1R - 301

REPORTS

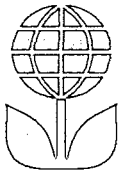
DATE:

2001

George O'Brien Oil Company

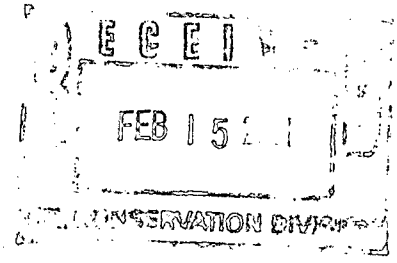
RECEIVED
FEB 15 2001
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Graham State # 1 Pit Closure Project



Whole Earth Environmental
19606 San Gabriel
Houston, Tx. 77084

Whole Earth Environmental, Inc.
19606 San Gabriel, Houston, Texas 77084
281/492-7077 • Fax: 281/646-8996



February 7, 2001

Roger Anderson
NMOCD
1220 South Saint Frances
Sante Fe, NM 87505

Dear Mr. Anderson:

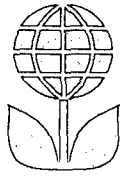
Enclosed, please find a copy of the final closure report for the George O'Brien Graham State pit complex.

If you've any questions regarding this project, please do not hesitate to call me at (800) 854-4358.

Warmest regards,

Mike Griffin
President
Whole Earth Environmental, Inc.

CC: George O'Brien



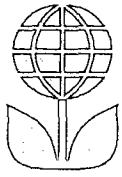
Executive Summary

Whole Earth Environmental, Inc. began the excavation of the Graham State site after first notifying New Mexico State One Call and obtaining a verification number of 00120710010211. The initial excavation began on December 11th, 2000 and consisted of the removal of approximately 308 cubic yards of solidified tank bottoms and contaminated soils. These materials were sent to the Gandy / Marley Landfill near Caprock, New Mexico for remediation.

Excavation continued to a total depth of approximately 30' below ground level. Field testing indicated that each side wall and the excavation bottom were below closure standards and the NMOCD was notified on December 15th that formal testing would be conducted on December 20th.

The bottom of the excavation was backfilled with clean side-wall material to a total depth of 25' below ground level in preparation of installing a clay liner. The liner was installed and tested on January 8th, 2001.

Backfilling of the excavation began January 21st, 2001 and was concluded on January 2nd. The site was back-dragged and re-contoured to match existing elevations.



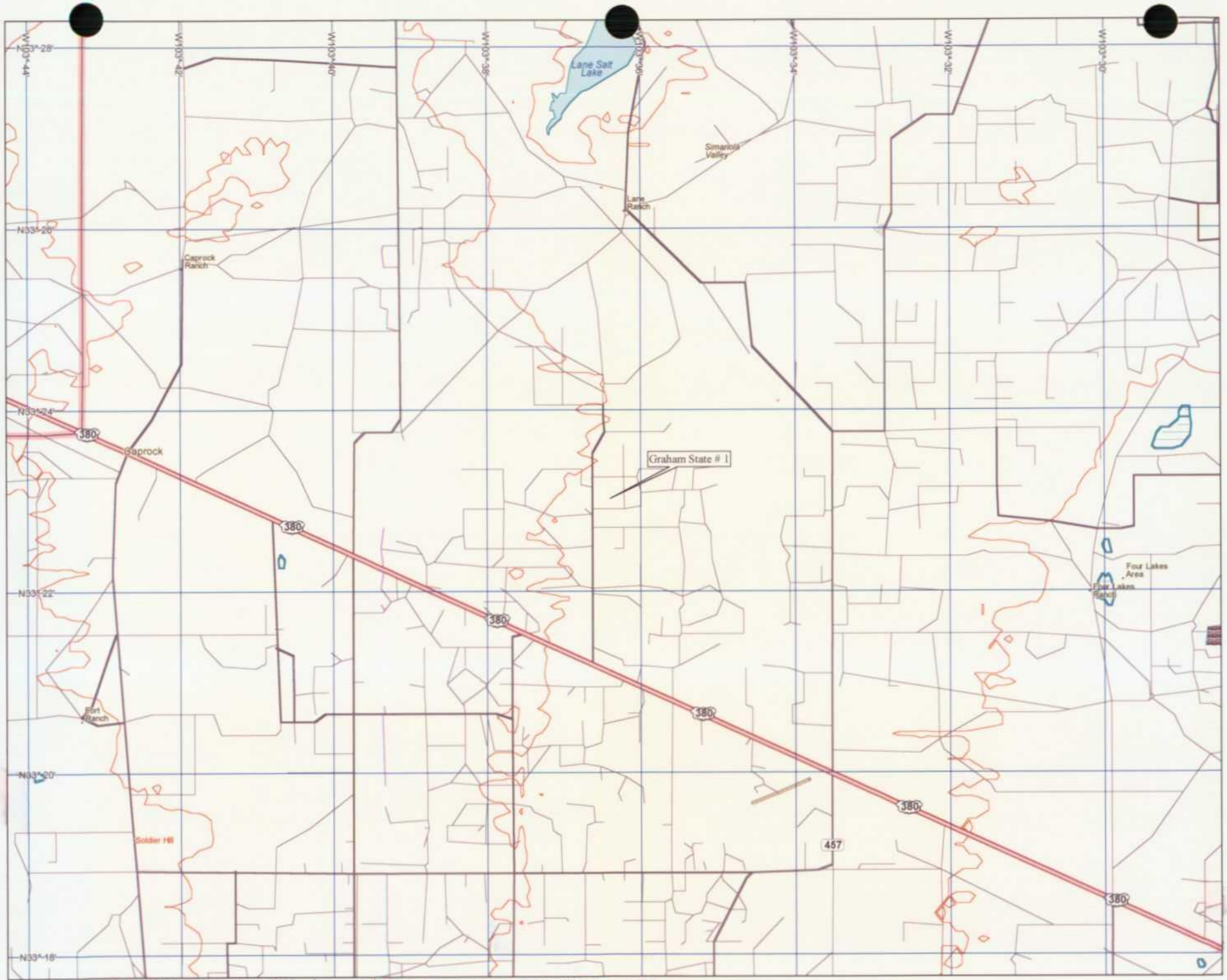
Site Profile

Location
The site is located approximately 14 miles northwest of Tatum, New Mexico. It may be reached by unimproved lease roads going north from Hwy. 380.

