A.E.I. COMPANIES

MINIMUM SITE ASSESSMENT
N.M. UST REGISTRATION # 5382
FACILITY # 5382011
PHASES ONE

LOVINGTON SIXTY-SIX
424 SOUTH MAIN
LOVINGTON, NEW MEXICO 88260

SUBMITTED TO: MR. JACK WALSTAD
317 NORTH LEECH
HOBBS, NEW MEXICO 88240

SUBMITTED BY: AEI TANK, INC
PO BOX 929
HUMPHREY ROAD
CLOVIS, NM 88102
(505) 762-3030

DECEMBER 20, 1991

RONALD D. AWTREY
PRESIDENT

RONALD M. CASTLEBERRY
ENVIRONMENTAL CONSULTANT

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REPORT SUMMARY

A proposed property transaction between Jack Walstad Oil Company, Inc. and Queen Oil and Gas Company required an environmental site assessment on the present Underground Storage Tank (UST) system at the Lovington 66 station, 424 South Main, Lovington, New Mexico. The site assessment was conducted by AEI personnel on July 30 - 31, 1991 at the request of Queen Oil and Gas Company. Five UST's containing unleaded gasoline and diesel fuel were precisely located, the capacities varied from 2,000 to 6,000 gallons. Seven bore holes were drilled inside UST backfill areas, including two bore holes on perimeter of backfill area. Five bore holes were drilled in strategic locations in or near the ancillary piping trenches.

Soil samples were field tested with a Warrick Vapor Meter (WVM) for the presence of volatile hydrocarbon contamination. Laboratory samples were taken and sent to an approved laboratory for Total Petroleum Hydrocarbon (TPH), and Benzene, Toluene, Ethyl benzene and Xylene (BTEX) analysis. Laboratory analysis and field tests indicated petroleum hydrocarbon contamination in the soil to a depth of 15 feet.

AEI Tank, Inc. was contracted by Jack Walstad Oil Company, Inc. to remove the UST's, ancillary piping, and over excavate the contaminated piping trenches and tank cavities.

Upon removal of the UST's personnel from AEI Tank, Inc., proceeded to obtain soil samples from the dispenser cavities and diesel tank cavity. Analytical laboratory results from Lubbock Christian University Institute of Water Research indicated that the Measured Level of Contaminants (MCL's) had exceeded the New Mexico Environment Departments' (NMED) standards. Another group of soil samples were taken from the fuel island dispensers, the analytical results from the laboratory indicated MCL's were exceeded on BTEX levels.

In an attempt to determine the vertical and horizontal extent of contamination; over excavation of the trenches and tank cavities continued until the horizontal contaminated soil was 90%

eliminated. Vertical hydrocarbon contamination, appears to be contained atop the first two feet of the lithographic caliche (Ogallala Caprock).

The excavation and pipe trenches remained open, for an extended period of time, while over excavating activities continued. Composite soil samples were taken December 4, 1991 and sent to Lubbock Christian University Institute of Water Research for analysis. Test results indicated that the TPH levels are still slightly above the required MCL's, however, the BTEX levels are below required parameters of hydrocarbon contamination. The natural aeration process that occurred during this time diluted and dissipated a great quantity of the volatile hydrocarbons.

Groundwater contamination may not be an issue of concern at this time. Public water supply wells are five to 13 miles southeast of the city. Research indicates that total depth to wells in the Lovington area vary from 60 feet to 180 feet. The caliche caprock protecting the Ogallala water formation, varies in thickness from eight to 15 feet in this area.

Sampling results have established that the lateral extent of contamination has been virtually removed with the exception of limited contamination that runs under the building. Removal of that contamination will threaten the structural integrity of the building. Sampling around the building indicates that contamination does not extend beyond the building.

In an effort to establish the vertical extent of contamination one boring was performed, field samples indicated that contamination was present at 40 foot where drilling ceased due to driller depth limitations.

Research indicated that the water level at that site was between 60 and 100 feet but could not be substantiated, as the last reliable well logs were from 1957. As a result, additional drilling was required to determine the depth to water and if the contamination had indeed impacted ground water. Soil sampling substantiated that soil contamination existed to the water table and that ground water was impacted.

CHRONOLOGY OF EVENTS

July 30 - 31, 1991

AEI Tank, Inc. conducted a site assessment for Queen Oil and Gas Company and Jack Walstad Oil Company, Inc. at 424 South Main, Lovington, Lea County, New Mexico. 13 bore holes were drilled and sampled at depths of four to 15 feet. Laboratory samples were collected and sent to Lubbock Christian University Institute of Water Research, Lubbock, Texas, for analytical results of TPH and BTEX. Field samples were tested by AEI personnel using a WVM.

* See drilling log - appendix B for individual bore hole results and analysis of soils.

Field sampling analysis using the WVM indicated petroleum hydrocarbon contamination existed in four of the 13 bore hole sites.

November 6, 1991

AEI Tank, Inc. was contracted to remove five UST's - one 3,172 gallon diesel tank, one 4,019 gallon unleaded plus, one 2,000 gallon premium unleaded tank and one 6,016 gallon regular unleaded tank. The ancillary piping and fuel dispensers were also to be removed. Removal was permitted by the New Mexico Environmental Department. Proper notification and permit were acquired.

November 14, 1991

All UST's and ancillary piping were removed, laboratory soil samples were collected in 250 millimeter (ml) glass jars with teflon septa lids, from five site specific locations in the dispenser excavation. One sample was collected below the diesel tank in the same area. Soil samples were placed on ice, properly sealed in a thermal cooler and sent to Lubbock Christian University Institute of Water Research for analysis.

November 20, 1991

Laboratory soil samples results indicated that TPH and BTEX parameters had exceeded the MCL's set by NMED.

* See appendix B.

November 22, 1991

After UST's, piping and dispensers were removed, over excavation procedures were initiated to remove and abate the contaminated soils.

Laboratory and field samples were collected to determine the extent of vertical and horizontal hydrocarbon contamination. Field results and laboratory analysis indicated the greater concentration of hydrocarbon contamination was atop the Ogallala caliche caprock at 15 feet.

November 29 - December 5, 1991

Approximately 600 yards plus, of contaminated soil was removed from line trenches, fuel islands, and tank excavations. Soils were stockpiled until a remedial action plan can be initiated. Inspection of the UST's indicated that there were no leaks found in the seams, bottom or tops of the tanks. While inspecting the dispensers and ancillary piping, it was obvious that leaking sections of the pipe had been removed and replaced over a period of time.

December 4, 1991

Laboratory soil samples were taken from four areas at depths of four to 15 feet in the south and north dispenser locations. Analytical laboratory results indicated that the BTEX MCL's are well below the parameters set by NMED.

December 5, 1991

It is the considered opinion of AEI Tank, Inc. that soil contamination was caused by line leaks, spillage at the dispensers and over-filling at the UST's fill spouts.

Groundwater contamination may not present a threat at this time due to the following conditions:

a) Public water supply wells are five to 13 miles southeast of this site.
b) The Ogallala aquifer (in the Lovington area) is protected by a "lithographic caliche cap" varying in thickness from eight to 15 feet. The porosity of this cap (unless fractured) is practically nil.
c) Depths to groundwater are over 100 feet, plus or minus 20-25 feet.

December 20, 1991

Ron Awtrey consulted with Mr. Steve Wild of New Mexico Environment Department (ED) in Santa Fe in an effort to obtain a release from the state ED. Mr. Wild agreed that the assessment was adequate with the exception of the determination of the vertical extent of contamination. AEI was hesitant to drill through the lithographic caliche barrier as drilling could possibly contaminate the water table. Mr. Wild requested that the vertical extent of contamination be established according to regulation. Mr. Wild also agreed that if the contamination was further than 50 feet from the water table no further action would be required.

December 23, 1991

In an effort to establish the vertical extent of contamination Mr. Walstad contracted with AEI and a drilling contractor to establish the depth of contamination. A hole was bored to a depth of 40 feet, driller limitations resulted in no further drilling.

Soil sample results indicated that BTEX results had exceeded the MCL's set by NMED.

* See appendix C

February 5, 1992

AEI Tank, Inc. and Eades Drilling were contracted by Jack Walstad Oil Company Inc. to determine the depth of contamination, the depth to ground water, the extent and quantity of contamination to the soil and groundwater. Drilling indicated that contamination did indeed exist at 10 foot intervals from 40 to 80 feet. The Hydrostatic water level was at 59 feet. Water samples indicated that contamination was above the minimum contaminate levels established by the New Mexico Environment Dept. One monitoring well was drilled and installed to comply with the requirements for the division's well policy set forth in NMUST Regulations Appendix D of Part XII.

March 13, 1992

AEI Tank, Inc. and Eades Drilling conducted additional borings in an effort to establish the down gradient horizonal extent of water contamination. One well was drilled approximately 15 feet east of the original boring one, another boring was conducted approximately 25 feet south of boring one. Water samples indicated that contamination was above the minimum contaminate levels established by the New Mexico Environment Dept.. Water monitoring wells were installed for sampling purposes.

* See Section VI for soil sample.

