



*Cimarex Energy Company of Colorado  
Drilling Department  
Dorsey Rogers  
207 South Mesa  
Carlsbad, New Mexico 8822*

*A wholly-owned subsidiary of Cimarex Energy Co., a NYSE Listed Company, "XEC"*

FEB - 5 2009

RECEIVED

FEB 18 2009

HOBBSOCD

# ***Final Closure Report***

*Aduddle #1 Reserve Drilling Pit, API: 30-025-30407  
Sec. 23 15S 36E - Lea County, New Mexico*

*Presented to:*

***New Mexico Oil Conservation Division***

*1220 South St. Francis Drive  
Santa Fe, New Mexico 87505*

*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 Aduddle #1, to the best of its ability. No warranty, expressed or implied, is made or intended. The report was prepared for Cimarex Energy Company, with offices at 207 South Mesa, Carlsbad, New Mexico 88022, 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***

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

State of New Mexico

Energy Minerals and Natural Resources

Form C-144  
March 12, 2004Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505For drilling and production facilities, submit to  
appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe  
office**Pit or Below-Grade Tank Registration or Closure**Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

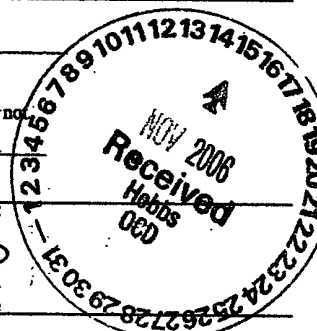
Operator: Cimarex Energy Co. Telephone: 972-443-6489 e-mail address: zfarris@cimarex.com

Address: P.O. Box 140907, Irving, Tx 75014-0907

Facility or well name: Aduddle No. 1 API #: 30-025-30407 U/L or Qtr/Qtr A Sec 23 T15S R36E

County: Lea Latitude 320033.8 N Longitude 1031607.7 W NAD: 1927 ☐ 1983 ☒ Surface Owner Federal ☐ State ☐ Private ☒ Indian ☐

<b>Pit</b> Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness 12 mil Clay <input type="checkbox"/> Volume _____ bbl Closed system, cuttings to be buried		<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not: _____	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) 100 feet or more (0 points)		
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) No (0 points)		
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) 1000 feet or more (0 points)		
Ranking Score (Total Points)		10	



**If this is a pit closure:** (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 11-14-06

Printed Name/Title Zeno Farris Manager Operations Administration

Signature Zeno Farris

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Date: NOV 21 2006

Printed Name/Title

ORIGINAL SIGNED BY

CHRIS WILLIAMS

Signature OC DISTRICT SUPERVISOR/GENERAL MANAGER



## ***SECTION II***

## **Final Closure Report**

Page 2 of 17

Company: Cimarex Energy Company of Colorado  
Location: Aduddle #1

### **Project Overview**

*Phoenix Environmental, LLC. (Phoenix) was contracted for the closure of a reserve-drilling pit on the Aduddle #1, belonging to Cimarex Energy Co. The Aduddle #1 is located in Section 23 T15S R36E. The GPS Reading is 33°00'33.8"N & 103°16'07.7"W, with an elevation of 3857 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 that were left on the drying pad once 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 68 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 <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 <250 ppm.*

### **Findings and Conclusion**

*It appeared that in excess of 1500 cubic yards of impacted soil were left on drying pad area with the dimensions of 100x100.*

*The bottom of the excavation (approximately 2.5 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 2.5 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. *February 14, 2008 – Phoenix 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. *February 15, 2008 – Crew began excavation of the deep bury entombment pit.*
3. *February 18, 2008– – Crew finished excavating deep bury entombment pit. The crew pushed caliche off pad 15 ft. outside dead man anchors into existing pit. The bottom of the deep bury pit was cleaned and dressed to prevent damage to liner. The deep bury pit was lined with 12 mil HDPE bottom. The crew transferred drill cuttings from drying pad to the deep bury entombment pit.*
4. *February 19, 2008 – Crew continued to transfer drill cuttings to deep bury entombment pit. Crew also pushed caliche off pad 15 ft outside of anchors.*
5. *February 20, 2008– Crew finished transferring drill cuttings from drying pad to deep bury pit. The bottom of the drilling pad 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 5 through 12 of this report). The deep bury pit was capped with a 20 mil HDPE top.*
6. *February 21, 2007 – Crew push in material from location to backfill drying pad and deep bury entombment pit. Final contouring and compactions was implemented to return the site back to grade. Contouring was completed with a crown to prevent rainwater ponding. Remanding caliche from pad was hauled back to caliche pit.*



## Final Closure Report

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Company: Cimarex Energy Company of Colorado  
Location: Aduddle #1

