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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

### 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

**June 11, 2020**

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

Mr. Mike Bratcher  
**NMOCD District 2**  
811 S. 1<sup>st</sup> 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 & Mr. Bratcher,

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
>100 feet	Total Chlorides	EPA 300.0 or SM4500 Cl B	20,000 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

### 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, none of the analytical results exceeded the NMOCD clean-up criteria for 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-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 compacted and contoured 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 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

Digitally signed by Rebecca Pons  
DN: cn=Rebecca Pons, o=Talon LPE,  
ou=Artesia,  
email=Rpons@talonlpe.com, c=US  
Date: 2020.06.17 15:18:00 -06'00'

Rebecca Pons  
Project Manager

David J.  
Adkins

Digitally signed by David J. Adkins  
DN: cn=David J. Adkins, o=Talon  
LPE, ou=District Manager,  
email=adkins@talonlpe.com,  
c=US  
Date: 2020.06.17 15:16:39 -06'00'

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 IV Laboratory Results





# **APPENDIX I**

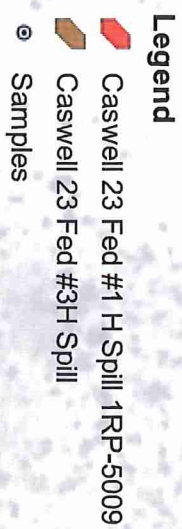
**SITE MAP**

**KARST MAP**

**TOPO MAP**

**LOCATION MAP**

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




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# 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**