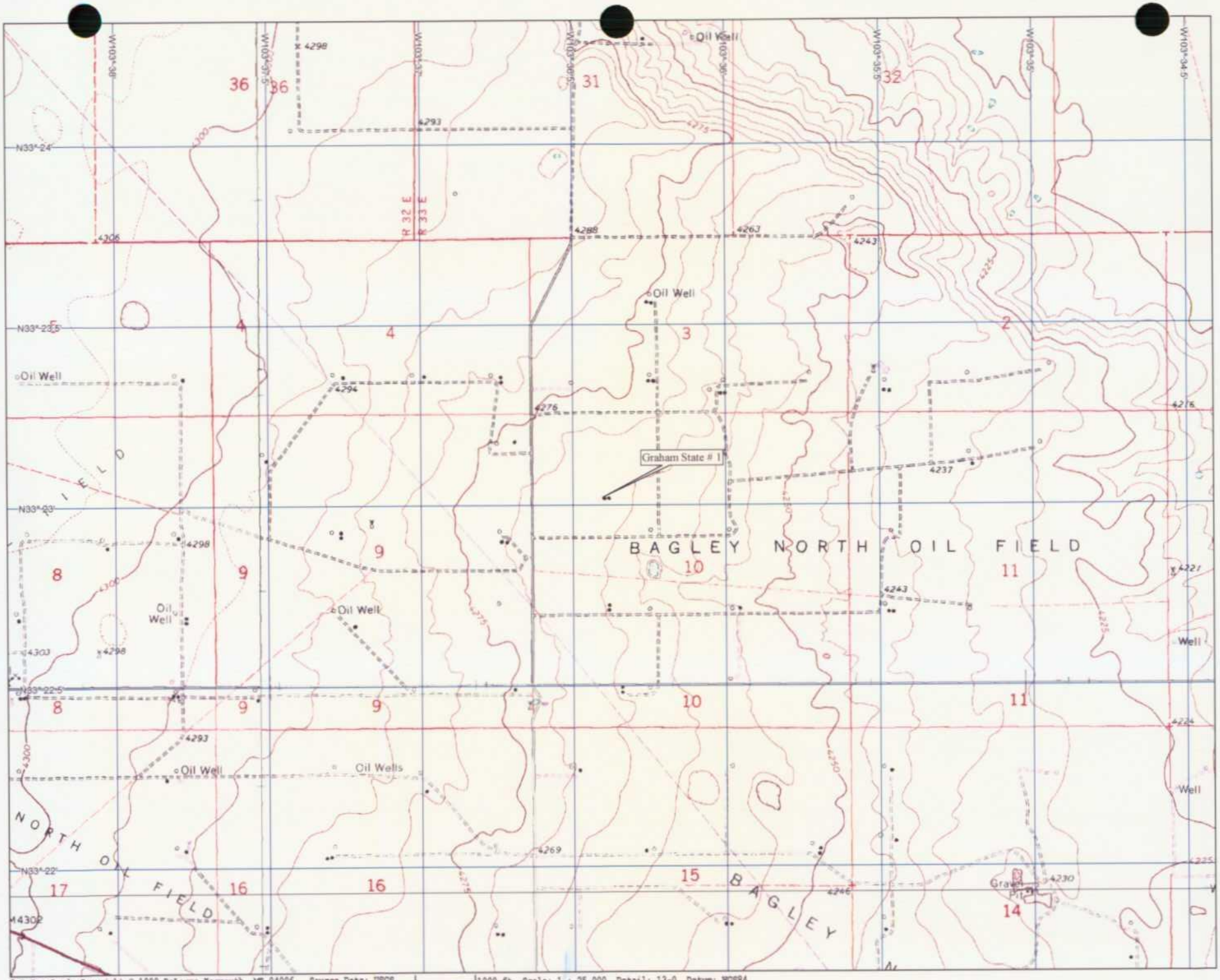
Topography
The surrounding topography is unremarkable. The elevation tends to decline in an easterly and southern direction with no significant deviations to the mean. There are no surface streams or ponds within five miles of the location.

Land Use
The primary land use for the surrounding area is petroleum extraction. Secondary usage is the grazing of cattle. There are no agricultural or recreational areas within five miles of the facility.

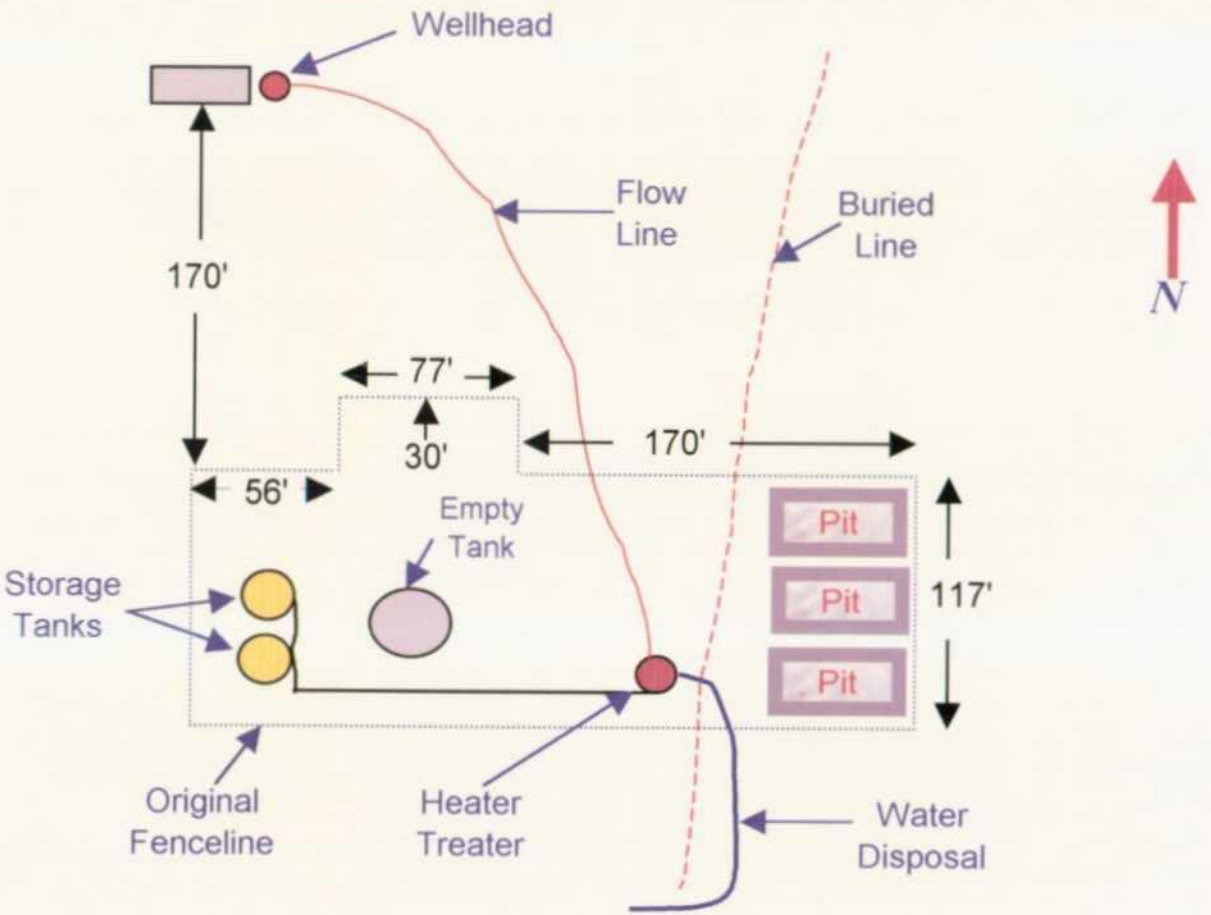
Site Description
The pit network consists of three interconnected unlined surface impoundments used for purposes of emergency overflow from a production facility located immediately west of the pits. Each impoundment is bermed with fill dirt raising the lip of the pits to a point approximately 2' above the surrounding elevations. The entire complex is surrounded with a four string barbed wire fence.

