

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 August 8, 2011

Submit 1 Copy to appropriate District Office to
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company Burlington Resources Oil & Gas Company	Contact Crystal Tafoya
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 326-9837
Facility Name: Howell D 350	Facility Type: Gas Well

Surface Owner BLM	Mineral Owner BLM (SF-078387)	API No. 30-045-26921
--------------------------	--------------------------------------	-----------------------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	28	31N	8W	1450	North	790	West	San Juan

Latitude 36.87182 Longitude 107.6862

**RCUD NOV 21 '12
OIL CONS. DIV.
DIST. 3**

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release ~170 bbls	Volume Recovered ~157 bbls
Source of Release Storage Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 8/29/12 at 9:00 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mark Kelly (BLM) & Brandon Powell (OCD)	
By Whom? Crystal Tafoya	Date and Hour 8/30/12 at 9:03am (BLM) & 9:04am (OCD)	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
N/A

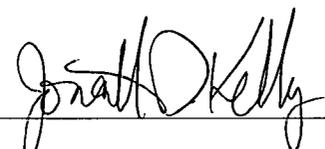
Describe Cause of Problem and Remedial Action Taken.*

Three 500bbls tanks on location with equalization lines connected at the 15' level at each tank. The line between the setting tank and the first storage tank became plugged and did not allow the water to transfer to tank #2 or tank #3 causing an overflow on the first tank.

Describe Area Affected and Cleanup Action Taken.*

Field screening and laboratory analytical results were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Releases for benzene, BTEX and TPH. Chloride levels were slightly exceeding NMOCD action levels and Brandon Powell was consulted on 10/3/12 and approved no further action is needed. The final report is attached for review.

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.

Signature: 	OIL CONSERVATION DIVISION	
	Approved by Environmental Specialist: 	
Printed Name: Crystal Tafoya	Approval Date: 11/30/2012	Expiration Date:
Title: Field Environmental Specialist	Conditions of Approval:	
E-mail Address: crystal.tafoya@conocophillips.com	Attached <input type="checkbox"/>	
Date: 11/20/2012	Phone: (505) 326-9837	

* Attach Additional Sheets If Necessary

nJK 1233542244



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche
Farmington, NM 87401
505-564-2281

Durango, Colorado
970-403-3274

November 14, 2012

Crystal Tafoya
ConocoPhillips
San Juan Business Unit
Office 214-05
5525 Hwy 64
Farmington, New Mexico 87401

**RE: Produced Water Release Report
Howell D #350
San Juan County, New Mexico**

Dear Ms. Tafoya:

On August 30, 2012, Animas Environmental Services, LLC (AES) completed a produced water release assessment at the ConocoPhillips (CoP) Howell D #350, located in San Juan County, New Mexico. The release consisted of an unknown volume of produced water which occurred when an onsite produced water tank overflowed. A large portion of the release remained within the secondary containment berm.

1.0 Site Information

1.1 Location

Location - SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 28, T31N, R8W, San Juan County, New Mexico

Well Head Latitude/Longitude – N36.87189 and W107.68676, respectively

Release Latitude/Longitude - N36.87192 and W107.68710, respectively

Land Jurisdiction – Bureau of Land Management (BLM)

Figure 1. Topographic Site Location Map

Figure 2. Aerial Site Map, August 2012

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and a C-144 form dated May 1999 for the Howell D #1A well, which is located approximately 390 feet southeast of the release area, reported the depth to groundwater as greater than 100 feet below ground surface (bgs). The New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered water wells were reported to be located within 1,000 feet of the location. Additionally, Google Earth and the New Mexico Tech Petroleum Recovery

Research Center online mapping tool (<http://ford.nmt.edu/react/project.html>) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was greater than 100 feet bgs. An unnamed wash is located approximately 750 feet east of the location. Based on this information, the location was assessed a ranking score of 10 per *NMOCD's Guidelines for Leaks, Spills and Releases* (August 1993).

1.3 Release Assessment

AES was initially contacted by Crystal Tafoya of CoP on August 30, 2012, and on the same day, Heather Woods and Zachary Trujillo of AES completed the release assessment field work. The assessment included collection of 22 soil samples from 12 soil borings (SB-1 through SB-12) located within and along the perimeter of the release area. Sample locations are shown on Figure 3.

