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ELECTRONIC REPORT

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JAN 07 2016

BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
751141038

6. If Indian, Allottee or Tribe Name
UTE MOUNTAIN UTE

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
PRAIRIE FALCON 19-2917

2. Name of Operator
BRIDGECREEK RESOURCES COLO LLC
Contact: CHRISTINE CAMPBELL
E-Mail: ccampbell@bridgecreekresources.com

9. API Well No.
30-045-35737-00-X1

3a. Address
405 URBAN STREET, SUITE 400
LAKEWOOD, CO 80228

3b. Phone No. (include area code)
Ph: 303-945-2642

10. Field and Pool, or Exploratory
VERDE GALLUP

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 19 T31N R14W SESE 151FSL 335FEL

11. County or Parish, and State
SAN JUAN COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Emergency Pits or Closure
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Bridgecreek Resources (CO), LLC submits the attached cuttings burial trench closure plan for the Prairie Falcon 19-29 17 well location.

OIL CONS. DIV DIST. 3

JAN 11 2016

SEE ATTACHED
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #327924 verified by the BLM Well Information System
For BRIDGECREEK RESOURCES COLO LLC, sent to the Durango
Committed to AFMSS for processing by BARBARA TELECKY on 01/07/2016 (16BDT0030SE)

Name *(Printed/Typed)* CHRISTINE CAMPBELL — Title REGULATORY LEAD

Signature (Electronic Submission) — Date 01/07/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title MSC Date 1/7/16

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office TRES RIOS FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

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NMOCD Accepted For Record

Adkins Consulting, Inc.
180 E. 12th Street, Suite #5 Durango, CO 81303
(505)793-1140

December 29, 2015

Mr. Ryan Joyner
Bureau of Land Management
Tres Rios Field Office
Land and Minerals
15 Burnett Court
Durango, CO 81301

RE: Drill cuttings disposal plan. Bridgecreek Resources. Prairie Falcon 19-2917. Sec. 19, T31N.R14W. Lease #751-14-1038.

Mr. Joyner:

On the behalf of Bridgecreek Resources (Bridgecreek), Adkins Consulting Inc. (ACI) is pleased to submit this closure plan to dispose drill cuttings into an on-site cuttings trench. The proposed burial trench dimensions have changed from the original submission of the APD and SUPO dated September 03, 2015.

The original cuttings trench volume did not account for a 3(clean):1(cuttings) mixing ratio. A 3:1 mixing ratio is required for burial of drill cuttings to meet UMU Table standards; with the exception of arsenic. Soil chemistry is discussed below.

Figure 1 shows the revised location and dimensions of the Proposed Trench #1. The cuttings trench remains in the southeast corner of the drill pad and within cut material. The cuttings trench will consist of an individual cell measuring 61 ft (L) x 36 ft (W) x 16 ft (D). The location of the Proposed Trench #1 allows for two future drill cuttings trenches. The location of the trenches will not interfere with the drilling operations of future wells as shown on Figure 1.

Prior to trench burial, the drill cuttings will be placed on a mixing pad measuring 100 feet (L) x 50 feet (W). The mixing pad will be constructed on grade with 3.5 foot high berms defining the mixing pad area. Make-up dirt for the berms will be obtained from preliminary construction of the cuttings trench to a maximum depth of approximately 4-feet. The cutting trench will be temporarily fenced with field fencing, three-strand wire, or equivalent to prevent accidental entry.

A 20-mil string reinforced LLDPE liner or equivalent liner will define the base of the mixing pad. The liner will overly the berm and secured along the outer edge of the berm. Next, clean soil will be placed on the liner followed by stabilized drill cuttings, then another layer of clean soil. This lasagna type layering will be repeated until a 3:1 ratio (see below) is achieved. Once the layering is complete, the material will

be further mixed with the bucket of the backhoe and/or excavator, taking precautions not to impair the liner. Once a 3:1 mixing ratio is achieved the stabilized mixed drill cuttings will be placed in the cuttings trench and closed per the SUPO.

During inclement weather, the mixing pad will be covered with a second 20-mil string reinforced LLDPE liner, or equivalent, to prevent the soil mixture becoming saturated with moisture.

Sampling Methodology

The drill cuttings in the four steel bins were sampled by Mr. Andrew Parker of Adkins Consulting on December 04, 2015. Samples were collected for the analysis of constituents listed in the Ute Mountain Ute (UMU) Tribe's "Standards for Spill Clean-up and Reclamation" table and chloride. The UMU Table standards were adopted from the Colorado Oil and Gas Commission's (COGCCs) Table 910-1 located in COGCC's 900 Series Rule.

Per the Surface Use Plan of Operations, a six point composite (a minimum 5-point composite required) sample was obtained from each of the four steel bins. The four six point composite samples were used to collect one composite sample representing the drill cuttings contained in the four steel bins. The one composite sample is referred to as the "Bin Composite" on the Certificate of Analysis (Appendix A).

The "Background" clean soil was obtained from on-site soil along the west fence; approximately 160 feet north of the southwest corner at a depth ranging from 1.0 to 1.5 feet below ground surface.

The composite and background samples were submitted to Envirotech Analytical Laboratory (Envirotech) located in Farmington, NM for the analysis of constituents listed in the UMU Table and chloride.

Analytical Results and Comparison to Soil Evaluation Values and Calculations

A summary of analytical results are presented in Table 1. The laboratory Certificate of Analysis is located in Appendix A. We compared the results to the UMU Table (December 2007), to the Colorado Soil Evaluation Values (which are the basis of the values in the UMU Table), and NMOCD Rule 19.15.17 for chloride. Constituents exceeding standards are highlighted light red.

The "Bin Composite" sample exhibited concentrations below UMU Table standards except for arsenic, benzene, and TPH. The "Background" exceeded arsenic standards.

Per the SUPO's "Methods for Handling Waste", clean soil from the trench spoil pile will be mixed with drill cuttings in a ratio not to exceed 3:1 (clean:cuttings). To evaluate chemicals of concern concentrations up to a 3:1 ratio, a mathematical mixing model was developed as described below:

1. Multiplied the "Background" (clean) concentration by the clean soil mixing ratio. For example, a mixing ratio of "2:1" has a multiplier of "2".
2. Added the clean soil result to the drill cuttings concentration ("Bin Composite).
3. Divided by the number of concentrations added in the numerator (mixing ratio plus 1).

4. If the constituent of concentration exhibits non-detect, the laboratory reporting limit was used. This creates a *"worse-case"* scenario for the constituent of concern and is most protective of human health and the environment.

For a mixing ratio of 2:1, the equation yields:

$$\frac{(clean\ soil\ X\ 2) + constituent\ of\ concern\ concentraion}{3}$$

Table 2 shows the mixing ratio for the chemicals on concern.

Locally, arsenic concentration is naturally high as exhibited in the background sample, exhibiting a value of 4.67 mg/kg. A 3:1 (clean:cuttings) calculated mixing ratio shows arsenic concentrations in the stabilized drill cuttings for disposal at 4.85 mg/kg, exceeding the background sample concentration by 0.18 mg/kg. Exceedance of the standard for the background sample is not surprising and is expected as localized arsenic concentrations are naturally high. The EPA Regional Screening Level for arsenic is 3.0 mg/kg.

In environments where background concentrations for chemicals of concern are naturally high, 1.25 or 1.5 times background is commonly used for regulatory action levels. Arsenic concentration 1.25x background is 5.84 mg/kg. Arsenic concentration 1.5x background is 7.0 mg/kg. The arsenic 3:1 mixing ratio concentration of 4.85 mg/kg is below the 1.25 multiplier. Furthermore, the mixed and stabilized drill cuttings will be sequestered within a 20-mil string reinforced LLDPE or equivalent liner and capped with 4-feet of clean soil. Impairment to human health and the environment is highly unlikely.

The benzene 3:1 mixing ratio is 0.16 mg/kg, below the UMU Table standard by 0.01 mg/kg. The UMU Table benzene standard is 0.17 mg/kg.

The TPH 3:1 mixing ratio is 208 mg/kg, below the UMU Table standard by 292 mg/kg. The UMU Table TPH standard is 500 mg/kg.

