

***Encore 22 State Com #1***

***Located in SECTION 22, T17S, R34E of Lea County, NM***

***GPS Reading of 32°-49'-22"-N & 103°-32'-34"-W***

***API # 30-025-38304***

***Reserve Drilling Pit Closure  
Report***

**RECEIVED**

**MAR 03 2009**

**HOBBSOCD**

***Presented to:***

***Encore Operating LP***

***777 Main St Suite 1400  
Fort Worth, Texas 76105***

***C/O SB Oilfield Service  
213 S Mesa  
Carlsbad, NM 88220***

***Prepared by:***

***Phoenix Environmental, LLC.***

***P.O. Box 1856  
Hobbs, New Mexico 88240***



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### **IMPORTANT NOTICE:**

Phoenix Environmental, LLC., with offices at 2113 French Drive, Hobbs, New Mexico 88241 (the Company), has prepared this project report for remediation of Encore 22 State Com #1, to the best of its ability. No warranty, expressed or implied, is made or intended. The report was prepared for Encore Operating LP, with offices at 777 Main St Suite 1400, Fort Worth, Texas 76105, and (the Client). All information disclosed in this plan is for internal purposes only and is considered confidential. By accepting this document, the recipient agrees to keep confidential the information contained herein. The recipient further agrees not to copy, reproduce or distribute to any third party this project plan in whole or in part, without express written permission from the Company or Client.





# ***SECTION I***

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  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.  
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

- Type of action: ☐ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Modification to an existing permit  
☒ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

*Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request*

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances

1. Operator: Encore Operating LP OGRID #: \_\_\_\_\_  
Address: 777 main st suite 1400 fort worth Tx. 76105  
Facility or well name: Encore 22 st com #1  
API Number: 30-025-38304 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr H Section 22 Township 17s Range 34e County: Leas Co. NM.  
Center of Proposed Design: Latitude 32°49'22" Longitude 103°32'34" NAD: ☐ 1927 ☐ 1983  
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2. ☒ Pit: Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☒ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☒ Lined ☐ Unlined Liner type: Thickness 12 mil ☐ LLDPE ☒ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☐ String-Reinforced  
Liner Seams: ☐ Welded ☒ Factory ☐ Other \_\_\_\_\_ Volume: 3000 bbl Dimensions: L 120 x W 120 x D 6'

3. ☐ Closed-loop System: Subsection H of 19.15.17.11 NMAC  
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_

4. ☐ Below-grade tank: Subsection I of 19.15.17.11 NMAC  
Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_  
Tank Construction material: \_\_\_\_\_  
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

5. ☐ Alternative Method:  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

6. **Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)

☒ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify \_\_\_\_\_

7. **Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

☐ Screen ☐ Netting ☐ Other \_\_\_\_\_

☐ Monthly inspections (If netting or screening is not physically feasible)

8. **Signs:** Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19.15.3.103 NMAC

9. **Administrative Approvals and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

*Please check a box if one or more of the following is requested, if not leave blank:*

☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10. **Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

**Instructions:** The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☒ No

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (*Applies to temporary, emergency, or cavitation pits and below-grade tanks*)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No  
☒ NA

Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (*Applies to permanent pits*)

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No  
☒ NA

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☒ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☒ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☒ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☒ No

11. **Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☒ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: CEI R916

12. **Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_

☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13. **Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC  
*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14. **Proposed Closure:** 19.15.17.13 NMAC  
*Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.*

Type: ☒ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System  
☐ Alternative

Proposed Closure Method: ☒ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)  
☐ In-place Burial ☐ On-site Trench Burial  
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15. **Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)*Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.*

Disposal Facility Name: \_\_\_\_\_

Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_

Disposal Facility Permit Number: \_\_\_\_\_

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?  
☐ Yes (If yes, please provide the information below) ☐ No*Required for impacted areas which will not be used for future service and operations:*

- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC*Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.*

Ground water is less than 50 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No  
☐ NA

Ground water is between 50 and 100 feet below the bottom of the buried waste

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No  
☐ NA

Ground water is more than 100 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No  
☐ NA

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

18.

**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Bonnie N. HawkinsTitle: AgentSignature: [Signature]

Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_

Telephone: 432-208-1203

20.

**OCD Approval:** ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: [Signature]Approval Date: 9.23.08

Title: \_\_\_\_\_

ENVIRONMENTAL ENGINEER

OCD Permit Number: \_\_\_\_\_

21.

**Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

☐ Closure Completion Date: \_\_\_\_\_

22.

**Closure Method:**

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)  
☐ If different from approved plan, please explain.

23.

**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

*Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*

Disposal Facility Name: \_\_\_\_\_

Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_

Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*

- ☐ Site Reclamation (Photo Documentation)  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique

24.

**Closure Report Attachment Checklist:** *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Proof of Closure Notice (surface owner and division)  
☐ Proof of Deed Notice (required for on-site closure)  
☐ Plot Plan (for on-site closures and temporary pits)  
☐ Confirmation Sampling Analytical Results (if applicable)  
☐ Waste Material Sampling Analytical Results (required for on-site closure)  
☐ Disposal Facility Name and Permit Number  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique  
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude \_\_\_\_\_

Longitude \_\_\_\_\_

NAD. ☐ 1927 ☐ 1983

25.

