

**3R - 137**

**REPORTS**

**DATE:**

**8/28/2007**

# ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

3R0141  
3R0137  
RECEIVED

2007 AUG 30 AM 11 06

Project No. 05161-007

August 28, 2007

Mr. Glen von Gonten  
NMOCD  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Phone (505) 476-3440

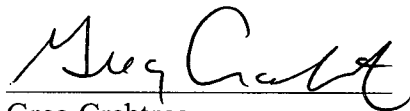
**RE: DUNCAN OIL FIFTH 2006-2007 QUARTERLY MONITORING REPORT**

Dear Mr. von Gonten:

Enclosed please find one (1) copy of the report entitled, *Duncan Oil Fifth 2006-2007 Quarterly Monitoring Report*. This report details the fourth quarterly monitoring for the North Hogback 12-1, and North Hogback 12-9 locations on the Navajo Nation in San Juan County, New Mexico.

We appreciate the opportunity to be of service. If you should have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,  
**ENVIROTECH, INC.**



Greg Crabtree  
Environmental Engineer  
[gcrabtree@envirotech-inc.com](mailto:gcrabtree@envirotech-inc.com)

Enclosure: One (1) copy

Cc: Mr. Fallin, Duncan Oil  
Mr. Lee, NNEPA  
Mr. Yarborough, BIA  
Mr. Walker, USEPA  
Client File 05161

**DUNCAN OIL  
FIFTH 2006-2007 QUARTERLY MONITORING REPORT  
NORTH HOGBACK 12-1 AND 12-9  
NAVAJO NATION  
SAN JUAN COUNTY, NEW MEXICO**

**TABLE OF CONTENTS**

Introduction .....	1
Groundwater Sampling and Analysis .....	1
Summary and Conclusions .....	2
Sections:	
Section 1:	Figure 1, Vicinity Map Figure 2, North Hogback 12-1 and 12-9 Site Map Figure 3, North Hogback 12-1 and 12-9 Water Level Map Figure 4, North Hogback 12-1 and 12-9 Manganese Iso-Concentration Map
Section 2:	Laboratory Water Sample Results
Section 3:	Historical Data
Section 4:	Field Notes

## INTRODUCTION

Envirotech, Inc. has completed the fifth quarterly monitoring of four (4) monitor wells at the Duncan Oil North Hogback 12-1 and 12-9 well sites; see *Figure 1 Vicinity Map*. Contaminated soil was previously excavated from the sites in September and October of 2005 and monitor wells were installed. The contaminated soil was transported to Envirotech's NMOCD permitted landfarm at Hilltop, NM, for remediation. Water samples collected at the time of excavation indicated that the two (2) sites previously referenced had residual contaminants in the groundwater above the guidelines set forth by the USEPA and adopted by the NNEPA.

## GROUNDWATER SAMPLING AND ANALYSIS

Groundwater sampling/monitoring was performed on four (4) monitor wells on July 05, 2007. Prior to sampling a minimum of three (3) well volumes of water were bailed out of each well with a new disposable bailer.

Water levels were calculated from the surveying data to draw a water level map. Water levels and groundwater gradient for the North Hogback 12-1 and 12-9 are shown on *Figure 3, North Hogback 12-1 and 12-9 Water Level Map*. It appears that the groundwater is moving from southeast to northwest across the 12-1 and 12-9 sites. Water levels for the individual wells are tabulated in *Table 1: Water Levels* below.

**Table 1: Water Levels**

Name	Casing Elevation	Water Depth	Water Elevation
N. Hogback 12-1 MW-1	5025.84	19.91	5005.93
N. Hogback 12-1 MW-2	5027.47	19.41	5008.06
N. Hogback 12-9 MW-1	5026.12	8.55	5017.57
N. Hogback 12-9 MW-2	5025.61	9.25	5016.36
N. Hogback 12-4 MW-1	NS	NS	NS
N. Hogback 12-4 MW-2	NS	NS	NS
N. Hogback 12-4 MW-3	NS	NS	NS

NS = Not Sampled

### **North Hogback 12-9**

Samples were collected from the two (2) monitor wells at the North Hogback 12-9 and analyzed for lead, manganese, and iron via USEPA Method 6010B. Results from this analysis are summarized in *Table 2: Summary of Laboratory Metals Analysis of North Hogback 12-9* below and laboratory certificates are presented in *Section 2: Laboratory Water Sample Results*.

**Table 2: Summary of Laboratory Metals Analysis for North Hogback 12-9**

Analyte	Monitor Well #1	Monitor Well #2	Regulated Level
Iron (ppm)	0.254	0.411	<b>1.0</b>
Manganese (ppm)	<b>0.308</b>	<b>0.417</b>	<b>0.2</b>
Lead (ppm)	ND	ND	<b>0.050</b>

Values in bold exceed the USEPA and NNEPA regulated level

ND – indicates analyte is below the method detection limit

Manganese is above standards for both MW-1 and MW-2. Manganese concentrations decreased from the values reported in the fourth quarter sampling event in MW-1 and in MW-2; see **Section 3: Historical Data**.

#### **North Hogback 12-1**

Samples were collected from the two (2) monitor wells at the North Hogback 12-1 and analyzed for benzene, toluene, ethylbenzene, and total xylene (BTEX) via USEPA Method 8021B.