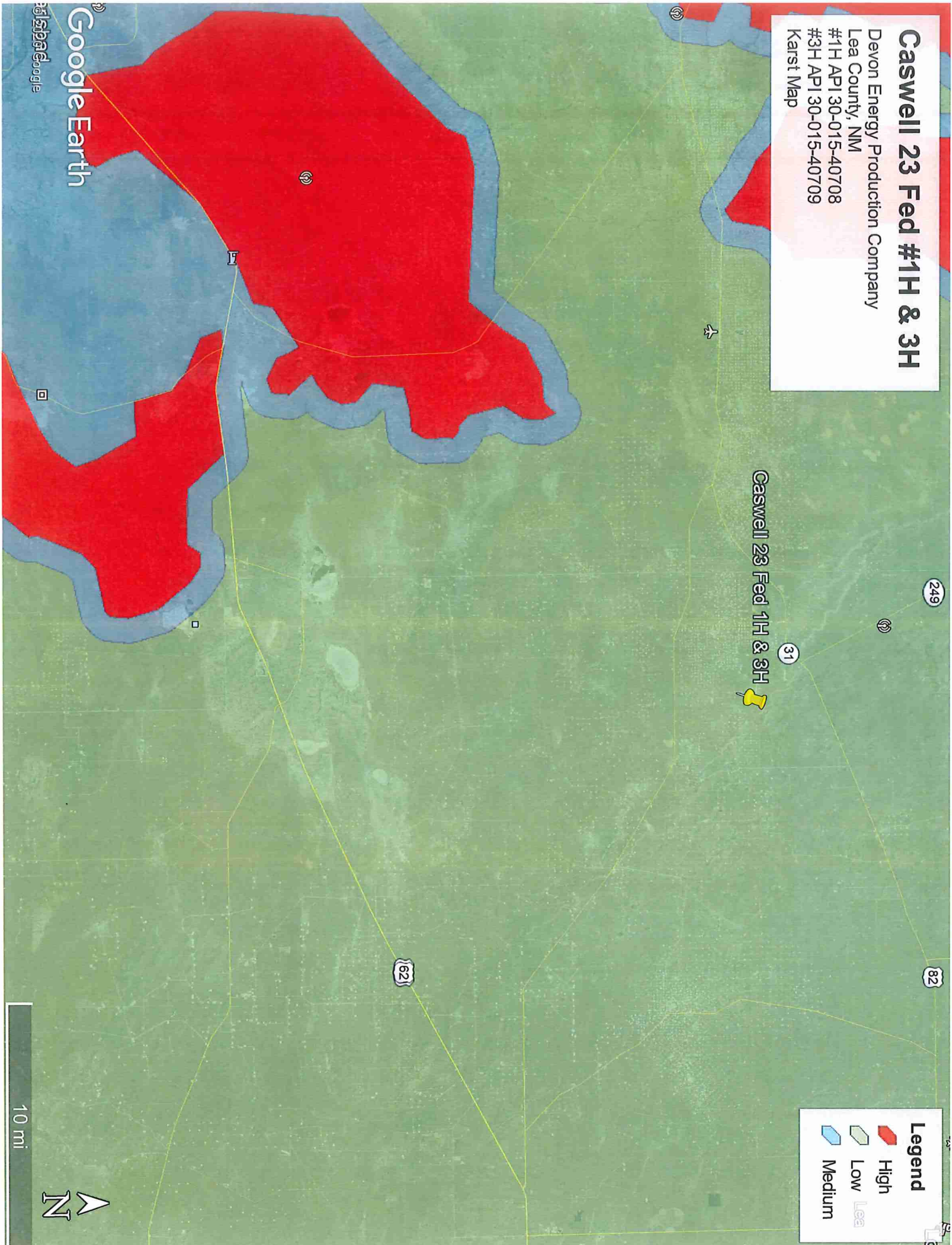
 High

 Low

 Medium

 Lea

Caswell 23 Fed 1H & 3H 



10 mi





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

#1H API 30-015-40708  
#3H API 30-015-40709  
TOPO Map

This is a topographic map of the Caswell 23 Fed #1H & 3H area in Lea County, NM. The map features a grid system with labels such as 4013, 4017, 4020, 4026, 4034, 4036, 4040, 4044, 4052, 4056, 4063, 4066, 4071, 4076, 4077, 4083, 4093, 4096, 4099, 4100, 4103, 4106, 4109, 4112, 4115, 4118, 4121, 4124, 4127, 4130, 4133, 4136, 4139, 4142, 4145, 4148, 4151, 4154, 4157, 4160, 4163, 4166, 4169, 4172, 4175, 4178, 4181, 4184, 4187, 4190, 4193, 4196, 4199, 4202, 4205, 4208, 4211, 4214, 4217, 4220, 4223, 4226, 4229, 4232, 4235, 4238, 4241, 4244, 4247, 4250, 4253, 4256, 4259, 4262, 4265, 4268, 4271, 4274, 4277, 4280, 4283, 4286, 4289, 4292, 4295, 4298, 4301, 4304, 4307, 4310, 4313, 4316, 4319, 4322, 4325, 4328, 4331, 4334, 4337, 4340, 4343, 4346, 4349, 4352, 4355, 4358, 4361, 4364, 4367, 4370, 4373, 4376, 4379, 4382, 4385, 4388, 4391, 4394, 4397, 4400, 4403, 4406, 4409, 4412, 4415, 4418, 4421, 4424, 4427, 4430, 4433, 4436, 4439, 4442, 4445, 4448, 4451, 4454, 4457, 4460, 4463, 4466, 4469, 4472, 4475, 4478, 4481, 4484, 4487, 4490, 4493, 4496, 4499, 4502, 4505, 4508, 4511, 4514, 4517, 4520, 4523, 4526, 4529, 4532, 4535, 4538, 4541, 4544, 4547, 4550, 4553, 4556, 4559, 4562, 4565, 4568, 4571, 4574, 4577, 4580, 4583, 4586, 4589, 4592, 4595, 4598, 4601, 4604, 4607, 4610, 4613, 4616, 4619, 4622, 4625, 4628, 4631, 4634, 4637, 4640, 4643, 4646, 4649, 4652, 4655, 4658, 4661, 4664, 4667, 4670, 4673, 4676, 4679, 4682, 4685, 4688, 4691, 4694, 4697, 4700, 4703, 4706, 4709, 4712, 4715, 4718, 4721, 4724, 4727, 4730, 4733, 4736, 4739, 4742, 4745, 4748, 4751, 4754, 4757, 4760, 4763, 4766, 4769, 4772, 4775, 4778, 4781, 4784, 4787, 4790, 4793, 4796, 4799, 4802, 4805, 4808, 4811, 4814, 4817, 4820, 4823, 4826, 4829, 4832, 4835, 4838, 4841, 4844, 4847, 4850, 4853, 4856, 4859, 4862, 4865, 4868, 4871, 4874, 4877, 4880, 4883, 4886, 4889, 4892, 4895, 4898, 4901, 4904, 4907, 4910, 4913, 4916, 4919, 4922, 4925, 4928, 4931, 4934, 4937, 4940, 4943, 4946, 4949, 4952, 4955, 4958, 4961, 4964, 4967, 4970, 4973, 4976, 4979, 4982, 4985, 4988, 4991, 4994, 4997, 5000. The map also shows contour lines, a scale bar indicating 3000 ft, and a north arrow. The text 'Caswell 23 Fed #1H & 3H' is prominently displayed in the center. The text 'Lea County, NM' is located in the top right corner. The text 'Devon Energy Production Company' is located in the top right corner. The text '#1H API 30-015-40708' is located in the top right corner. The text '#3H API 30-015-40709' is located in the top right corner. The text 'TOPO Map' is located in the top right corner. The text 'Google Earth' is located in the bottom left corner. The text '© 2020 Google' is located in the bottom left corner.

