

1R - 132

# REPORTS

DATE:

10-19-1996



## **ALLSTATE SERVICES**

P.O. BOX 11322  
MIDLAND, TEXAS 79702  
OFFICE: (915) 682-3547  
FAX: (915) 682-4182



October 19, 1996

### **DOCUMENTATION FOR PREPARATION OF C-103**

**Project: TNM 96-20**

**Location: Jal, New Mexico**

In accordance with NMOCD Guidelines for Remediation of Leaks, Spills and Releases Part III. Site Assessment, Subtitle B Soil/Waste Characteristics, the initial assessment of soil contamination was determined after soil removal.

#### **Segment 1. First One Third of Subject Site**

From 6-19-96 through 9-10-96 excavation of the release was accomplished in stages. The origin of the release was located at the pipeline on the North and West end of the site and traveled adjacent to the lease road which is located to the North of the first one third of the contaminated material. This strip measured approximately 26' wide, 750' long and 8' in depth (See Map #1). As excavation was accomplished the resulting material was staged on the South side of the aperture.

Highly saturated soil was present at the surface to approximately 1-2 feet in depth. Unsaturated soil was encountered from this level to the bottom hole area where sampling indicated lower levels of constituents present (See Map #1 and Lab Results #1).

#### **Segment 2. Second One Third of Site**

After reaching the intersecting lease road at the North East corner of Segment 1. The contaminated material migrated toward the South following the bed of a seasonally dry tributary. At approximately 150' to the South the natural depression took a Westerly turn for approximately 100' then returned to a Southerly direction for about 450'-500' where it crossed over a small lease road and continued another 300' - 400' to a lease road intersection. This entire strip was also excavated to depths of approximately 8' and 15'-18' wide with material being staged on the perimeter to the West of the cavity. At this point the material ponded, spreading in a circular pattern measuring approximately 160' long by 94' wide. The area of ponding was excavated to approximately 11'-12' vertically and 160' X 94' horizontally. Material was staged on the Western and Northern perimeter.

*An Environmental Company*

SOLIDIFICATION, BIOREMEDIATION, LAND FARMING, SOIL SHREDDING

Saturated material was present in varying layers from 1' along the edges of the seasonally dry tributary to a depth to 4' in the ponding area. Unsaturated material was present below this layer. Excavation continued to depths where field screening and laboratory results indicated acceptable levels of constituents. See Maps #2, #3, & #4 along with Lab Results #2, #3, #3a, #4, #4a, & #4b.

At the time of sampling, the pond area was holding rain water therefore final sampling was not possible. Samples were collected and analyzed at the time of excavation, see Lab Results ?????

### **Segment 3. Last One Third of Site**

The release crossed the lease road on the South East corner of the subject site and followed a seasonally dry tributary in a Easterly direction for approximately 600' to 650', then turned back South under a pasture fence for approximately 150' - 200' where it appeared to dissipate.

Excavation of this segment was also accomplished to depths of approximately 8' and a width of 15'-18'. Saturated material was present at varying depths from 1' to 3'. The soil was staged adjacent to the cavity on the South side and adjacent to the lease road on the North side. Unsaturated material was encountered below this layer. Excavation continued to depths where field screening and laboratory confirmatories indicated acceptable levels of constituents. See Maps #5, #6 & #7 along with Lab Results #5, #6, #7, #7a & #7b.

### **Conclusions**

After the sampling event from September 16, 1996 through September 25, 1996 which produced the results referred to in the above documentation, there were six areas containing elevated concentrations of hydrocarbon constituents (other than the North sidewalls in Segment 1. associated with the lease road). These "hot spots" were excavated and sampled on September 30, 1996 with favorable results as enumerated on Lab Results #8 and accompanying Maps # 8, #8a, #8b & #8c.

It is noted that the excavated soil was sampled during the 9/16-25/96 period with results and locations depicted along with the appropriate Segments as above.

A monitor well was installed on August 13, 1996. The lithological data is included under separate cover along with this overview.

**PROPOSED SOIL REMEDIATION PLAN**

The site has been excavated to the extent practicable and the contaminated material placed on site. In accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases, Section VI A.2.b.iii Alternative Methods, Texas-New Mexico Pipeline proposes in-situ remediation utilizing dozers and backhoes to push the contaminated material from the stockpiles to begin the aeration process in order to reduce BTEX and TPH levels. As material is moved and aerated it shall be blended with cleaner soil to further reduce BTEX and TPH values.

Samples shall be collected from the treated soil to determine when recommended soil remediation action levels have been reached. Laboratory confirmatory samples will follow.

When appropriate levels are established, the remediated soil will be placed back into the original excavated area and the site shall be dressed and contoured to the existing topography.

Prepared by: K.C. Offield, Allstate Services Environmental

TNN 96-20  
 Sampling Sketch Map #1

BH = Btm Hole  
 SW = Side walls  
 NSW = North sidewall  
 SSW = South sidewall

Date: Sept 16, 1996

SSV KEO

BH - 3-4 Aliquots / 50' ft - composited  
 SW - 7-8 Aliquots / 100' ft. Each side - composited

[ ] = APPROX 50 ft.

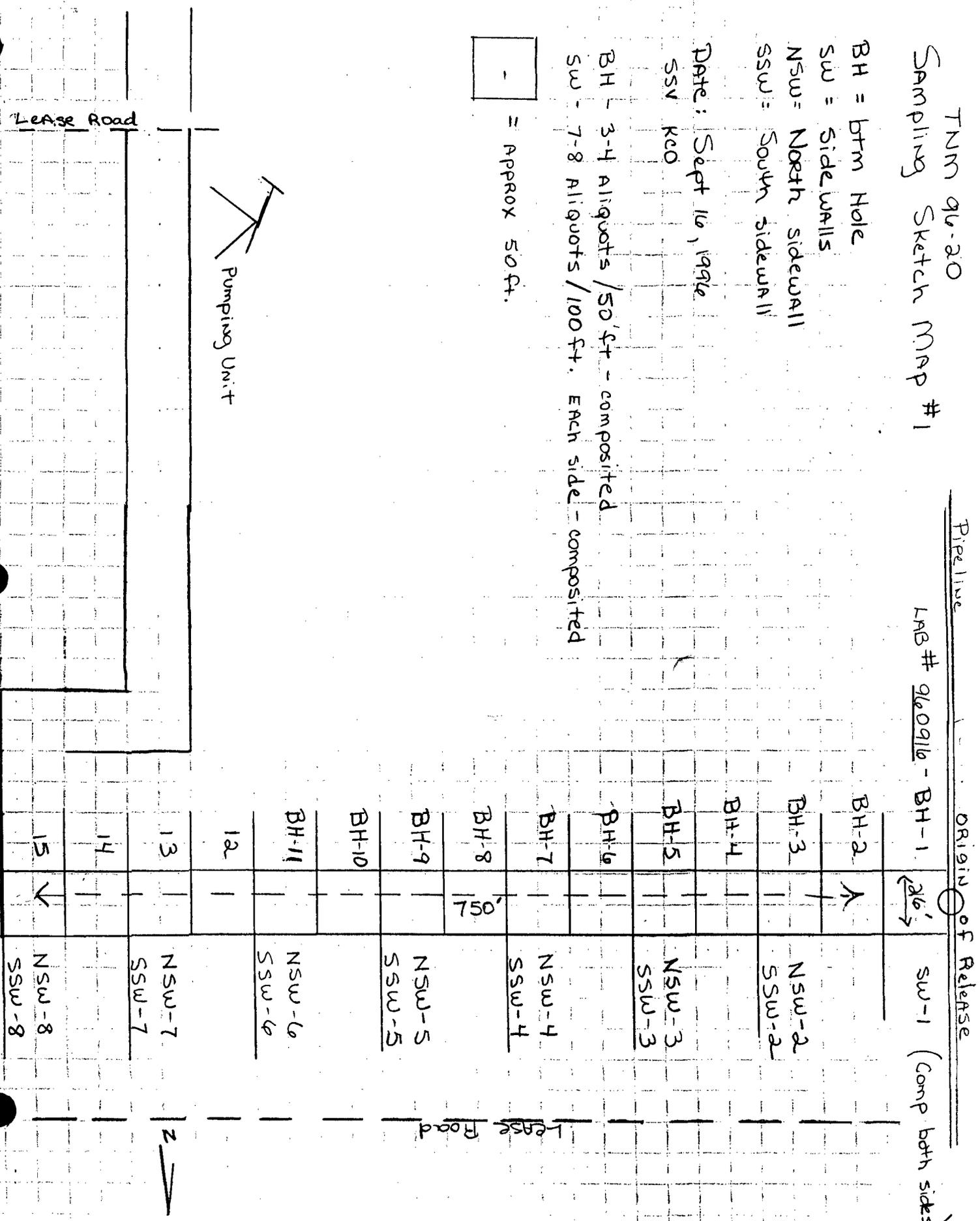
Pipeline

ORIGIN OF Release

LRB # 960916 - BH-1

← 216' →

SW-1 (Comp both sides)



# ENVIRONMENTAL LAB OF , INC.

Lab Results #1

"Don't Treat Your Soil Like Dirt!"  
 TEXAS NEW MEXICO PIPE LINE COMPANY  
 MR. TONY SAVOIE  
 P.O. BOX 1030  
 JAL., NM 88252  
 FAX: 505-395-2636

Receiving Date: 09/16/96  
 Sample Type: SOIL  
 Project: TNM 96-20  
 Project Location: JAL., NM

Analysis Date: 09/17/96  
 Sampling Date: 09/16/96  
 Sample Condition: Intact/iced

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH. (mg/kg)
8768	960916-BH1	<0.100	0.283	0.288	0.628	0.232	1,450
8769	960916-BH3	<0.100	1.407	0.928	8.009	4.232	4,600
8770	960916-BH2	<0.100	0.149	0.265	0.545	0.216	1,270
8771	960916-BH4	<0.100	<0.100	<0.100	0.631	0.154	1,510
8772	960916-BH5	<0.100	0.342	0.103	0.392	0.373	580
8773	960916-BH6	<0.100	0.235	<0.100	0.198	0.179	220
8774	960916-BH7	<0.100	0.243	<0.100	0.266	0.223	360
8775	960916-BH8	<0.100	0.228	<0.100	0.242	0.128	210
8776	960916-BH9	<0.100	0.362	<0.100	0.299	0.101	540
8777	960916-BH10	<0.100	0.192	<0.100	0.234	<0.100	360
8778	960916-BH11	<0.100	0.170	<0.100	0.291	0.124	70
8779	960916-SW1	<0.100	1.085	0.641	2.791	1.399	7,000
8780	960916-NSW2	<0.100	1.526	1.598	7.009	3.137	3,410
8781	960916-NSW3	<0.100	2.897	3.421	10.058	4.538	7,190
8782	960916-NSW4	<0.100	0.311	0.582	0.598	0.182	130
8783	960916-SSW2	<0.100	0.131	<0.100	0.500	0.344	110
8784	960916-SSW3	<0.100	0.210	<0.100	0.228	<0.100	<10
8785	960916-SSW4	<0.100	<0.100	<0.100	0.217	<0.100	<10
8786	960916-SSW5	<0.100	<0.100	<0.100	0.212	<0.100	<10
8787	960916-SSW6	<0.100	0.108	<0.100	0.204	<0.100	<10
8788	960916-SSW7	<0.100	<0.100	<0.100	0.198	<0.100	60
8789	960916-NSW8	<0.100	<0.100	<0.100	0.198	<0.100	250
8790	960916-12	<0.100	<0.100	<0.100	0.197	<0.100	10
8791	960916-13	<0.100	0.104	<0.100	0.236	<0.100	290
8792	960916-14	<0.100	<0.100	<0.100	0.161	<0.100	640
8793	960916-15	<0.100	<0.100	<0.100	0.205	<0.100	130
8794	960916-NSW5	<0.100	0.107	<0.100	0.241	0.212	4,800
8795	960916-NSW6	<0.100	0.268	0.228	1.024	0.558	7,620
8796	960916-NSW7	<0.100	0.106	0.288	0.658	0.353	4,150
8797	960916-SSW8	<0.100	<0.100	0.125	0.351	0.113	390
% IA		113	97	96	91	90	100
% EA		111	95	88	85	87	88
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001	<10

MAP #1

METHODS: SW 846-6020,5030 , EPA 418.1

  
 Michael R. Fowler

9-17-96  
 Date

# Environmental Lab of Texas, Inc. 12600 West 120 East Odessa, Texas 79763

(915) 563-1800 FAX (915) 563-1713

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: *Handy*  
 Phone #: 915/682-3546  
 FAX #: 915/682-4182