### 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 Cimarex Energy Company of Colorado 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

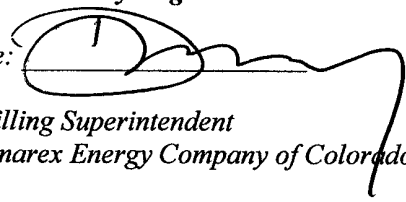
*The following Phoenix/Cimarex personnel have reviewed this report and verify that to the best of their knowledge the contents are true and correct.*

Name: **Allen Hodge, REM # 7096**

Signature: 

Title: VP Operations  
Phoenix Environmental LLC

Name: **Dorsey Rogers**

Signature: 

Title: Drilling Superintendent  
Cimarex Energy Company of Colorado







## ***SECTION III***



## **SUMMARY SOIL ANALYSIS REPORT**

**Client:** Cimarex Energy Co.  
**Supervisor:** Allen Hodge  
**Sample Matrix:** Soil

**Facility:** Aduddle #1  
**Order No.:** Dorsey Rogers  
**Samples Received:** Intact on site

### ***Initial Project Screening***

Sample	Date	Depth	Chlorides	TPH	BTEX	Location	Test Method
#1							
#2							
#3							
#4							
#5							
#6							

Samples reported in parts per million (ppm) and depth is in feet (') and inches (")

### ***Interim Project Screening***

Sample	Date	Depth	Chlorides	PID TPH	PID BTEX	Location	Test Method
#1	2/20/08	2.5'	<50			Northwest Quarter	EPA 325.3
#2	2/20/08	2.5'	<50			Northeast Quarter	EPA 325.3
#3	2/20/08	2	75			Center	EPA 325.3
#4	2/20/08	2.5'	110			Southwest Quarter	EPA 325.3
#5	2/20/08	2'	80			Southeast Quarter	EPA 325.3
#6	2/20/08	0-6"	<50			Background	EPA 325.3
#7							
#8							
#9							
#10							
#11							
#12							
#13							
#14							
#15							
#16							

Samples reported in parts per million (ppm) and depth is in feet (') and inches (")

### ***Final (Third Party Laboratory) Project Screening Verification***

Sample	Date	Depth	Chlorides	TPH	BTEX	Location	Test Method
#1		2.5'	<50			Northwest Quarter	See Report
#2		2.5'	<50			Northeast Quarter	See Report
#3		2	62.4			Center	See Report
#4		2.5'	97.6			Southwest Quarter	See Report
#5		2'	7.2			Southeast Quarter	See Report
#6		0-6"	<50			Background	See Report
#7							

Samples reported in parts per million (ppm) and depth is in feet (') and inches (")



**Phoenix Environmental, LLC.**  
**P.O. Box 1856 – 2113 French Drive**  
**Hobbs, New Mexico 88241**  
**505.391.9685 – FAX: 505.391.9687**

## **SOIL ANALYSIS REPORT**

**Date:** 2/25/08  
**Client:** Cimarex Energy Co.  
**Supervisor:** Allen Hodge  
**Sample Matrix:** Soil

**Facility:** Aduddle #1  
**Test Method:** EPA 325.3  
**Order No.:** Dorsey Rogers  
**Sample Received:** Intact on site

<b><u>Sample</u></b>	<b><u>Cl (ppm)</u></b>	<b><u>Depth (feet)</u></b>	<b><u>Location</u></b>
<b>#1</b>	<50	2.5'	Northwest Quarter
<b>#2</b>	<50	2.5'	Northeast Quarter
<b>#3</b>	75	2	Center
<b>#4</b>	110	2.5'	Southwest Quarter
<b>#5</b>	80	2.5'	Southeast Quarter
<b>#6</b>	<50	0-6"	Background

**COMMENTS:** Sample are well below limits for NMOCD guidelines for unlined pit closure.

## Summary Report

Dorsey Rogers  
Cimarex  
207 S Mesa  
Carlsbad, NM, 88220

Report Date: February 28, 2008

Work Order: 8022701



Project Location: UL-A-Sec. 23, T15S, R36E, Lea, Co.  
Project Name: Aduddle #1  
Project Number: API 30-025-30407

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
151754	NW-1 @ 2.5'	soil	2008-02-25	15:00	2008-02-26
151755	NW-2 @ 2.5'	soil	2008-02-25	15:15	2008-02-26
151756	C-3 @ 2'	soil	2008-02-25	15:30	2008-02-26
151757	SW-4 @ 2.5'	soil	2008-02-25	15:45	2008-02-26
151758	SE-5 @ 2'	soil	2008-02-25	16:00	2008-02-26
151759	BG-6 @ 0.6'	soil	2008-02-25	16:15	2008-02-26