Results from this analysis are summarized in **Table 3: Summary of Laboratory BTEX Analysis for North Hogback 12-1** below and laboratory certificates are presented in **Section 2:**

**Laboratory Water Sample Results.** Both wells bailed dry after approximately 0.5 gallons of water was bailed out.

**Table 3: Summary of Laboratory BTEX Analysis for North Hogback 12-1**

Analyte	Monitor Well #1	Monitor Well #2	Regulated Level
Benzene (ppb)	ND	ND	5.0
Toluene (ppb)	ND	ND	1,000
Ethylbenzene (ppb)	ND	ND	700
Total Xylenes (ppb)	0.4	0.5	10,000

ND – indicates analyte is below the method detection limit

#### **SUMMARY AND CONCLUSIONS**

Envirotech has completed the fifth quarterly monitoring of four (4) monitor wells at the North Hogback 12-1 and 12-9 well sites.

At the North Hogback 12-1 location, all contaminants of concern analyzed for are below the regulated limit. BTEX levels decreased from the previous sampling event, this could be from re-entrainment of contamination from the vadose zone due to the fluctuation in water levels.

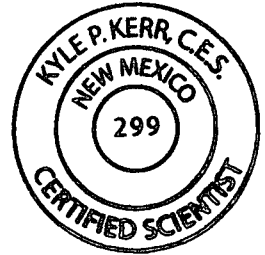
Envirotech recommends a minimum of two (2) additional sampling events at this site where contaminants of concern are below regulated limits.

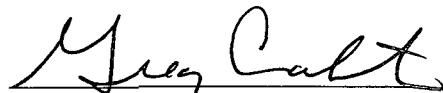
At the North Hogback 12-9 location, manganese was slightly higher than the regulated level in both monitor wells at 0.308 ppm and 0.417 ppm respectively. Envirotech recommends a minimum of three (3) additional sampling events at this site, until contaminants of concern are below regulated limits. Although manganese is above the regulated level, it has shown a decrease from the last sampling event in January 2007.


We appreciate the opportunity to be of service. Should you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully submitted,  
**ENVIROTECH, INC.**

Reviewed By:



  
Greg Crabtree, EIT  
Environmental Engineer  
[gcrabtree@envirotech-inc.com](mailto:gcrabtree@envirotech-inc.com)

  
\_\_\_\_\_  
Kyle P. Kerr  
Chief Environmental Scientist  
NMCES #299  
[kpkerr@envirotech-inc.com](mailto:kpkerr@envirotech-inc.com)

