



AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pGRL1018853407

1RP - 2574

SAMSON RESOURCES CO



Samson Plaza
Two West Second Street
Tulsa, Oklahoma 74103-3103
USA
918/591-1791

RECEIVED
JUL 16 2010
HOBSOCD

July 9, 2010

SENT VIA CERTIFIED MAIL

State of New Mexico Energy Minerals and Natural Resources
Oil Conservation Division – District I
Attn: Geoffrey Leking
1625 N. French Dr.
Hobbs, NM 88240

07/19/10
RESUBMITTING

**Re: Remediation & Sampling Work Plan
Minis 2R Fed #1
Lea County, New Mexico**

Summary

This report is submitted to the New Mexico Bureau of Land Management, New Mexico Oil Conservation Division (OCD) to report remediation of a produced water spill that occurred at the Minis 2R Fed #1 location in Section 2, Township 21 South and Range 32 East in Lea County, New Mexico.

The spill occurred on 6/21/10 after a water hauler left a handle on the load line and did not close the valve at the water tank. Approximately 45 bbls of produced water was released. Samson recovered 35 bbls that was returned to the tank battery. Approximately 10 bbls of produced water was lost to the surface. All fluid remained on location. The initial C-141 was submitted to NMOCD District 1 and BLM-Carlsbad on 6/23/10. The C-141 was submitted to BLM-Hobbs via email on 6/24/10.

- On June 21, 2010 Banta Oilfield Services, Inc. (Banta) excavated impacted soils from the area. At approximately 3 to 4 below ground surface (bgs) caliche was encountered.
- On June 24, 2010 Arc Environmental, LLC collected field samples from five locations (Area 1 through Area 5). The samples were submitted to Cardinal Laboratories in Hobbs, New Mexico and analyzed for chloride.
- The week of June 28, 2010 Key Energy continued excavation to approximately 4 to 5 feet bgs. The backhoe failed and was serviced on June 30, 2010.
- On July 2, 2010 Arc Environmental, LLC collected field samples from five locations (Area 1 through Area 5).
- On July 6, 2010 Larson & Associates drilled two soil borings, in Area 1 and Area 4. The samples were submitted to Cardinal Laboratories in Hobbs, New Mexico.

Site Assessment

- Groundwater occurs at about 150 feet below ground surface based on records with the New Mexico Environmental Department;
- The release is not within a wellhead protection area, and no private, domestic fresh-water well or springs are within 500 horizontal feet of release;
- The release is not within vicinity of surface waters; and
- No observable or free petroleum hydrocarbons or staining is present.

Soil Remediation

On June 21, 2010 Samson contracted Banta Oilfield Services, Inc. (Banta) to excavate impacted soils from the area. At approximately 3 to 4 below ground surface (bgs), caliche was encountered.

On June 24, 2010 Samson contracted Arc Environmental, LLC to collect field samples from 3 to 4 feet bgs from five locations (Area 1 through Area 5). Samples were also collected for background, the excavated stock pile and the clean backfill. The samples were submitted to Cardinal Laboratories in Hobbs, New Mexico and analyzed for chloride. See attached sample results.

Key Energy continued excavation the week of June 28, 2010 to approximately 4 to 5 feet bgs. Caliche prevented further excavation with the backhoe and the equipment was serviced on June 30, 2010.

On July 2, 2010 Arc Environmental, LLC collected five field samples (Area 1 through Area 5) from the bottom of the excavation. The samples were analyzed onsite for chloride. See attached sample results.

On July 6, 2010 Samson contracted Larson & Associates, Inc. (LAI) to drill two 15 foot vertical soil borings, one each in Area 1 and Area 4. The soil borings were witnessed by Samson representative Floyd Steed, OCD representative Geoffrey Leking and BLM representative Trishia Bad Bear. The samples were submitted to Cardinal Laboratories in Hobbs, New Mexico and analyzed for total petroleum hydrocarbons (TPH) near the surface and chloride for the extent of the boring to determine vertical extent of chloride. See attached sample results.

Closure Request

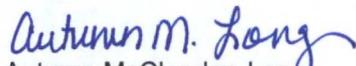
The vertical extent of chloride concentration has been determined. The limited vertical extent and level of chloride concentrations, location of the produced water release and the depth to groundwater indicates little risk associated with the chlorides remaining in the impacted soils.

Soils will be further excavated in Area 1 and Area 4 to meet the OCD risk based chloride standard of 1000 ppm. Field samples will be taken at intervals to determine if further excavation is required. Once the OCD standard has been met, confirmation sampling will be scheduled. OCD and BLM will be given 48 hours notice to witness the sampling event. Confirmation sample results will be submitted to OCD and BLM.