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Chuck RobertsTitle: Production ForemanSignature: [Signature]Date: 2/26/09e-mail address: croberts@encoreacg.comTelephone: 432-362-2209



September 17, 2008

Encore Operating LP  
777 Main St., Suite 1400  
Fort Worth, Texas 76105

Attn: Mr. Ronnie Hawkins

**RE: Work Plan for the Encore 22 State Com #1 Drilling Pit Located in UL-H,  
Sec 22, T17S and R34E of Lea County, New Mexico API # 30-025-38304**

Dear Mr. Hawkins:

SB Oilfield Services would like to take this time to thank you and Encore Operating LP, for the opportunity to provide our professional services. Please find attached our work plan for the above listed site.

If you have any questions and/or need more data in regards to projects please call at any time. My cell phone is 575-706-5645.

Sincerely,

A handwritten signature in black ink, appearing to read "Cris Busby", with a stylized flourish at the end.

Cris Busby  
Project Manager  
SB Oilfield Services

## Summary/Overview

The Encore 22 State Com #1 drilling pit should be completed and remediated in accordance with the standards of the NMOCD. It is our understanding that any potential contamination from the site was a result of activities associated with the drilling and production of oil and gas.

The potential contaminants of concern are mid to high-level concentrations of drilling mud and cuttings that were left in the pit once drilling operations were completed.

The lands primary use is domestic pasture for ranching and the production of oil and gas.

The ground water depth data available for this area showed the depth to ground water to be in the 126' range BGS.

Pursuant to the standards of the NMOCD, the clean up level for this site will be at <2,500ppm of TPH, <50ppm for BTEX and Chlorides less than <1,000ppm.

The following scope of work was based on data from our site visit and the requirements of the NMOCD for site clean up following the new pit rule 19.15.17 NMAC that started on 6-16-08.

## Scope of Work for Off-Site Disposal

**NOTE:** SB, for the purpose of this work plan, will estimate that there is approximately 3,000cyds of impacted soils at the site that needs to be addressed for site closure.

1. SB will mobilize to the site located northwest of Carlsbad, NM equipment and personnel necessary to start and complete the site remediation as required, getting the site back into compliance with the requirements of subsection G of 19.15.17.13 NMAC.
2. At the site a staging area will be set up for site control and safety.

3. The impacted soils will be excavated, stabilized and loaded into trucks for off-site disposal.
4. Impacted soils at the site will then be transported to a NMOCD approved disposal facility for disposal (CRI Permit #R9166).
5. SB will field screen the site during the excavation, and, once the TPH BTEX and CL has dropped below clean-up requirements, final samples will be taken and sent to a third party lab for analysis and tested for BTEX 8021 B, TPH 418.1, TPH 8015 GRO/DRO and CL (chlorides) to meet the requirements of subsection D of 19.15.17.13 NMAC.
6. Once all of the remediation criteria have been met for site closure and compliance, the site will be backfilled with clean material from the site and contoured with a crown to prevent the ponding of water to meet the requirements of subsection H of 19.15.17.13 NMAC.
7. The site will be reseeded once backfilling operations have been completed to meet the requirements of subsection I of 19.15.17.13 NMAC.
8. Once all of the closure criteria have been met, a final closure report will be prepared by SB. This report will include a summary of remediation operations, findings on-site and lab analysis, site maps and project photos to meet the requirements of subsection K of 19.15.17.13 NMAC.

If you have any questions and/or need more data in regards to this project please call 575-706-5645 at any time.

Sincerely,

A handwritten signature in black ink, appearing to read "Cris Busby", with a stylized flourish at the end.

Cris Busby  
Project Manager  
SB Oilfield Services



## ***SECTION II***

## **Project Overview**

*SB Oilfield Service. (SB) was contracted for the closure of a reserve-drilling pit on the Encore 22 State Com #1, belonging to Encore Operating LP. The Encore 22 State Com #1 is located in Section 22 T17S R34E. The GPS Reading is 32°49'22"N & 103°32'44"W, with an elevation of 4040 feet above sea level. The land, in and around the site, is primarily used as domestic pasture for ranching and the production of oil and gas. The pit site is located on the north side of the location.*

*The potential contaminates of concern were mid- to high-level concentrations of drill cuttings, and drilling fluids that were left after drilling operations were completed.*

*The ground water depth data available from the State of New Mexico Engineers' office showed the vertical depth to the top of water to be about 126 feet below surface.*

*Pursuant to the NMOCD guidelines for clean up of unlined surface impoundments, the clean up level for this site will be at <2,500 ppm for TPH (Total Petroleum Hydrocarbons) and <50 ppm for BTEX (Benzene, Toluene, Ethylbenzene, and Xylene). The NMOCD has also asked for CL (Chlorides) be returned back as close to background levels as possible or <1,000 ppm.*

## **Findings and Conclusion**

*It appeared that in excess of 4140 cubic yards (cyds) of cuttings, drilling mud, and soil were impacted in the pit area with the dimensions of 120'x120'x6'. . Impacted soils at the site were transported to a NMOCD approved disposal facility for disposal. (Sundance Permit # NM01-003)*