**SECTION 1:**

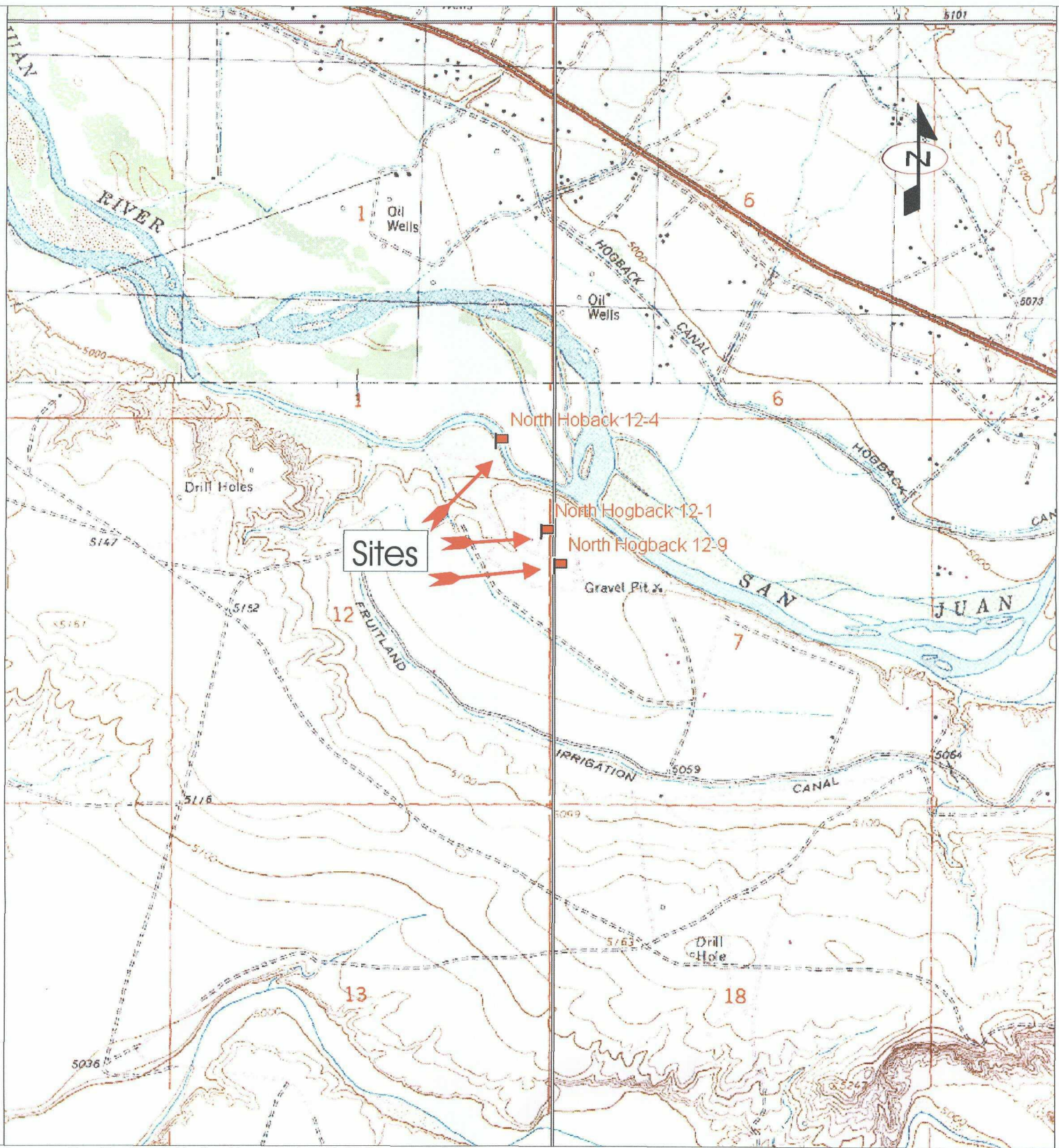
Figure 1, Vicinity Map

Figure 2, North Hogback 12-1 and 12-9 Site Map

Figure 3, North Hogback 12-1 and 12-9 Water  
Level Map

Figure 4, North Hogback 12-1 and 12-9 Manganese  
Iso-Concentration Map





Source: The Hogback North, New Mexico 7.5 Minute U.S.G.S. Topographic Quadrangle Map  
 Scale: 1:24,000 1" = 2000'

North Hogback 12-1, 12-4, & 12-9  
 Section 12, Township 29N, Range 16W  
 San Juan County, NM

# ENVIROTECH INC.

ENVIRONMENTAL SCIENTISTS & ENGINEERS  
 5796 U.S. HIGHWAY 64  
 FARMINGTON, NEW MEXICO 87401  
 PHONE (505) 632-0615

Vicinity Map

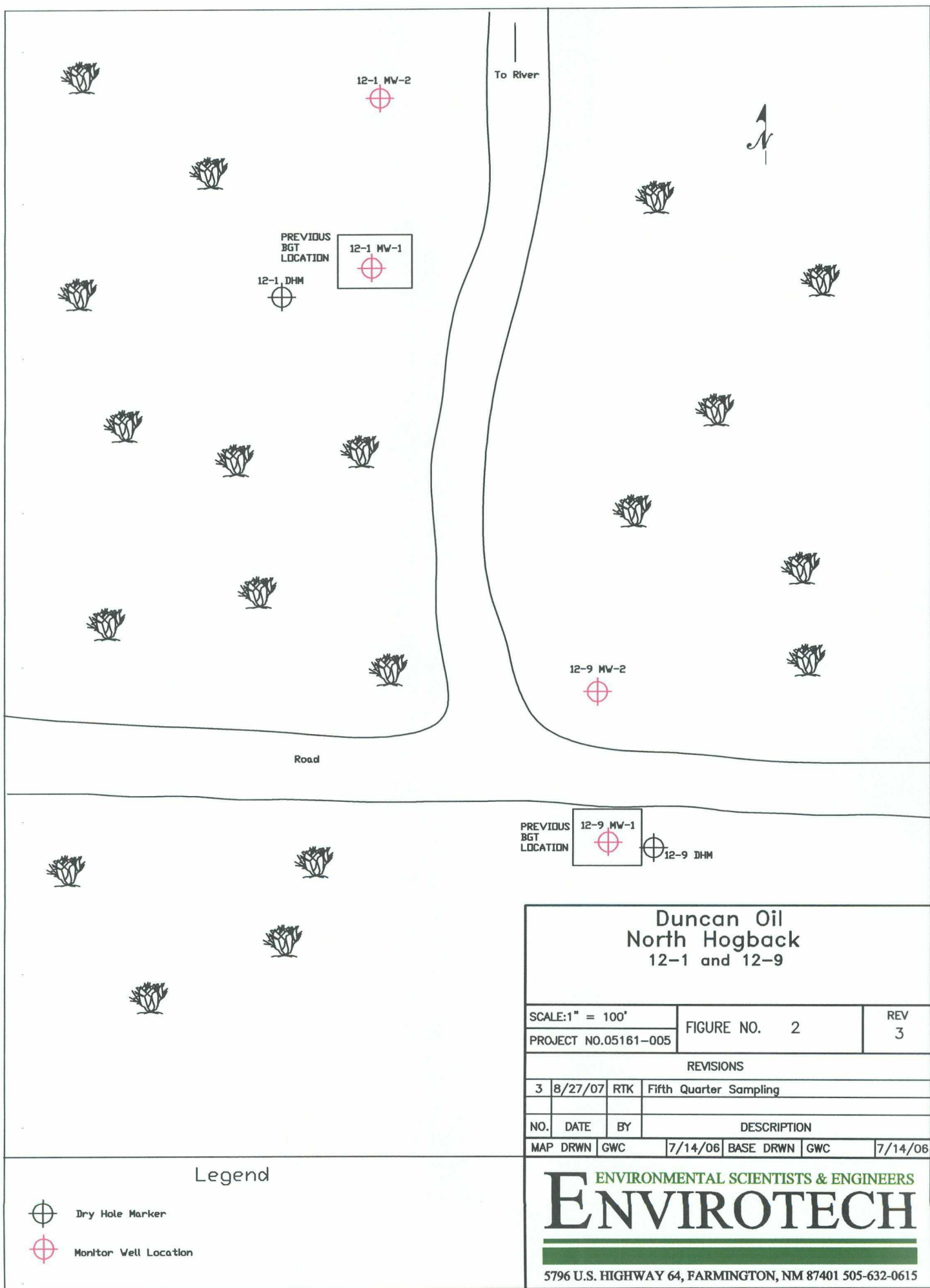
Figure 1

PROJECT No 05161-005 Date Drawn: 7/20/06

DRAWN BY:  
 Greg Crabtree

PROJECT MANAGER:  
 Kyle Kerr





### Legend



Dry Hole Marker



Monitor Well Location

### Duncan Oil North Hogback 12-1 and 12-9

SCALE: 1" = 100'