Google Earth

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Received by *OCD*: 6/18/2020 2:58:25 PM



# Caswell 23 Fed #1H & 3H

Devon Energy Production Company

Lea County, NM

#1H API 30-015-40708

#3H API 30-015-40709

Location Map

Caswell 23 Fed 1H & 3H

Majamär

Hwy 82

529

2 mi



Google Earth

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## **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 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
<a href="#">RA 11911 POD1</a>	RA	LE		1	3	1	24	17S	32E	619192	3632296	498	35		
<a href="#">L 12974 POD1</a>	L	LE		3	4	3	18	17S	33E	621233	3632940	2270	140	130	10
<a href="#">RA 11957 POD1</a>	RA	LE		3	4	1	19	17S	33E	621177	3632200	2272	55		
<a href="#">RA 11936 POD1</a>	RA	LE		1	4	1	19	17S	33E	621246	3632321	2314	92		
<a href="#">RA 11937 POD1</a>	RA	LE		1	4	1	19	17S	33E	621244	3632281	2319	95		
<a href="#">RA 11684 POD5</a>	RA	LE		3	1	4	11	17S	32E	618353	3635047	2384	275		
<a href="#">RA 11684 POD1</a>	RA	LE		1	1	4	11	17S	32E	618216	3635124	2497	275		
<a href="#">L 02770 S2</a>	L	LE		2	2	3	18	17S	33E	621338	3633583*	2512	214	184	30
<a href="#">L 02770 S3</a>	L	LE		2	2	3	18	17S	33E	621338	3633583*	2512	220	202	18
<a href="#">RA 11684 POD2</a>	RA	LE		1	1	4	11	17S	32E	618313	3635248	2589	275		
<a href="#">L 13047 POD1</a>	L	LE					11	17S	32E	618187	3635254*	2629	140		
<a href="#">RA 11684 POD3</a>	RA	LE		3	3	1	11	17S	32E	618262	3635371	2721	275		
<a href="#">RA 11684 POD4</a>	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 Count: 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

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*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 FIS 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

### OTHER AREAS OF FLOOD HAZARD

	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

	Area of Minimal Flood Hazard Zone X
	Effective LOMFRS
	Area of Undetermined Flood Hazard Zone X

