

**REMEDIATION SUMMARY
&
SITE CLOSURE REQUEST**

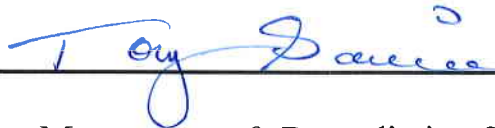
**BOPCO, L.P.
POKER LAKE UNIT #213 (SWD)
(Spill dated 11/26/05)
API-30-015-33859
Eddy County, New Mexico
UL-P, Section 18, Twns. 24 South, Range 30 East
Latitude N 32.212505° Longitude W 103.914199°
NMOCD Spill reference (N/A)**

Prepared By:

**BOPCO, L.P.
522 W. Mermod, Suite 704
Carlsbad, N.M. 88220**

January 2016

Tony Savoie



Waste Management & Remediation Specialist

Site History:

On 11/26/05, Bass Enterprise Production Co. reported a produced water spill at the PLU-213 Tank Battery. The estimated volume released was reported as 500 to 770 Bbls. With 260 Bbls. recovered. This release was prior to the NMOCD RP numbering process. This C-141 is included in the report.

On 12/15/05 the NMOCD requested a corrective action plan. This letter is included in the report.

Apparently Bass Enterprise employed Stoller Environmental to submit a corrective action plan based on the remediation of TPH only.

This plan was rejected in a letter dated 1/20/06. This letter is included in the report.

A subsequent plan was written dated 6/20/06 and is included in this report. This plan was approved with conditions in a letter written to Bass Enterprises on 2/8/06.

This information was discovered during research of the NMOCD records on-line after a reportable spill at the location on 5/28/12.

After reviewing the aerial photos of the site from 2/15/07 to date and the absence of data to demonstrate that the site was remediated in accordance to the NMOCD and BLM guidelines, BOPCO L.P. employed Basin Environmental to sample the spill and run off areas to determine if further remediation activities were needed to bring the site into compliance.

NMOCD SITE CLASSIFICATION:

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated information was unavailable for Section 18, Township 24 South, Range 30 East. A depth to groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately one hundred and seventy-five feet (175') below ground surface (bgs).

Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated there are no water wells within 1,000 feet of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

There are no surface water bodies within 1,000 feet of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

NMOCD guidelines indicate the PLU#213 SWD release site has an initial ranking score of zero (0) points. The soil remediation levels for a site with a ranking score of zero (0) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 5,000 mg/Kg (ppm)

The New Mexico Administrative Code (NMAC) does not currently specify a remediation level for chloride concentrations in soil. Chloride remediation levels are set by the NMOCD on a site specific basis.

SUMMARY OF SITE ASSESSMENT ACTIVITIES:

On 2/9/15, Basin Environmental collected soil samples at or as near to the point of release as possible referenced to as SP #1 in the middle of the lease road just to the south of the production tank battery. The samples collected at the surface, 2 ft. and 4 ft. were above the remediation action level "RAL" of 1000 mg/kg for chlorides, however at 5.5 ft. the chlorides dropped to 832 mg/kg. An additional eight locations were sampled throughout the spill area at depths ranging from surface to 6 ft. below ground surface. Sample point #4 at 6 ft. was the only sample that was above the RAL at 1490 mg/kg. On 3/4/15, the results of the sampling event were reviewed by the Artesia NMOCD. It was determined that no further remediation would be required in the pasture area and that the road area would be addressed during a subsequent remediation at the tank battery.

SITE CLOSURE REQUEST

The soil sample results at the PLU-213 SWD location have met the objectives defined in the NMOCD guidelines for the remediation of leaks and spills. BOPCO, L.P. hereby request the NMOCD to grant closure for the release at the spill site.

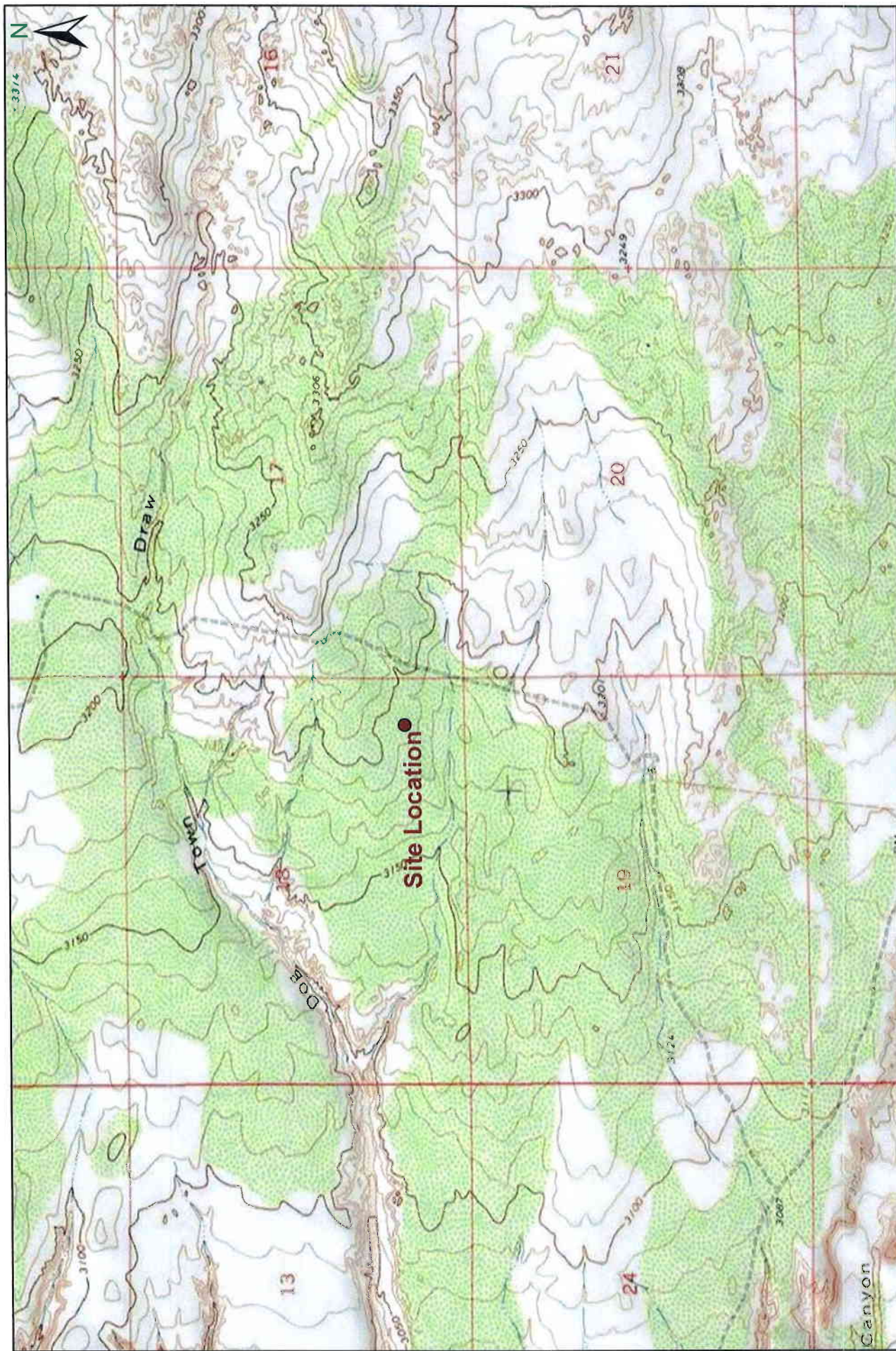


Figure 1
Site Location Map
 BOPCO, LP
 Poker Lake Unit #213 Truck Line Spill
 Eddy County, New Mexico
 NMOCD Reference #: 2RP-2953

Basin Environmental Service Technologies, LLC
 3100 Plains Hwy.
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
June 1, 2015	Scale: 1" = 2,000'

1,000 500 0 1,000 2,000

Distance in Feet

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

30-015-33859

Release Notification and Corrective Action

n MLB 0534940800

OPERATOR 1801

☒ Initial Report ☐ Final Report

Name of Company	BASS ENTER. PROD. CO.	Contact	GARY FLETCHER
Address	901 N. CANAL SUITE 704 CARLSBAD NM	Telephone No.	505 361-8061
Facility Name	POKER LAKE UNIT #213	Facility Type	TANK BATTERY
Surface Owner	BLM	Mineral Owner	BLM
		Lease No.	30-015-33859

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	18	24S	30E	860 FSL		660 FEL		Eddy N.M.

Latitude N.A. Longitude N.A.

NATURE OF RELEASE

Type of Release	SALT WATER	Volume of Release	500-700 bbl	Volume Recovered	I 260 bbls
Source of Release	TANK BATTERY	Date and Hour of Occurrence		Date and Hour of Discovery	11-26-05
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	MIKE BRATTON		
By Whom?	GARY FLETCHER	Date and Hour	11-28-05 10:00 am		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

RECEIVED

DEC 1 2005

OOD-ARTERIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

system by installing additional pump storage and possibly HIGH TANK level alarms.

Describe Area Affected and Cleanup Action Taken.*

very sandy and poor vegetation

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: Gary Fletcher

Printed Name: Gary Fletcher

Title: PROD. Foreman

E-mail Address: G.FLETCHER@NMED.FIELDS.COM

Date: 11-28-05

Phone: 505-887-7329

TIM GUM

Approved by District Supervisor:

by MB

Approval Date: 12/15/05

Expiration Date: N/A

Conditions of Approval:

Attached ☒

* Attach Additional Sheets If Necessary



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

Bass Enterprises Production Co.
901 N. Canal St. Suite 704
Carlsbad NM 88220
Attn: Gary Fletcher

December 15, 2005

Re: Poker Lake Unit 213

P-18-24s-30e

API: 30-015-33859

The New Mexico Oil Conservation Division District II Office (NMOCD) is in receipt of an Initial Report C-141 reporting a produced fluids release that occurred on 11/26/2005 at or near the above referenced well site.

Please submit a Corrective Action Work Plan to this office for correction/remediation of this release. Please use the "Guidelines For Remediation of Leaks, Spills, and Releases" as your guide.

This document may be found on the NMOCD web site: www.emnrd.state.nm.us/ocd , under Publications/Environmental Handbook/Miscellaneous Guidelines/Spill Prevention Clean up.

The work plan presented to the NMOCD must include general site characteristics, site ranking score, soil remediation action levels, soil remediation methods, and planned analytical testing for TPH, B-TEX , Chlorides or any other CoCs as applicable.

A Final Report Form C-141 is required to be submitted upon satisfactory completion of project, and must include a report of remediation actions taken with final confirmation sample analysis results attached.

Like approval by BLM required if applicable.

Please have the requested work plan in the Artesia office on or before January 12, 2006. The NMOCD District II Office must be notified 24 hours prior to commencement of remediation actions and 24 hours prior to samples being obtained where analysis of such samples are to be submitted to the NMOCD.