*The bottom of the excavation (approximately 10 feet) was tested for TPH, BTEX & Chlorides to make certain that the target limits had been met prior to backfilling and compaction for closure. The site cleaned up well with vertical depth of impact, listed above at 10 feet and not impacting groundwater. All of the final lab analyses were below the NMOCD guidelines for unlined surface impoundments (refer to attached laboratory reports for actual levels.)*

*The site was backfilled and compacted with clean backfill and contoured with a crown back to grade to prevent ponding on the area. The site was reseeded and should vegetate very well with upcoming rains.*



## **Chronology of Operations**

1. *September 25, 2008 – SB mobilized on-site. The first order on the agenda was a tailgate safety meeting to review any potential safety concerns of the site and to cover the clean- up operations. (Please note that a daily safety meeting is the first order of the day before any work begins on site). New Mexico One Call was notified of the intent to finish the pit closure.*
2. *September 26, 2008 – Crew began excavating impacted soils from the reserve drill pit and loaded the soils into trucks. Trucks hauled 460 cubic yards of drill cuttings off site to CRI (Permit #R9166), a NMOCD disposal facility.*
3. *September 29, 2008– – Crew continued to excavate impacted soils from the reserve drill pit and loaded into trucks. Trucks hauled 600 cubic yards of impacted soil off site for disposal.*
4. *September 30, 2008– Crew continued to excavate impacted soils from the reserve drill pit and loaded into trucks. Trucks hauled 420 cubic yards of impacted soil off site for disposal.*
5. *October 1, 2008 - Crew continued to excavate impacted soils from the reserve drill pit and loaded into trucks. Trucks hauled 500 cubic yards of impacted soil off site for disposal.*
6. *October 2, 2008 - Crew continued to excavate impacted soils from the reserve drill pit and loaded into trucks. Trucks hauled 780 cubic yards of impacted soil off site for disposal.*
7. *October 3, 2008 - Crew continued to excavate impacted soils from the reserve drill pit and loaded into trucks. Trucks hauled 360 cubic yards of impacted soil off site for disposal.*
8. *October 6, 2008 - Crew continued to excavate impacted soils from the reserve drill pit and loaded into trucks. Trucks hauled 840 cubic yards of impacted soil off site for disposal. Crew also hauled 440 cubic yards of caliche from CRI to location and stockpiled for further use on backfilling.*
9. *October 7, 2008 - Crew continued to excavate impacted soils from the reserve drill pit and loaded into trucks. Trucks hauled 120 cubic yards of impacted soil off site for disposal. Crew also hauled 100 cubic yards of caliche from CRI to location and stockpiled for further use on backfilling.*



10. *October 9, 2008 - Crew continued to excavate impacted soils from the reserve drill pit and loaded into trucks. Trucks hauled 60 cubic yards of impacted soil off site for disposal.*
11. *October 29, 2008 – The bottom of the reserve drill pit was cleaned and final samples were taken and sent to a third party laboratory for analysis Chlorides for final verification of the limits met. (Please refer to attached reports, pages 13 through 15 of this report). Crew hauled 528 cubic yards of caliche, which was used for backfilling reserve drilling pit.*
12. *October 30, 2008 - Crew hauled 576 cubic yards of caliche, which was used for backfilling reserve drilling pit.*
13. *October 31, 2008 - Crew hauled 1512 cubic yards of caliche, which was used for backfilling reserve drilling pit.*
14. *November 12, 2008 – Crew finished backfilling reserve drilling pit. Final contouring and compactions was implemented to return the site back to grade. Contouring was completed with a crown to prevent rainwater ponding.*



**Limitations**

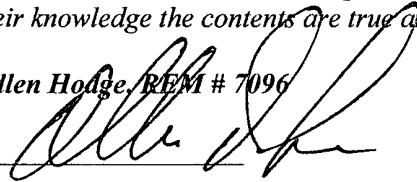
*Phoenix Environmental LLC has prepared this report to the best of its ability. No other warranty expressed, implied or intended is made.*

*This report has been prepared for SB Oilfield Service our client. The information contained in this report including all exhibits and attachments, may not be used by any other party without the express consent from Phoenix Environmental LLC and/or the client.*

**Certification**

*The following Phoenix Environmental LLC personnel have reviewed this report and verify that to the best of their knowledge the contents are true and correct.*

Name: *Allen Hodge, REM # 7096*

Signature: 

Title: *VP Operations*  
*Phoenix Environmental LLC*







## ***SECTION III***

Report Date: October 24, 2008  
API 30-025-38304

Work Order: 8102301  
Encore 22 St. Com. #1

Page Number: 1 of 2  
Sec. 22, T17S-R34E

## Summary Report

Chris Busby  
SB Oil Field Serv.  
P.O. Box 1502  
Carlsbad, NM, 88221-1502

Report Date: October 24, 2008

Work Order: 8102301



Project Location: Sec. 22, T17S-R34E  
Project Name: Encore 22 St. Com. #1  
Project Number: API 30-025-38304