2.0 Soil Sampling

A total of 22 soil samples from 12 soil borings (SB-1 through SB-12) and 1 composite sample (SC-1) were collected during the assessment. All soil samples were field screened for volatile organic compounds (VOCs), and selected samples were also analyzed for total petroleum hydrocarbons (TPH). Composite samples SC-1 was submitted for confirmation laboratory analysis.

2.1 Field Screening

2.1.1 Volatile Organic Compounds

Field screening for VOC vapors was conducted with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

2.1.2 Total Petroleum Hydrocarbons

Field TPH samples were analyzed per U.S. Environmental Protection Agency (USEPA) Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

2.2 Laboratory Analyses

The composite soil sample collected for laboratory analysis was placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. The sample was maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil sample SC-1 was laboratory analyzed for chloride per USEPA Method 300.0.

2.3 Field Screening and Laboratory Analytical Results

Field screening readings for VOCs via OVM ranged from 0.3 ppm in SB-10 up to 2.7 ppm in SB-11. Field TPH concentrations ranged from 27.0 mg/kg in SB-1 up to 86.7 mg/kg in SB-1 at 0.5 feet bgs. Results are included below in Table 1 and on Figure 3. The AES Field Screening Report is attached.

Table 1. Soil Field Screening Results
 Howell D #350 Release Assessment, August 2012

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)
		<i>NMOCD Action Level*</i>		<i>100</i>
			<i>100</i>	<i>1,000</i>
SB-1	8/30/12	0.5	0.6	86.7
		1	1.0	27.0
SB-2	8/30/12	1	0.7	NA
SB-3	8/30/12	0.5	0.4	NA
		1	0.8	NA
SB-4	8/30/12	0.5	0.5	NA
		1	0.9	NA
SB-5	8/30/12	0.5	1.0	44.7
		1	0.7	NA
SB-6	8/30/12	0.5	0.6	NA
		1	0.4	NA
SB-7	8/30/12	0.5	1.2	78.7
		1	0.6	NA
SB-8	8/30/12	0.5	0.9	76.0
		1	0.7	NA
SB-9	8/30/12	0.5	1.7	63.8
		1	2.3	NA
SB-10	8/30/12	0.5	1.1	81.4
		1	0.3	NA
SB-11	8/30/12	0.5	2.5	82.8
		1	2.7	NA

<i>Sample ID</i>	<i>Date Sampled</i>	<i>Sample Depth (ft bgs)</i>	<i>VOCs OVM Reading (ppm)</i>	<i>Field TPH (mg/kg)</i>
		<i>NMOCD Action Level*</i>	100	1,000
SB-12	8/30/12	0.5	2.4	77.4

NA – Not Analyzed

*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

Laboratory analytical results for SC-1 reported a chloride concentration of 270 mg/kg. Laboratory analytical results are included on Figure 3. Laboratory analytical reports are attached.

3.0 Conclusions and Recommendations

On August 30, 2012, AES conducted a release assessment of a produced water at the Howell D #350, located in San Juan County, New Mexico. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993), and the site was assigned a rank of 10. Field screening readings were below the NMOCD action levels of 100 ppm VOCs and 1,000 mg/kg TPH in all of the analyzed samples. Laboratory analytical results for SC-1 reported chloride concentrations above the NMOCD action level of 250 mg/kg with 270 mg/kg.

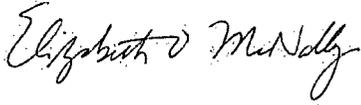
Based on field screening and laboratory analytical results, residual soil contaminants resulting from the release were reported below the NMOCD action Levels for benzene, total BTEX and TPH. However, laboratory analytical results for chlorides slightly exceeded the NMOCD action level. CoP consulted with Brandon Powell of the NMOCD on October 3, 2012, and Mr. Powell concurred that no further work was needed.

If you have any questions about this report or site conditions, please do not hesitate to contact Deborah Watson at (505) 564-2281.