SITE CHARACTERIZATION/FIELD INVESTIGATION RESULTS

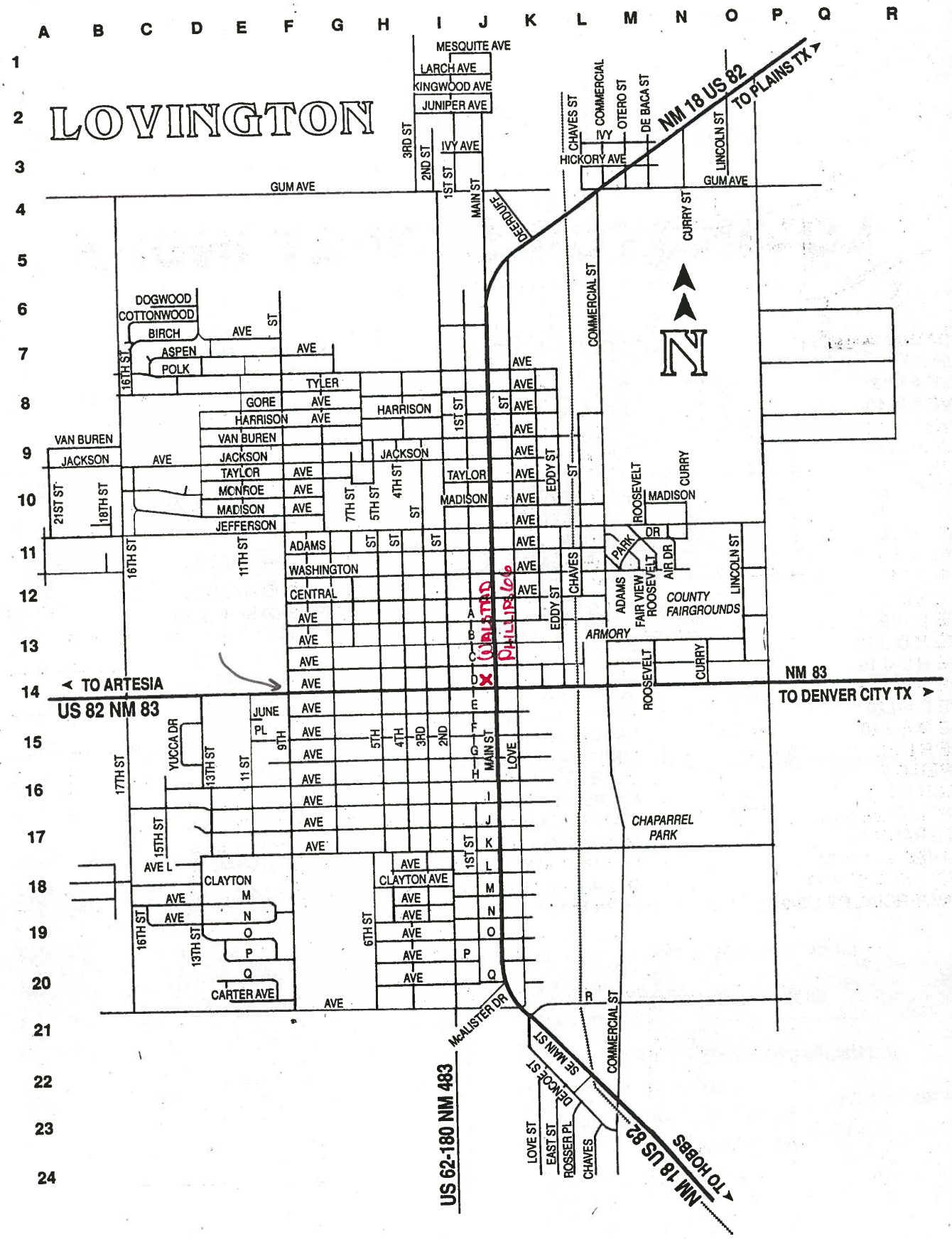
The facility in question is a Phillips 66, full service gasoline station located at 424 South Main in Lovington, New Mexico. The facility consisted of six tanks that contained gasoline, diesel, and waste oil. A site assessment performed in July 1991 be AEI indicated that the site has contamination resulting from piping leaks, spills and overfills.

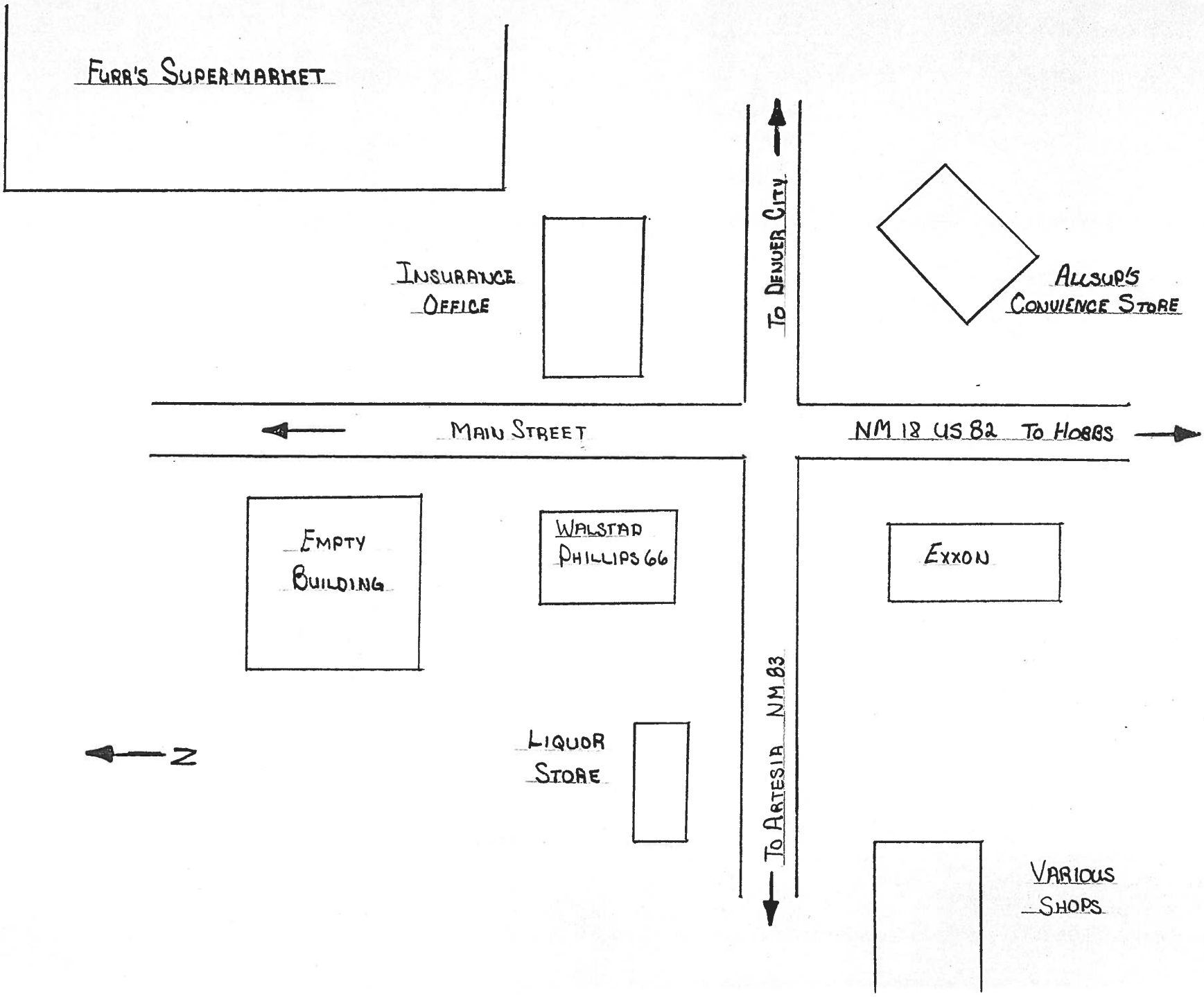
The contamination resulted from improperly installed pipe, corroded pipe, and improper flex connections. Spills are documented by NMED and occurred prior to the site assessment.

In November, AEI was contracted to remove the contamination in an effort to facilitate the sale of the property. The stated objectives were to provide the purchaser with a clean piece of property free from contamination and state or federal environmental ramifications, property that could be financed by a lending institution, insured for financial responsibility as required by federal EPA regulations for owners of underground storage tank regulations and provide the seller with a marketable piece of property.

The station was closed just prior to the removal of the underground storage tanks and the excavation of the contaminated soil.

Sampling results indicate that the horizonal extent of contamination has been excavated, but lab sampling results indicate that contamination has impacted the ground water at a depth of 56 feet.


LOVINGTON
MESQUITE AVE
LARCH AVE
KINGWOOD AVE
JUNIPER AVE
IVY AVE
GUM AVE
HICKORY AVE
NM 18 US 82
TO PLAINS TX
CHAVES ST
COMMERCIAL
IVY
OTERO ST
DE BACA ST
LINCOLN ST
3RD ST
2ND ST
1ST ST
MAIN ST
DEPOT
CURRY ST
COMMERCIAL ST
N
DOGWOOD
COTTONWOOD
BIRCH
ASPEN
POLK
TYLER
GORE
HARRISON
VAN BUREN
JACKSON
TAYLOR
MONROE
MADISON
JEFFERSON
16TH ST
21ST ST
18TH ST
11TH ST
7TH ST
5TH ST
4TH ST
EDDY ST
ROOSEVELT
CURRY
DR
PARK
AIR DR
ADAMS
WASHINGTON
CENTRAL
FAIR VIEW
COUNTY FAIRGROUNDS
ARMORY
CHAVES
TO ARTESIA
US 82 NM 83
NM 83
TO DENVER CITY TX
JUNE
PL
9TH
YUCCA DR
13TH ST
17TH ST
15TH ST
AVE L
CLAYTON
CARTER AVE
6TH ST
CHAPARREL PARK
McALISTER DR
US 62-180 NM 483
SE MAIN ST
DENOCE ST
LOVE ST
EAST ST
ROSSER PL
NM 18 US 82
TO HOBBS


FURR'S SUPERMARKET
INSURANCE OFFICE
TO DENVER CITY
ALLSUP'S CONVIENCE STORE
MAIN STREET
NM 18 US 82 TO HOBBS
EMPTY BUILDING
WALSTAR PHILLIPS 66
EXXON
N
LIQUOR STORE
TO ARTESIA NM 83
VARIOUS SHOPS

500 gal. △ NC 7·30·91

UNLEADED
6,000 gal.

