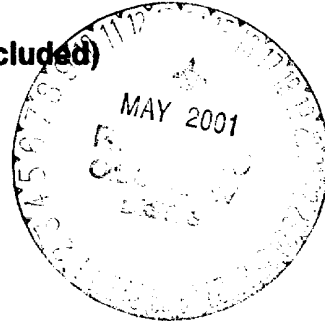


**Cross Timbers Operating Company (CTOC)
Prespentt GC # 1 - Blow Pit
Sw/4 Se/4 Sec. 21, T29N, R10W**

Bill Olson
Approved Pit
closure 12/26/01
Blow pit

Site Assessment Date: June 8, 1992 & October 18, 1993
(Documentation Included)
Pit closure Date: November 1, 1993
(Documentation Included)
Monitor Well Installation Date: December 7, 1999
Monitor Well Sampling Date: 12/9/99, 2/21/00, 4/17/00



Groundwater Monitor Well Sampling Procedures:

Groundwater samples were collected from site monitor wells (MW's) following US EPA: SW-846 protocol. The samples were collected using new disposable bailers and placed in new laboratory supplied 40 ml glass vials with teflon septa caps. Samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) per US EPA Method 8021. Additional groundwater was collected and placed in laboratory supplied 500 ml plastic containers and analyzed for general water quality per US EPA Method 600/4-79-020. The samples were preserved cool (BTEX samples also preserved with mercuric chloride) and hand delivered to a qualified laboratory for testing. Waste generated during monitor well sampling and development was disposed of utilizing the separator tank pit located due east from the well head.

Water Quality Information:

BTEX and general chemistry results for the three (3) quarterly sampling events are summarized in the following tables. All MW BTEX constituents satisfactorily meet the New Mexico Water Quality Control Commission's (NMWQCC) allowable concentrations for groundwater. The general water quality results also met NMWQCC standards for groundwater or was less than/statistically equal to the apparent background levels derived from MW #1.

Summary:

MW #3 is located in the down gradient direction from the source area (figure 4), but appears in a more lateral position during the December, 1999 and February, 2000 sampling events (figures 2 and 3).

In accordance with the attached correspondence (refer to letter dated May 11, 2001 - RE: CTOC, 2000 Annual Groundwater Reports, San Juan County, NM, Permanent Closure Requested) and the NMOCD previously approved groundwater management plan (GMP), specifically Section 2.0, CTOC respectfully request permanent closure for the site blow pit.

This document contains all pertinent information detailed in section 5.0 (Reporting) of the GMP. Upon receiving permanent closure notification from NMOCD, CTOC will conduct plug and abandonment of all sampling points as addressed in Section 6.0 of the GMP.

CROSS TIMBERS GROUNDWATER MONITOR WELL LAB RESULTS
SUBMITTED BY BLAGG ENGINEERING, INC.