In the event that a satisfactory response is not received to this letter further enforcement will occur. Such enforcement may include this office applying to the Division for an order summoning you to a hearing before a Division Examiner in Santa Fe. Such a hearing may result in imposition of **CIVIL PENALTIES** for your violation of NMOCD rules.

If I can be of assistance in this matter, my contact information is listed below.

Sincerely,

Mike Bratcher

NMOCD District 2

1301 W. Grand Ave.

Artesia, NM 88210

(505) 748-1283 Ext. 108

(505) 626-0857

mbratcher@state.nm.com

NMOCD Incident Number: nMLB0534940800



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

BASS ENTERPRISES PRODUCTION COMPANY

901 North Canal, Suite 704

Carlsbad, NM 88220

January 20, 2006

REMEDIATION WORK PLAN DENIAL - POKER LAKE UNIT 213

A review of the remediation work plan submitted on January 12, 2006 for the Poker Lake Unit 213 (30-015-33859) has been completed by this office. The work plan is being returned for revision subject to the following comments:

1. Highly Contaminated/Saturated Soils are not limited to hydrocarbon contamination.
 - a. The release produced water at this location flowed into the pasture south of the tank battery, saturating the soils at the time of the release.
 - b. Since no delineation is provided in the work plan to show otherwise, it must be assumed that the flow paths and any pooling areas in the flow paths from this release have become highly contaminated by virtue of the liquids having evaporated leaving unsaturated but highly contaminated soils in place.
2. Highly Contaminated soils are present inside the berm of the tank battery.
 - a. Upon inspection of the location by OCD on January 18, 2006, soils inside the berm were found to exhibit gross staining in the walls of the berm and beneath the surface layer of soils inside the bermed area.
3. Site delineation (by visual examination) completed on January 18, 2006, shows that a watercourse may have been impacted.
 - a. The contamination flow path left the location south into the pasture then entered a natural drainage less than 1,000 feet from the location.
 - b. This drainage path leads to Dog Town Draw, a seasonal watercourse, west and down gradient from the location. (Map 1)
 - c. A watercourse is defined as any lake bed or gully, draw, stream bed, wash, arroyo, or natural or human-made channel through which water flows or has flowed.
4. Since no site delineation has been conducted it is not possible to evaluate the remediation methods proposed in the work plan.

Please submit a revised work plan, addressing the above comments prior to January 30, 2006.

Artesia OCD District Office

cc: Don George, S.M. Stoller Corporation (unsigned copy via e-mail only)



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

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Director

Oil Conservation Division

BASS ENTERPRISES PRODUCTION COMPANY

901 North Canal, Suite 704

Carlsbad, NM 88220

February 8, 2006

REMEDIATION WORK PLAN CONDITIONS OF APPROVAL - POKER LAKE UNIT 213

The NMOCD District 2 Office has reviewed the remediation work plan submitted by Stoller Corporation on January 30, 2006 for the release at the Poker Lake Unit 213 (30-015-33859). Your proposal to excavate and remove the contaminated soils from the location is approved subject to the following conditions:

- All contaminated soils must be fully delineated to maximum horizontal and vertical extent using a method appropriate for chloride contamination.
- Contaminated soils must be remediated by excavating to the maximum depth and horizontal extent practicable until a representative sample from the walls and bottom of the excavation is below the contaminant specific remediation level for benzene, toluene, ethylbenzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH) or other potential fresh water contaminants unique to the leak, spill or release (e.g. chlorides). Upon reaching this limit samples should be taken from the walls and bottom of the excavation to determine the remaining levels of soil contaminants. All soils removed from the location must be documented as to contaminants in the soils, contaminant levels, method of determining contaminant levels and disposition of the soils (OCD approved landfarm, centralized site, etc.).
- Chlorides must be remediated to naturally occurring background concentrations for the local area. Samples taken to determine this background level should be taken in undisturbed areas close to the location. If soil action levels cannot practicably be attained, a detailed evaluation of risk may be performed and provided in writing to OCD for approval showing that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh water, public health and the environment.
- If alternate methods of remediation are to be used, approval from the OCD District 2 Office is required prior to beginning any work using these alternate methods. A specific proposal outlining the alternate methods must be submitted in writing.
- If ground water is encountered during the soil/waste characterization, excavation or remediation of the impacted soils, a sample should be obtained to assess the incidents potential impact on ground water quality and the OCD District 2 Office should be notified immediately.
- Notify OCD District 2 Office 24 hours prior to commencement of work by Bass Enterprises or contractors, sub-contractors or affiliated companies that is intended to excavate, wash, move or disturb (such as in tilling, blading, etc.) soils or contaminated materials for the purpose of remediation, or hauling any soils or contaminated materials into or out of the location covered under this remediation work plan. This notification is to ensure NMOCD personnel are able to monitor compliance with approved remediation work plans as

required by the New Mexico Administrative Code. Therefore, if a reasonable schedule of work cannot be provided then a separate notification that work is to resume is required if work ceases at the location for more than 5 days.

- Notify OCD District 2 Office 24 hours prior to obtaining samples where analysis of samples will be submitted to OCD. ALL final delineation sample results and samples to determine naturally occurring background levels for chlorides must be submitted to the OCD whether or not the OCD actually witnesses those samples being taken.
- Upon termination of any required remedial actions, the area of a leak, spill or release may be closed, **after obtaining approval for the closure from the OCD District 2 office**, by backfilling any excavated areas, contouring to provide drainage, revegetating the area or other OCD approved methods. Upon completion of remedial activities a final report summarizing all actions taken to mitigate environmental damage related to the leak, spill or release will be provided to OCD for approval.
- For all Federal Lease wells, a "Like Approval" by the United States Bureau of Land Management may be required. It is the operators' responsibility to obtain this approval and the approval of any other surface owner that may be required by law, regulation or contractual obligation of the operator and surface owner.

Acceptance of the remediation work plan 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 reports and work plans does not relieve the operator of responsibility for compliance with any other federal, state or local laws and/or regulations.

NMOCD District 2 Contact Person: Chris Beadle, Office: (505) 748-1283 x107 / Cell: (505) 626-0831 / Fax: (505) 748-9720 / E-mail: Chris.Beadle@state.nm.us

Thank you for your prompt attention to this matter and your efforts in helping to protect our environment and the infrastructure of the oil and gas industry.



Artesia OCD District Office

cc: Don George, Stoller Corporation (unsigned copy delivered via e-mail)

Site Characterization/Remediation Work Plan

Poker Lake Unit # 213
Property / Well / Facility Name

Bass Enterprises Production Company
Company / Operator Name

11/26/2005
Date of Contamination Release / Spill

June 20, 2006
Date Plan Submitted BLM and OCD
for Review / Approval

Date Plan Approved

Date Remediation / Site Closure Approved

Site Characterization Report / Remediation Work Plan

Section 1: Location Identification

Location Name: Poker Lake Unit # 213

API: 30-015-33859

Section 18 Township 24 S Range 30E

Surface Owner: BLM

Was Surface Owner Contacted? ☒ Yes ☐ No

Surface Owner Required Actions? ☒ Yes ☐ No

If Yes, Describe: Surface Owner requires Bass to install an additional storage tank, repair faulty equipment, install high level tank alarms, and build up the firewall.

Site Characteristics: The area is primarily sandy with sparse vegetation.

Contact Information

	<i>Name</i>	<i>Phone</i>	<i>Fax</i>	<i>e-mail</i>
Operator Representative	Mike Waygood	505-361-8060	505-887-7473	mgwaygood@wtdfields.com
Contractor Representative	Donald L. George	505-885-0172	505-885-0776	dgeorge@stoller.com
Field Representative	Mike Waygood	505-361-8060	505-887-7473	mgwaygood@wtdfields.com

Section 2: Release Information

Released Material

Oil	0	BBL with 0	BBL of liquid recovered
Produced Water	500 - 700	BBL with 260	BBL of liquid recovered
Condensate	0	BBL with	BBL of liquid recovered
Natural Gas	0	MCF	
Other (Describe)			
		BBL with	BBL of liquid recovered
		BBL with	BBL of liquid recovered

Source of Release: Tank Battery

Suspected Cause of Release: Pump failure at tank battery resulted in tank spilling over.

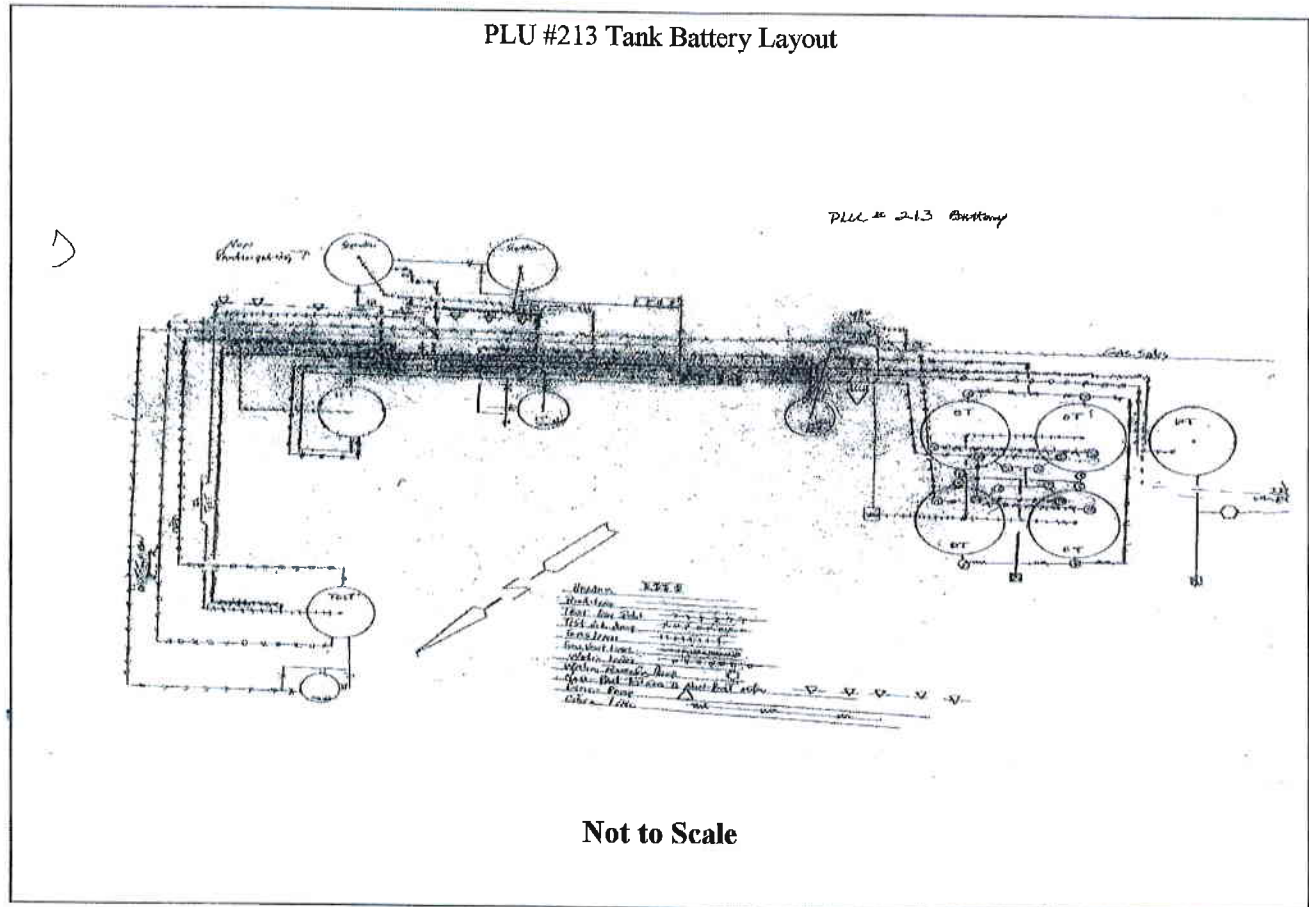
Steps taken to prevent future Release: The System was improved by installing an additional storage tank, new water lines and replacing faulty equipment. In addition, high level tank alarms were installed and the fire wall built up.