UNLEADED PLUS
4,000 gal.

UNLEADED PLUS
4,000 gal.

△ NC 7·31·91

△ NC 7·30·91

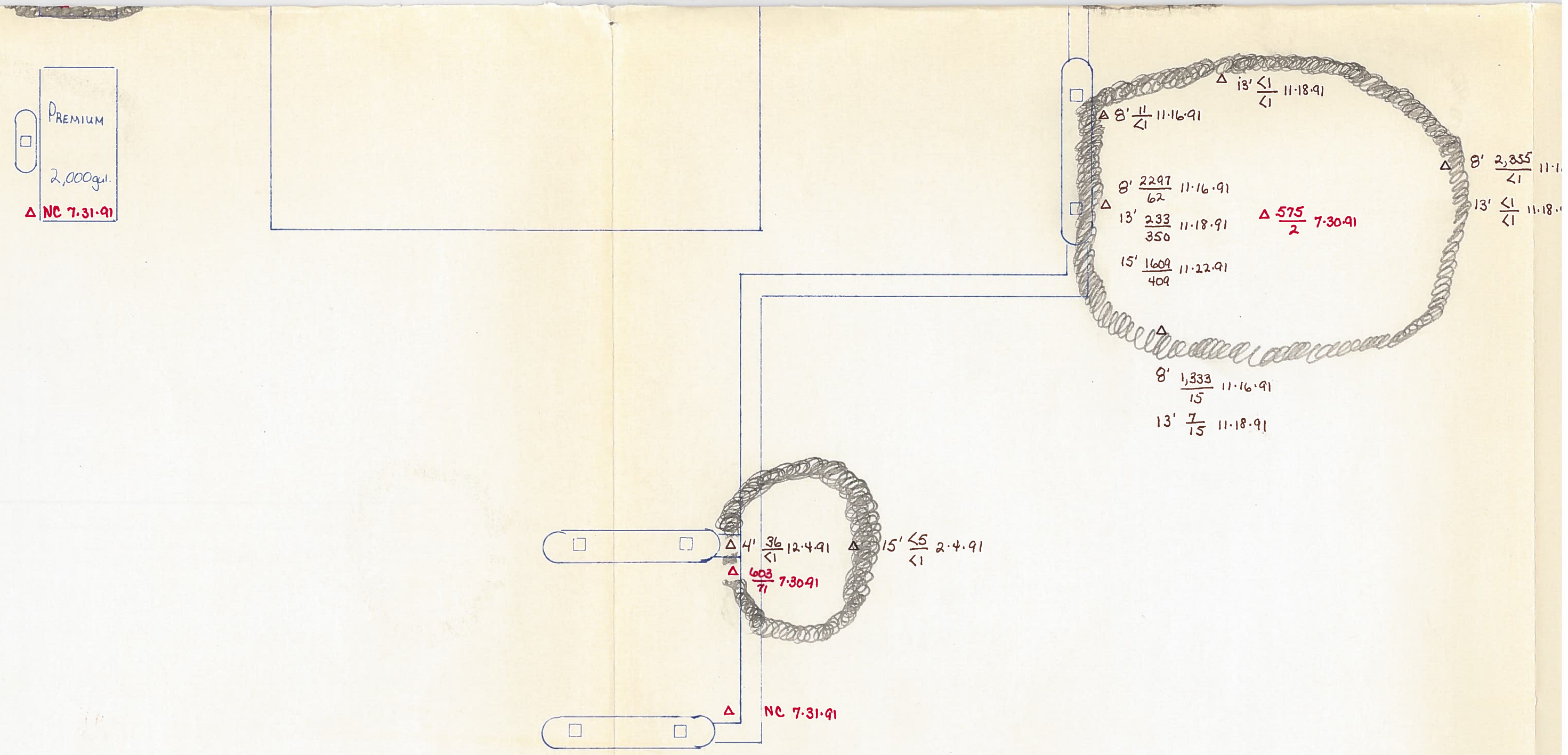
A △ △ 2569/223 7·30·91

B △

COMPOSITE A&B
8' 25/<1 12·5·91

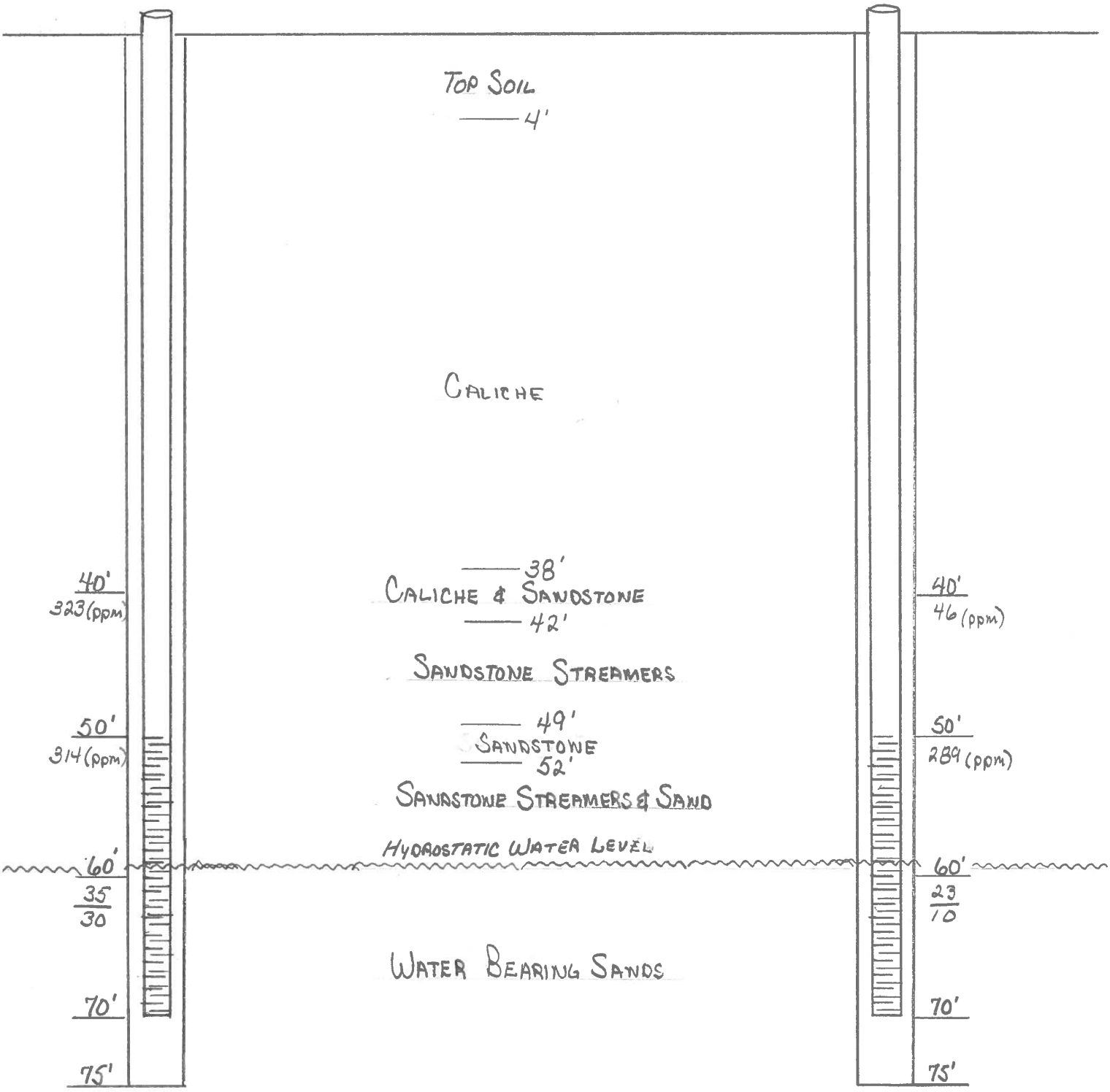
△ 88/<1 7·31·91

△ 2433/<2 7·31·91


PREMIUM
2,000gal.
NC 7.31.91
8' 11/<1 11.16.91
13' <1/<1 11.18.91
8' 2,355/<1 11.1
8' 2297/62 11.16.91
13' 233/350 11.18.91
15' 1609/409 11.22.91
575/2 7.30.91
13' <1/<1 11.18.
8' 1,333/15 11.16.91
13' 7/15 11.18.91
4' 36/<1 12.4.91
15' <5/<1 2.4.91
603/71 7.30.91
NC 7.31.91