PRESPENTT GC # 1 - BLOW PIT
UNIT O, SEC. 21, T29N, R10W

REVISED : APRIL 28, 2000

FILENAME: (P1-2Q-00.WK4) NJV

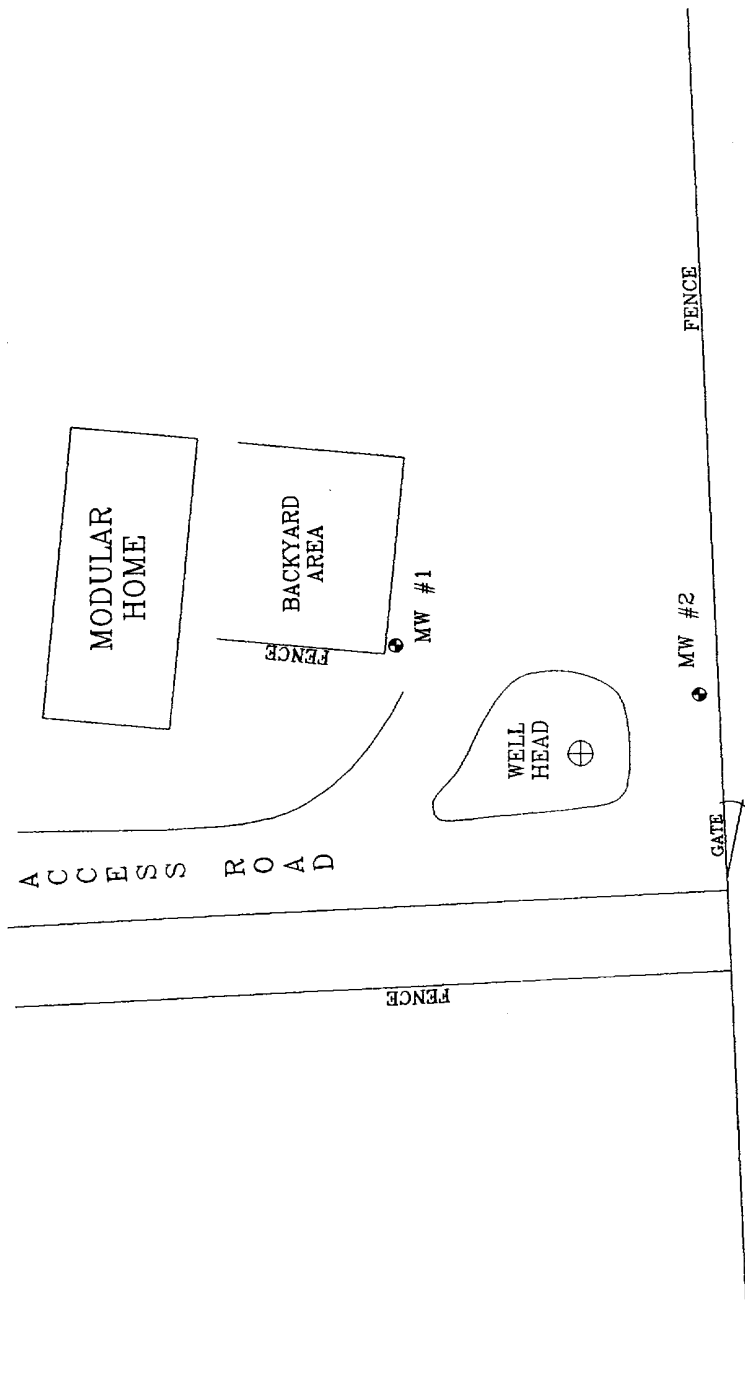
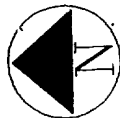
SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS mg/L	COND. umhos	pH	PRODUCT (in)	BTEX EPA METHOD 8021 (PPB)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
09-Dec-99	MW #1	14.27	20.00	460	945	7.1		1.2	1.2	0.7	1.8
21-Feb-00		16.36			-	-		-	-	-	-
09-Dec-99	MW #2	14.38	20.00	275	505	6.5		7.9	14.9	26.9	73.4
21-Feb-00		16.38			500	7.0		ND	ND	ND	0.6
18-Apr-00		17.10			700	7.0		ND	1.2	3.9	211.9
09-Dec-99	MW #3	13.84	20.00	260	515	7.2		9.4	20.9	15.7	33.0
21-Feb-00		15.68			500	7.6		ND	ND	0.9	19.2
18-Apr-00		16.02			500	7.5		1.6	0.8	1.1	16.4