It is important to consider the source of the standards listed in the UMU Table (COGCC Table 910-1). UMU Table footnotes show that many constituent concentration levels were taken from the CDHPE-HMWMD Table 1 Colorado Soil Evaluation Values (December 2007). Because the constituent levels in Table 910-1 are eight years out of date, we examined the CDPHE-HMWMD website to determine if the values had changed. The CDPHE website directs the user to EPA's Regional Screening Levels (RSLs). As stated on the CDPHE-HMWMD website, "The division uses the direct exposure levels for residential and industrial exposure scenarios listed in the EPA Regional Screening Levels (RSLs)". The RSL's listed in Table 1 assume direct soil dermal contact to an Industrial Worker. Per EPA's guidelines, a THQ=0.1 is commonly used if multiple constituents are being screened, which is the case for some organic compounds (BTEX) at the Prairie Falcon 19-2917 location. Furthermore, direct soil dermal contact is the "worst case" scenario and most protective of human health.

At the Prairie Falcon 19-2917 location,

- Benzene concentrations do not exceed EPA RSL or UMU Table when mixed in a 3:1 ratio.
- The mixed and stabilized drill cuttings will be sequestered within a 20-mil string reinforced LLDPE liner or equivalent and capped with 4-feet of clean soil.
- Benzene, TPH, and arsenic impairment to human health and the environment is highly unlikely.

Conclusion

Examination of analytical results and mixing ratios of the drill cuttings, we conclude that mixing 3 parts clean material to 1 part drill cuttings and the cuttings trench is closed according to the SUPO will result in a closure that is protective of human health and the environment. A mixing ratio of up to 3:1 is permitted in accordance with NMCOD 19.15.17. COGCC Rule 900 Series allows for in place burial of E&P waste so that the waste does not exceed UMU Table standards.

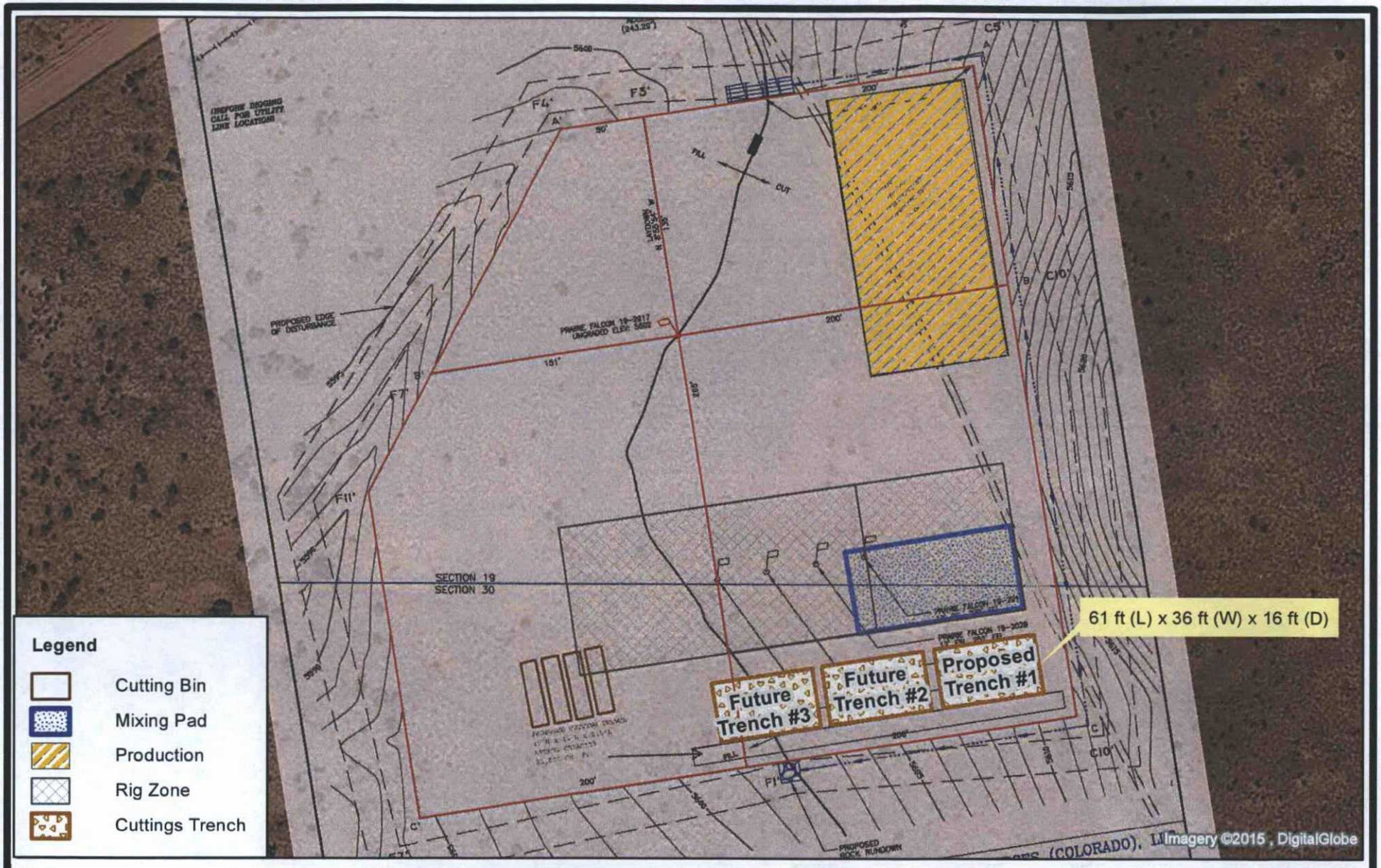
Closure will be completed within 3-weeks of work plan approval. If inclement weather occurs that creates a safety risk, Bridgecreek will notify BLM of any delays within 24 hours and ask for a 2-week closure extension or for a time period that both parties agree that is safe to resume closure.

If you have any questions or comments please contact me at 970-570-9535.

Andrew Parker
Adkins Consulting, Inc
Durango, CO
970-570-9535
andrew@adkinsenvironmental.com

Cc: Christine Campbell, Bridgecreek Resources

Figures



Adkins Consulting Inc.
180 East 12th Street
Durango, CO 81303
505-793-1140

Trench Burial - Drill Cuttings	Figure 1
Bridgecreek Resources Prairie Falcon 19-2917	December 2015

Tables

Table 1: Summary of Analytical Results

Sample ID	Date	DRO (8015D)	MRO (8015D)	GRO (8015D)	TPH (EPA 8015)	Benzene	Toluene	Ethylbenzene	Xylenes (total)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bin Composite	12/4/2015	367	122	56	545	0.59	1.47	0.54	2.3
Background	12/4/2015	<25	<50	<20	95	<0.02	<0.02	0.03	<0.02
UMU Table (COGCC Table 910-1)					500	0.17	85	100	175
NMOCD (Rule 19.15.17; DTW > 100 ft)					1,000	10			
CDPHE-HMWMD/EPA RSLs						5.10	4,700	25	250

Notes:

exceeds UMU Table standards

exceeds EPA RSL Standards

na = not analyzed

Table 1: Summary of Analytical Results

Sample ID	Date	Chloride	Mercury	Arsenic	Barium	Boron	Cadmium	Chromium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bin Composite	12/4/2015	134	<0.96	5.38	1,830	<0.50	<0.96	25.5	<2.66	3.68	16.2	12.3	<4.8	<0.96
Background	12/4/2015	849	<0.99	4.67	152	<0.50	<0.99	13.1	<2.36	<1.97	15.6	9.07	<4.93	<0.99
UMU Table (COGCC Table 910-1)			23	0.39	15,000	4 (exempt)	70	120,000	23	3,100	400	1,600	390	390
NMOCD (Rule 19.15.17; DTW > 100 ft)														
CDPHE-HMWMD/EPA RSLs			35	3.00	22,400		98	180,000	6	4,700	800	2,200	580	580