Upon receiving closure approval from the OCD and BLM, excavated Area 1 through Area 5 will be backfilled with clean soil and a final C-141 will be submitted.

Sincerely,

Samson Resources Company



Autumn McClendon-Long
Environmental Specialist

Cc: Trishia Bad Bear – BLM Hobbs Field Station
Gerry Petree – Superintendent
Bob Fisher – Key Energy

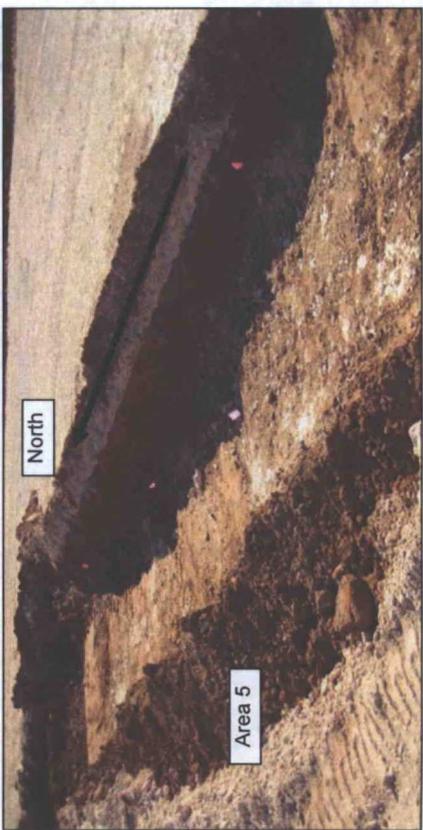
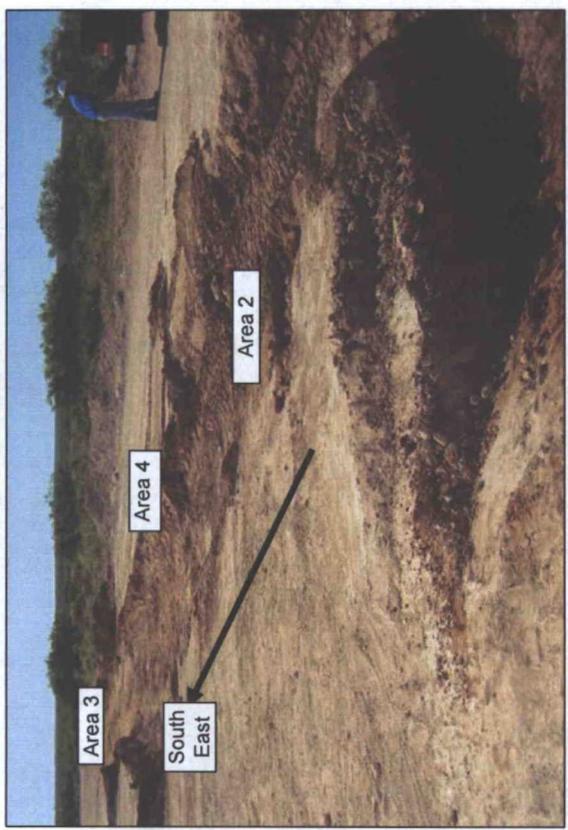
Chloride Field Sampling

CLIENT: **Samson Resources**
 SYSTEM: **Minis 2 (R) Federal Com #1**
 SITE LOCATION: **Sec 2, T21S, R32E ~ Lea County**
 TECHNICIAN **Rozanne Johnson**

SAMPLE DATE	SAMPLE TIME	SAMPLE LOCATION	CHLORIDE PPM	COMMENTS
6-23-2010	8:15	Area 1 ~ Trench Floor 5 Point Composite	6765	No Odor
6-23-2010	8:30	Area 2 ~ Trench Floor 5 Point Composite	1583	No Odor
6-23-2010	8:40	Area 3 ~ Trench Floor 5 Point Composite	1304	No Odor
6-23-2010	8:55	Area 4 ~ Trench Floor 5 Point Composite	9097	No Odor
6-23-2010	9:10	Area 5 ~ Trench Floor 5 Point Composite	503	No Odor
6-23-2010	9:20	Background	404	No Odor
6-23-2010	10:25	Stockpile	11384	No Odor

Comments: Samples were jarred and sent to Cardinal Laboratories in Hobbs, New Mexico for Chloride analysis.

