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334

REPORTS

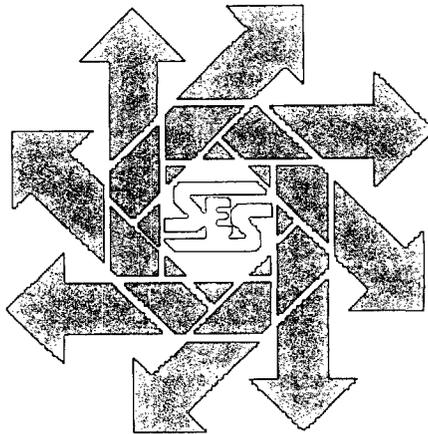
DATE:

2001

IR-344

**Chevron USA
Coleman/Grimes Site Investigation
Lea County, New Mexico**

August 27, 2001



RECEIVED

JAN 24 2002

**ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION**

Prepared for:

**Chevron USA
P.O. Box 1949
Eunice, New Mexico 88231**

By:

***Safety & Environmental Solutions, Inc.
703 E. Clinton, Suite 102
Hobbs, New Mexico 88240
(505) 397-0510***

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I. Background

In July 2001 Safety & Environmental Solutions, Inc. (SESI) was engaged by Chevron USA to perform a site investigation at the abandoned location of a tank battery. The investigation was conducted at the request of the New Mexico Oil Conservation Division (NMOCD). The subject area is identified as the Coleman/Grimes Battery and is located in of Section 33, Township 18S, Range 38E in Lea County, New Mexico. The site is situated inside the city limits of Hobbs, New Mexico and is bounded by Alston Street to the north, Burk Street to the east, Cain Street to the south, and Coleman Street to the west. The site consists of an approximately 20,000 square foot area as determined from historical aerial photographs. This area was used as a site for the storage of fluids produced by wells. (Figure 1). The property is currently vacant.

Six storage tanks and associated vessels and piping were previously located on the subject area according to the facility site diagram dated 11-17-1848. (Figure 2) The aerial photograph taken for the City of Hobbs by Wilson & Company, Engineers on March 26, 1964, confirms this fact. (Figure 3) The aerial photograph date March 9, 1978 shows that all equipment had been removed from the subject site. (Figure 4) The equipment was removed from the subject site in the early 1970's according to the C-140 filed on December 17, 1971 and correspondence between Gulf Oil Company and Shell Pipeline Corporation in 1971 and 1972. (Appendix A)

The purpose of the investigation was to delineate the horizontal and vertical extent of any remaining hydrocarbon and/or salt materials at the site of the storage tanks.

II. Work Performed

Soil Boring and Sampling

The NMOCD requested surface, 0"-6", soil samples be taken from the center of each quadrant of the site as well as surface soil samples from the most visually contaminated areas in each quadrant. The NMOCD requested the samples be analyzed for Total Petroleum Hydrocarbons (EPA Method SW 846 8015), BTEX (EPA Method SW-846-8260) and Total RCRA Metals. (Figure 5)

On August 2 and 3, 2001, the subject site, a full city block, was quartered and sampled using SOPs found in Environmental Protection Agency, 1984, Characterization of Hazardous Waste Site - A Methods Manual: Vol. II. per the NMOCD request. In addition, SESI personnel identified the most visually stained areas in each quadrant, which were also sampled. (Figure 5)

Five (5) borehole locations were staked within the perimeter of the old battery site. (Figure 6)

Installation of the boreholes took place on August 23, 2001, using SESI personnel from Hobbs. A Giddings trailer-mounted drill, Model 25-SCT was used to bore test holes with a 7-in. hollow-stem auger. Samples from the test holes generally were collected in thin-walled sampling tubes and/ or split spoon sampler using SOPs found in Environmental Protection Agency, 1984, Characterization of Hazardous Waste Site - A Methods Manual: Vol. II. Soil samples were collected at 5 ft. intervals. and 2-5 ft. intervals. At the completion of drilling, the boreholes were backfilled with grout containing 5% bentonite.

Field-testing for Total Petroleum Hydrocarbons (TPH) was performed on most soil samples (EPA Method 418.1) using a GAC Mega Total Petroleum Hydrocarbon analyzer. The samples collected were preserved on ice and delivered along with Chain of Custody to Cardinal Laboratories for testing. Laboratory samples were analyzed for Total Petroleum Hydrocarbons (EPA Method SW 846 8015), BTEX (EPA Method SW-846-8260) and Chlorides (EPA Method 600/4-79-020 325.3). Copies of the analytical results are found in Appendix B.

III. Results of Soil Testing

Soil Sampling Results

The results for the surface sampling are tabulated in Table 1 and Table 2.

The surface sample results show no areas with TPH contamination greater than 801 ppm DRO. The groundwater under the site is approximately 54' in depth. The NMOCD guidelines would indicate a cleanup level of 1000 ppm TPH. The 801 ppm TPH level is from the surface of the most visually stained soil in the southeast quadrant. Minor traces of metals were detected in the surface samples; however, no levels that would be harmful to the public health were detected.

The results of the soil boring samples are tabulated in Table 3.

The bottom of borehole #1 was 10' and the bottom of the remaining boreholes was 5'. The bottom hole samples of each borehole have no measurable BTEX concentrations and TPH levels of less than 50 ppm GRO and DRO. Minor concentrations of chlorides were present in the bottom hole samples.