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
177123	1-Southeast 1/4 @ 10'	soil	2008-10-21	10:00	2008-10-22
177124	2-3Northeast 1/4 @ 10'	soil	2008-10-21	10:15	2008-10-22
177125	3-Center @ 10'	soil	2008-10-21	10:30	2008-10-22
177126	4-Northwest 1/4 @ 9'	soil	2008-10-21	10:45	2008-10-22
177127	5-Southwest 1/4 @ 12'	soil	2008-10-21	11:00	2008-10-22
177128	6-Background @ 0-6"	soil	2008-10-21	11:30	2008-10-22

Sample - Field Code	BTEX				MTBE	TPH 418.1	TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	MTBE (mg/Kg)	TRPHC (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
177123 - 1-Southeast 1/4 @ 10'	<0.0100	<0.0100	<0.0100	<0.0100		<10.0	<50.0	<1.00
177124 - 2-3Northeast 1/4 @ 10'	<0.0100	<0.0100	<0.0100	<0.0100		<10.0	<50.0	<1.00
177125 - 3-Center @ 10'	<0.0100	<0.0100	<0.0100	<0.0100		<10.0	<50.0	<1.00
177126 - 4-Northwest 1/4 @ 9'	<0.0100	<0.0100	<0.0100	<0.0100		<10.0	<b>159</b>	<1.00
177127 - 5-Southwest 1/4 @ 12'	<0.0100	<0.0100	<0.0100	<0.0100		<10.0	<50.0	<1.00
177128 - 6-Background @ 0-6"	<0.0100	<0.0100	<0.0100	<0.0100		<10.0	<50.0	<1.00

### Sample: 177123 - 1-Southeast 1/4 @ 10'

Param	Flag	Result	Units	RL
Chloride		42.1	mg/Kg	3.25

### Sample: 177124 - 2-3Northeast 1/4 @ 10'

Param	Flag	Result	Units	RL
Chloride		60.0	mg/Kg	3.25

Report Date: October 24, 2008  
API 30-025-38304

Work Order: 8102301  
Encore 22 St. Com. #1

Page Number: 2 of 2  
Sec. 22, T17S-R34E

**Sample: 177125 - 3-Center @ 10'**

Param	Flag	Result	Units	RL
Chloride		62.0	mg/Kg	3.25

**Sample: 177126 - 4-Northwest 1/4 @ 9'**

Param	Flag	Result	Units	RL
Chloride		44.5	mg/Kg	3.25

**Sample: 177127 - 5-Southwest 1/4 @ 12'**

Param	Flag	Result	Units	RL
Chloride		238	mg/Kg	3.25

**Sample: 177128 - 6-Background @ 0-6"**

Param	Flag	Result	Units	RL
Chloride		<32.5	mg/Kg	3.25

## TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
Fax (806) 794-1298  
1 (800) 378-1296

5002 Basin Street, Suite A1  
Midland, Texas 79703  
Tel (432) 689-6301  
Fax (432) 689-6313

200 East Sunset Rd., Suite E  
El Paso, Texas 79922  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 588-3443

8808 Camp Bowie Blvd West, Suite 180  
Ft Worth, Texas 76116  
Tel (817) 201-5260  
Fax (817) 560-4336

Company Name: S.B. DPL field serv. Phone #: (375) 700-5645  
Address: (Street, City, Zip) P.O. Box 1302 Carlisbad NM 88221 Fax #: (375) 628-0176  
Contact Person: Cris Busby E-mail: crisbusby@gmail.com

Invoice to: Same  
(If different from above)  
Project #: APC# 30-025-38304 Project Name: Encore 22 St com #1  
Project Location (including state): Sec. 22-T17S-R34E Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		MTBE 8021B / 601	BTEX 8021B / 601	TPH 418 1 / TX100	TPH 8015 GRO / T	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 601	GC/MS Semi. Vol. 8270C / 601	PCBs 8082 / 608	Pesticides 8081A / 608	BOD, TSS, pH	Moisture Content	CL chlorides	Turn Around Time	Hold	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE	NONE	DATE	TIME																					
179123	1-South East 1/4 @ 10'	1	42	X							X		10-21-05	10:00	X	X	X	X																		
124	2-North East 1/4 @ 10'	1		X							X			10:15	X	X	X	X																		
125	3-Center @ 10'	1		X							X			10:30	X	X	X	X																		
126	4-North West 1/4 @ 9'	1		X							X			10:45	X	X	X	X																		
127	5-South West 1/4 @ 12'	1		X							X			11:00	X	X	X	X																		
128	6-Back Ground @ 0-6"	1		X							X			11:30	X	X	X	X																		

Relinquished by: [Signature] Company: Phoenix Date: 10-22-05 Time: 4:15

Received by: [Signature] Company: Trace Date: 10/22/05 Time: 4:15 Temp: 39

Relinquished by: [Signature] Company: Phoenix Date: 10-22-05 Time: 4:15

Received by: [Signature] Company: Trace Date: 10/22/05 Time: 4:15 Temp: 39

Relinquished by: [Signature] Company: Phoenix Date: 10-22-05 Time: 4:15

Received by: [Signature] Company: Trace Date: 10/22/05 Time: 4:15 Temp: 39

LAB USE ONLY

Intact: Y / N  
Headspace: Y / N / NA

Log-in-Review [Signature]