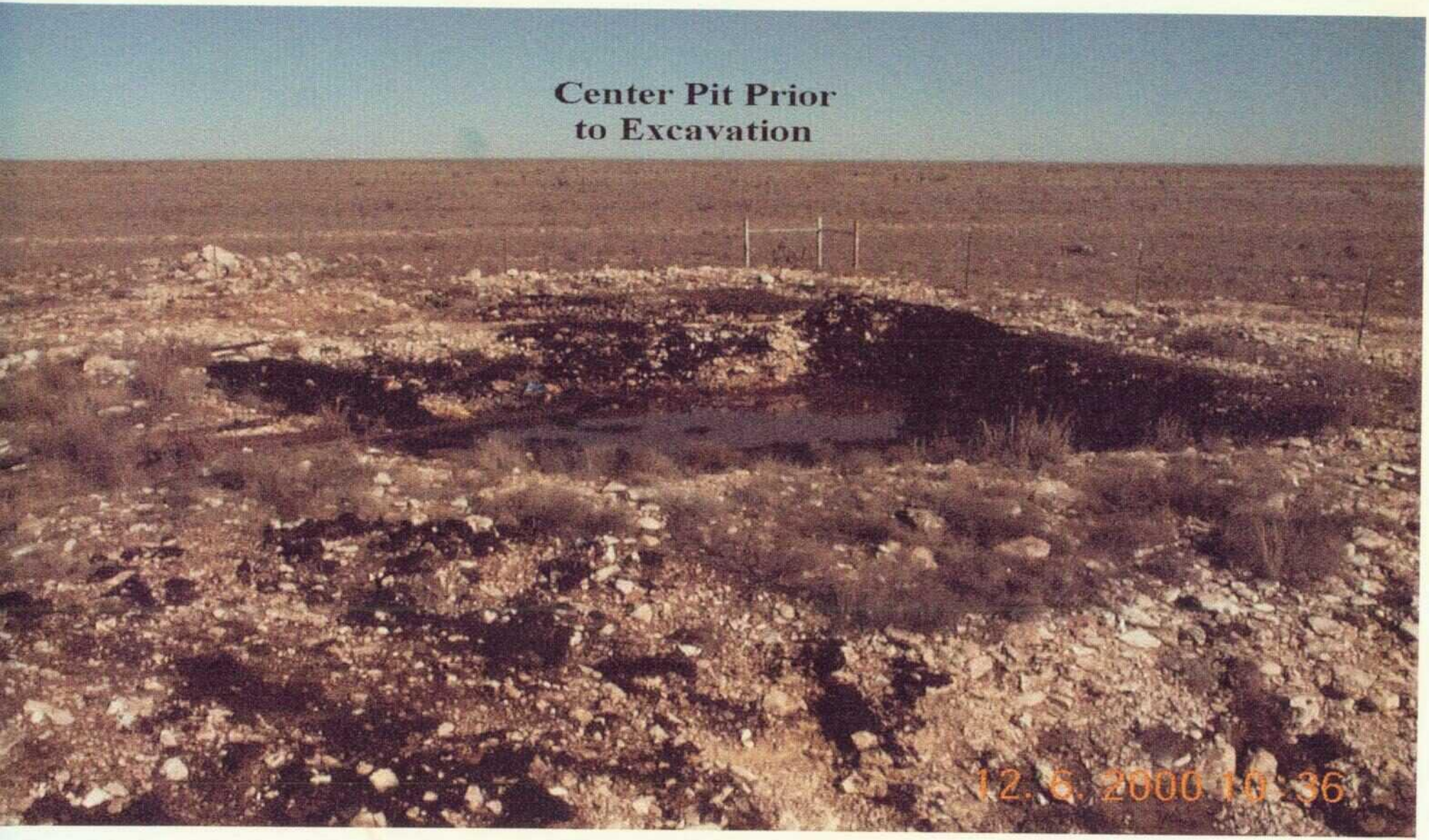


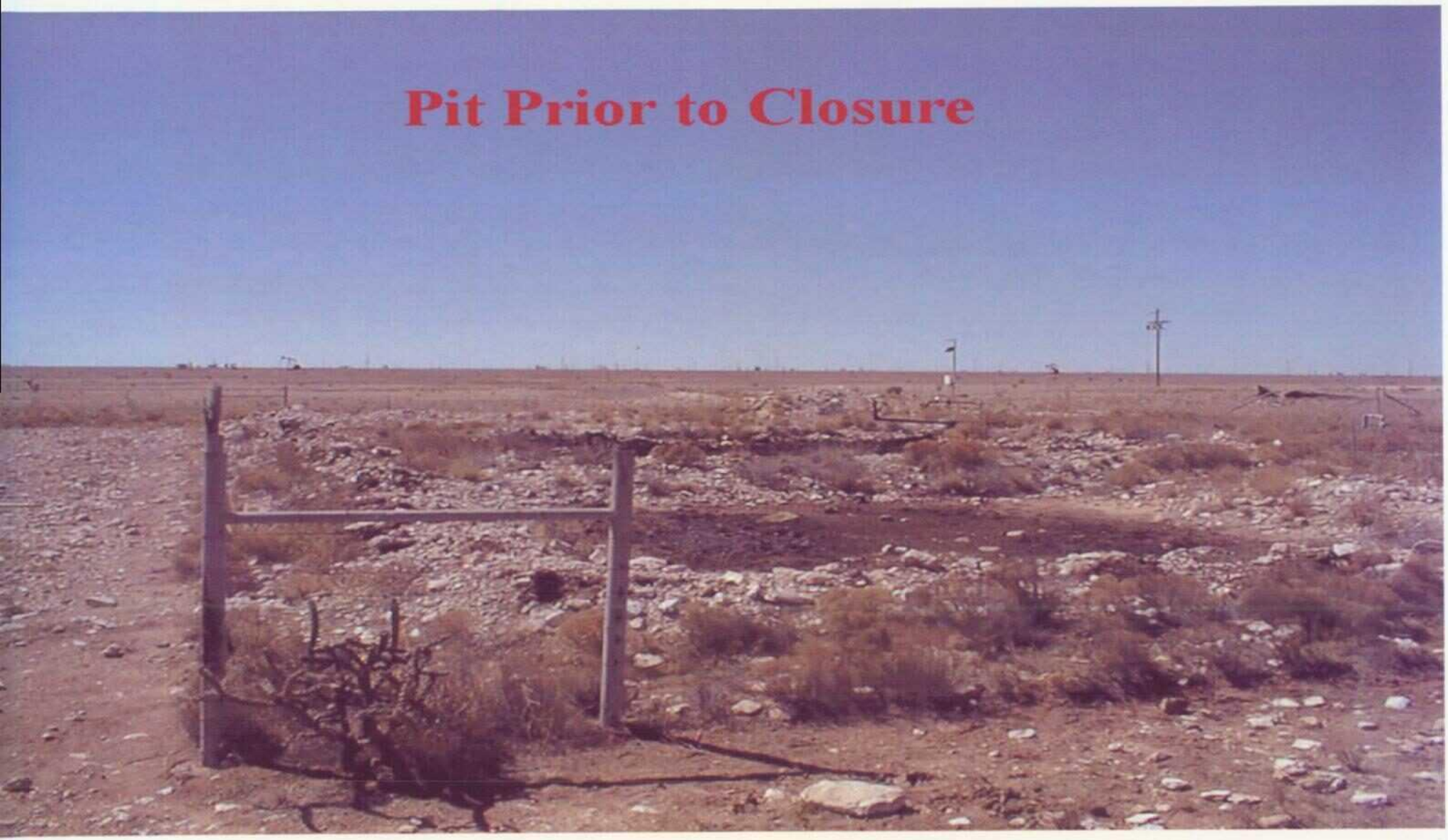
4000 ft Scale: 1 : 100,000 Detail: 11-0 Datum: WGS84

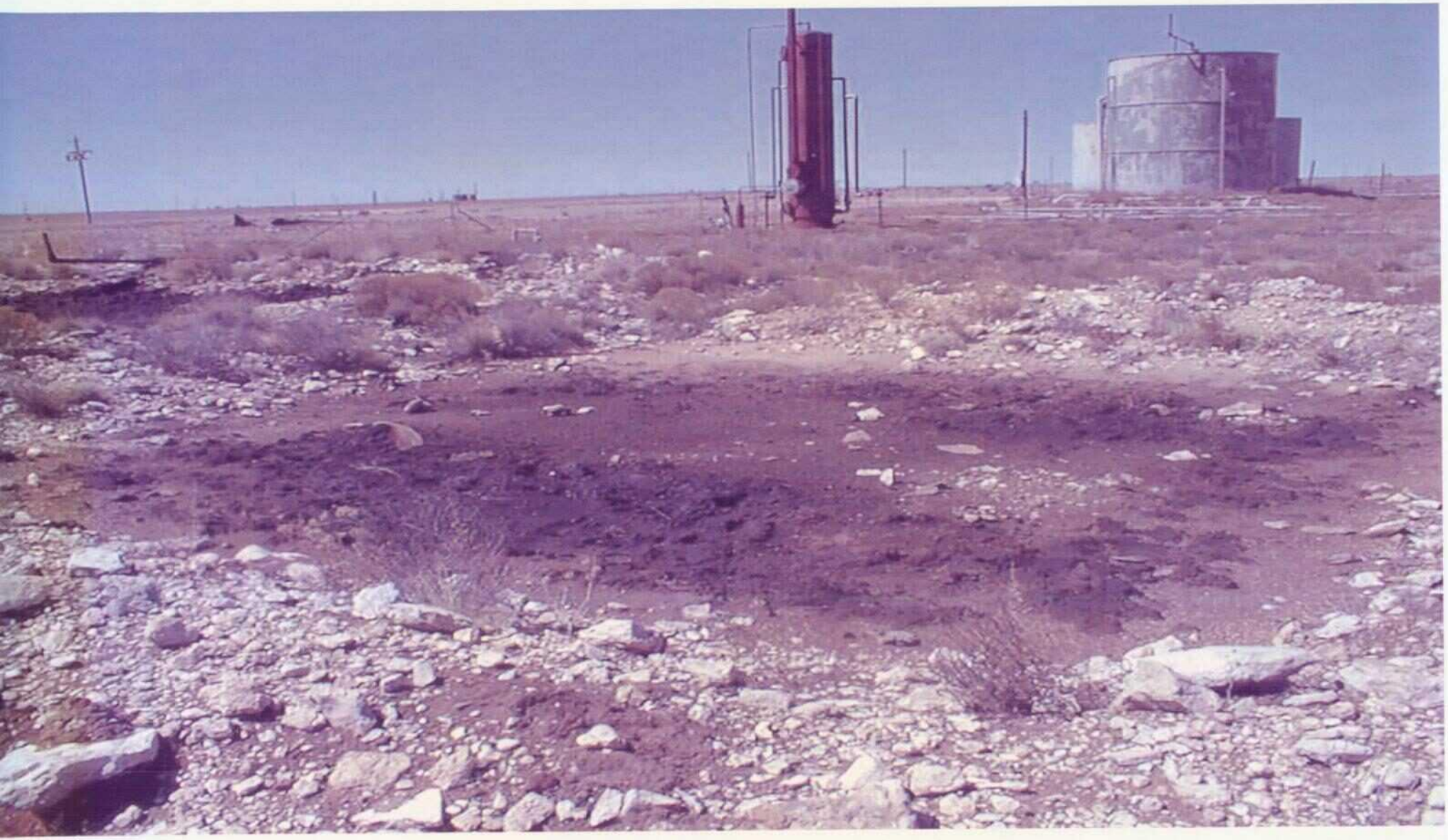

Graham State # 1
BAGLEY NORTH OIL FIELD
NORTH OIL FIELD
BAGLEY
Oil Well
Oil Wells
Well
N33°-24'
N33°-23'
N33°-22'
N33°-22'-5"
W103°-36'
W103°-35'-5"
W103°-35'
W103°-34'-5"
R 32 E
R 33 E
36
31
32
5
4
3
2
8
9
10
11
17
16
15
14
3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS
1000 ft Scale: 1 : 25,000 Detail: 13-0 Datum: WGS84

