

CONOCOPHILLIPS

EVGSAU #3127-002 FLOWLINE LEAK

ENVIRONMENTAL SITE INVESTIGATION

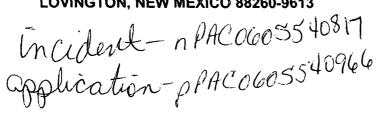
PERFORMED BY:

BBC INTERNATIONAL, INC.
WORLD-WIDE ENVIRONMENTAL SPECIALISTS
1324 W. MARLAND BLVD.
P. O. BOX 805
HOBBS, NEW MEXICO 88240
(505)397-6388 • FAX (505)397-0397
EMAIL: bbc@bbcinternational.com
WEBSITE: www.bbcinternational.com

AUGUST 23, 2005

PREPARED FOR:

MR. STEPHEN R. WILSON
CONOCOPHILLIPS
29 VACUUM COMPLEX RD.
LOVINGTON, NEW MEXICO 88260-9613







NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

September 15, 2005

Steve Wilson Conoco Phillips 29 Vacuum Complex Rd. Lovington, NM 88260

Re:

Work Plan Approval

EVGSAU #3127-002 Flowline Leak

Dated: 08/23/05

UL-M, Sec 32-T17S-R35E

The remediation closure referenced above and submitted to the New Mexico Oil Conservation Division (OCD) for ConocoPhillips by BBC is **hereby approved** according to the information provided.

Please be advised that OCD approval of this plan does not relieve ConocoPhillips of liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. In addition, OCD approval does not relieve ConocoPhillips of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you have any questions or need assistance please write or call: (505) 393-6161, ext. 113, or e-mail: psheeeley@state.nm.us

Sincerely,

Paul Sheeley-Environmental Engineer

Cc:

Roger Anderson - Environmental Bureau Chief

Chris Williams - District I Supervisor Larry Johnson - Environmental Engineer

Ken Swinny - BBC

ConocoPhillips EVGSAU #3127-002 Flowline Leak (05-31-05)

1.0 INTRODUCTION

The subject site is located east of Buckeye, New Mexico in unit letter M of Section 32, Township 17 South, and Range 35 East. The site consists of undeveloped rangeland and petroleum production facilities. On May 5, 2005, the 3" flowline from well # 3127-002 leaked approximately 14 bbls of oil and 9 bbls of water with approximately 6 bbls of oil and 4 bbls of water being recovered.

2.0 SITE CHARACTERIZATION

The leak area runs north to south and measures approximately 138 feet by 40 feet. A diagram of the leak area including the sample points can be reviewed in Appendix I of this report. Site photographs are located in Appendix IV of this report. The surface soil is brown topsoil. There is no water source within 1,000 feet of the site. Data from the New Mexico Office of the State Engineer indicates that there is one recorded water well located in Section 32, Township 17 South, and Range 35 East. The depth to groundwater in this well is 86.08 feet. The rock layer in the Buckeye area is very shallow and at this site it is approximately one foot below the surface of the topsoil. A soil boring drilled on 8-3-05 to 119 feet BGS (Below Ground Surface) at the center of the leak site did not encounter groundwater. Therefore the ranking criteria for this site, using New Mexico Oil Conservation Division "Guidelines for Remediation of Leaks Spills and Releases" (August 13, 1993), is 0 - 9.

3.0 SITE INVESTIGATION ACTIVITIES

On 6-6-05 BBC personnel conducted a site visit and concluded that the surface soil should be excavated and disposed of to prevent further vertical migration of hydrocarbons and chloride at the site.

On 6-9-05 BBC personnel and equipment mobilized to the site and began excavating surface soils. During the excavation and disposal of the surface soil samples were taken at various points and shallow depths to determine the remaining hydrocarbon and chloride impact at the site. A backhoe was used to sample to a depth of 13.5 feet BGS (Below Ground Surface). All samples were taken to Cardinal Laboratories for analysis. Soil analysis from these samples indicated that further vertical delineation of the site was warranted. The sample

BBC International, Inc.

point locations can be reviewed on the site diagram located in Appendix I. The laboratory analysis reports can be reviewed in Appendix II.

On 8-4-05 an air rotary drilling rig was used to drill two soil borings at the site. SB1 was drilled at the approximate point of the leak to a depth of 50 feet BGS. SB2 was drilled at the approximate center of the leak site to a depth of 119 feet BGS. No groundwater was encountered at SB2. Field chloride analysis and a PID were used to screen the samples. Samples were taken at 5' intervals in both soil borings. All samples from SB1 were analyzed for chlorides, additionally since this boring was the nearest to the leak point the 5', 25' and 50' samples were also analyzed for TPH and BTEX. All samples from SB2 were analyzed for chlorides, additionally the 5', and 119' samples were analyzed for TPH and BTEX. Soil boring records can be reviewed in Appendix III.

4.0 CONCLUSION AND RECOMMENDATION

The laboratory data for this site indicates that TPH and BTEX concentrations are below OCD guidelines for areas where depth to groundwater is greater than 100 feet, and the area of greatest chloride contamination is in the near surface portion of the leak area. Therefore, it is recommended that approximately 3 feet of soil be removed and disposed of. This soil would be transported to an OCD approved landfarm or disposal site. An impermeable barrier would then be installed, the site backfilled with clean soil, and reseeded with the appropriate BLM seed mix.

BBC International, Inc.

District 1
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

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

Form C-141

Revised October 10, 2003

Release Notification and Corrective Action

					OPERA	TOR	🛛 Initia	l Report
Name of Co	mpany C	onocoPhilli	os	~	Contact St	ephen Wilson		
		66, Lovingt		-	Telephone	No. 505-396-79	962	
Facility Nat	ne EVGS	SAU well #3	127-002		Facility Ty	e Oil and Gas	3	
Surface Ow	ner State	of NM		Mineral C	wner		Lease N	o 30-025-02961-00-00
		<u></u>		LOCA	TION OF RE	LEASE		
Unit Letter m	Section 32	Township 17S	Range 35E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea, NM
	*	, , , , , , , , , , , , , , , , , , ,	Latit	ude N 32° 47	J	ude W 103° 2	29.213'	
,				NAT	URE OF REL			
Type of Rele		_			Volume of Release		Volume R	
Crude and		water			23bbl (14oil, 9w		(60il, 4wa	
Source of Re	elease				Date and Hour of 05-31-05 9:00an		05-31-05	Hour of Discovery
Was Immedi	ate Notice (Given?			If YES, To Whor		03-31-03	10.00dili
		Yes No	Not Not ■ Not N	Required	11.1.2, 10			
By Whom?					Date and Hour	····		
Was a Water	course Rea	ched?			If YES, Volume	mpacting the Wat	ercourse.	
			Yes 🛭] No				
If a Waterco	urse was Im	pacted, Descr	ibe Fully.	*				
1		, , ,	,					
								
		external co			out to pick up fr	ee liquids and b	ackhoe out to sa	nd location to secure site.
Describe Ar	ea Affected	and Cleanup	Action Ta	ken.*				
					e liquids and bacl	choe out to sand	l location to secu	re site.
								suant to NMOCD rules and
								eases which may endanger ieve the operator of liability
								r, surface water, human health
or the enviro	nment. In	addition, NM	OCD acce	ptance of a C-141	report does not relie	ve the operator of	responsibility for c	ompliance with any other
federal, state	, or local la	ws and/or reg	ulations.		-			
						OIL CON	<u>ISERVATION</u>	DIVISION
Signature:								
					Annroyed h	y District Supervis	sor.	
Printed Nam	e: Stephe	n R. Wilson		···	7 tpproved b			
Title: Sr. S	HEAR Spe	ecialist			Approval D	ate:	Expiration	Date:
E-mail Add	ess: Stepl	nen.R.Wilson	@Conoce	Phillips.com	Conditions	of Approval:		Attached 🗖
5. 0.	. 05	_						Attached
Date: 06-				05-396-7962				
AILIACH ACID	iuonai 5he	ets If Neces	sarv					