**Sample: 151754 - NW-1 @ 2.5'**

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	5.00

**Sample: 151755 - NW-2 @ 2.5'**

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	5.00

**Sample: 151756 - C-3 @ 2'**

Param	Flag	Result	Units	RL
Chloride		62.4	mg/Kg	5.00

**Sample: 151757 - SW-4 @ 2.5'**

Param	Flag	Result	Units	RL
Chloride		97.6	mg/Kg	5.00

**Sample: 151758 - SE-5 @ 2'**

Param	Flag	Result	Units	RL
Chloride		72.2	mg/Kg	5.00

**Sample: 151759 - BG-6 @ 0.6'**

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	5.00





## ***SECTION IV***

Cimarex Energy -

Aduddle #1

UL-A SEC-23 - T15S - R36E

API # 30 - 025 - 30407

N33° - 00' - 33.8" - W103° - 16' - 07.7"

1. N33° 00' 33.9" - W103° 16' 05.3"

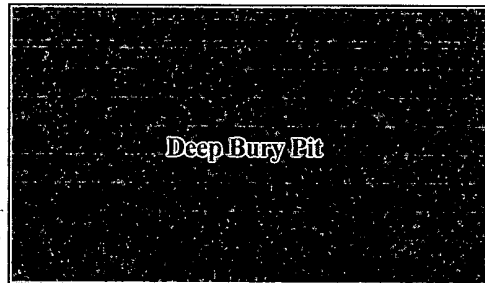
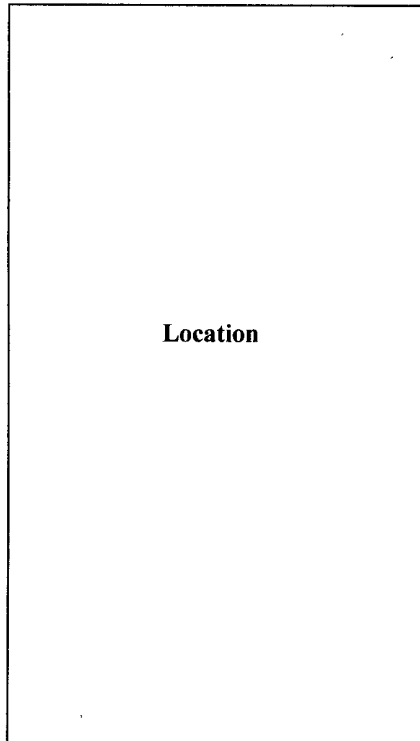
2. N33° 00' 34.6" - W103° 16' 05.5"

3. N33° 00' 34.2" - W103° 16' 06.7"

4. N33° 00' 34.6" - W103° 16' 06.1"

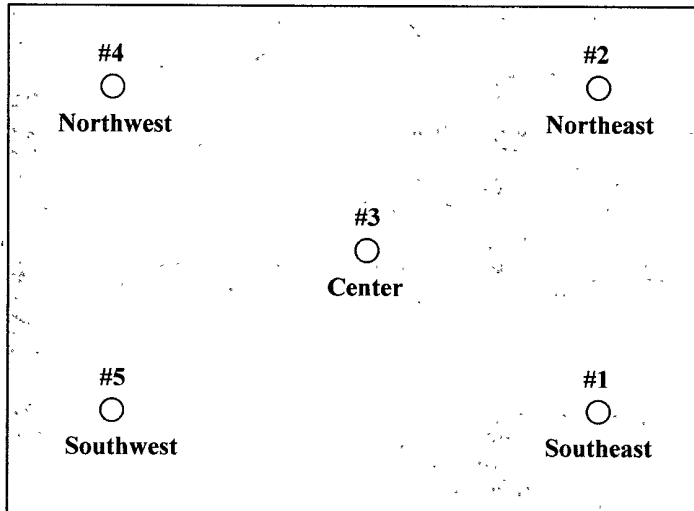
5. N33° 00' 33.9" - W103° 16' 06.1"