### ANALYSIS REQUEST

Company Name & Address:

ALLSTATE SERVICES ENVIRONMENTAL, MIDLAND, TEXAS

Project #:

96-20  
 TMM 96-20

Project Location:

*Valley NW*

Sampling Signature:

*[Signature]*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX						DATE	TIME	BTEX 8020/5030	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
				WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD										
8768	<del>960916-BH1</del>			✓						9/16	10:40	✓							
8769	960916-BH23			✓						9/16	10:49	✓							
8770	960916-BH22			✓						9/16	10:42	✓							
8771	960916-BH4			✓						9/16	10:52	✓							
8772	960916-BH5			✓						9/16	10:54	✓							
8773	960916-BH6			✓						9/16	11:03	✓							
8774	960916-BH7			✓						9/16	11:06	✓							
8775	960916-BH8			✓						9/16	11:14	✓							
8776	960916-BH9			✓						9/16	11:15	✓							
8777	960916-BH10			✓						9/16	11:46	✓							
8778	960916-BH11			✓						9/16	11:47	✓							

Relinquished by:

*[Signature]*

Date:

9-16-96

Times:

2:41 PM

Received by:

*[Signature]*

REMARKS

Relinquished by:

*[Signature]*

Date:

Times:

Received by:

Received by Laboratory:

Relinquished by:

Date:

Times:

Received by:

Received by Laboratory:



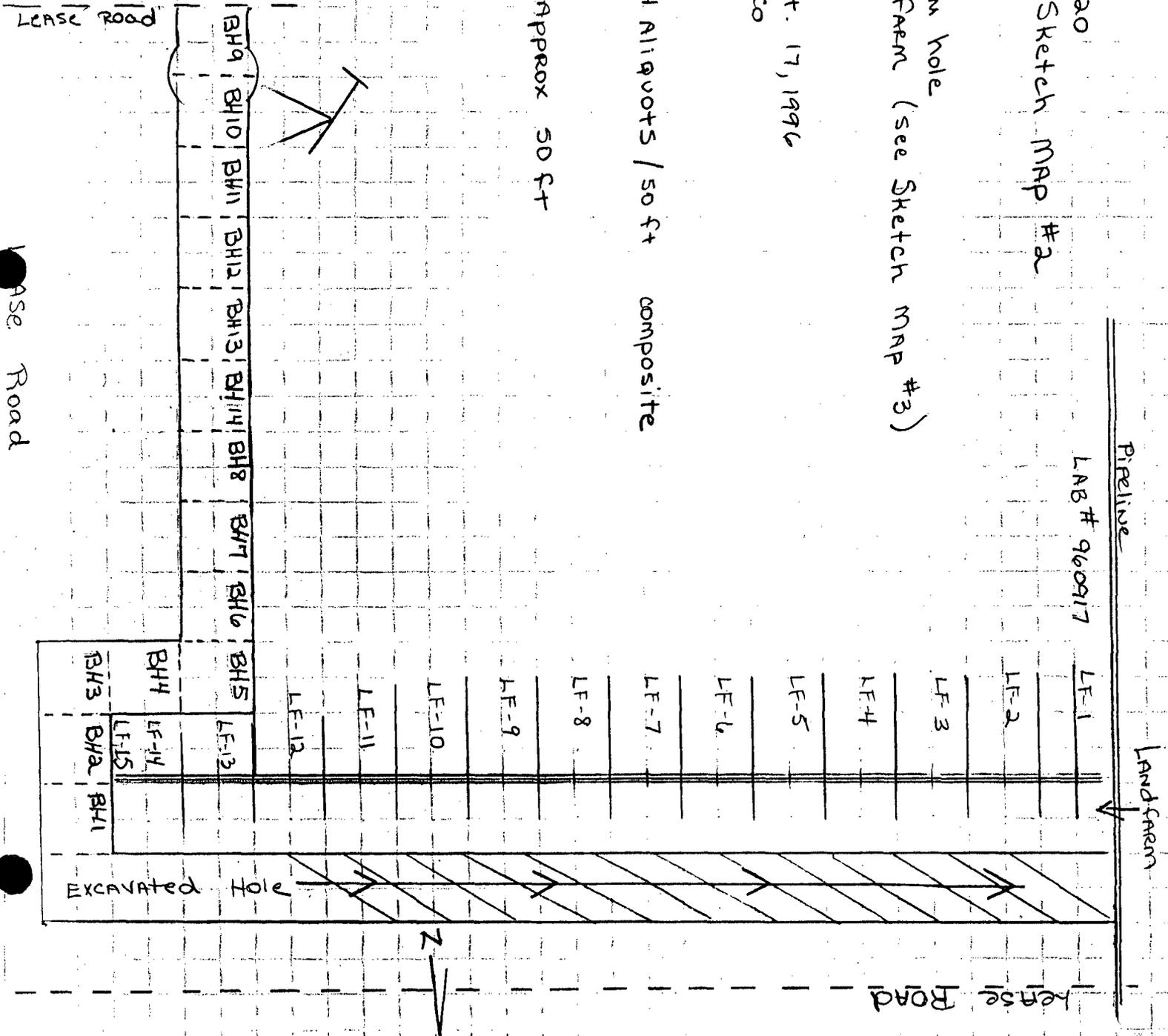
TNM - 9e-20  
Sampling Sketch Map #2

BH = Bottom Hole  
LF = Landfarm (see Sketch Map #3)

Date: Sept. 17, 1996  
SSV KCO

BH - 3-4 Aliquots / 50 ft composite

 = Approx 50 ft



LAB RESULTS #2

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2638

Receiving Date: 09/17/96  
Sample Type: SOIL  
Project: TNM 96-20  
Project Location: JAL, NM

Analysis Date: 09/17/96  
Sampling Date: 09/17/96  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/kg)
8802	960917-BH1	<0.100	0.117	<0.100	0.204	0.240	110
8803	960917-BH2	<0.100	0.118	<0.100	0.230	<0.100	50
8804	960917-BH3	<0.100	0.102	<0.100	0.219	<0.100	140
8805	960917-BH4	<0.100	0.215	<0.100	0.212	0.111	120
8806	960917-BH5	<0.100	0.155	<0.100	0.118	<0.100	150
8807	960917-BH6	<0.100	0.117	<0.100	0.211	<0.100	730
8808	960917-BH7	<0.100	0.117	<0.100	0.200	<0.100	370
8809	960917-BH8	<0.100	0.102	<0.100	0.270	<0.100	1,410
8810	960917-BH9	<0.100	<0.100	<0.100	<0.100	<0.100	80
8811	960917-BH10	<0.100	0.115	<0.100	0.184	<0.100	540
8812	960917-BH11	<0.100	0.238	0.184	0.508	0.598	1,040
8813	960917-BH12	<0.100	<0.100	<0.100	<0.100	<0.100	880
8814	960917-BH13	<0.100	0.139	<0.100	0.285	0.155	1,180
8815	960917-BH14	<0.100	<0.100	<0.100	<0.100	<0.100	780
8816	960917-LF1	<0.100	0.123	<0.100	0.521	0.470	3,430
8817	960917-LF2	<0.100	<0.100	<0.100	0.139	0.158	1,310
8818	960917-LF3	<0.100	<0.100	<0.100	<0.100	<0.100	1,610
8819	960917-LF4	<0.100	<0.100	<0.100	<0.100	<0.100	140

MAP #2

MAP #3

% IA	102	89	86	82	82	102
% EA	107	98	90	89	88	87
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

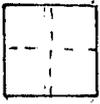
9-20-96  
Date

TMM 96-20  
Sampling Sketch map #3

LF = Land Farm  
SW = Sidewalls

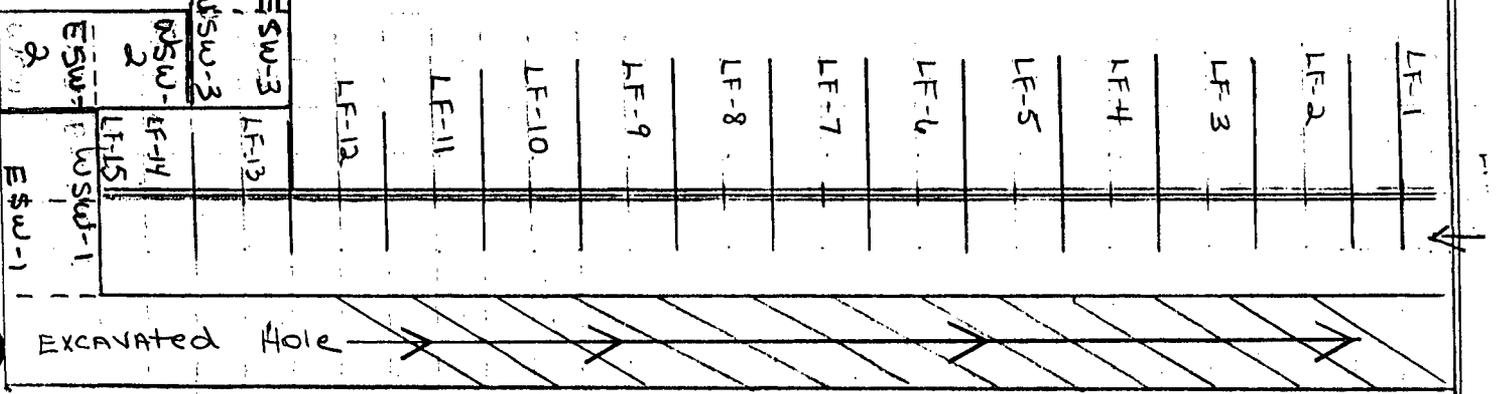
Date: Sept. 17, 1996  
SSV KCO

LF - 5 Aliquots / 50 Ft. composite  
SW - 7-8 Aliquots / 100 Ft. composite



= APPROX 50 Ft.

Pipeline  
LAB # 960917



WSW-5	WSW-6	WSW-7	WSW-4	SESW-3	ESW-1
ESW-5	ESW-6	ESW-7	ESW-4	NWESW-3	ESW-1
ESW-2	ESW-3	ESW-4	ESW-5	ESW-6	ESW-7

LEASE ROAD

Lease Road

Reverse Road

EXCAVATED HOLE

# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #3

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2636

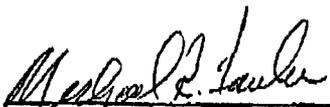
Receiving Date: 09/17/96  
Sample Type: SOIL  
Project: TNM 96-20  
Project Location: JAL, NM

Analysis Date: 09/18/96  
Sampling Date: 09/17/96  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/Kg)
8820	960917-LF5	<0.100	0.183	<0.100	0.368	0.230	5,690
8821	960917-LF6	<0.100	<0.100	0.112	0.118	0.268	1,250
8822	960917-LF7	<0.100	<0.100	<0.100	<0.100	<0.100	310
8823	960917-LF8	<0.100	<0.100	<0.100	<0.100	<0.100	640
8824	960917-ESW1	<0.100	<0.100	<0.100	<0.100	<0.100	160
8825	960917-WSW1	<0.100	<0.100	<0.100	<0.100	<0.100	<10 *
8826	960917-ESW2	<0.100	<0.100	<0.100	<0.100	<0.100	130
8827	960917-WSW2	<0.100	<0.100	<0.100	<0.100	<0.100	10
8828	960917-SESW3	<0.100	<0.100	<0.100	<0.100	<0.100	200
8829	960917-NWSW3	<0.100	<0.100	<0.100	<0.100	<0.100	10
8830	960917-ESW4	<0.100	<0.100	<0.100	0.164	<0.100	<10
8831	960917-WSW4	<0.100	<0.100	<0.100	0.150	<0.100	1,610
8832	960917-ESW5	<0.100	<0.100	<0.100	0.236	0.101	40
8833	960917-WSW5	0.260	<0.100	<0.100	0.162	<0.100	<10
8834	960917-ESW6	<0.100	<0.100	<0.100	0.179	<0.100	100
8835	960917-LF9	<0.100	<0.100	0.108	0.414	0.199	1,370
8836	960917-LF10	<0.100	<0.100	<0.100	0.174	<0.100	510
8837	960917-LF11	<0.100	0.185	0.148	0.414	0.196	2,470
8838	960917-LF12	<0.100	<0.100	<0.100	<0.100	<0.100	910
8839	960917-LF13	<0.100	0.229	0.205	0.360	0.105	1,150
8840	960917-LF14	<0.100	0.626	0.372	1.614	1.061	6,270
8841	960917-LF15	<0.100	<0.100	<0.100	<0.100	<0.100	170
8842	960917-WSW6	<0.100	<0.100	<0.100	<0.100	<0.100	10
8843	960917-ESW7	<0.100	<0.100	<0.100	<0.100	<0.100	40
8844	960917-WSW7	<0.100	<0.100	<0.100	<0.100	<0.100	10
% IA		108	92	88	83	84	101
% EA		113	95	88	85	84	87
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001	<10