Site Characterization Report/Remediation Work Plan

Section 3: Contamination Impact Information

SITE RANKING SCORE				DEPTH TO GROUND WATER (GW)		
GW + WPA + SWB = 0 + 0 + 0 = 0				Less Than 50 feet	50-99 feet	Greater Than 100 feet
				0	10	0
Remediation Action Levels				WELLHEAD PROTECTION AREA (WPA)		
Total Ranking Score				Less Than 1000 feet from a water source, or; Less Than 200 feet from private domestic water source		
	>19	10 – 19	0 – 9	Yes		No
Benzene (ppm)	10	10	10	20		0
BTEX (ppm)	50	50	50			
TPH (ppm)	100	1000	5000			
Contaminated soils must be remediated until the contaminants are to the parts per million listed above				DISTANCE TO NEAREST SURFACE WATER BODY (SWB)		
Other contaminants, not listed, must be remediated to WQCC, EPA, RCRA or other standards for those specific contaminants.				Less Than 200 Horizontal Feet	200-1000 Horizontal Feet	Greater Than 1000 Horizontal Feet
				20	10	0

Percentage of impacted soils that are Highly Contaminated/Saturated or Unsaturated Contaminated: Unknown at this time.



Site Characterization Report/Remediation Work Plan

Section 4.0: Site Characterization

The following sections present the findings of the site characterization of the Poker Lake #213 tank battery, and provides a detailed work plan for site cleanup activities.

4.1 Introduction

The New Mexico Oil Conservation Division (NMOCD), District 2 Office was notified on November 26, 2006 that a release of production fluids had occurred at the Bass Enterprises Production Company (Bass) Poker Lake Unit #213. Bass submitted a C-141 Release Notification and Corrective Action Form via facsimile to the NMOCD on November 28, 2006. The spill involved an estimated 500 to 700 barrels (BBL) of produced water from the tank battery as a result of a pump failure. Approximately 260 BBL of spilled fluids were recovered using a vacuum truck.

Since the spill, Bass has improved the system by installing an additional storage tank, new water lines and replacing faulty equipment. In addition, high level tank alarms were installed and the fire wall increased in height.

The NMOCD requested Bass to submit a Corrective Action Work Plan for the Poker Lake Unit #213 Tank Battery Site (Site) in a letter dated December 15, 2005. The work plan was submitted to the NMOCD for approval on January 12, 2006. The work plan was disapproved in a letter from the NMOCD dated January 20, 2006. Disapproval of the work plan was based on the NMOCD inability to evaluate the remediation methods proposed because no site delineation had been conducted. The Remediation Work Plan was revised to include conducting a site characterization to determine the nature and extent of contamination and resubmitted on January 27, 2006. In their letter of February 8, 2006 the NMOCD approved the work plan with conditions.

Stoller reviewed the ranking criteria for this site to determine the recommended remediation action levels. Using NMOCD's "Guidelines for Remediation of Leaks, Spills, and Releases," Stoller determined the total ranking score to be "zero" ($GW + WPA + SWB = 0$). Depth to groundwater is greater than 100 feet. The site is not within the limits of a wellhead protection area. The distance to the nearest surface water body is greater than 1,000 horizontal feet. Therefore, hydrocarbon remediation action levels are 10 parts-per-million (ppm) benzene, 50 ppm total benzene, toluene, ethylbenzene, and xylenes (BTEX), and 5,000 ppm total petroleum hydrocarbons (TPH). However, Poker Lake Unit #213 was primarily impacted by produced water and current NMOCD guidelines do not directly address remedial action levels for chlorides.

According to both BLM and NMOCD stipulations, chlorides must be remediated to naturally occurring background concentrations for the local area. In practice, BLM and NMOCD realistically enforce their cleanup criteria on a site-specific basis. Remediation action levels are expected to target background concentrations with allowances for site-specific factors such as the:

- practicable limit of remediation
- overall reduction in contaminant concentration
- proximity to an active production area
- pre-existing conditions unrelated to the current scope of remediation
- impact to surrounding vegetation

Site Characterization Report/Remediation Work Plan

- protection of groundwater and surface water quality

Prior to commencing any field activities a Class III archaeological survey was conducted by Boone Archaeological Services. The survey was expanded because production water from the spill had flowed beyond the original 600 x 600 feet footprint of the well pad and onto the surrounding BLM pasture land. The archaeological survey report was completed on March 28, 2006 with negative findings. Stoller mobilized to the field and conducted a characterization of the Site from April 10 through April 12, 2006.

This report presents both the findings of the site characterization and a plan for corrective actions at the Site. The primary driver for cleanup at the Poker Lake #213 site is chlorides. The remediation work plan will strive to remove chlorides that have detrimental impacts to existing vegetation and minimize the potential for chlorides to migrate off site during seasonal monsoonal rain events.

4.2 Site Location and Description

Poker Lake Unit #213 is unit letter P, in section 18, township 24 south, range 30 east in Eddy County, New Mexico. The site consists of a wellhead, pump jack, tank battery, earthen berms and ancillary above ground piping situated on a caliche pad. Crude oil and produced water are transferred to the tank battery via a 2-inch flow line. A search of the well location using the U.S. Bureau of Land Management (BLM), New Mexico State Office, Statewide Spatial Database, verified BLM surface ownership/management.

4.3 Site Characterization Objectives

The spill resulted in fluids flowing downgradient from the production pad into the surrounding pasture and impacted several areas. One arm of the spill entered a small drainage channel and flowed downgradient about 1000 feet. Areas where production waters had ponded were visibly stained with hydrocarbons. Chloride residues were not clearly visible in all areas impacted, but could be delineated using distressed and dead vegetation within the spill areas. In addition to field observations the characterization was guided by a map of the impacted area made by Jerry Blakley (BLM, Carlsbad Field Office) shortly after the spill occurred. The impacted areas designated as Areas A, B, C and D are shown on Figure 1. This map of the impacted areas is based on Global Positioning System (GPS) data collected by the BLM shortly after the spill and includes the GPS locations of soil samples collected by Stoller during the site characterization.

Site characterization activities were conducted at the Poker Lake #213 site from April 10 through April 12, 2006. Activities included a visual inspection of the site and collection of 23 soil samples. All soil samples were screened in the field for chlorides and 15 were sent to an offsite laboratory for analysis of both chlorides and TPH. GPS coordinates were taken at each sample location so they could be plotted on the shape file of the impacted area supplied by the BLM. In addition, Stoller met onsite with Terry Gregston (BLM) during field activities to discuss the overall approach of the site characterization and the goals for future site remediation. It was generally agreed that the lateral extent of the contamination was defined as a result of the BLM mapping the spill shortly after it occurred. Therefore, the objective of the investigation was to address the following issues:

- Determine the concentrations of chlorides in each area
- Determine the extent to which chlorides have migrated down the shallow draw (Area D)

Site Characterization Report/Remediation Work Plan

- Determine if chlorides threaten Dog Town Draw, a seasonal watercourse approximately 1,000 feet downgradient of the release
- Establish a local background concentration for chlorides
- Determine if TPH is present above the cleanup guideline
- Determine vertical extent of chlorides.

4.4 Soil Waste Characteristics

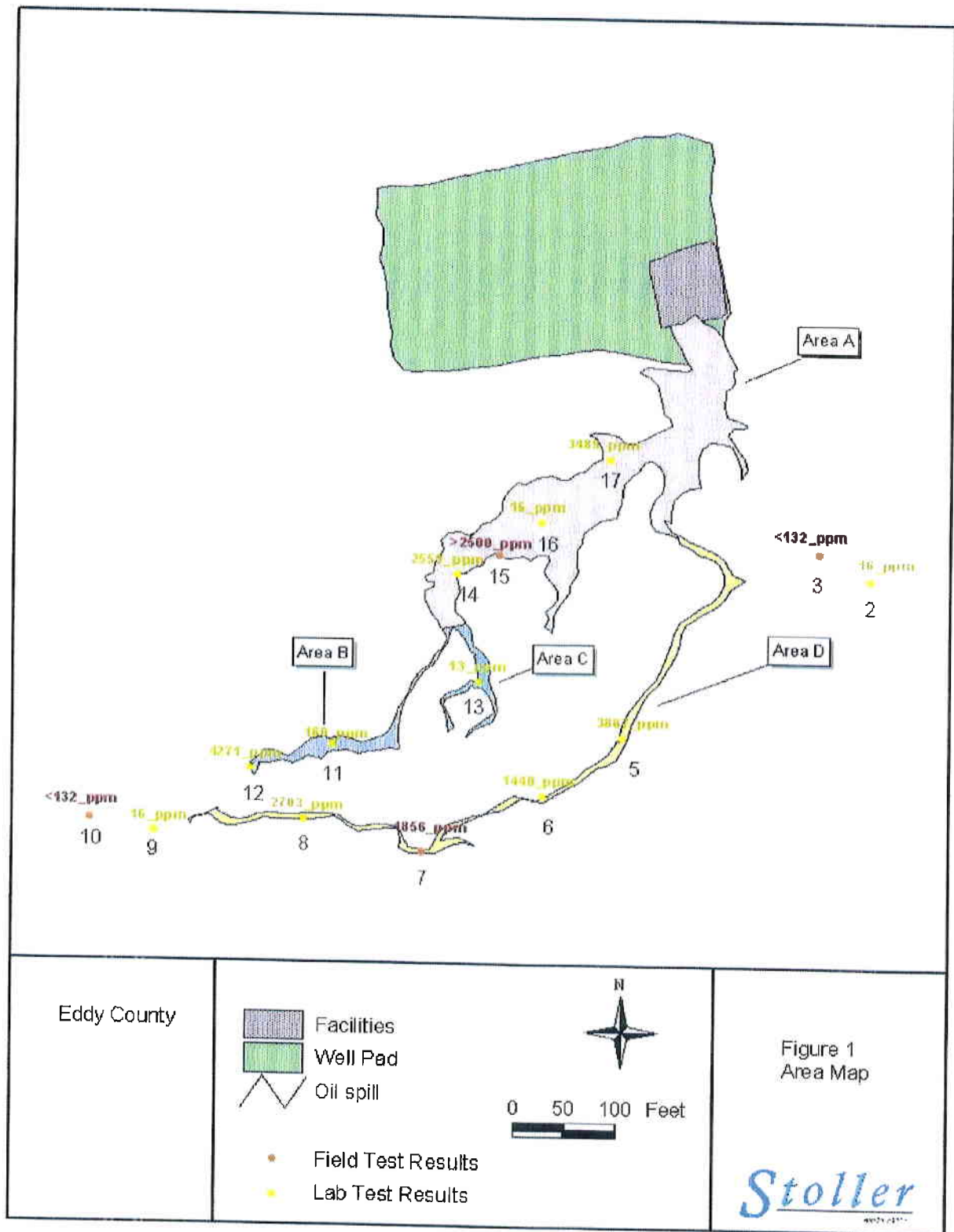
Soils within and beneath the area of the spill were evaluated to determine the type and extent of contamination at the Site. The following sections document the degrees of soil contamination that were assessed during the investigation.

