



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

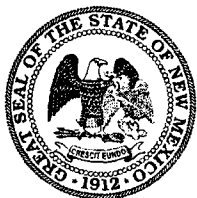
AUGUST 23, 2005

PREPARED FOR:

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



Incident - nPAC0605540817
Application - pPAC0605540966



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. There is no surface water 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

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.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company ConocoPhillips	Contact Stephen Wilson
Address HC60 Box 66, Lovington, NM	Telephone No. 505-396-7962
Facility Name EVGSAU well #3127-002	Facility Type Oil and Gas

Surface Owner State of NM	Mineral Owner	Lease No 30-025-02961-00-00
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LOCATION OF RELEASE

Unit Letter m	Section 32	Township 17S	Range 35E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea, NM
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Latitude **N 32° 47.282'** Longitude **W 103° 29.213'**

NATURE OF RELEASE

Type of Release Crude and Produced water	Volume of Release 23bbl (14oil, 9water)	Volume Recovered (6oil, 4water)
Source of Release Flowline	Date and Hour of Occurrence 05-31-05 9:00am	Date and Hour of Discovery 05-31-05 10:00am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
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.*

Describe Cause of Problem and Remedial Action Taken.*

Flow line leak due to external corrosion. Vacuum truck out to pick up free liquids and backhoe out to sand location to secure site.

Describe Area Affected and Cleanup Action Taken.*

150' X 30" of pasture. Vacuum truck out to pick up free liquids and backhoe out to sand location to secure site.

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	
Printed Name: Stephen R. Wilson		Approved by District Supervisor:	
Title: Sr. SHEAR Specialist		Approval Date:	Expiration Date:
E-mail Address: Stephen.R.Wilson@ConocoPhillips.com		Conditions of Approval:	
Date: 06-1-05 Phone: 505-396-7962		Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

Table 1

		SP1 @ 1'	SP2 @ 1'	SP3 @ 1'	Background
Analyte	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. Methods 4500-ClB	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-ClB	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

Analyte	Method	SB1 @ 5'	SB1 @ 10'	SB1 @ 15'	SB1 @ 20'	SB1 @ 25'
		Sample: H10052-1 8/3/2005	Sample: H10052-2 8/3/2005	Sample: H10052-3 8/3/2005	Sample: H10052-4 8/3/2005	Sample: H10052-5 8/3/2005
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	Std. Methods 4500-ClB	2159	3439	3439	1280	1280
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
Ethylbenzen	EPA SW-846 8260	<0.005				<0.005
Total Xylene	EPA SW-846 8260	<0.015				<0.015

Analyte	Method	SB1 @ 30'	SB1 @ 35'	SB1 @ 40'	SB1 @ 45'	SB1 @ 50'
		Sample: H10052-6 8/3/2005	Sample: H10052-7 8/3/2005	Sample: H10052-8 8/3/2005	Sample: H10052-9 8/3/2005	Sample: H10052-10 8/3/2005
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	Std. Methods 4500-ClB	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
Ethylbenzen	EPA SW-846 8260					<0.005
Total Xylene	EPA SW-846 8260					<0.015

Table 4

Analyte	Method	SB2 @ 5'	SB2 @ 10'	SB2 @ 15'	SB2 @ 20'	SB2 @ 25'	SB2 @ 30'	SB2 @ 35'	SB2 @ 40'
		Sample: H10053-1 8/3/2005	Sample: H10053-2 8/3/2005	Sample: H10053-3 8/3/2005	Sample: H10053-4 8/3/2005	Sample: H10053-5 8/3/2005	Sample: H10053-6 8/3/2005	Sample: H10053-7 8/3/2005	Sample: H10053-8 8/3/2005
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	Std. Methods 4500-C1B	2719	3839	4799	3359	3039	2559	1999	2159
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							
Ethylbenzene	EPA SW-846 8260	<0.005							
Total Xylenes	EPA SW-846 8260	<0.015							

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

[illegible]