Notes:

exceeds UMU Table standards

exceeds EPA RSL Standards

na = not analyzed

Table 1: Summary of Analytical Results

Sample ID	Date	Zinc	pH	Naphthalene	Acenaphthene	Fluorene	Anthracene	Fluoranthene	Pyrene	Benzo(A)anthracene	Chrysene
		mg/kg	--	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bin Composite	12/4/2015	54.5	8.98	0.394	0.0123	0.0379	<0.00799	<0.00799	0.0094	<0.00799	<0.00799
Background	12/4/2015	39.9	8.73	<0.0236	<0.00708	<0.00708	<0.00708	<0.00708	<0.00708	<0.00708	<0.00708
UMU Table (COGCC Table 910-1)		23,000	6-9	23	1,000	1,000	1,000	1,000	1,000	0.22	22
NMOCD (Rule 19.15.17; DTW > 100 ft)											
CDPHE-HMWMD/EPA RSLs		35,000		17	4,500	3,000	23,000	3,000	2,300	2.90	290

Notes:
exceeds UMU Table standards
exceeds EPA RSL Standards
na = not analyzed

Table 1: Summary of Analytical Results

Sample ID	Date	Benzo(B)fluoranthene	Benzo(K)floranthene	Benzo(A)pyrene	Dibenzo(A,H)anthracene
		mg/kg	mg/kg	mg/kg	mg/kg
Bin Composite	12/4/2015	<0.00799	<0.00799	<0.00799	<0.00799
Background	12/4/2015	<0.00708	<0.00708	<0.00708	<0.00708
UMU Table (COGCC Table 910-1)		0.22	2.20	0.022	0.022
NMOCD (Rule 19.15.17; DTW > 100 ft)					
CDPHE-HMWMD/EPA RSLs		2.90	29.00	0.29	0.290

Notes:
exceeds UMU Table standards
exceeds EPA RSL Standards
na = not analyzed

Table 1: Summary of Analytical Results

Sample ID	Date	Indeno(1,2,3-cd)pyrene	Sodium Absportion Ratio	Electrical Conductivity
		mg/kg	--	mmhos/cm
Bin Composite	12/4/2015	<0.00799	2.24	1.63
Background	12/4/2015	<0.00708	0.186	0.112
UMU Table (COGCC Table 910-1)		0.22	<12	<4 or 2x background
NMOCD (Rule 19.15.17; DTW > 100 ft)				
CDPHE-HMWMD/EPA RSLs		2.90		

Notes:
exceeds UMU Table standards
exceeds EPA RSL Standards
na = not analyzed

Table 2: Mixing Ratio

Mixing Ratio	DRO (8015D)	MRO (8015D)	GRO (8015D)	TPH (EPA 8015)	Benzene	Toluene	Ethylbenzene	Xylenes (total)
clean:cuttings	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1:1	196	86	38	320	0.31	0.75	0.29	1.16
2:1	139	74	32	245	0.21	0.50	0.20	0.78
3:1	111	68	29	208	0.16	0.38	0.16	0.59
UMU Table (COGCC Table 910-1)				500	0.17	85	100	175
NMOCD (Rule 19.15.17; DTW > 100 ft)				1,000	10			
CDPHE-HMWMD/EPA RSLs					5.10	4,700	25	250

Notes:
exceeds UMU Table standards
exceeds EPA RSL Standards

Table 2: Mixing Ratio

Mixing Ratio	Arsenic	Barium	Boron	Cadmium	Chromium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver	Zinc	pH	Naphthalene
clean:cuttings	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	--	mg/kg
1:1	5.03	991.00	0.50	0.98	19.30	2.51	2.83	15.90	10.69	4.87	0.98	47.20	8.86	0.21
2:1	4.91	711.33	0.50	0.98	17.23	2.46	2.54	15.80	10.15	4.89	0.98	44.77	8.81	0.15
3:1	4.85	571.50	0.50	0.98	16.20	2.44	2.40	15.75	9.88	4.90	0.98	43.55	8.79	0.12

UMU Table (COGCC Table 910-1)	0.39	15,000		70	120,000	23	3,100	400	1,600	390	390	23,000	6-9	23
NMOCD (Rule 19.15.17; DTW > 100 ft)														
CDPHE-HMWMD/EPA RSLs	3	22,400		98	180,000	6.30	4,700	800	2,200	580	580	35,000		17

Notes:
exceeds UMU Table standards
exceeds EPA RSL Standards

Table 2: Mixing Ratio

Mixing Ratio	Acenaphthene	Fluorene	Anthracene	Fluoranthene	Pyrene	Benzo(A)anthracene	Chrysene	Benzo(B)fluoranthene
clean:cuttings	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
1:1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
2:1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
3:1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01

UMU Table (COGCC Table 910-1)	1,000	1,000	1,000	1,000	1,000	0.22	22	0.22
NMOCD (Rule 19.15.17; DTW > 100 ft)								
CDPHE-HMWMD/EPA RSLs	4,500	3,000	23,000	3,000	2,300	2.90	290	2.90

Notes:
exceeds UMU Table standards
exceeds EPA RSL Standards

Table 2: Mixing Ratio

Mixing Ratio	Benzo(K)floranthene	Benzo(A)pyrene	Dibenzo(A,H)anthracene	Indeno(1,2,3-cd)pyrene	Sodium Absportion Ratio
clean:cuttings	mg/kg	mg/kg	mg/kg	mg/kg	--
1:1	0.01	0.01	0.01	0.01	1.21
2:1	0.01	0.01	0.01	0.01	0.87
3:1	0.01	0.01	0.01	0.01	0.70

UMU Table (COGCC Table 910-1)	2.20	0.022	0.022	0.22	<12
NMOCD (Rule 19.15.17; DTW > 100 ft)					
CDPHE-HMWMD/EPA RSLs	29	0.29	0.29	2.9	

Notes:
exceeds UMU Table standards
exceeds EPA RSL Standards

Table 2: Mixing Ratio

Mixing Ratio	Electrical Conductivity
clean:cuttings	mmhos/cm
1:1	0.87
2:1	0.62
3:1	0.49

UMU Table (COGCC Table 910-1)	<4 or 2x background
NMOCD (Rule 19.15.17; DTW > 100 ft)	
CDPHE-HMWMD/EPA RSLs	

Notes:
exceeds UMU Table standards
exceeds EPA RSL Standards

Appendix A

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Bridgecreek Resources, LLC

Chain Of Custody Number:

Samples Received: 12/4/2015 5:44:00PM

Job Number: 15090-0001

Work Order: P512016

Project Name/Location: Prairie Falcon 19- 29-17

Entire Report Reviewed By: _____ Date: 12/22/15

Tim Cain, Laboratory Manager

Supplement to analytical report generated on: 12/15/15 5:22 pm

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865
Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fr (800) 362-1879
envirotech-inc.com
laboratory@envirotech-inc.com

envirotech
Analytical Laboratory

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Analyical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Bin Composite	P512016-01A	Soil	12/04/15	12/04/15	Glass Jar, 4 oz.
	P512016-01B	Soil	12/04/15	12/04/15	Glass Jar, 4 oz.
	P512016-01C	Soil	12/04/15	12/04/15	Glass Jar, 4 oz.
Background	P512016-02A	Soil	12/04/15	12/04/15	Glass Jar, 4 oz.
	P512016-02B	Soil	12/04/15	12/04/15	Glass Jar, 4 oz.
	P512016-02C	Soil	12/04/15	12/04/15	Glass Jar, 4 oz.