George O'Brien Oil Company
Graham State # 1
Site Layout

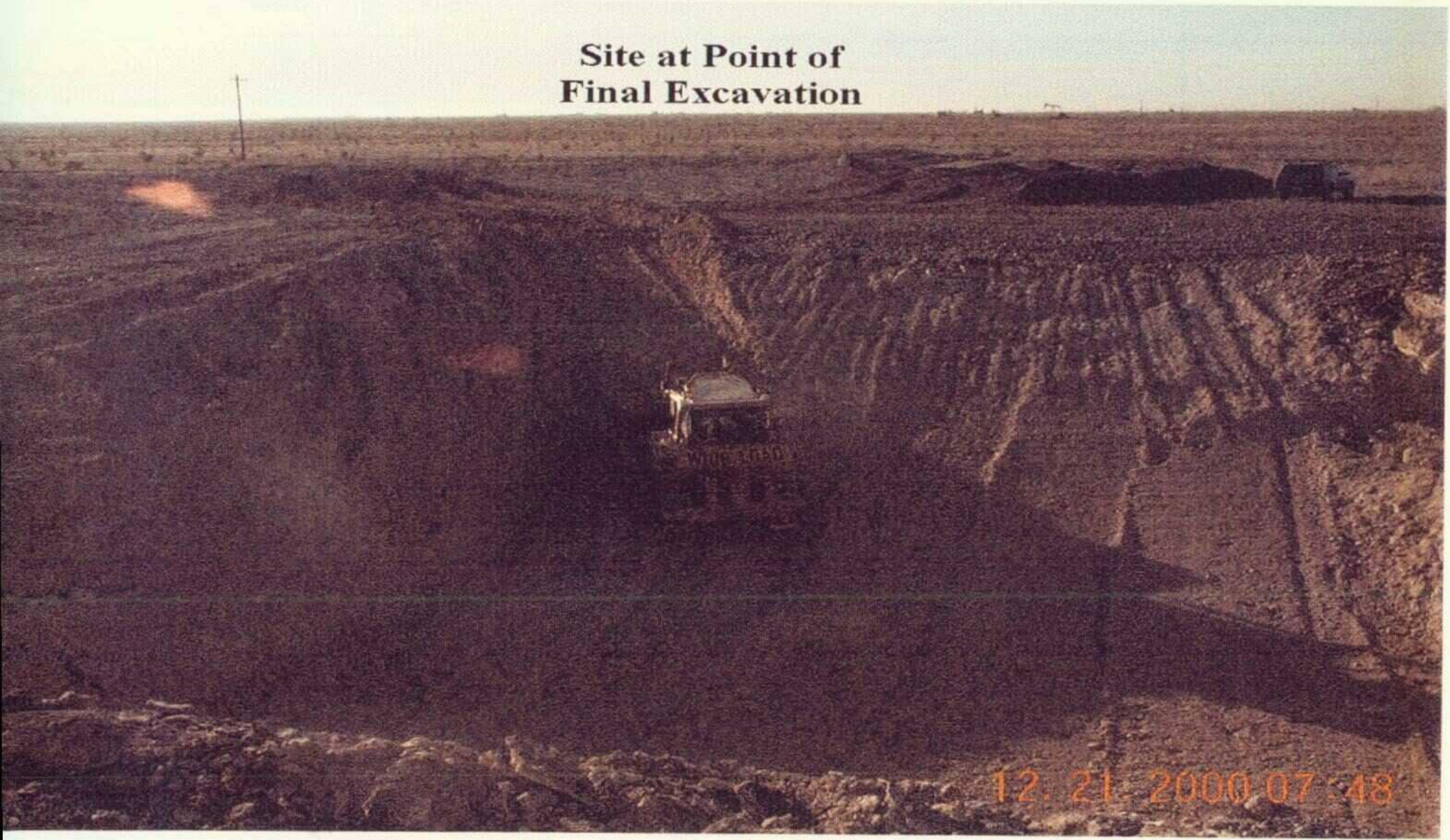



Center Pit Prior
to Excavation
12. 6. 2000 10:36


Pit Prior to Closure

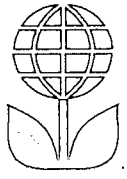


Site at Point of Final Excavation



Liner Compaction Detail

1-22-01 Site at Final Contour



Protocol

This section contains a copy of PR-58A submitted to the NMOCD on November 17, 2000 and approved by Donna Williams on December 4, 2000.

PR-58A

Remediation Protocol
George O'Brien Oil Company
Graham State # 1

1.0 Purpose

This protocol is to provide a detailed outline of the steps to be employed in the remediation of a pit area located west of Tatum, New Mexico.

2.0 Scope

This protocol is site specific for the George O'Brien remediation project.

3.0 Preliminary

Prior to any field operations, Whole Earth Environmental shall conduct the following activities:

3.1 Client Review

3.1.1 Whole Earth shall meet with cognizant personnel within George O'Brien to review this protocol and make any requested modifications or alterations.

3.1.2 Changes to this protocol will be documented and submitted for final review by George O'Brien prior to the initiation of actual field work.

4.0 Safety

4.1 Prior to work on the site, Whole Earth shall obtain the location and phone numbers of the nearest emergency medical treatment facility. We will review all safety related issues with the appropriate George O'Brien personnel, sub-contractors and exchange phone numbers.

4.2 A tailgate safety meeting shall be held and documented each day. All sub-contractors must attend and sign the daily log-in sheet.

4.3 Anyone allowed on to location must be wearing sleeved shirts, steel toed boots, and long pants. Each vehicle must be equipped with two way communication capabilities.

4.4 Prior to any excavation, New Mexico One Call will be notified. The One Call notification number will be included within the closure report. If lines are discovered within the area to be excavated they shall be marked with pin flags on either side of the line at maximum five foot intervals.

5.0 Remediation Procedure

5.1 All soils containing a TPH concentration >100 ppm, and all soils containing a benzene concentration >10ppm or a total BTEX concentration >50ppm will be excavated and placed immediately adjacent to the excavation. The side walls and bottom of the excavation will be field tested for TPH and BTEX concentrations in accordance with WEQP-06 and WEQP-19.

5.2 The Hobbs branch of the OCD will be notified to witness the final confirmation sampling of the side walls and bottom of the excavation. Samples will be collected in accordance with WEQP-77 and analyzed for TPH and BTEX.

5.3 The excavated soils will be mixed and blended with sub-strait materials to achieve a maximum concentration of 1,000 ppm TPH, 10 ppm benzene and 50 ppm total BTEX concentration. A confirmation composite sample will be collected and analyzed in accordance with 7.1 of this protocol.

6.0 Clay Liner

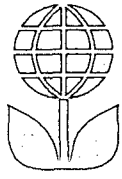
6.1 Upon approval by the NMOCD, Whole Earth will install a clay liner in the bottom of the excavation to a minimum depth of 24" and compacted to 100% density.