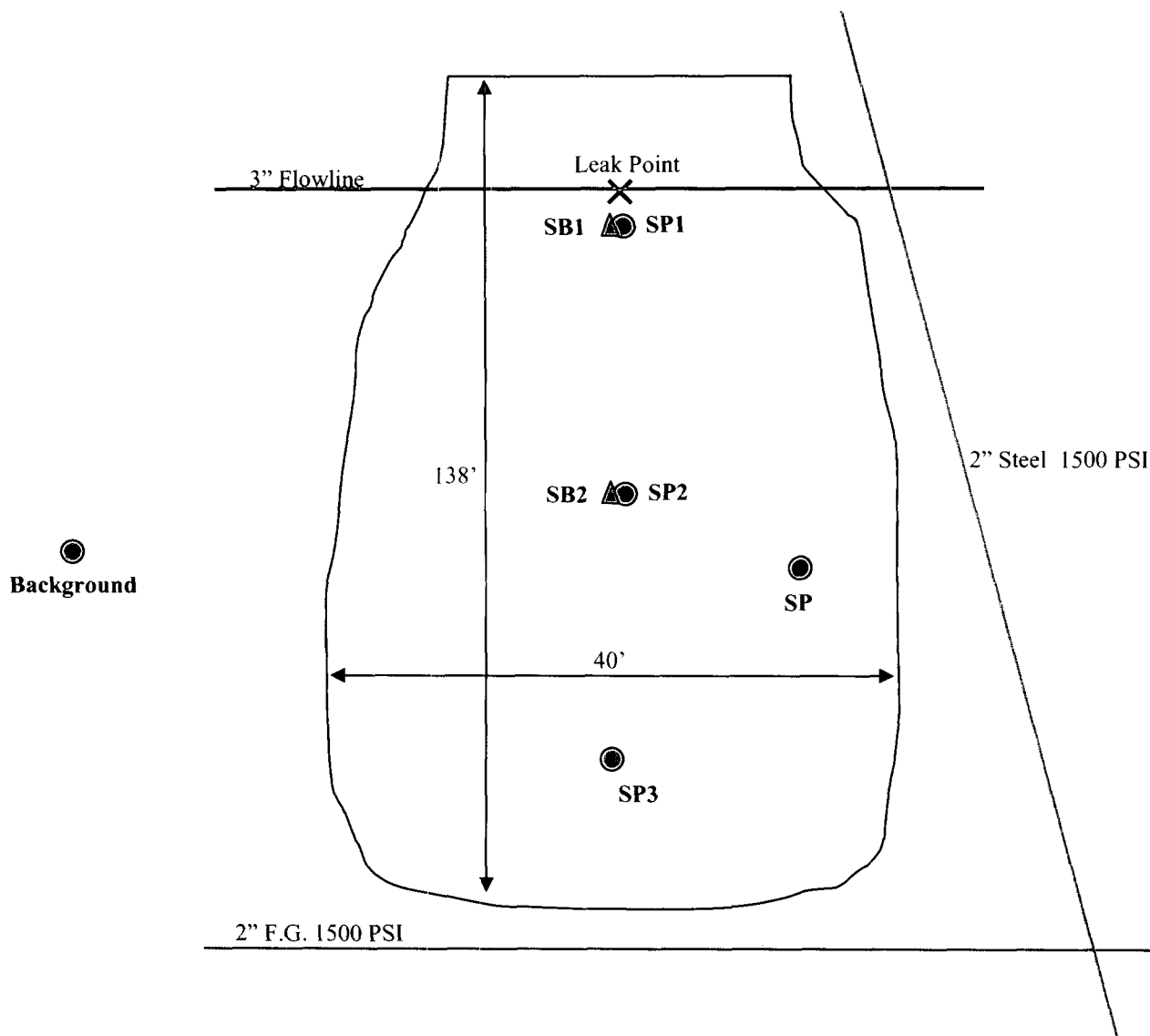
Groundwater Search Results

UL	SEC	TWN	RNG	SPOT	COUNTY	SOURCE	QTY	SITE LOCATION	DATE	LEVEL
B	32	17S	35E	21142	LEA	SEO	1	17S.35E.32.21142	1990-12-20	86.08

Appendix I



CONOCOPHILLIPS EVGSAU 3127-002 FLOWLINE LEAK



LEGEND

- × 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



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 88240
FAX TO: (505) 397-0397

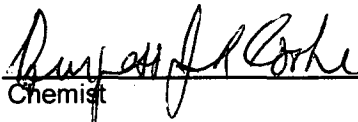
Receiving Date: 06/15/05
Reporting Date: 06/16/05
Project Owner: CONOCO PHILLIPS
Project Name: EVGSAU #3127-002 FLOWLINE LEAK
Project Location: BUCKEYE, NM

