

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



#8320

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FOR OGCC USE ONLY
MAR 03 2014
COGCC
OGCC Employee:
☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No: 112239

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☐ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☒ Other (describe): close skim pit

OGCC Operator Number: 24320	Contact Name and Telephone:
Name of Operator: Diamond Operating, Inc.	Dave Peterson
Address: 6666 Gunpark Drive, Suite 200	No: 303-517-3399
City: Boulder State: CO Zip: 80301	Fax: 303-494-3931
API Number: 05-123-05702	County: Weld
Facility Name: Scheetz skim	Facility Number: 112239
Well Name: Arthur Scheetz	Well Number: #1
Location: (QtrQtr, Sec, Twp, Rng, Meridian): NW NE 9-T9N-R61W Latitude: 40.769677 Longitude: 104.209949	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): _____

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☐ Y ☒ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Pasture non-cropland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Olney-Ascalon-Platner

Potential receptors (water wells within 1/4 mi, surface waters, etc.): None

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input type="checkbox"/> Soils	_____	_____
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDIALTION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Removed screen cover from skim pit. Removed water from pit. Checked for oil-stained soil.

Describe how source is to be removed:

No oil-stained soil. Traces of iron sulfide scale on pit banks.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Not applicable - no oily soil.



REMEDIATION WORKPLAN (Cont.)

Tracking Number:	112239
Name of Operator:	Diamond Operating
OGCC Operator No:	24320
Received Date:	3/3/2014
Well Name & No:	Arthur Scheetz #1
Facility Name & No:	Scheetz Skim Pit

OGCC Employee: R. Allison

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Not applicable

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

After testing soil sample from base of the pit, if the analytical results comply with concentration levels set forth in Table 910-1, backfill pit using excess soil available on site. Pit area will be restored to original grade. Location of pit is within confines of tank battery site and therefore it will not be reseeded.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? ☐ Y ☒ N If yes, describe:

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Not applicable

IMPLEMENTATION SCHEDULE

Date Site Investigation Began:	10/15/2013	Date Site Investigation Completed:	12/28/2013	Date Remediation Plan Submitted:	2/7/2014
Remediation Start Date:	est. 3/1/2014	Anticipated Completion Date:	3/2/2014	Actual Completion Date:	

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: David C. Peterson

Signed:

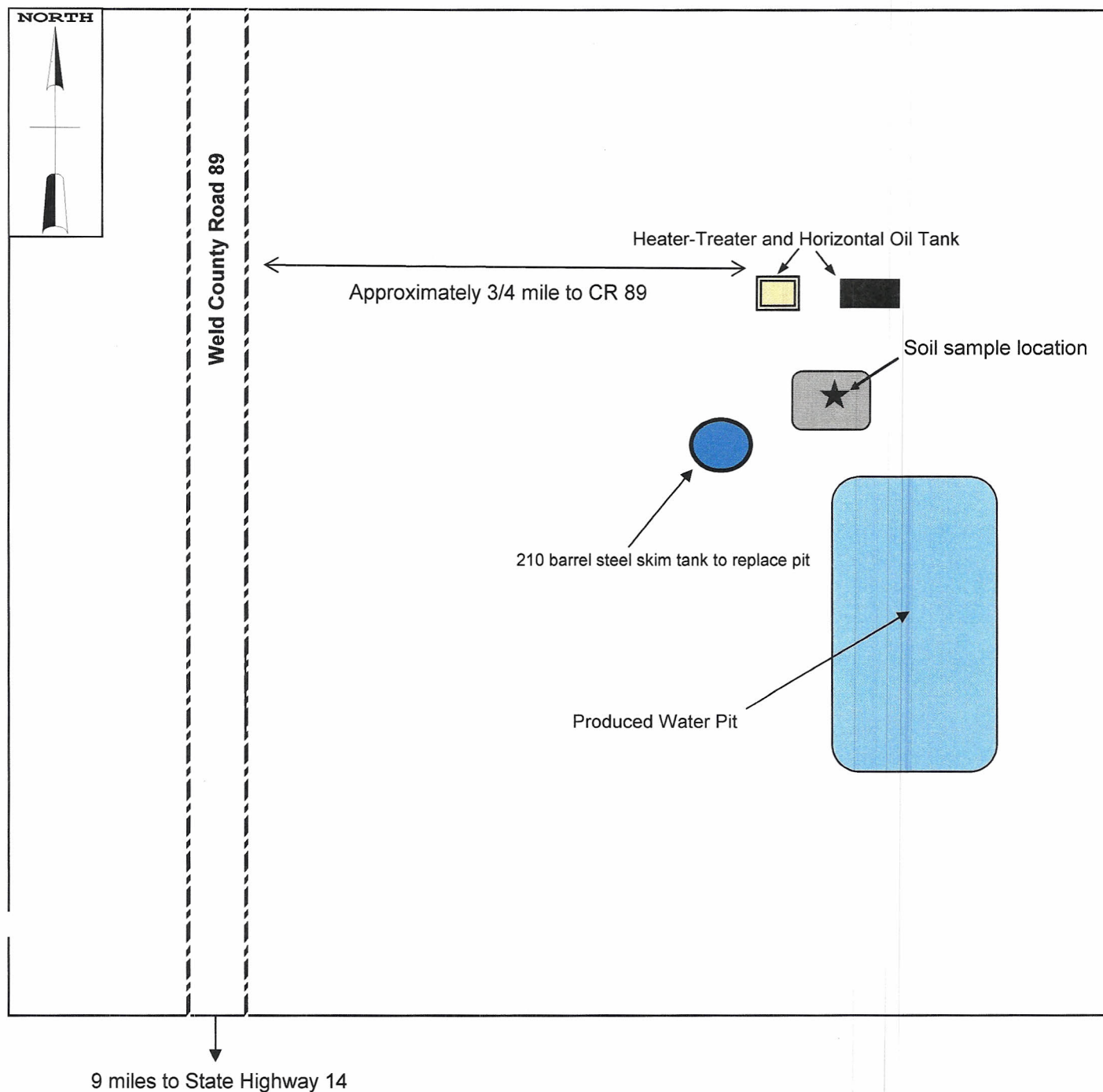
Title: President

Date: 2/7/2014

OGCC Approved: _____ Title: Northeast EPS Date: 4/8/2014

Diamond Operating, Inc.
Arthur Scheetz #1 - Skim Pit Closure
API #:05-123-05702 00

Attachment to Form 27
Site plan with soil sampling location



Schematic diagram -- not to scale



01/14/14

Technical Report for

Diamond Operating Inc.

Scheetz-Skim Pit

Accutest Job Number: D53893

Sampling Date: 12/28/13

Report to:

Diamond Operating Inc.
6666 Gunpark Drive Suite 200
Boulder, CO 80301
davep@flatironenergy.com

ATTN: Dave Peterson

Total number of pages in report: 39



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read "Scott Heideman".

Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.



Sample Results

Report of Analysis

Report of Analysis

Page 1 of 1

Client Sample ID:	SOIL AFTER EXCAVATION			Date Sampled:	12/28/13
Lab Sample ID:	D53893-1			Date Received:	12/31/13
Matrix:	SO - Soil			Percent Solids:	93.6
Method:	SW846 8015B				
Project:	Scheetz-Skim Pit				

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB23262.D	1	01/02/14	EV	n/a	n/a	GGB1281
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	11	5.6	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	90%		60-140%		

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID: SOIL AFTER EXCAVATION
 Lab Sample ID: D53893-1
 Matrix: SO - Soil
 Method: SW846 8021B
 Project: Scheetz-Skim Pit

Date Sampled: 12/28/13
 Date Received: 12/31/13
 Percent Solids: 93.6

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB23262.D	1	01/02/14	EV	n/a	n/a	GTB1281
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	56	18	ug/kg	
108-88-3	Toluene	ND	110	56	ug/kg	
100-41-4	Ethylbenzene	ND	110	56	ug/kg	
1330-20-7	Xylenes (total)	ND	110	110	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	100%		60-140%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID: SOIL AFTER EXCAVATION
 Lab Sample ID: D53893-1
 Matrix: SO - Soil
 Method: SW846-8015B SW846 3546
 Project: Scheetz-Skim Pit

Date Sampled: 12/28/13
 Date Received: 12/31/13
 Percent Solids: 93.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FH017114.D	1	01/03/14	JS	01/03/14	OP9190	GFH843
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	9.35	7.1	5.3	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	58%		20-130%		

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

Client Sample ID: SOIL AFTER EXCAVATION

Lab Sample ID: D53893-1

Matrix: SO - Soil

Project: Scheetz-Skim Pit

Date Sampled: 12/28/13

Date Received: 12/31/13

Percent Solids: 93.6

4.1

4

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	93.6		%	1	01/02/14	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	225	1.0	umhos/cm	1	01/03/14	BF	SM 2510B-2011 MOD
pH	8.06		su	1	01/02/14 13:25	JD	SW846 9045D

RL = Reporting Limit

Report of Analysis

Client Sample ID: SOIL AFTER EXCAVATION

Lab Sample ID: D53893-1A

Matrix: SO - Soil

Project: Scheetz-Skim Pit

Date Sampled: 12/28/13

Date Received: 12/31/13

Percent Solids: 93.6

4.2

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SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	19.1	2.0	mg/l	1	01/03/14	01/03/14 KV	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	1.88	1.0	mg/l	1	01/03/14	01/03/14 KV	SW846 6010C ¹	SW846 3010A/M ²
Sodium	18.5	2.0	mg/l	1	01/03/14	01/03/14 KV	SW846 6010C ¹	SW846 3010A/M ²

(1) Instrument QC Batch: MA4354

(2) Prep QC Batch: MP12059

RL = Reporting Limit

Report of Analysis

Page 1 of 1

Client Sample ID: SOIL AFTER EXCAVATION

Lab Sample ID: D53893-1A

Matrix: SO - Soil

Project: Scheetz-Skim Pit

Date Sampled: 12/28/13

Date Received: 12/31/13

Percent Solids: 93.6

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	1.08		ratio	1	01/03/14 15:27	KV	USDA HANDBOOK 60

(a) Calculated as: $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$

RL = Reporting Limit