REMARKS:

2-DAY RUSH

- ☐ Dry Weight Basis Required  
☐ TRRP Report Required  
☐ Check If Special Reporting Limits Are Needed



## ***SECTION IV***

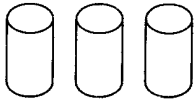
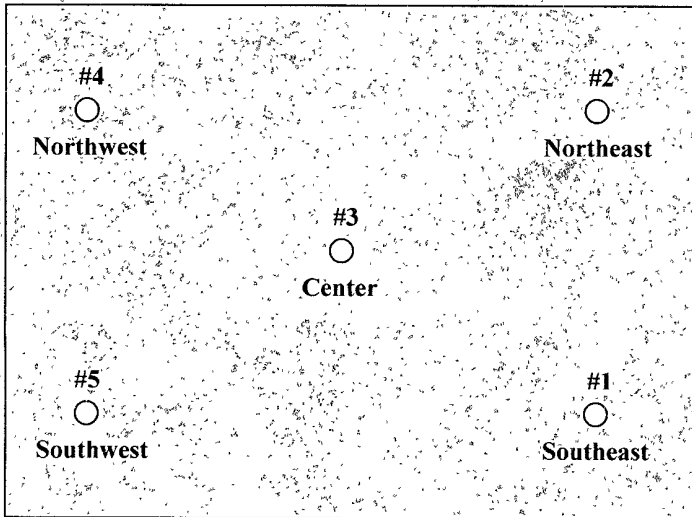
Encore Operating LP

Encore 22 State Com #1

UL-L SEC-1 - T16S - R29E

API # 30 - 015 - 35933

N32° - 56' - 55.96" - W104° - 02' - 08.74"



Location

1. N32° 49' 23.7" - W103° 32' 35.4"

2. N32° 49' 24.5" - W103° 32' 35.6"

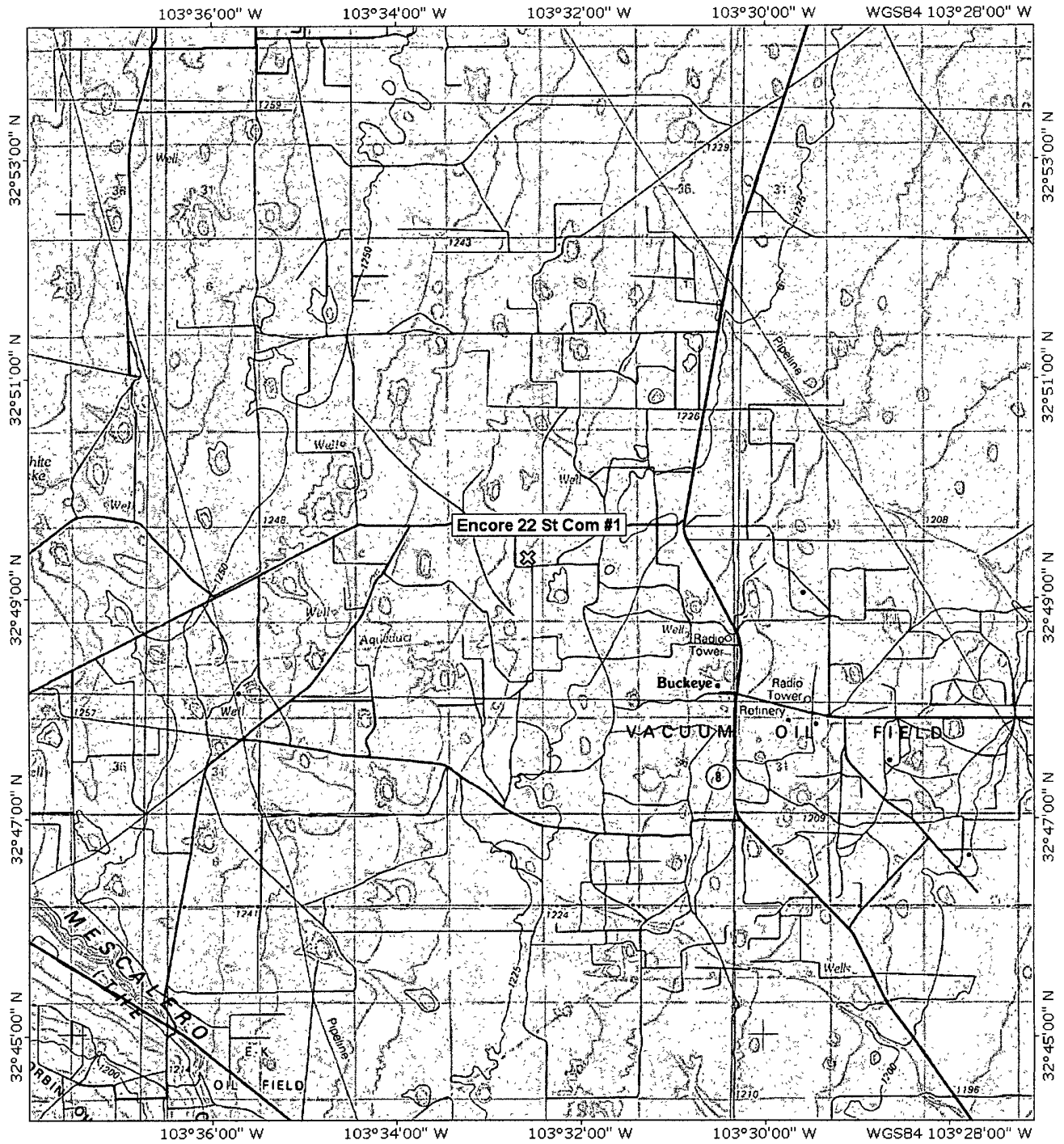
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4. N32° 49' 24.4" - W103° 32' 36.3"