MAP #3

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

9-20-96  
Date

# ENVIRONMENTAL LAB OF , INC.

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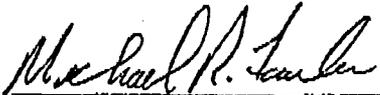
ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/kg)
8802	960917-BH1	<0.100	0.117	<0.100	0.204	0.240	110
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8811	960917-BH10	<0.100	0.115	<0.100	0.184	<0.100	540
8812	960917-BH11	<0.100	0.238	0.184	0.508	0.598	1,040
8813	960917-BH12	<0.100	<0.100	<0.100	<0.100	<0.100	880
8814	960917-BH13	<0.100	0.139	<0.100	0.285	0.155	1,180
8815	960917-BH14	<0.100	<0.100	<0.100	<0.100	<0.100	780
8816	960917-LF1	<0.100	0.123	<0.100	0.521	0.470	3,430
8817	960917-LF2	<0.100	<0.100	<0.100	0.139	0.158	1,310
8818	960917-LF3	<0.100	<0.100	<0.100	<0.100	<0.100	1,610
8819	960917-LF4	<0.100	<0.100	<0.100	<0.100	<0.100	140

MAP #2

MAP #3

% IA	102	89	86	82	82	102
% EA	107	96	90	89	88	87
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

9-20-96  
Date

TNM-96-20  
Sampling Sketch Map #4

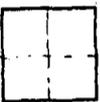


Date: Sept. 20, 1996

C4 LFB = Landfarm  
BH = Bottom hole  
SW = Sidewalls

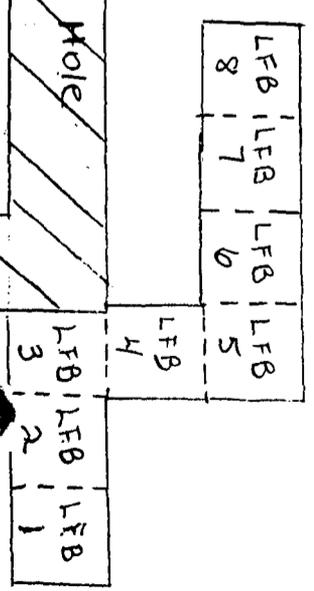
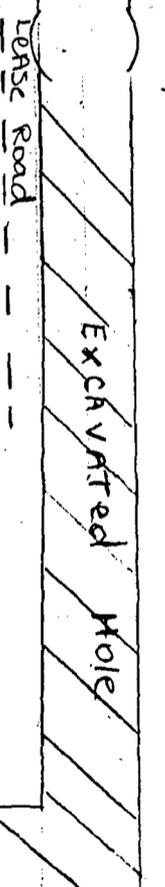
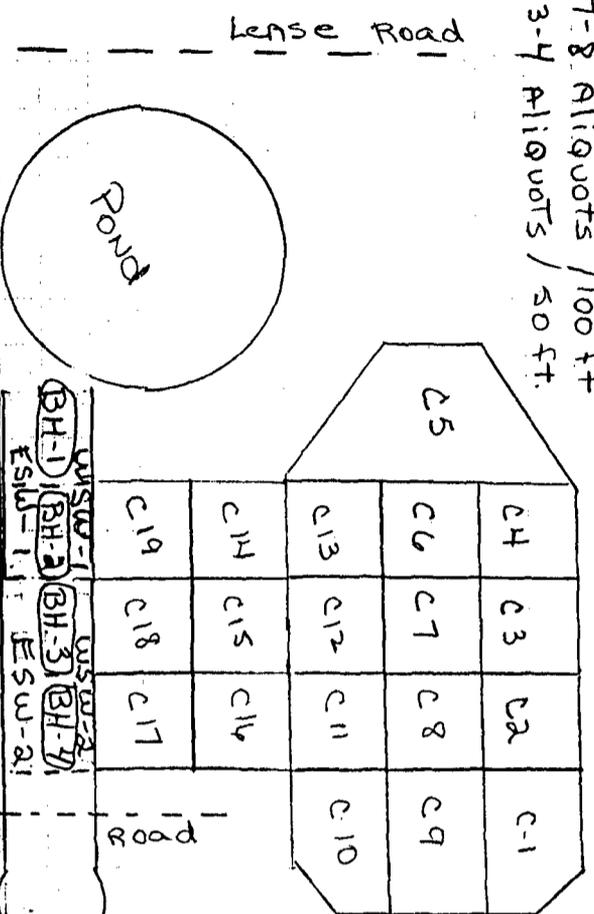
All Composites

Landfarm - 5 Aliquots / 50 sq ft  
SW - 7-8 Aliquots / 100 ft  
BH - 3-4 Aliquots / 50 ft.



= Approx 50 ft

LAB # 96 0920 -



# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #4

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2636

Receiving Date: 09/20/96  
Sample Type: SOIL  
Project: TNM 96-20  
Project Location: JAL, NM

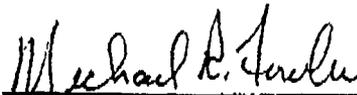
Analysis Date: 09/25/96  
Sampling Date: 09/20/96  
Sample Condition: Intact/Iced

map #4

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/Kg)
8931	960920-LFB1	<0.100	<0.100	<0.100	0.417	0.382	3,520
8932	960920-LFB2	<0.100	<0.100	<0.100	<0.100	<0.100	500
8933	960920-LFB3	<0.100	<0.100	<0.100	<0.100	<0.100	2,930
8934	960920-LFB4	<0.100	<0.100	<0.100	<0.100	<0.100	240
8935	960920-LFB5	<0.100	<0.100	<0.100	<0.100	<0.100	3,620
8936	960920-LFB6	<0.100	<0.100	<0.100	0.285	0.281	5,210
8937	960920-LFB7	<0.100	<0.100	<0.100	<0.100	<0.100	6,520
8938	960920-LFB8	<0.100	<0.100	<0.100	<0.100	<0.100	30

% IA	109	97	92	88	88	101
% EA	114	101	96	94	92	81
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

9-26-96  
Date

# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #4a

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2636

Receiving Date: 09/20/96  
Sample Type: SOIL  
Project: TNM 86-20  
Project Location: JAL, NM

Analysis Date: 09/23-9/25/96  
Sampling Date: 09/20/96  
Sample Condition: Intact/Iced

MAP #4

ELTW	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/Kg)
8912	960920-C1	<0.100	0.108	0.137	0.886	0.679	6,780
8913	960920-C2	<0.100	0.107	0.128	0.480	0.808	7,570
8914	960920-C3	<0.100	0.167	0.816	0.748	1.142	7,460
8915	960920-C4	0.109	<0.100	0.539	0.409	0.957	7,390
8916	960920-C5	0.210	0.782	0.271	2.280	2.200	11,200
8917	960920-C6	<0.100	0.248	0.153	1.340	0.982	11,800
8918	960920-C7	<0.100	<0.100	<0.100	<0.100	<0.100	5,210
8919	960920-C8	<0.100	<0.100	<0.100	<0.100	<0.100	6,110
8920	960920-C9	<0.100	<0.100	<0.100	0.142	<0.100	4,830
8921	960920-C10	<0.100	<0.100	<0.100	<0.100	0.142	3,680
8922	960920-C11	<0.100	<0.100	<0.100	<0.100	<0.100	6,220
8923	960920-C12	<0.100	<0.100	<0.100	0.131	<0.100	5,690
8924	960920-C13	<0.100	0.449	0.347	1.603	1.423	13,100
8925	960920-C14	<0.100	<0.100	<0.100	<0.100	<0.100	1,760
8926	960920-C15	<0.100	<0.100	<0.100	<0.100	<0.100	4,570
8927	960920-C16	<0.100	<0.100	<0.100	<0.100	<0.100	5,660
8928	960920-C17	<0.100	<0.100	<0.100	<0.100	<0.100	2,580
8929	960920-C18	<0.100	<0.100	<0.100	<0.100	<0.100	1,630
8930	960920-C19	<0.100	<0.100	<0.100	<0.100	<0.100	1,380

% IA	96	87	85	99	91	101
% EA	110	96	92	88	88	81
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

9-26-96  
Date

# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #4b

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2636

Receiving Date: 09/20/96  
Sample Type: SOIL  
Project: TNM 96-20  
Project Location: JAL, NM

Analysis Date: 09/21/96  
Sampling Date: 09/20/96  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/kg)	
MAP #4	8874	960920-BH1	<0.100	<0.100	<0.100	<0.100	<0.100	190
	8875	960920-BH2	<0.100	<0.100	<0.100	<0.100	<0.100	<10
	8876	960920-BH3	<0.100	<0.100	<0.100	0.122	<0.100	230
	8877	960920-BH4	<0.100	<0.100	<0.100	<0.100	<0.100	610
	8878	960920-BH5	<0.100	<0.100	<0.100	<0.100	<0.100	260
	8879	960920-BH6	<0.100	<0.100	<0.100	<0.100	<0.100	310
	8880	960920-BH7	<0.100	<0.100	<0.100	<0.100	<0.100	2,670
	8881	960920-BH8	<0.100	<0.100	<0.100	0.158	<0.100	3,350
	8882	960920-BH9	<0.100	<0.100	<0.100	0.142	<0.100	3,680
	8883	960920-BH10	<0.100	1.742	5.350	16.060	6.675	11,000
MAP #5	8884	960920-BH11	<0.100	0.130	<0.100	<0.100	<0.100	1,550
	8885	960920-BH12	<0.100	0.259	0.100	0.341	0.246	1,130
	8886	960920-BH13	0.202	0.143	0.134	0.417	0.251	1,290
	8887	960920-BH14	<0.100	<0.100	<0.100	0.369	0.361	4,230
	8888	960920-BH15	<0.100	<0.100	0.129	0.447	0.127	1,370
	8889	960920-BH16	<0.100	<0.100	<0.100	<0.100	<0.100	130
	8890	960920-BH17	2.218	58.660	42.840	104.400	36.630	32,900
	8891	960920-BH18	<0.100	<0.100	<0.100	<0.100	<0.100	110

% IA	131	113	107	102	102	103
% EA	132	117	112	109	108	83
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

9-20-96  
Date

TNM 96-20  
Sampling Sketch MAP #5

Date: Sept. 20, 1996

BH = Bottom Hole - 3-4 Aliquots / 50 ft.