7.0 Closure Report

7.1 At the conclusion of the project, Whole Earth shall prepare a closure report which contains the following minimum information:

- Photographs of the location prior to remediation
- Photographs of the location at time of final closure
- Plat map showing sampling locations
- All pre-closure contaminant concentrations
- Contaminant concentrations at the conclusion of the project
- Copies of this protocol and all testing procedures
- Copies of each days tailgate safety meeting
- Copies of daily calibration logs for each instrument
- Independent split sample laboratory analyses

- Clay proctor certificate
- Clay density test result



Procedures

This section contains copies of the field testing and laboratory sample collection procedures employed on this project.

QP-06 Rev. C

WHOLE EARTH ENVIRONMENTAL
QUALITY PROCEDURE

Procedure for Conducting Field TPH Analysis

Completed By:	Approved By:	Effective Date: 02/15/97

1.0 Purpose

To define the procedure to be used in conducting total percentage hydrocarbon testing in accordance with EPA Method 418.1 (modified) using the "MEGA" TPH Analyzer.

2.0 Scope

This procedure is to be used for field testing and on site remediation information.

3.0 Procedure

3.1 The G.A.C. "MEGA" TPH analyzer is an instrument that measures concentrations of aliphatic hydrocarbons by means of infra-red spectrometry. It is manufactured to our specifications and can accurately measure concentrations from two parts per million through 100,000 parts per million. The unit is factory calibrated however minor calibration adjustments may be made in the field. Quality Procedure 25 defines the field calibration methods to be employed.

3.2 Prior to taking the machine into the field, insert a 500 ppm and 5,000 ppm calibration standard into the sample port of the machine. Zero out the Range dial until the instrument records the exact standard reading.

3.3 Once in the field, insert a large and small cuvette filled with clean Freon 113 into the sample port of the machine. Use the range dial to zero in the reading. If the machine does not zero, do not attempt to adjust the span dial. Immediately implement Quality Procedure 25.

3.4 Place a 100 g. weight standard on the field scale to insure accuracy. Zero out the scale as necessary.

3.5 Tare a clean 100 ml. sample vial with the Teflon cap removed. Add 10 g. (+/- .01 g), of sample soil into the vial taking care to remove rocks or vegetable matter from the sample to be tested. If the sample is wet, add up to 5 g. silica gel or anhydrous sodium sulfate to the sample after weighing.

3.6 Dispense 10 ml. Freon 113 into the sample vial.

3.7 Cap the vial and shake for five minutes.

3.8 Carefully decant the liquid contents of the vial into a filter/desiccant cartridge and affix the cartridge cap. Recap the sample vial and set aside.

3.9 Insert the metal tip of the pressure syringe into the cap opening and slowly pressurize. WARNING: APPLY ONLY ENOUGH PRESSURE ON THE SYRINGE TO EFFECT FLOW THROUGH THE FILTERS. TOO MUCH PRESSURE MAY CAUSE THE CAP TO SEPARATE FROM THE BODY OF THE CARTRIDGE. Once flow is established through the cartridge direct the flow into the 5 cm. cuvette until the cuvette is full. Reverse the pressure on the syringe and remove the syringe tip from the cartridge cap. Set the cartridge aside in vertical position.

3.10 The cuvette has two clear and two frosted sides. Hold the cuvette by the frosted sides and carefully insert into the sample port of the machine. Read the right hand digital read-out of the instrument. If the reading is less than 1,000 ppm. the results shall be recorded in the field Soil Analysis Report. If the result is higher than 1,000 ppm, continue with the dilution procedure.

4.0 Dilution Procedure

4.1 When initial readings are greater than 1,000 ppm using the 5 cm. cuvette, pour the contents of the 5 cm. cuvette into a 1 cm. cuvette. Insert the 1. cm cuvette into the metal holder and insert into the test port of the instrument.

4.1 Read the left hand digital read-out of the machine. If the results are less than 10,000 ppm, record the results into the field Soil Analysis Report. If greater than 10,000 ppm, continue the dilution process. Concentrations >10,000 ppm are to be used for field screen purposes only.

4.2 Pour the contents of the small cuvette into a graduated glass pipette. Add 10 ml. pure Freon 113 into the pipette. Shake the contents and pour into the 1cm. cuvette. Repeat step 4.2. adding two zeros to the end of the displayed number. If the reported result is greater than 100,000 ppm. the accuracy of further readings through additional dilutions is extremely questionable. Do not use for reporting purposes.

4.4 Pour all sample Freon into the recycling container.

5.0 Split Samples

5.1 Each tenth test sample shall be a split sample. Decant approximately one half of the extraction solvent through a filter cartridge and insert into the instrument to obtain a concentration reading. Clean and rinse the cuvette and decant the remainder of the fluid to obtain a second concentration reading from the same sample. If the second reading varies by more than 1% from the original, it will be necessary to completely recalibrate the instrument.

QP-77

WHOLE EARTH ENVIRONMENTAL
QUALITY PROCEDURE

Procedure for Obtaining Soil Samples for Transportation to a Laboratory

Completed By: Approved By: Effective Date: / /

1.0 Purpose

This procedure outlines the methods to be employed when obtaining soil samples to be taken to a laboratory for analysis.

2.0 Scope

This procedure is to be used when collecting soil samples intended for ultimate transfer to a testing laboratory.

3.0 Preliminary

3.1 Obtain sterile sampling containers from the testing laboratory designated to conduct analyses of the soil. The shipment should include a Certificate of Compliance from the manufacturer of the collection bottle or vial and a Serial Number for the lot of containers. Retain this Certificate for future documentation purposes.

3.2 If collecting TPH, BTEX, RCRA 8 metals, cation / anions or O&G, the sample jar may be a clear 4 oz. container with Teflon lid. If collecting PAH's, use an amber 4 oz. container with Teflon lid.

4.0 Chain of Custody

4.1 Prepare a Sample Plan. The plan will list the number, location and designation of each planned sample and the individual tests to be performed on the sample. The sampler will check the list against the available inventory of appropriate sample collection bottles to insure against shortage.

4.2 Transfer the data to the Laboratory Chain of Custody Form. Complete all sections of the form except those that relate to the time of delivery of the samples to the laboratory.

4.3 Pre-label the sample collection jars. Include all requested information except time of collection. (Use a fine point Sharpie to insure that the ink remains on the label). Affix the labels to the jars.

5.0 Sampling Procedure

5.1 Go to the sampling point with the sample container. If not analyzing for ions or metals, use a trowel to obtain the soil. Do not touch the soil with your bare hands. Use new latex gloves with each sample to help minimize any cross-contamination.