Sincerely,



Heather M. Woods
Staff Geologist

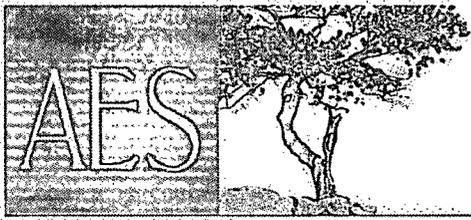
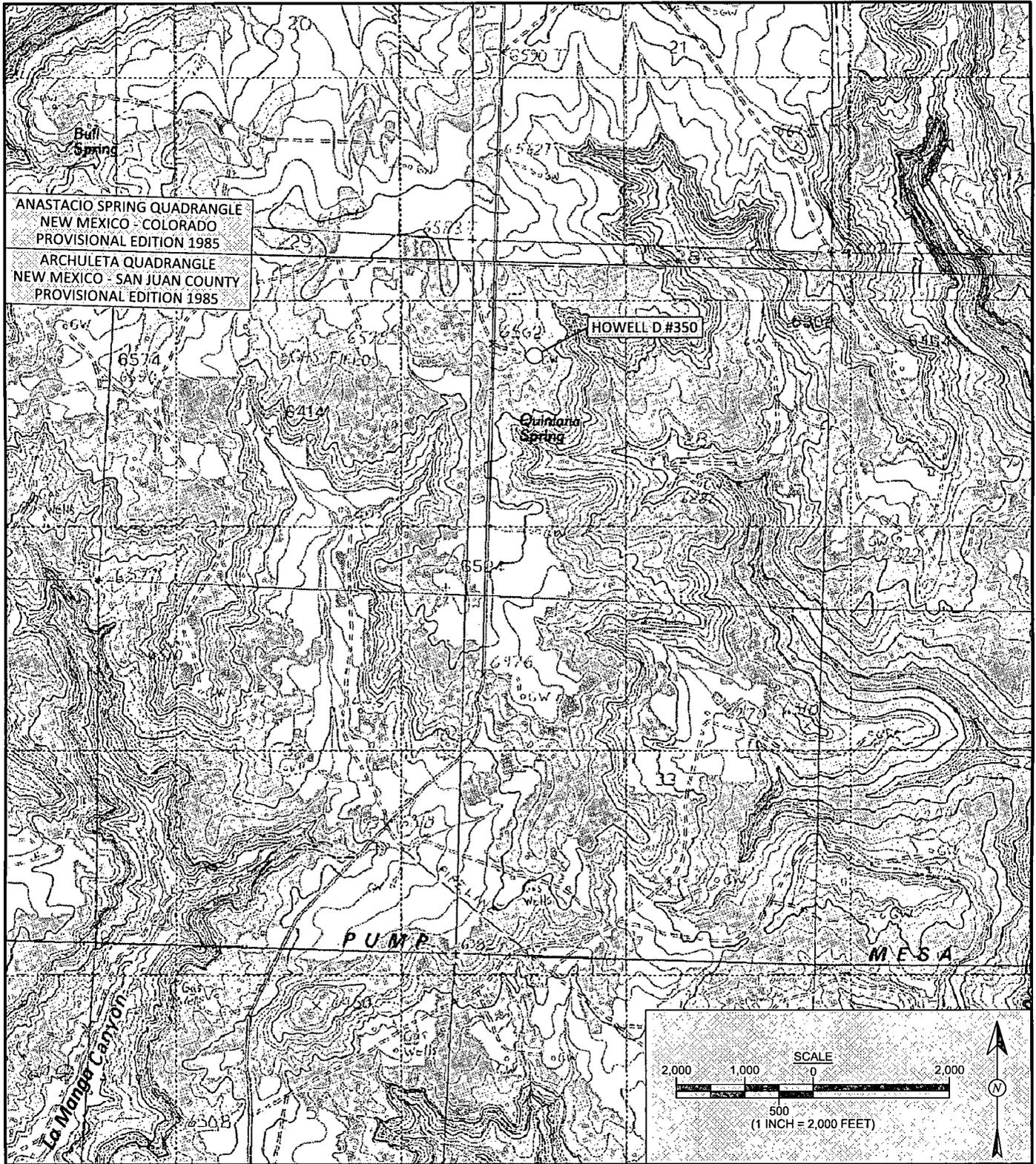


Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map, August 2012
- Figure 3. Initial Assessment Sample Locations and Results, August 2012
- AES Field Screening Report 083012
- Hall Laboratory Analytical Report 1208D98

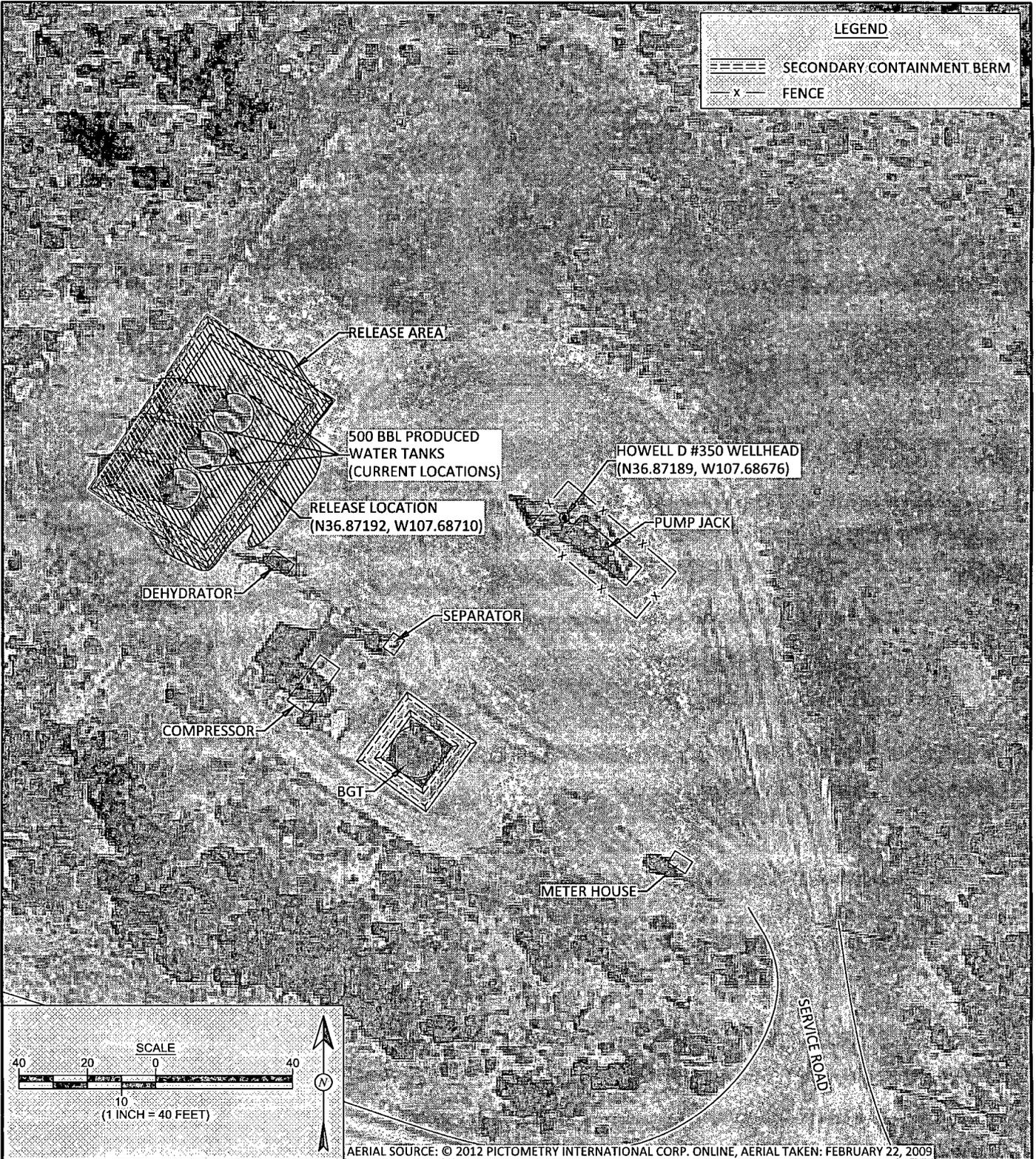
R:\Animas 2000\2012 Projects\Conoco Phillips\Howell D 350\Howell D #350 Release Assessment Report
111412.docx



Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: September 7, 2012
REVISIONS BY: C. Lameman	DATE REVISED: September 7, 2012
CHECKED BY: D. Watson	DATE CHECKED: September 7, 2012
APPROVED BY: E. McNally	DATE APPROVED: November 14, 2012

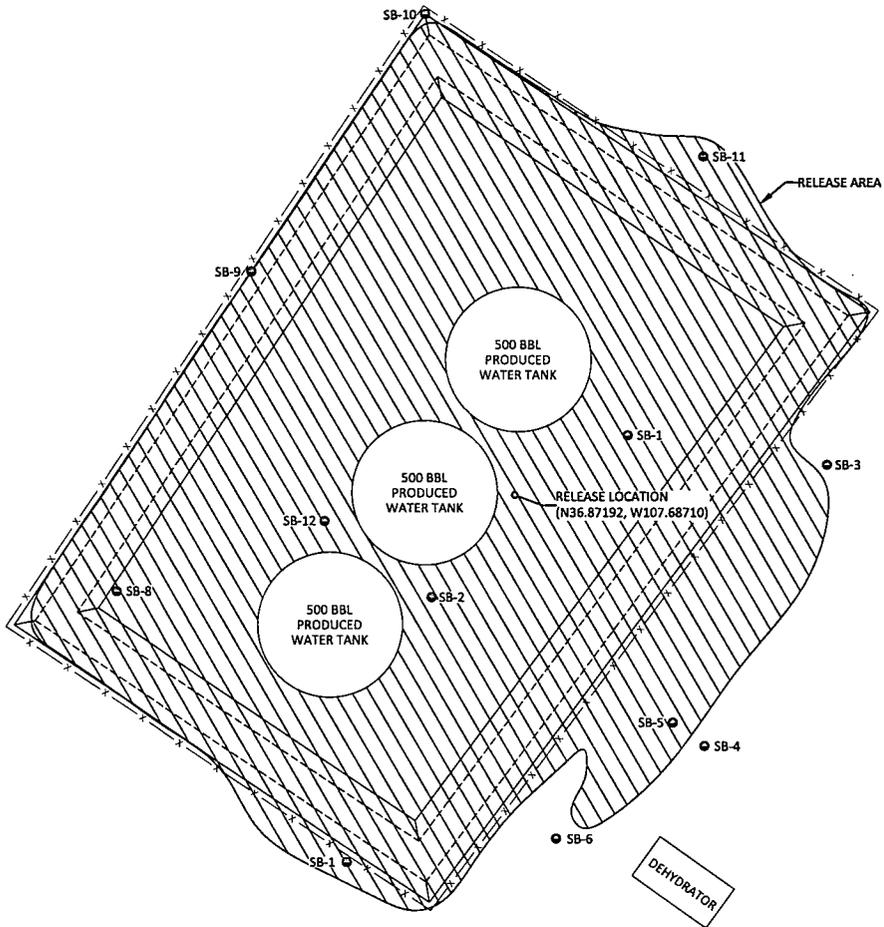
FIGURE 1
TOPOGRAPHIC SITE LOCATION MAP
 ConocoPhillips
 HOWELL D #350
 SAN JUAN COUNTY, NEW MEXICO
 SW¼ NW¼, SECTION 28, T31N, R8W
 N36.87189, W107.68676



DRAWN BY: C. Lameman	DATE DRAWN: September 7, 2012
REVISIONS BY: C. Lameman	DATE REVISED: September 7, 2012
CHECKED BY: D. Watson	DATE CHECKED: September 7, 2012
APPROVED BY: E. McNally	DATE APPROVED: November 14, 2012

FIGURE 2

AERIAL SITE MAP
 ConocoPhillips
 HOWELL D #350
 SAN JUAN COUNTY, NEW MEXICO
 SW¼ NW¼, SECTION 28, T31N, R8W
 N36.87189, W107.68676