Table 1

Analyte			3F2 @ I	SF3 (4) 1	Dackground
	Method	Sample: H9872-1	Sample: H9872-2	Sample: H9872-3	Sample: H9872-4
		6/10/2005	6/10/2005	6/10/2005	6/10/2005
		mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride Std	Std. Methods 4500-CIB	8560	8880	12600	48
GRO	EPA SW-846 8015 M	22.7	<10.0	<10.0	<10.0
DRO	EPA SW-846 8015 M	1890	<10.0	<10.0	<10.0
Benzene	EPA SW-846 8260	<0.005	<0.005	<0.005	<0.005
Toluene	EPA SW-846 8260	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	EPA SW-846 8260	<0.005	<0.005	<0.005	<0.005
Total Xylenes	EPA SW-846 8260	0.078	<0.0015	<0.0015	<0.0015

Table 2

		SP @ 3'	SP @ 5'	SP @ 7.5'	SP @ 10'	SP @ 13.5'
Analyte	Method	Sample: H9874-1	Sample: H9874-2	Sample: H9874-3	Sample: H9874-4	Sample: H9874-5
		6/15/2005	6/15/2005	6/15/2005	6/15/2005	6/15/2005
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	Std. Methods 4500-CI'B	8320	3840	4240	4240	3520
GRO	EPA SW-846 8015 M	<10.0				<10.0
DRO	EPA SW-846 8015 M	<10.0				<10.0
Benzene	EPA SW-846 8260	<0.005				<0.005
Toluene	EPA SW-846 8260	<0.005				<0.005
Ethylbenzene	EPA SW-846 8260	<0.005				<0.005
Total Xylenes	EPA SW-846 8260	<0.015				<0.015

Table 3

Method Std. Methods 4500-CIB EPA SW-846 8015 M EPA SW-846 8260 EPA SW-846 8260			SB1 @ 5'	SB1 @ 5' SB1 @ 10'	SB1 @ 15	SB1 @ 20.	SB1 @ 25.
Std. Methods 4500-CIB EPA SW-846 8015 M EPA SW-846 8260 EPA SW-846 8260	Analyte	Method	Sample: H10052-1	Sample: H10052-2	Sample: H10052-3	Sample: H10052-4	Sample: H10052-5
Std. Methods 4500-CIB EPA SW-846 8015 M EPA SW-846 8260 EPA SW-846 8260			8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/3/2005
Std. Methods 4500-CIB EPA SW-846 8015 M EPA SW-846 8260 EPA SW-846 8260			mg/Kg	бу/бш	By/6w	BA/Bw	63//6m
EPA SW-846 8015 M EPA SW-846 8015 M EPA SW-846 8260 EPA SW-846 8260	Chloride	Std. Methods 4500-CI'B	2159	3439	3439	1280	1280
EPA SW-846 8015 M EPA SW-846 8260 EPA SW-846 8260	GRO	EPA SW-846 8015 M	<10.0		:		<10.0
EPA SW-846 8260 EPA SW-846 8260 EPA SW-846 8260	DRO	EPA SW-846 8015 M	<10.0				<10.0
EPA SW-846 8260	Benzene	EPA SW-846 8260	<0.005				<0.005
	Toluene	EPA SW-846 8260	<0.005				<0.005
EPA SW-846 8260	thylbenzen	EPA SW-846 8260	<0.005				<0.005
otal Xylene EPA SW-846 8260 <0.0	otal Xylene	EPA SW-846 8260	<0.015				<0.015

		SB1 @ 30'	SB1 @ 35'	SB1 @ 40'	SB1 @ 45'	SB1 @ 50'
Analyte	Method	Sample: H10052-6	Sample: H10052-7	Sample: H10052-8	Sample: H10052-9	Sample: H10052-10
		8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/3/2005
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	Std. Methods 4500-CIB	432	256	256	224	192
GRO	EPA SW-846 8015 M					<10.0
DRO	EPA SW-846 8015 M					<10.0
Benzene	EPA SW-846 8260					<0.005
Toluene	EPA SW-846 8260					<0.005
thylbenzen	EPA SW-846 8260					<0.005
otal Xylene	EPA SW-846 8260					<0.015

Table 4

Method SB2 @ 5' SB2 @ 10' SB2 @ 15' SB2 @ 20' Method Sample: H10053-1 Sample: H10053-2 Sample: H10053-3 Sample: H10053-3 Std. Methods 4500-CIB \$8/3/2005 \$8/3/2005 \$8/3/2005 EPA SW-846 8015 M <10.0 \$3839 4799 3359 EPA SW-846 8015 M <10.0 \$10.0 \$10.0 \$10.0 \$10.0 \$10.0 EPA SW-846 8260 <0.005 <0.005 \$10.0										
Method Sample: H10053-1 Sample: H10053-2 Sample: H10053-3 Sample: H10053-3			SB2 @ 5	-SB2 @ 10'	,	SB2 @ 20'	SB2 @ 25.	SB2 @ 30'	SB2 @ 35'	SB2 @ 40
Std. Methods 4500-CIB 2719 3839 4799 3359 EPA SW-846 8015 M <10.0 <	Analyte	Method	Sample: H10053-1	Sample: H10053-2	Sample: H10053-3	Sample: H10053-4	Sample: H10053-5	Sample: H10053-6	Sample: H10053-7	Sample: H10053-8
Std. Methods 4500-CIB 2719 3839 4799 3359 EPA SW-846 8015 M <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <10.0 <t< th=""><th></th><th></th><th>8/3/2005</th><th>8/3/2005</th><th>8/3/2005</th><th>8/3/2005</th><th>8/3/2005</th><th>8/3/2005</th><th>8/3/2005</th><th>8/3/2005</th></t<>			8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/3/2005
Std. Methods 4500-CIB 2719 3839 4799 3359 EPA SW-846 8015 M <10.0 <10.0 EPA SW-846 8015 M <0.005 <0.005 EPA SW-846 8260 <0.005 <0.005 EPA SW-846 8260 <0.005 <0.005 <0.005			mg/Kg							
EPA SW-846 8015 M EPA SW-846 8015 M EPA SW-846 8260 EPA SW-846 8260 EPA SW-846 8260	Chloride	Std. Methods 4500-CI'B	2719	3839	4799	3359	3039	2559	1999	2159
EPA SW-846 8015 M EPA SW-846 8260 EPA SW-846 8260 EPA SW-846 8260	GRO	EPA SW-846 8015 M	<10.0							
EPA SW-846 8260 EPA SW-846 8260 EPA SW-846 8260	DRO	EPA SW-846 8015 M	<10.0							
EPA SW-846 8260 EPA SW-846 8260	Benzene	EPA SW-846 8260	<0.005							
EPA SW-846 8260	Toluene	EPA SW-846 8260	<0.005							
CDV 01/0 016	Ethylbenzene	EPA SW-846 8260	<0.005							
0070 040-000	Total Xylenes	EPA SW-846 8260	<0.015							