All Composites

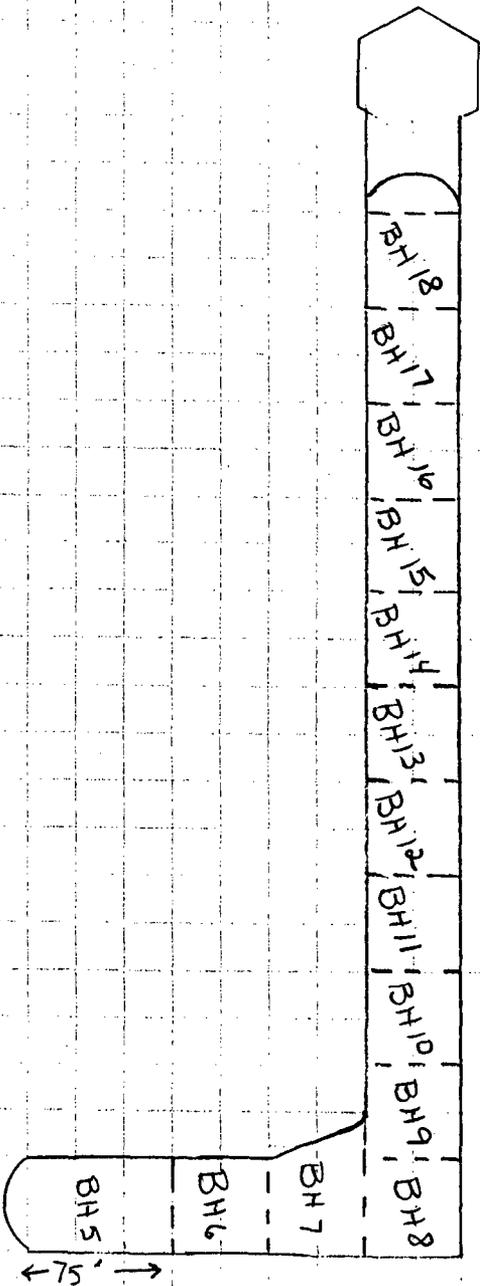
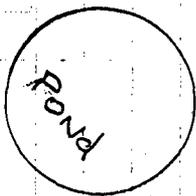


= APPROX 50 ft



LEASE ROAD

LEASE ROAD



LAB. # 960920 -

# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #5

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2636

Receiving Date: 09/20/96  
Sample Type: SOIL  
Project: TNM 96-20  
Project Location: JAL, NM

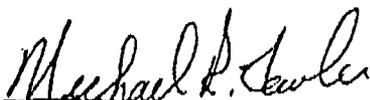
Analysis Date: 09/21/96  
Sampling Date: 09/20/96  
Sample Condition: Intact/Iced

SEE MAP #4  
MAP #5

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/kg)
8874	960920-BH1	<0.100	<0.100	<0.100	<0.100	<0.100	190
8875	960920-BH2	<0.100	<0.100	<0.100	<0.100	<0.100	<10
8876	960920-BH3	<0.100	<0.100	<0.100	0.122	<0.100	230
8877	960920-BH4	<0.100	<0.100	<0.100	<0.100	<0.100	610
8878	960920-BH5	<0.100	<0.100	<0.100	<0.100	<0.100	260
8879	960920-BH6	<0.100	<0.100	<0.100	<0.100	<0.100	310
8880	960920-BH7	<0.100	<0.100	<0.100	<0.100	<0.100	2,670
8881	960920-BH8	<0.100	<0.100	<0.100	0.158	<0.100	3,350
8882	960920-BH9	<0.100	<0.100	<0.100	0.142	<0.100	3,880
8883	960920-BH10	<0.100	1.742	5.350	16.060	6.675	11,000
8884	960920-BH11	<0.100	0.130	<0.100	<0.100	<0.100	1,550
8885	960920-BH12	<0.100	0.259	0.100	0.341	0.248	1,130
8886	960920-BH13	0.202	0.143	0.134	0.417	0.251	1,290
8887	960920-BH14	<0.100	<0.100	<0.100	0.369	0.361	4,230
8888	960920-BH15	<0.100	<0.100	0.129	0.447	0.127	1,370
8889	960920-BH16	<0.100	<0.100	<0.100	<0.100	<0.100	130
8890	960920-BH17	2.218	58.660	42.840	104.400	36.630	32,900
8891	960920-BH18	<0.100	<0.100	<0.100	<0.100	<0.100	110

% IA	131	113	107	102	102	103
% EA	132	117	112	109	108	83
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

9-20-96  
Date

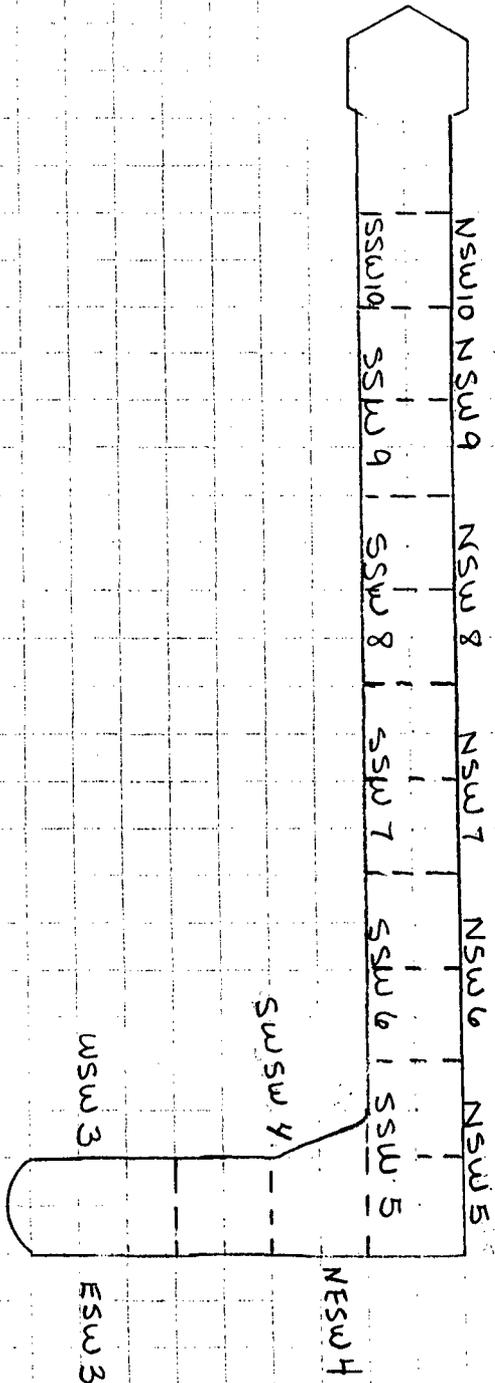
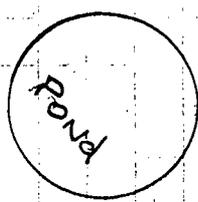
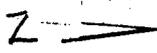
INM 96-20  
Sampling Sketch MAP #6

Date: Sept 20, 1996

SW = Sidewalls - 7-8 Aliquots / 100 ft

All composites

 = Approx 50 ft



LAR # 960920 -

# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #6

"Don't Treat Your Soil Like Dirt!"

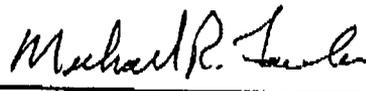
TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2636

Receiving Date: 09/20/96  
Sample Type: SOIL  
Project: TNM 96-20  
Project Location: JAL, NM

Analysis Date: 09/23/96  
Sampling Date: 09/20/96  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/kg)
8892	960920-WSW1	<0.100	<0.100	<0.100	<0.100	<0.100	110
8893	960920-ESW1	<0.100	2.474	3.244	9.889	3.878	5,550
8894	960920-WSW2	<0.100	<0.100	<0.100	<0.100	<0.100	490
8895	960920-ESW2	<0.100	<0.100	<0.100	<0.100	<0.100	330
8896	960920-ESW3	<0.100	<0.100	<0.100	<0.100	<0.100	60
8897	960920-WSW3	<0.100	<0.100	<0.100	0.137	0.277	370
8898	960920-NEsw4	<0.100	<0.100	<0.100	0.109	0.105	2,330
8899	960920-SWSW4	<0.100	<0.100	<0.100	<0.100	<0.100	130
8900	960920-NSW5	<0.100	<0.100	<0.100	<0.100	<0.100	430
8901	960920-SSW5	<0.100	0.132	0.112	0.746	0.781	5,280
8902	960920-NSW6	0.117	<0.100	0.716	0.298	0.137	800
8903	960920-SSW6	<0.100	<0.100	<0.100	0.792	0.244	2,390
8904	960920-NSW7	<0.100	0.174	0.197	0.412	0.375	3,350
8905	960920-SSW7	<0.100	0.146	0.164	1.233	0.925	5,150
8906	960920-NSW8	<0.100	<0.100	<0.100	0.420	0.286	2,980
8907	960920-SSW8	0.278	0.128	0.347	0.263	0.463	2,510
8908	960920-NSW9	<0.100	<0.100	0.695	0.585	0.190	210
8909	960920-SSW9	<0.100	<0.100	0.155	0.124	0.127	360
8910	960920-NSW10	0.246	0.135	1.174	0.840	1.248	40
8911	960920-SSW10	<0.100	<0.100	<0.100	<0.100	0.139	40
% IA		113	100	95	92	89	103
% EA		113	96	92	87	87	81
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

  
Michael R. Fowler

9-26-96  
Date



TNM 96-20

LANDFARM SAMPLING  
Sketch MAP # 7

DATE: Sept. 23, 1996

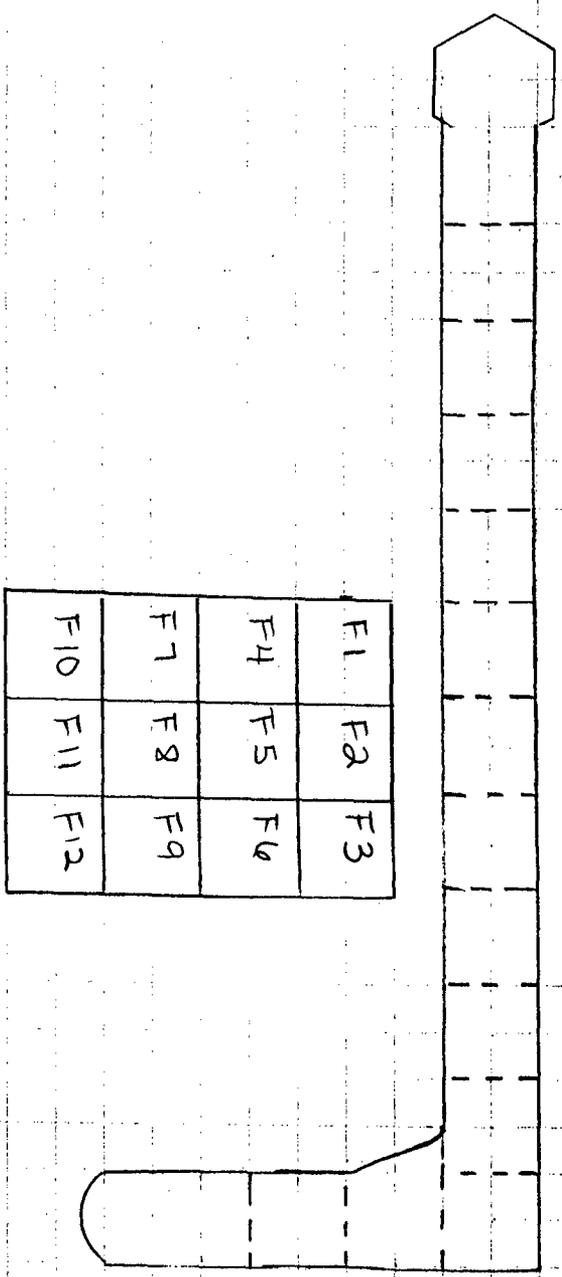
Composites - 5 aliquots/soil

LAB # - Landfarm.

E1	E2	E3	E4	E5	E6	E7	E8
E9	E10	E11	E12	E13	E14	E15	E16
E17	E18	E19	E20	E21	E22	E23	E24
E25	E26	E27	E28	E29	E30	E31	E32

D1	D2	D3	D4	D5	D6	D7
D8	D9	D10	D11			

POND



F1	F2	F3
F4	F5	F6
F7	F8	F9
F10	F11	F12

# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #7

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2636

Receiving Date: 09/23/96  
Sample Type: SOIL  
Project: TNM 96-20  
Project Location: JAL, NM

Analysis Date: TPH 09/24/96  
Analysis Date: BTEX 0925/96  
Sampling Date: NONE GIVEN  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/kg)
8969	LANDFARM D #1	<0.100	<0.100	<0.100	<0.100	<0.100	3,130
8970	LANDFARM D #2	<0.100	<0.100	<0.100	<0.100	0.140	2,240
8971	LANDFARM D #3	<0.100	<0.100	<0.100	<0.100	<0.100	1,280
8972	LANDFARM D #4	<0.100	<0.100	<0.100	0.260	<0.100	950
8973	LANDFARM D #5	<0.100	<0.100	<0.100	0.199	<0.100	4,640
8974	LANDFARM D #6	<0.100	<0.100	<0.100	<0.100	<0.100	2,500
8975	LANDFARM D #7	<0.100	<0.100	<0.100	<0.100	<0.100	3,810
8976	LANDFARM D #8	<0.100	<0.100	<0.100	<0.100	<0.100	1,080
8977	LANDFARM D #9	<0.100	<0.100	<0.100	<0.100	<0.100	830
8978	LANDFARM D #10	<0.100	<0.100	<0.100	<0.100	<0.100	6,130
8979	LANDFARM D #11	<0.100	0.134	<0.100	0.105	<0.100	5,980
8980	LANDFARM E #1	<0.100	<0.100	<0.100	<0.100	<0.100	460
8981	LANDFARM E #2	<0.100	<0.100	<0.100	<0.100	<0.100	210
8982	LANDFARM E #3	<0.100	<0.100	<0.100	<0.100	<0.100	350
8983	LANDFARM E #4	<0.100	<0.100	<0.100	<0.100	<0.100	1,780
8984	LANDFARM E #5	<0.100	<0.100	<0.100	<0.100	<0.100	2,770
8985	LANDFARM E #6	<0.100	<0.100	<0.100	<0.100	<0.100	3,130
8986	LANDFARM E #7	<0.100	<0.100	<0.100	<0.100	<0.100	20
8987	LANDFARM E #8	<0.100	<0.100	<0.100	<0.100	<0.100	460
8988	LANDFARM E #9	<0.100	0.114	0.125	0.273	<0.100	1,970
8989	LANDFARM E #10	<0.100	<0.100	<0.100	<0.100	<0.100	740
8990	LANDFARM E #11	<0.100	<0.100	<0.100	<0.100	<0.100	650
8991	LANDFARM E #12	<0.100	<0.100	<0.100	<0.100	<0.100	640
8992	LANDFARM E #13	<0.100	<0.100	<0.100	0.118	<0.100	2980
8993	LANDFARM E #14	<0.100	<0.100	<0.100	<0.100	<0.100	6150
8994	LANDFARM E #15	<0.100	<0.100	<0.100	<0.100	<0.100	5080
8995	LANDFARM E #16	<0.100	<0.100	<0.100	<0.100	<0.100	5040
	% IA	110	97	91	89	88	101
	% EA	108	100	95	93	91	101
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