Sampling Date: 06/10/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO	DRO	CI*
		(C ₆ -C ₁₀) (mg/Kg)	(>C ₁₀ -C ₂₈) (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 Control		784	815	1030
True Value QC		800	800	1000
% Recovery		98.0	102	103
Relative Percent Difference		1.0	4.6	2.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; CI: Std. Methods 4500-CI B

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


Chemist

6/16/05
Date

H9872A.XLS

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



ARDINAL LABORATORIES

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

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

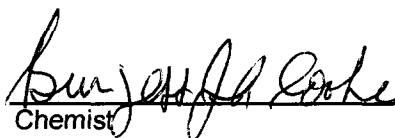
ANALYTICAL RESULTS FOR
BBC INTERNATIONAL, INC.
ATTN: CLIFF BRUNSON
P.O. BOX 805
HOBBS, NM 88240
FAX TO: (505) 397-0397

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 DATE		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 Percent Difference		4.5	2.6	1.7	2.2

METHOD: EPA SW-846 8260


Chemist

6/16/05
Date

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

Page 7 of 7

BILL TO										ANALYSIS REQUEST									
Company Name: BBC International, Inc Project Manager: Cliff Benson Address: 1724 W. Maryland City: Hobbs State: N.M. Zip: 88240 Phone #: (505) 397-6388 Fax #: (505) 397-0397 Project #: — Project Owner: Cesena Phillips Project Name: EVGSAU #3127-002 Bloutline leg Project Location: Buckeye Sampler Name: Ken Swinney										P.O. #: Company: Attn: SA Address: City: State: Zip: Phone #: Fax #: Project Name: Project Location: Sampler Name:									
FOR LAB USE ONLY		MATRIX		PRESERV		SAMPLING													
Lab I.D.	Sample I.D.	CONTAINER OR (C)OMP.	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME						
H9812-1	SP1 @ 1'	G 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	6-10-05	14:35	✓	✓	✓	✓	✓	✓
-2	SP2 @ 1'	G 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	6-10-05	14:41	✓	✓	✓	✓	✓	✓
-3	SP3 @ 1'	G 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	6-10-05	14:45	✓	✓	✓	✓	✓	✓
-4	Background	G 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	6-10-05	14:52	✓	✓	✓	✓	✓	✓

Tenth and Condensate: Interval will be charged on all accounts more than 30 days past due at the rate of 2% per annum from the original date of billing, and all costs of collection, including shipping's fees.

Phone Result: ☐ Yes ☐ No Fax Result: ☐ Yes ☐ No
 Add'l Phone #: Add'l Fax #:

Remarks:

Received By: **Ken Swinney** Date: **6-15-05** Time: **15:43**
 Received By: **Ken Swinney** Date: **6-15-05** Time: **15:50**

Delivered By: (Circle One) **Ken Swinney**

Sampler - UPS - Bus - Other:



ARDINAL LABORATORIES

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

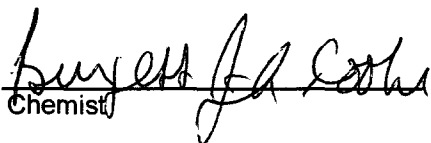
Receiving Date: 06/17/05
Reporting Date: 06/20/05
Project Number: NOT GIVEN
Project Name: EVGSAV #3127-002 FLOWLINE LEAK
Project Location: BUCKEYE, NM

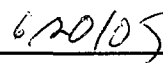
Analysis Date: 06/17/05
Sampling Date: 06/15/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl ⁻ (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 Difference		1.0

METHOD: Std. Methods	4500-Cl ⁻ B
----------------------	------------------------

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


Chemist


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

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:		06/19/05	06/19/05	06/20/05	06/20/05	06/20/05	06/20/05
H9874-1	SP @ 3'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H9874-5	SP @ 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.

6/21/05
Date

H9874A.XLS

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

ARDINAL LABORATORIES, INC.