		SB2 @ 45'	SB2 @ 50'	SB2 @ 55.	SB2 @ 60.	SB2 @ 64'	SB2 @ 69.	SB2 @ 74'	SB2 @ 79'
Analyte	Method	Sample: H10053-9							
		8/3/2005							
		mg/Kg							
Chloride	Std. Methods 4500-Cl'B	1919	2079	1999	1919	1440	1280	1120	1200

		SB2 @ 84'	SB2 @ 88.	SB2 @ 94'	SB2 @ 99,	SB2 @ 104	SB2 @ 109'	SB2 @ 114'	SB2 @ 119'
Analyte	Method	Sample: H10053-17	Sample: H10053-18	Sample: H10053-19	Sample: H10053-17 Sample: H10053-18 Sample: H10053-19 Sample: H10053-20 Sample: H10053-21	Sample: H10053-21	Sample: H10053-22	Sample: H10053-22 Sample: H10053-23 Sample: H10043-1	Sample: H10043-1
		8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/3/2005	8/4/2005
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	Std. Methods 4500-CI'B	1120	1200	1280	1120	720	704	095	176
GRO	EPA SW-846 8015 M								<50.0
DRO	EPA SW-846 8015 M								<50.0
Benzene	EPA SW-846 8260								<0.005
Toluene	EPA SW-846 8260								<0.005
Ethylbenzene	EPA SW-846 8260								<0.005
Total Xylenes	EPA SW-846 8260								<0.015

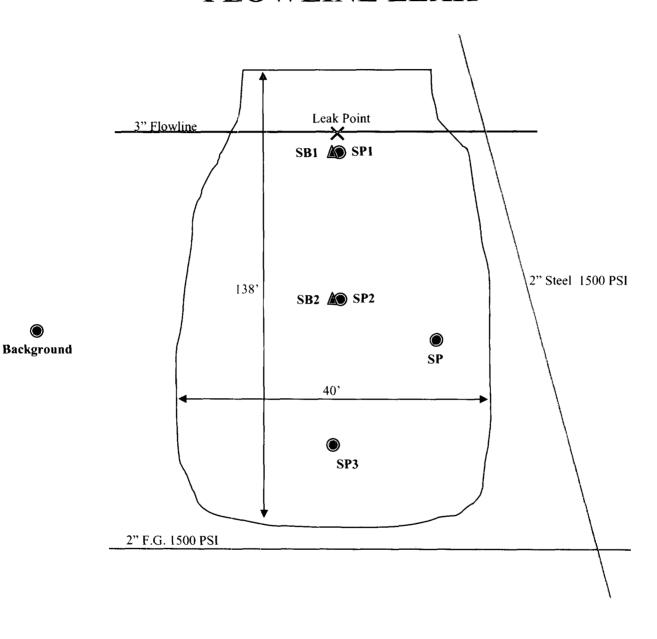
Groundwater Search Results

٦	SEC	TWN	RNG	SPOT	COUNTY	SOURCE	QTY	SITE LOCATION	DATE	LEVEL
В	32	178	35E	21142	LEA	OES	_	17S.35E.32.21142	1990-12-20	86.08

Appendix I



CONOCOPHILLIPS EVGSAU 3127-002 FLOWLINE LEAK



LEGEND

- X Leak point
- Sample point
- Soil Boring

BBC INTERNATIONAL, INC.

CONOCOPHILLIPS Well 3127-002

Date: 6-16-05	Drawn By: JG
Disk:	Sheet 1 of 1 Sheets
Scale: Not to Scale	File Name

CONOCOPHILLIPS WELL #3127-002 GPS Coordinates

SP-1

N. 32° 47.291'

W. 103° 29.221'

SP-2

N. 32° 47.284'

W. 103° 29.221'

SP-3

N. 32° 47.277'

W. 103° 29.220'

SP

N. 32° 47.283'

W. 103° 29.219'

BACKGROUND

N. 32° 47.280'

W. 103° 29.236'

SB-1

N. 32° 47.291'

W. 103° 29.221'

SB-2

N. 32° 47.284'

W. 103° 29.221'

Appendix II





ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON P.O. BOX 805 HOBBS, NM 88240 FAX TO: (505) 397-0397

Receiving Date: 06/15/05 Reporting Date: 06/16/05

Project Owner: CONOCO PHILLIPS

Project Name: EVGSAU #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Sampling Date: 06/10/05 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: AH Analyzed By: BC/AH

	GRO	DRO	
	(C ₆ -C ₁₀)	(>C ₁₀ -C ₂₈)	CI*
LAB NUMBER SAMPLE ID	(mg/Kg)	(mg/Kg)	(mg/Kg)

ANALYSIS	DATE	06/15/05	06/15/05	06/16/05
H9872-1	SP1 @1'	22.7	1890	8560
H9872-2	SP2 @1'	<10.0	<10.0	8880
H9872-3	SP3 @1'	<10.0	<10.0	12600
H9872-4	BACKGROUND	<10.0	<10.0	48
Quality Con	trol	784	815	1030
True Value	QC	800	800	1000
% Recovery	1	98.0	102	103
Relative Pe	rcent Difference	1.0	4.6	2.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl⁻: Std. Methods 4500-Cl⁻B *Analyses performed on 1:4 w:v aqueous extracts.