4.4.1 Highly Contaminated/Saturated Soils:

Highly Contaminated/Saturated Soils are defined as soils which contain a free liquid phase or exhibit gross staining. A visual inspection of each area determined that the release was predominately production water and that highly contaminated soil was currently unsaturated. Soils visibly stained with hydrocarbons were noted during the site characterization and 15 soil samples were collected for laboratory analysis of TPH. The representative soil samples collected within the spill area included samples from the most visibly stained areas most likely to contain hydrocarbons. Only two samples had detectable concentrations of TPH. TPH concentrations ranged from 11.4 ppm to 357 ppm, well below the recommended cleanup guideline of 5,000 ppm.

Previously saturated soils contaminated with chlorides were visually observed during the site characterization. Twenty soil samples were collected and screened in the field using test strips. In addition, 15 of these field screened samples were then sent to a laboratory for analysis of both TPH and chlorides. Laboratory analytical results detected chloride concentrations ranging from 16 ppm to 6638 ppm within the impacted areas with most chloride concentrations generally in the 2,000 ppm to 3,000 ppm range. Chlorides are the primary contaminant at the Poker Lake #213 site.

Site Characterization Report/Remediation Work Plan



Site Characterization Report/Remediation Work Plan

4.4.2 Unsaturated Contaminated Soils:

Unsaturated Contaminated soils are defined as soils which are not highly contaminated/saturated but contain benzene, toluene, ethyl benzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH) or other potential fresh water contaminants (e.g. chlorides) unique to the leak, spill or release.

4.5 Background Levels:

In order to determine naturally occurring background concentrations for the local area, Stoller collected four "background" soil samples at the Poker Lake #213 site. Two samples (PLU213-BG100U and -BG150U) were collected from undisturbed soil about 100 ft and 150 ft upgradient of both the tank battery and the point where production water from the release entered into the small draw (waypoint 004). Two additional "background" samples were collected within the same draw about 1,000 ft downgradient of this point. The entire length of the draw was denuded of vegetation from where the spill entered it to about 900 ft downgradient. The downgradient "Background" samples were collected from an undisturbed area where healthy vegetation had returned to the channel. These sample locations (waypoints 009 and 010) were selected to confirm that chlorides had not migrated beyond the denuded portion of the drainage.

"Background" soil samples (shaded in Table 1) were screened in the field using Hach® Quantab® chloride test strips. Chloride concentrations for field screened samples were below the detection limit of 132 ppm for all four samples. Two of these samples were then sent for laboratory analysis to confirm field test results. Both samples (PLU213-D009-0 and PLU213-BG150U) had chloride concentrations of 16 ppm.

4.6 Soil Sample Analysis:

Production water from the release flowed downgradient following the contours of the surrounding pasture land and bifurcating in several areas. The site was divided into four areas (Areas A through D) and soil samples collected from each area. This approach was taken to better understand chloride impacts in each of the areas and help determine the best course of action to meet cleanup goals.

Area A includes the impacted area closest to the PLU #213. Area A is the largest area contaminated with chlorides and encompasses about 24,000 ft². The spill originated at the tank battery and flowed south and southwest approximately 100 ft before bifurcating. The main portion of the flow (Area A) continued toward the southwest while a narrower portion continued south until reaching a small draw and turning southwest. Area D includes the release from where it splits from Area A and the entire portion of the draw impacted by chlorides (about 4,200 ft²). At the distal end of the release, Area A again bifurcates into Area C which continued to the south and Area B which continued to the southwest. These areas are about 1,100 ft² and 2,200 ft², respectively. The total area impacted by chlorides is about 0.75 acres.

Soils throughout the impacted area consist primarily of unconsolidated sands and silts with very little clayey material. This soil type allowed production water from the one-time release to quickly migrate downward. A visual inspection of the area confirmed that the release was predominately production water and that contaminated soil was currently unsaturated. Soils visibly stained with hydrocarbons were noted only in areas where ponding had occurred and vegetation within the spill area was typically distressed or dead.

Site Characterization Report/Remediation Work Plan

Soil samples were transported by Stoller and relinquished under chain-of-custody to Cardinal Laboratories in Hobbs, New Mexico, for analysis. The chain-of-custody form is included as Attachment B. The samples were analyzed for TPH by method 8015 M and chlorides by method 4500-Cl⁻B. Attachment A is a copy of the laboratory certificate of analysis. Table 1 presents a summary of laboratory and field screening analytical results for characterization samples.

Figure 1 shows each area and includes GPS waypoint numbers, sample locations, and chloride concentrations. The analytical findings for each of the areas characterized are discussed below. GPS waypoint numbers are used to identify sample locations in the table for easy cross reference to Figure 1.

4.6.1 Area A

Area A is the largest area contaminated with chlorides and encompasses about 24,000 ft². Four soil sample locations (waypoints 014 through 017) were selected within Area A. Seven samples were collected at depths ranging from ground surface to 2 ft below ground surface (bgs). Samples were collected from areas that were clearly stained (waypoints 015 and 017) to represent "worst case" (Photograph 1) and from areas that appeared undisturbed, but were surrounded by dead vegetation (waypoints 014 and 016).

Each sample was screened for chlorides in the field using Hach® Quantab® chloride test strips. Results ranged from none detected (<132 ppm) to 3,772 ppm. Four of the seven samples were then selected for laboratory analysis of TPH and chlorides.

Laboratory results from TPH analysis indicate concentrations that range from below the detection limit (<10 ppm) to 357 ppm. Chloride concentrations range from 16 ppm to 3,489 ppm. Two samples were collected from waypoints 015 and 016 at a depth of 2 ft bgs and chloride concentrations range from 16 ppm to greater than 2,500 ppm (field test). Laboratory results are documented in Attachment A and included in Table 1.

Overall, the correlation between the Hach® Quantab® chloride test strips and results of the laboratory analytical is very good.

4.6.2 Area B

Area B is at the distal end of the release and encompasses an area of about 2,200 ft². Two soil sample locations (waypoints 011 and 012) were selected within the disturbed area. Three samples were collected at depths ranging from ground surface to 2 ft bgs. Samples were collected from areas that were clearly impacted (waypoint 012) to represent "worst case" and from an area that appeared undisturbed, but is surrounded by dead vegetation (waypoint 011). Each sample was field screened using Hach® Quantab® chloride test strips. Field screening results range from 184 ppm to 8,196 ppm. Samples were then sent for laboratory analysis of TPH and chlorides. TPH was not detected above the detection limit (<10 ppm) in any of the samples. Chloride concentrations range from 160 ppm to 6,638 ppm. Laboratory results are documented in Attachment A and included in Table 1.

Site Characterization Report/Remediation Work Plan

4.6.3 Area C

Area C is at the distal end of the release area and encompasses about 1,100 ft². Soils throughout the impacted area consist primarily of unconsolidated sands and silts with very little clayey material. As a result, production water from the one-time release. A visual inspection of the area confirmed that the release was predominantly production water and that contaminated soil was currently unsaturated. Vegetation within portions of the spill area was distressed. One soil sample location (waypoint 013) was selected within a representative portion of the disturbed area surrounded by distressed vegetation. The sample was field screened using Hach® Quantab® chloride test strips; the measured concentration was below the detection limit of 132 ppm.

The sample was then sent for laboratory analysis of TPH and chlorides. TPH was not detected above the detection limit (<10 ppm) and the chloride concentration was 16 ppm. Laboratory results are documented in Attachment A and included in Table 1.

4.6.4 Area D

Area D begins about 100 ft south of the tank battery where the release bifurcates into two distinct arms. Production water from the spill continued downgradient to waypoint 004 where it intersected a narrow draw and turned southwest. Once the fluids entered the draw they remained confined within its banks and flowed for about 1,000 linear feet. Area D includes and encompasses a total area of about 2,200 ft². Vegetation within the draw was typically distressed or dead, but at about 900 to 1,000 feet downgradient heavy vegetation reappeared in the channel. Photograph 2 shows a typical portion of the channel and Photograph 3 shows the channel about 900 ft. downgradient where vegetation first reappears. Analytical data from this portion of Area D confirms chlorides have not to date migrated to a point where Dog Town Draw, a seasonal watercourse approximately 1,000 feet further downgradient, is threatened.

Six soil sample locations (waypoints 005 through 010) were selected within the channel proper at approximately every 200 feet. A total of eight soil samples were collected six from the ground surface and one sample from 1 ft bg (waypoint 005) and one from 2 ft bg (waypoint 008). Samples were collected from areas where water had ponded to represent "worst case" locations and from areas that appeared undisturbed, but were void of vegetation. Each sample was field screened field using Hach® Quantab® chloride test strips. Results ranged from below the detection limit (<132 ppm) to 4,152 ppm.

Six representative samples were then selected and sent for laboratory analysis of TPH and chlorides. Only one soil sample had TPH above the detection limit (10 ppm). This sample (waypoint 005) had a concentration of 11.4 ppm well below the cleanup guideline. Chloride concentrations ranged from 16 ppm to 3,887 ppm. A Sample collected from waypoint 008 found little or no change in chloride concentrations from surface to 2 ft bgs. Laboratory results are documented in Attachment A and included in Table 1.