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

Page 7 of 7

BILL TO										ANALYSIS REQUEST																																																																																																						
Company Name: BBC INTERNATIONAL																																																																																																																
Project Manager: CLIFF BRUNSON																																																																																																																
Address: 1324 W. MARLAND																																																																																																																
City: HOBBS																																																																																																																
State: NM Zip: 88246																																																																																																																
Phone #: (505) 397 6388 Fax #: (505) 397 0397																																																																																																																
Project #: _____ Project Owner: _____																																																																																																																
Project Name: EVCSAV # 3127-002 Flowline Leak																																																																																																																
Project Location: BUCKEYE																																																																																																																
Sampler Name: KEN SWINNEY																																																																																																																
FOR USE ONLY																																																																																																																
Lab I.D. Sample I.D.																																																																																																																
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Lab I.D.</th> <th rowspan="2">Sample I.D.</th> <th colspan="5">MATRIX</th> <th rowspan="2"># CONTAINERS</th> <th colspan="3">PRESERV</th> <th rowspan="2">SAMPLING</th> <th rowspan="2">DATE</th> <th rowspan="2">TIME</th> </tr> <tr> <th>GROUNDWATER</th> <th>WASTEWATER</th> <th>SOIL</th> <th>CRUDE OIL</th> <th>SLUDGE</th> <th>OTHER</th> <th>ACID/BASE</th> <th>ICE / COOL</th> <th>OTHER</th> </tr> </thead> <tbody> <tr> <td>49874-1</td> <td>SP @ 3'</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>6-15</td> <td>10:10</td> </tr> <tr> <td>-2</td> <td>SP @ 5'</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>6-15</td> <td>10:15</td> </tr> <tr> <td>-3</td> <td>SP @ 7.5'</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>6-15</td> <td>10:30</td> </tr> <tr> <td>-4</td> <td>SP @ 10'</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>6-15</td> <td>10:50</td> </tr> <tr> <td>-5</td> <td>SP @ 13.5'</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>6-15</td> <td>11:35</td> </tr> </tbody> </table>										Lab I.D.	Sample I.D.	MATRIX					# CONTAINERS	PRESERV			SAMPLING	DATE	TIME	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	49874-1	SP @ 3'						1					6-15	10:10	-2	SP @ 5'						1					6-15	10:15	-3	SP @ 7.5'						1					6-15	10:30	-4	SP @ 10'						1					6-15	10:50	-5	SP @ 13.5'						1					6-15	11:35	<div style="display: flex; justify-content: space-between;"> <div>TPH 8015 M</div> <div>BTEX</div> <div>Chloride</div> </div>									
Lab I.D.	Sample I.D.	MATRIX					# CONTAINERS	PRESERV				SAMPLING	DATE	TIME																																																																																																		
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-5	SP @ 13.5'						1					6-15	11:35																																																																																																			
<p>PLEASE NOTE: Liberty and Dominion Company's policy and client's agreement require that any claim arising from this report be filed with the company within 90 days of the date of the report. In the event that the client is not satisfied with the results of the analysis, the client may request a re-analysis of the sample at the client's expense. The client's request for a re-analysis must be received by the company within 90 days of the date of the report. The client's request for a re-analysis must be received by the company within 90 days of the date of the report. The client's request for a re-analysis must be received by the company within 90 days of the date of the report.</p>										<p>Terms and Conditions: Liberty and Dominion Company's policy and client's agreement require that any claim arising from this report be filed with the company within 90 days of the date of the report. In the event that the client is not satisfied with the results of the analysis, the client may request a re-analysis of the sample at the client's expense. The client's request for a re-analysis must be received by the company within 90 days of the date of the report. The client's request for a re-analysis must be received by the company within 90 days of the date of the report. The client's request for a re-analysis must be received by the company within 90 days of the date of the report.</p>																																																																																																						
Sampler Relinquished: Peter Hermander										Received By: _____ Date: 6-16-01 Time: 9:21																																																																																																						
Relinquished By: _____										Received By: Libby Staff Date: 6/16/01 Time: _____																																																																																																						
Delivered By: (Circle One)										Sample Condition: _____ Cool Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Sample Integrity: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																																																																						
Sampler - UPS - Bus - Other:										Checked By: _____ Initials: MA																																																																																																						

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



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: 08/08/05
Reporting Date: 08/09/05
Project Owner: CONOCO PHILLIPS
Project Name: EVGSAU #3127-002 FLOWLINE LEAK
Project Location: BUCKEYE, NM

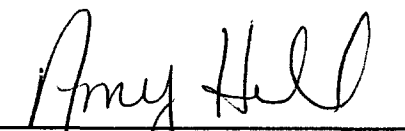
Analysis Date: 08/09/05
Sampling Date: 08/03/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: NF


LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/Kg)
H10052-1	SB1 @ 5'	2159
H10052-2	SB1 @ 10'	3439
H10052-3	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

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



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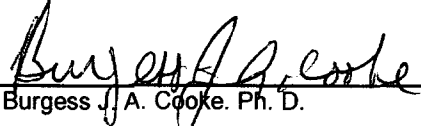
ANALYTICAL RESULTS FOR
BBC INTERNATIONAL, INC.
ATTN: CLIFF BRUNSON
P.O. BOX 805
HOBBS, NM 88241
FAX TO: (505) 397-0397

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.