5. N32° 49' 23.6" - W103° 32' 36.7"

6. N32° 49' 24.2" - W103° 32' 33.2"

TOPO! map printed on 02/18/09 from "Untitled.tpo"

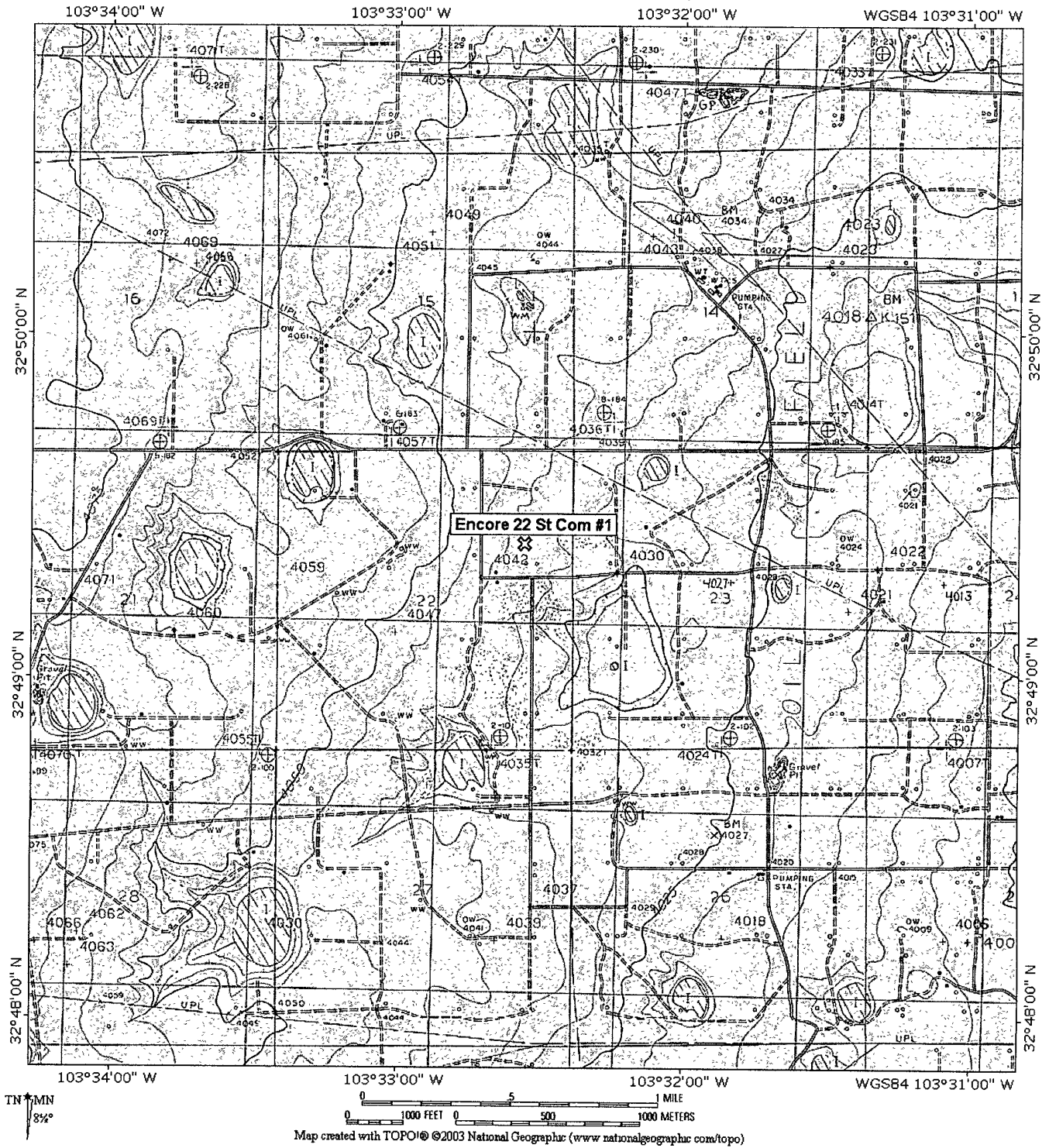


TN MN  
8 1/2°

0 0.5 1 1.5 2 2.5 3 3.5 miles  
0 1 2 3 4 5 km  
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)