Site Characterization Report/Remediation Work Plan



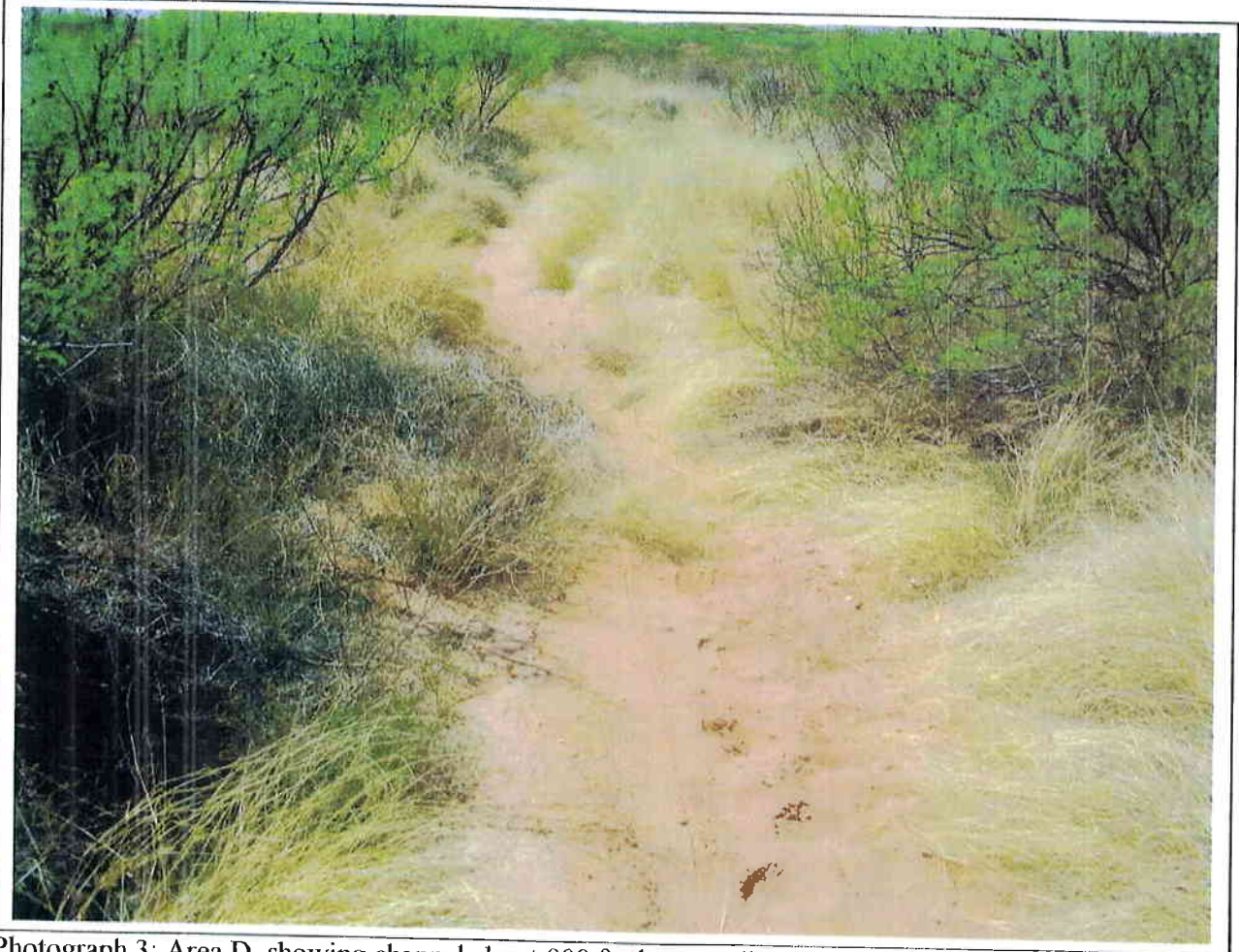
Photograph 1: Area A, showing dead vegetation and stained soils where fluids ponded.

Site Characterization Report/Remediation Work Plan



Photograph 2: Area D, showing typical view of channel.

Site Characterization Report/Remediation Work Plan



Photograph 3: Area D, showing channel about 900 ft. downgradient where vegetation first reappears.

Site Characterization Report/Remediation Work Plan

Table 1
Analytical Results for Characterization Samples

Sample Number	Sample Location/Depth	TPH GRO (ppm)	TPH DRO (ppm)	Chlorides (ppm)	Field Screening Results Chlorides (ppm)
Area A					
PLU213-A014-0	Waypoint 014/ surface	<10	<10	2,559	1,928
PLU213-200DG-0	Waypoint 015/ surface	NA	NA	NA	>2,500
PLU213-200DG-1	Waypoint 015/ 1 ft bg	NA	NA	NA	>2,500
PLU213-200DG-2	Waypoint 015/ 2 ft bg	NA	NA	NA	>2,500
PLU213-A016-0	Waypoint 016/ surface	<10	<10	16	<132
PLU213-A016-2	Waypoint 016/ 2 ft bg	<10	<10	16	<132
PLU213-A017-0	Waypoint 017/ surface	<10	357	3,489	3,772
Area B					
PLU213-B011-0	Waypoint 011/ surface	<10	<10	160	184
PLU213-B012-0	Waypoint 012/ surface	<10	<10	4,271	5,973
PLU213-B012-2	Waypoint 012/ 2 ft bg	<10	<10	6,638	8,196
Area C					
PLU213-C013-0	Waypoint 013/ surface	<10	<10	16	<132
Area D					
PLU213-BG150U	Waypoint 002/ surface	<10	<10	16	<132
PLU213-BG100U	Waypoint 003/ surface	NA	NA	NA	<132
PLU213-600DG-0	Waypoint 007/ surface	NA	NA	NA	1,856
PLU213-1000DG-0	Waypoint 010/ surface	NA	NA	NA	<132
PLU213-D005-0	Waypoint 005/ surface	<10	11.4	3,887	4,152
PLU213-D005-1	Waypoint 005/ 1 ft bg	<10	<10	3,295	3,076
PLU213-D006-0	Waypoint 006/ surface	<10	<10	1,440	1,724
PLU213-D008-0	Waypoint 008/ surface	<10	<10	2,703	2,516
PLU213-D008-2	Waypoint 008/ 2 ft bg	<10	<10	2,767	2,516
PLU213-D009-0	Waypoint 009/ surface	<10	<10	16	<132

NA = Not Analyzed

bgs = below ground surface

Site Characterization Report/Remediation Work Plan

4.7 Characterization Conclusions:

A Class III archaeological survey was conducted at the Poker Lake #213 site by Boone Archaeological Services and the archaeological survey report was completed with negative findings

The NMOCD "Guidelines for Remediation of Leaks, Spills, and Releases" indicate a total ranking score of 0 -9 is applicable to this site. Depth to groundwater is greater than 100 feet. The site is not within the limits of a wellhead protection area. The distance to the nearest surface water body is greater than 1,000 horizontal feet.

The production water released from the tank battery at the Poker Lake #213 contained both chlorides and TPH. TPH was not detected above the cleanup action guideline in any of the soil samples analyzed. Therefore, the primary driver for cleanup at the Poker Lake #213 is chlorides.

Analytical data from Area D confirms chlorides have not to date migrated to a point where Dog Town Draw is threatened. The furthest extent of the release is more than 1,000 feet from this seasonal watercourse.

The horizontal extent of contamination at the Site has been fully delineated although the vertical extent has not. In places where fluids ponded contamination appears to have soaked into the sandy soils to a depth greater than 2 ft bg.

Background samples collected upgradient of Area D had chloride concentrations below the detection limit of the Hach® Quantab® chloride test strips (<132 ppm) and laboratory analytical results had chloride concentrations of 16 ppm. Additional characterization soil samples analyzed in Area A, Area C and the distal portion of the Area D channel support these findings.

Overall the correlation between the Hach® Quantab® chloride test strips and results of the laboratory analytical is very good and the test strips will be used during cleanup activities as a valuable field screening tool.

Site Characterization Report/Remediation Work Plan

Section 5.0 Remediation Work To Be Conducted

The Site is located in an active oil field where underground oil and gas transmission pipelines may be present. All electrical power is supplied by overhead lines and there are no municipal water or sewer lines in the area of the Site. A utility notification will be conducted prior to commencing any subsurface remedial activities. Specifically this includes Bass Enterprises Production Company (PLU #213 infrastructure) and oil and gas transmission companies that operate in the vicinity.

The production water released from the tank battery contained both chlorides and hydrocarbons. The site characterization found only minor hydrocarbon contamination and no TPH or BTEX detected above the recommended cleanup guidelines. Therefore, the removal of chlorides will guide remedial actions at the site. Soils highly contaminated with chlorides will be excavated and hauled off the premises to an NMOC approved facility. In the following sections each area is discussed along with our recommended approach to doing the cleanup.

5.1 Remedial Approach Area A

Area A is the largest area contaminated with chlorides and encompasses about 24,000 ft². Area A is closest to the well pad. Soil samples collected during the site assessment contain chloride concentrations that range from 16 ppm to 3,489 ppm at the surface and in places greater than 2,500 ppm (field test) at a depth of 2 ft bgs. The following approach is recommended for the cleanup of Area A:

Area of Excavation

Stoller will use the GPS data provided by the BLM to mark the impacted area on the ground surface using a combination surveyor flags and spray paint. The marking will be offset about 1 foot outside of the original data point to ensure that the entire lateral extent of the impacted area is included within the boundaries of marked area. Because of the intrinsic errors in handheld GPS data (± 10 feet) special care will be taken to include any and all areas of dead or distressed vegetation that may fall outside of the GPS data.

Contaminated Soil Removal

Soil within the outlined extent will be excavated to a depth of about 1 ft bg. Soils may be excavated to a greater depth at the discretion of Stoller's onsite field supervisor. Upon completion, about 30 representative soil samples will be collected from the bottom of the excavation. Samples will be collected on approximately 25 foot centers as shown in Figure 2. Each of the sample locations will be marked by a surveyor flag with a unique sample identification number and its corresponding GPS waypoint number.

The sample will then be field screened using the Hach® Quantab® chloride test strips and the results recorded. When the results of field screening are below either the detection limit of the chloride test strips or the recommended cleanup guideline, then the soil sample will be sent to the laboratory for analysis. If the results of laboratory analysis confirm that the cleanup goal has been met then the excavation will be left open for agency inspection and approval to backfill.

Site Characterization Report/Remediation Work Plan

If the results of field screening are above the targeted cleanup guideline an additional foot of soil will be excavated. Soils may be excavated to a greater extent at the discretion of Stoller's onsite field supervisor to a maximum practicable excavation depth of 4 ft bg.

The excavation area will include the sample location and extend laterally 25 feet in every direction. This process will continue until; 1) all highly contaminated chloride soil is removed from within the boundaries of the marked extent or; 2) regulatory agency cleanup goals have been met based on the allowances for site-specific factors as described in Section 5.0.

5.2 Remedial Approach Area B

Area B is at the distal end of the release and encompasses an area of about 2,200 ft². Neither BTEX nor TPH was detected above the detection limit (<10 ppm) in any of the characterization samples. Chloride concentrations ranged from 160 ppm to 4,271 in surface soil and 6,638 in the sample collected at a depth of 2 ft bg. The following approach is recommended for the cleanup of Area B.