MAP #7

METHODS: SW 846-8020,5030 , EPA 418.1



Michael R. Fowler

7-27-96

Date

# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #7a

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2636

Receiving Date: 09/23/96  
Sample Type: SOIL  
Project: TNM 96-20  
Project Location: JAL, NM

Analysis Date: TPH 09/25/96  
Analysis Date: BTEX 09/26/96  
Sampling Date: NONE GIVEN  
Sample Condition: Intact/Iced

MAP # 7

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/kg)
8996	LANDFARM E #17	<0.100	<0.100	<0.100	<0.100	<0.100	3,560
8997	LANDFARM E #18	<0.100	<0.100	<0.100	<0.100	<0.100	5,060
8998	LANDFARM E #19	<0.100	<0.100	<0.100	<0.100	<0.100	1,730
8999	LANDFARM E #20	<0.100	<0.100	<0.100	<0.100	<0.100	3,730
9000	LANDFARM E #21	<0.100	<0.100	<0.100	<0.100	<0.100	2,520
9001	LANDFARM E #22	<0.100	<0.100	<0.100	<0.100	<0.100	4,920
9002	LANDFARM E #23	<0.100	<0.100	<0.100	<0.100	<0.100	3,500
9003	LANDFARM E #24	<0.100	<0.100	<0.100	<0.100	<0.100	7,790
9004	LANDFARM E #25	<0.100	<0.100	<0.100	<0.100	<0.100	120
9005	LANDFARM E #26	<0.100	<0.100	<0.100	<0.100	<0.100	3,830
9006	LANDFARM E #27	<0.100	<0.100	<0.100	<0.100	<0.100	150
9007	LANDFARM E #28	<0.100	<0.100	<0.100	<0.100	<0.100	3,170
9008	LANDFARM E #29	<0.100	<0.100	<0.100	<0.100	<0.100	970
9009	LANDFARM E #30	<0.100	<0.100	<0.100	<0.100	<0.100	3,320
9010	LANDFARM E #31	<0.100	<0.100	<0.100	<0.100	<0.100	1,650
9011	LANDFARM E #32	<0.100	<0.100	<0.100	<0.100	<0.100	40

% IA	113	101	100	95	94	103
% EA	102	94	91	87	87	101
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , EPA 418.1

*Michael R. Fowler*

Michael R. Fowler

9-27-96

Date

# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #7b

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2638

Receiving Date: 09/23/96  
Sample Type: SOIL  
Project: TNM 96-20  
Project Location: JAL, NM

Analysis Date: TPH 09/25/96  
Analysis Date: BTEX 09/27/96  
Sampling Date: NONE GIVEN  
Sample Condition: Intact/Iced

MAP #7

ELT#	FIELD CODE	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYLBENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TPH (mg/kg)
9012	LANDFARM F #1	<0.100	<0.100	<0.100	<0.100	<0.100	4,860
9013	LANDFARM F #2	<0.100	<0.100	<0.100	<0.100	<0.100	480
9014	LANDFARM F #3	<0.100	<0.100	<0.100	<0.100	<0.100	1,120
9015	LANDFARM F #4	<0.100	<0.100	<0.100	<0.100	<0.100	1,980
9016	LANDFARM F #5	<0.100	1.021	1.217	0.240	0.934	2,580
9017	LANDFARM F #6	<0.100	0.202	0.254	2.513	1.741	14,300
9018	LANDFARM F #7	<0.100	<0.100	<0.100	<0.100	<0.100	1,450
9019	LANDFARM F #8	<0.100	<0.100	<0.100	<0.100	<0.100	4,680
9020	LANDFARM F #9	<0.100	<0.100	<0.100	<0.100	<0.100	640
9021	LANDFARM F #10	<0.100	<0.100	<0.100	<0.100	<0.100	20
9022	LANDFARM F #11	<0.100	<0.100	<0.100	<0.100	<0.100	110
9023	LANDFARM F #12	<0.100	<0.100	<0.100	<0.100	<0.100	4,100

% IA	106	95	92	86	86	103
% EA	101	91	88	84	84	101
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 . EPA 418.1

*Michael R. Fowler*

Michael R. Fowler

9-27-96

Date

# ENVIRONMENTAL LAB OF , INC.

LAB RESULTS #8

"Don't Treat Your Soil Like Dirt!"

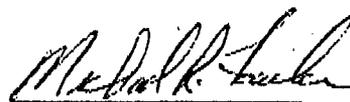
TEXAS NEW MEXICO PIPELINE CO.  
MR. TONY SAVOIE  
P.O. BOX 1030  
JAL, NEW MEXICO 88252  
FAX: 505-395-2636

RECEIVING DATE: 09/30/96  
SAMPLE TYPE: SOIL  
PROJECT #: ALLSTATE TNM 96-20  
PROJECT NAME: TNM 96-20  
PROJECT LOCATION: NONE GIVEN

ANALYSIS DATE: 09/30/96  
SAMPLING DATE: 09/30/96  
SAMPLE CONDITION: INTACT/ICED

ELT#	FIELD CODE	TPH (mg/kg)
9080	SW1-A 96-30	100
9081	ESW2-A 96-30	80
9082	SSW5-A 96-30	70
9083	SSW7-A 96-30	60
9084	BH10-A 96-30	70
9085	BH17-A 96-30	120
	QUALITY CONTROL	300
	TRUE VALUE	302
	% PRECISION	99

Methods: EPA 418.1

  
Michael R. Fowler

9-30-96  
Date

TNN-96-20  
Sampling Sketch Map #4

Date: Sept. 20, 1996



C4 LFB = Landfarm  
BH = Bottom hole  
SW = Sidewalls

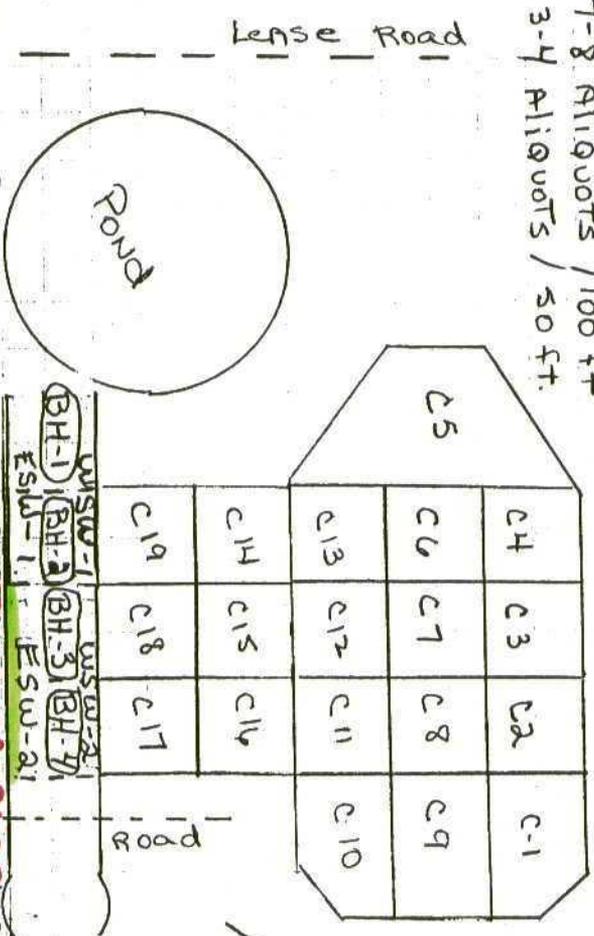
All Composites  
Landfarm - 5 Aliquots / 50 sq ft  
SW - 7-8 Aliquots / 100 ft  
BH - 3-4 Aliquots / 50 ft.



= Approx 50 ft

LAB # 96 0920 -

1 = HOT SPOTS  
Resampled



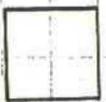
ESW-1 (BH-1) ESW-2 (BH-2) ESW-3 (BH-3) ESW-4 (BH-4)  
ESW-1 (BH-1) ESW-2 (BH-2) ESW-3 (BH-3) ESW-4 (BH-4)

ESW2-A 96-30 Lease Road

EXCAVATED HOLE

LFB	LFB	LFB
8	7	6

Turn 96-20  
Sampling Sketch Map #6

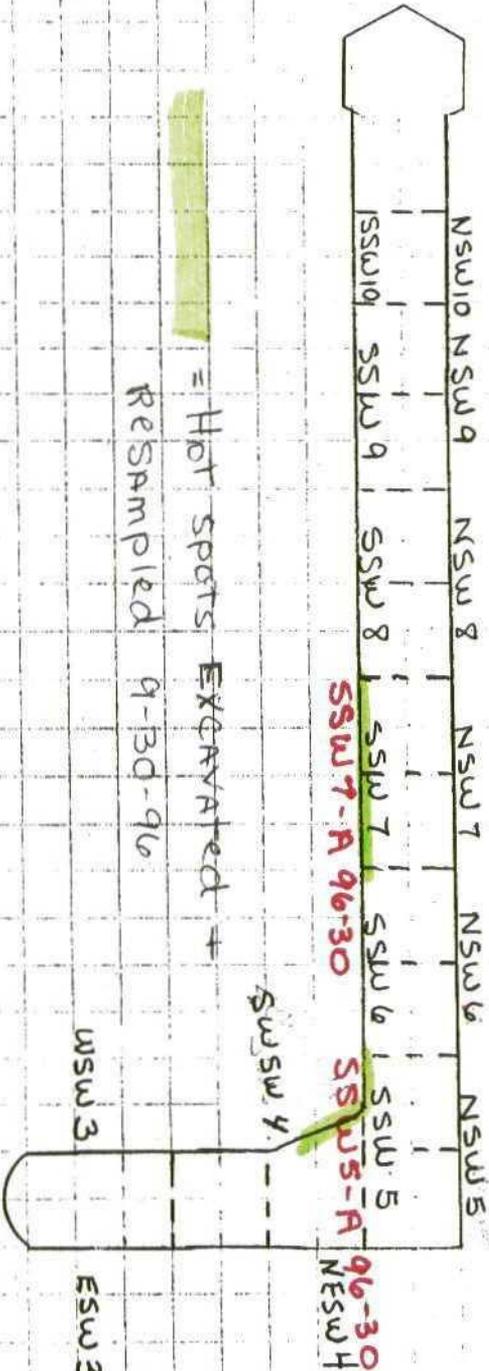
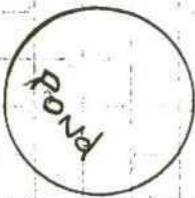
 = Approx  
50 ft



Date: Sept 20, 1996

SW = Sidewalls - 7-8 Aliquots / 100 ft

LFB # 960920 -



 = Hot spots EXCAVATED +  
RESAMPLED 9-30-96

TNM 9e-20  
Sampling Sketch MAP #5

Date: Sept. 20, 1996

All Composites

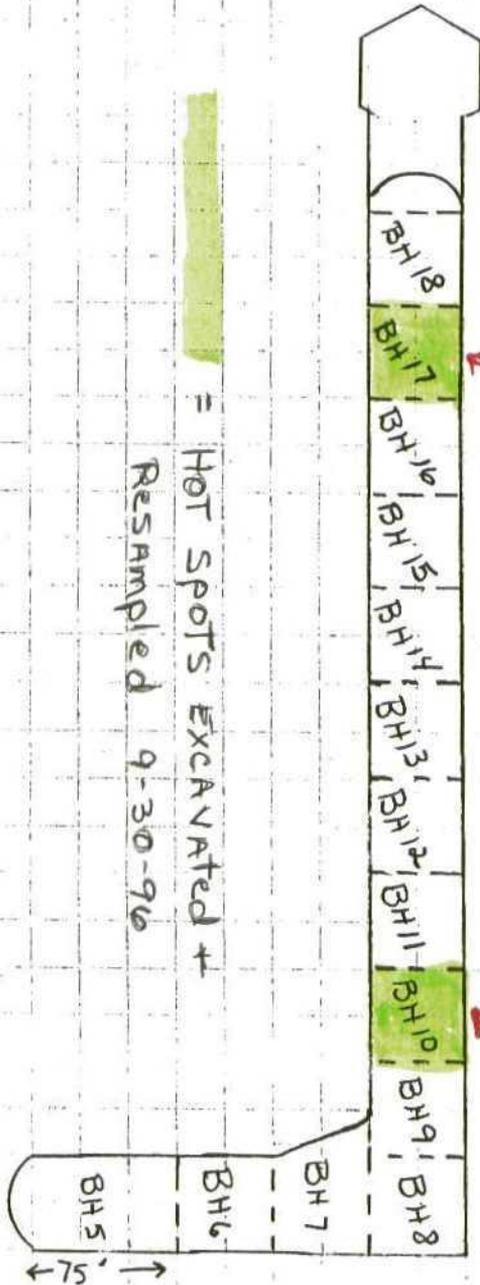
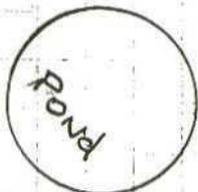
BH = Bottom Hole - 3-4 Aliquots / 50 ft.