6. N33° 00' 34.8" - W104° 16' 04.7"



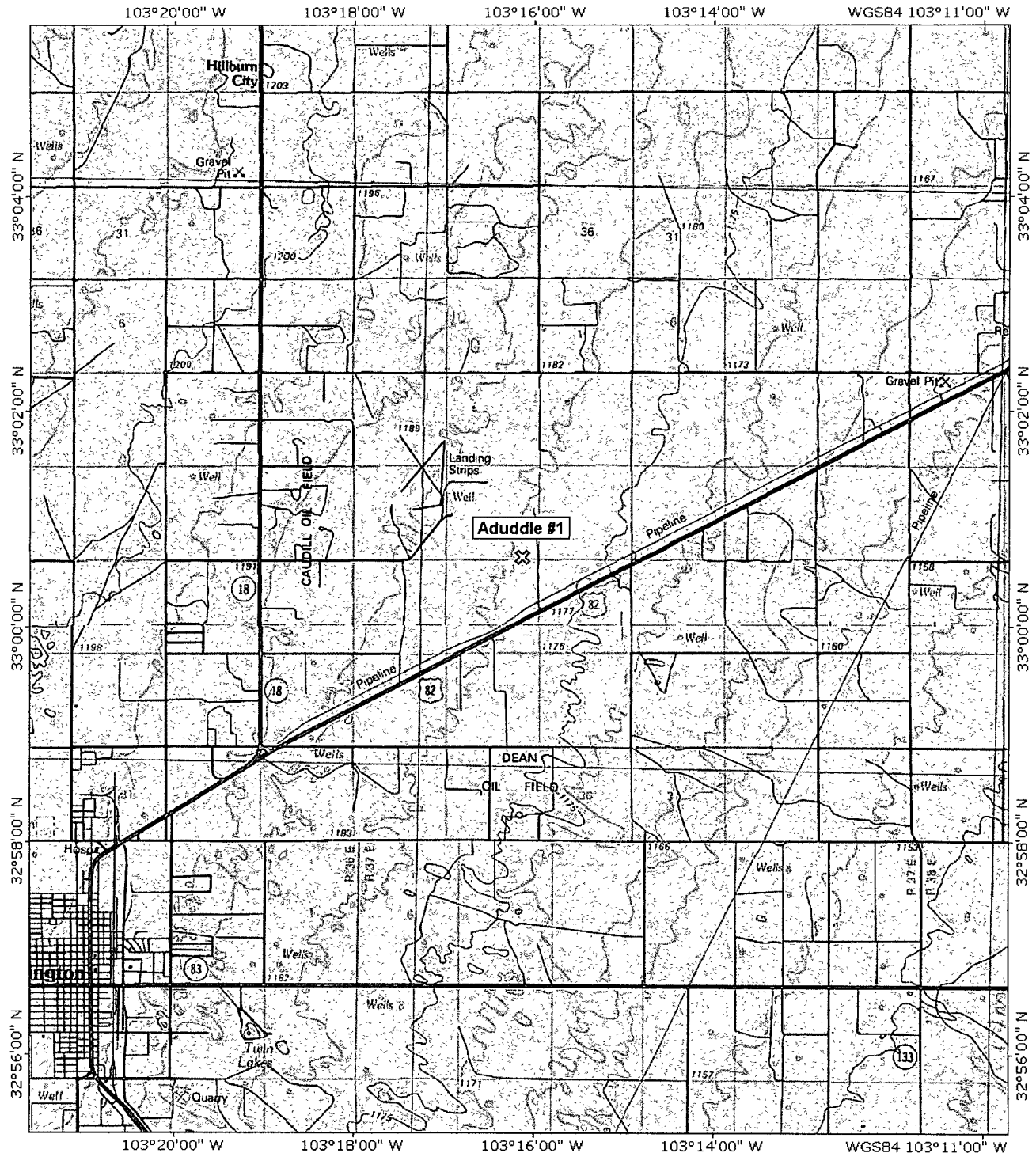
#6  
○

Background





TOPOI map printed on 01/27/09 from "Untitled.tpo"



