: 04/23/2020
Project Name: CASWELL 23 1H & 3H
Project Number: 700794.338.01
Project Location: DEVON - LEA COUNTY, NM

Sampling Date: 04/20/2020
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kelly Jacobson

Sample ID: S - 10 A 1' (H001156-11)

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	04/22/2020	ND	2.15	107	2.00	7.04		
Toluene*	<0.050	0.050	04/22/2020	ND	2.18	109	2.00	6.44		
Ethylbenzene*	<0.050	0.050	04/22/2020	ND	2.27	114	2.00	6.91		
Total Xylenes*	<0.150	0.150	04/22/2020	ND	6.66	111	6.00	7.00		
Total BTX	<0.300	0.300	04/22/2020	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: GM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1150	16.0	04/21/2020	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	04/21/2020	ND	216	108	200	5.11	
DRO >C10-C28*	124	10.0	04/21/2020	ND	229	115	200	10.4	
EXT DRO >C28-C36	21.9	10.0	04/21/2020	ND					

Surrogate: 1-Chlorooctane 90.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 106 % 42.2-156

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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 Maryland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Released to Imaging: 1/19/2021 10:53:12 AM

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District II
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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

CONDITIONS

Action 10708

CONDITIONS OF APPROVAL

Operator:		OGRID:	Action Number:	Action Type:
TALON LPE	408 W Texas	329944	10708	C-141
	Artesia, NM88210			
OCD Reviewer	Condition			
ceads	None			