PROJECT NO. 05161-005

FIGURE NO. 2

REV

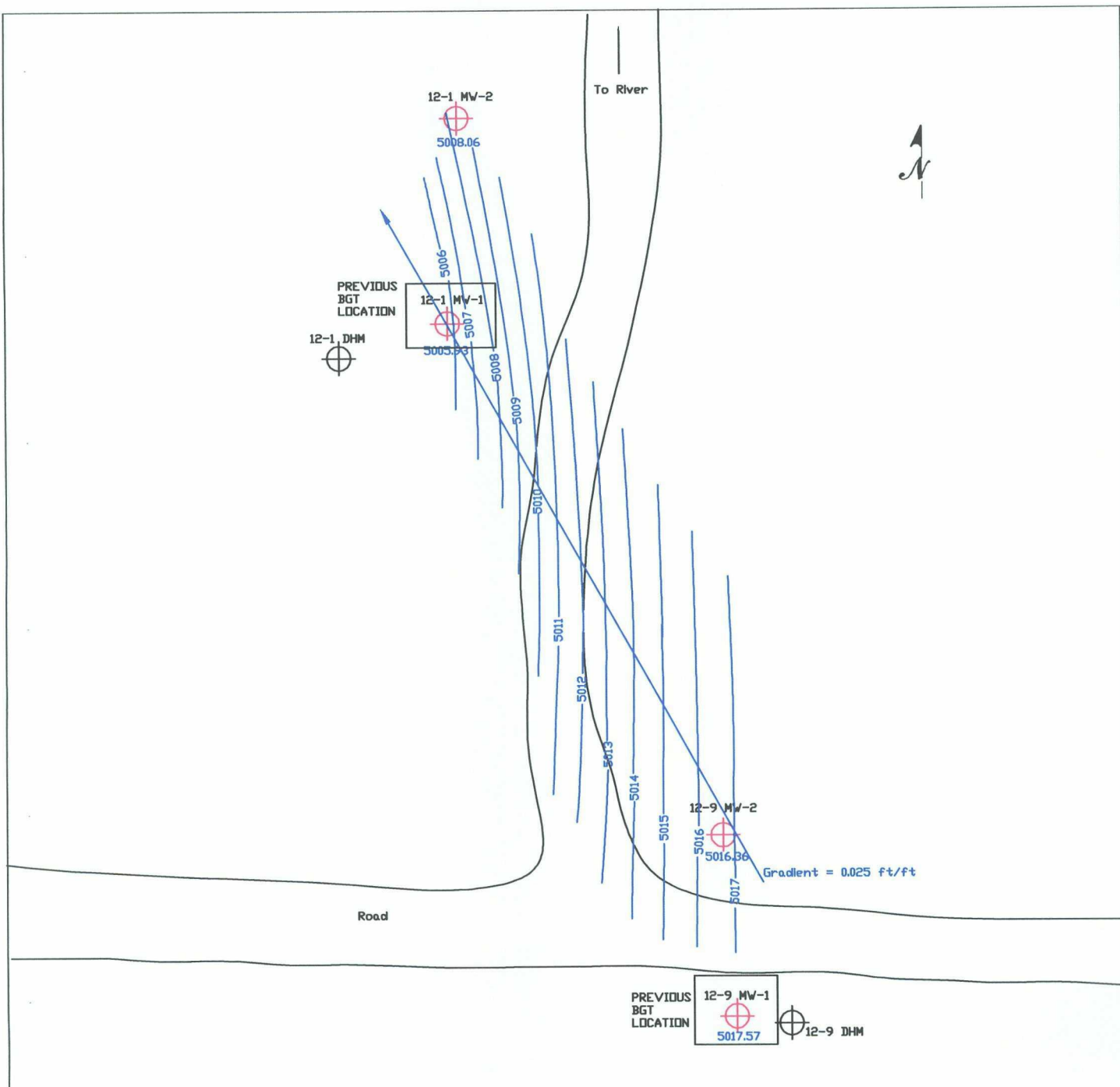
3

#### REVISIONS

NO.	DATE	BY	DESCRIPTION
3	8/27/07	RTK	Fifth Quarter Sampling
MAP DRWN	GWC	7/14/06	BASE DRWN GWC 7/14/06

ENVIRONMENTAL SCIENTISTS & ENGINEERS  
**ENVIROTECH**

5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615



# Duncan Oil North Hogback 12-1 and 12-9

SCALE: 1" = 100'

PROJECT NO. 05161-005

FIGURE NO. 3

REV  
3

## REVISIONS

NO.	DATE	BY	DESCRIPTION
3	8/27/07	RTK	Fifth Quarter Sampling
MAP DRWN	GWC	7/14/06	BASE DRWN GWC 7/14/06