Area of Excavation

Stoller will use the GPS data provided by the BLM to mark the impacted area on the ground surface using a combination surveyor flags and spray paint. The marking will be offset about 1 foot outside of the original data point to ensure that the entire lateral extent of the impacted area is included within the boundaries of marked area. Because of the intrinsic errors in handheld GPS data (± 10 feet) special care will be taken to include any and all areas of dead or distressed vegetation that may fall outside of the GPS data.

Contaminated Soil Removal

Soil within the outlined extent will be excavated to a depth of about 1 ft bg. Soils may be excavated to a greater at the discretion of Stoller's onsite field supervisor. Upon completion about 6 representative soil samples will be collected from the bottom of the excavation. Samples will be collected on approximately 25 foot centers in the main portion of Area B. One composite sample will be collected from three locations in the narrowest portion of Area B. All sample locations are shown on Figure 3. Each of the sample locations will be marked by a surveyor flag with a unique sample identification number and its corresponding GPS waypoint number.

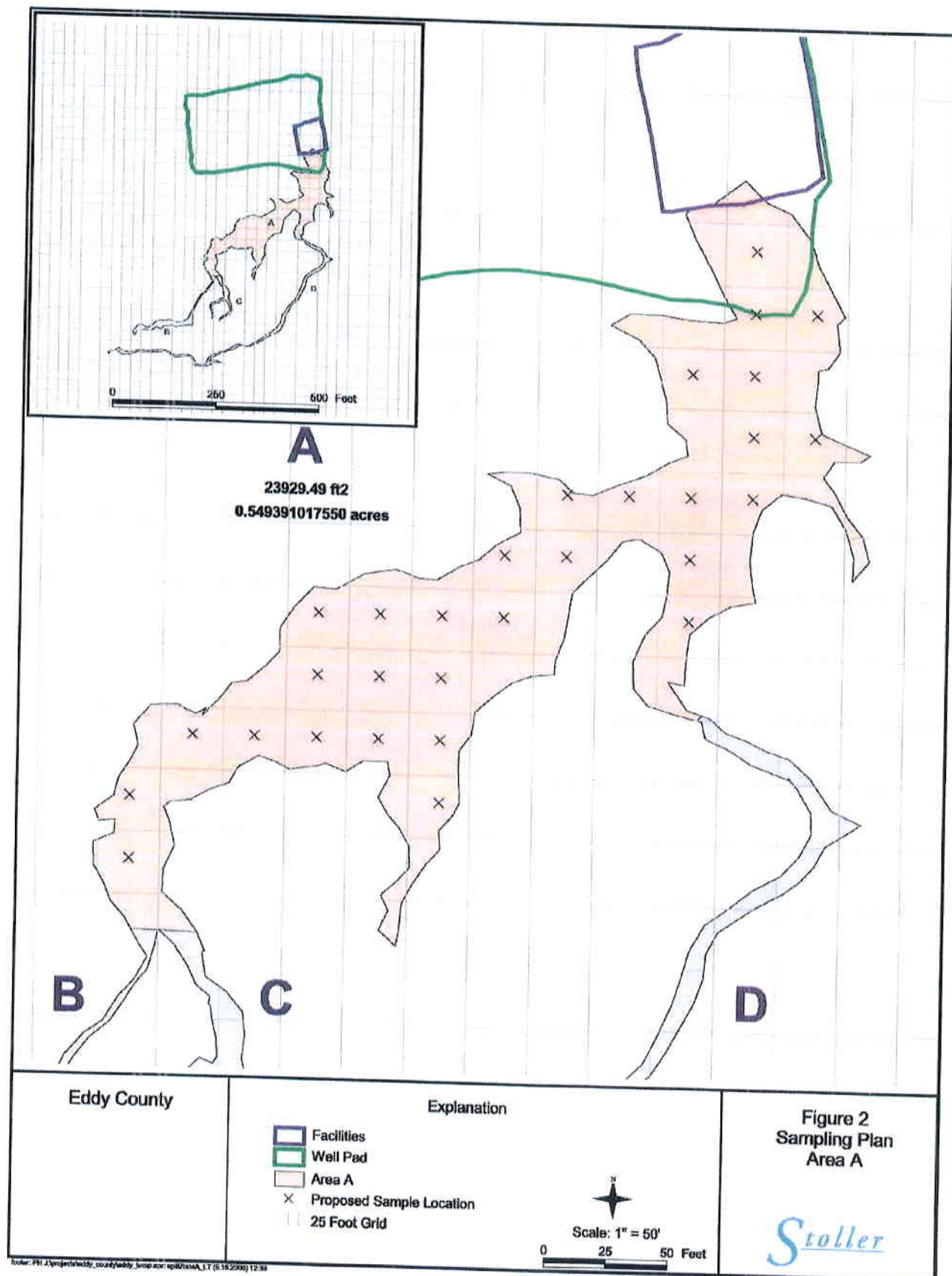
The sample will then be field screened using the Hach® Quantab® chloride test strips and the results recorded. When the results of field screening are below either the detection limit of the chloride test strips or the recommended cleanup guideline, then the soil sample will be sent to the laboratory for analysis. If the results of laboratory analysis confirm that the cleanup goal has been met then the excavation will be left open for agency inspection and approval to backfill.

If the results of field screening are above the recommended cleanup guideline an additional foot of soil will be excavated. Soils may be excavated to a greater at the discretion of Stoller's onsite field supervisor.

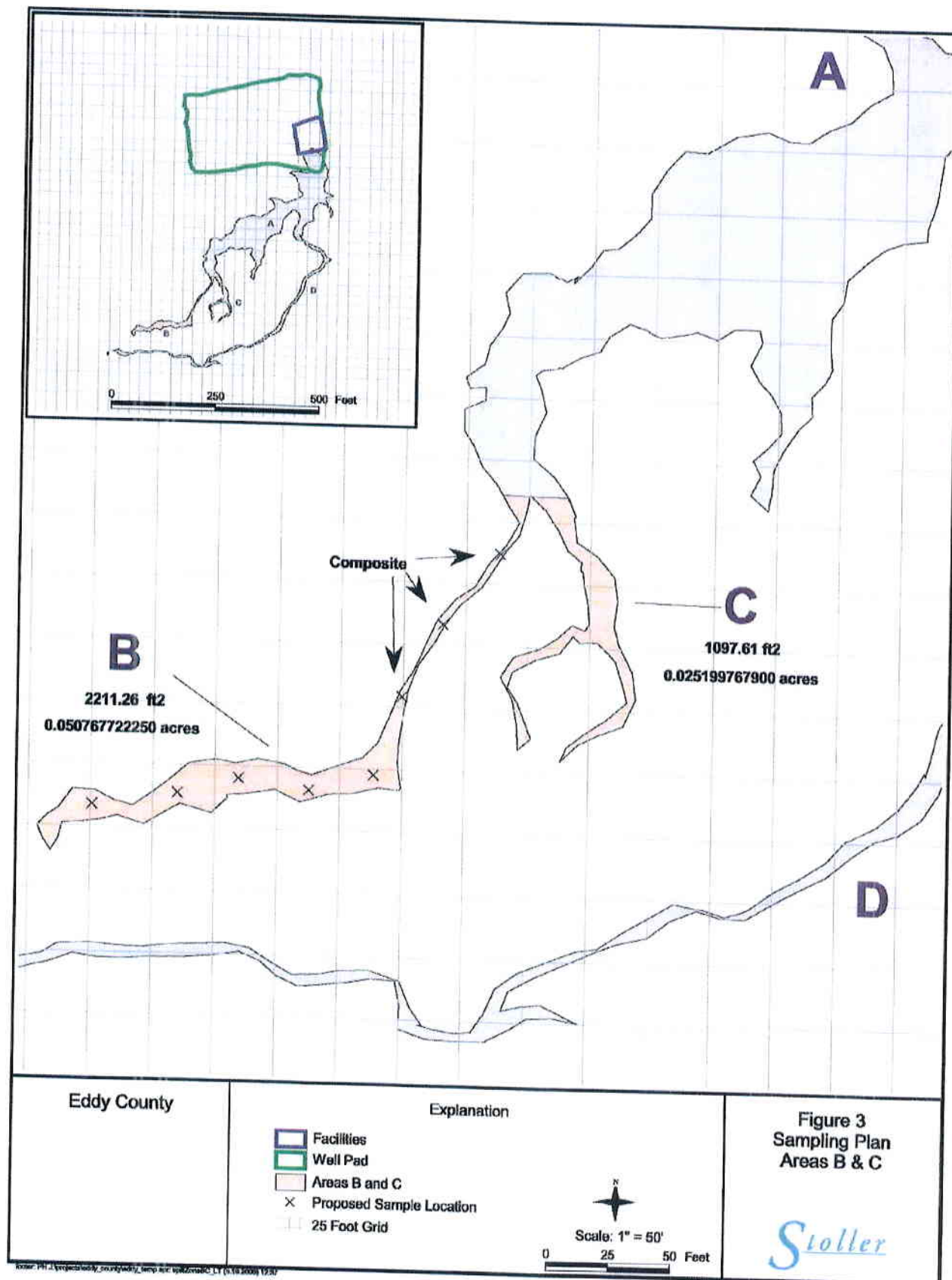
Site Characterization Report/Remediation Work Plan

The excavation area will include the sample location and extend laterally in 25 feet in every direction. This process will continue until; 1) all highly contaminated chloride soil is removed from within the boundaries of the marked extent to a maximum practicable depth of 4 ft bg or; 2) regulatory agency cleanup goals have been met based on the allowances for site-specific factors as described in Section 5.0.

Site Characterization Report/Remediation Work Plan



Site Characterization Report/Remediation Work Plan



Site Characterization Report/Remediation Work Plan

5.3 Remedial Approach Area C

Area C is at the distal end of the release area and encompasses about 1,100 ft². A visual inspection of the area confirmed that the release was predominately production water and that contaminated soil was currently unsaturated. Vegetation within portions of the spill area was distressed.

Because of the limited size of Area C only one characterization soil sample location was selected. The sample was collected within a representative portion of the disturbed area surrounded by distressed vegetation. The sample was field screened using Hach® Quantab® chloride test strips and the concentration was below the detection limit of 132 ppm. The sample was then sent for laboratory analysis of TPH and chlorides. TPH was not detected above the detection limit (<10 ppm) and the chloride concentration was 16 ppm. The limited size of Area C and the lack of laboratory analytical results above the recommended cleanup guidelines support no further cleanup actions are required for Area C. However, we recommend a composite sample be collected from 5 locations within Area C and a sample collected 2 feet below ground to confirm the results of the site characterization sample. If higher concentrations are found from the results of the composite and bgs samples then the same cleanup method will be used that was described for Area B.

5.4 Remedial Approach Area D

Area D begins about 100 ft south of the tank battery where the release bifurcates into two distinct arms. Production water from the spill continued downgradient to waypoint 004 where it intersected a narrow draw and turned southwest. Once the fluids entered the draw they remained confined within its banks and flowed for about 1,000 linear feet. Area D includes and encompasses a total area of about 2,200 ft².