Boring Log Monitoring Wells

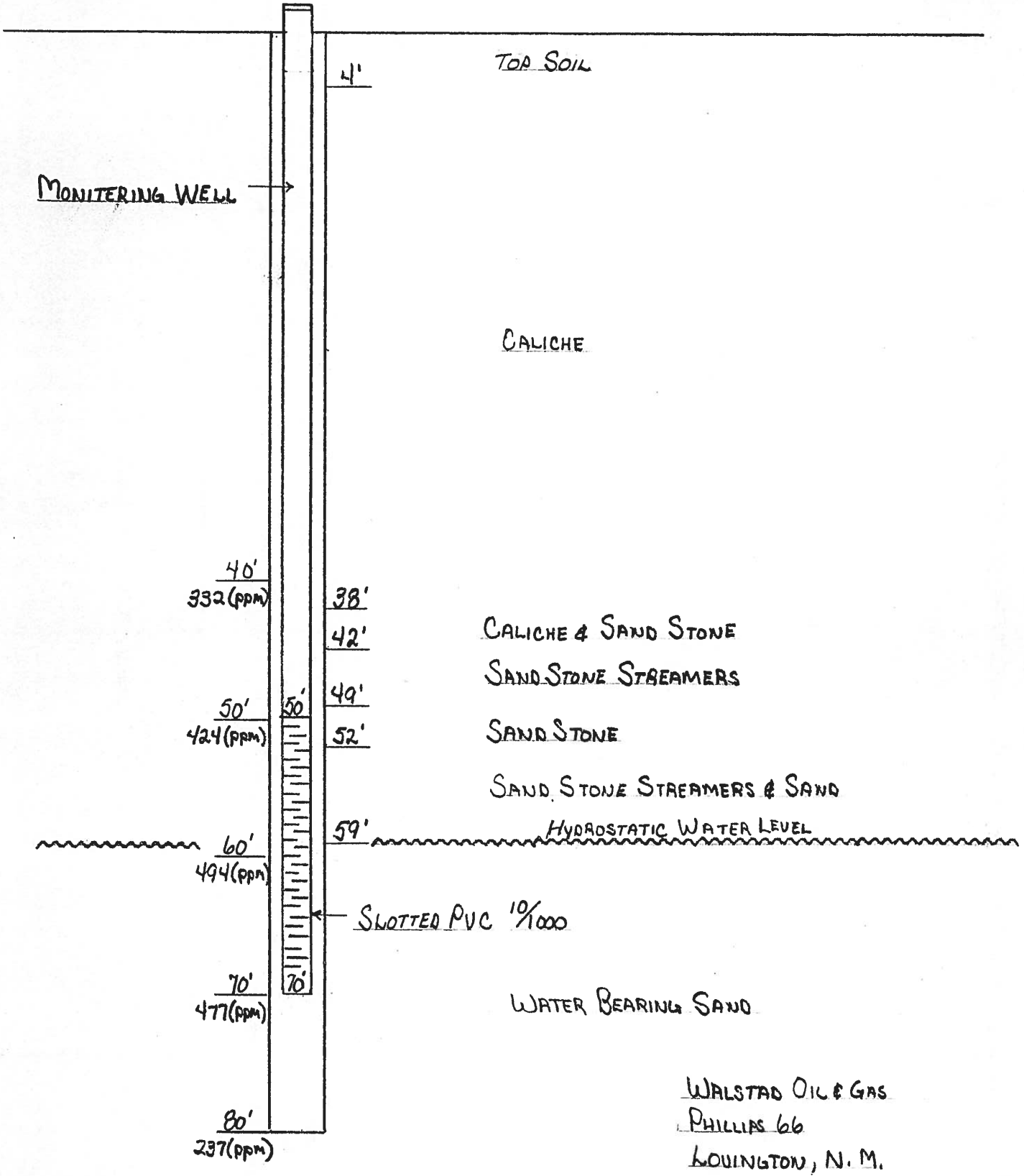
March 13, 1992



Walstad Oil & Gas
Phillips 66
Lovington, New Mexico

Boring Log - Monitoring Well

February 12, 1992



Walstad Oil & Gas
Phillips 66
Lovington, N. M.

RECOMMENDATIONS

1. Remove contaminated soil from site and place in six inch lifts for remediation purposes in a location that ground water is at a depth in excess of 100 feet.

2. Refill excavations with clean, suitable backfill material.

3. New Mexico Environment Department UST regulations Part XII, section 1205, C, (2), (b) require that one monitoring well must be located on-site in the area of highest contamination, as determined by the soil borings, that well has been installed.

   With the permission of the New Mexico Environmental Department Ground Water Division, AEI has installed two additional monitoring wells located down-gradient from the first well. The purpose of these monitoring wells is to determine the on-site extent and magnitude of dissolved and free-phase contamination in ground water and to determine the probability that contamination has traveled off-site.

4. Develop a remediation plan to be submitted to Jack Walstad Oil Co. and Steve Wild, to be approved by the New Mexico Environmental Department Ground Water Division prior to initiating remediation. Soil venting is the obvious method of reclamation for the contaminated soil. The contaminated zone above the ground water consist of sand and sandstone streamers with a very high porosity conducive to vapor transport.

CONCLUSIONS

Samples indicate that the horizonal extent of contamination has been eliminated with the exception of limited contamination under the building. Removal of that small pocket of contamination resulting from a piping leak would be impractical as the building would have to be demolished. Lab samples indicate that the contamination is isolated and poses no environmental threats.

Drilling in the area where the maximum amount of expected contamination exists indicated that contamination has impacted the ground water. Soil sample analysis indicate that the soil from the surface to the ground water is contaminated above MCL estabolished by NMED. (field sample results enclosed in appendix D).

The thickness and concentration of petroleum in and on the aquifer have been established to be a thickness of 1/16 to 1/8 inches. The water sample analysis indicate that the leak is primarily a gasoline leak as the BTEX levels are proportionately greater than the TRPHC levels.

The rate and direction of ground water contaminant migration is from the north west to the south east and migration rates vary from 2 to four foot per year.

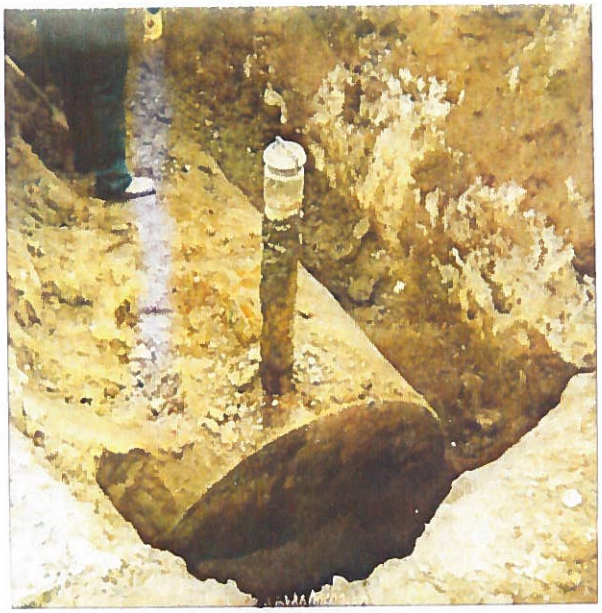
Water bearing sands are limited to primarily sand with sand stone streamers just above the water table. The porosity for sand is 25% to 50%, particle density is 2.65 (g/cm to the third power), bulk density is 1.33 to 1.99 (g/cm to the third power), saturated hydrolic conductivity is 10 to the fourth power to 10 (cm/sec), permeabillity of 10 to the ninth power to 10 to the fifth power (cm squared) and air conductivity of 10 to the fifth power to 10 to the first power (cm/sec). The water holding properties of sand is 10 to 13 percent.

These monitoring wells are in compliance with the New Mexico Environmental Department well policy set forth in Appendix D of Part XII as illustrated is Appendix E of Part XII. A 10/1000 perforation screen from the depth of 50 to 70 feet, filter sand pack from 45 to 70 feet, to one foot with grout seal and concrete pad to the surface with locking well casing cap and bolted steel well shroud, and a cap on the bottom of the casing.

Water elevation maps are unavailable but drilling logs are enclosed in Section VI Text D.

Drilling logs indicate test results at 10 foot intervals and soil types.

With the installation of two additional water monitoring wells laboratory sampling indicate that the down gradient horizontal extent of contamination has not been determined as the drilling of two down gradient wells indicate. The extent of contamination is much less than the contamination existing in the original water monitoring well, but is still above NMED required contamination levels.



South Gas Tank
Lovington bb

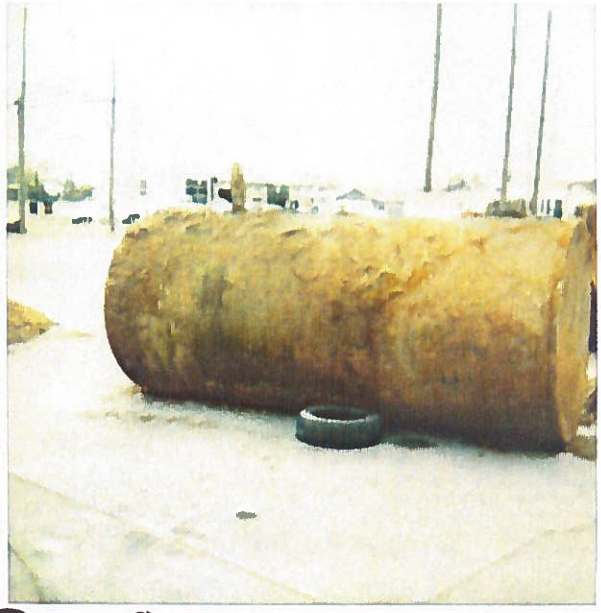
Gas tank
Lovington bb

Diesel tank
Lovington 66

Diesel tank.
Excavation-Lovington 66

Diesel Excavation
Lovington 66

Oil tank
Lovington bb



Premium Unlead
Lovington bb

Premium Unlead tank
Lovington bb

Excavating into the lithographic Caliche Cap

Excavation into the lithographic Caliche Cap

Lubbock Christian University Institute of Water Research

5601 West 19th Street • Lubbock, Texas 79407
(806) 796-8900

ANALYTICAL RESULTS FOR
AEI TANK CO., INC.
P. O. Box 929
Clovis, NM 88101

March 19, 1992
Receiving Date: 3/17/92
Sample Type: Water
Project No: NA
Project Location: Lovington, NM

Analysis Date: 03/18/92
Sampling Date: NA March, 13, 1992
Sample Condition: Intact & Cool
Sample Received by: YL
Project Name: Walstad Oil Co.

LCUIWR #	Field Code	TRPHC (ppb)	MTBE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	M,P,O XYLENE (ppb)
Y38160	MW - 2	34,906	5,921	29,878	28,953	3,874	13,109
Y38161	MW - 3	23,225	5,150	10,493	8,961	1,253	5,320
QC	Quality Control	81,950	217	192	185	195	574
Air Blank		---	<1	<1	<1	<1	<1
% Precision		---	100	102	106	100	106
% Extraction Accuracy		100	---	78	82	95	93
% Instrument Accuracy		99	108	96	93	98	96

METHODS: EPA SW 846-3810 USING AUTOMATED HEAD SPACE; EPA SW 846-8020; EPA 418.1.
BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS.
TRPHC SPIKE AND QC: Sample spiked with 29,464 ppb TRPHC and Blank spiked with 82,500 ppb TRPHC.