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Bin Composite

P512016-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	**0.59**	0.10	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	
Toluene	**1.47**	0.10	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	
Ethylbenzene	**0.54**	0.10	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	
p,m-Xylene	**1.33**	0.20	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	
o-Xylene	**0.97**	0.10	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	
Total Xylenes	**2.30**	0.10	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	
Total BTEX	**4.90**	0.10	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	
Surrogate: 4-Bromochlorobenzene-PID		*117 %*		*50-150*	*1550020*	*12/09/15*	*12/10/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	**56.0**	20.0	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8015D	
Diesel Range Organics (C10-C28)	**367**	25.0	mg/kg	1	1550019	12/09/15	12/10/15	EPA 8015D	
Oil Range Organics (C28-C40+)	**122**	50.0	mg/kg	1	1550019	12/09/15	12/10/15	EPA 8015D	
Surrogate: n-Nonane		*113 %*		*50-200*	*1550019*	*12/09/15*	*12/10/15*	*EPA 8015D*	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*92.3 %*		*50-150*	*1550020*	*12/09/15*	*12/10/15*	*EPA 8015D*	
Total Metals by 6010									
Arsenic	**5.38**	0.96	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Barium	**1830**	9.60	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Cadmium	ND	0.96	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Chromium	**25.5**	4.80	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Copper	**3.68**	1.92	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Lead	**16.2**	0.96	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Mercury	ND	0.96	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Nickel	**12.3**	0.96	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Selenium	ND	4.80	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Silver	ND	0.96	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Zinc	**54.5**	1.92	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Bin Composite

P512016-01 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Cation/Anion Analysis									
pH @25°C	**8.98**		pH Units	1	1550009	12/08/15 12:24	12/08/15 14:33	9040C/4500 H	
Electrical Conductivity	**1630**		umhos/cm	1	1550009	12/08/15 12:24	12/08/15 14:33	9050A/2510	
Sodium Absorption Ratio	**2.24**		N/A	1	1551017	12/15/15	12/15/15	[CALC]	
Chloride	**134**	20.0	mg/kg	1	1550022	12/10/15	12/10/15	EPA 300.0	
Calcium	**52.0**	0.50	mg/L	1	1551009	12/14/15	12/15/15	EPA 6010C	
Magnesium	**39.9**	0.20	mg/L	1	1551009	12/14/15	12/15/15	EPA 6010C	
Sodium	**88.1**	2.00	mg/L	1	1551009	12/14/15	12/15/15	EPA 6010C	
Boron-Hot Water Soluble by EPA 6010									
Boron	ND	0.50	mg/L	1	1551005	12/14/15	12/15/15	EPA 6010C	

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Background

P512016-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organics by EPA 8021									
Benzene	ND	0.02	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	A-01
Toluene	ND	0.02	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	A-01
Ethylbenzene	**0.03**	0.02	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	A-01
p,m-Xylene	ND	0.04	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	A-01
o-Xylene	ND	0.02	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	A-01
Total Xylenes	ND	0.02	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	A-01
Total BTEX	ND	0.02	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8021B	A-01
Surrogate: 4-Bromochlorobenzene-PID		*115 %*		*50-150*	*1550020*	*12/09/15*	*12/10/15*	*EPA 8021B*	
Nonhalogenated Organics by 8015									
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg	1	1550020	12/09/15	12/10/15	EPA 8015D	
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg	1	1550019	12/09/15	12/10/15	EPA 8015D	
Oil Range Organics (C28-C40+)	ND	50.0	mg/kg	1	1550019	12/09/15	12/10/15	EPA 8015D	
Surrogate: n-Nonane		*107 %*		*50-200*	*1550019*	*12/09/15*	*12/10/15*	*EPA 8015D*	
Surrogate: 1-Chloro-4-fluorobenzene-FID		*86.5 %*		*50-150*	*1550020*	*12/09/15*	*12/10/15*	*EPA 8015D*	
Total Metals by 6010									
Arsenic	**4.67**	0.99	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Barium	**152**	9.86	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Cadmium	ND	0.99	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Chromium	**13.1**	4.93	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Copper	ND	1.97	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Lead	**15.6**	0.99	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Mercury	ND	0.99	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Nickel	**9.07**	0.99	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Selenium	ND	4.93	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Silver	ND	0.99	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	
Zinc	**39.9**	1.97	mg/kg	1	1551002	12/14/15	12/14/15	EPA 6010C	

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Background

P512016-02 (Solid)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Cation/Anion Analysis									
pH @21.6°C	**8.73**		pH Units	1	1550009	12/08/15 12:24	12/08/15 14:33	9040C/4500 H	
Electrical Conductivity	**112**		umhos/cm	1	1550009	12/08/15 12:24	12/08/15 14:33	9050A/2510	
Sodium Absorption Ratio	**0.186**		N/A	1	1551017	12/15/15	12/15/15	[CALC]	
Chloride	**849**	20.0	mg/kg	1	1550022	12/10/15	12/10/15	EPA 300.0	
Calcium	**22.1**	0.50	mg/L	1	1551009	12/14/15	12/15/15	EPA 6010C	
Magnesium	**20.1**	0.20	mg/L	1	1551009	12/14/15	12/15/15	EPA 6010C	
Sodium	**5.02**	2.00	mg/L	1	1551009	12/14/15	12/15/15	EPA 6010C	
Boron-Hot Water Soluble by EPA 6010									
Boron	ND	0.50	mg/L	1	1551005	12/14/15	12/15/15	EPA 6010C	

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1550020 - Purge and Trap EPA 5030A										
Blank (1550020-BLK1)				Prepared: 09-Dec-15 Analyzed: 10-Dec-15						
Benzene	ND	0.10	mg/kg							
Toluene	ND	0.10	"							
Ethylbenzene	ND	0.10	"							
p,m-Xylene	ND	0.20	"							
o-Xylene	ND	0.10	"							
Total Xylenes	ND	0.10	"							
Total BTEX	ND	0.10	"							
Surrogate: 4-Bromochlorobenzene-PID	*0.364*		"	*0.400*		*91.1*	*50-150*			
LCS (1550020-BS1)				Prepared: 09-Dec-15 Analyzed: 10-Dec-15						
Benzene	11.8	0.10	mg/kg	10.0		118	70-130			
Toluene	11.6	0.10	"	10.0		116	70-130			
Ethylbenzene	11.6	0.10	"	10.0		116	70-130			
p,m-Xylene	23.5	0.20	"	20.0		117	70-130			
o-Xylene	11.2	0.10	"	10.0		112	70-130			
Surrogate: 4-Bromochlorobenzene-PID	*0.367*		"	*0.400*		*91.6*	*50-150*			
Matrix Spike (1550020-MS1)		**Source: P512014-21**		Prepared: 09-Dec-15 Analyzed: 10-Dec-15						
Benzene	10.9	0.10	mg/kg	10.0	ND	109	54.3-133			
Toluene	10.7	0.10	"	10.0	ND	107	61.4-130			
Ethylbenzene	10.7	0.10	"	10.0	ND	107	61.4-133			
p,m-Xylene	21.6	0.20	"	20.0	ND	108	63.3-131			
o-Xylene	10.5	0.10	"	10.0	ND	105	63.3-131			
Surrogate: 4-Bromochlorobenzene-PID	*0.365*		"	*0.400*		*91.3*	*50-150*			
Matrix Spike Dup (1550020-MSD1)		**Source: P512014-21**		Prepared: 09-Dec-15 Analyzed: 10-Dec-15						
Benzene	11.4	0.10	mg/kg	10.0	ND	114	54.3-133	4.80	20	
Toluene	11.2	0.10	"	10.0	ND	112	61.4-130	4.97	20	
Ethylbenzene	11.2	0.10	"	10.0	ND	112	61.4-133	5.01	20	
p,m-Xylene	22.7	0.20	"	20.0	ND	113	63.3-131	4.85	20	
o-Xylene	10.9	0.10	"	10.0	ND	109	63.3-131	4.21	20	
Surrogate: 4-Bromochlorobenzene-PID	*0.366*		"	*0.400*		*91.4*	*50-150*			

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1550019 - DRO Extraction EPA 3550M										
Blank (1550019-BLK1)				Prepared & Analyzed: 09-Dec-15						
Diesel Range Organics (C10-C28)	ND	25.0	mg/kg							
Surrogate: n-Nonane	*52.4*		"	*50.0*		*105*	*50-200*			
LCS (1550019-BS1)				Prepared & Analyzed: 09-Dec-15						
Diesel Range Organics (C10-C28)	502	25.0	mg/kg	500		100	38-132			
Surrogate: n-Nonane	*52.4*		"	*50.0*		*105*	*50-200*			
Matrix Spike (1550019-MS1)	**Source: P512013-01**			Prepared & Analyzed: 09-Dec-15						
Diesel Range Organics (C10-C28)	506	25.0	mg/kg	500	ND	101	38-132			
Surrogate: n-Nonane	*49.5*		"	*50.0*		*99.0*	*50-200*			
Matrix Spike Dup (1550019-MSD1)	**Source: P512013-01**			Prepared & Analyzed: 09-Dec-15						
Diesel Range Organics (C10-C28)	507	25.0	mg/kg	500	ND	101	38-132	0.207	20	
Surrogate: n-Nonane	*47.8*		"	*50.0*		*95.6*	*50-200*			