5.2 Pack the soil tightly into the container leaving the top slightly domed. Screw the lid down tightly. Enter the time of collection onto the sample collection jar label.

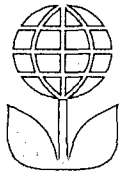
5.3 Place the sample directly on ice for transport to the laboratory.

5.4 Complete the Chain of Custody form to include the collection times for each sample. Deliver all samples to the laboratory.

6.0 Documentation

6.1 The testing laboratory shall provide the following minimum information:

A. Client, Project and sample name.
B. Signed copy of the original Chain of Custody Form including data on the time the sample was received by the lab.
C. Results of the requested analyses
D. Test Methods employed
E. Quality Control methods and results



Laboratory Analytical Results

This section contains copies of the chain of custody and laboratory analytical results for the excavation and remediation portion of the project. The section additionally contains copies of the laboratory proctor and field density tests for the clay liner.

REPORT OF MOISTURE FIELD DENSITY TESTS

Smith Engineering Company
A Full-Service Engineering Company

PROJECT: *OILFIELD PIT LINER*

LAB NO: *300915*

CLIENT: *GANDY CORP*

TESTED BY: *SAY*

CONTRACTOR: *GANDY CORP*
MORLY & GANDY LAND FARM

DATE TESTED: *01/08/01*

MATERIAL: *NATURAL GROUND ON SITE (LINER, CLAY MATERIAL)*

TEST NUMBER	LOCATION OF TEST	PERCENT MOISTURE	DRY DENSITY LBS/CU FT	PERCENT PROCTOR	REQUIRED COMPACTION
1	NW CORNER, 1STLIFT	14.7	115.0	101%	95%
2	SW CORNER, 1ST LIFT	15.0	115.3	102%	95%
3	SE CORNER, 1ST LIFT	14.9	116.3	102%	95%
4	NE CORNER, 1ST LIFT	15.2	113.6	100%	95%
5	NW CORNER, FINAL LIFT	15.8	115.7	102%	95%
6	SW CORNER, FINAL LIFT	15.6	115.8	102%	95%
7	SE CORNER, FINAL LIFT	15.4	114.9	101%	95%
8	NE CORNER, FINAL LIFT	15.1	115.7	102%	95%

REMARKS:

TEST METHOD: *ASTM-D-2922, bs*

OPTIMUM MOISTURE: *14.5*

OPTIMUM DENSITY: *113.5*

COPIES TO: *GANDY CORP*

THOMAS E. DICK
STATE OF
NO. 6136
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

THOMAS E. DICK, P.E.
N.M. LICENSE NO. 6136

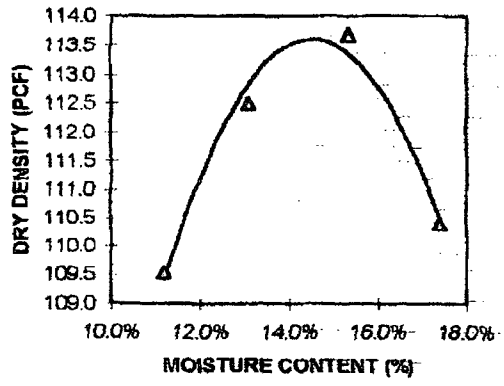
Smith Engineering Company
A Full-Service Engineering Company

SOIL REPORT FORM

PROJECT	OILFIELD PIT LINER	LAB NO.	300915		
CLIENT	GANDY	SAMPLE NO.	J001127		
CONTRACTOR	GANDY	SAMPLED BY	CLIENT	DATE	12/22/00
A SAMPLE OF	NATURAL GROUND	TESTED BY	DLG	DATE	12/29/00
LOCATION	ON SITE				

TEST METHOD - *ASTM D-698 A*

MOISTURE-DENSITY CURVE



MAX. DRY DENSITY 113.5 OPTIMUM MOISTURE 14.5%

CORRECTED FOR OVERSIZE FRACTION: (ASTM D4718)

MODIFIED M.D. NT MODIFIED O.M. NT

ATTERBERG LIMITS *(ASTM D4318)*

LIQUID LIMIT NT PLASTICITY INDEX NT

CLASSIFICATION *(ASTM D2487)*

UNIFIED CLASSIFICATION:

REMARKS:

COPIES TO: ~~LA FARGE~~
Gandy Corp.

AGGREGATE SIEVE ANALYSIS
ASTM C136

SIEVE SIZE (U.S.B.S.)	CUMULATIVE % PASSING	SPECIFICATION LIMITS
2"	NT	
1 1/2"	NT	
1"	NT	
3/4"	NT	
1/2"	NT	
3/8"	NT	
No. 4	NT	
No. 10	NT	
No. 40	NT	
No. 80	NT	
No. 200	NT	

% GRAVEL	NT
%SAND	NT
%SILT AND CLAY	NT

Thomas E. Dick P.E.
N.M. License No. 6136

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL
ATTN: MR. ELLIOT WERNER
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

Sample Type: Soil
Sample Condition: Intact/Iced/ 3.5 deg C
Project #: None Given
Project Name: George O'Brien
Project Location: Tatum, N.M.

Sampling Date: See Below
Receiving Date: 01/24/01
Analysis Date: 01/24/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg	SAMPLE DATE
36790	Lift 1	<10	88	01/21/01
36791	Lift 2	<10	86	01/21/01
36792	Lift 3	11	105	01/21/01
36793	Lift 4	<10	79	01/21/01
36794	Lift 5	<10	60	01/22/01
36795	Lift 6	<10	72	01/22/01
36796	Lift 7	<10	86	01/22/01
36797	Lift 8	<10	74	01/22/01
36798	Lift 9	<10	65	01/22/01
36799	Top Composite	<10	<10	01/22/01
	% IA	84	92	
	%EA	95	96	
	BLANK	<10	<10	

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

1-25-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL
ATTN: MR. ELLIOT WERNER
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

Sample Type: Soil
Sample Condition: Intact/ Iced/ 3.5 deg. C
Project #: None Given
Project Name: George O'Brien
Project Location: Tatum, N.M.

Sampling Date: See Below
Receiving Date: 01/24/01
Analysis Date: 01/24/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
36790	Lift 1	<0.025	<0.025	<0.025	<0.025	<0.025	01/21/01
36791	Lift 2	<0.025	<0.025	<0.025	<0.025	<0.025	01/21/01
36792	Lift 3	<0.025	<0.025	<0.025	<0.025	<0.025	01/21/01
36793	Lift 4	<0.025	<0.025	<0.025	<0.025	<0.025	01/21/01
36794	Lift 5	<0.025	<0.025	<0.025	<0.025	<0.025	01/22/01
36795	Lift 6	<0.025	<0.025	<0.025	<0.025	<0.025	01/22/01
36796	Lift 7	<0.025	<0.025	<0.025	<0.025	<0.025	01/22/01
36797	Lift 8	<0.025	<0.025	<0.025	<0.025	<0.025	01/22/01
36798	Lift 9	<0.025	<0.025	<0.025	<0.025	<0.025	01/22/01
36799	Top Composite	<0.025	<0.025	<0.025	<0.025	<0.025	01/22/01
	%IA	99	97	98	93	98	
	%EA	96	97	98	95	98	
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025	

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

1-25-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

Sample Type: Soil
Sample Condition: Intact/ Iced/ 3.5 deg. C
Project #: None Given
Project Name: George O'Brien
Project Location: Tatum, N.M.