8/9/05
Date

H10052A.XLS

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

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ARDINAL LABORATORIES

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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

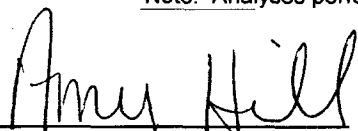
Analysis Date: 08/09/05
Sampling Date: 08/03/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: NF

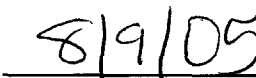
LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/Kg)
H10053-1	SB 2 @ 5'	2719
H10053-2	SB 2 @ 10'	3839
H10053-3	SB 2 @ 15'	4799
H10053-4	SB 2 @ 20'	3359
H10053-5	SB 2 @ 25'	3039
H10053-6	SB 2 @ 30'	2559
H10053-7	SB 2 @ 35'	1999
H10053-8	SB 2 @ 40'	2159
H10053-9	SB 2 @ 45'	1919
H10053-10	SB 2 @ 50'	2079
H10053-11	SB 2 @ 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-Cl⁻B

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


Chemist


Date

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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: 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
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 A. Cooke, Ph. D.

8/9/05
Date

H10053A.XLS

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES, INC.

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

Page 1 of 3

Company Name: BBC International, Inc.		P.O. #:		ANALYSIS REQUEST																		
Project Manager: Cliff Brunson		Company:																				
Address: 1324 W Marland		ATTN: AA MF																				
City: Hobbs		Address: AA MF																				
Phone #: (505) 397-6388		City: AA MF																				
Project #: —		State: —																				
Project Name: EUGSAB #3127-CO2 Flowline leak		Phone #: —																				
Project Location: Buckeye N.M.		Fax #: —																				
Sampler Name: Ken Swinney																						
FOR LAB USE ONLY																						
Lab I.D.	Sample I.D.	# CONTAINERS	MATRIX	GROUNDWATER	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE:	ICE/COOL	OTHER:	DATE	TIME										
10053-1 SB2 @ 5'		1	WASTEWATER	✓				✓			8-3-05	15:40										
-2 SB2 @ 10'		1	WASTEWATER	✓				✓			8-3-05	15:42										
-3 SB2 @ 15'		1	WASTEWATER	✓				✓			8-3-05	15:44										
-4 SB2 @ 20'		1	WASTEWATER	✓				✓			8-3-05	15:46										
-5 SB2 @ 25'		1	WASTEWATER	✓				✓			8-3-05	15:49										
-6 SB2 @ 30'		1	WASTEWATER	✓				✓			8-3-05	15:55										
-7 SB2 @ 35'		1	WASTEWATER	✓				✓			8-3-05	16:04										
-8 SB2 @ 40'		1	WASTEWATER	✓				✓			8-3-05	16:06										
-9 SB2 @ 45'		1	WASTEWATER	✓				✓			8-3-05	16:25										
-10 SB2 @ 50'		1	WASTEWATER	✓				✓			8-3-05	16:27										

PLEASE NOTE: Laboratory and Cardinal Laboratories (CLL) and other agencies involved in the collection, storage, and analysis of samples. Samples must be properly labeled and stored in accordance with the applicable regulations. In the event that samples are found to be contaminated or otherwise compromised, the results of the analysis may be affected. The results of the analysis are based on the information provided by the client and are not a guarantee of the accuracy of the results. The results of the analysis are based on the information provided by the client and are not a guarantee of the accuracy of the results. The results of the analysis are based on the information provided by the client and are not a guarantee of the accuracy of the results.

Sampler Relinquished: **Ken Swinney** Date: **8-3-05** Time: **9:10**

Received By: **R-H** Date: **8-8-05** Time: **9:20**

Relinquished By: **R-H** Date: **8-8-05** Time: **9:20**

Delivered By: (Circle One) **R-H**

Sampler - UPS - Bus - Other:

Checked By: **MF**

REMARKS:

Phone Result: ☐ Yes ☐ No Add'l Phone #: **—**

Fax Result: ☐ Yes ☐ No Add'l Fax #: **—**

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 3

CARDINAL LABORATORIES, INC.