## Legend



Dry Hole Marker

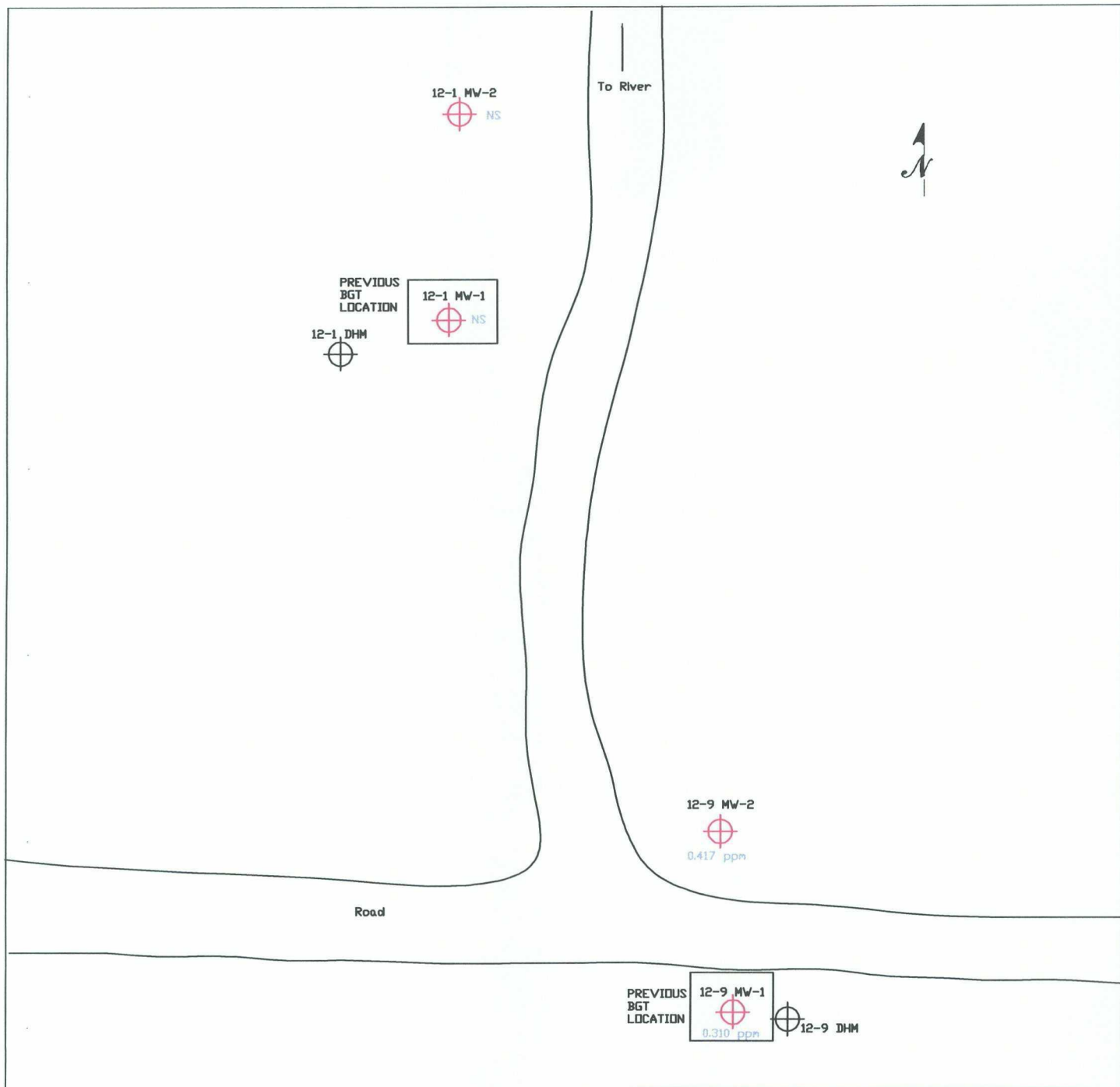
5014.64 Water Level Elevation



Monitor Well Location

ENVIRONMENTAL SCIENTISTS & ENGINEERS  
**ENVIROTECH**

5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615



## Duncan Oil North Hogback

### 12-1 and 12-9

Manganese Iso-Concentration Map

SCALE: 1" = 100'		FIGURE NO. 4		REV 3	
PROJECT NO. 05161-005					
REVISIONS					
3	8/27/07	RTK	Fifth Quarter Sampling		
NO.	DATE	BY	DESCRIPTION		
MAP DRWN	GWC	7/14/06	BASE DRWN	GWC	7/14/06

### Legend

Dry Hole Marker

Monitor Well Location

ENVIRONMENTAL SCIENTISTS & ENGINEERS

# ENVIROTECH

---

5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615

**SECTION 2:**

Laboratory Water Sample Results

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Duncan Oil	Project #:	05161-007
Sample ID:	12 - 1 MW #1	Date Reported:	07-14-07
Chain of Custody:	2951	Date Sampled:	07-05-07
Laboratory Number:	42311	Date Received:	07-05-07
Sample Matrix:	Water	Date Analyzed:	07-14-07
Preservative:	Cool / HCL	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	ND	1	0.2
Toluene	ND	1	0.2
Ethylbenzene	ND	1	0.2
p,m-Xylene	0.4	1	0.2
o-Xylene	ND	1	0.1

**Total BTEX** 0.4

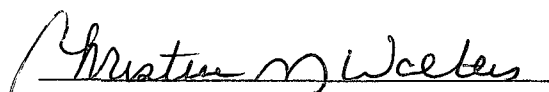
ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	99.8 %
	1,4-difluorobenzene	99.8 %
	4-bromochlorobenzene	99.8 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: N. Hogback, NM.