Lithologically, all the samples taken at the 5' depth were in white, cemented caliche with the exception of borehole # 1 where the 5' sample was reddish-brown sand. The 10' sample in borehole #1 was taken in very hard, white, cemented caliche.

Table 1. Surface 0"-6," Center of Quadrants, Soil Sampling Results,
Coleman/Grimes Battery Site Investigation, Lea County, New Mexico

LOCATION	DEPTH	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES
CTR SE 1/4	0-6"	<0.005	<0.005	<0.005	<0.015
CTR SW 1/4	0-6"	<0.005	<0.005	<0.005	<0.015
CTR NE 1/4	0-6"	<0.005	<0.005	<0.005	<0.015
CTR NW 1/4	0-6"	<0.005	<0.005	<0.005	<0.015

LOCATION	DEPTH	GRO	DRO
CTR SE 1/4	0-6"	<50	<50
CTR SW 1/4	0-6"	<50	75.6
CTR NE 1/4	0-6"	<50	97.8
CTR NW 1/4	0-6"	<50	99.0

LOCATION	DEPTH	AS	AG	BA	CD	CR	PB	HG	SE
CTR SE 1/4	0-6"	2.87	.043	<5	.034	4.05	<1	0.011	<0.02
CTR SW 1/4	0-6"	1.63	9.5	17.3	0.41	4.62	<1	0.003	<0.02
CTR NE 1/4	0-6"	2.31	5.6	43.1	0.40	4.12	<1	0.011	<0.02
CTR NW 1/4	0-6"	3.02	0.95	431	0.49	3.97	<1	<0.02	0.054

Table 2. Surface 0"-6," Most Stained Area in each Quadrant, Soil Sampling Results, Coleman/Grimes Battery Site Investigation, Lea County, New Mexico

LOCATION	DEPTH	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES
NE ¼ #1	0-6"	<0.005	<0.005	<0.005	<0.015
NW ¼ #1	0-6"	<0.005	<0.005	<0.005	<0.015
SE ¼ #1	0-6"	<0.005	<0.005	<0.005	<0.015
SE ¼ #1	0-6"	<0.005	<0.005	<0.005	<0.015

LOCATION	DEPTH	GRO	DRO
NE ¼ #1	0-6"	<50	<50
NW ¼ #1	0-6"	<50	394
SE ¼ #1	0-6"	<50	801
SE ¼ #1	0-6"	<50	382

LOCATION	DEPTH	AS	AG	BA	CD	CR	PB	HG	SE
NE ¼ #1	0-6"	1.90	<0.5	12.8	0.48	4.08	<1	<0.02	0.124
NW ¼ #1	0-6"	2.36	<0.5	22.7	6.02	4.50	<1	<0.02	0.037
SE ¼ #1	0-6"	1.04	<0.5	26.5	0.50	3.66	<1	<0.02	<0.02
SE ¼ #1	0-6"	1.69	<0.5	34.3	0.5	4.18	<1	<0.02	<0.02

Table 3. Borehole Soil Sampling Results, Coleman/Grimes Battery Site
 Investigation, Lea County, New Mexico

BOREHOLE #	DEPTH	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES
1	10'	<0.005	<0.005	<0.005	<0.015
2	5'	<0.005	<0.005	<0.005	<0.015
3	5'	<0.005	<0.005	<0.005	<0.015
4	5'	<0.005	<0.005	<0.005	<0.015
5	5'	<0.005	<0.005	<0.005	<0.015