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

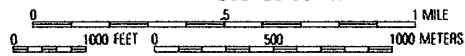
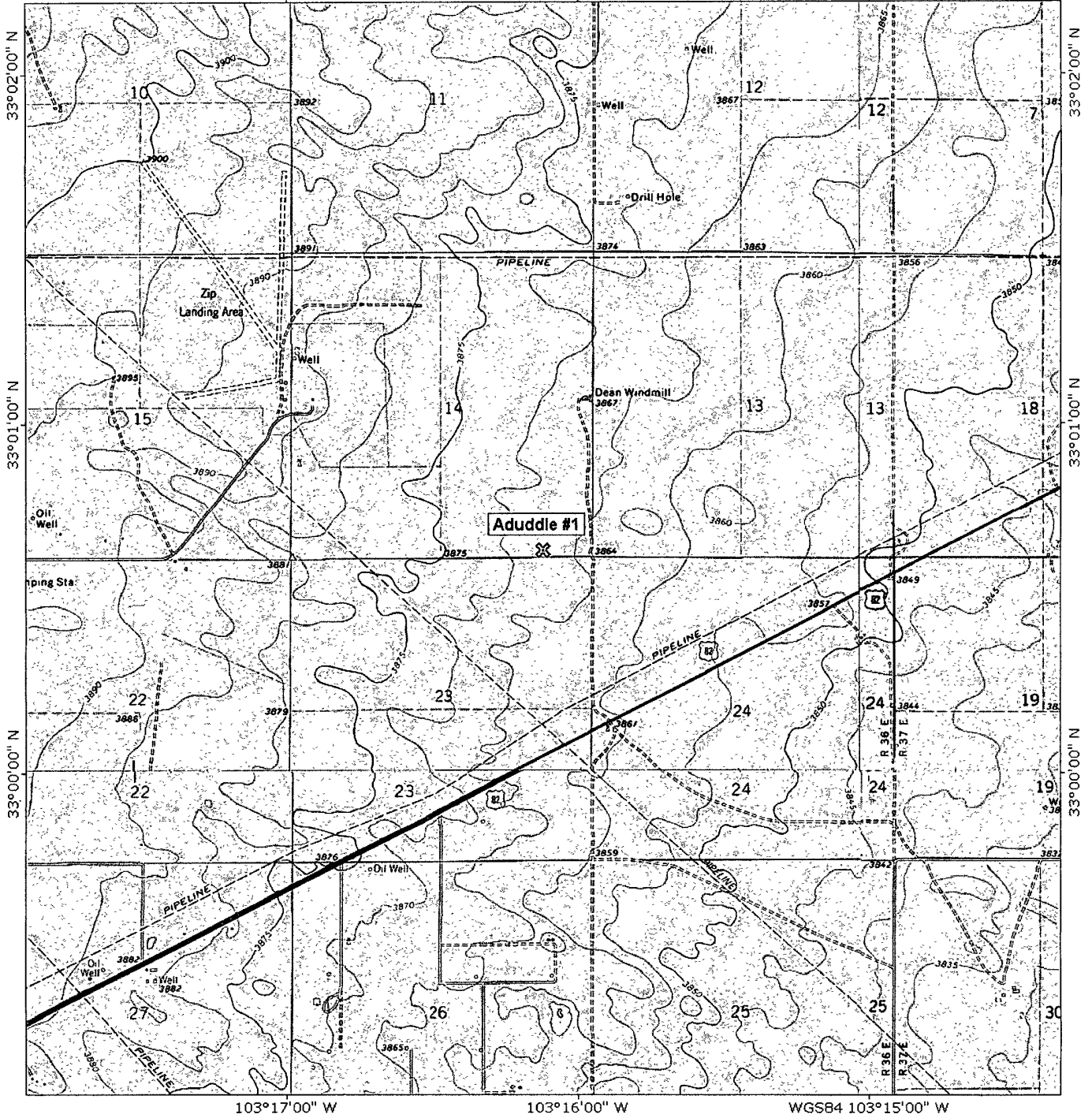


TOPO! map printed on 01/27/09 from "Untitled.tpo"