 = Approx 50 ft

N 

Lease Road

Lease Road



BH17-A 96-30

BH10-A 96-30

LAB. # 960920 -

 = HOT SPOTS EXCAVATED +  
Resampled 9-30-96

TNM 96-20  
Sampling Sketch Map #1

Pipeline

LAB # 960916 - BH-1

ORIGIN OF Release

SW-1 (Comp both sides)  
SW-1-A 96-30

BH = Btm Hole

SW = Side walls

NSW = North sidewall

SSW = South sidewall

DATE: Sept 16, 1996

SSV KCO

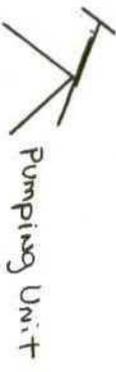
BH - 3-4 Aliquots / 50 ft - composited

SW - 7-8 Aliquots / 100 ft. Each side - composited



= APPROX 50 ft.

[Green box] = HOT SPOTS EXCAVATED + Resampled  
9-30-96



Pumping Unit

Lease Road

ROAD 25A77

ROAD 25A77

Lease Road

BH-2		
BH-3		NSW-2 SSW-2
BH-4		
BH-5		NSW-3 SSW-3
BH-6		
BH-7		NSW-4 SSW-4
BH-8		
BH-9		NSW-5 SSW-5
BH-10		
BH-11		NSW-6 SSW-6
12		
13		NSW-7 SSW-7
14		
15		NSW-8 SSW-8





# Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763

(915) 563-1800 FAX (915) 563-1713

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: *Handy Offield* Phone #: 915/682-3546  
 FAX #: 915/682-4182

### ANALYSIS REQUEST

Company Name & Address: ALLSTATE SERVICES ENVIRONMENTAL, MIDLAND, TEXAS

Project #: *THM96-20* Project Name: *THM96-20*

Project Location: *Del. NY* Sampler Signature: *Handy Offield*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX						DATE	TIME	REMARKS
				WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD			
8885	960920 - BH12			✓						9/20 1:55		BTEX 8020/5030 TPH 418.1
8886	960930 - BH13			✓						9/20 2:00		TCLP Metals Ag As Ba Cd Cr Pb Hg Se Total Metals Ag As Ba Cd Cr Pb Hg Se
8887	960920 - BH14			✓						9/20 2:02		TCLP Volatiles TCLP Semi Volatiles
8888	960920 - BH15			✓						9/20 2:05		TDS RCI
8889	960920 - BH16			✓						9/20 2:10		
8890	960920 - BH17			✓						9/20 2:15		
8891	960920 - BH18			✓						9/20 2:20		

Relinquished by: <i>Handy Offield</i>	Date: <i>9/20/96</i>	Times: <i>10:00</i>	Received by: <i>Rala de Jesus</i>
Relinquished by:	Date:	Times:	Received by:
Relinquished by:	Date:	Times:	Received by Laboratory:











# Environmental Lab of Texas, Inc. 12600 West 120 East Odessa, Texas 79763

(915) 563-1800 FAX (915) 563-1713

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Tony Savoie

Phone #:

FAX #:

Company Name & Address:

Texas New Mexico Pipe Line

Project Name:

Alstake. TUM 96-20

Sampler Signature:

Project Location:

Project #:

MATRIX

PRESERVATIVE METHOD

SAMPLING

LAB # (LAB USE ONLY)

FIELD CODE

# CONTAINERS

Volume/Amount

WATER  
SOIL  
AIR  
SLUDGE  
OTHER

HCL  
HNO3  
ICE  
NONE  
OTHER

DATE

TIME

BTEX 8020/5030

TPH 418.1

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

Total Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

TDS

RCI

ANALYSIS REQUEST

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX	PRESERVATIVE METHOD	SAMPLING	DATE	TIME	REMARKS
9080	SW 1-A	1	9630	X	X	9-30-96	13:00	X	
9081	ESW 2-A	1	96-30	X	X	9-30-96	13:13	X	
9082	SSW 5-A	1	96-30	X	X	9-30-96	13:56	X	
9083	SSW 7-A	1	96-30	X	X	9-30-96	13:30	X	
9084	RH 10-A	1	96-30	X	X	9-30-96	13:40	X	
9085	RH 17-A	1	96-30	X	X	9-30-96	13:18	X	

Relinquished by:

*R. Sullivan*

Date:

9-30-96

Times:

1530

Received by:

*Roland (G) ...*

REMARKS

Relinquished by:

Date:

Times:

Received by Laboratory:

# Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763 (915) 563-1800 FAX (915) 563-1713

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Phone #: FAX #:

### ANALYSIS REQUEST

Company Name & Address: TUMD Project Name: TUMD

Project #: TUMD 96-20 Project Location: DR New Mex Sampler Signature: *[Signature]*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX PRESERVATIVE METHOD							DATE	TIME	
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3			ICE
819-8179	LAND FARM 'D'											✓	
	#1 - #11												
819-9011	LAND FARM 'E'											✓	
	#1 - #32												
902-9023	LAND FARM 'F'											✓	
	#1 - #12												

Relinquished by:	Date:	Times:	Received by:	REMARKS

Relinquished by:	Date:	Times:	Received by:

Relinquished by:	Date:	Times:	Received by Laboratory:
<i>[Signature]</i>	9-23-96	1602	<i>[Signature]</i>















# Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763

(915) 563-1800 FAX (915) 563-1713

## CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

*Randy Offield*

Phone #: 915/682-3546  
FAX #: 915/682-4182

ANALYSIS REQUEST

Company Name & Address:

ALLSTATE SERVICES ENVIRONMENTAL, MIDLAND, TEXAS

Project #: TMM

916-20

Project Name:

Tex N.Mex PPL

Project Location:

JAI, NM

Sampler Signature:

*[Signature]*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX						PRESERVATIVE METHOD					DATE	TIME	REMARKS
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICE	NONE	OTHER				
8824	9160917-ESW1			✓										9-17	10:39	BTEX 8020/5030 TPH 418.1 TCLP Metals Ag As Ba Cd Cr Pb Hg Se Total Metals Ag As Ba Cd Cr Pb Hg Se TCLP Volatiles TCLP Semi Volatiles TDS RCI	
8825	9160917-WSW1			✓										9-17	10:40		
8826	9160917-ESW2			✓										9-17	10:45		
8827	9160917-WSW2			✓										9-17	10:47		
8828	9160917-SESW3			✓										9-17	10:55		
8829	9160917-NWSW3			✓										9-17	11:00		
8830	9160917-ESW4			✓										9-17	11:06		
8831	9160917-WSW4			✓										9-17	11:10		
8832	9160917-ESW5			✓										9-17	11:45		
8833	9160917-WSW5			✓										9-17	11:50		
8834	9160917-ESW6			✓										9-17	11:59		

Relinquished by:

*[Signature]*

Date:

9-17-96

Times:

16:03

Received by:

*Rolando J...*

REMARKS

Relinquished by:

*[Signature]*

Date:

Times:

Received by:

Received at laboratory:



## GROUND WATER ASSESMENT

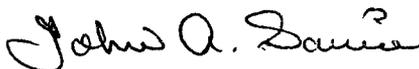
A copy of the State Engineers office estimated the depth to Ground water at 51.69 ft. Wayne Price with the N.M.O.C.D. office was contacted prior to 8/13/96 and advised that Texas New Mexcio Pipe Line co. intended to install 1 monitor well to confirm the depth to ground water and document the lithology.

The monitor well was located within 20 ft and down gradient of the deepest part of the excavation.

The Monitor well was completed, developed and sampled on 8/13/96.

Ground water depth at the time of sampling was 63.35 ft. The monitor well has been checked one time since installation on 10/14/96 depth to water was 63.28 ft.

See attachment dated August 16, 1996 for more detail



JOHN A. SAVOIE

TEXAS NEW MEXICO PIPE LINE CO.

November 2, 1996

August 16, 1996

Allstate Services Environmental  
Attention: K. C. Offield  
P. O. Box 11322  
Midland, Texas 79702

Re: TNM 96-20  
Monitor Well No. 1  
Section 18, T25S, R36E  
Lea County, New Mexico

Dear Ms. Offield:

Attached is material associated with the rock boring descriptions on the subject Monitor Well. This includes the following:

1. Wellbore rock description with well name, location, total depth, elevation, and color code.
2. Topographic map with wellbore location, Scale 1" = 2000'.
3. Insert from Bureau of Economic Geology, Austin, Texas publication "Geologic Atlas of Texas", Hobbs Sheet, Scale 1" = 250,000' - published 1976 to aid in identifying surface rock units and their age.

The attached Geologic Atlas Map (Hobbs Sheet) indicates Monitor Well (96-20) to be located on Quaternary colluvial deposits of Holocene (Recent) age. Its coordinate location is unknown at present. The estimated surface location is 1980 feet from the south line and 660 feet from the west line of Section 18, T25S, R36E, one mile northwest of Jal, Lea County, New Mexico. Elevation is approximately 3125 feet.

Examination of well bore cuttings from the subject well indicates probable Quaternary deposits from surface to 27 feet, at which point a maroon (or red) shale is encountered. The shale is approximately seven (7) feet thick and is immediately underlain by a pink siltstone. An impervious red and green shale, five feet thick, underlays the siltstone and overlays a clean, angular, well sorted, friable watersand, topped at 50 feet. The sandstone showed no visible traces of contamination by hydrocarbons. Continued sandstone and siltstone deposition was found to total depth of 75 feet.

Samples on the 96-20 are returned to your office with this report.

Yours truly,



Dwayne Hamilton

DATE: 12/04/95

PROVISIONAL GROUNDWATER DATA LEA COUNTY.

PAGE1207

SITE ID: 320745103113401  
LOCATION: 255.37E.18.242221  
OTHER ID: 11655  
ELEVATION: 3099.80  
USE: H  
DEPTH:  
GEO. UNIT: 110AVMB

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 02, 1965	54.06 R	DEC 16, 1970	52.62 R
	HIGHEST --		
	LOWEST --		

SITE ID: 320726103115001  
LOCATION: 255.37E.18.412423  
OTHER ID: 11656  
ELEVATION: 3096.40  
USE: R  
DEPTH: 70  
GEO. UNIT: 110AVMB

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 29, 1965	53.39	JAN 06, 1976	49.48 S
	HIGHEST 53.39	OCT 29, 1965	
	LOWEST 53.39	OCT 29, 1965	

SITE ID: 320730103114801  
LOCATION: 255.37E.18.421110  
OTHER ID: 11657  
ELEVATION: 3107.20  
USE: R  
DEPTH: 100  
GEO. UNIT: 110AVMB

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
OCT 29, 1965	63.82	DEC 16, 1970	61.42 S	MAR 30, 1981	58.25	JUN 11, 1991	52.94
FEB 29, 1968	62.85	JAN 06, 1976	60.31 S	MAR 13, 1986	54.41	<i>Feb 14, 1996</i>	<i>51.69</i>
	HIGHEST 52.94	JUN 11, 1991					
	LOWEST 63.82	OCT 29, 1965					

DATE: 12/04/95

PROVISIONAL GROUNDWATER DATA LEA COUNTY.