Auf HACohi

Date

H9872A.XLS



ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON

P.O. BOX 805 HOBBS, NM 88240

FAX TO: (505) 397-0397

Receiving Date: 06/15/05

Reporting Date: 06/16/05
Project Owner: CONOCO PHILLIPS

Project Name: EVGSAU #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Sampling Date: 06/10/05 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: AH

Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DA	TE	06/15/05	06/15/05	06/15/05	06/15/05
H9872-1	SP1 @1'	< 0.005	<0.005	<0.005	0.078
H9872-2	SP2 @1'	<0.005	<0.005	<0.005	<0.015
H9872-3	SP3 @1'	< 0.005	<0.005	<0.005	<0.015
H9872-4	BACKGROUND	<0.005	<0.005	<0.005	<0.015
Quality Control		0.094	0.099	0.099	0.302
True Value QC		0.100	0.100	0.100	0.300
% Recovery		94.4	98.7	99.1	101.0
Relative Perce	nt Difference	4.5	2.6	1.7	2.2

METHOD: EPA SW-846 8260

Date

& ARDINAL LABORATORIES, INC.

land, Hobbs, NM 88240	26 Fax (505) 393-2476
TX 79603 101 East Mar	673-7020 (505) 393-232
2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240	(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

3d days, past, che st. Ine raise of 24% par servera livra. Ine ariginal date of Invelon graf at coeis of colections, britacing separitory's loss. county independent for charged on all societies more fines ŏ REQUES Page ANAL YSIS S108 Hd1 - ---PELECOTE LOOK) AN DENGAR (GROW) KAN NO BEACH ARRAY LENGT ON THE NOW HAVE THE DEAD DEAD OF THE WASHINGTON OF THE PROPERTY OF THE SECOND OF THE CONTRIBUTION OF THE PROPERTY OF THE SECOND OF THE CONTRIBUTION OF THE PROPERTY OF THE SECOND OF TH 54:41 20-01-9 45.11 TIME 14:41 page any of the above stated reasons or otherwise SAMPLING TO DATE 6-10-05 5-10-05 50-01-9 7718 (505) 393-2326 Fax (505) 393-2476 PRESERV OTHER: Company ICE / CODI Address: Phone #: P.O. # Fax #: State: Attn: ACID/BASE: chy: OTHER: STADGE Project Owner: Color of Phillips MATRIX CENDE DIF Fax #: (505) 397-0397 #3197 -002 Slowline leak ROIF State: 11 1 21p: 862 (1) MASTEWATER ВЕОПИРМАТЕЯ # CONTAINERS (G) AO (C)OMP. Ō atecautiona mer) and acraso 0 Sample I.D. Sampler Relinquished; Prond # (5'04') 397 - 6388 40000 EVESAU Q Company Name: BDCالم $\mathcal{C}_{\mathcal{O}}$ Tob? Project Manager: Project Location: Sampler Name: Project Mine: ころののので б Lab LD 7 Project ₩ Address: City:

T Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

Add'l Phone #: Add'l Fax #:

I No

☐ Yes

Phone Result: Fax Result: REMARKS:

CHECKED BY:

ondition

Received By: (Lab Staff

səilnquknad

17mg; 50

Fast. N

Received By:

Cool (Mact

Sampler - UPS - Bus - Other: Delivered By: (Cirkle One)

(initials)



ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON P.O. BOX 805 HOBBS, NM 88241

FAX TO: (505) 397-0397

Receiving Date: 06/17/05 Reporting Date: 06/20/05

Project Number: NOT GIVEN

Project Name: EVGSAV #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Analysis Date: 06/17/05

Sampling Date: 06/15/05 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: AH

		CI ⁻
LAB NUMBER	SAMPLE ID	(mg/Kg)
H9874-1	SP @ 3'	8320
H9874-2	SP @ 5'	3840
H9874-3	SP @ 7.5'	4240
H9874-4	SP @ 10'	4240
H9874-5	SP @ 13.5'	3520
Quality Control		1020
True Value QC		1000
% Recovery		102
Relative Percent	1.0	

METHOD: Std. Methods 4500-Cl⁻B

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

Suy LH JA Colla

Date



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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

ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON

P.O. BOX 805 HOBBS, NM 88241 FAX TO: (505) 397-0397

Receiving Date: 06/17/05

Reporting Date: 06/21/05
Project Number: NOT GIVEN

Project Name: EVGSAV #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Sampling Date: 06/15/05

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: BC

	GRO	DRO			ETHYL	TOTAL
LAB NUMBER SAMPLE ID	(C ₆ -C ₁₀) (mg/Kg)	(>C ₁₀ -C ₂₈) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	BENZENE (mg/Kg)	XYLENES (mg/Kg)
	(IIIg/Ng)	(mg/kg)	(ilig/Kg)	(IIIg/Ng)	(ilig/ixg)	(mg/kg)

ANALYSIS DATE:		06/19/05	06/19/05	06/20/05	06/20/05	06/20/05	06/20/05
H9874-1 SF	9 @ 3'	<10.0	<10.0	< 0.005	< 0.005	<0.005	<0.015
H9874-5 SF	² @ 13.5'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
Quality Control		784	815	0.094	0.086	0.087	0.270
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		98.0	102	94.2	86.1	87.4	90.0
Relative Percent [Difference	1.0	4.6	0.2	14.6	13.4	12.0

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.

Burgess J. A. Cooke. Ph. D.

Date

Page

A ARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476 (915) 673-7001 Fax (915) 673-7020

Terran and Conditions: Jak was rid by damped on all accession inter Familia departments and department on the case of 24% per access from the adjust data of lineies, and at oosts of codesdons, training appearantly leve. REQUES ANALYSIS 8012 W Haytes, A. Jeich. Charles, N. Tayageste and advised withhearer that do beamed where there in the first and featured by Carles highly layers and the second highly controlled by the control of the contro (0:30 10:50 11:35 TIME 5.5 9:0 ELSE NOTE: LAKERY XXI December Cardon's hainst and dears wanter stands for any definitions when the common of lot, that he lated to the mount paid by the check for the SAMPLING BILL TO DATE 6.15 6.15 でふ 9.12 6 5 PRESERY : REHTO Company: ICE I CODT Address: Phone #: P.O. # State: Attn: chy: Fax #: ACID/BASE: OTHER: STADGE MATRIX CENDE OIL Fax # (Tor) 3970397 POIL Project Name: EVGSAV # 9127-001 Flouline Leal MASTEWATER **ВЕТАМОИ ОЯЭ** # CONTAINERS State: NM Zlp: (G) RAB DR (C) OMP. S INTERNATIONA Project Owner: Bausson MARLAND KEN SUIMED Sample I.D. Phone # (505) 397 6388 Buckeye Company Name: BBC Project Manager: CLiff SPO ż 5P @ SPO SP @ B S 1324 City: HOBBS Project Location: Samplar Name: FURLIBUSE ONLY Lab LD h 1.867 Address: Project #

Phone Result: Fax Result: REMARKS: Sampler Relinguished:

Date: 16-05 17:b

topen Hebinandes

Add'l Phone #:

CHECKED BY: (Initials) Sample Condition Cool Intack

Yes Yes Received By: (Lab Stat 25/17/05 Time: Sampler - UPS - Bus - Other: Delivered By: (Circle One) Relinquished By:

T. Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.



ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON P.O. BOX 805 HOBBS, NM 88241

FAX TO: (505) 397-0397

Receiving Date: 08/08/05 Reporting Date: 08/09/05

Project Owner: CONOCO PHILLIPS

Project Name: EVGSAU #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Analysis Date: 08/09/05 Sampling Date: 08/03/05

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: NF

LAB NUMBER	SAMPLE ID	CI¯ (mg/Kg)
H10052-1	SB1 @ 5'	2159
		3439
H10052-2 H10052-3	SB1 @ 10' SB1 @ 15'	3439
H10052-4	SB1 @ 20'	1280
H10052-5	SB1 @ 25'	1280
H10052-6	SB1 @ 30'	432
H10052-7	SB1 @ 35'	256
H10052-8	SB1 @ 40'	256
H10052-9	SB1 @ 45'	224
H10052-10	SB1 @ 50'	192
Quality Control		1000
True Value QC		1000
% Recovery		100
Relative Percent	Difference	2.0

METHOD: Standard Methods 4500-Cl'B

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

Chemist

Date





ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON

P.O. BOX 805 HOBBS, NM 88241 FAX TO: (505) 397-0397

Receiving Date: 08/08/05

Reporting Date: 08/09/05

Project Owner: CONOCO PHILLIPS

Project Name: EVGSAU #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Sampling Date: 08/03/05

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)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:	08/08/05	08/08/05	08/08/05	08/08/05	08/08/05	08/08/05
H10052-1 SB 1 @ 5'	<10.0	<10.0	<0.005	<0.005	< 0.005	<0.015
H10052-5 SB 1 @ 25'	<10.0	<10.0	<0.005	<0.005	< 0.005	<0.015
H10052-10 SB 1 @ 50'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
	·					
Quality Control	759	754	0.096	0.091	0.098	0.308
True Value QC	800	800	0.100	0.100	0.100	0.300
% Recovery	94.9	94.2	95.8	90.5	97.5	103
Relative Percent Difference	3.6	1.2	0.6	3.3	4.9	4.9

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.

Burgess J. A. Cooke. Ph. D.

Date

H10052A.XLS

A ARDINAL LABORATORIES, INC.

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ast	393
101	(505)
2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240	(915) 373-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

21	020 (505) 393-2326 Fax (505) 393-2476	(505) 393-2476			;	Page	10
Company Name: 8BC Internation	100		2		ANALYSIS	IS REQUEST	
- 43		P.O. #:					
Address: 1324 W. Merland		Company:	دوا هد استان دوس ای در این در این به دوستان در این	78.	• • • • • • • • • • • • • • • • • • • •		
City: 140bbs State: M.M.	7. Zlp: 882410	Attn:	and the state of t			,	
Phone # (505) 397-6388 Fax # (505)	17397.0397	Address:					
Project #: Project Owner:	Con	Chy:	12				
V65AU#3127.002 FI	_	State: 21p:	,				
Project Location: Buckeye N. M.		Phone #:					
Samplar Name: //en Studio of		Fax#:					
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Sampler - UPS - Bus - Other:		Initials HY:					
	ON NO NO						

T Cardinal cannot accept yerbal changes. Please fax written changes to 505-393-2476.



ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON P.O. BOX 805 HOBBS, NM 88241 FAX TO: (505) 397-0397

Receiving Date: 08/08/05 Reporting Date: 08/09/05

Project Owner: CONOCO PHILLIPS

Project Name: EVGSAU #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Analysis Date: 08/09/05 Sampling Date: 08/03/05

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: NF

Analyzed By: NF

		CI
LAB NUMBER	SAMPLE ID	(mg/Kg)

H10053-1	SB 2 @ 5'	2719
H10053-2	SB 2 @ 10'	3839
H10053-3	SB 2 @ 15'	4799
H10053-4	SB 2 @ 20'	3359
H10053-5	SB 2 @ 25'	3039
H10053-6	SB 2 @ 30'	2559
H10053-7	SB 2 @ 35'	1999
H10053-8	SB 2 @ 40'	2159
H10053-9	SB 2 @ 45'	1919
H10053-10	SB 2 @ 50'	2079
H10053-11	SB 2 @ 55'	1999
H10053-12	SB 2 @ 60'	1919
H10053-13	SB 2 @ 64'	1440
H10053-14	SB 2 @ 69'	1280
H10053-15	SB 2 @ 74'	1120
H10053-16	SB 2 @ 79'	1200
H10053-17	SB 2 @ 84'	1120
H10053-18	SB 2 @ 89'	1200
H10053-19	SB 2 @ 94'	1280
H10053-20	SB 2 @ 99'	1120
H10053-21	SB 2 @ 104'	720
H10053-22	SB 2 @ 109'	704
H10053-23	SB 2 @ 114'	560
Quality Control		1000
True Value QC		1000
% Recovery		100
Relative Percent	Difference	2.0

METHOD: Standard Methods 4500-CI'B

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

Da

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 Note that the variety of the service is a 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.





ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON

P.O. BOX 805 HOBBS, NM 88241 FAX TO: (505) 397-0397

Receiving Date: 08/08/05

Reporting Date: 08/09/05

Project Owner: CONOCO PHILLIPS

Project Name: EVGSAU #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Sampling Date: 08/03/05

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)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:	08/08/05	08/08/05	08/08/05	08/08/05	08/08/05	08/08/05
H10053-1 SB 2 @ 5'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
Quality Control	759	754	0.096	0.091	0.098	0.308
True Value QC	800	800	0.100	0.100	0.100	0.300
% Recovery	94.9	94.2	95.8	90.5	97.5	103

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.

Burgess J. A. Cooke. Ph. D.

Relative Percent Difference

Date

3.3

H10053A.XLS

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ARDINAL LABORATORIES, INC.

2111 Beachwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240

ANALYSIS REQUEST - 74 - -BILL TO (505) 393-2326 Fax (505) 393-2476 Address: Company: P.O. #: Attn: 357-0397 SERIE: N. A. 21p: 88240 (915) 673-7001 Fax (915) 673-7020 Fax # (505) Laternationa Marland 397-6388 3 Project Manager Cide Company Name: BBC1324 Sagnas:

of 24% per excess from the oxigonel date of lineato Lecture and Conditioned laker and the damped days after completion of the applicable 15.40 650 二五元 イケン 15:46 17.71 -3-05 112, xx 16:04 3.05/16:06 16:25 SAMPLING 3-05 2-3-05 3.05 300 -3. Ost DATE 1.3.0x 20-8-.30E. Zlp: PRESERV. OTHER: ICE I COOF Phone #: State: Fax#: CID/BYPE: Chy: OTHER: STADGE Project Owner: Conda Phillips SEUDE OIL Flowline book SOIL MASTEWATER REDUNDWATER # CONTAINERS - 10 | S (2) 6 CO (C) AGAMADA (C)OMP. (0) 0 43117-002 3 Sample I.D. 5 89 B 35 5Bg @ 40 24 0 802 P--r15026 25 589 @ 30 Project Name: EVGSAB 501620 -25020 10' -3/502015 58265 Pnana 示 (くのち) CITY: Hobbe Project Location: 1-5500 Samplar Name: היא היה שבי היהו Lab LD Project #:

היאים אבים לאות משמח איזיים להמושאו ול אמו איזיים המהלחמה משנה לא לא הראקים היאים להגרב האות היאים איני היאלאי tacher, in its erect was Cartists on large its Add'l Phone #:

Phone Result. Fax Rosult: REMARKS: Sample Condition Received By: (Lab Staff) Received By: Dafe: 8.0c. Date: O. 19më; /O Delivered By: (Circle One) Sampler Relinguished Reilinguished By:

T. Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

Sampler - UPS - Bus - Otner:

*ARDINAL LABORATORIES, INC. 2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240

(512) 6/3-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476		
.7001 Fax (915) 673-7020 (505) 393-23	L. 2. 1 T.	1916
910) 6/3-7001 Fax (915	(18(+'+')	10/10/10/10/10
F15) 673-7001 F	Company Name:	

Project Manager 100 14 Terrautione 10	171						8	BILL TO	Q				1	ANAL YSIS	YSK		REQUEST	ST			. !	
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City: Hobbs State: N.M. Zlp: 8824	. 21p: 88	241			Attn:		Pr			::. T			٠.									
88 69-656(203)	397-0	39	7		Add	Address		Y		1.												<u></u>
Project #. (anoco /	i Cara	00	'\/'}a	9	Chy:			J.	· F	T												
Project Name: EVGSAU #3127 :002 Flowline	Flow	8	heak		State:	9:		Zlp:		1												
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Phone Result: Fax Result: REMARKS: CHECKED BY: (Initials) Sample Condition
Cool Intact

The Type Received By: Received By: 1-8-05-Darre Co Sampler - UPS - Bus - Otner: Deliyared By: (Circle One) Sampler Relinguished: Kelinguished By:

T. Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

7

*ARDINAL LABORATORIES, INC. 2111 Beechwood, Abilene, TX 79603 101 East Mariand, Hobbs, NM 88240

Page ANALYSIS REQUEST ٠. 9:01 01:01 TIME 10:25 SAMPLING BILL TO 8-4-05 ģ 20.7 DATE (505) 393-2326 Fax (505) 393-2476 Company: PRESERV. : AEHTO ICE \ CODT Address: Phone #: P.O. #: State: Fax#: Atto: chy: **ACIDABASE**: STADGE CENDE DIF esou Phil ROIT Fax # (50c) 347 -0342 State: N. M. 219: 88240 **MASTEWATER ВЕТАМ**ФИПОЯВ N CONTAINERS 4MO(0) AO(AAA(0) (915) 673-7001 Fax (915) 673-7020 Project Owner: 5V6SAU #3127 -002 bote Contional, Acasea Moder Sample I.D. Phone # (COC) 397 - 6389 Ruckeye 23/5/12 @ 10g 411 9 602 -21 SB2@ 104 Project Manager (1, 54 Company Name: DO Project Location: Sampler Name: Project Name: Lab I.D HAG TOSS: Project #

than it reconst this to it is come to be common amples. Relinguished:

Terms and Considerate, like on the lot diapped on Macourus more than 50 days past our at he two of 24% per extra from the adjusted date of bandes, and Macobia of codestions, training subserve fees.

Add'l Phone #: Phone Result: Fax Result: REMARKS; THE PROPERTY OF THE PROPERTY O CHECKED BY: (Initials) Sample Condition
Cool Intact
State Tes Received By: (Lab Staft) ナーナ Daily: X.O. Data: Sampler - UPS - Bus - Other: Delivered By: (Circle One) Reilinguishea By

T. Carainal cannot accept varbal changes. Please fax written changes to 505-393-2476.



ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON P.O. BOX 805 HOBBS, NM 88241 FAX TO: (505) 397-0397

Receiving Date: 08/04/05 Reporting Date: 08/09/05

Project Owner: CONOCO Pl

Project Owner: CONOCO PHILLIPS

Project Name: EVGSAU #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Analysis Date: 08/04/05 Sampling Date: 08/04/05

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: AH

Analyzed By: AH

CI⁻
LAB NUMBER SAMPLE ID (mg/Kg)

H10043-1	SB2 @ 119'	176
		
·		
Ovality Control		4000
Quality Control		1000
True Value QC		1000
% Recovery		100
Relative Percent Dif	ference	2.0

METHOD: Standard Methods 4500-CIB

Note: Analysis performed on a1:4 w:v aqueous extract.

Date

Chemist



ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC ATTN: C. BRUNSON 1324 W MARLAND HOBBS, NM 88240 FAX TO: 505-397-0397

Receiving Date: 8/4/2005

Project Owner: CONOCO PHILLIPS
Project Number: NONE GIVEN

Project Name: EVGSAU #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE N.M.

Sampling Date: 8/4/2005

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: AH

Analyzed By: JD

LAB ID	SAMPLE ID	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TOTAL TPH (mg/kg)
ANALYSIS DA	ATE .	8/5/05	8/5/05	8/5/05
H10043-1	SB2 @ 119'	<50.0	<50.0	<50.0
				-
Blank		<50.0	<50.0	<50.0
Matrix Spike		178	205	383
Matrix Spike D	uplicate	171	211	382
True Value		200	200	400
% Recovery (A		87.3	104	95.6
Relative Perce	ent Difference	4	2.8	0.3

METHOD: EPA SW 846-8015M GRO; TRPHC by Gas Chromatography

Chemist Chemist

Date /





ANALYTICAL RESULTS FOR BBC INTERNATIONAL, INC. ATTN: CLIFF BRUNSON P.O. BOX 805 HOBBS, NM 88241

FAX TO: (505) 397-0397

Receiving Date: 08/04/05 Reporting Date: 08/08/05

Project Owner: CONOCO PHILLIPS

Project Name: EVGSAU #3127-002 FLOWLINE LEAK

Project Location: BUCKEYE, NM

Sampling Date: 08/04/05 Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: AH

Analyzed By: BC

LAB NUMBER SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE	08/04/05	08/04/05	08/04/05	08/04/05
H10043-1 SB2 @ 119'	<0.005	<0.005	<0.005	<0.015
Quality Control	0.096	0.091	0.098	0.306
True Value QC	0.100	0.100	0.100	0.300
% Recovery	95.6	90.8	97.8	102
Relative Percent Difference	<0.1	0.2	2.5	2.7

METHOD: EPA SW-846 8260

8/9100

of

ANALYSIS REQUEST

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101 East Mariand, Hobbs, NM 88240 (FOE) 303-3226 Ear (FOE) 303-3476	1/0	מורד			Ç	_	JUL	Zip:			SAMPLING	DATE	50.4.8			
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7111 beecnwood, Abliene, 17 / 35U3	-1	troom	Project Manager: C. G. Como	Address: 1324 W. Marland	State: N. M. Zlp: 811 40	Phone # (505) 397-6388 Fax # (605) 397-0397	Project Owner: Osoo Phillips	Project Names EVG SAU #3127-002 Slowling lead	Project Location: Buckeye N. M.	Ker Swinger		Sample I.D.	11100437 5020119'			
4	Company Name	imi (imdino)	Project Manage	Address: 3	City: 142865	Phone #: (100	Project #.	Project Name:	Project Locatio	Sampler Name:	FOR LAB USE ONLY	Lab I.D.	H100437			

XIII

PLEASE NOTE. Library and Demoçes, Cardows's includy and electro exclavive remody for any claim arising whether based in contract or fort, while he hashed to the amount paid by the classic sort of the applicable analysis in confidence and any other cause what some demonstrated in white and received by Cardons within 30 days after completion of the applicable across. In the area that Cardons he be been for incidental or consequental cumages, habitog without includes themselves, loss of use, or loss of profits incurred by clear, he subaddenines,

Terms and Conditions: latered will be drapped on all accounts more from 30 days part due at the rate of 24% per arrans from the original date of brevious, and all oosts of collections, brokultry attorney's free.