GENERAL WATER QUALITY
CROSS TIMBERS OPERATING COMPANY
PRESPELTT GC # 1

SAMPLE DATE : December 9 , 1999

PARAMETERS	MW # 1	MW # 2	MW # 3	Units
LAB pH	7.05	6.54	7.16	s. u.
LAB CONDUCTIVITY @ 25 C	945	505	515	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	460	275	260	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	450	280	260	mg / L
SODIUM ABSORPTION RATIO	0.9	0.3	0.0	ratio
TOTAL ALKALINITY AS CaCO3	282	188	244	mg / L
TOTAL HARDNESS AS CaCO3	290	202	230	mg / L
BICARBONATE as HCO3	282	188	244	mg / L
CARBONATE AS CO3	< 0.1	< 0.1	< 0.1	mg / L
HYDROXIDE AS OH	< 0.1	< 0.1	< 0.1	mg / L
NITRATE NITROGEN	3.0	0.2	0.2	mg / L
NITRITE NITROGEN	0.043	0.010	0.007	mg / L
CHLORIDE	9.6	11.8	2.0	mg / L
FLUORIDE	0.56	0.29	0.40	mg / L
PHOSPHATE	< 0.1	1.3	< 0.1	mg / L
SULFATE	116	57.1	20.5	mg / L
IRON	0.004	2.15	0.385	mg / L
CALCIUM	110	71.2	72.0	mg / L
MAGNESIUM	3.91	5.86	12.2	mg / L
POTASSIUM	3.10	5.5	1.5	mg / L
SODIUM	34.0	11.0	< 0.1	mg / L
CATION / ANION DIFFERENCE	0.24	0.18	2.85	%

FIGURE 1



ALFALFA FIELD

1 INCH = 40 FT.



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

CROSS TIMBERS OPERATING CO.

PRESPEPNT GC #1

SW/4 SE/4 SEC. 21, T29N, R10W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW INSTALL.

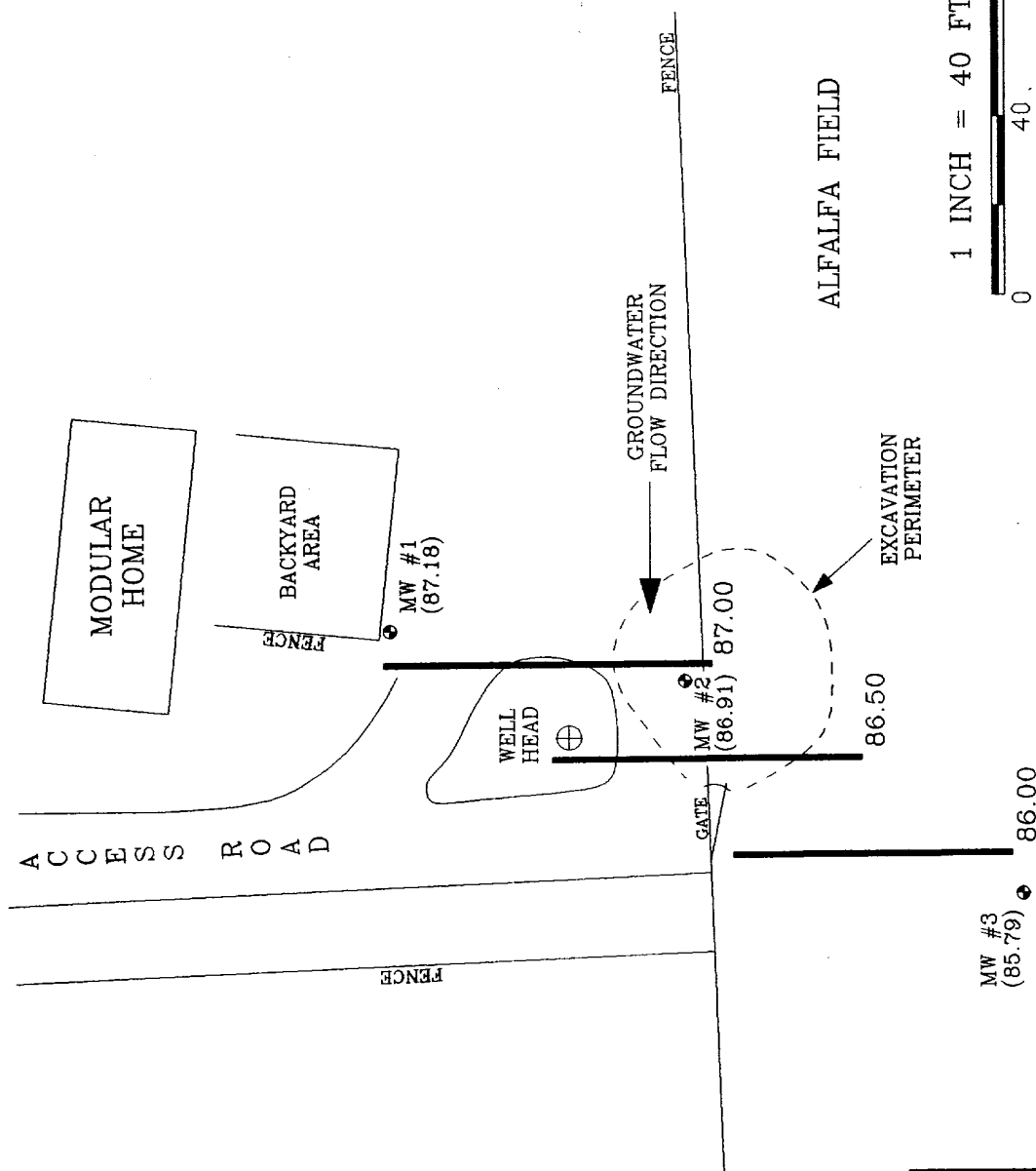
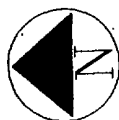
DRAWN BY: NJV