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1550020 - Purge and Trap EPA 5030A										
Blank (1550020-BLK1)				Prepared: 09-Dec-15 Analyzed: 10-Dec-15						
Gasoline Range Organics (C6-C10)	ND	20.0	mg/kg							
Surrogate: 1-Chloro-4-fluorobenzene-FID	*0.270*		"	*0.400*		*67.5*	*50-150*			
LCS (1550020-BS1)				Prepared: 09-Dec-15 Analyzed: 10-Dec-15						
Gasoline Range Organics (C6-C10)	109	20.0	mg/kg	113		96.7	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*0.278*		"	*0.400*		*69.5*	*50-150*			
Matrix Spike (1550020-MS1)	**Source: P512014-21**			Prepared: 09-Dec-15 Analyzed: 10-Dec-15						
Gasoline Range Organics (C6-C10)	101	20.0	mg/kg	113	ND	89.1	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	*0.276*		"	*0.400*		*69.0*	*50-150*			
Matrix Spike Dup (1550020-MSD1)	**Source: P512014-21**			Prepared: 09-Dec-15 Analyzed: 10-Dec-15						
Gasoline Range Organics (C6-C10)	105	20.0	mg/kg	113	ND	93.3	70-130	4.57	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	*0.277*		"	*0.400*		*69.3*	*50-150*			

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Total Metals by 6010 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1551002 - Metal Solid Digestion EPA 3051A										
Blank (1551002-BLK1)				Prepared & Analyzed: 14-Dec-15						
Arsenic	ND	1.00	mg/kg							
Barium	ND	10.0	"							
Cadmium	ND	1.00	"							
Chromium	ND	5.00	"							
Copper	ND	2.00	"							
Lead	ND	1.00	"							
Mercury	ND	1.00	"							
Nickel	ND	1.00	"							
Selenium	ND	5.00	"							
Silver	ND	1.00	"							
Zinc	ND	2.00	"							
LCS (1551002-BS1)				Prepared & Analyzed: 14-Dec-15						
Arsenic	93.1	1.00	mg/kg	100		93.1	80-120			
Barium	103	10.0	"	100		103	80-120			
Cadmium	96.0	1.00	"	100		96.0	80-120			
Chromium	103	5.00	"	100		103	80-120			
Copper	87.8	2.00	"	100		87.8	80-120			
Lead	97.9	1.00	"	100		97.9	80-120			
Mercury	92.8	1.00	"	100		92.8	80-120			
Nickel	95.6	1.00	"	100		95.6	80-120			
Selenium	89.1	5.00	"	100		89.1	80-120			
Silver	97.5	1.00	"	100		97.5	80-120			
Zinc	94.7	2.00	"	100		94.7	80-120			
Matrix Spike (1551002-MS1)	**Source: P512013-06**			Prepared & Analyzed: 14-Dec-15						
Arsenic	93.4	0.98	mg/kg	97.8	1.88	93.6	75-125			
Barium	156	9.78	"	97.8	59.5	99.1	75-125			
Cadmium	94.4	0.98	"	97.8	ND	96.5	75-125			
Chromium	105	4.89	"	97.8	4.91	102	75-125			
Copper	84.8	1.96	"	97.8	ND	86.7	75-125			
Lead	101	0.98	"	97.8	5.56	97.6	75-125			
Mercury	92.8	0.98	"	97.8	ND	94.9	75-125			
Nickel	95.9	0.98	"	97.8	2.20	95.7	75-125			
Selenium	87.9	4.89	"	97.8	ND	89.8	75-125			
Silver	46.2	0.98	"	97.8	ND	47.2	75-125			SPK1
Zinc	103	1.96	"	97.8	9.97	95.0	75-125			

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Total Metals by 6010 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1551002 - Metal Solid Digestion EPA 3051A										
Matrix Spike Dup (1551002-MSD1)	**Source: P512013-06**			Prepared & Analyzed: 14-Dec-15						
Arsenic	91.2	0.95	mg/kg	95.1	1.88	94.0	75-125	2.40	20	
Barium	164	9.51	"	95.1	59.5	110	75-125	4.69	20	
Cadmium	92.2	0.95	"	95.1	ND	97.0	75-125	2.38	20	
Chromium	103	4.75	"	95.1	4.91	104	75-125	1.50	20	
Copper	82.5	1.90	"	95.1	ND	86.8	75-125	2.81	20	
Lead	99.8	0.95	"	95.1	5.56	99.2	75-125	1.26	20	
Mercury	89.7	0.95	"	95.1	ND	94.4	75-125	3.41	20	
Nickel	93.4	0.95	"	95.1	2.20	95.9	75-125	2.63	20	
Selenium	86.2	4.75	"	95.1	ND	90.7	75-125	1.95	20	
Silver	28.6	0.95	"	95.1	ND	30.1	75-125	47.0	20	SPK1
Zinc	101	1.90	"	95.1	9.97	95.4	75-125	2.23	20	

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1550022 - Anion Extraction EPA 300.0										
Blank (1550022-BLK1)				Prepared & Analyzed: 10-Dec-15						
Chloride	ND	20.0	mg/kg							
LCS (1550022-BS1)				Prepared & Analyzed: 10-Dec-15						
Chloride	472	20.0	mg/kg	500		94.4	90-110			
Matrix Spike (1550022-MS1)	**Source: P512013-01**			Prepared & Analyzed: 10-Dec-15						
Chloride	505	20.0	mg/kg	500	ND	101	80-120			
Matrix Spike Dup (1550022-MSD1)	**Source: P512013-01**			Prepared & Analyzed: 10-Dec-15						
Chloride	507	20.0	mg/kg	500	ND	101	80-120	0.563	20	

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1551009 - Metal Water Digestion EPA 3015A										
Blank (1551009-BLK1)				Prepared & Analyzed: 14-Dec-15						
Calcium	ND	0.50	mg/L							
Magnesium	ND	0.20	"							
Sodium	ND	2.00	"							
LCS (1551009-BS1)				Prepared & Analyzed: 14-Dec-15						
Calcium	109	0.50	mg/L	111		98.5	80-120			
Magnesium	114	0.20	"	111		103	80-120			
Sodium	122	2.00	"	111		110	80-120			
Matrix Spike (1551009-MS1)	**Source: P512013-01**			Prepared & Analyzed: 14-Dec-15						
Calcium	121	0.50	mg/L	111	11.2	99.1	75-125			
Magnesium	116	0.20	"	111	2.60	102	75-125			
Sodium	122	2.00	"	111	2.31	108	75-125			
Matrix Spike Dup (1551009-MSD1)	**Source: P512013-01**			Prepared & Analyzed: 14-Dec-15						
Calcium	118	0.50	mg/L	111	11.2	95.8	75-125	3.16	20	
Magnesium	118	0.20	"	111	2.60	104	75-125	1.14	20	
Sodium	124	2.00	"	111	2.31	109	75-125	1.36	20	

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Boron-Hot Water Soluble by EPA 6010 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1551005 - Boron HW Soluble Digestion										
Blank (1551005-BLK1)				Prepared: 14-Dec-15 Analyzed: 15-Dec-15						
Boron	ND	0.50	mg/L							
LCS (1551005-BS1)				Prepared: 14-Dec-15 Analyzed: 15-Dec-15						
Boron	4.15		mg/L	4.00		104	80-120			
Matrix Spike (1551005-MS1)	**Source: P512016-02**			Prepared: 14-Dec-15 Analyzed: 15-Dec-15						
Boron	3.19		mg/L	4.00	0.06	78.1	75-125			
Matrix Spike Dup (1551005-MSD1)	**Source: P512016-02**			Prepared: 14-Dec-15 Analyzed: 15-Dec-15						
Boron	2.98		mg/L	4.00	0.06	73.1	75-125	6.55	20	SPK1

Bridgecreek Resources, LLC	Project Name:	Prairie Falcon 19- 29-17	
405 Urban St Suite 400	Project Number:	15090-0001	**Reported:**
Lakewood CO, 80228	Project Manager:	Andrew Parker	22-Dec-15 10:34