103°17'00" W

103°16'00" W

WGS84 103°15'00" W

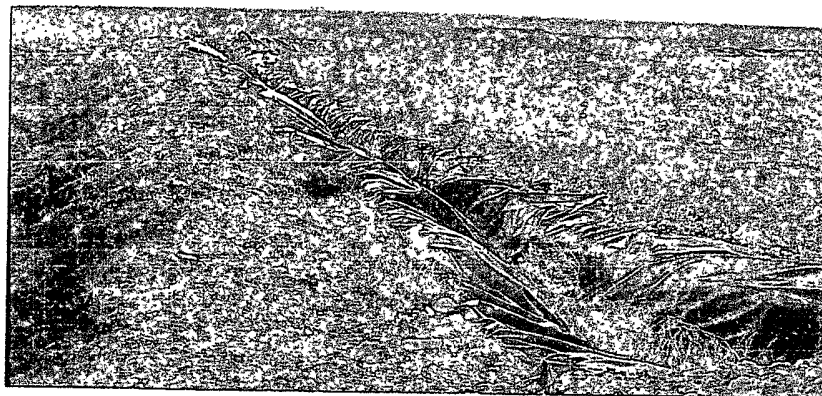


Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

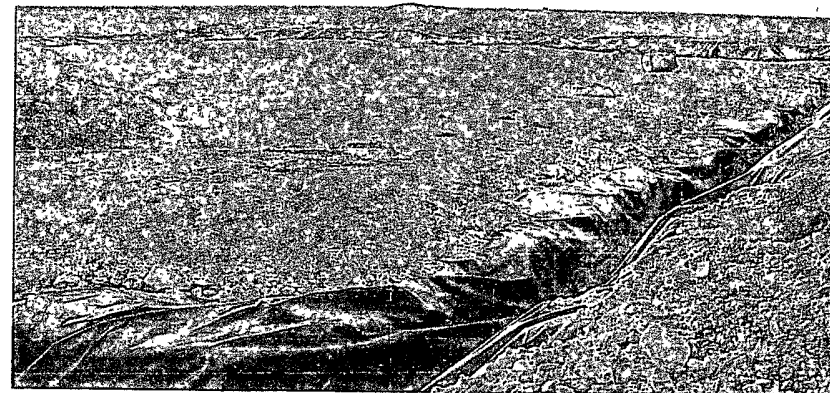




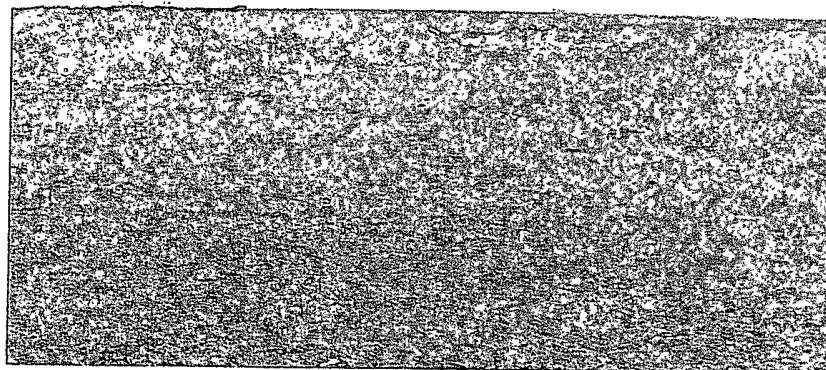
## *SECTION V*



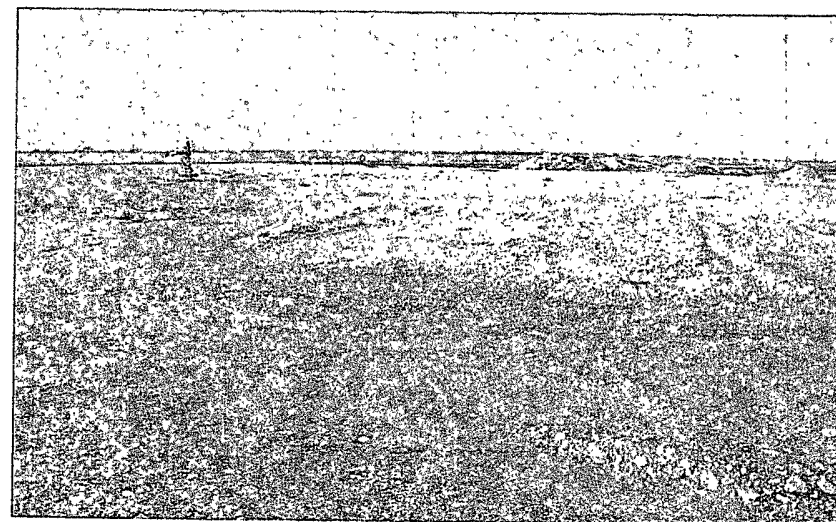
*Photo #1 Beginning View of Drying Pad*



*Photo #2 Beginning View of Drying Pad*

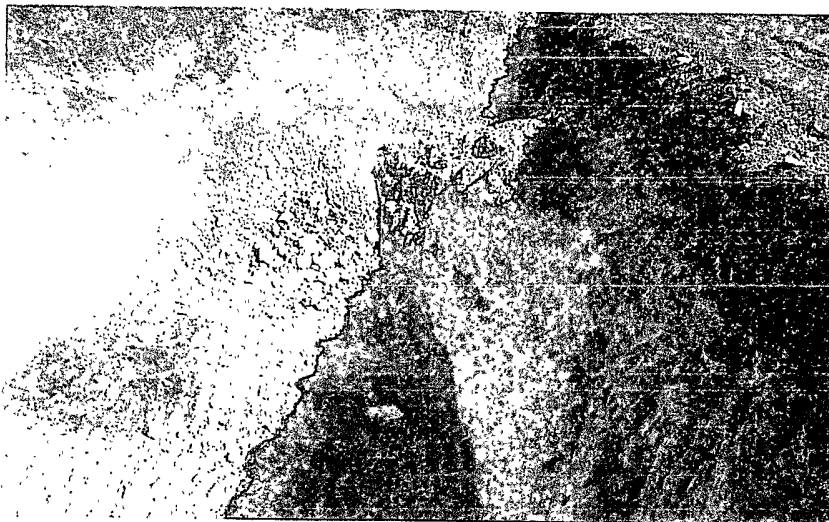


*Photo #3 Beginning View of Location*

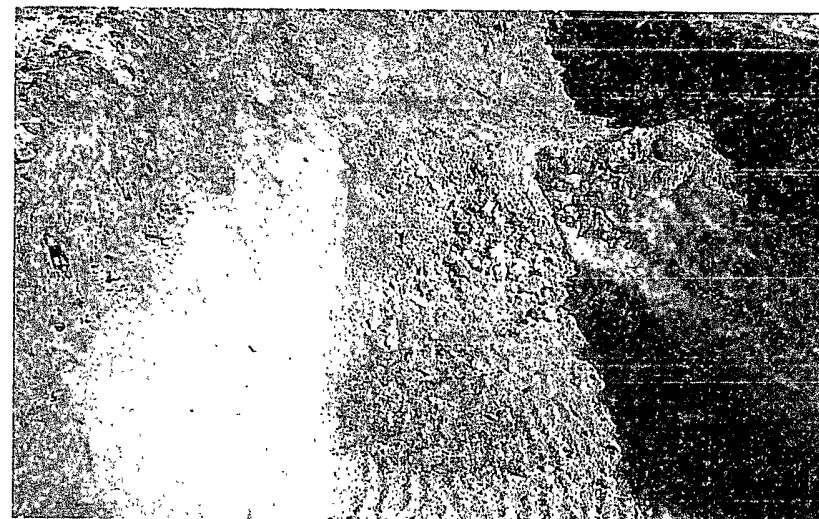


*Photo #4 Beginning View of Location*