*** NOTE: Sample for BTEX analysis taken from Qt jar. Actual BTEX may be higher.**

Director, Dr. Blair Leftwich
Asst. Dir., Dr. Bruce McDonell
Asst. Dir., Dr. Mohammad Haghighi-Podeh

3-19-92
Date

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: AEI TANK CO. INC.	Phone #: 505-762-3030	ANALYSIS REQUEST	OTHER / SPECIAL HANDLING
Address: P.O. BOX929 CLOVIS, NM 88101	FAX #:		
Project Number: H2O SAMPLES	Project Name: WALSTAD Oil Co. INC.		
Project Location: LOVINGTON, N.M.	Sampler Signature: Ronald M. Gilbreath		

Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume Amount	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO3	ICE	NONE	OTHER	Sampling: DATE	TIME	BTEX	TPH	
MW-2	38160	Glass		X	**						**					X	X	1 QT. JAR - 2 (VIALS)
MW-3	38161	Glass		X	**						X					X	X	1 QT. JAR ONLY
					**						*							
					**						*							
					**													

Send by Cool Ice
United Parcel Service

Relinquished by:	Date Time	Received by:
Relinquished by	Date Time 12-17-92	Received by: YL IC
Relinquished by	Date Time	Received by Laboratory:

Remarks:
Send bill to: JACK WALSTAD Oil Co.
P.O. BOX 1098
HOBBS, N.M. 88240
NOTE: Sample for BTEX analysis taken from QT jar. Actual BTEX may be higher
Fax results to AEI 505-763-6762
Return Cooler via UPS

Lubbock Christian University Institute of Water Research

5601 West 19th Street • Lubbock, Texas 79407
(806) 796-8900

ANALYTICAL RESULTS FOR
A.E.I. TANK COMPANY, INC.
Attention: Ronald Awtrey
P. O. Box 929
Clovis, NM 88101

February 17, 1992
Receiving Date: 02/14/92
Sample Type: Water
Project No: NA
Project Location: Main & Ave. D
Lovington, NM

Analysis Date: 02/14/92
Sampling Date: NA
Sample Condition: Intact & Cool
Sample Received by: DS
Project Name: Walstad Phillips 66

LCUIWR #	Field Code	TRPHC (ppb)	MTBE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	M,P,O XYLENE (ppb)
Y36625	Water Samples	68,581	24,599	31,783	43,116	5,559	19,504
QC	Quality Control	81,550	204	190	197	202	621
Air Blank		---	<1	<1	<1	<1	<1
% Precision		---	100	100	100	100	100
% Extraction Accuracy		103	100	88	92	91	96
% Instrument Accuracy		99	102	95	99	101	103

METHODS: EPA SW 846-3810 USING AUTOMATED HEAD SPACE; EPA SW 846-8020; EPA 418.1.
BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS.
TRPHC SPIKE AND QC: Sample spiked with 29,464 ppb TRPHC and Blank spiked with 82,500 ppb TRPHC.

Director, Dr. Blair Leftwich
Asst. Dir., Dr. Bruce McDonell
Asst. Dir., Dr. Mohammad Haghighi-Podeh

2-17-92
Date

Lubbock Christian University Institute of Water Research

5601 West 19th Street • Lubbock, Texas 79407
(806) 796-8900

ANALYTICAL RESULTS FOR
AEI TANK CO., INC.
P. O. Box 929
Clovis, NM 88102

December 09, 1991
Receiving Date: 12/07/91
Sample Type: Soil
Project No: NA
Project Location: Lovington, New Mexico

Analysis Date: 12/07/91
Sampling Date: 12/04,05/91
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: Lovington 66

LCUIWR #	Field Code	TRPHC (ppb)	MTBE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	M,P,O XYLENE (ppb)
Y33092	South Dispenser Hole W. Wall 4'	36,473	<1	<1	<1	<1	1
Y33093	South Dispenser Hole E. Wall 4'	<500	<1	<1	1	<1	1
Y33094	North Tank E. Hole Wall 15'	25,326	1	2	<1	<1	<1
Y33095	South Dispenser Hole S. Wall 4'	<500	<1	<1	1	1	1
QC	Quality Control	81,819	195	198	204	200	600
Air Blank		---	<1	<1	<1	<1	<1
% Precision		100	100	94	88	73	89
% Extraction Accuracy		103	96	108	131	118	108
% Instrument Accuracy		99	98	99	102	100	100

METHODS: EPA SW 846-3810 USING AUTOMATED HEAD SPACE; EPA SW 846-8020; EPA 418.1.
BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS.
TRPHC SPIKE AND QC: Sample spiked with 207,025 ppb TRPHC and Blank spiked with 82,810 ppb TRPHC.

BL

Director, Dr. Blair Leftwich

Asst. Dir., Dr. Bruce McDonell

12-10-91

Date

Lubbock Christian University Institute of Water Conservation
5601 West 19th Street • Lubbock, Texas 79407

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: AEI TANK CO. INC.	**Phone #:** 505-762-3030	**ANALYSIS REQUEST**	**OTHER** / **SPECIAL HANDLING**
Address: P.O. BOX929 CLOVIS, NM 88101	**FAX #:**		
Project Number:	**Project Name:** Lovington bb		
Project Location: Lovington, New Mexico	**Sampler Signature:** Danny Davis		

Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume Amount	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	ICE	NONE	OTHER	Sampling: DATE	TIME	BTEX, MTBE	TPH
South dispenser hole W. Wall 4'	3392				**						**			12/5	7:40am	✓	✓
South dispenser hole E. Wall 4'	93				**						*			12/5	7:30am	✓	✓
N. Tank E. Hole wall 15'	94				**						*			12/4	3:30pm	✓	✓
S. dispenser hole S. wall 4'	95				**						*			12/5	7:30am	✓	✓
					**												

4) 3/8) -

	Date	Time		
Relinquished by: Lynne Wieber	12/6	4:30pm	**Received by:**	**Remarks:** Send bill to: Jack Walstad Oil Company PO Box 1098 Hobbs, nm 88240.
Relinquished by			**Received by:**	
Relinquished by			**Received by Laboratory:** 12/7/91	Fax results to AEI 505-763-6762 Return Cooler via UPS Ice

Lubbock Christian University Institute of Water Research

5601 West 19th Street • Lubbock, Texas 79407
(806) 796-8900

ANALYTICAL RESULTS FOR
AEI TANK CO., INC.
P. O. Box 929
Clovis, NM 88102

November 29, 1991
Receiving Date: 11/26/91
Sample Type: Soil
Project No: ---
Project Location: Lovington, NM

Analysis Date: 11/27/91
Sampling Date: 11/22/91
Sample Condition: Intact & Cool
Sample Received by: JT
Project Name: Lovington 66

LCUIWR #	Field Code	TRPHC (ppb)	MTBE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	M,P,O XYLENE (ppb)
Y32487	#1 Diesel Island - 16'	1,278	NR	NR	NR	NR	NR
Y32488	#2 Premium unlead - 9'	4,589	<1	<1	<1	<1	<1
Y32489	#3 Dispenser Hole - 15'	1,609,832	<2	4,895	154,749	116,591	409,650
QC	Quality Control	83,414	177	206	206	217	619
Air Blank		---	<1	<1	<1	<1	<1
% Precision		87	100	100	82	88	75
% Extraction Accuracy		115	83	102	103	108	105
% Instrument Accuracy		101	89	103	103	108	103

METHODS: EPA SW 846-3810 USING AUTOMATED HEAD SPACE; EPA SW 846-8020; EPA 418.1.
BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS.
TRPHC SPIKE AND QC: Sample spiked with 207,025 ppb TRPHC and Blank spiked with 82,810 ppb TRPHC.

Director, Dr. Blair Leftwich

Asst. Dir., Dr. Bruce McDonell

11-29-91
Date

Lubbock Christian University Institute of Water Research
8501 West 19th Street • Lubbock, Texas 79407

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: AEI TANK CO. INC.	**Phone #:** 505-762-3030
Address: P.O. BOX929 CLOVIS, NM 88101	**FAX #:**
Project Number:	**Project Name:** Lovington 66
Project Location: Lovington	**Sampler Signature:** Danny Davis

ANALYSIS REQUEST | **OTHER** | **SPECIAL HANDLING**

Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume Amount	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	ICE	NONE	OTHER	Sampling: DATE	TIME	BTEX, MTBE	TPH
#1-Diesel Island-1bbl	32487				**						**			11/22	9am	✓	✓
#2-Premium unlead-9pt	32488				**						*			11/22	9am	✓	✓
#3-Dispenser Hole-15pt	32489				**						*			11/22	9am	✓	✓
					**						*						
					**												

Relinquished by: Lynne Wieber	**Date Time:** 11/25/91 5:00	**Received by:**	**Remarks:** Send bill to: Jack Walstad Oil Company PO Box 1098 Hobbs, NM 88240
Relinquished by	**Date Time:**	**Received by:**	
Relinquished by	**Date Time:** 11/26	**Received by Laboratory:** K Taylor CI	Fax results to AEI 505-763-6762 Return Cooler via UPS

Lubbock Christian University Institute of Water Research

5601 West 19th Street • Lubbock, Texas 79407
(806) 796-8900

ANALYTICAL RESULTS FOR
AEI TANK CO., INC.
P. O. Box 929
Clovis, NM 88102

November 20, 1991
Receiving Date: 11/16/91
Sample Type: Soil
Project No: ---
Project Location: Lovington, NM

Analysis Date: 11/16/91
Sampling Date: 11/14/91
Sample Condition: Intact & Cool
Sample Received by: McD
Project Name: Lovington 66

LCUIWR #	Field Code	TRPHC (ppb)	MTBE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	M,P,O XYLENE (ppb)
Y31651	#1 S. Wall Dispenser Hole	1,333,698	47	105	4,593	5,681	15,514
Y31652	#2 Bottom Dispenser Hole E.	2,296,756	3,694	62,610	381,263	219,078	350,799
Y31653	#3 E. Wall Dispenser Hole	2,354,810	<1	<1	<1	<1	<1
Y31654	#4 N. Wall Dispenser Hole	10,837	8	3	5	<1	<1
Y31655	#5 Diesel Tank	38,124,476	<2	1,698	3,755	3,590	8,453
QC	Quality Control	82,691	185	188	192	192	578
Air Blank		---	<1	<1	<1	<1	<1
% Precision		100	100	100	118	100	100
% Extraction Accuracy		108	84	82	87	93	92
% Instrument Accuracy		100	93	94	96	96	96

METHODS: EPA SW 846-3810 USING AUTOMATED HEAD SPACE; EPA SW 846-8020; EPA 418.1.
BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS.
TRPHC SPIKE AND QC: Sample spiked with 207,025 ppb TRPHC and Blank spiked with 82,810 ppb TRPHC.