FILENAME: PRES-SM.SKD

SITE
MAP

12/99

FIGURE 2
(4th 1/4, 1999)



Top of Well Elevation	
MW #1	(101.45)
MW #2	(101.29)
MW #3	(99.63)
MW #1 Groundwater Elevation as of 12/9/89	
•	(87.18)

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

CROSS TIMBERS OPERATING CO.

PRESPENT GC #1

SW/4 SE/4 SEC. 21, T29N, R10W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

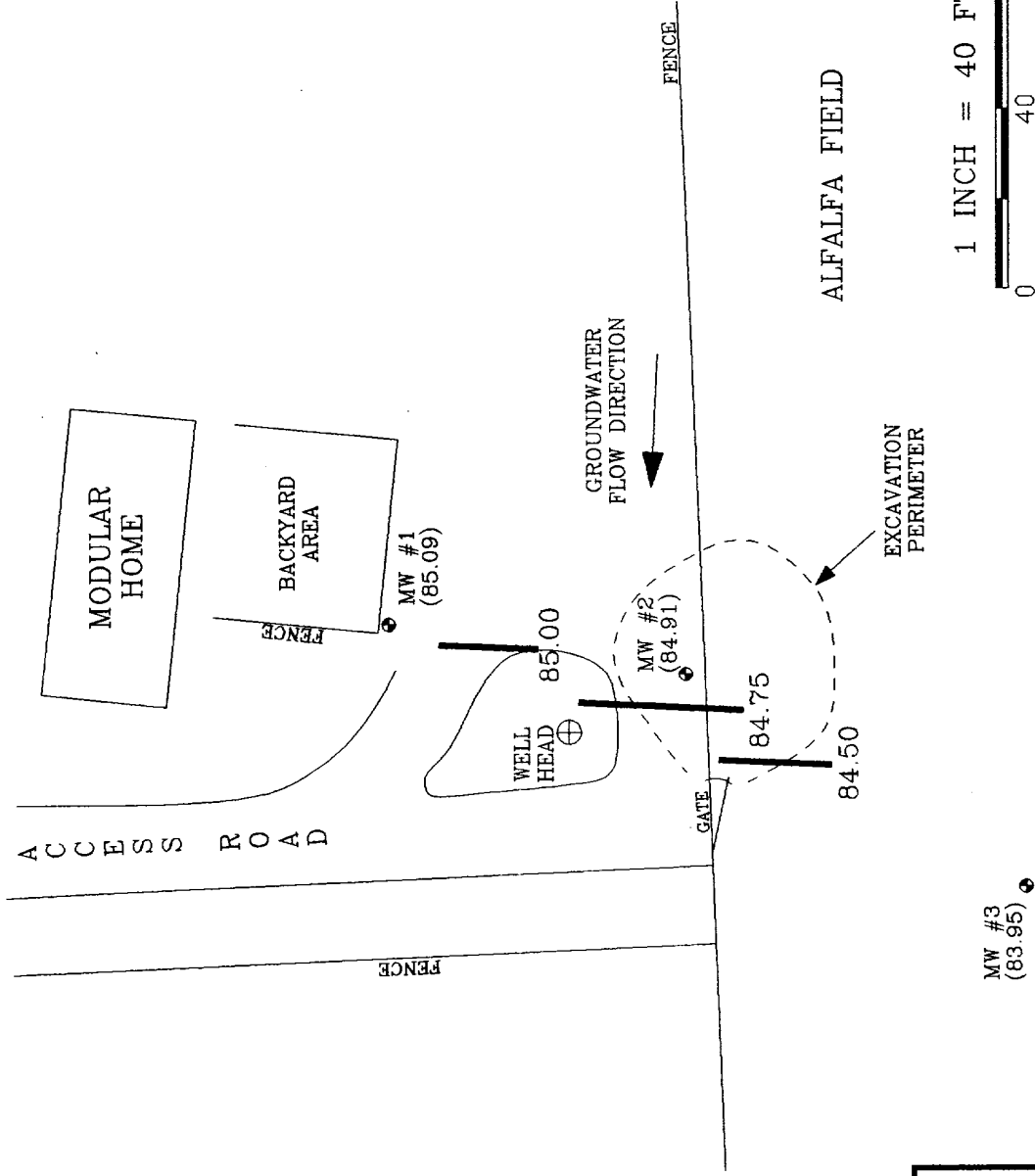
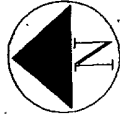
DRAWN BY: NJV