PAGE1208

SITE ID: 320722103114601  
LOCATION: 255.37E.18.423123

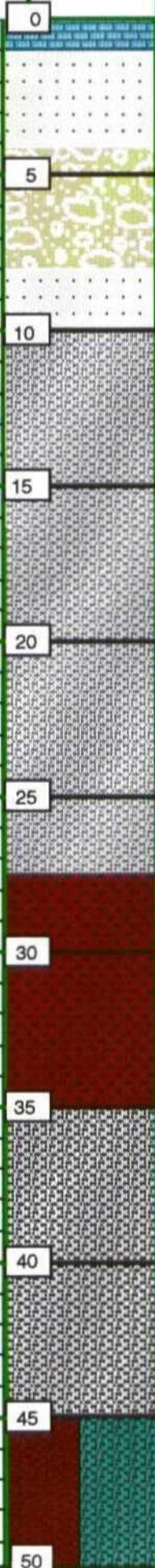
Lithology Symbols:

- SS . . . . .
- Slit 
- Sh 
-  black green
-  brown
- Dolo 
- Congl 
- Clay 
- Meta 
- Chert 
- Ign \* \* \* \* \*

DRILL RATE  
MPF  
n/a

DEPTH  
LITHOLOGY

DESCRIPTION



LS (Caliche) SS-(50/50 each) abundant chalcedony Inclus.  
SS - clear - fn - med - rounded (aeolian)

SS - brn-red, lots of clay, fn-med very loose & friable

Conglomerate - caliche pebbles in red sand & shale matrix

SS yellow, friable, fn-med - sub angular  
SS - gray - quartzitic - hard - well cemented w quartz

Siltstone wh-gray calcareous

Siltstone as above

Siltstone as above more pink some ss. med. gr. - some sh. pink

Siltstone as above more sh red-maroon

Sh, red-maroon - fissile mixed with siltstone as above

Siltstone buff -pinkish - some ss fn pink

Siltstone - as above - calc w/some ls pebble inclusions

Sh. maroon - green - waxy w/clay ductile w/cinnabar looking rust colored inclusions - appears impervious

County: Lea  
Elevation: 3125' (EST)  
Location: 1980' FSL 660' FWL T25S R36E  
Coordinates:  
Monitor  Water  or Test Well   
Other

Station  M  
Operator: TNM 96-20  
Total Depth 75'

Rotary  Mud  Air   
Cable Tool

N/M

Operator: TNM 96-20  
Total Depth 75'

County: Lea  
Elevation: 3125' (EST)  
Location: 1980' FSL 660' FWL T25S R36E

Rotary  Mud  Air   
Cable Tool

Monitor  Water  or Test Well   
Other

Lithology Symbols:

- SS
- Sh
- gray black green  
maroon brown
- Ls
- Dolo
- Congl
- Clay
- Meta
- Chert
- Ign

DRILL RATE MPF N/A	DEPTH	LITHOLOGY
	50	
	55	
	60	
	65	
	70	
	75	

Ss - buff - rouge, fn - fri, calc, silty

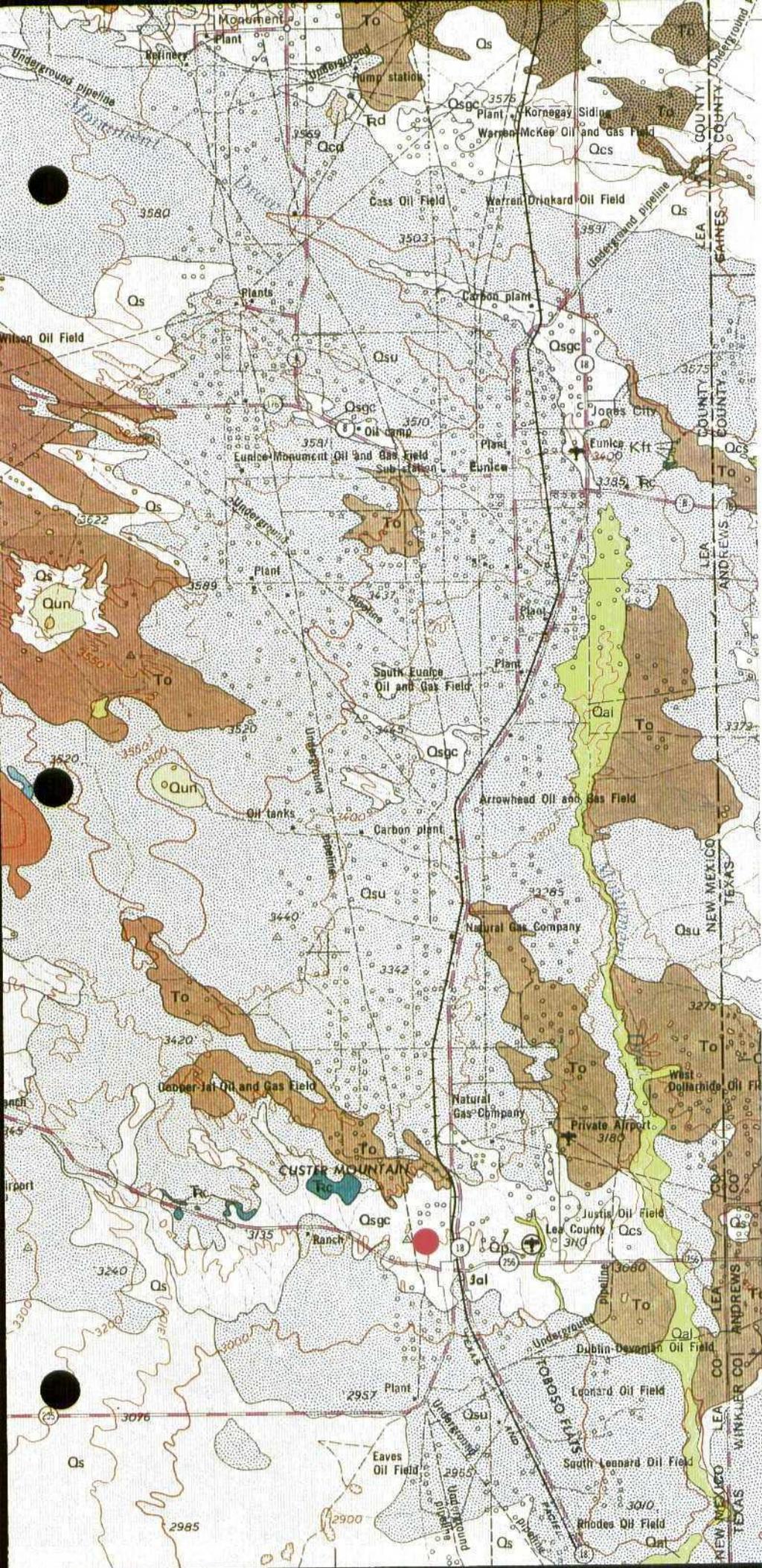
Ss as above ang

Sh - gry - gn - silty - waxy to pressure

Ss fir ang clear to pk fri - cemented - calc

siltstone - pk - grn - calc  
shly - calc

TD 75'