BB

Director, Dr. Blair Leftwich

Asst. Dir., Dr. Bruce McDonell

11-20-91

Date

Lubbock Christian University Institute of Water Research
5801 West 19th Street • Lubbock, Texas 79407

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: AEI TANK CO. INC.	**Phone #:** 505-762-3030
Address: P.O. BOX929 CLOVIS, NM 88101	**FAX #:**
Project Number:	**Project Name:** Lovington bb
Project Location: Lovington	**Sampler Signature:** Danny David

Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume Amount	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	ICE	NONE	OTHER	Sampling: DATE	TIME	ANALYSIS REQUEST: BTEX, MTBE	TPH
#1 South wall dispenser hole	31657				**						**			11/14	2pm	✓	✓
#2 Bottom dispenser hole tank	52				**						*			11/14	2pm	✓	✓
#3 East wall dispenser hole	53				**						*			11/14	2pm	✓	✓
#4 north wall dispenser hole	54				**						*			11/14	2pm	✓	✓
#5 diesel Tank	55				**									11/14	2pm	✓	✓

OTHER | SPECIAL HANDLING

	Date	Time	
Relinquished by: Lynne Wieber	11/15	5pm	Received by:
Relinquished by			Received by:
Relinquished by			Received by Laboratory:

Remarks:
Send bill to:
Jack Walstad Oil Company
Attention: Jack Walstad
POBox 1098,
Hobbs, nm 88240.
Fax results to AEI 505-763-6762

Lubbock Christian University Institute of Water Research

5601 West 19th Street • Lubbock, Texas 79407
(806) 796-8900

ANALYTICAL RESULTS FOR
A.E.I. TANK CO., INC.
P. O. Box 929
Clovis, NM 88101

August 12, 1991
Receiving Date: 8/08/91
Sample Type: Soil
Project No: NA
Project Location: Lovington, NM

Sampling Date: 7/30-31/91
Sample Condition: Intact & Cool
Sample Received by: MS
Project Name: Queen Oil & Gas
Analysis Date: 8/09/91

LCUIWR #	Field Code	TRPHC (ppb)	MTBE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	M,P,O XYLENE (ppb)
Y27152	Sample #1	2,569,272	<2	32,485	178,469	83,533	222,984
Y27153	Sample #8	602,546	<2	843	15,719	17,697	71,048
Y27154	Sample #9	575,845	<2	777	1,783	5,662	10,564
Y27155	Sample #10	16,907,265	<2	188	661	1,233	2,728
Y27156	Sample #11	2,433,911	<2	47	<2	<2	61
Y27157	Sample #12	87,613	<1	6	<1	<1	2
QC	Quality Control	83,636	210	200	206	190	590
Air Blank		---	<1	<1	<1	<1	<1
% Precision		100	100	138	100	100	100
% Extraction Accuracy		106	94	94	96	93	110
% Instrument Accuracy		101	105	100	103	95	98

METHODS: EPA SW 846-3810 USING AUTOMATED HEAD SPACE; EPA SW 846-8020; EPA 418.1.
BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS.
TRPHC SPIKE AND QC: Sample spiked with 207,025 ppb TRPHC and Blank spiked with 82,810 ppb TRPHC.

BB

Director, Dr. Blair Leftwich

Asst. Dir., Dr. Bruce McDonell

8-12-91

Date

Lubbock Christian University Institute of Water Research
5801 West 19th Street • Lubbock, Texas 79407

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: AEI TANK CO. INC.	**Phone #:** 505-762-3030
Address: P.O. BOX929 CLOVIS, NM 88101	**FAX #:**
Project Number:	**Project Name:** Bill Queen
Project Location: Lovington	**Sampler Signature:** Ronald Awtrey

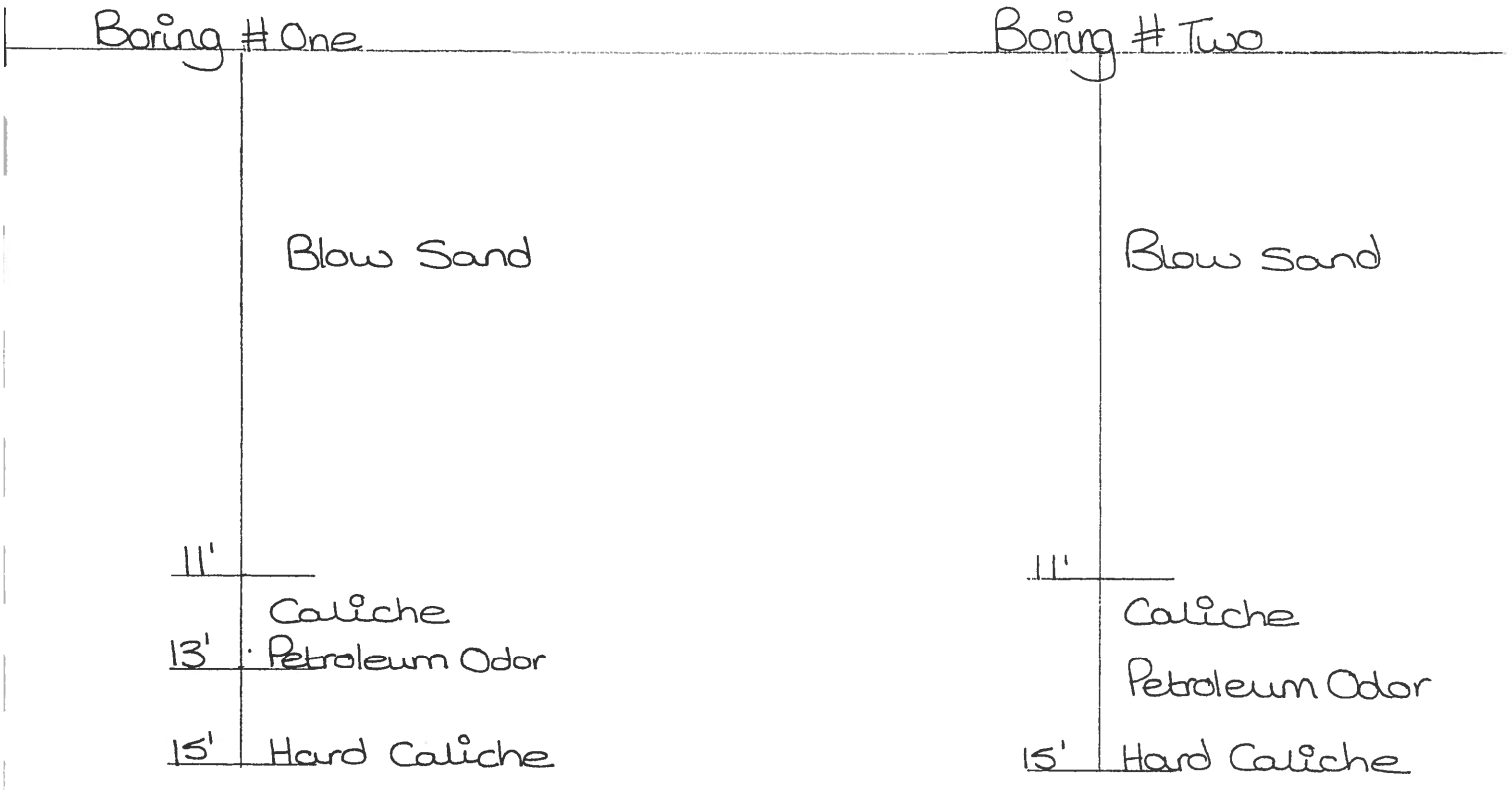
Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume Amount	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	ICE	NONE	OTHER	Sampling: DATE	TIME	ANALYSIS REQUEST: BTEX, MTBE	TPH	OTHER	SPECIAL HANDLING
1	27152				**						**			7/30	11:35am	X	X		
8	27153				**						*			7/30	4:40pm	X	X		
9	27154				**						*			7/30	4:55pm	X	X		
10	27155				**						*			7/31	8:01am	X	X		
11	27156				**									7/31	8:40am	X	X		
12	27157													7/31	9:20am	X	X		

Relinquished by:	Date	Time	Received by:
Lynne Weber	8/7/91	4:30pm	
Relinquished by	Date	Time	Received by:
Relinquished by	Date	Time	Received by Laboratory:
	8-8-91		

Remarks:
Send bill to:
Queen Oil & Gas
attention: Bill Queen
3202 South Canal
Carlsbad, NM 88220.