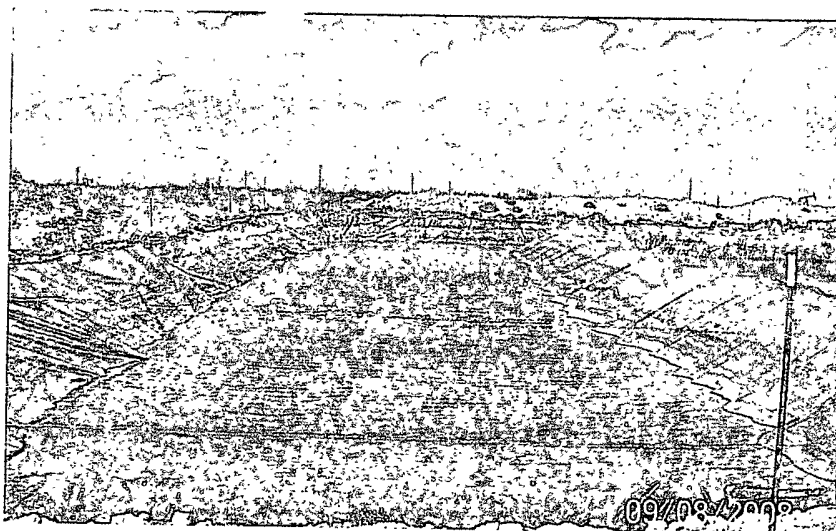
TOPO! map printed on 02/18/09 from "Untitled.tpo"