### GENERAL STRUCTURES

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

### OTHER FEATURES

	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

### MAP PANELS

	Digital Data Available
	No Digital Data Available
	Unmapped

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 undetermined 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	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@devon.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>
<b><u>OCD Only</u></b>	
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

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

Signature: \_\_\_\_\_

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  
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
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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 Fulks-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	<div style="border: 2px solid blue; padding: 5px; display: inline-block;"> <b>RECEIVED</b>  <b>By Olivia Yu at 2:04 pm, Apr 03, 2018</b> </div>	

#### 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: <u>Jennifer Reyna</u>	Approved by Environmental Specialist: 	
Printed Name: Jennifer Reyna	Approval Date: <u>4/3/2018</u>	Expiration Date:
Title: Field Admin Support	Conditions of Approval: <u>see attached directive</u>	Attached <input checked="" type="checkbox"/>
E-mail Address: Jennifer.Reyna@dvn.com		
Date: <u>4/2/2018</u> Phone: <u>575.746.5588</u>		

\* 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=Artesia,  
email=rpone@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

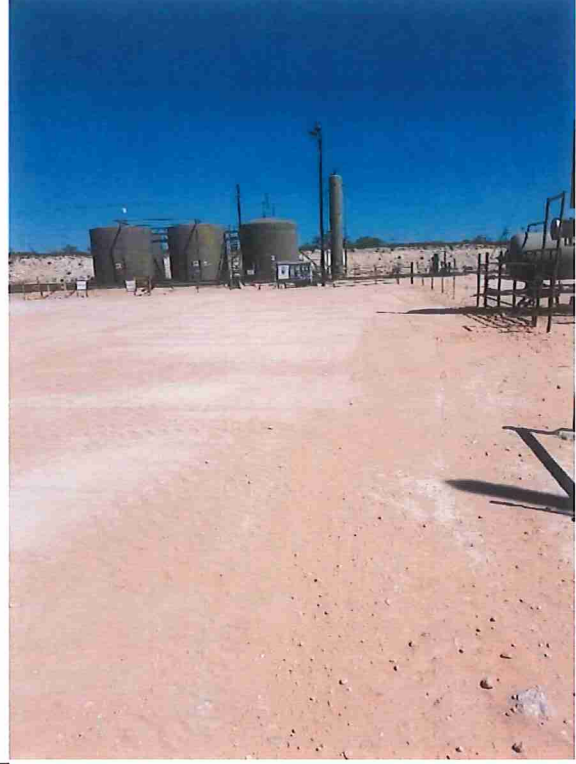
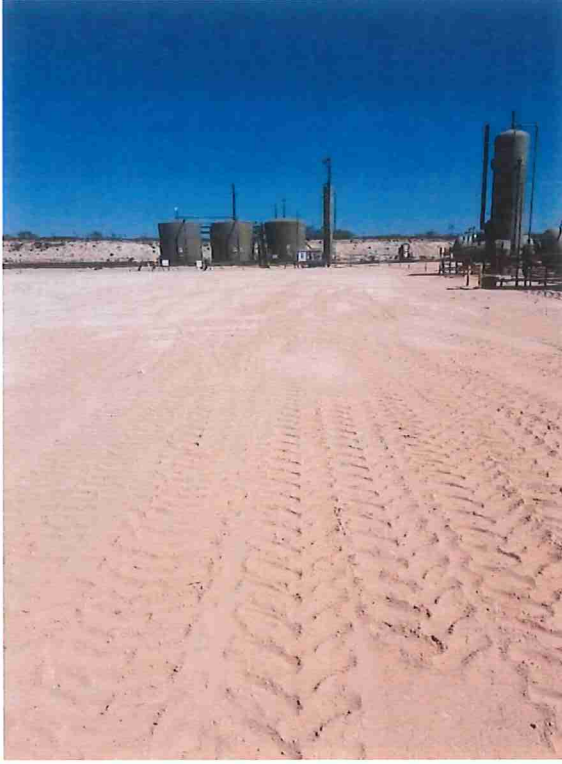