Fax results to AEI 505-763-6762
Return Cooler via UPS | Tom | Bubble bar

Boring Logs


Boring # One
Blow Sand
11'
Caliche
13'
Petroleum Odor
15'
Hard Caliche
Boring # Two
Blow sand
11'
Caliche
Petroleum Odor
15'
Hard Caliche

Boring Logs

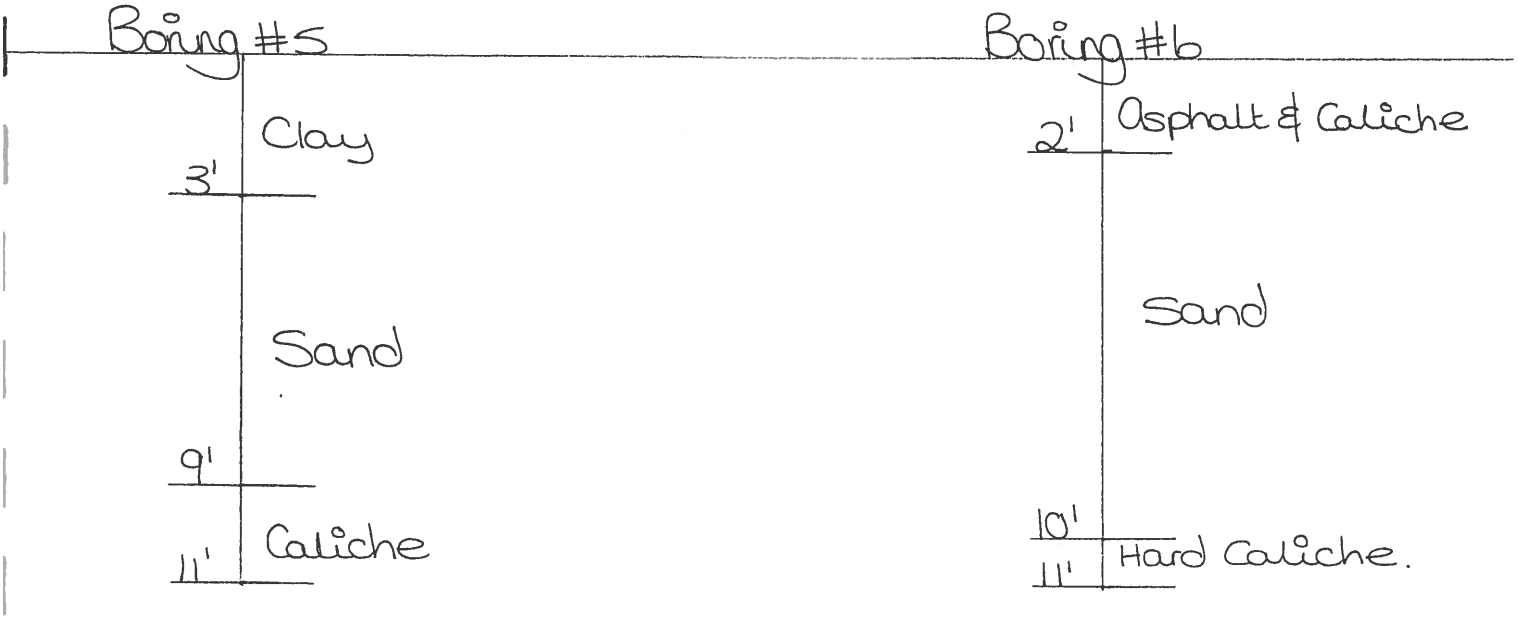
Boring #3

3'	Clay
5'	Red Caliche
7'	Hard White Caliche

Boring #4

2'	Sandy loam
3'	Red Clay White Caliche
5'	

Boring Logs


Boring #5
Clay
3'
Sand
9'
11'
Caliche
Boring #6
2'
Asphalt & Caliche
Sand
10'
11'
Hard Caliche.

Boring Logs

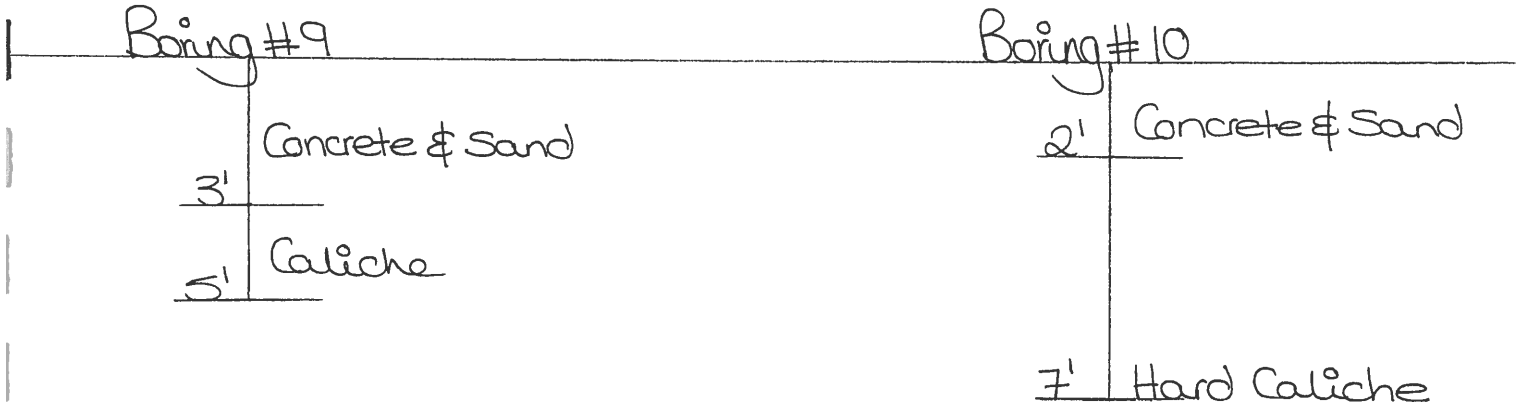
Boring #7

2'	Concrete & Caliche
3'	Sand
5'	Caliche

Boring #8

3'	Concrete & Sand
5'	Caliche

Boring Logs


Boring #9
Concrete & Sand
3'
Caliche
5'
Boring #10
2'
Concrete & Sand
7'
Hard Caliche

Boring Logs

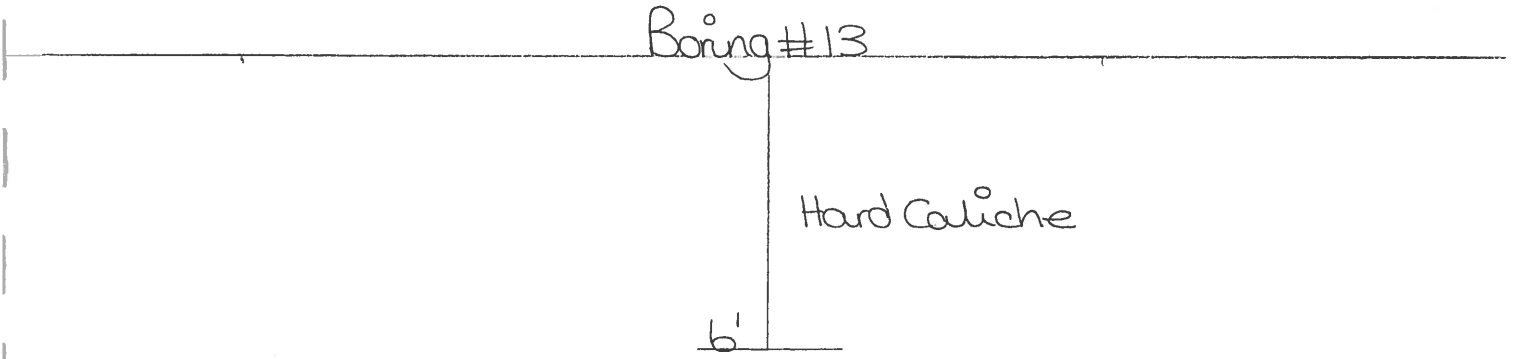
Boring #11

2'	Asphalt & Caliche
	Sand
10'	
11'	Caliche

Boring #12

2'	Asphalt & Caliche
	Sand
10'	
11'	Caliche

Boring Log



A.E.I. COMPANIES

Site assessment for Queen Oil and Gas
Walstead Phillips 66 Retail location Lovington, NM
Conducted July 30 and 31, 1991

DRILLING LOGS AND SAMPLES:

B-1 (Boreing number one) Tank Test, 1' to 11' blow sand (inside tank bed) 11' to 15' caliche, 13' petroleum odor, 15' hard caliche.
S-1 (soil sample number one) at 15' Warwick Vapor Monitor (WVM) 200,000 red, enclosed sample TPH 2,569,272 (ppb), BTEX <2 to 71,048 (ppb) 1135 7-30-91

B-2 Tank Test, 1' to 11' blow sand (inside tank bed) 11' to 15' caliche.
13' petroleum odor, 15' hard caliche.
S-2 15', WVM 200,000 red 1215 7-30-91

B-3 Tank Test, 1' to 3' clay, 3' to 5' red caliche, 5' to 10' white caliche.
S-3 10', WVM 0.75 green 1310 7-30-91

B-4 Fuel Line Test, 1' to 2' sandy loam, 2' to 3' red clay, 3' to 5' white caliche.
S-4 5', composite sample, WVM 0.75 green 1340 7-30-91

B-5 Tank Test, 1' to 3' clay, 3' to 9' sand (inside tank bed) 9' to 11' caliche.
S-5 11', WVM 0.75 green 1440 7-30-91

B-6 Tank Test, 1' to 2' asphalt and caliche, 2' to 10' sand (inside tank bed) 10' to 11' hard caliche.
S-6 11', WVM 1.0 green 1510 7-30-91

B-7 Fuel Line Test, 1' to 2' concrete and caliche, 2' to 3' sand, 3' to 5' caliche.
S-7 5', WVM 0.75 green 1455 7-30-91

P.O. Box 929 • Humphrey Road • Clovis, NM 88102 •(505)762-3030

B-8 Fuel Line Test, 1' to 3' concrete and sand, 3' to 5' caliche.
WVM Maximum, No soil sample taken contamination was quiet evident.