  
Analyst

  
Review

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Duncan Oil	Project #:	05161-007
Sample ID:	12 - 1 MW #2	Date Reported:	07-14-07
Chain of Custody:	2951	Date Sampled:	07-05-07
Laboratory Number:	42312	Date Received:	07-05-07
Sample Matrix:	Water	Date Analyzed:	07-14-07
Preservative:	Cool / HCL	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
<b>Benzene</b>	ND	1	0.2
<b>Toluene</b>	ND	1	0.2
<b>Ethylbenzene</b>	ND	1	0.2
<b>p,m-Xylene</b>	0.3	1	0.2
<b>o-Xylene</b>	0.2	1	0.1

**Total BTEX** 0.5

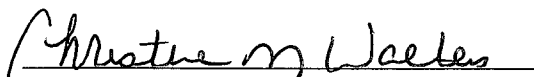
ND - Parameter not detected at the stated detection limit.


Surrogate Recoveries:	Parameter	Percent Recovery
	fluorobenzene	99.8 %
	1,4-difluorobenzene	99.8 %
	4-bromochlorobenzene	99.8 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: N. Hogback, NM.

  
Analyst

  
Review

**EPA METHOD 8021  
AROMATIC VOLATILE ORGANICS  
QUALITY ASSURANCE REPORT**

Client:	N/A	Project #:	N/A
Sample ID:	07-14-BTEX QA/QC	Date Reported:	07-14-07
Laboratory Number:	42311	Date Sampled:	N/A
Sample Matrix:	Liquid	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	07-14-07
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff.	Blank Conc	Detect. Limit
		Accept. Range 0 - 15%			
Benzene	2.4829E+007	2.4904E+007	0.30%	ND	0.2
Toluene	2.1429E+007	2.1494E+007	0.30%	ND	0.2
Ethylbenzene	1.5978E+007	1.6026E+007	0.30%	ND	0.2
p,m-Xylene	3.4436E+007	3.4540E+007	0.30%	ND	0.2
o-Xylene	1.4729E+007	1.4773E+007	0.30%	ND	0.1

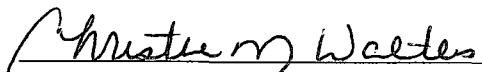
Duplicate Conc. (ug/L)	Sample	Duplicate	%Diff.	Accept Limit
Benzene	ND	ND	0.0%	0 - 30%
Toluene	ND	ND	0.0%	0 - 30%
Ethylbenzene	ND	ND	0.0%	0 - 30%
p,m-Xylene	0.4	0.4	0.0%	0 - 30%
o-Xylene	ND	ND	0.0%	0 - 30%

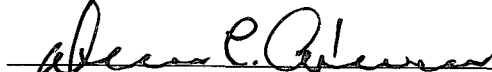
Spike Conc. (ug/L)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Limits
Benzene	ND	50.0	49.9	99.8%	39 - 150
Toluene	ND	50.0	50.0	100.0%	46 - 148
Ethylbenzene	ND	50.0	49.9	99.9%	32 - 160
p,m-Xylene	0.4	100	100	100.0%	46 - 148
o-Xylene	ND	50.0	50.0	100.0%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.  
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for samples 42311 - 42312 and 42376.

  
Analyst

  
Review



Client:	Duncan Oil	Project #:	05161-007
Sample ID:	12-9 MW #1	Date Reported:	07-08-07
Laboratory Number:	42309	Date Sampled:	07-05-07
Chain of Custody:	2951	Date Received:	07-05-07
Sample Matrix:	Water	Date Analyzed:	07-08-07
Preservative:	Cool, HNO <sub>3</sub>	Date Digested:	07-06-07
Condition:	Cool & Intact	Analysis Needed:	Fe, Mn, Pb

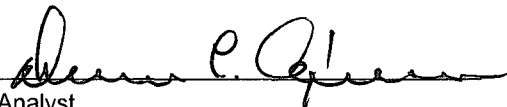
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Iron	0.254	0.001
Manganese	0.308	0.001
Lead	ND	0.001

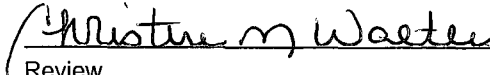
ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.  
SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Comments: **N. Hogback, NM Field Filtered**

  
Analyst

  
Review

Client:	Duncan Oil	Project #:	05161-007
Sample ID:	12-9 MW #2	Date Reported:	07-08-07
Laboratory Number:	42310	Date Sampled:	07-05-07
Chain of Custody:	2951	Date Received:	07-05-07
Sample Matrix:	Water	Date Analyzed:	07-08-07
Preservative:	Cool, HNO <sub>3</sub>	Date Digested:	07-06-07
Condition:	Cool & Intact	Analysis Needed:	Fe, Mn, Pb

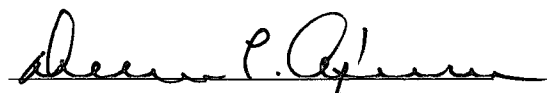
Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Iron	0.411	0.001
Manganese	0.417	0.001
Lead	ND	0.001

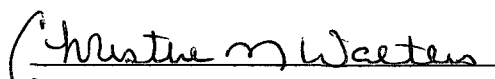
ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.  
SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission Spectroscopy, SW-846, USEPA, December 1996.