Notes and Definitions

SPK1	The spike recovery is outside of quality control limits.
A-01	Re-reported. Client requested lower detection limit.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Client: Bridgecreek Resources

Project: Prairie Falcon 19-17 per Andrew Parker 12/07/15 ag

Sampler: A. Parker

Phone: 970-570-9535

Email(s): andrew@atkinsenvironmental.com

Project Manager:

RUSH? 1d 3d

Lab Use Only	Analysis and Method									lab Only	
Lab WO# P512016	GRO/DRO by 8015	BTEX by 8021	~~TPH by 418.1~~ 8015	Chloride by 300.0	Table 910-1	Cr-VI				Lab Number	Correct Cont/Prsrv (s) Y/N
Job Number 15090-0002											

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Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative									
~~3~~ 4 oz Bar Composite	12/4	4:15	SOLID	3 - 4oz glass/cool	+		X	+	X	X			1	Y
~~3~~ 4 oz Background	12/4	4:30	↓	1	+		X	X	X	X			2	Y

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Andrew Parker	12/4/15	17:35	Hanna Hoff	12/4/15	17:44
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only

**Received on Ice (Y) / N

T1____ T2____ T3____

AVG Temp °C 4.0

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other ____

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

**Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

☐ Sample(s) dropped off after hours to a secure drop off area.

Chain of Custody

Notes/Billing info:

envirotech Analytical Laboratory

5796 US Highway 64, Farmington, NM 87401 Ph (505) 632-0615 Fx (505) 632-1865

Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (970) 259-0615 Fx (800) 362-1879

envirotech-inc.com

ANALYTICAL REPORT

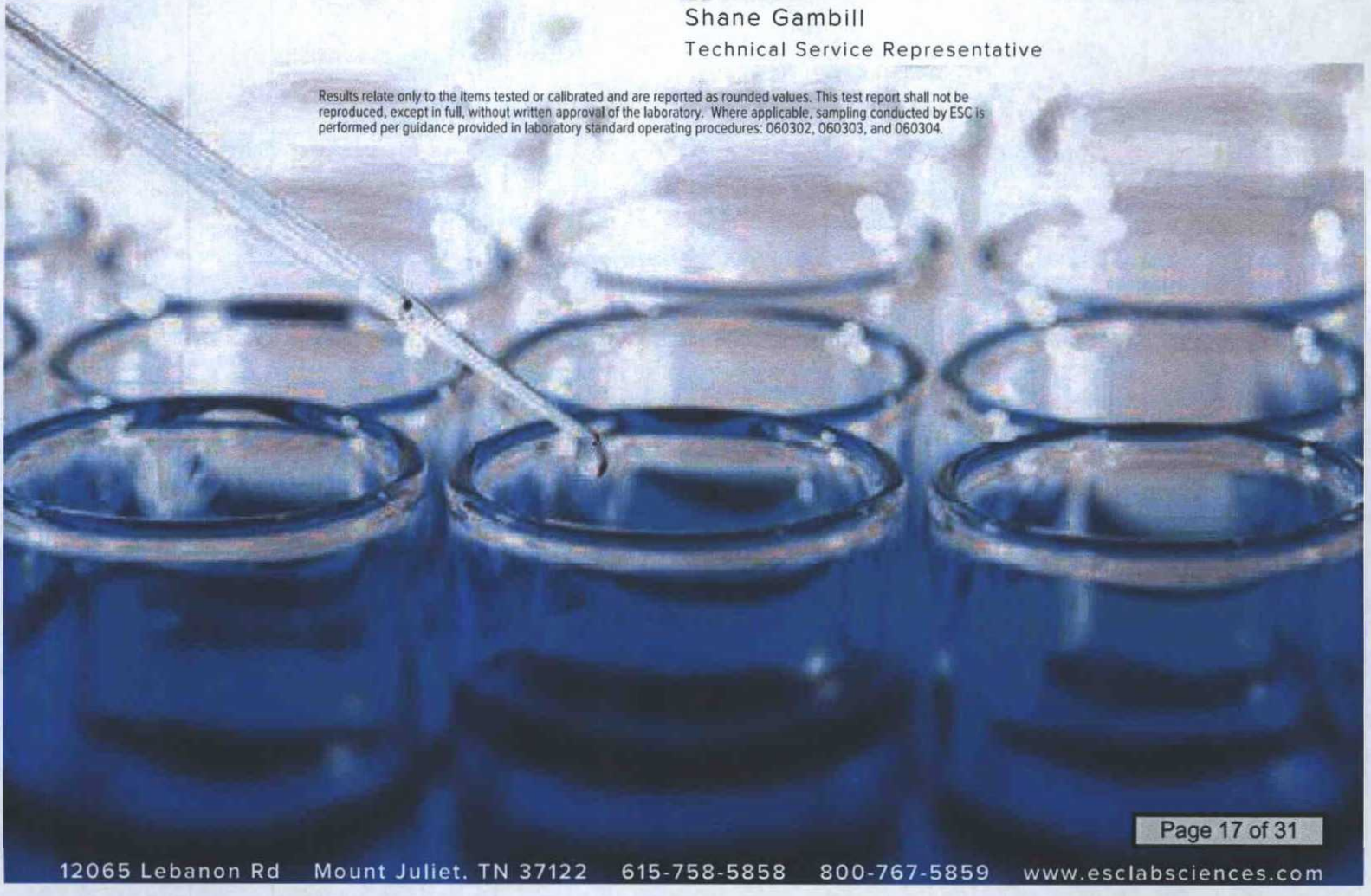
December 15, 2015

EnviroTech- NM

Sample Delivery Group:	L805353
Samples Received:	12/08/2015
Project Number:	15090-0002
Description:	Prairie Falcon 19-29-17
Site:	P512016
Report To:	Tim Cain and Lynn Cook 5796 US. Highway 64 Farmington, NM 87401

Entire Report Reviewed By:

Shane Gambill
Technical Service Representative



12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.esclabsciences.com

BIN COMPOSITE L805353-01 Solid

Collected by: A. Parker
Collected date/time: 12/04/15 16:15
Received date/time: 12/08/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG834440	1	12/09/15 19:07	12/10/15 11:12	KMP
Total Solids by Method 2540 G-2011	WG834540	1	12/14/15 13:03	12/14/15 13:12	MEL
Wet Chemistry by Method 2580 B-2011	WG834194	1	12/08/15 21:26	12/08/15 21:27	MZ
Wet Chemistry by Method 3060A/7196A	WG834156	1	12/09/15 09:52	12/10/15 13:58	AMC
Wet Chemistry by Method 9045D	WG834208	1	12/09/15 09:20	12/09/15 09:20	MAJ

BACKGROUND L805353-02 Solid

Collected by: A. Parker
Collected date/time: 12/04/15 16:30
Received date/time: 12/08/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG834440	1	12/09/15 19:07	12/10/15 11:34	KMP
Total Solids by Method 2540 G-2011	WG834540	1	12/14/15 13:03	12/14/15 13:12	MEL
Wet Chemistry by Method 2580 B-2011	WG834194	1	12/08/15 21:26	12/08/15 21:27	MZ
Wet Chemistry by Method 3060A/7196A	WG834156	1	12/09/15 09:52	12/10/15 14:00	AMC
Wet Chemistry by Method 9045D	WG834208	1	12/09/15 09:20	12/09/15 09:20	MAJ

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	75.1		1	12/14/2015 13:12	WG834540

Wet Chemistry by Method 2580 B-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	mV			date / time	
ORP	90		1	12/08/2015 21:27	WG834194

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chromium,Hexavalent	ND		2.66	1	12/10/2015 13:58	WG834156

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	9.64		1	12/09/2015 09:20	WG834208

Sample Narrative:

9045D L805353-01 WG834208: 9.64 at 23.7c

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00799	1	12/10/2015 11:12	WG834440
Acenaphthene	0.0123		0.00799	1	12/10/2015 11:12	WG834440
Acenaphthylene	ND		0.00799	1	12/10/2015 11:12	WG834440
Benzo(a)anthracene	ND		0.00799	1	12/10/2015 11:12	WG834440
Benzo(a)pyrene	ND		0.00799	1	12/10/2015 11:12	WG834440
Benzo(b)fluoranthene	ND		0.00799	1	12/10/2015 11:12	WG834440
Benzo(g,h,i)perylene	ND		0.00799	1	12/10/2015 11:12	WG834440
Benzo(k)fluoranthene	ND		0.00799	1	12/10/2015 11:12	WG834440
Chrysene	ND		0.00799	1	12/10/2015 11:12	WG834440
Dibenz(a,h)anthracene	ND		0.00799	1	12/10/2015 11:12	WG834440
Fluoranthene	ND		0.00799	1	12/10/2015 11:12	WG834440
Fluorene	0.0379		0.00799	1	12/10/2015 11:12	WG834440
Indeno(1,2,3-cd)pyrene	ND		0.00799	1	12/10/2015 11:12	WG834440
Naphthalene	0.394		0.0266	1	12/10/2015 11:12	WG834440
Phenanthrene	0.0733		0.00799	1	12/10/2015 11:12	WG834440
Pyrene	0.00940		0.00799	1	12/10/2015 11:12	WG834440
1-Methylnaphthalene	0.320		0.0266	1	12/10/2015 11:12	WG834440
2-Methylnaphthalene	0.409		0.0266	1	12/10/2015 11:12	WG834440
2-Chloronaphthalene	ND		0.0266	1	12/10/2015 11:12	WG834440
(S) Nitrobenzene-d5	*69.5*		*22.1-146*		*12/10/2015 11:12*	WG834440
(S) 2-Fluorobiphenyl	*41.7*		*40.6-122*		*12/10/2015 11:12*	WG834440
(S) p-Terphenyl-d14	*44.3*		*32.2-131*		*12/10/2015 11:12*	WG834440

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	%				
Total Solids	84.7		1	12/14/2015 13:12	WG834540

Wet Chemistry by Method 2580 B-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	mV				
ORP	124		1	12/08/2015 21:27	WG834194

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Chromium,Hexavalent	ND		2.36	1	12/10/2015 14:00	WG834156

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	su				
pH	9.11		1	12/09/2015 09:20	WG834208

Sample Narrative:

9045D L805353-02 WG834208: 9.11 at 23.9c

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis date / time	Batch
	mg/kg		mg/kg			
Anthracene	ND		0.00708	1	12/10/2015 11:34	WG834440
Acenaphthene	ND		0.00708	1	12/10/2015 11:34	WG834440
Acenaphthylene	ND		0.00708	1	12/10/2015 11:34	WG834440
Benzo(a)anthracene	ND		0.00708	1	12/10/2015 11:34	WG834440
Benzo(a)pyrene	ND		0.00708	1	12/10/2015 11:34	WG834440
Benzo(b)fluoranthene	ND		0.00708	1	12/10/2015 11:34	WG834440
Benzo(g,h,i)perylene	ND		0.00708	1	12/10/2015 11:34	WG834440
Benzo(k)fluoranthene	ND		0.00708	1	12/10/2015 11:34	WG834440
Chrysene	ND		0.00708	1	12/10/2015 11:34	WG834440
Dibenz(a,h)anthracene	ND		0.00708	1	12/10/2015 11:34	WG834440
Fluoranthene	ND		0.00708	1	12/10/2015 11:34	WG834440
Fluorene	ND		0.00708	1	12/10/2015 11:34	WG834440
Indeno(1,2,3-cd)pyrene	ND		0.00708	1	12/10/2015 11:34	WG834440
Naphthalene	ND		0.0236	1	12/10/2015 11:34	WG834440
Phenanthrene	ND		0.00708	1	12/10/2015 11:34	WG834440
Pyrene	ND		0.00708	1	12/10/2015 11:34	WG834440
1-Methylnaphthalene	ND		0.0236	1	12/10/2015 11:34	WG834440
2-Methylnaphthalene	ND		0.0236	1	12/10/2015 11:34	WG834440
2-Chloronaphthalene	ND		0.0236	1	12/10/2015 11:34	WG834440
(S) Nitrobenzene-d5	*67.4*		*22.1-146*		*12/10/2015 11:34*	WG834440
(S) 2-Fluorobiphenyl	*71.9*		*40.6-122*		*12/10/2015 11:34*	WG834440
(S) p-Terphenyl-d14	*67.9*		*32.2-131*		*12/10/2015 11:34*	WG834440

Method Blank (MB)

(MB) 12/14/15 13:12

Analyte	MB Result	MB Qualifier	MB RDL
	%		%
Total Solids	0.000400		

L805396-01 Original Sample (OS) • Duplicate (DUP)

(OS) 12/14/15 13:12 • (DUP) 12/14/15 13:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	78.9	77.2	1	2.28		5

Laboratory Control Sample (LCS)

(LCS) 12/14/15 13:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	99.9	85.0-115	

L804772-01 Original Sample (OS) • Duplicate (DUP)

(OS) 12/08/15 21:27 • (DUP) 12/08/15 21:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mV	mV		%		%
ORP	-19.0	-18	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/08/15 21:27 • (LCSD) 12/08/15 21:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mV	mV	mV	%	%	%			%	%
ORP	100	97	98	97.0	98.0	90.0-110			1.03	20

Method Blank (MB)

(MB) 12/10/15 13:35

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Chromium,Hexavalent	ND		2.00

L805169-01 Original Sample (OS) • Duplicate (DUP)

(OS) 12/10/15 13:43 • (DUP) 12/10/15 13:53

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/10/15 13:40 • (LCSD) 12/10/15 13:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	97.4	78.2	79.6	80.3	81.7	80.0-120			1.77	20

L805169-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 12/10/15 13:43 • (MS) 12/10/15 13:53 • (MSD) 12/10/15 13:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	ND	15.8	16.5	79.0	82.5	1	75.0-125			4.33	20

L804859-20 Original Sample (OS) • Duplicate (DUP)

(OS) 12/09/15 09:20 • (DUP) 12/09/15 09:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	4.14	4.17	1	0.722		1

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/09/15 09:20 • (LCSD) 12/09/15 09:20

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	6.72	6.72	6.69	100	99.6	98.5-102			0.447	1

Cp
Tc
Ss
Cn
Sr
Qc
Gl
Al
Sc

Method Blank (MB)

(MB) 12/10/15 08:42

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Anthracene	ND		0.00600
Acenaphthene	ND		0.00600
Acenaphthylene	ND		0.00600
Benzo(a)anthracene	ND		0.00600
Benzo(a)pyrene	ND		0.00600
Benzo(b)fluoranthene	ND		0.00600
Benzo(g,h,i)perylene	ND		0.00600
Benzo(k)fluoranthene	ND		0.00600
Chrysene	ND		0.00600
Dibenz(a,h)anthracene	ND		0.00600
Fluoranthene	ND		0.00600
Fluorene	ND		0.00600
Indeno(1,2,3-cd)pyrene	ND		0.00600
Naphthalene	ND		0.0200
Phenanthrene	ND		0.00600
Pyrene	ND		0.00600
1-Methylnaphthalene	ND		0.0200
2-Methylnaphthalene	ND		0.0200
2-Chloronaphthalene	ND		0.0200
(S) p-Terphenyl-d14	*83.0*		*32.2-131*
(S) Nitrobenzene-d5	*75.4*		*22.1-146*
(S) 2-Fluorobiphenyl	*88.2*		*40.6-122*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/10/15 07:59 • (LCSD) 12/10/15 08:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0723	0.0752	90.4	94.0	50.3-130			3.89	20
Acenaphthene	0.0800	0.0681	0.0711	85.1	88.8	52.4-120			4.26	20
Acenaphthylene	0.0800	0.0696	0.0727	87.0	90.8	49.6-120			4.32	20
Benzo(a)anthracene	0.0800	0.0711	0.0738	88.9	92.3	46.7-125			3.72	20
Benzo(a)pyrene	0.0800	0.0596	0.0609	74.5	76.1	42.3-119			2.13	20
Benzo(b)fluoranthene	0.0800	0.0668	0.0632	83.4	79.0	43.6-124			5.41	20
Benzo(g,h,i)perylene	0.0800	0.0673	0.0696	84.1	87.0	45.1-132			3.34	20
Benzo(k)fluoranthene	0.0800	0.0671	0.0760	83.9	95.0	46.1-131			12.4	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 12/10/15 07:59 • (LCSD) 12/10/15 08:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chrysene	0.0800	0.0736	0.0774	92.0	96.8	49.5-131			5.05	20
Dibenz(a,h)anthracene	0.0800	0.0668	0.0687	83.5	85.9	44.8-133			2.83	20
Fluoranthene	0.0800	0.0731	0.0763	91.4	95.4	49.3-128			4.26	20
Fluorene	0.0800	0.0703	0.0729	87.9	91.1	50.6-121			3.59	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0703	0.0728	87.8	91.0	46.1-135			3.49	20
Naphthalene	0.0800	0.0638	0.0655	79.7	81.8	49.6-115			2.63	20
Phenanthrene	0.0800	0.0658	0.0678	82.3	84.7	48.8-121			2.90	20
Pyrene	0.0800	0.0749	0.0773	93.6	96.6	44.7-130			3.10	20
1-Methylnaphthalene	0.0800	0.0720	0.0744	90.0	93.0	50.6-122			3.25	20
2-Methylnaphthalene	0.0800	0.0734	0.0757	91.8	94.6	50.4-120			3.09	20
2-Chloronaphthalene	0.0800	0.0735	0.0763	91.9	95.4	53.9-121			3.74	20
(S) p-Terphenyl-d14				*87.3*	*88.6*	*32.2-131*				
(S) Nitrobenzene-d5				*79.4*	*78.0*	*22.1-146*				
(S) 2-Fluorobiphenyl				*92.4*	*94.7*	*40.6-122*				