#	DEPTH	GRO	DRO	CHLORIDES
1	10'	<50	<50	480
2	5'	<50	<50	80
3	5'	<50	<50	128
4	5'	<50	<50	48
5	5'	<50	<50	160

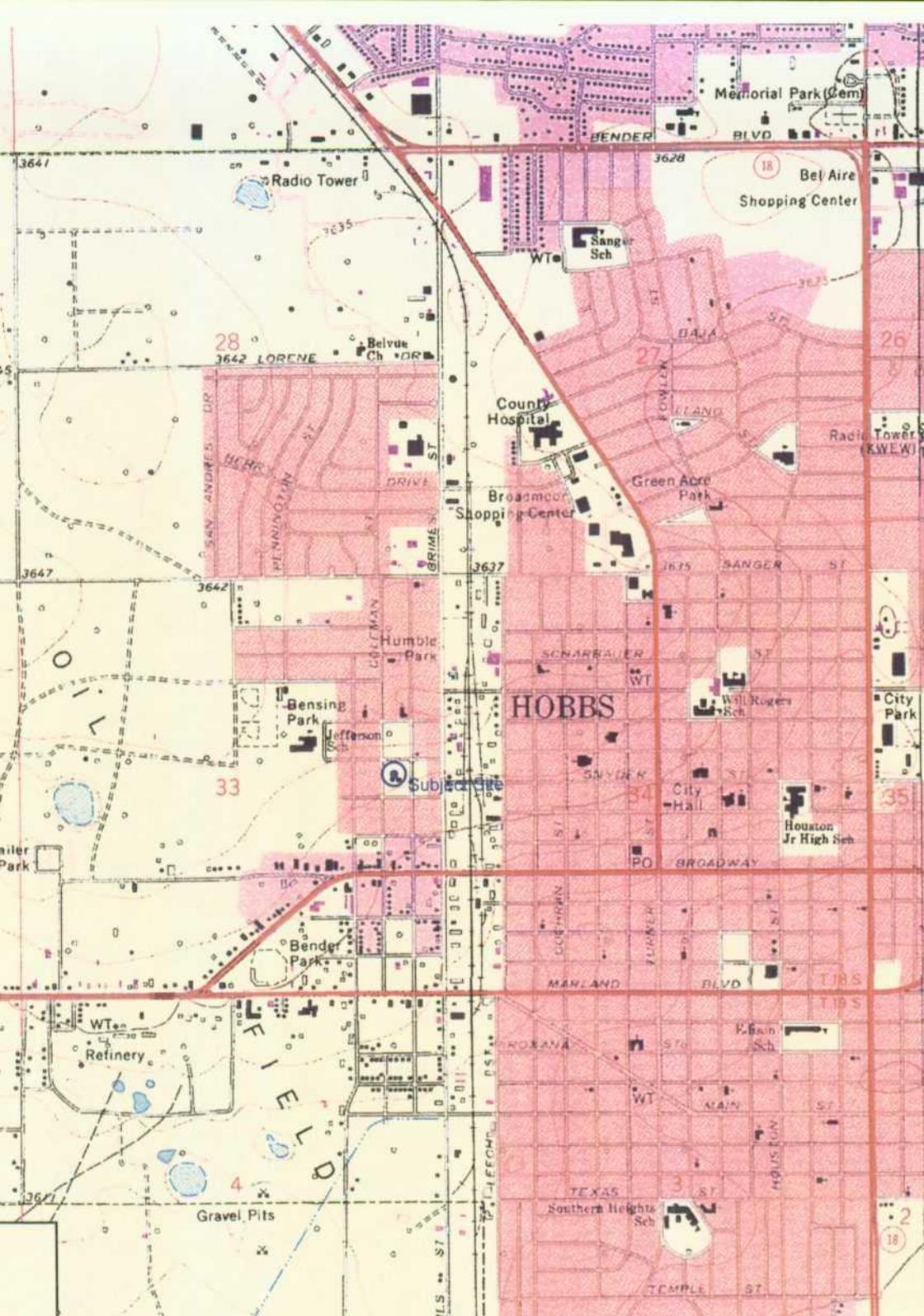
IV. Conclusions and Recommendations

Results of the soil-sampling program show no levels of BTEX or TPH above regulatory limits in the bottom of the borehole as reported in Table 1. Minor chloride levels were detected at the bottom of each borehole. It is evident from the sampling that this site, the immediate tank battery area, contains no levels of contamination that are above regulatory limits found in "**Unlined Surface Impoundment Closure Guidelines**" *New Mexico Oil Conservation Division* - February 1993 regarding Total Petroleum Hydrocarbons (TPH) and Benzene, Ethyl Benzene, Toluene and Total Xylenes (BTEX). The levels of chloride contamination detected would pose no threat to the surface or the groundwater in the area.

V. Report Figures

- Figure 1. - Vicinity Map
- Figure 2. - Facility Diagram 1948
- Figure 3. - Aerial Photo 1964
- Figure 4. - Aerial Photo 1978
- Figure 5. - Site Plan Surface Samples
- Figure 6. - Site Plan Borehole Location

Figure 1.
Vicinity Map



Memorial Park (Cem)

BENDER BLVD

Bel Aire Shopping Center

Radio Tower

Sanger Sch

28
3642 LORENE

Belvue Ch

County Hospital

Broadmoor Shopping Center

Green Acre Park

Radio Tower (KWE)

3647

3642

3647

3637

HOBBS

Will Rogers Sch

City Park

3647

33

Subject Site

34

35

Houston Jr High Sch

Water Park

Bender Park

BROADWAY

Refinery

3647

3647

3647

Gravel Pits

F I E L D

Southern Heights Sch

Eason Sch

2

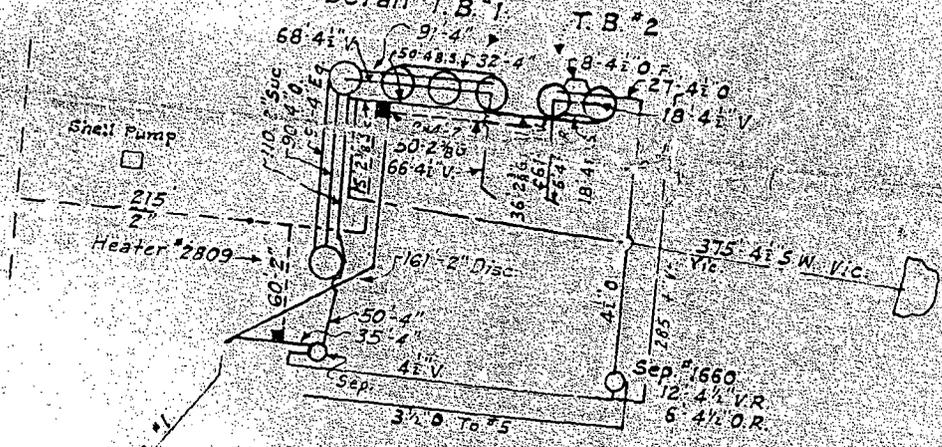
18

TEMPLE ST

Figure 2.
Site Diagram 1948

Phillips 4.6

Detail T.B.#1 T.B.#2



T.B.#1

- 3-500 Bbl. St. Tks. (Low)
- 1-500 Wood
- 6-4-6 Show St. Pump #901
- 10-18 Boot
- 10-4 1/2 Bypass
- 3-18 Syp
- 4-6
- 2-4-10 O.R.
- 2-10 Vent
- 14-7 Header
- 12-2 3/8 B.S.P.
- 15-2 3/8 S.W.V.