*Photo #5 Deep Bury Entombment Pit*



*Photo #6 Deep Bury Entombment Pit*



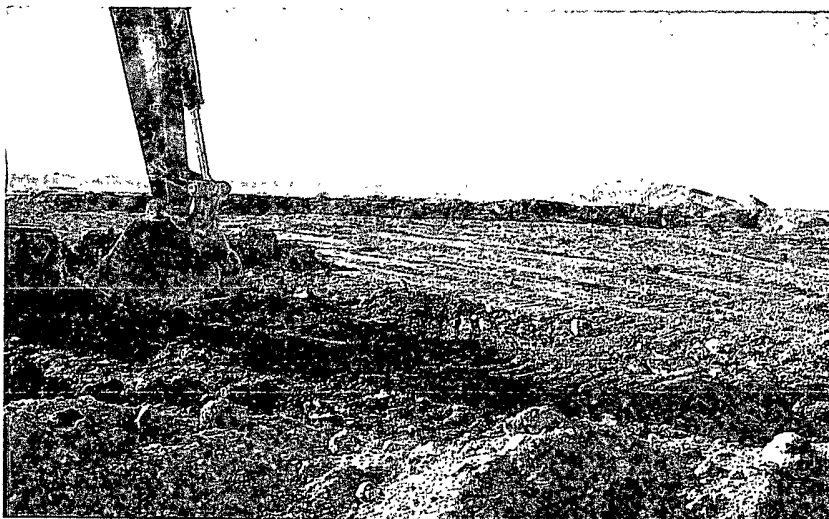
*Photo #7 Lined Deep Bury Entombment Pit*



*Photo #8 Lined Deep Bury Entombment Pit*







*Photo #9 Transferring Drill Cuttings*



*Photo #10 Transferring Drill Cuttings*



*Photo #11 Drill Cuttings in Deep Bury Entombment Pit*



*Photo #12 Drill Cuttings in Deep Bury Entombment Pit*





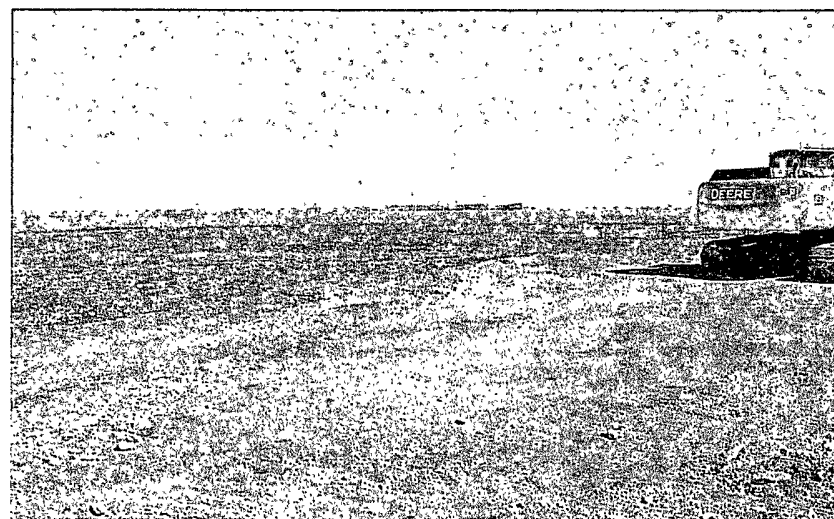
*Photo #13 Capped Deep Bury Entombment Pit*