Cp Tc Ss Cn Sr Qc Gl Al Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [14]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

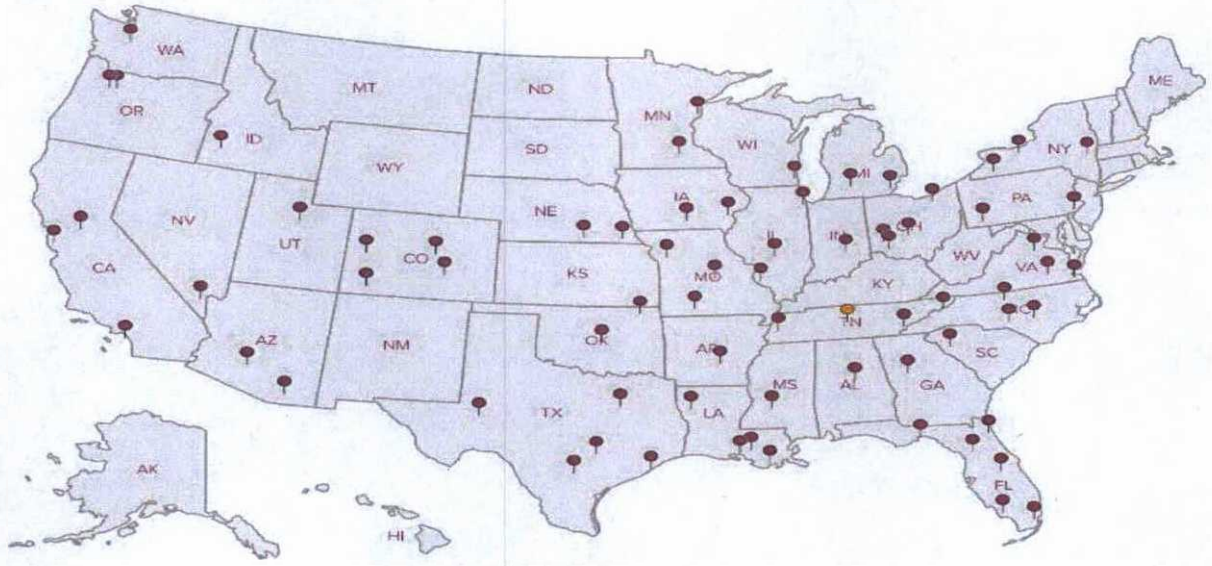
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:	Billing Information:	Analysis / Container / Preservative	Chain of Custody Page 1 of 1
Envirotech Inc. -NM 5796 US Highway 64 Farmington, NM 87401	Accounts Payable 5796 US Highway 64 Farmington, NM 87401		ESC LABORATORY SCIENCES YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859
Report to: Lynn Cook & Tim Cain	Email To: Lynn Cook & Tim Cain		L# L805353 B091
Project Description: Prairie Falcon 19-29-17	City/State Collected:		Acctnum: Template: Prelogin: TSR: PB:
Phone: Fax:	Client Project # 15090-0002	Lab Project #	Shipped Via:
Collected by (print): A. Parker	Site/Facility ID # P512016	P.O. # 142780	
Collected by (signature): Immediately Packed on Ice N___ Y✓	Rush? (Lab MUST Be Notified) ___ Same Day .....200% ___ Next Day .....100% ___ Two Day .....50% ___ Three Day 25%	Date Results Needed 12-14-15 Email? ___No ✓Yes FAX? ✓No ___Yes	No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Hexavalent Chromium /4oz jar/Cool	PAH Sim by 8270 /4oz jar/Cool	* Free Quote ENVIROTHN100915S1	Rem./Contaminant	Sample # (lab only)
Bin Composite		SS		12/4/15	16:15	1	✓	✓		-01
Background		SS		12/4/15	16:30	1	✓	✓		02

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

(630)937-7960

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	12-07-15	14:15	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ____

Temp: 3.1 °C Bottles Received: 2-4oz

Date: 12/8/15 Time: 09:00

Condition: (lab use only) SW7 OK

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Department Of Interior- Bureau of Land Management -Tres Rios Field Office –SUNDRY 1/7/2016

Well Name/Number: Prairie Falcon 19-29-17 **Operator:** Bc. Resc. **Surface/Mineral Ownership:** IND/IND (UMU)

Leases: ### **Location: (STR, QQ)** S19, T31N, R14W, ###' FNL, ###' FEL,

API: 050670- **PAD(X), ACCESS (X), PIPELINE ( )**

NEPA DOCUMENT TYPE/I.D.: EA / DOI-BLM-CO-SO10-##

REQUIREMENTS AT ALL SITES:

NOTIFICATION:

- The BLM Minerals Division - Surface Protection Specialist at (970) 385-1242 shall be notified 5 days prior to the onset of pad/road construction.
- The BLM Minerals Division – Physical Scientist/Natural Resources Specialist (970) 385-1242 and the BIA-UMU Agency Realty (970) 565-3716 shall be notified at least 48 hours prior to commencement of drilling or completion activities.
- NO SURFACE DISTURBANCE shall begin until the Edge of Disturbance Corners and Midline markers of the permitted area have been re-established and are clearly marked.

GENERAL REQUIREMENTS:

- Any cement wash or other fluids should not be mixed with dry cuttings, but placed in a self-contained tank, surrounded by a lined containment dike of 110% of contained volumes for storage and removed for disposal at an approved location off-reservation.
- Polymer additives, Gel fluids, Saline Frac fluids or other non-fresh water based fluids stored on site to facilitate horizontal drilling/frac operations/ completion should have 110-125% containment facilities covered by 35 mil minimum thickness impermeable barrier surrounding and beneath storage tanks to protect against potential spills.
- Any free liquid accumulating from all earthen lined containment systems should be vacuumed off to insure a minimum of 2ft. of freeboard on all tanks and pits consistently; the contents shall then be transported/disposed-of at an approved facility.
- All stormwater mitigations will be in accordance with BLM gold book BMP construction and installation standards and practices.

AT THIS PROJECT SPECIFICALLY: Sundry Dated 1/7/2016

1. Operator will submit lab results pursuant to the Ute Table Clean-up Standards prior to closure of cuttings trench.

2. Permanent metal T-postsl will be installed at the corners of the burial trenches to denote the presence of loosly compacted soils.

3. Operator will submit diagrams showing dimensions of the final burial trenches (L,W, H).

_____ _____

Ryan N.Joyner
Physical Scientist/ Natural Resource Specialist
BLM-Minerals Division

Date: 1/7/2016