T.B.#2

- 2-250 Bbl. B.S. Tk.
- 12-4 1/2 O.R.

- Sep. #1269
- 17-4 1/2 V.R.
- 8-4 1/2 O.R.

Surface Lse NW NE 1/4

Summary
chk'd. w/Map
8/23/45

EAST GRIMES		Hobbs New Mexico				Scale 1" = 200'
Sec. 33-T. 185-R38E		Date of Last Field Inv. 11-17-40				
GULF OIL CORP. PROD. DIV. FORT WORTH, TEXAS	Inv. Plat	2-31-33	7-1-33	7-31-33	7-31-34	7-31-35
	Corrected	5-12-33	7-31-33	5-12-34	7-31-34	7-31-35
	Drawn	redrawn 5-3-1939.				
						Map No. 556

Figure 3.
Aerial Photo 1964



SITE

March 26, 1964

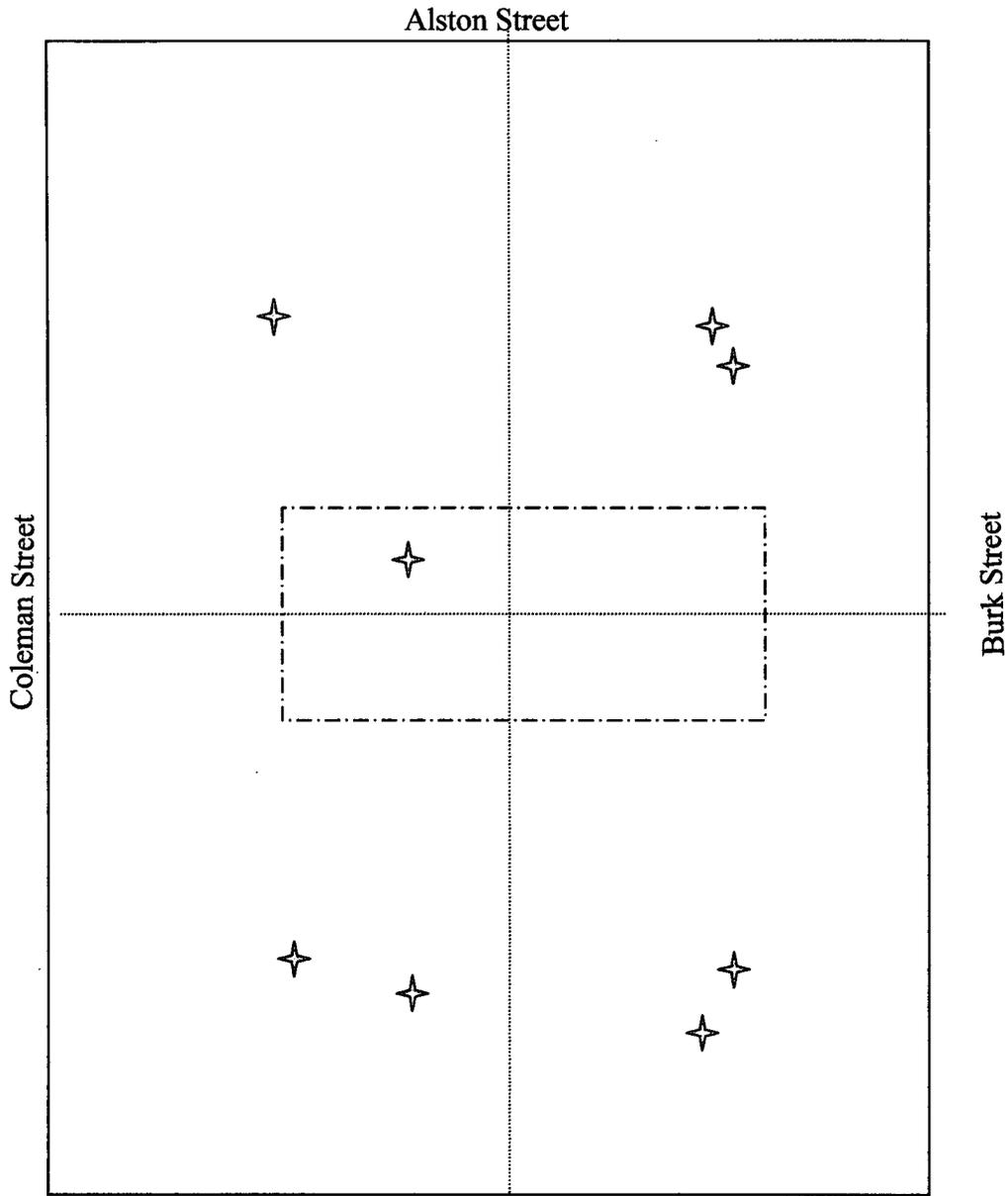
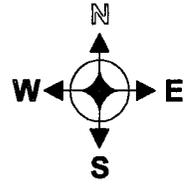
Figure 4
Aerial Photo 1978