Field Screening Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	1,000
SB-1	8/30/12	0.5	0.6	86.7
		1	1.0	27.0
SB-2	8/30/12	1	0.7	NA
		0.5	0.4	NA
SB-3	8/30/12	1	0.8	NA
		0.5	0.5	NA
SB-4	8/30/12	1	0.9	NA
		0.5	1.0	44.7
SB-5	8/30/12	1	0.7	NA
		0.5	0.6	NA
SB-6	8/30/12	1	0.4	NA
		0.5	1.2	78.7
SB-7	8/30/12	1	0.6	NA
		0.5	0.9	76.0
SB-8	8/30/12	1	0.7	NA
		0.5	1.7	63.8
SB-9	8/30/12	1	2.3	NA
		0.5	1.1	81.4
SB-10	8/30/12	1	0.3	NA
		0.5	2.5	82.8
SB-11	8/30/12	1	2.7	NA
		0.5	2.4	77.4
SB-12	8/30/12	0.5		

NA - NOT ANALYZED

Laboratory Analytical Results			
Sample ID	Date	Depth (ft)	Chlorides (mg/kg)
NMOCD ACTION LEVEL			250
SC-1	8/30/12	0.5 to 1	270

SC-1 IS A 5-POINT COMPOSITE OF RELEASE AREA. SAMPLE WAS ANALYZED PER USEPA METHOD 300.0.

FIGURE 3

**INITIAL ASSESSMENT
SAMPLE LOCATIONS AND RESULTS
AUGUST 2012**
ConocoPhillips
HOWELL D #350
SAN JUAN COUNTY, NEW MEXICO
SW¼ NW¼, SECTION 28, T31N, R8W
N36.87189, W107.68676

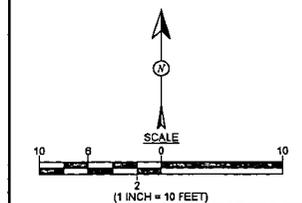


Animas Environmental Services, LLC

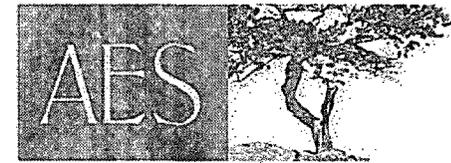
DRAWN BY: C. Lameman	DATE DRAWN: September 10, 2012
REVISIONS BY: C. Lameman	DATE REVISED: September 10, 2012
CHECKED BY: D. Watson	DATE CHECKED: September 10, 2012
APPROVED BY: E. McNally	DATE APPROVED: November 14, 2012

LEGEND

- SAMPLE LOCATIONS
- ===== SECONDARY CONTAINMENT BERM



AES Field Screening Report



Animas Environmental Services, LLC

www.animasenvironmental.com

624 E. Comanche
Farmington, NM 87401
505-564-2281

Durango, Colorado
970-403-3274

Client: ConocoPhillips

Project Location: Howell D #350

Date: 8/30/2012

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-1 @ 0.5'	8/30/2012	11:03	0.6	11:47	86.7	40.0	1	HMW
SB-1 @ 1'	8/30/2012	11:05	1.0	11:54	27.0	20.0	1	HMW
SB-2 @ 1'	8/30/2012	11:10	0.7	<i>Not Analyzed for TPH</i>				
SB-3 @ 0.5'	8/30/2012	11:13	0.4	<i>Not Analyzed for TPH</i>				
SB-3 @ 1'	8/30/2012	11:15	0.8	<i>Not Analyzed for TPH</i>				
SB-4 @ 0.5'	8/30/2012	11:18	0.5	<i>Not Analyzed for TPH</i>				
SB-4 @ 1'	8/30/2012	11:20	0.9	<i>Not Analyzed for TPH</i>				
SB-5 @ 0.5'	8/30/2012	11:23	1.0	12:24	44.7	20.0	1	HMW
SB-5 @ 1'	8/30/2012	11:25	0.7	<i>Not Analyzed for TPH</i>				
SB-6 @ 0.5'	8/30/2012	11:30	0.6	<i>Not Analyzed for TPH</i>				
SB-6 @ 1'	8/30/2012	11:32	0.4	<i>Not Analyzed for TPH</i>				
SB-7 @ 0.5'	8/30/2012	11:35	1.2	12:27	78.7	20.0	1	HMW
SB-7 @ 1'	8/30/2012	11:37	0.6	<i>Not Analyzed for TPH</i>				