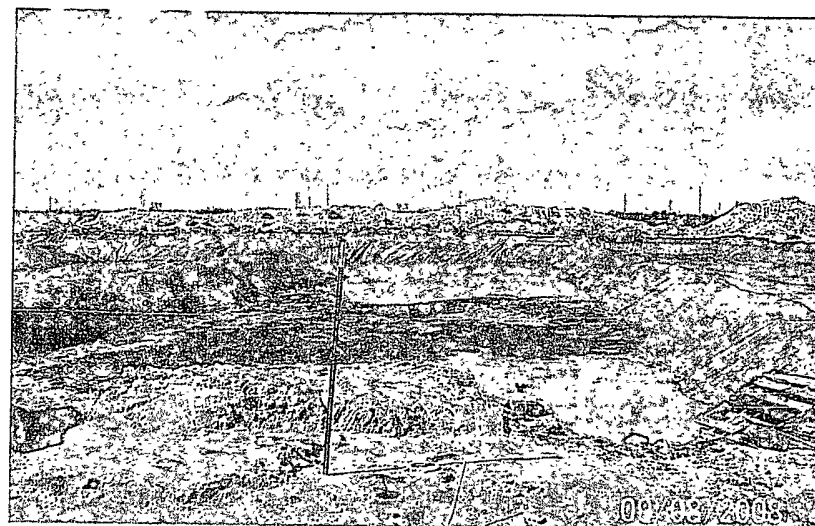




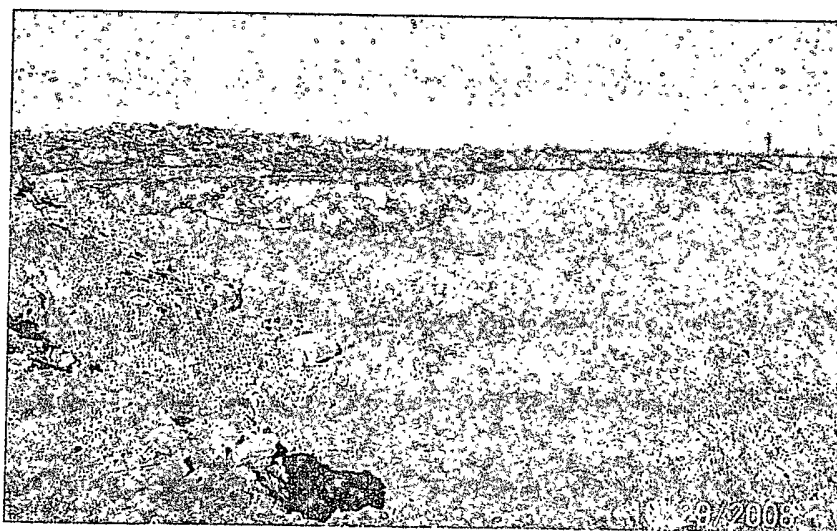
## ***SECTION V***



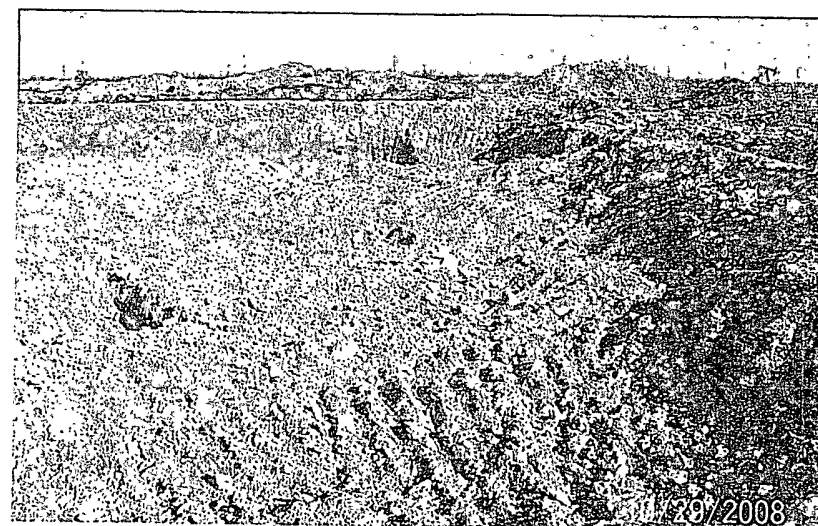
*Photo #1 Beginning View*



*Photo #2 Beginning View*



*Photo #3 Clean Bottoms on Reserve Pit*

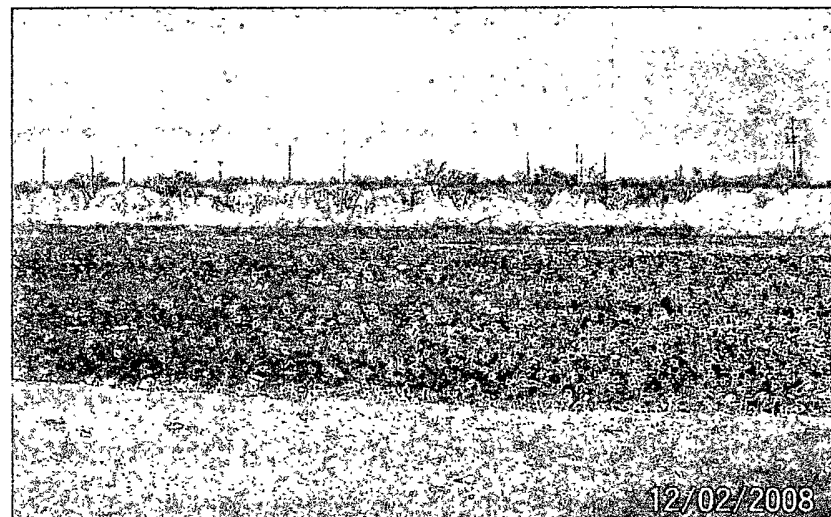


*Photo #4 Clean Bottoms on Reserve Pit*

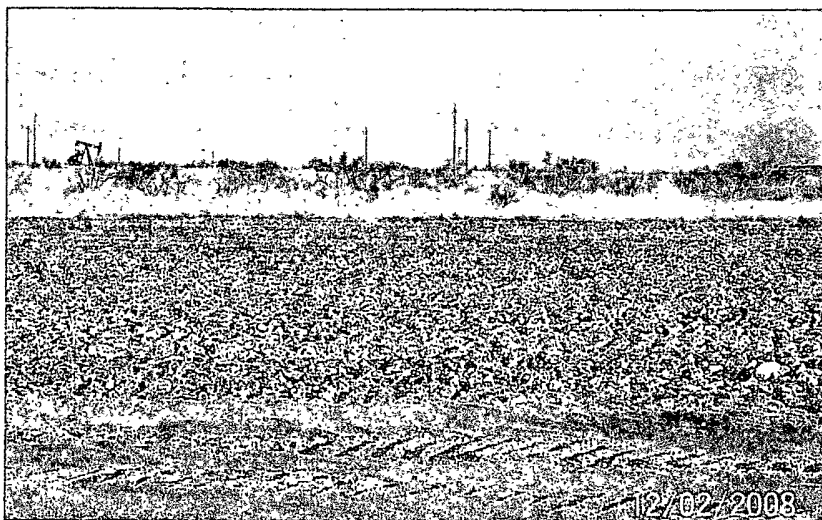




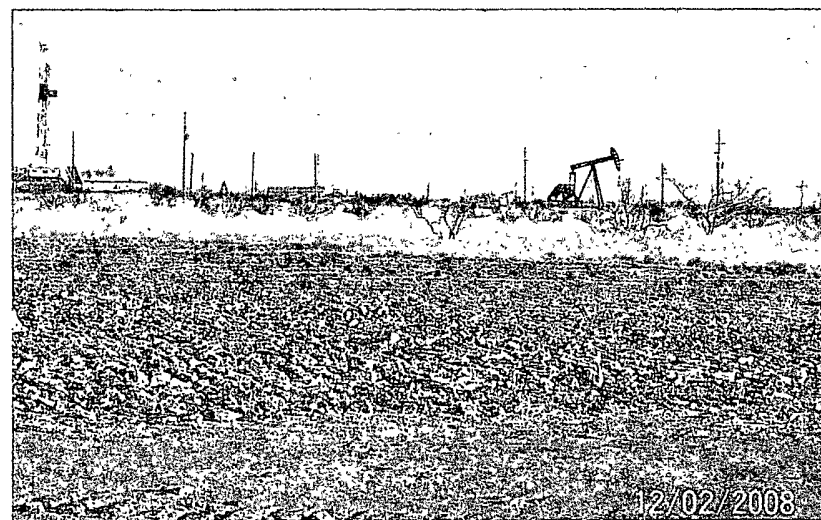
*Photo #1 Final View*



*Photo #2 Final View*



*Photo #3 Final View*



*Photo #4 Final View*