SITE

March 9, 1978

Figure 5.
Site Plan – Surface Samples



**Section 33,
Township 18 South
Range 38 East**

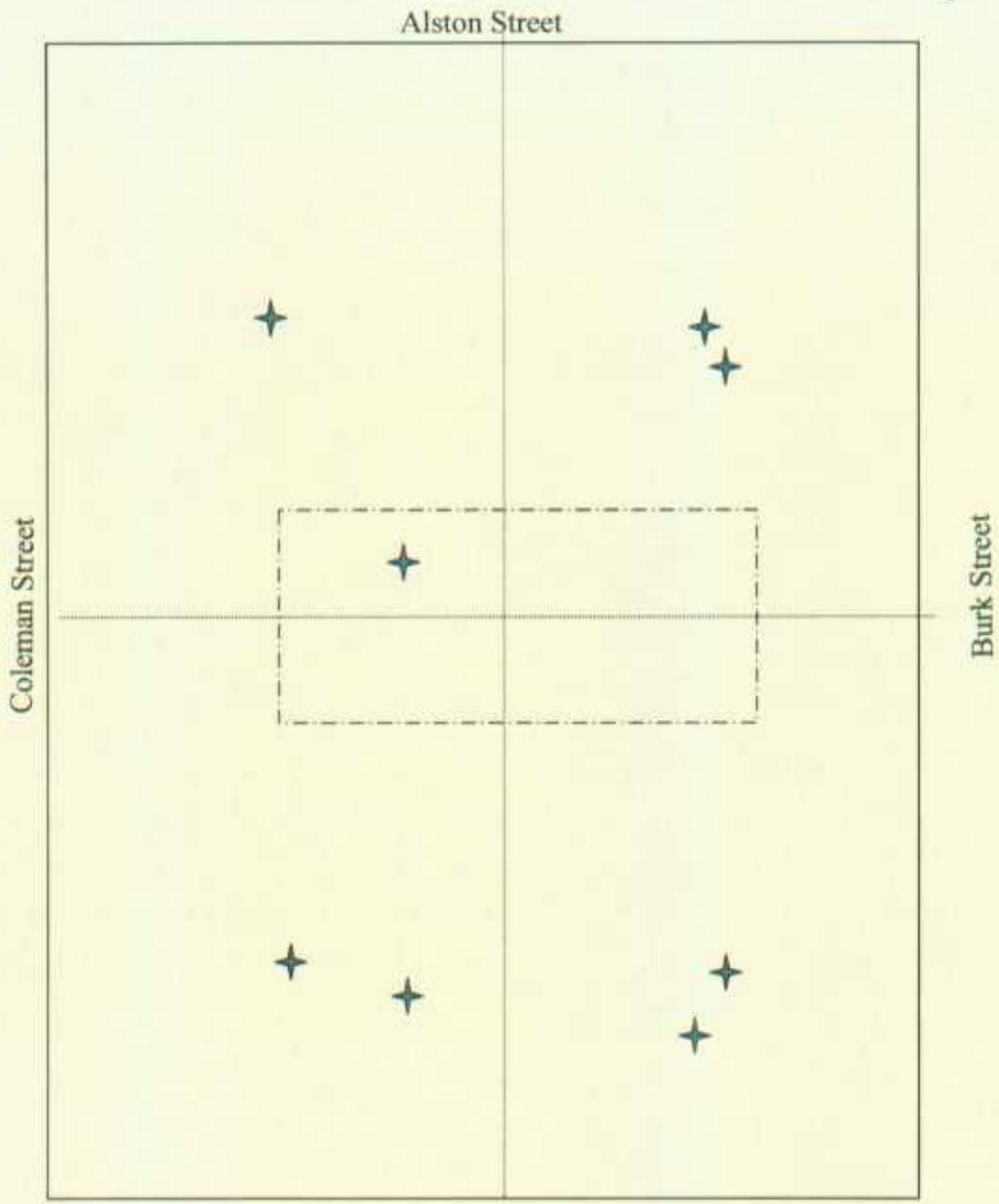
Cain Street

Chevron USA

**Coleman Street
Site Plan
Surface Sample Locations**



**Safety & Environmental
Solutions, Inc.
Hobbs, New Mexico**



**Section 33,
Township 18 South
Range 38 East**

Cain Street



Chevron USA	Coleman Street Site Plan Surface Sample Locations	<i>Safety & Environmental Solutions, Inc. Hobbs, New Mexico</i>
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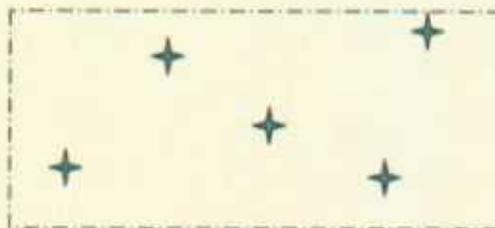
Figure 6.
Site Plan Borehole Location



Alston Street

Coleman Street

Burk Street



✦ Test Hole Locations

Cain Street

**Section 33,
Township 18 South
Range 38 East**



Chevron USA

**Coleman Street
Site Plan
Borehole Locations**

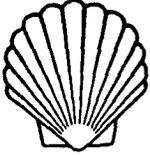
**Safety & Environmental
Solutions, Inc.
Hobbs, New Mexico**

VI. Report Appendices

Appendix A. Historical Correspondence

Appendix B. Laboratory Analytical Reports - Soil

Appendix A
Historical Correspondence



SHELL PIPE LINE CORPORATION

WILCO BUILDING
P. O. BOX 1910
MIDLAND, TEXAS 79701

July 17, 1972

RECEIVED
JUL 27 '72
HOBBS AREA

Subject: Grimes "B" Lease in East
Central Part of Section 33,
T-18-S, Lea County, New Mexico

403

Gulf Oil Company - U.S.
P. O. Box 1150
Midland, Texas 79701

RECEIVED
JUL 20 1972
W. B. Hopkins

Attention Mr. W. B. Hopkins

Gentlemen:

We understand that the production from tank battery on your captioned lease has been transferred to another tank battery. If you do not anticipate any other production from this lease that will require crude oil pipeline facilities, please execute and return the duplicate original of this letter to us so that we may remove them for use elsewhere.