FILENAME: PRES-GW.SKD

GROUNDWATER
GRADIENT
MAP

12/99

FIGURE 3
(1st 1/4, 2000)



Top of Well Elevation	
MW #1	(101.45)
MW #2	(101.29)
MW #3	(99.63)
● MW #1 Groundwater Elevation	as of 2/21/00.

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

CROSS TIMBERS OPERATING CO.

PRESENTT GC #1

SW/4 SE/4 SEC. 21, T29N, R10W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMPLING

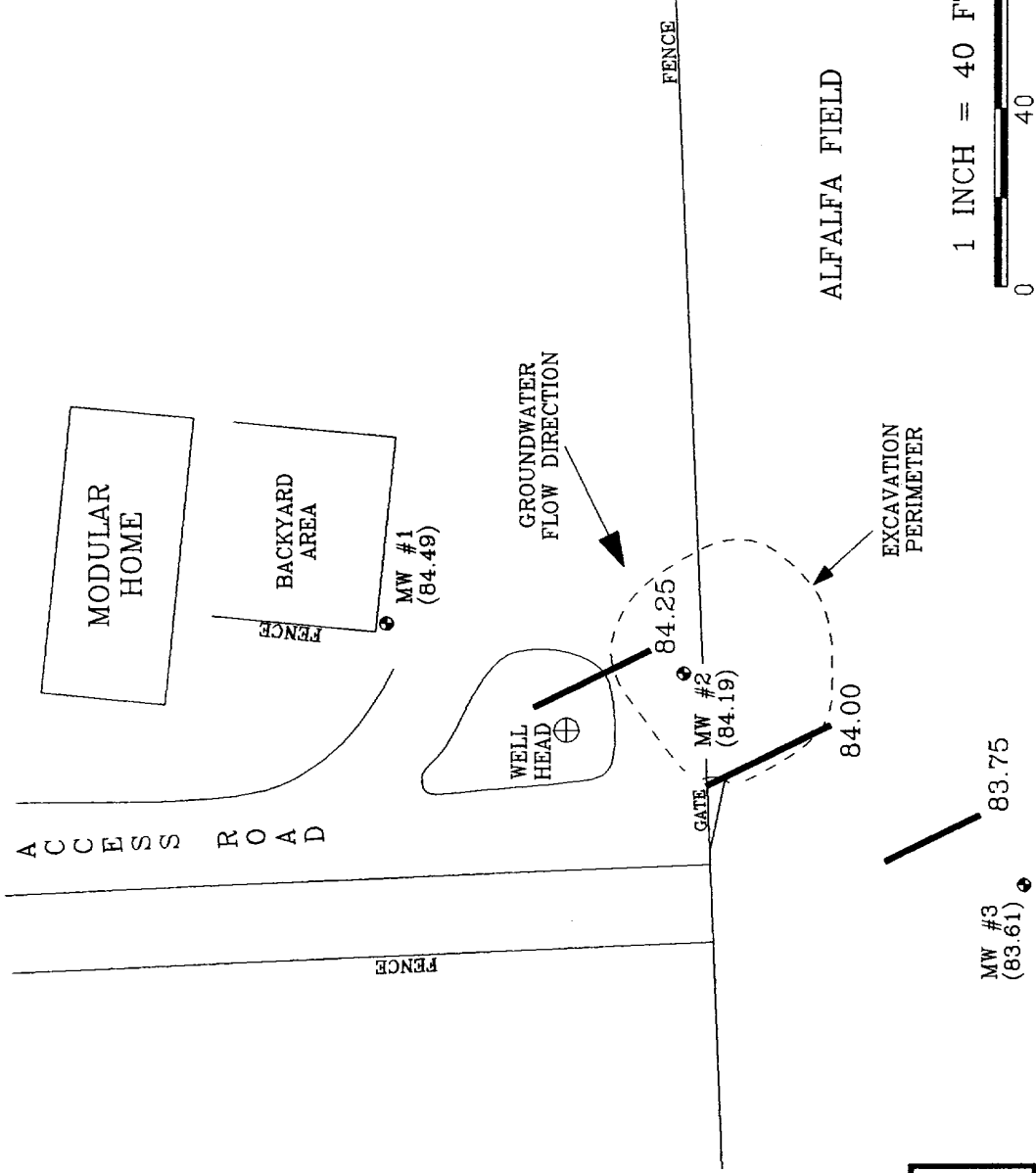
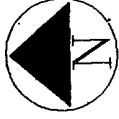
DRAWN BY: NJV

FILENAME: 02-21-GW.SKD

GROUNDWATER
GRADIENT
MAP

02/00

FIGURE 4
(2nd 1/4, 2000)



Top of Well Elevation	
MW #1	— (101.45)
MW #2	— (101.29)
MW #3	— (99.63)
● MW #1 Groundwater Elevation	as of 4/18/00.
● (84.49)	

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND MAY NOT BE TO SCALE.

CROSS TIMBERS OPERATING CO.
PRESIDENT GC #1
SW/4 SE/4 SEC. 21, T29N, R10W
SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

PROJECT: MW SAMPLING
DRAWN BY: NJV
FILENAME: 04-18-GW.SKD

GROUNDWATER
GRADIENT
MAP
04/00

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	MW # 1	Date Reported:	12-10-99
Chain of Custody:	7315	Date Sampled:	12-09-99
Laboratory Number:	G571	Date Received:	12-09-99
Sample Matrix:	Water	Date Analyzed:	12-09-99
Preservative:	HgCl ₂ & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	1.2	1	0.2
Toluene	1.2	1	0.2
Ethylbenzene	0.7	1	0.2
p,m-Xylene	1.2	1	0.2
o-Xylene	0.6	1	0.1
Total Xylene	1.8		
Total BTEX	4.9		

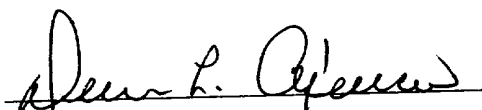
ND - Parameter not detected at the stated detection limit.

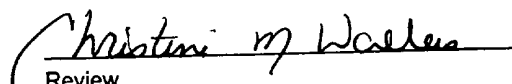
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	99 %

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

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

Comments: Prespentt GC # 1.