*Photo #14 Capped Deep Bury Entombment Pit*

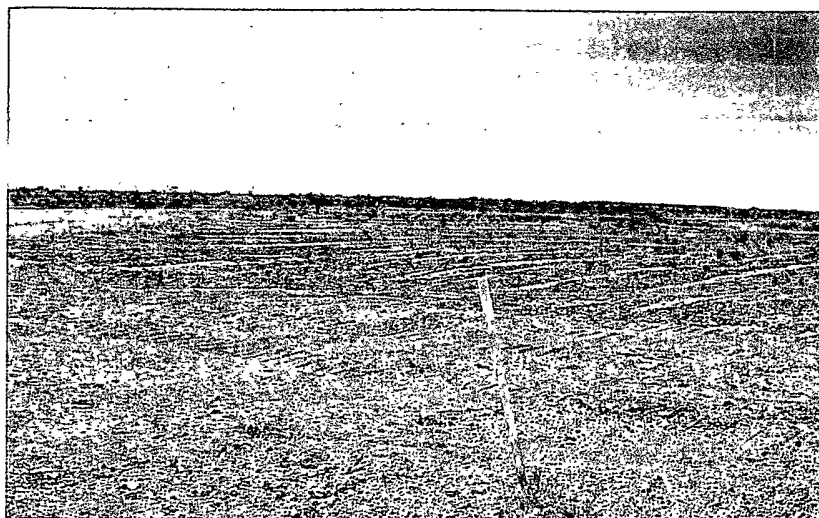


*Photo #15 Dressing Location*

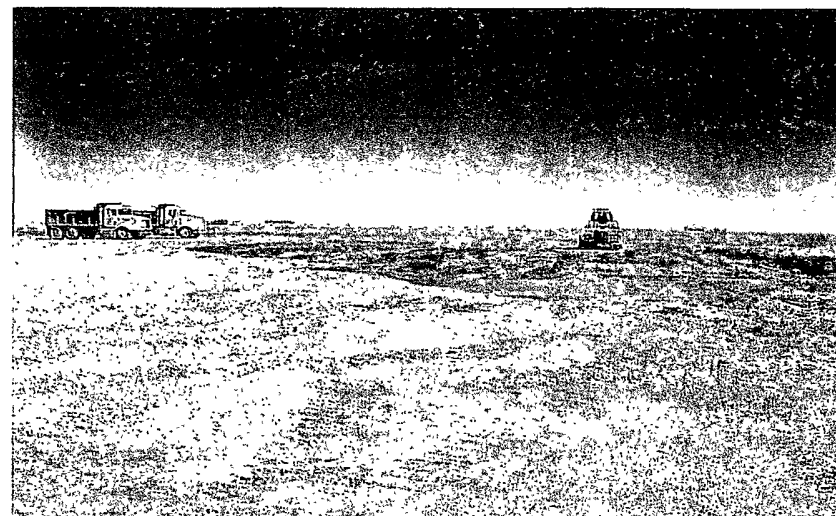


*Photo #16 Dressing Location*





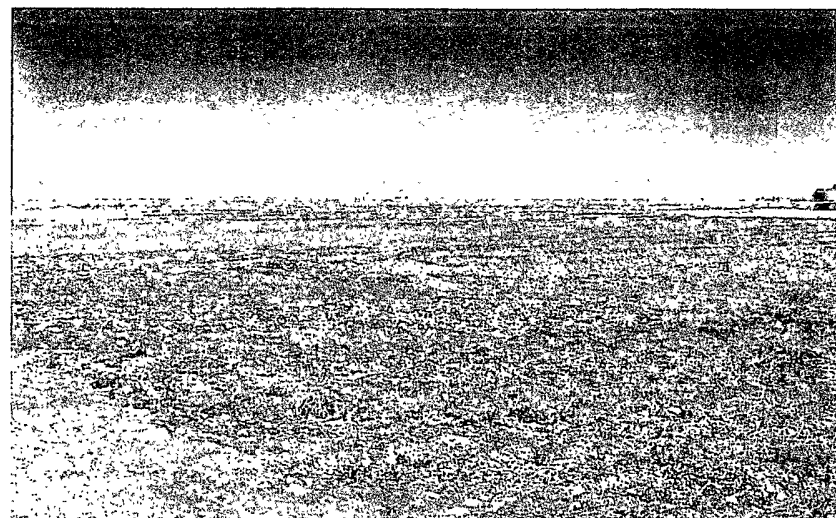
*Photo #17 Dressing Location*



*Photo #18 Dressing Location*



*Photo # 19 Final View of Location*



*Photo #20 Final View of Location*