Yours very truly,

W. R. Yates, Division Manager
West Texas Division

Attachment

I do not anticipate any other production from captioned lease and you may remove your pipeline facilities.

Gulf Oil Company - U. S.

By CO Borland

Title Area Production Manager

Date 7-27-72

*7-25-72
Hobbs Area - W. B. Hopkins Shell
in (2-30-72) Shell facilities
no longer required
JH*

*Copy let to Shell 7-27-72
✓ 2 Midland - TMO*

Gulf Oil Company - U.S.

HOBBS PRODUCTION AREA

C. D. Borland
AREA PRODUCTION MANAGER

December 30, 1971

P. O. Box 670
Hobbs, New Mexico 88240

Shell Pipeline Corporation
P. O. Box 1910
Midland, Texas 79701

Gentlemen:

This is to advise that effective immediately Gulf no longer needs a pipeline connection on their W. D. Grimes (NCF-B) Lease, Hobbs and Hobbs Elinebry Pools, Section 33-18S-38E, Lea County, New Mexico. These tank batteries have been discontinued and production is now going to our W. D. Grimes (NCF-A) Lease tank battery.

Yours very truly,

ORIGINAL SIGNED BY
C. D. BORLAND

C. D. BORLAND
Area Production Manager

ptg:

cc: Shell Pipeline Corp.
P. O. Box 1003
Hobbs, New Mexico 88240



Appendix B
Laboratory Analytical Reports
Soil

**NEW MEXICO OIL CONSERVATION COMMISSION
REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS**

Form C-104
Supersedes Old C-104 and C-110
Effective 1-1-65

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
TRANSPORTER	OIL
	GAS
OPERATOR	
PRORATION OFFICE	

Operator
Gulf Oil Corporation
Address
Box 670, Hobbs, New Mexico 88240

Reason(s) for filing (Check proper box) Other (Please explain)

New Well Change in Transporter of: This form is to cover 135 bbls of oil
Recompletion Oil Dry Gas moved from our W. D. Grimes (NCT-B) lse,
Change in Ownership Casinghead Gas Condensate Hobbs Bl Pool to the W. D. Grimes (NCT-A)
lse, Hobbs Bl & Hobbs (G-SA) commingled
btry. To be run from the W. D. Grimes
(NCT-A) Hobbs Bl & Hobbs (G-SA) commingled
battery.

If change of ownership give name and address of previous owner _____

DESCRIPTION OF WELL AND LEASE

Lease Name W. D. Grimes (NCT-B)	Well No. 7	Pool Name, including Formation Hobbs Blinebry	Kind of Lease State, Federal or Fee Fee	Lease No.
Location				
Unit Letter B	450	Feet From The North	Line and 2160	Feet From The East
Line of Section 33	Township 18-S	Range 38-E	, NMPM, Lea: County	

DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input checked="" type="checkbox"/> or Condensate <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Shell Pipe Line Corporation	Box 1910, Midland, Texas 79701
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When

If this production is commingled with that from any other lease or pool, give commingling order number: _____

COMPLETION DATA

Designate Type of Completion - (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
Date Spudded	Date Compl. Ready to Prod.	Total Depth				P.B.T.D.		
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation	Top Oil/Gas Pay				Tubing Depth		
Perforations						Depth Casing Shoe		

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT

TEST DATA AND REQUEST FOR ALLOWABLE OIL WELL (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pitot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

I. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Commission have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

C.D. Kalltger
(Signature)
Area Engineer
(Title)
December 17, 1971

OIL CONSERVATION COMMISSION
DEC 20 1971

APPROVED _____, 19____
BY *Joe D. Ramsey*
Dist. I, Supv.
TITLE _____

This form is to be filed in compliance with RULE 1104.
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.
All sections of this form must be filled out completely for allowable on new and recompleted wells.
Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.



**ARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, SUITE #103
HOBBS, NM 88240
FAX TO:

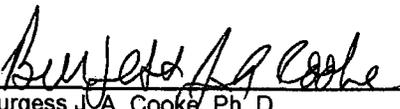
Receiving Date: 08/02/01
Reporting Date: 08/03/01
Project Number: NOT GIVEN
Project Name: CHEVRON
Project Location: COLEMAN/GRIMES

Sampling Date: 08/02/01
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
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:	08/02/01	08/02/01	08/02/01	08/02/01	08/02/01	08/02/01
H6043-1	CTR SE 1/4	<50	<50	<0.005	<0.005	<0.015
H6043-2	CTR SW 1/4	<50	75.6	<0.005	<0.005	<0.015
H6043-3	CTR NE 1/4	<50	97.8	<0.005	<0.005	<0.015
H6043-4	CTR NW 1/4	<50	99.0	<0.005	<0.005	<0.015
Quality Control	713	762	0.109	0.102	0.106	0.317
True Value QC	800	800	0.100	0.100	0.100	0.300
% Recovery	89.1	95.3	109	102	106	106
Relative Percent Difference	7.1	2.9	7.9	12.6	14.7	14.3

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


Burgess J.A. Cooke, Ph. D.