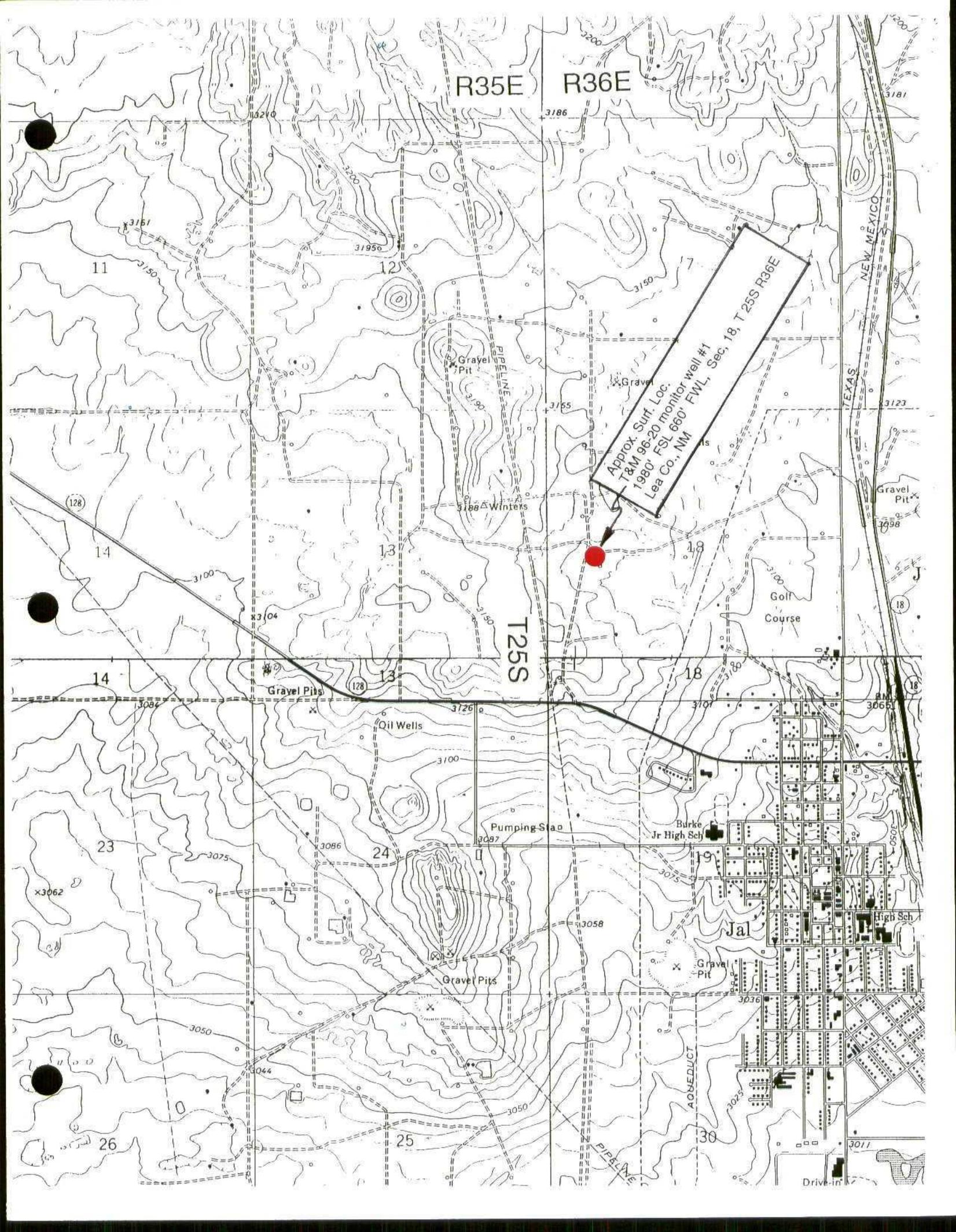


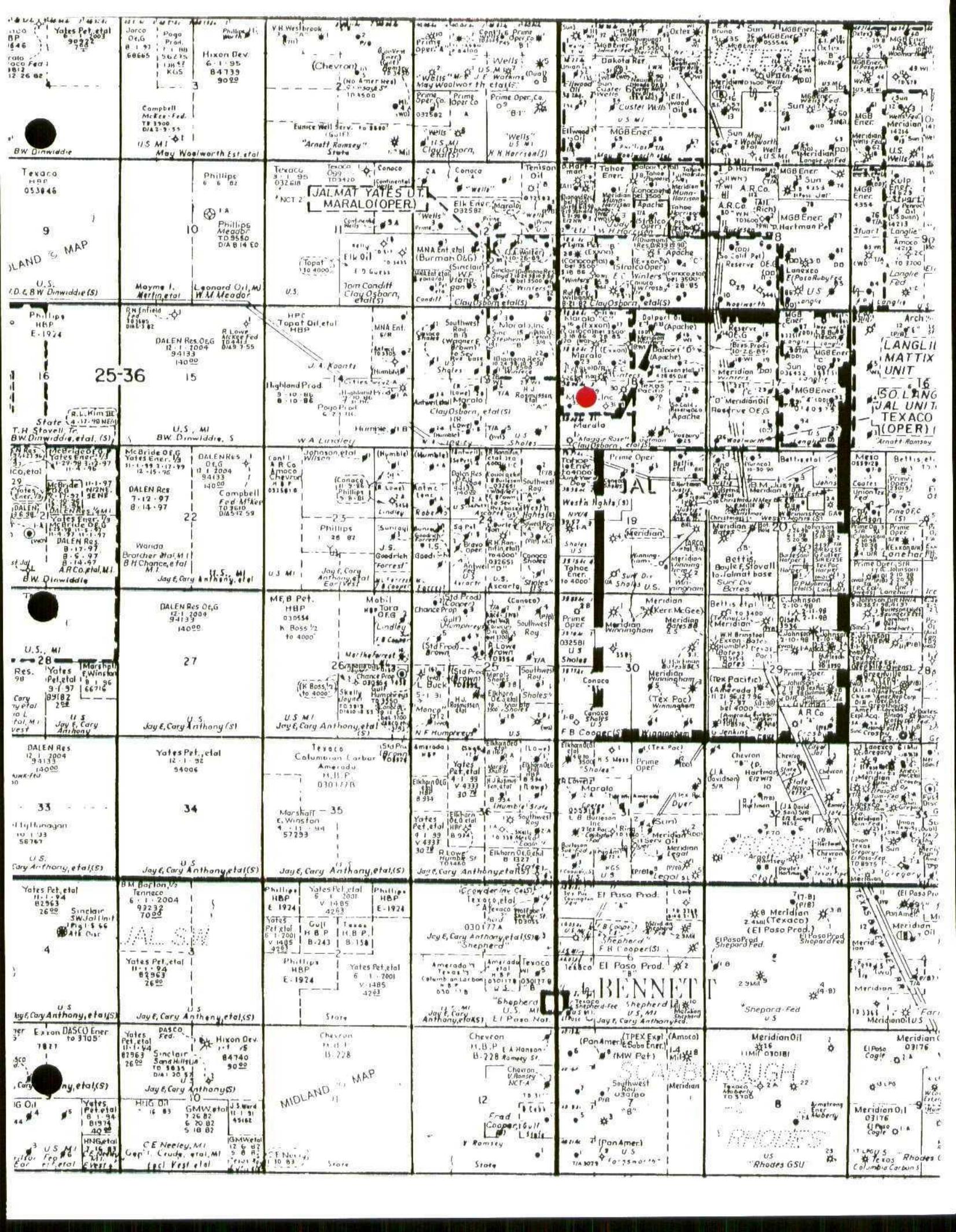
EXPLANATION

- Mine Waste
- Alluvium
- Eolian deposits
- Windblown sand
- Playa deposits
- Caliche
- Alluvium and other Quaternary deposits
- Colluvial deposits
- Fluvial terrace deposits
- Pond deposits
- Pleistocene surficial deposits undivided
- Other Quaternary deposits
- Gatuña Formation
- Tahoka Formation
- Windblown cover sand
- Ogallala Formation
- Fort Terrett Formation and Fredericksburg Group
- Antlers Sand
- Santa Rosa Sandstone, Chinte Formation, and Dockum Group undivided
- Dewey Lake Redbeds and Rustler Formation
- Diapirs and collapse structures

Recent (Holocene)  
 Recent (Holocene) and Pleistocene  
 Pleistocene  
 Pliocene  
 Lower Cretaceous  
 Ochoa

QUATERNARY  
 TERTIARY  
 CRETACEOUS  
 TRIASSIC  
 PERMIAN





Yates Pet, et al  
11-1-94  
02963  
12 26 02

Jarco  
O&G  
8-1-97  
66665

Hixon Dev  
6-1-95  
84739  
9029

(Chevron) in  
(No Amer Neel)  
2-1-95  
104500

Wells  
May Woolworth et al  
Prime Oper, Co  
032502

Wells  
U.S. MI  
Wells  
U.S. MI

Wells  
U.S. MI  
Wells  
U.S. MI

Wells  
U.S. MI  
Wells  
U.S. MI

Texaco  
HBP  
053046

Phillips  
6-6-02

JALMAT YATES U.  
MARALO (OPER)

Wells  
U.S. MI  
Wells  
U.S. MI

Phillips  
HBP  
E-1974

DALEN Res. O&G  
12-1-2004  
94133  
14000

Highland Prod.  
3-10-88  
6-10-88

Wells  
U.S. MI  
Wells  
U.S. MI

Phillips  
HBP  
E-1974

DALEN Res. O&G  
12-1-2004  
94133  
14000

Wells  
U.S. MI  
Wells  
U.S. MI

Phillips  
HBP  
E-1974

DALEN Res. O&G  
12-1-2004  
94133  
14000

Wells  
U.S. MI  
Wells  
U.S. MI

Phillips  
HBP  
E-1974

DALEN Res. O&G  
12-1-2004  
94133  
14000

Wells  
U.S. MI  
Wells  
U.S. MI

Phillips  
HBP  
E-1974

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94133  
14000

Wells  
U.S. MI  
Wells  
U.S. MI

Phillips  
HBP  
E-1974

DALEN Res. O&G  
12-1-2004  
94133  
14000

Wells  
U.S. MI  
Wells  
U.S. MI

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY  
MR. JOHN A. SAVOIE  
P.O. BOX 1030  
JAL, NM 88252  
FAX: 505-395-2636

RECEIVING DATE: 08/14/96  
SAMPLE TYPE: SOIL  
PROJECT #: TNM 96-20  
PROJECT NAME: TNM 96-20  
PROJECT LOCATION: JAL, NM

ANALYSIS DATE: 08/14/96  
SAMPLING DATE: 08/13/96  
SAMPLE CONDITION: INTACT/ICED

ELT#	FIELD CODE	TPH (mg/kg)
8472	960813 MW1 5'	<10
8473	960813 MW1 10'	<10
8474	960813 MW1 15'	60
8475	930813 MW1 20'	<10
8476	960813 MW1 60'	<10
	QUALITY CONTROL	302
	TRUE VALUE	302
	% PRECISION	100

Methods: EPA 418.1

  
Michael R. Fowler

8-15-96  
Date

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JAL, NM 88252  
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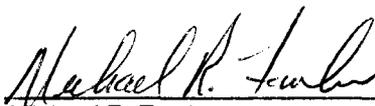
Receiving Date: 08/14/96  
Sample Type: WATER  
Project : TNM 96-20  
Project #: TNM 96-20  
Project Location: JAL, NM

Analysis Date: 08/14/96  
Sampling Date: 08/13/96  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYLBENZENE (mg/l)	m,p-XYLENE (mg/l)	o-XYLENE (mg/l)	TPH (mg/l)
8477	960813-MW1	<0.001	<0.001	<0.001	<0.001	<0.001	<1

% IA	109	99	104	104	103	101
% EA	98	97	104	103	102	--
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<1

METHODS: SW 846-8020,5030, EPA 418.1

  
Michael R. Fowler

8-15-96  
Date

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FAX: 505-395-2636

Receiving Date: 08/14/96  
Sample Type: WATER  
Project : TNM 96-20  
Project #: TNM 96-20  
Project Location: JAL, NM

Analysis Date: 08/15/96  
Sampling Date: 08/13/96  
Sample Condition: Intact/Iced

ELT#	FIELD CODE	TDS (mg/l)	TOTAL CHLORIDES (mg/l)
8477	960813-MW1	557	116

QUALITY CONTROL	22562
TRUE VALUE	22320
% PRECISION	101

METHODS: EPA 160.1, 325.1

  
Michael R. Fowler

8-15-96  
Date



STATE ENGINEER OFFICE

WELL RECORD

Section 1. GENERAL INFORMATION

(A) Owner of well Texas-New Mexico Pipeline Co. Owner's Well No. MW#1  
 Street or Post Office Address PO Box 1030  
 City and State Jal, New Mexico 88252

Well was drilled under Permit No. \_\_\_\_\_ and is located in the:  
 a. \_\_\_\_\_ ¼ \_\_\_\_\_ ¼ \_\_\_\_\_ ¼ of Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_ N.M.P.M.  
 b. Tract No. \_\_\_\_\_ of Map No. \_\_\_\_\_ of the \_\_\_\_\_  
3 mi W of Jal  
 c. Lot No. \_\_\_\_\_ of Block No. \_\_\_\_\_ of the \_\_\_\_\_  
 Subdivision, recorded in \_\_\_\_\_ Lea County.  
 d. X= \_\_\_\_\_ feet, Y= \_\_\_\_\_ feet, N.M. Coordinate System \_\_\_\_\_ Zone in  
 the \_\_\_\_\_ Grant.

(B) Drilling Contractor Scarborough Drilling, Inc. License No. WD 1188  
 Address 122 N. 24th, Lamesa, TX 79331

Drilling Began 8-13-96 Completed 8-13-96 Type tools rotary Size of hole 5 in.  
 Elevation of land surface or \_\_\_\_\_ at well is \_\_\_\_\_ ft. Total depth of well 75 ft.  
 Completed well is  shallow  artesian. Depth to water upon completion of well 63.35 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From	To			

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
2	Sch 40		+ 2	75	77	none	60	75

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				
0	55	5		5 sx	pumped
55	58	5	bentonite chips		poured
58	75		8-16 frac sand		poured

Section 5. PLUGGING RECORD

Plugging Contractor \_\_\_\_\_  
 Address \_\_\_\_\_  
 Plugging Method \_\_\_\_\_  
 Date Well Plugged \_\_\_\_\_  
 Plugging approved by: \_\_\_\_\_  
 \_\_\_\_\_ State Engineer Representative

No.	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received \_\_\_\_\_ Quad \_\_\_\_\_ FWL \_\_\_\_\_ FSL \_\_\_\_\_  
 File No. \_\_\_\_\_ Use \_\_\_\_\_ Location No. \_\_\_\_\_



RECEIVED

DEC 02 1996

Environmental Bureau  
Oil Conservation Division



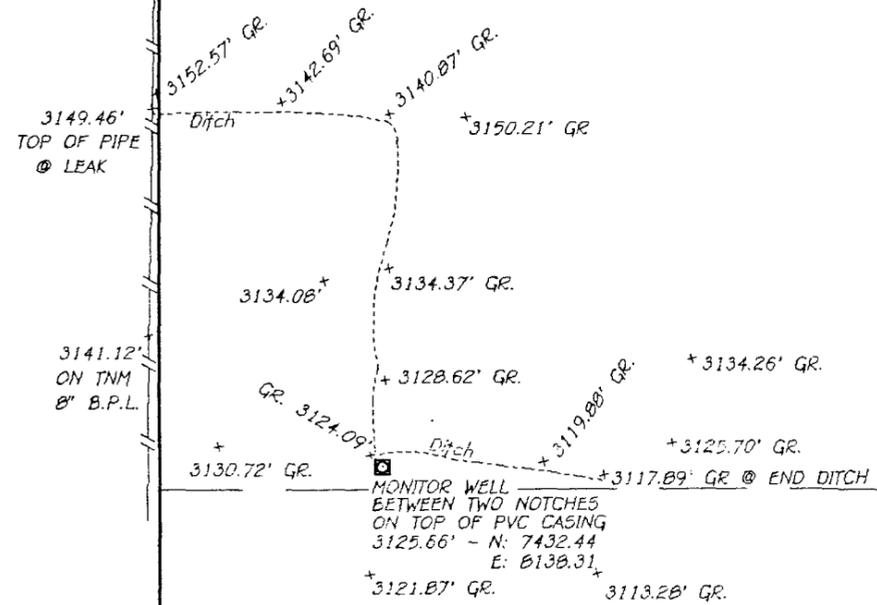
589°55'E (Basis of Bearings)

N: 10000.00  
E: 10000.00

FND.  
B.C.

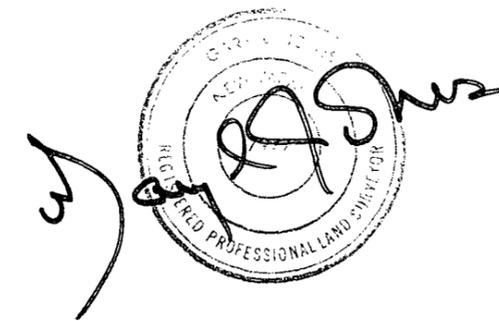
FND. SPIKE  
NAIL

N: 9996.16  
E: 12630.23



TRI STA. WINTERS  
N: 8224.57  
E: 6246.09  
3188.00'

3141.12'  
ON TNM  
8" B.P.L.



600 0 600 1200 Feet

TEXAS - NEW MEXICO PIPE LINE CO.

ELEVATIONS ON MONITOR WELL IN  
SECTION 18, TOWNSHIP 25 SOUTH, RANGE 36 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

P.O. BOX 1786 **BASIN SURVEYS** HOBBS, NEW MEXICO

Survey Date: 08-20-96 W.O. Number: 6343