## Excavation





Completed





## APPENDIX V

# 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](http://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,

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 (PIE) 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)**

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 (PIL) 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	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

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 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 (PIL) 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	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





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 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 (PIE) 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	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 (PI) 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	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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\*=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)**

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 (PIL) 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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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- 3 0' (H001001-07)**

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	04/07/2020	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 (PII) 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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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- 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 (PIE) 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	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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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- 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 (PII) 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	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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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- 4 0' (H001001-10)**

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	04/07/2020	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 (PIE) 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	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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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- 4 1' (H001001-11)**

BTEx 8021B			mg/kg							Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Benzene*	<0.050	0.050	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 (PIE) 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	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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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- 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 (PIE) 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 97.4 % 44.3-144

Surrogate: 1-Chlorooctadecane 101 % 42.2-156

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Celest 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 (PIE) 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 95.2 % 44.3-144

Surrogate: 1-Chlorooctadecane 99.4 % 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- 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 (PIE) 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	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 (PIE) 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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\*=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- 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 (PIE) 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*	<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 (PIE) 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	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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**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 (PIL) 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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**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- 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 (PIL) 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	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 (PIE) 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	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 (PIE) 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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\* = 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- 7 2' R (H001001-22)**

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 (PIE) 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	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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\* = 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- 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 (PIL) 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





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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)**

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 (PIB) 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	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)**

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 (PIE) 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	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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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 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 (PI) 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	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 (PIL) 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	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)**

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 (PIE) 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	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)**

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 (PIE) 103 % 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	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, SM4500Cl-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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\*=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- 11 0' (H001001-31)**

BTEX 8021B			mg/kg				Analyzed By: MS			S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Benzene*	<0.050	0.050	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 BTEX	7.90	0.300	04/07/2020	ND							

Surrogate: 4-Bromofluorobenzene (PIL) 200 % 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	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 (PIE) 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	256	16.0	04/07/2020	ND	432	108	400	0.00	
TPH 8015M		mg/kg		Analyzed By: MS					

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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\*=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	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- 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 (PIL) 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)**

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 (PIE) 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)**

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 (PIE) 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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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)**

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 (PIL) 105 % 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	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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Celest 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)**

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 (PIE) 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	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 (PIL) 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	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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\* = 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- 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 (PIE) 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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**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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Celey D. Keene, Lab Director/Quality Manager

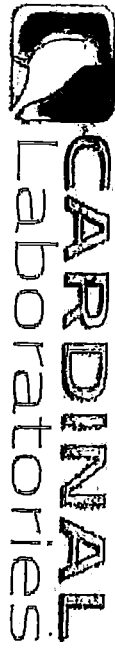


101 East Marland, Hobbs, NM 88240  
(575) 398-2326 FAX (575) 393-2476

**† Cardinal cannot accept verbal changes. Please fax written changes to (576) 393-2826**

101 East Maryland, Hobbs, NM 88240  
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <b>THLON LPE</b>		P.O. #: <b>760794.338.01</b>	
Project Manager: <b>C. JONES</b>		Company: <b>THLON LPE</b>	
Address: <b>408 W. TEXAS AVE</b>		Attn: <b>C. JONES</b>	
City: <b>ARTESIA</b>		Address:	
Phone #: <b>575-631-6477</b>		State: <b>NM</b> Zip: <b>88210</b>	
Fax #: <b>575-631-6477</b>		City:	
Project #: <b>760794.338.01</b>		Project Owner: <b>DEVON</b>	
Project Name: <b>CASWELL 23 1H+3H</b>		State: <b>2701</b>	
Project Location: <b>LEA COUNTY</b>		Phone #:	
Sampler Name: <b>MICHAEL COLLIER</b>		Fax #:	