8/3/01
Date

H6043A.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 (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, SUITE #103
HOBBS, NM 88240
FAX TO:

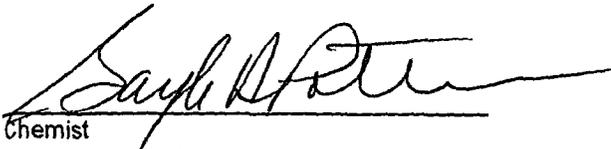
Receiving Date: 08/02/01
Reporting Date: 08/10/01
Project Number: NOT GIVEN
Project Name: CHEVRON
Project Location: COLEMAN/GRIMES

Sampling Date: 08/02/01
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH/GP

RCRA METALS

LAB NUMBER	SAMPLE ID	As ppm	Ag ppm	Ba ppm	Cd ppm	Cr ppm	Pb ppm	Hg ppm	Se ppm
ANALYSIS DATE:		08/07/01	08/03/01	08/03/01	08/08/01	08/08/01	08/03/01	08/03/01	08/07/01
H6043-1	CTR SE 1/4	2.87	0.43*	<5	0.34	4.05	<1	0.011	<0.02
H6043-2	CTR SW 1/4	1.63	9.5	17.3	0.41	4.62	<1	0.003	<0.02
H6043-3	CTR NE 1/4	2.31	5.6	43.1	0.40	4.12	<1	0.011	<0.02
H6043-4	CTR NW 1/4	3.02	0.95	431	0.49	3.97	<1	<0.02	0.054
Quality Control		0.197	4.256	21.09	3.049	4.128	5.058	0.0108	0.188
True Value QC		0.200	5.000	25.00	3.000	4.000	5.000	0.0100	0.200
% Recovery		98.4	85.1	85.0	102	103	101	108.0	93.8
Relative Percent Difference		6.6	0.4	2.8	2.3	0.3	6.7	7.4	5.1
METHODS: EPA 600/4-79-020		206.2	272.1	208.1	213.1	218.1	239.1	245.1	270.2
METHODS:	SW-846	7060A	7760A	7080A	7130	7190	7420	7470A	7740

*Analysis date: 08/10/01


Chemist

08/13/2001
Date

H6043MB.XLS

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ___ of ___

BILL TO

ANALYSIS REQUEST

Company Name: SESI	P.O. #:
Project Manager: Allen	Company:
Address: 903 E Clinton	Attn:
City: Hobbs State: NM Zip: 88240	Address:
Phone #: 397-0510 Fax #: 397-0510	City:
Project #: Cherrow Project Owner:	State: NM Zip: 88240
Project Name: Cherrow	Phone #:
Project Location: Bolema / Grimes	Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	8015	BTEX	Total Metals
				GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE:					
M6031	CTA SE Yg	C 1	1			Y					8-2-01	2:10	Y	Y	C
	CTA SW Yg	C 1	1			Y						2:15	Y	Y	C
	CTA NE Yg	C 1	1			Y						2:20	Y	Y	C
	CTA NW Yg	C 1	1			Y						2:25	Y	Y	C

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Sampler Relinquished: **Ball** Date: **8-2-01** Time: **2:32 PM**

Relinquished By: **Ball**

Received By: (Lab Staff) **Barbara**

Delivered By: (Circle One) UPS Bus Other

Sampler Condition: Intact Cool No

CHECKED BY: (Initials)

Phone Result: Yes No Add'l Phone #:

Fax Result: Yes No Add'l Fax #:

REMARKS:

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



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ANALYTICAL RESULTS FOR
 SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
 ATTN: BOB ALLEN
 703 E. CLINTON, SUITE #103
 HOBBS, NM 88240
 FAX TO:

Receiving Date: 08/03/01
 Reporting Date: 08/09/01
 Project Owner: CHEVRON
 Project Name: NOT GIVEN
 Project Location: COLEMAN/GRIMES

Sampling Date: 08/03/01
 Sample Type: SOIL
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: AH/GP

RCRA METALS

LAB NUMBER	SAMPLE ID	As ppm	Ag ppm	Ba ppm	Cd ppm	Cr ppm	Pb ppm	Hg ppm	Se ppm
ANALYSIS DATE:		08/07/01	08/03/01	08/03/01	08/08/01	08/08/01	08/03/01	08/03/01	08/07/01
H6046-1	NE 1/4 #1	1.90	<0.5	12.8	0.48	4.08	<1	<0.02	0.124
H6046-2	NW 1/4 #1	2.36	<0.5	22.7	6.02	4.50	<1	<0.02	0.037
H6046-3	SE 1/4 #1	1.04	<0.5	26.5	0.50	3.66	<1	<0.02	<0.02
H6046-4	SW 1/4 #1	1.69	<0.5	34.3	0.5	4.18	<1	<0.02	<0.02
Quality Control		0.197	4.256	21.09	3.049	4.128	5.058	0.0108	0.188
True Value QC		0.200	5.000	25.00	3.000	4.000	5.000	0.0100	0.200
% Recovery		98.4	85.1	85.0	102	103	101	108.0	93.8
Relative Percent Difference		6.6	0.4	2.8	2.3	0.3	6.7	7.4	5.1

METHODS: EPA 600/4-79-020	206.2	272.1	208.1	213.1	218.1	239.1	245.1	270.2
METHODS: SW-846	7060A	7760A	7080A	7130	7190	7420	7470A	7740