Six representative samples were sent for laboratory analysis of TPH and chlorides. Only one soil sample detected TPH above the detection limit (<10 ppm) this sample had a concentration of 11.4 ppm well below the cleanup guideline. Chloride concentrations ranged from 16 ppm to 3,881 ppm. A Sample collected 2 ft bg found little or no change in chloride concentrations from surface.

Area of Excavation

Area D will not need to be marked prior to remediation because it is apparent where the spill entered the channel and once confined to the narrow channel the fluids did not leave its banks.

Contaminated Soil Removal

Soil within the draw will be excavated to a depth of about 1 ft bgs. Soils may be excavated to a greater at the discretion of Stoller's onsite field supervisor. Upon completion about approximately 12 representative soil samples will be collected from the bottom of the excavation. Samples will be collected at approximately every 75 feet in the draw (Figure 4). All sample locations are shown on Figure 4. Each of the sample locations will be marked by a surveyor flag with a unique sample identification number and its corresponding GPS waypoint number.

The sample will then be field screened using the Hach® Quantab® chloride test strips and the results recorded. When the results of field screening are below either the detection limit of the chloride test strips or the recommended cleanup guideline, then the soil sample will be sent to the laboratory for analysis. If

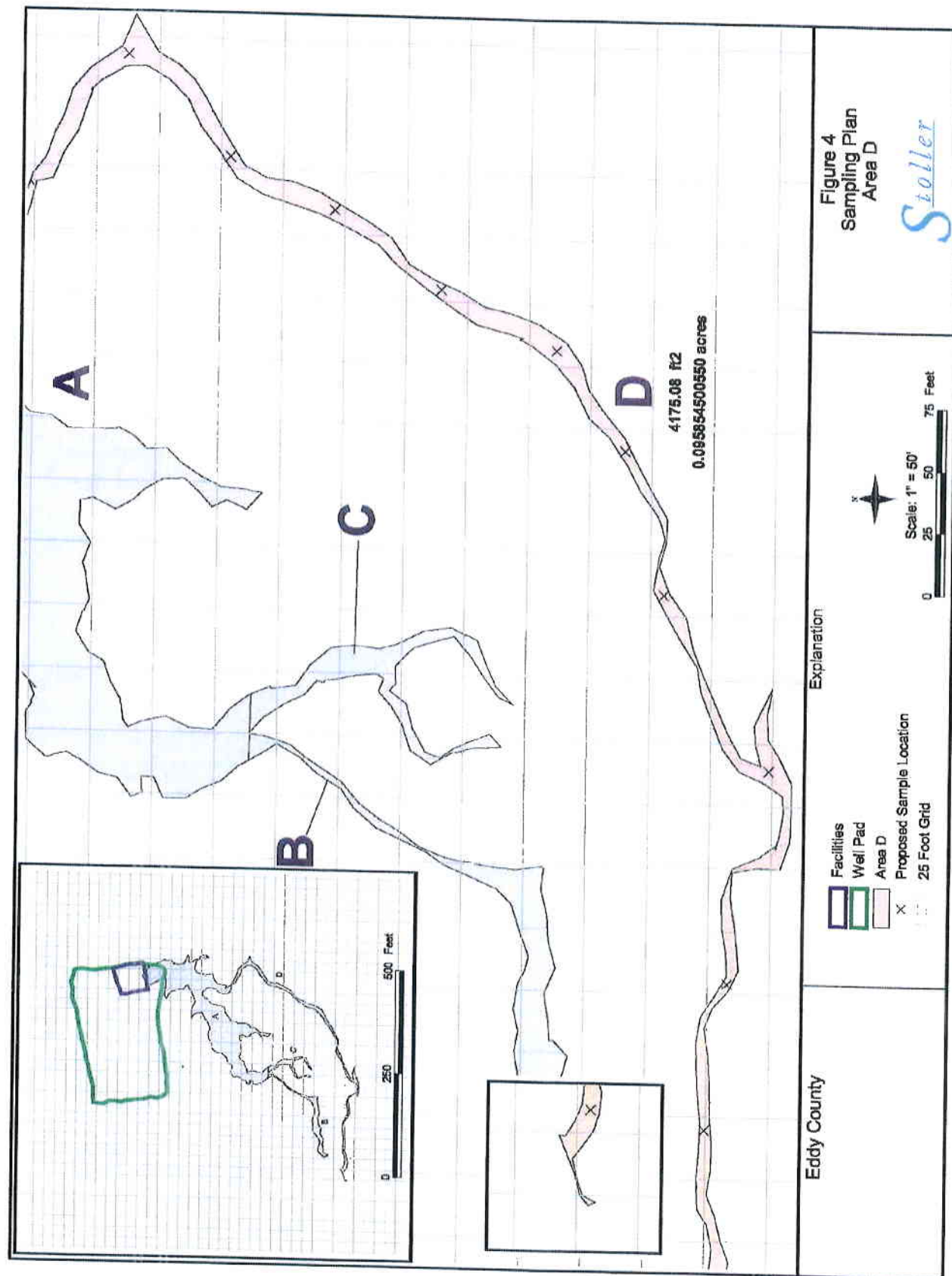
Site Characterization Report/Remediation Work Plan

the results of laboratory analysis confirm that the cleanup goal has been met then the excavation will be left open for agency inspection and approval to backfill.

If the results of field screening are above the recommended cleanup guideline an additional foot of soil will be excavated. Soils may be excavated to a greater extent at the discretion of Stoller's onsite field supervisor.

The excavation area will include the sample location and extend laterally in each direction to a point within approximately 25 feet of the next point that tested below the cleanup guideline. This process will continue until; 1) all chloride contaminated soil is removed from within the boundaries of the narrow channel or; 2) regulatory agency cleanup goals have been met based on the allowances for site-specific factors as described in Section 5.0.

Site Characterization Report/Remediation Work Plan



Site Characterization Report/Remediation Work Plan

5.5 Site Reclamation

Disturbed areas will be revegetated after the site has been satisfactorily prepared. Site preparation will include respreading topsoil to an adequate depth, and may also include ripping, tilling, disking on contour, and dozer track-imprinting. The BLM will advise Bass of the revegetation methods, objectives, and seasons to plant. Native perennial species or other plant materials specified by the BLM will be used. Seeding or planting will be repeated until revegetation is successful, as determined by the BLM. Excavated areas will be backfilled with appropriate fill, graded in a manner to minimize erosion (i.e., windrows perpendicular to slope, hummocks or other) and seeded with a BLM approved seed mix.

Site Characterization Report/Remediation Work Plan

Attachment A



PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ATTN: HARRY BOLTON
314 W. MERMOD, SUITE 102
CARLSBAD, NM 88220
FAX TO: (505) 885-0776

Receiving Date: 04/13/06
Reporting Date: 04/20/06
Project Number: 4102-040
Project Name: POKER LAKE UNIT 213
Project Location: POKER LAKE FIELD

Sampling Date: 04/12/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C ₈ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)
ANALYSIS DATE:		04/18/06	04/18/06
H11024-1	PLU213-A014-0	<10.0	<10.0
H11024-2	PLU213-A016-0	<10.0	<10.0
H11024-3	PLU213-A016-2	<10.0	<10.0
H11024-4	PLU213-A017-0	<10.0	357
Quality Control		787	738
True Value QC		800	800
% Recovery		98.3	92.3
Relative Percent Difference		2.7	1.8

METHOD: SW-846 8015 M

Buyers J & Coole
Chemist

4/20/00

Date

H11024A

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



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ANALYTICAL RESULTS FOR SM STOLLER

ATTN: HARRY BOLTON
314 W. MERMOD SUITE 102
CARLSBAD, NM 88220
FAX TO: (505) 885-0776

Receiving Date: 04/13/06
Reporting Date: 04/14/06
Project Owner: BASS ENTERPRISES (4102-040)
Project Name: POKER LAKE UNIT 213
Project Location: POKER LAKE FIELD

Analysis Date: 04/13/06
Sampling Date: 04/12/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: AB

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H11024-1	PLU213-A014-0	2559
H11024-2	PLU213-A016-0	16
H11024-3	PLU213-A016-2	16
H11024-4	PLU213-A017-0	3489
H11024-5	PLU213-BG150U	16
Quality Control		
True Value QC		500
% Recovery		500
Relative Percent Difference		100
		0.0

METHOD: Standard Methods

4500-CIB

NOTE: Analyses performed on 1:4 w/v aqueous extracts.

Chemist

Date _____

04-14-06

H11024

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ANALYTICAL RESULTS FOR
SM STOLLER
ATTN: HARRY BOLTON
314 W. MERMOD SUITE 102
CARLSBAD, NM 88220
FAX TO: (505) 885-0776

Receiving Date: 04/13/06

Reporting Date: 04/14/06

Project Owner: BASS ENTERPRISES (4102-040)

Project Name: POKER LAKE UNIT 213

Project Location: POKER LAKE FIELD

Analysis Date: 04/13/06

Sampling Date: 04/12/06

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: NF


Analyzed By: AB

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H11023-1	PLU213-D005-0	3887
H11023-2	PLU213-D005-1	3295
H11023-3	PLU213-D006-0	1440
H11023-4	PLU213-D008-0	2703
H11023-5	PLU213-D008-2	2767
H11023-6	PLU213-D009-0	16
H11023-7	PLU213-B011-0	160
H11023-8	PLU213-B012-0	4271
H11023-9	PLU213-B012-2	6638
H11023-10	PLU213-C013-0	16
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		0.0

METHOD: Standard Methods

4500-Cl⁻B

NOTE: Analyses performed on 1:4 w:v aqueous extracts.


Chemist

04-14-06
Date

H11023

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



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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SM STOLLER
ATTN: HARRY BOLTON
314 W. MERMOD, SUITE 102
CARLSBAD, NM 88220
FAX TO: (505) 885-0776

Receiving Date: 04/13/06
Reporting Date: 04/20/06
Project Number: 4102-040
Project Name: POKER LAKE UNIT 213
Project Location: POKER LAKE FIELD

Sampling Date: 04/12/07
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)
ANALYSIS DATE:		04/18/06	04/18/06
H11023-1	PLU213-D005-0	<10.0	11.4
H11023-2	PLU213-D005-1	<10.0	<10.0
H11023-3	PLU213-D006-0	<10.0	<10.0
H11023-4	PLU213-D008-0	<10.0	<10.0
H11023-5	PLU213-D008-2	<10.0	<10.0
H11023-6	PLU213-D009-0	<10.0	<10.0
H11023-7	PLU213-B011-0	<10.0	<10.0
H11023-8	PLU213-B012-0	<10.0	<10.0
H11023-9	PLU213-B012-2	<10.0	<10.0
H11023-10	PLU213-C013-0	<10.0	<10.0
Quality Control			
True Value QC		787	738
% Recovery		800	800
Relative Percent Difference		98.3	92.3
		2.7	1.8

METHOD: SW-846 8015 M

Chemist

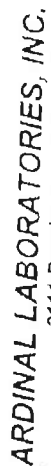
Date

H11023A

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

Site Characterization Report/Remediation Work Plan

Attachment B



2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(325) 673-7001 Fax (325) 673-7020 (505) 393-2326 Fax (505) 393-2476

ANALYSIS REQUEST

[illegible]

† Cardinal cannot accept verbal changes. Please fax written changes to (325) 673-7020.



CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (325) 673-7001 Fax (325) 673-7020 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO										ANALYSIS REQUEST	
Company Name: SM Stollen											
Project Manager: Henry Bolton											
Address: 314 W Mermed Suite 102											
City: Carlsbad											
State: NM Zip: 88220											
Phone #: 505-885-0172 Fax #: 505-885-0776											
Project #: 4102-040 Project Owner: Bass Enterprises											
Project Name: Poken Lake Unit 213											
Project Location: Poken Lake Field											
Sampler Name: Henry Bolton											
Fax #:											
FOR LAB USE ONLY											
Lab I.D.											
Sample I.D.											
Matrix											
PRESERV.											
SAMPLING											
DATE											
TIME											
4/12/06	10:50	X									
4/12/06	10:50	X									
4/12/06	10:55	X									
4/12/06	11:10	X									
4/12/06	11:10	X									
4/12/06	11:25	X									
4/12/06	11:35	X									
4/12/06	11:40	X									
4/12/06	11:40	X									
4/12/06	11:55	X									

80/15 Modified TPH

Chlorides

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 subcontractors arising out of or related to the performance of services performed by Cardinal, regardless of whether such claim is based upon any of the above stated theories or otherwise.

Sampler Relinquished: *Michael Bolton* Date: 4/13/06 Time: 9:00

Received By: *Michael Bolton* Date: 4/13/06 Time: 9:00

Delivered By: (Circle One) *Hand delivered*

Sampler - UPS - Bus - *Other* Hand delivered

Phone Result: ☐ Yes ☐ No

Fax Result: ☐ Yes ☐ No

REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to (325) 673-7020.

PLU-213

6/30/05

Pre-SPILL

R.P. →

Garrett Rd

Image NMREIS



PLU-213

Post SPILL
2/15/07

R.P.

Gavalla Rd

Image © 2014 DigitalGlobe

PLU-213

Post SP, LL

5/8/09

RP. →

Cavehill Rd

Image USDA Farm Service Agency

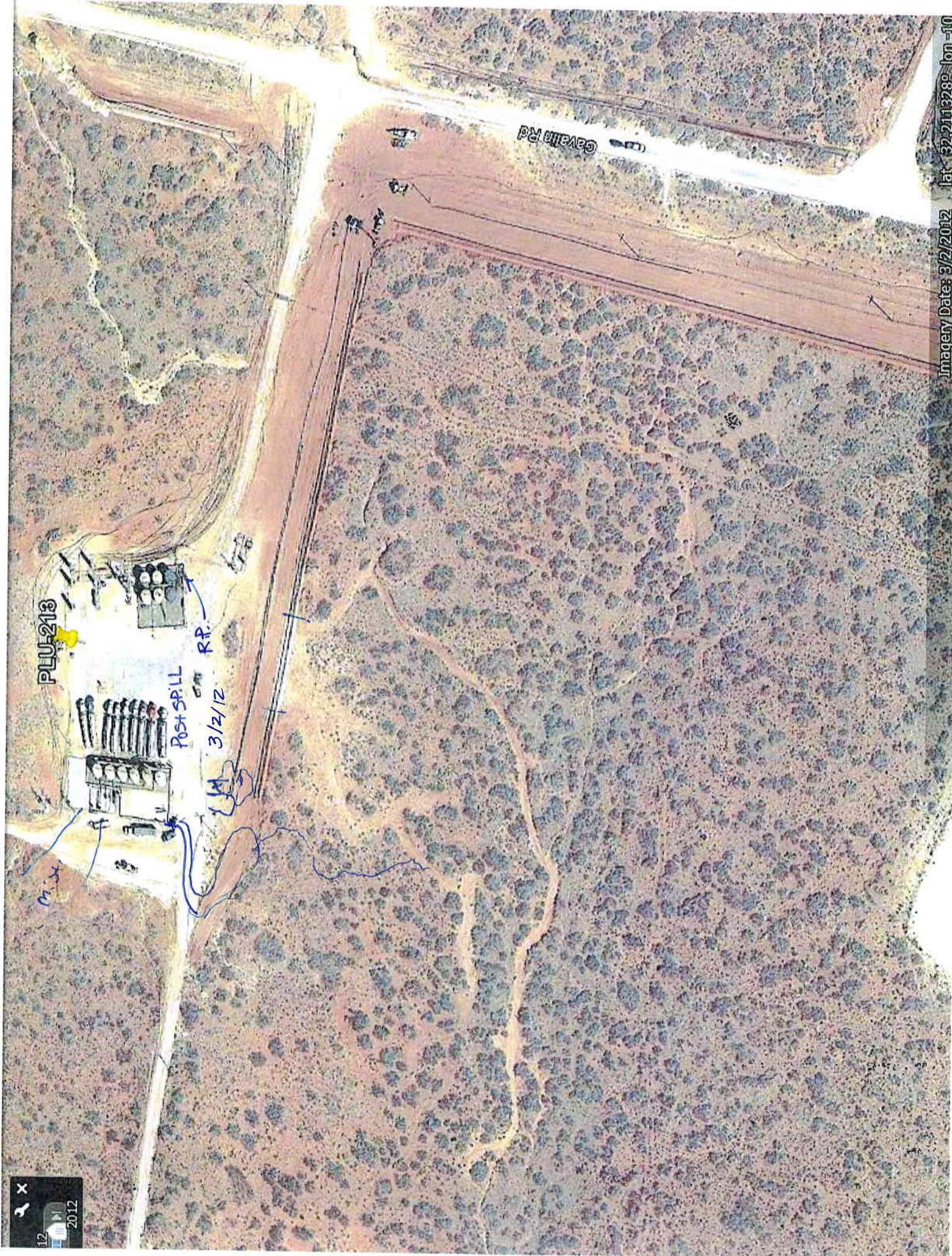
PLU-213

Box SPILL

7/24/11 R.P. ↗

Cavehill Rd

Image USDA Farm Service Agency



PLU-213

Post SPILL

RP

3/2/12

Cavalier Rd

2/13/2014

PLU-213

POSTSPILL

2/13/14

R.P.

PLU-295 FL

Google

1996

Imagery Date: 2/13/2014

lat 32.211985°

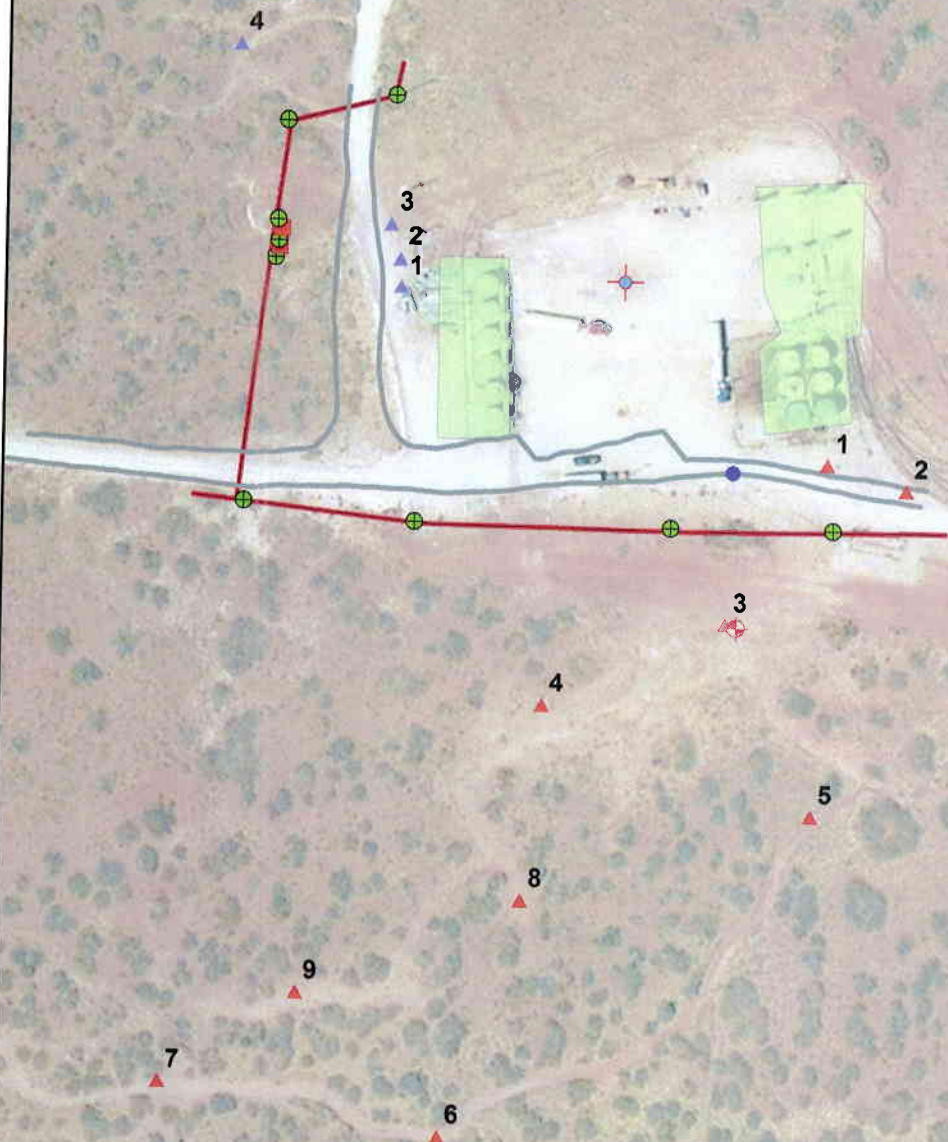
lon -103.914522°

elev 3193 ft

©

Initial Sampling

GPS WELLHEAD: 32°12'45.772"N 103°54'51.611"W



Legend

- CAMERA
- ⊗ ELECTRIC POLE
- ELECTRICAL BOX
- ⊗ MONITOR WELL
- ▲ SAMPLE POINT PURPLE
- ▲ SAMPLE POINT RED
- ★ P&A MARKER
- OVERHEAD ELECTRIC LI
- PAD/ROAD EDGE
- FACILITY

Landowner: BLM
DGW:

Source: Esri, DigitalGlobe, Geo
CNES/Airbus DS, USDA, USG
swisstopo, and the GIS User Community



RECS
RICE ENVIRONMENTAL
CONSULTING & SAFETY

**BOPCO
PLU 213 SWD**

UL P SECTION 18
T-24-S R-30-E
EDDY COUNTY, NM

**Underground facilities are
spatially projected
and need to be field verified.**

0 100 200
Feet

GPS date: 2/6/15 KS, 2/9/15 KS & KH
Drawing date: 2/10/15
Drafted by: T. Grieco