Arc Environmental, LLC
 P. O. Box 1772
 Lovington, New Mexico 88260
 (575) 631-9310
rozanne@valornet.com





**ARDINAL
LABORATORIES**

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

June 25, 2010

Floyd Steed
Samson
P.O. Box 214
Artesia, NM 88211

RECEIVED

JUL 16 2010

HOBBSOCD

Re: Minis 2 Federal Com #1

Enclosed are the results of analyses for sample number H20204, received by the laboratory on 06/24/10 at 10:40 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director



CARDINAL LABORATORIES

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Samson Resources		BILL TO		ANALYSIS REQUEST															
Project Manager: Floyd Steed		P.O. #:																	
Address: P.O. Box 951		Company: ARC ENV.																	
City: Colorado City		Attn:																	
State: TX		Address: P.O. Box 1772																	
Zip: 79512		City: Lovington																	
Phone #: (575) 513-1687		State: NM																	
Fax #: (918) 591-9727		Zip: 88260																	
Project #:		Phone #: (575) 631-9310																	
Project Owner:		Fax #:																	
Project Name: Minis 2 Federal Com #1																			
Project Location: Unit P Sec - TALS - R32E ~ Lea Cty																			
Sampler Name: Rozanne Johnson																			
FOR LAB USE ONLY																			
Lab I.D. H20206 with H20207-1 Stockpile		MATRIX		PRESERV.		SAMPLING													
		GROUNDWATER		ACID/BASE		DATE													
		WASTEWATER		ICE / COOL		TIME													
		SLUDGE		OTHER:		6-23 10:25													
		OIL		OTHER:		2010													
		SOIL		OTHER:															
		X																	
		CL																	

PLEASE NOTE: Liability and Damages - Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates, or successors arising out of or in connection with the performance of services hereunder, by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Rozanne Johnson
Date: 6-24-2010
Time: 10:40

Received By: [Signature]
Date: [Blank]
Time: [Blank]

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: [Blank]

Sample Condition:
Cool Intact Yes No
Yes No Yes No
-1C [Signature]

Checked By: [Signature]
(Initials)

REMARKS:
Floyd Steed ~ bsteed@samson.com
Autumn Long ~ autumnl@samson.com
Rozanne@valornet.com

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

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476
#26
Cash

Chloride Field Sampling

CLIENT: **Samson Resources**

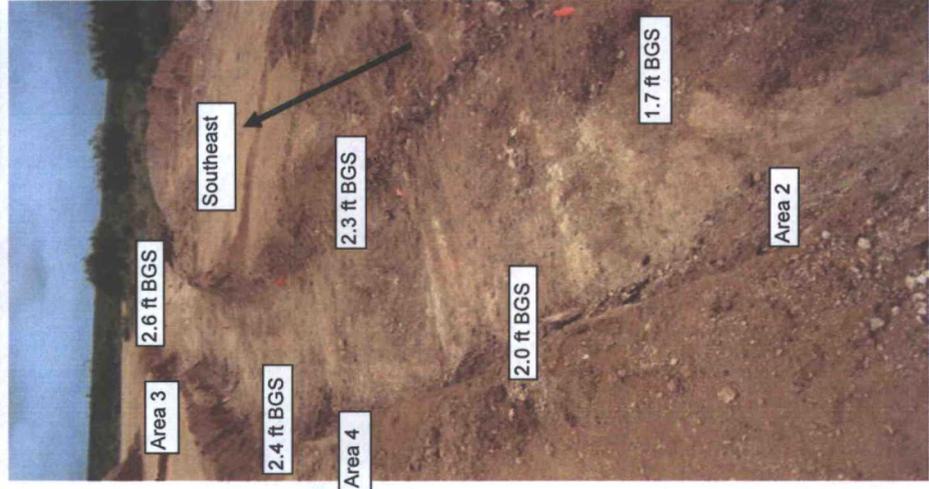
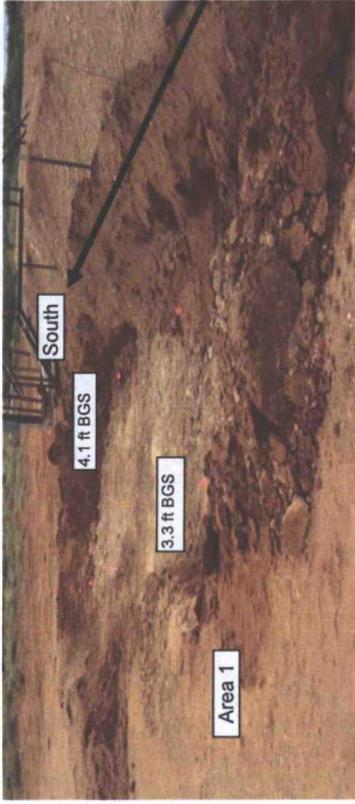
SYSTEM: **Minis 2 @ Federal Com #1**