Beverly A. Cook
 Chemist

8/9/01
 Date

H6046M.XLS

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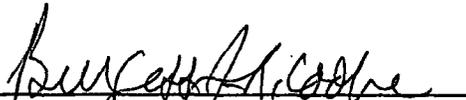
ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, SUITE #103
HOBBS, NM 88240
FAX TO:

Receiving Date: 08/03/01
Reporting Date: 08/06/01
Project Owner: CHEVRON
Project Name: NOT GIVEN
Project Location: COLEMAN/GRIMES

Sampling Date: 08/02/01
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
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:		08/02/01	08/02/01	08/02/01	08/02/01	08/02/01	08/02/01
H6046-1	NE 1/4 #1	<50	<50	<0.005	<0.005	<0.005	<0.015
H6046-2	NW 1/4 #1	<50	394	<0.005	<0.005	<0.005	<0.015
H6046-3	SE 1/4 #1	<50	801	<0.005	<0.005	<0.005	<0.015
H6046-4	SW 1/4 #1	<50	382	<0.005	<0.005	<0.005	<0.015
Quality Control		741	783	0.098	0.095	0.096	0.293
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		92.6	97.9	97.3	95.3	95.9	97.6
Relative Percent Difference		1.2	8.5	3.3	6.0	5.3	7.3

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


Burgess J. A. Cooke, Ph. D.

8/16/01
Date

H6046A.XLS

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page of

Company Name: <u>SEEST</u>	P.O. #:	BILL TO
Project Manager: <u>Alper</u>	Company:	ANALYSIS REQUEST
Address: <u>903 E. Clinch</u>	Attn:	
City: <u>Hobbs</u>	Address:	
State: <u>NM</u>	City:	
Zip: <u>78001</u>	State:	
Phone #: <u>399-0510</u>	Fax #:	
Project #: <u>399-0510</u>	Project Owner: <u>Cherbor</u>	
Project Name:	Subject Location: <u>Colander / Grimes</u>	
Sampler Name:	Phone #:	
FOR LAB USE ONLY	Fax #:	

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS
				GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV			
H0040-1	NEGTR #1	C1	1			X				8-30-01	6:15	8015	
	NEGTR #1	C1	1			X				"	7:00	BTEX	
	NEGTR #1	C1	1			X				"	7:25	TOTAL METALS	
	SWQTR #1	C1	1			X				"	7:50		

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Terms and Conditions: Invoiced will be charged on all accounts items from 30 days past due at the rate of 20% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished By: <u>[Signature]</u>	Date: <u>8-3-01</u>	Received By: (Lab Staff) <u>[Signature]</u>	Sample Condition	CHECKED BY: (Initials)
Time: <u>8:05</u>			<input checked="" type="checkbox"/> Cool <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	
Relinquished By: <u>[Signature]</u>	Date: <u>8-3-01</u>	Received By: (Lab Staff) <u>[Signature]</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #: <u> </u> Add'l Fax #: <u> </u>
Delivered By: (Circle One)	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	REMARKS:	
<input checked="" type="checkbox"/> UPS <input type="checkbox"/> Bus <input type="checkbox"/> Other				

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ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 08/24/01
Reporting Date: 08/27/01
Project Number: NOT GIVEN
Project Name: CHEVRON-COLEMAN & GRIMES
Project Location: HOBBS, NM

Sampling Date: 08/23/01
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NO.	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
	ANALYSIS DATE	08/24/01	08/24/01	08/24/01	08/24/01
H6108-1	BORE HOLE #1 (10')	<0.005	<0.005	<0.005	<0.015
H6108-2	BORE HOLE #2 (5')	<0.005	<0.005	<0.005	<0.015
H6108-3	BORE HOLE #3 (5')	<0.005	<0.005	<0.005	<0.015
H6108-4	BORE HOLE #4 (5')	<0.005	<0.005	<0.005	<0.015
H6108-5	BORE HOLE #5 (5')	<0.005	<0.005	<0.005	<0.015
	Quality Control	0.109	0.099	0.105	0.307
	True Value QC	0.100	0.100	0.100	0.300
	% Recovery	109	98.6	105	102
	Relative Percent Difference	6.1	6.1	5.1	4.3

METHOD: EPA SW-846 8260

Burton A. Roche
Chemist

8/27/01
Date

H6108B.XLS

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SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

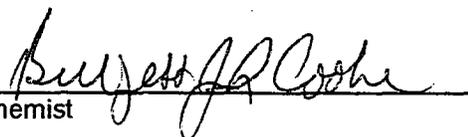
Receiving Date: 08/24/01
Reporting Date: 08/27/01
Project Number: NOT GIVEN
Project Name: CHEVRON-COLEMAN & GRIMES
Project Location: HOBBS, NM

Sampling Date: 08/23/01
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	CI* (mg/Kg)
	ANALYSIS DATE	08/24/01	08/24/01	08/24/01
H6108-1	BORE HOLE #1 (10')	<50	<50	480
H6108-2	BORE HOLE #2 (5')	<50	<50	80
H6108-3	BORE HOLE #3 (5')	<50	<50	128
H6108-4	BORE HOLE #4 (5')	<50	<50	48
H6108-5	BORE HOLE #5 (5')	<50	<50	160
	Quality Control	737	851	970
	True Value QC	800	800	1000
	% Recovery	92.1	106	97.0
	Relative Percent Difference	0.8	8.1	3.2

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

8/27/01
Date

H6108A.XLS

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