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SB-8 @ 0.5'	8/30/2012	11:43	0.9	12:30	76.0	20.0	1	HMW
SB-8 @ 1'	8/30/2012	11:46	0.7	Not Analyzed for TPH				
SB-9 @ 0.5'	8/30/2012	11:50	1.7	12:33	63.8	20.0	1	HMW
SB-9 @ 1'	8/30/2012	11:54	2.3	Not Analyzed for TPH				
SB-10 @ 0.5'	8/30/2012	11:59	1.1	12:36	81.4	20.0	1	HMW
SB-10 @ 1'	8/30/2012	12:02	0.3	Not Analyzed for TPH				
SB-11 @ 0.5'	8/30/2012	12:07	2.5	12:52	82.8	20.0	1	HMW
SB-11 @ 1'	8/30/2012	12:10	2.7	Not Analyzed for TPH				
SB-12 @ 0.5'	8/30/2012	12:15	2.4	12:56	77.4	20.0	1	HMW

Total Petroleum Hydrocarbons - USEPA 418.1

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

DF Dilution Factor

*Field TPH conc *Field TPH concentrations recorded may be below PQL.

Analyst:

Leather M. Woods



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 10, 2012

Debbie Watson

Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 486-4071
FAX

RE: COP Howell D#350

OrderNo.: 1208D98

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 8/31/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a thin horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services

Client Sample ID: SC-1

Project: COP Howell D#350

Collection Date: 8/30/2012 12:40:00 PM

Lab ID: 1208D98-001

Matrix: SOIL

Received Date: 8/31/2012 10:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: SRM
Chloride	270	15		mg/Kg	10	9/6/2012 2:38:05 PM

- Qualifiers:**
- * Value exceeds Maximum Contaminant Level.
 - E Value above quantitation range
 - J Analyte detected below quantitation limits
 - R RPD outside accepted recovery limits
 - S Spike Recovery outside accepted recovery limits
 - B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - ND Not Detected at the Reporting Limit
 - RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208D98

10-Sep-12

Client: Animas Environmental Services

Project: COP Howell D#350

Sample ID	LCS-3638	SampType	LCS	TestCode	EPA Method 300.0: Anions					
Client ID	LCSS	Batch ID	3638	RunNo	5348					
Prep Date	9/6/2012	Analysis Date	9/6/2012	SeqNo	152318	Units	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.4	90	110			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

Sample Log-In Check List

Client Name: Animas Environmental	Work Order Number: 1208D98
Received by/date: <u>AT 08/31/12</u>	
Logged By: Anne Thorne	8/31/2012 10:25:00 AM <i>Anne Thorne</i>
Completed By: Anne Thorne	8/31/2012 <i>Anne Thorne</i>
Reviewed By: <u>AT 08/31/12</u>	

Chain of Custody

1. Were seals intact? Yes No Not Present
2. Is Chain of Custody complete? Yes No Not Present
3. How was the sample delivered? Courier

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes No NA
5. Was an attempt made to cool the samples? Yes No NA
6. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
7. Sample(s) in proper container(s)? Yes No
8. Sufficient sample volume for indicated test(s)? Yes No
9. Are samples (except VOA and ONG) properly preserved? Yes No
10. Was preservative added to bottles? Yes No NA
11. VOA vials have zero headspace? Yes No No VOA Vials
12. Were any sample containers received broken? Yes No
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes No
14. Are matrices correctly identified on Chain of Custody? Yes No
15. Is it clear what analyses were requested? Yes No
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes No

of preserved bottles checked for pH: _____ (<2 or >12 unless noted) Adjusted? _____ Checked by: _____
--

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

18. Additional remarks:

19. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.4	Good	Yes			