☐ Yes ☐ No Add'l Phone #: ☐ Yes ☐ No Add'l Fax #: 318-6704 Sample Condition
Cool Intact

Yes Yes Received By: (Lab Staff) Cardra, repardess of whether such Received By: similaries or account arising out of or released to the portnames of services transmiss by sometimes by Sampler Refindulshed; Date: \$-4-05-Time: Time: Delivered By: (Circle One) Sampler - UPS - Bus - Other:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

Appendix III

File	Number:		

NEW MEXICO OFFICE OF THE STATE ENGINEER WELL RECORD

1. OWNER OF WELL	L	
	ConocoPhillips	Work Phone:
Contact:	201/2011 Dd	Home Phone:
Address:	29 Vacuum Rd.	
City:	Lovington	State: NM Zip: 88260
2. LOCATION OF	WELL(A,B,C,or D required,E or F	if known)
A1/4	1/4 1/4 Section: 3	Township: 178 Range: 38E N.M.P.M.
in <u>Unit L</u>	etter M, Lea Co.	County.
B. X =	feet, Y =	feet, N.M. Coordinate System
	one in the	Grant.
U.S.G.S. Q	uad Map	
C. Latitude:	32 d 47 m 17.1 s	Longitude: 103 d 29 m 13.0 s
D. East	(m), North	(m), UTM Zone 13, NAD(27 or 83)
E. Tract No.	, Map No of the	Hydrographic Survey
F. Lot No.	, Block No. of Unit	/Tract of the
	Subdivision recor	ded inCounty.
G Other		
<u> </u>		
H. Give State	Engineer File Number if existi	ng well:
I. On land ow	med by (required): ConocoPhill	ips
2 DETILING COM	TD A CMOD	
3. DRILLING CON License Number		
		Work Phone: 325-893-2950
Agent	t : John W. White	Home Phone: 325-893-2950
Mailing Address	s: P.O. Box 906	
Cit	v: Clvde	State: TX Zip: 79510
4. DRILLING REC	"	12/05 Marie Andre Air Determ
	4 3/4 in.; Total depth of well	13/05 ; Type tools: Air Rotary ;;;
	is: shallow (shallo	
	upon completion of well: DRY	
-10		
File Number: Form: wr-20	0 page 1 of 4	Trn Number:

					Fi	le Number:			
	1	NEW MEXIC		CE OF TH		engineer			
. PRINCIPAL	WATER-	BEARING S	TRATA:S	B-1					
Depth in From To		Thickness in feet	water-	ption of bearing fo			Est	imated (GPM)	Yield
6. RECORD OF	CASING	}							
		Threads			Length (feet)	Type of S	Shoe	Perfor From	То
55.0 5	Feet o	Hole Diameter 4 3/4	Sacks of mud 10	Cubic Fee	: Pour	Method of P	ellets	ent	
5.0 0	0.0	4 3/4	2	0.99	<u>Hanc</u>	l mix/cemen	nt		
Plugg	Contract Addre ing Meth	or: ss: od:							
Date We	ll Plugg	ed:		· · · · · · · · · · · · · · · · · · ·					
Plugging a	pproved	by:		State E	ngineer Re	presentati	ve		
	То	Depth in Fe	om 						

page 2 of 4

File Number:

Form: wr-20

Trn Number:

File Number:	

NEW MEXICO OFFICE OF THE STATE ENGINEER WELL RECORD

9.LOG OF HOLE:SB-1

Depth in From	feet To	Thickness in feet	Color and Type of Material Encountered
0.0	2.0	2.0	Brown clayey sand.
2.0	4.0	2.0	Tan limestone.
4.0	55.0	51.0	Tan sand.
		-	
			,
,			

File Number:		Trn Number:	
Form: wr-20	page 3 of 4		

File	Number:	
ות אים	ICTNEED	

NEW MEXICO OFFICE OF THE STATE ENGINEER WELL RECORD

		-		
				
		· · · · · · · · · · · · · · · · · · ·		
The undersid	ned hereby ce	rtifies that	, to the best of	of his knowledge and
belief, the	foregoing is	a true and c	orrect record o	of the above described
hole.	\wedge	ì		
	O(2)	•		
		<u></u>	8/22/2005	
	Driller		(mm/dd/y	year)
		•		
	:========			======================================
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========	FC	OR STATE ENG	INEER USE ONL	Y
				_
			INEER USE ONL	_

File	Number:	

1. OWNER OF WELL	
Name: ConocoPhillips Contact:	** - · · · - · ** ** · · · ·
Address: 29 Vacuum Rd.	nome Phone.
City: Lovington	State: NM Zip: 88260
2. LOCATION OF WELL(A,B,C,or D required,E or F if known	
A1/41/41/4 Section: 32 Towns in Unit Letter M, Lea Co.	
B. X =feet, Y =	feet, N.M. Coordinate System Grant.
U.S.G.S. Quad Map	
C. Latitude: 32 d 47 m 17.1 s Longitude	e: <u>103</u> d <u>29</u> m <u>13.0</u> s
D. East (m), North (m), UTM 2	Zone 13, NAD (27 or 83)
E. Tract No, Map No of the	
F. Lot No, Block No of Unit/Tract	
Subdivision recorded in	County.
	-
G. Other:	
H. Give State Engineer File Number if existing well:	
I. On land owned by (required): ConocoPhillips	
3. DRILLING CONTRACTOR	
License Number: WD-1456	-
Name: White Drilling Company, Inc.	
Agent: John W. White Mailing Address: P.O. Box 906	Home Phone: 325-893-2950
Mailing Address: P.O. Box 900	-
City: Clyde	- State: TX Zip: 79510
4. DRILLING RECORD: SB-2	
Drilling began: 8/03/05; Completed: 8/04/05	
Size of hole: 43/4 in.; Total depth of well: 119.0	
Completed well is: shallow (shallow, artest Depth to water upon completion of well: DRY	
Depth to water upon completion of well:	ft.
Tid I a Manufacture	
File Number: Form: wr-20 page 1 of 4	Trn Number:

File	Number:	