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

Company Name: ABC International Inc.		P.O. #:		ANALYSIS REQUEST													
Project Manager: Cliff Bruegger		Company:															
Address: 1324 W. Markle		Attn: SA															
City: Hobbs		Address:															
Phone #: (505) 397-6388		City:															
State: N.M.		State:															
Zip: 88240		Phone #:															
Fax #: (505) 397-0397		Fax #:															
Project Name: EKGSAV #3127-002 Flowline Leak		Project Owner: Cardo Phillips															
Project Location: Buckeye N.M.		Project Owner:															
Sampler Name: Ken Dumas		Project Owner:															
Lab I.D.	Sample I.D.	# CONTAINERS	MATRIX	PRESERV	SAMPLING	DATE	TIME	OTHER:	ACID/BASE:	ICE / COOL:	OTHER:	SLUDGE	CRUDE OIL	SOIL	WASTEWATER	GROUNDWATER	REMARKS
-11 SB2 @ 55'		1	SOIL			8-3-05	16:30										
-12 SB2 @ 60'		1	SOIL			8-3-05	17:05										
-13 SB2 @ 64'		1	SOIL			8-4-05	8:00										
-14 SB2 @ 69'		1	SOIL			8-4-05	8:11										
-15 SB2 @ 74'		1	SOIL			8-4-05	8:30										
-16 SB2 @ 79'		1	SOIL			8-4-05	8:45										
-17 SB2 @ 84'		1	SOIL			8-4-05	8:59										
-18 SB2 @ 89'		1	SOIL			8-4-05	9:21										
-19 SB2 @ 94'		1	SOIL			8-4-05	9:35										
-20 SB2 @ 99'		1	SOIL			8-4-05	9:45										

PLEASE NOTE: Samples and Containers (Cardinal Lab) and their associated materials (labels, etc.) must be returned to Cardinal Laboratories within 30 days of collection. If not returned, the samples will be destroyed and the containers will be recycled. The cost of destruction and recycling will be charged to the account from which the samples were collected. The cost of destruction and recycling will be charged to the account from which the samples were collected. The cost of destruction and recycling will be charged to the account from which the samples were collected.

Sampler Relinquished:		Date: 8-8-05		Time: 9:10		Received By: R-H		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #: <input type="checkbox"/> No	
Relinquished By: Ken Dumas		Date: 8-8-05		Time: 9:20		Received By: Ken Dumas		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #: <input type="checkbox"/> No	
Delivered By: R-H		Date: 8-8-05		Time: 9:20		Received By: Ken Dumas		REMARKS:			
Sampler - UPS - Bus - Other:		Sample Condition		Cool: <input type="checkbox"/> Intact: <input type="checkbox"/>		Checked By: Ken Dumas		Initials: Ken Dumas			

ARDINAL LABORATORIES, INC.

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Page 3 of 3

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ARDINAL LABORATORIES

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: 08/04/05
Reporting Date: 08/09/05
Project Owner: CONOCO PHILLIPS
Project Name: EVGSAU #3127-002 FLOWLINE LEAK
Project Location: BUCKEYE, NM

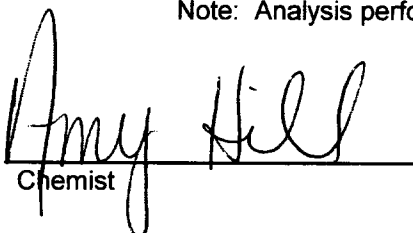
Analysis Date: 08/04/05
Sampling Date: 08/04/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH

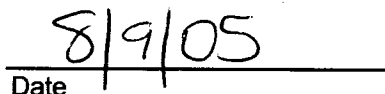
LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/Kg)
H10043-1	SB2 @ 119'	176
Quality Control		1000
True Value QC		1000
% Recovery		100
Relative Percent Difference		2.0

METHOD: Standard Methods

4500-Cl⁻B

Note: Analysis performed on a 1:4 w:v aqueous extract.