Lab I.D.	Sample I.D.	(S)RAB OR (C)OMP.	# CONTAINERS	MATERIAL						DATE	TIME	TPH	BTEx	TOTAL CHLORIDES
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:					
4601001														
21	S-7 1'	G	1							4-2-20	11:10a	✓	✓	✓
22	S-7 2'R													
23	S-8 0'													
24	S-8 1'													
25	S-8 2'R													
26	S-9 0'													
27	S-9 1'													
28	S-9 2'R													
29	S-10 0'													
30	S-10 1'R									4-2-20	12:10a	✓	✓	✓

Delivered By: (Circle One)	Received By:	Sample Condition	Checked By:
Sampler - UPS - Bus - Other:	Signature: <i>Michael Collier</i>	Good <input checked="" type="checkbox"/> Bad <input type="checkbox"/>	Signature: <i>Michael Collier</i>
1.4°C #113	4-6-20	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

REMARKS:	PHONE RESULTS:	ADDITIONAL PHONE #:
1.4°C #113	Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Yes <input type="checkbox"/> No <input type="checkbox"/>	

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

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

<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to (376) 393-2926



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](http://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,

Caley 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: 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 (PIE) 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

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: 04/20/2020  
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)**

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 (PIE) 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	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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\* = 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: 04/20/2020  
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 (PIE) 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 (PIL) 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

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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-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 (PIE) 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

\*=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: 04/20/2020  
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 (PIE) 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	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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\*=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: 04/20/2020  
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)**

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 (PIB) 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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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 - 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 (PIE) 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	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)**

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 (PIE) 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	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)**

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 (PIL) 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	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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**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 (PIE) 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	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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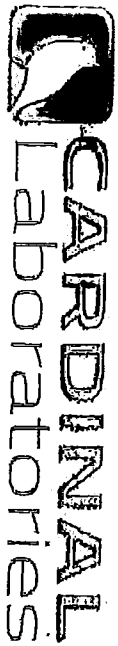
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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <b>THORN LPT</b>		P.O. # <b>700794, 338.01</b>	
Project Manager: <b>C. JONES</b>		Company: <b>THORN LPT</b>	
Address: <b>408 W. TEXAS AVE</b>		Attn: <b>C. JONES</b>	
City: <b>AKTESIA</b>		Address:	
Phone #: <b>575-631-6977</b>		City:	
State: <b>NM</b> Zip: <b>88210</b>		State:	
Project #: <b>700794, 338.01</b>		Zip:	
Project Name: <b>CASABEL 23 FEB 14 43H</b>		Project Owner: <b>DEVON</b>	
Project Location: <b>LEA COUNTY</b>		Phone #:	
Sampler Name: <b>MICHAEL COLLIER</b>		Fax #:	

Lab ID.	Sample I.D.	MATRIX										DATE	TIME	ANALYSIS REQUEST				
		(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL			OTHER:	BTEX	TPH	TOTAL CHLORIDES	
H001156																		
1	N.S.W. 1'	C	1									4-20-20	10:30					
2	S.S.W-1 1'												10:35					
3	E.S.W-1 1'												10:40					
4	E.S.W-2 1'												10:45					
5	W.S.W-1 1'												10:50					
6	W.S.W-2 1'												10:55					
7	S.S.W-2 1'												11:00					
8	S-13A 1'												11:05					
9	S-12A 1'												11:10					
10	S-11A 1'												11:15					

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Requisitioned By: **THORN LPT** Date: **4-20-20** Received By: **[Signature]** Date: **5-18**

Delivered By: (Circle One) **5.5C** Sample Condition: **Good** Checked By: **[Signature]**

Sampler - UPS - Bus - Other: **#113** ☒ Yes ☐ No **145**

Phone Result: ☐ Yes ☐ No **16 1052**

Fax Result: ☐ Yes ☐ No **145**

REMARKS:

† Cardinal cannot accept verbal changes. Please fax within changes to (575) 393-2326

Company Name: **TALON CP**  
101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

[illegible]