Analyst


Review

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 26-Apr-00

Client: Blagg Engineering

Work Order: 0004046

Lab ID: 0004046-01A Matrix: AQUEOUS

Project: CTOC; Prespentt GC #1

Client Sample Info: Prespentt GC #1

Client Sample ID: MW #2

Collection Date: 4/18/2000 9:25:00 AM

COC Record: 10578

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	4/19/2000
Toluene	1.2	0.5		µg/L	1	4/19/2000
Ethylbenzene	3.9	0.5		µg/L	1	4/19/2000
m,p-Xylene	210	1		µg/L	1	4/19/2000
o-Xylene	1.9	0.5		µg/L	1	4/19/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 26-Apr-00

Client:	Blagg Engineering	Client Sample Info:	Prespentt GC #1
Work Order:	0004046	Client Sample ID:	MW #3
Lab ID:	0004046-02A	Matrix:	AQUEOUS
Project:	CTOC; Prespentt GC #1	Collection Date:	4/18/2000 8:40:00 AM
		COC Record:	10578

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	1.6	0.5		µg/L	1	4/19/2000
Toluene	0.8	0.5		µg/L	1	4/19/2000
Ethylbenzene	1.1	0.5		µg/L	1	4/19/2000
m,p-Xylene	14	1		µg/L	1	4/19/2000
o-Xylene	2.4	0.5		µg/L	1	4/19/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

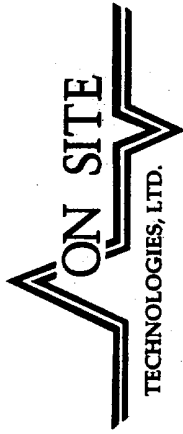
R - RPD outside accepted recovery limits

E - Value above quantitation range

Surrogate - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



CHAIN OF CUSTODY RECORD

612 E. Murray Dr. • P.O. Box 2608 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 4/18/00
Page: 1

Purchase Order No.:		Project No.:	
Name: <u>JEFF BLAGE</u>		Company: <u>BLAGE ENGINEERING, INC.</u>	
Address: <u>P.O. BOX 87</u>		City, State, Zip: <u>BLOOMFIELD, NM 87413</u>	
City, State, Zip: <u>BLOOMFIELD, NM 87413</u>		Telephone No.: <u>505-497-XXXX</u>	
PROJECT LOCATION: <u>CTOC - PRESIDENT GC #1</u>		ANALYSIS REQUESTED:	
SAMPLER'S SIGNATURE: <u>Nelson VJ</u>		RESULTS TO REPORT	
SAMPLE IDENTIFICATION		Number of Containers	
DATE	TIME	MATRIX	PRES.
4/18/00	0925	WATER	REF & COOL
4/18/00	0840	WATER	REF & COOL
RELINQUISHED BY: <u>Nelson VJ</u>		Received by: <u>Nelson VJ</u>	
RELINQUISHED BY: _____		Received by: _____	
RELINQUISHED BY: _____		Received by: _____	
Method of Shipment: _____		Rush ☐ 24-48 Hours ☒ 10 Working Days ☐ By Date: _____	
Authorized by: _____		Special Instructions / Remarks: <u>PLEASE FAX UPON ANALYTICAL COMPLETION</u>	
(Client Signature Must Accompany Request)		Date: _____	

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company Telephone: (505) - 326-9200
Address: 200 Amoco Court, Farmington, New Mexico 87401
Facility Or: PRESIDENT GC #1
Well Name
Location: Unit or Qtr/Qtr Sec 0 Sec 21 T29N R10W County SAN JUAN
Pit Type: Separator Dehydrator Other Blow
Land Type: BLM State Fee ✓ Other

Pit Location: Pit dimensions: length 55', width 45', depth 15'
(attach diagram) Reference: wellhead X, other
Footage from reference: 51'
Direction from reference: 26 Degrees X East North
of
 West South X

Depth To Ground Water: Less than 50 feet (20 points)
(Vertical distance from 50 feet to 99 feet (10 points)
contaminants to seasonal Greater than 100 feet (0 Points) 20
high water elevation of
ground water)