SITE LOCATION: **Sec. 2, T21S, R32E ~ Lea County**

TECHNICIAN: **Rozanne Johnson**

SAMPLE DATE	SAMPLE TIME	SAMPLE LOCATION	SAMPLE DEPTH FT BGS	CHLORIDE PPM	COMMENTS
7-2-2010	8:20	Area 1 ~ Trench Floor 5 Point Composite	4.1-3.3 FT BGS	3200	No Odor
7-2-2010	8:30	Area 2 ~ Trench Floor 5 Point Composite	1.7-2.3 FT BGS	585	No Odor
7-2-2010	8:40	Area 3 ~ Trench Floor 5 Point Composite	2.6-2.1 FT BGS	805	No Odor
7-2-2010	8:50	Area 4 ~ Trench Floor 5 Point Composite	2.4-2.1 FT BGS	1200	No Odor
7-2-2010	9:00	Area 5 ~ Trench Floor 5 Point Composite	2.8-2.3 FT BGS	380	No Odor

Site Description: The surrounding area outside the location is primarily open range utilized for cattle grazing and oilfield production activities. The site is characterized by a right-of-way for the production well and tank battery location. The excavated area includes the release point, release flow path and pooling areas; covering an area approximately 153 feet long by 29 feet wide at the widest point. Area 1 contains the release point and is 13 ft by 29 ft, Area 2 is 9 ft by 37ft, Area 3 is 17ft by 58ft, Area 4 is 9ft by 45 ft and Area 5 is 8.4 ft by 24ft.



Comments: Samples were jarred and iced.

BGS - Below Ground Surface

Arc Environmental, LLC
 P. O. Box 1772
 Lovington, New Mexico 88260
 (575) 631-9310
rozanne@valornet.com



ARDINAL LABORATORIES

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

July 9, 2010

Michelle Green
Larson & Associates, Inc.
507 North Marienfeld, Suite 202
Midland, TX 79701

Re: 10-0116

Enclosed are the results of analyses for sample number H20273, received by the laboratory on 07/06/10 at 3:20 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

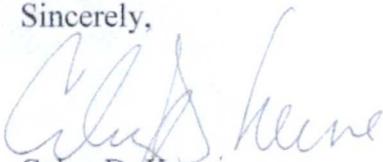
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 4 (includes Chain of Custody)

Sincerely,



Celey D. Keene
Laboratory Director

CHAIN-OF-CUSTODY

LA arson & associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 7/6/10 PAGE 1 OF 1
 PO #: _____ LAB WORK ORDER #: _____
 PROJECT LOCATION OR NAME: Samson
 LAI PROJECT #: 10-0116 COLLECTOR: J. Ferguson

Data Reported to: Michelle Green

Field	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION			ANALYSES	FIELD NOTES
						HCl	HNO ₃	H ₂ SO ₄ NaOH		
TRRP report? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										
TIME ZONE: Time zone/State: <u>MDT/VA</u>										
<u>H2 samples 1-3</u>										
1 SB-1 (3')		7/6/10	1130	S	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Hold* run as per Michelle 7/8
2 SB-1 (5')		7/6/10	1135	S	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3 SB-1 (10')		7/6/10	1140	S	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4 SB-1 (15')		7/6/10	1215	S	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
5 SB-2 (3')		7/6/10	1310	S	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
6 SB-2 (5')		7/6/10	1313	S	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
7 SB-2 (10')		7/6/10	1316	S	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
8 SB-2 (15')		7/6/10	1318	S	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Hold* " " "
TOTAL					8					

RECEIVED BY: (Signature) J. Ferguson DATE/TIME 7/6/10 1520

RECEIVED BY: (Signature) Michelle Green DATE/TIME _____

RECEIVED BY: (Signature) _____ DATE/TIME _____

RECEIVED BY: (Signature) _____ DATE/TIME _____

LABORATORY USE ONLY:
 RECEIVING TEMP: 9°C THERM #: 26
 CUSTODY SEALS - BROKEN INTACT NOT USED
 CARRIER BILL # _____
 HAND DELIVERED

email Autumn & Floyd