Chemist


Date

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



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: 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 DATE		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 Duplicate		171	211	382
True Value		200	200	400
% Recovery (Ave)		87.3	104	95.6
Relative Percent Difference		4	2.8	0.3

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


Chemist


Date



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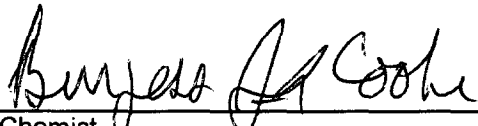
ANALYTICAL RESULTS FOR
BBC INTERNATIONAL, INC.
ATTN: CLIFF BRUNSON
P.O. BOX 805
HOBBS, NM 88241
FAX TO: (505) 397-0397

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


Chemist

8/8/05
Date

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

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

[illegible]

† 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

Name: ConocoPhillips Work Phone: _____
Contact: _____ 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)

A. 1/4 1/4 1/4 Section: 32 Township: 17S Range: 38E N.M.P.M.
in Unit Letter M, Lea Co. County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad 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 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. Work Phone: 325-893-2950
Agent: John W. White Home Phone: 325-893-2950
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: SB-1

Drilling began: 8/03/05; Completed: 8/03/05; Type tools: Air Rotary;
Size of hole: 4 3/4 in.; Total depth of well: 55.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: DRY ft.

File Number: _____ Trn Number: _____
Form: wr-20 page 1 of 4

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA: SB-1

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
55.0	5.0	4 3/4	10		Pour/bentonite pellets
5.0	0.0	4 3/4	2	0.99	Hand mix/cement
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

File Number: _____ Trn Number: _____

Form: wr-20 page 2 of 4

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE: SB-1

[illegible]

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

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: ConocoPhillips Work Phone: _____
Contact: _____ 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)

A. 1/4 1/4 1/4 Section: 32 Township: 17S Range: 38E N.M.P.M.
in Unit Letter M, Lea Co. County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
Zone in the _____ Grant.
U.S.G.S. Quad 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 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. Work Phone: 325-893-2950
Agent: John W. White Home Phone: 325-893-2950
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: SB-2

Drilling began: 8/03/05; Completed: 8/04/05; Type tools: Air Rotary;
Size of hole: 4 3/4 in.; Total depth of well: 119.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: DRY ft.

File Number: _____
Form: wr-20 page 1 of 4

Trn Number: _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA: SB-2

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
119.0	5.0	4 3/4	23		Pour/bentonite pellets
5.0	0.0	4 3/4	2	0.99	Hand mix/cement
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____

File Number: _____

Form: wr-20

page 2 of 4

Trn Number: _____

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 #):	3333 - 001	Analysis Cost:	\$40.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 308282 @ 75 °F					
Sampling Date:	1/20/04	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	1/23/04	Chloride:	64278.0	1813.05	Sodium:	39523.1	1719.16
Analyst:	JAMES AHRLETT	Bicarbonate:	2123.0	34.79	Magnesium:	737.0	60.63
TDS (mg/l or g/m3):	113277.2	Carbonate:	0.0	0.	Calcium:	2613.0	130.39
Density (g/cm3, tonne/m3):	1.081	Sulfate:	3548.0	73.87	Strontium:	48.0	1.1
Anion/Cation Ratio:	1	Phosphate:			Barium:	0.1	0.
		Borate:			Iron:	3.0	0.11
		Silicate:			Potassium:	404.0	10.33
Carbon Dioxide:	310 PPM	Hydrogen Sulfide:		30 PPM	Aluminum:		
Oxygen:		pH at time of sampling:		6.33	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		6.33	Lead:		
					Manganese:		
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO ₃		Gypsum CaSO ₄ *2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO 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.

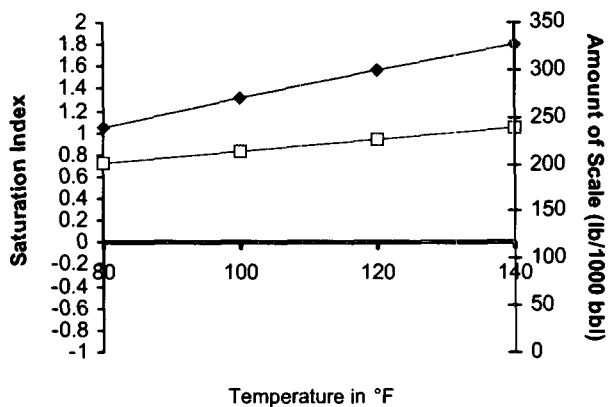
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