Wellhead Protection Area: Yes (20 points)
(Less than 200 feet from a private No (0 points) 0
domestic water source, or; less than
1000 feet from all other water sources)

Distance To Surface Water: Less than 200 feet (20 points)
(Horizontal distance to perennial 200 feet to 1000 feet (10 points)
lakes, ponds, rivers, streams, creeks, Greater than 1000 feet (0 points) 10
irrigation canals and ditches)

RANKING SCORE (TOTAL POINTS): 30

Date Remediation Started: _____ Date Completed: 11/10/93

Remediation Method: Excavation ☒
(Check all appropriate sections)

Approx. cubic yards 960

Landfarmed ☒

Insitu Bioremediation _____

Other _____

Remediation Location: Onsite _____ Offsite ☒ GARCIA GC 8 #1 (J-21-29-10)
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: _____

Excavation, GROUNDWATER IMPACT.

Ground Water Encountered: No _____ Yes ☒ Depth 13'

Final Pit:

Sample location see Attached Documents

Closure Sampling:

(if multiple samples, attach sample results and diagram of sample locations and depths)

MULTIPLE SAMPLES

Sample depth _____

Sample date _____ Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) _____

TPH _____

Ground Water Sample: Yes ☒ No _____ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

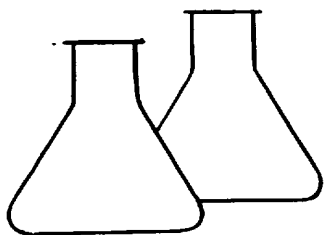
DATE 2/15/00

SIGNATURE

B. Shaw

PRINTED NAME
AND TITLE

Buddy D. Shaw
ENVIRONMENTAL COORDINATOR



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	92140
Sample ID:	ES @ 10'	Date Sampled:	11-01-93
Laboratory Number:	6425	Date Received:	11-01-93
Sample Matrix:	Soil	Date Analyzed:	11-02-93
Preservative:	Cool	Date Reported:	11-02-93
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	ND	10.0

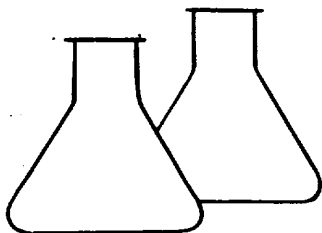
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Perspentt GC #1, Blow Pit, C4265

Tony Tristano
Analyst

Maris S. Young
Review



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401

PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	5 B @ 13'	Date Reported:	11-02-93
Laboratory Number:	6424	Date Sampled:	11-01-93
Sample Matrix:	Water	Date Received:	11-01-93
Preservative:	HgCl and Cool	Date Analyzed:	11-01-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	29.0	1.0
Toluene	22.5	1.0
Ethylbenzene	210	1.0
p,m-Xylene	2,370	1.0
o-Xylene	1,080	1.0
	<u>3,450</u>	

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	98 %

Method: Method 5030A, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

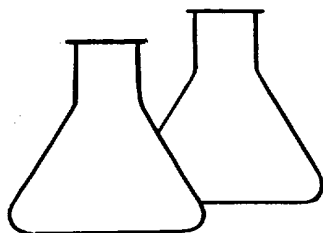
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Prespentt GC #1 Blow Pit C4265

Dennis L. Owens
Analyst

Marvin D. Young
Review



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Pit Water	Date Reported:	11-10-93
Laboratory Number:	6459	Date Sampled:	11-09-93
Sample Matrix:	Water	Date Received:	11-09-93
Preservative:	HgCl and Cool	Date Analyzed:	11-10-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	4.6	0.2
Toluene	ND	0.3
Ethylbenzene	ND	0.3
p,m-Xylene	ND	0.4
o-Xylene	5.7	0.4

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	Bromofluorobenzene	99 %

Method: Method 5030A, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: Prespentt GC #1 Blow Pit C4265

Dennis L. Givener
Analyst

Marion D. Young
Review