Comments: **N. Hogback, NM Field Filtered**

  
Analyst

  
Review

## TRACE METAL ANALYSIS Quality Control / Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	07-08-TM QA/QC	Date Reported:	07-08-07
Laboratory Number:	42309	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Analysis Requested:	Fe, Mn, Pb	Date Analyzed:	07-08-07
Condition:	N/A	Date Digested:	07-06-07

Blank & Duplicate Conc. (mg/L)	Instrument Blank (mg/L)	Detection Limit	Sample (mg/L)	Duplicate (mg/L)	% Diff.	Acceptance Range
Iron	ND	0.001	0.254	0.255	0.4%	0% - 30%
Manganese	ND	0.001	0.308	0.307	0.3%	0% - 30%
Lead	ND	0.001	ND	ND	0.0%	0% - 30%

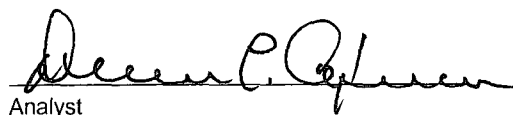
Spike Conc. (mg/L)	Spike Added	Sample (mg/L)	Spiked Sample	Percent Recovery	Acceptance Range
Iron	0.500	0.254	0.752	99.7%	80% - 120%
Manganese	0.500	0.308	0.806	99.8%	80% - 120%
Lead	0.500	ND	0.499	99.8%	80% - 120%

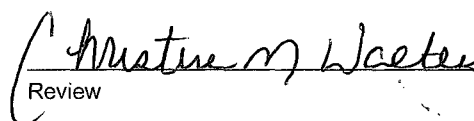
ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils.  
SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emission  
Spectroscopy, SW-846, USEPA, December 1996.

Comments: QA/QC for samples 42309 - 42310

  
Analyst

  
Review

٢٥٤

san juan reproduction 578-129

**SECTION 3:**

Historical Data

# Historical Data

NMED Action Levels		5	1000	700	10000	1	0.20	0.05
Well No.	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)	Iron (ppm)	Manganese (ppm)	Lead (ppm)
North Hogback 12-1 MW-1	07/20/06	NS	NS	NS	NS	NS	NS	NS
	10/13/06	4.30	2.40	3.90	12.20	NS	NS	NS
	01/11/07	ND	ND	0.20	1.50	NS	NS	NS
	04/02/07	<b>121</b>	301	359	1748	NS	NS	NS
	07/05/07	ND	ND	ND	0.4	NS	NS	NS
North Hogback 12-1 MW-2	07/20/06	NS	NS	NS	NS	NS	NS	NS
	10/13/06	<b>5.90</b>	3.00	7.10	15.80	NS	NS	NS
	01/11/07	0.20	17.60	5.00	46.30	NS	NS	NS
	04/02/07	ND	ND	0.60	1.80	NS	NS	NS
	07/05/07	ND	ND	ND	0.50	NS	NS	NS
North Hogback 12-4 MW-1	07/20/06	1.20	5.90	23.40	16.70	NS	NS	NS
	10/13/06	ND	1.90	1.30	1.90	NS	NS	NS
	01/11/07	ND	51.20	26.60	118.50	NS	NS	NS
North Hogback 12-4 MW-2	07/20/06	1.60	1.80	1.60	8.70	NS	NS	NS
	10/13/06	3.10	1.60	2.80	6.70	NS	NS	NS
	01/11/07	ND	3.50	0.70	8.40	NS	NS	NS
North Hogback 12-4 MW-3	07/20/06	1.30	0.40	0.80	2.80	NS	NS	NS
	10/13/06	ND	ND	0.70	ND	NS	NS	NS
	01/11/07	ND	ND	ND	0.10	NS	NS	NS
North Hogback 12-9 MW-1	07/20/06	NS	NS	NS	NS	0.54	<b>0.28</b>	ND
	10/13/06	NS	NS	NS	NS	0.31	<b>0.50</b>	ND
	01/11/07	NS	NS	NS	NS	0.74	<b>0.40</b>	ND
	04/02/07	NS	NS	NS	NS	0.119	<b>0.387</b>	0.004
	07/05/07	NS	NS	NS	NS	0.250	<b>0.310</b>	ND
North Hogback 12-9 MW-2	07/20/06	NS	NS	NS	NS	ND	<b>0.22</b>	ND
	10/13/06	NS	NS	NS	NS	0.22	<b>0.54</b>	ND
	01/11/07	NS	NS	NS	NS	0.46	<b>0.55</b>	ND
	04/02/07	NS	NS	NS	NS	0.325	<b>0.493</b>	0.003
	07/05/07	NS	NS	NS	NS	0.411	<b>0.417</b>	ND

NS = Not Sampled  
ND = Not Detected

Historical Data

NMED Action Levels		5	1000	700	10000	1	0.20	0.05
Well No.	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)	Iron (ppm)	Manganese (ppm)	Lead (ppm)



**SECTION 4:**

Field Notes



# U.S. ENVIRONMENTAL PROTECTION AGENCY

## NOTICE OF INSPECTION

Address (EPA Regional Office)

Region 9

Environmental Inspection Agency

75 Hawthorne Street (WTR-9)

San Francisco, CA 94105

Inspection Contractor

NAVAJO NATION

UNDERGROUND INJECTION CONTROL

PO BOX 1090

SHIPROCK, NM 87420-1999

Firm To Be Inspected RT Duncan

Environatech Inc.