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

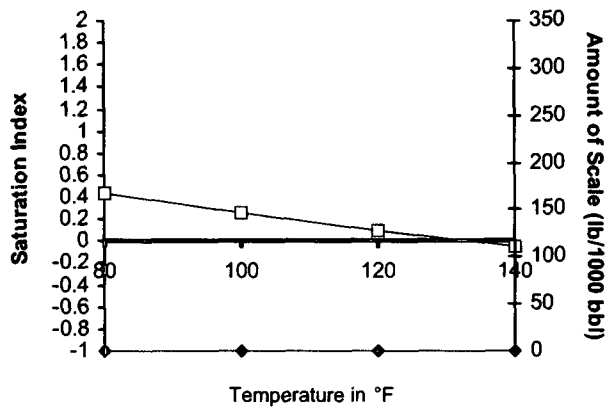
Scale Predictions from Baker Petrolite

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

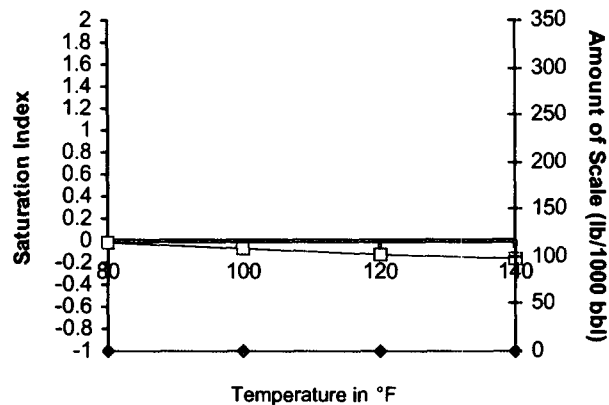
Calcite - CaCO_3



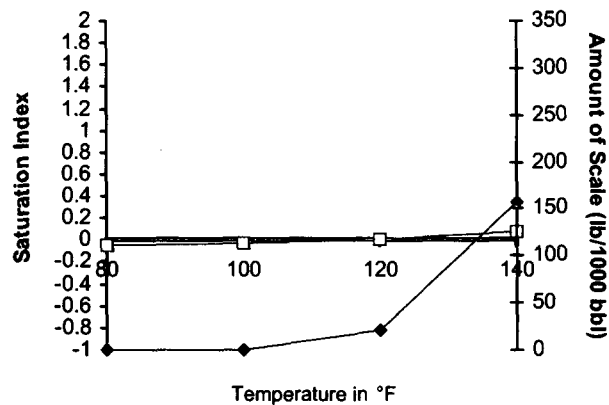
Barite - BaSO_4



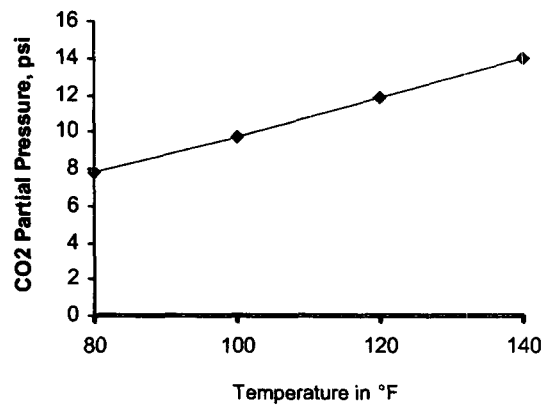
Gypsum - $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$



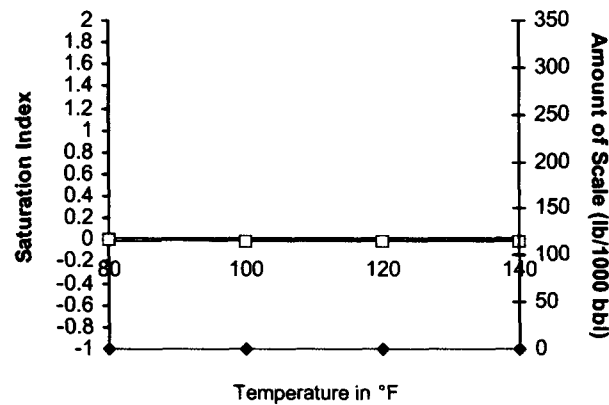
Anhydrite - CaSO_4



Carbon Dioxide Partial Pressure



Celestite - SrSO_4



Appendix IV