Depth in	n Feet To	in feet	water-	Description of water-bearing formation					Yield
RECORD (OF CASI	NG							
		ds Threads	Depth Top	in Feet Le Bottom (f	ength eet)	Type of	Shoe	Perfor	To To
	in Feet	ING AND CE	Sacks		 	ethod of	Placem	ent	
119.0		4 3/4	23	or cement	Pour/	bentonite	pellets		
							P		
5.0	0.0 G RECORD	4 3/4 D ctor:		0.99		mix/ceme	ent		
Plugging Plug	O.O G RECORD G Contract Addr gging Met	4 3/4 Doctor: cess: chod: gged:							
Plugging Plug	O.O G RECORD G Contract Addr gging Met	4 3/4 D ctor: cess: chod:							
Plugging Plug	O.O G RECORI G Contract Addr gging Met Well Plug approved	4 3/4 Depth in Factor in	eet Cubi	State Engin	eer Rep				
Plugging Plug	O.O G RECORD G Contract Addr gging Met Well Plug approved	4 3/4 Depth in From Bott	eet Cubi	State Engin	eer Rep				
Plugging Plug	O.O G RECORD G Contract Addr gging Met Well Plug approved No. T 1 2	4 3/4 Depth in Frop Bott	eet Cubi	State Engin	neer Rep				
Plugging Plug	O.O G RECORI G Contract Addr gging Met Well Plug approved	4 3/4 Depth in From Bott	eet Cubi	State Engin	eer Rep				
Plugging Plug	O.O G RECORD G Contract Addr gging Met Well Plug approved No. 1 2 3 4	4 3/4 Depth in Frop Bott	eet Cubi	State Engin	nt				
Plugging Plug	O.O G RECORD G Contract Addr gging Met Well Plug approved No. 1 2 3 4	4 3/4 Depth in Frop Bott	eet Cubi	State Engin	nt				

page 2 of 4

Form: wr-20

File	Number:	

9.LOG OF HOLE:SB-2

Depth in	feet	Thickness	Color and Type of Material Encountered
From	To	in feet	
0.0	3.0	3.0	Brown clayey sand.
3.0	4.5	1.5	Tan limestone.
4.5	18.0	13.5	Tan sand.
18.0	20.0	2.0	Tan limestone.
20.0	63.0	43.0	Tan sand.
63.0	119.0	56.0	Tan silty sand (moist).
	-		
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File Number:	Tr	n Number:
Form: wr-20	page 3 of 4	

File	Number:	
		

				
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The undersig	ned hereby ce	rtifies that	, to the best of his	knowledge and
belief, the	foregoing is	a true and c	orrect record of the	above described
hole.				
			8/22/2005	
	Driller		(mm/dd/year)	
		ii i	(mm/ dd/ / cdl/	
========	========	=======		
	FC	R STATE ENG	INEER USE ONLY	
Quad ; FW	IL ; FSL	;Use	;Location No	
				

North Permian Basin Region P.O. Box 740 Sundown, TX 79372-0740 (806) 229-8121 Lab Team Leader - Sheila Hernandez (432) 495-7240

Water Analysis Report by Baker Petrolite

Company:

CONOCO - PHILLIPS PETROLEUM CO

Sales RDT:

33506

Region:

PERMIAN BASIN

Account Manager: KENNY KEARNEY (505) 390-9370

Area:

MALJAMAR, NM

Sample #:

308282

Lease/Platform:

EAST VACUUM GRAYBURG SA UNIT

Analysis ID #:

40883

Entity (or well #):

Analysis Cost:

\$40.00

3333 - 001

UNKNOWN

Sample Point:

Formation:

WELLHEAD

Sumn	nary	Analysis of Sample 308282 @ 75 °F						
Sampling Date:	1/20/04	Anions	mg/l	meq/l	Cations	mg/l	meq/l	
Analysis Date: Analyst: TDS (mg/l or g/m3): Density (g/cm3, tonn Anion/Cation Ratio:	1/23/04 JAMES AHRLETT 113277.2 ie/m3): 1.081	Chloride: Bicarbonate: Carbonate: Sulfate: Phosphate: Borate: Silicate:	64278.0 2123.0 0.0 3548.0	1813.05 34.79 0. 73.87	Sodium: Magnesium: Calcium: Strontium: Barium: Iron: Potassium:	39523.1 737.0 2613.0 48.0 0.1 3.0 404.0	1719.16 60.63 130.39 1.1 0. 0.11	
Carbon Dioxide: Oxygen: Comments:	310 PPM	Hydrogen Sulfide: pH at time of sampling: pH at time of analysis: pH used in Calculation	:	30 PPM 6.33 6.33	Aluminum: Chromium: Copper: Lead: Manganese: Nickel:			

Cond	itions	Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Calcite Gypsum Press. CaCO ₃ CaSO ₄ *2H ₂ 0				ydrite aSO ₄		estite rSO ₄	Barite BaSO ₄		CO ₂ Press		
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.73	239.73	-0.02	0.00	-0.04	0.00	0.01	0.63	0.44	0.00	7.75
100	0	0.83	269.53	-0.08	0.00	-0.03	0.00	-0.01	0.00	0.26	0.00	9.75
120	0	0.94	299.03	-0.12	0.00	0.01	21.02	-0.02	0.00	0.09	0.00	11.85
140	0	1.05	327.90	-0.16	0.00	0.07	157.83	-0.02	0.00	-0.05	0.00	13.96

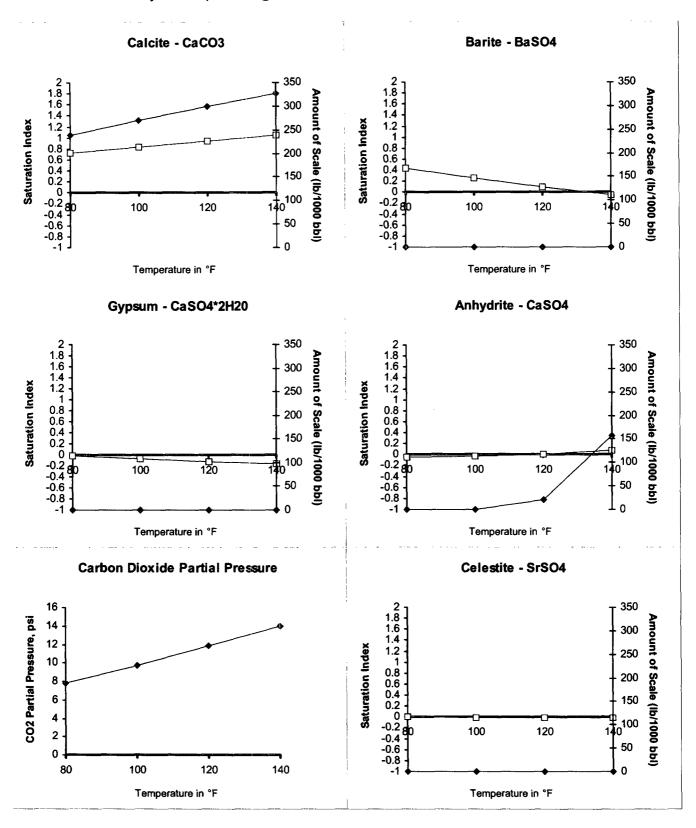
Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

Scale Predictions from Baker Petrolite

Analysis of Sample 308282 @ 75 °F for CONOCO - PHILLIPS PETROLEUM CO, 1/23/04



Appendix IV