5796 US Hwy 64

Farmington NM 87401

Date 7-05-07

Hour 2:16 PM

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300 f et seq.).

Reason For Inspection

Ground Water Sampling

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable permit or rule.

Raymond T Duncan

No 1 logback 12-9

Monitor well #1 sample with label

monitor well #2 sample with label

No 1 logback 12-1

monitor well #1 sample with label

monitor well #2 sample with label

Pit, Conductivity, temperature readings taken.

Section 1445(b) of the SDWA (42 U.S.C. §300 j-4 (b) is quoted on the reverse of this form.

Receipt of this Notice of Inspection is hereby acknowledged.

Firm Representative

Date

Inspector



10601 Lomas NE, Suite 106  
Albuquerque, NM 87112  
(505) 237-8440

3R0097  
3R0090

March 31, 2006

Mr. Glen Von Gonten  
State of New Mexico  
Oil Conservation Division  
Environmental Bureau  
1220 South Saint Francis Drive  
Santa Fe, NM 87505

2006 APR 3 PM 1:23

Dear Mr. Von Gonten:

Maxim Technologies (Maxim), on behalf of ConocoPhillips, submits this letter requesting permission to plug and abandon former air injection wells located at the Shephard and Kelsey #1 and Nell Hall #1 sites located in Bloomfield and Flora Vista, New Mexico, respectively. The air injection wells are out of use at both sites. Maxim also seeks approval to plug and abandon three monitoring wells located at the Nell Hall #1 site. These monitoring wells were replaced with deeper wells during February 2004 and are no longer sampled due to the lack of measurable groundwater within the screened intervals.

Maxim intends to complete this work during the week of May 15, 2006. Please notify me at (505) 237-8440 or [khenders@maximusa.com](mailto:khenders@maximusa.com) before that time if you do not approve of this path forward, have any questions, or require additional information.

Sincerely,

Kelly E. Henderson  
Project Manager/Geologist

Cc: Neal Goates, ConocoPhillips (electronic only)  
Denny Foust, NMED, Oil Conservation Division  
Robert Wirtanen, ConocoPhillips



10601 Lomas NE, Suite 106  
Albuquerque, NM 87112  
(505) 237-8440

3R0097  
3R0090

March 31, 2006

Mr. Glen Von Gonten  
State of New Mexico  
Oil Conservation Division  
Environmental Bureau  
1220 South Saint Francis Drive  
Santa Fe, NM 87505

2006 APR 3 PM 1 23

Dear Mr. Von Gonten:

Maxim Technologies (Maxim), on behalf of ConocoPhillips, submits this letter requesting permission to plug and abandon former air injection wells located at the Shephard and Kelsey #1 and Nell Hall #1 sites located in Bloomfield and Flora Vista, New Mexico, respectively. The air injection wells are out of use at both sites. Maxim also seeks approval to plug and abandon three monitoring wells located at the Nell Hall #1 site. These monitoring wells were replaced with deeper wells during February 2004 and are no longer sampled due to the lack of measurable groundwater within the screened intervals.

Maxim intends to complete this work during the week of May 15, 2006. Please notify me at (505) 237-8440 or [khenders@maximusa.com](mailto:khenders@maximusa.com) before that time if you do not approve of this path forward, have any questions, or require additional information.

Sincerely,

Kelly E. Henderson  
Project Manager/Geologist

Cc: Neal Goates, ConocoPhillips (electronic only)  
Denny Foust, NMED, Oil Conservation Division  
Robert Wirtanen, ConocoPhillips



10601 Lomas NE, Suite 106  
Albuquerque, NM 87112  
(505) 237-8440

3R0097  
3R0090

March 31, 2006

Mr. Glen Von Gonten  
State of New Mexico  
Oil Conservation Division  
Environmental Bureau  
1220 South Saint Francis Drive  
Santa Fe, NM 87505

2006 APR 3 PM 1 23

Dear Mr. Von Gonten:

Maxim Technologies (Maxim), on behalf of ConocoPhillips, submits this letter requesting permission to plug and abandon former air injection wells located at the Shephard and Kelsey #1 and Nell Hall #1 sites located in Bloomfield and Flora Vista, New Mexico, respectively. The air injection wells are out of use at both sites. Maxim also seeks approval to plug and abandon three monitoring wells located at the Nell Hall #1 site. These monitoring wells were replaced with deeper wells during February 2004 and are no longer sampled due to the lack of measurable groundwater within the screened intervals.

Maxim intends to complete this work during the week of May 15, 2006. Please notify me at (505) 237-8440 or [khenders@maximusa.com](mailto:khenders@maximusa.com) before that time if you do not approve of this path forward, have any questions, or require additional information.

Sincerely,

Kelly E. Henderson  
Project Manager/Geologist

Cc: Neal Goates, ConocoPhillips (electronic only)  
Denny Foust, NMED, Oil Conservation Division  
Robert Wirtanen, ConocoPhillips