Sampling Date: See Below
Receiving Date: 01/24/01
Analysis Date: 01/24/01

ELT#	FIELD CODE	Chloride mg/kg
36790	Lift 1	25
36791	Lift 2	<25
36792	Lift 3	<25
36793	Lift 4	<25
36794	Lift 5	<25
36795	Lift 6	<25
36796	Lift 7	<25
36797	Lift 8	<25
36798	Lift 9	<25
36799	Top Composite	25

QUALITY CONTROL	4963
TRUE VALUE	5000
% INSTRUMENT ACCURACY	99
BLANK	<10

METHODS: SW 846-9253

R. C. de Tuttle
Raland K. Tuttle

1-25-01
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: E. Weaver
Company Name: Whole Earth Environmental
Company Address: 19606 San Gabriel
City/State/Zip: Houston Tx. 77084
Telephone No: (800) 854-6358 Fax No: (281) 646-8996
Sampler Signature: M. Griffin

Project Name: George O'Brien
Project #:
Project Loc: Tatum, NM.
PO #:

Lab # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify)	Analyze For: TCLP: TDS / Cl / SAR / EC	TPH 418.1	TPH TX 1005/1005	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	Chlorides						RUSH TAT (Pre-Schedule)	Standard TAT
36790	L.ft 1	1-21-01		1	✓									✓					✓				✓	✓							
36791	L.ft 2	1-21-01		1	✓									✓					✓				✓	✓							
36792	L.ft 3	1-21-01		1	✓									✓					✓				✓	✓							
36793	L.ft 4	1-21-01		1	✓									✓					✓				✓	✓							
36794	L.ft 5	1-22-01		1	✓									✓					-				✓	✓							
36795	L.ft 6	1-22-01		1	✓									✓					✓				✓	✓							
36796	L.ft 7	1-22-01		1	✓									✓					✓				✓	✓							
36797	L.ft 8	1-22-01		1	✓									✓					✓				✓	✓							
36798	L.ft 9	1-22-01		1	✓									✓					✓				✓	✓							
36799	Top Composite	1-22-01		1	✓									✓					✓				✓	✓							

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt: 3.5°C
Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
M. Griffin	1-24-01	8:35			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jana McSwain	01-24-01	835

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

SampleType: Soil
Sample Condition: Intact/ Iced/ -0.5 deg. C
Project #: Graham State
Project Name: George O'Brien
Project Location: Tatum, N.M.

Sampling Date: 12/20/00
Receiving Date: 12/21/00
Analysis Date: 12/22/00

ELT#	FIELD CODE	Chloride mg/kg
35546	N. Wall	18
35547	S. Wall	18
35548	W. Wall	<10
35549	E. Wall	<10
35550	Bottom	32

QUALITY CONTROL	5051
TRUE VALUE	5000
% INSTRUMENT ACCURACY	101
BLANK	<10

METHODS: SW 846-9253

Raland K. Tuttle

12-29-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

SampleType: Soil
Sample Condition: Intact/ Iced/ -0.5 deg. C
Project #: Graham State
Project Name: George O'Brien
Project Location: Tatum, N.M.

Sampling Date: 12/20/00
Receiving Date: 12/21/00
Analysis Date: 12/21/00

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
35546	N. Wall	<10	<10
35547	S. Wall	<10	15
35548	W. Wall	<10	12
35549	E. Wall	<10	<10
35550	Bottom	<10	<10
	% IA	101	107
	% EA	94	98
	BLANK	<10	<10

METHODS: SW 846-8015M GRO/DRO

Raland K. Tuttle

12-29-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

Sample Type: Soil
Sample Condition: Intact/ Iced/ -0.5 deg. C
Project #: Graham State
Project Name: George O'Brien
Project Location: Tatum, N.M.

Sampling Date: 12/20/00
Receiving Date: 12/21/00
Analysis Date: 12/28/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
35546	N. Wall	<0.025	<0.025	<0.025	<0.025	<0.025
%IA		99	99	105	104	99
%EA		107	114	107	115	114
BLANK		<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: EPA SW 846-8021B ,5030

R. K. Tuttle

Raland K. Tuttle

12-29-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

WHOLE EARTH ENVIRONMENTAL
ATTN: MR. MIKE GRIFFIN
19606 SAN GABRIEL
HOUSTON, TEXAS 77084
FAX: 281-646-8996

Sample Type: Soil
Sample Condition: Intact/ Iced/ -0.5 deg. C
Project #: Graham State
Project Name: George O'Brien
Project Location: Tatum, N.M.

Sampling Date: 12/20/00
Receiving Date: 12/21/00
Analysis Date: 12/28/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
35547	S. Wall	<0.025	<0.025	<0.025	<0.025	<0.025
35548	W. Wall	<0.025	0.037	<0.025	0.044	<0.025
35549	E. Wall	<0.025	<0.025	<0.025	<0.025	<0.025
35550	Bottom	<0.025	0.044	0.113	0.463	0.333
%IA		99	102	99	99	97
%EA		106	109	105	108	110
BLANK		<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

12-29-00
Date

vironmental Lab of Texas, Inc.

West I-20 East
, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: E. Weaver
Company Name: Whole Earth Environ.
Company Address: 19606 San Gabriel
City/State/Zip: Houston, Tx. 77084
Telephone No: (800) 854-4358 Fax No: (281) 646-8496
Sampler Signature: M. Gill

Project Name: George O'Brien
Project #: Graham State
Project Loc: Tatum, NM
PO #:

(lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TDS / CL / SAR / EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	Chlorides	RUSH TAT (Pre-Schedule)	Standard TAT
5546	N. Wall	12-20-00	11:00	1										✓					✓				✓	✓		
5547	S. Wall		12:00	1										✓					✓				✓	✓		
5548	W. Wall		15:00	1										✓					✓				✓	✓		
5549	E. Wall		15:30	1										✓					✓				✓	✓		
5550	Bottom		16:00	1										✓					✓				✓	✓		

Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt: 3.5°C
Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
M. Gill	12-21-00	0900			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jeanne Mcmurrey	12-21-00	0900