B-9 Fuel Line Test, 1' to 3' concrete and sand, 3' to 5' caliche.
S-8 5', WVM 150,000 red, enclosed sample, TPH 602,546 (ppb) BTEX <2 to 71,048 (ppb) 1640 7-30-91

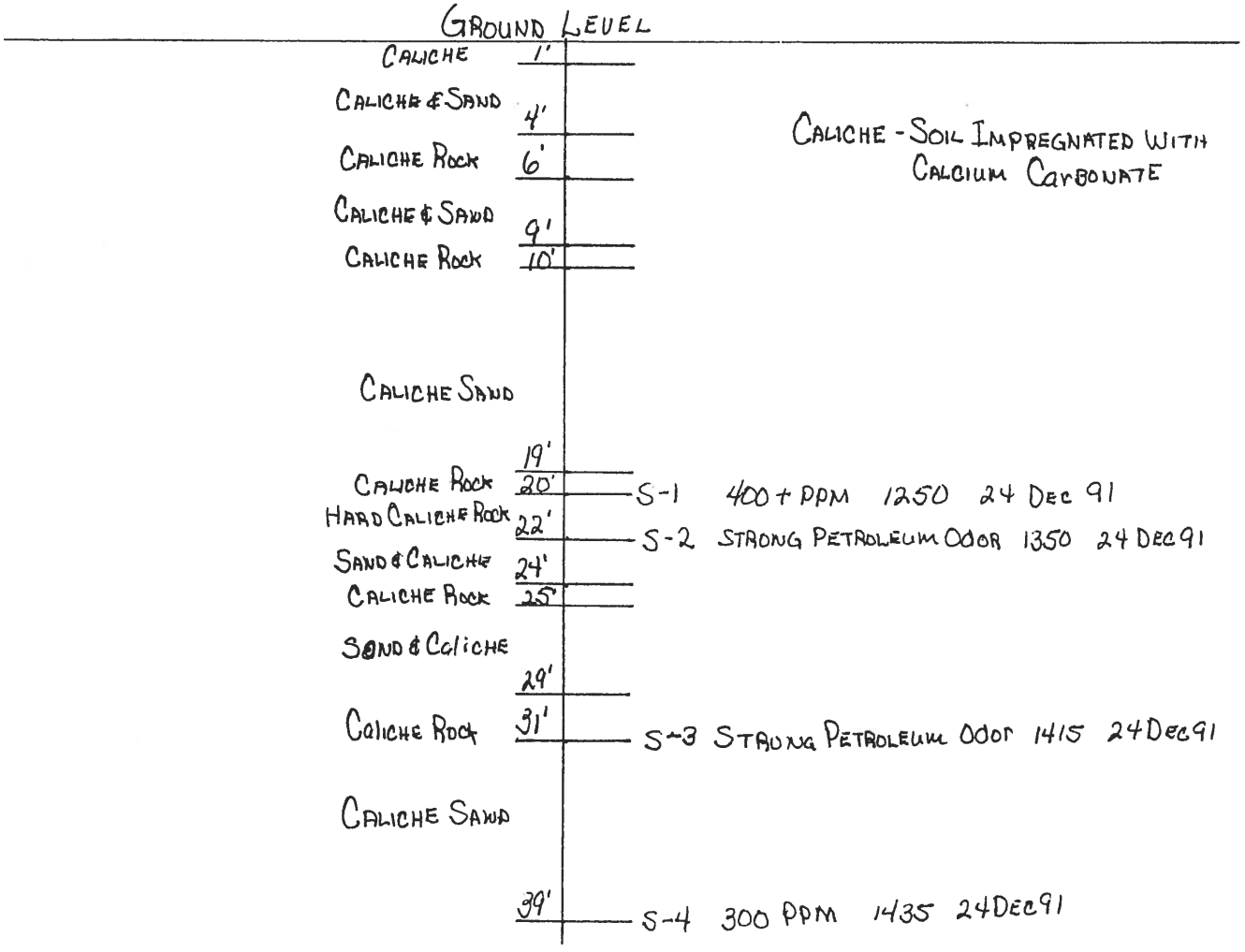
B-10 Site Assessment, 1' to 2' concrete sand, 2' to 7' caliche.
S-9 7', WVM 3.0 green, enclosed sample, TPH 575,845 (ppb) BTEX <2 to 10,564 (ppb) 1730 7-30-91

B-11 Tank Test, 1' to 2' asphalt and caliche, 2' to 10' sand (inside tank bed) 10' to 11' caliche.
S-10 11', WVM n/a, enclosed sample, TPH 16,907,265 (ppb) BTEX <2 to 2,728 (ppb) 0801 7-31-91

B-12 Tank Test, 1' to 2' asphalt and caliche, 2' to 10' sand, 10' to 11' caliche.
S-11 11', WVM n/a, enclosed sample, TPH 2,433,911 (ppb) BTEX <2 to 6 (ppb) 0840 7-31-91

B-13 Fuel Line Test, 1' to 6' hard caliche.
S-12 6', WVM 0.75 green, enclosed sample, TPH 87,613 (ppb) BTEX <1 to 6 (ppb) 0920 7-31-91

DRILLING LOG BORING CONDUCTED 24 DEC 91



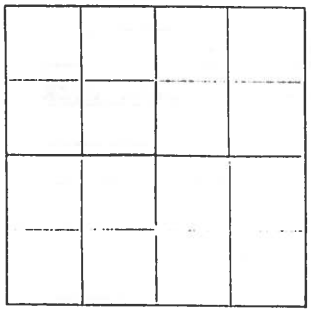
ONE SQUARE = 1' FOOT

Form WR-23 S E ENGINEER OFFICE

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1



(Plat of 640 acres)

(A) Owner of well [illegible] "Well No. 1"

Street and Number [illegible]

City [illegible] State New Mexico

Well was drilled under Permit No. [illegible] and is located in the [illegible] ¼ ¼ ¼ of Section 10 Twp. [illegible] Rge. 36 E

(B) Drilling Contractor [illegible] License No. [illegible]

Street and Number [illegible]

City [illegible] State New Mexico

Drilling was commenced Oct. 20 19 53

Drilling was completed Oct. 29 19 53

Elevation at top of casing in feet above sea level [illegible] Total depth of well 213

State whether well is shallow or artesian [illegible] Depth to water upon completion 62

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1	80	110	30	[illegible] Sand
2				
3				
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
13" OD	52	8	[illegible]	213	211	Baker	62	210

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used

Section 5 PLUGGING RECORD

Name of Plugging Contractor [illegible] License No. [illegible]

Street and Number [illegible] City [illegible] State [illegible]

Tons of Clay used [illegible] Tons of Roughage used [illegible] Type of roughage [illegible]

Plugging method used [illegible] Date Plugged [illegible] 19 [illegible]

Plugging approved by:

[illegible]
Basin Supervisor

Cement Plugs were placed as follows:

No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

FOR USE OF STATE ENGINEER ONLY

Date Received [illegible] 1955

[illegible]

File No. [illegible] Use [illegible] Location No. 16.36.10.11422

Form WR-23 AM 624 STATE ENGINEER OFFICE

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

(Plat of 640 acres)

(A) Owner of well .....

Street and Number O. L. Green

City 905 E. Tyler State .....

Well was drilled under Permit No. Lovington and is located in the New Mexico

¼ ¼ ¼ of Section L-3626 Twp. Rge.

(B) Drilling Contractor Let xx 11 xx 4 16 S License No. 36 E

Street and Number Clayton Drilling Company WD-183

City Box 1021 State .....

Drilling was commenced Lovington New Mexico 19

Drilling was completed August 1 1957

August 2 57

Elevation at top of casing in feet above sea level ..... Total depth of well .....

State whether well is shallow or artesian ..... Depth to water upon completion 25 ft.

Shallow 66 ft.

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1				
2	66	74	8	Water Sand
3	82	95	13	Quick Sand
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
6 5/8	13		88	95	8			

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
18	95	7	200 lbs.		Dry Mix

Section 5 PLUGGING RECORD

Name of Plugging Contractor ..... License No. .....

Street and Number ..... City ..... State .....

Tons of Clay used ..... Tons of Roughage used ..... Type of roughage .....

Plugging method used ..... Date Plugged 19

Plugging approved by:

Cement Plugs were placed as follows:

No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

Basin Supervisor

FOR USE OF STATE ENGINEER ONLY

Date Received 7-11-57

OFFICE OF STATE ENGINEER SUPERVISOR ROSWELL, NEW MEXICO

File No. L-3626 Use Dom Location No. 16.36.4.3220

16.36.4.3220

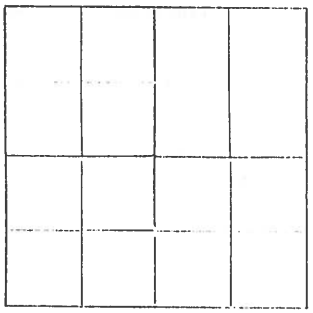
Form WJ-23 STATE ENGINEER OFFIC

FIELD ENGR. LOG

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1



(Plat of 640 acres)

(A) Owner of well [illegible]

Street and Number [illegible] 1206

City [illegible] State N. M.

Well was drilled under Permit No. L-5615 and is located in the [illegible] ¼ [illegible] ¼ [illegible] ¼ of Section 1 Twp. 16 S Rge. 36 E

(B) Drilling Contractor [illegible] License No. WD-287

Street and Number 1121 [illegible]

City [illegible] State New Mexico

Drilling was commenced [illegible] 19 65

Drilling was completed [illegible] 19 65

Elevation at top of casing in feet above sea level [illegible] Total depth of well 100

State whether well is shallow or artesian [illegible] Depth to water upon completion 70

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1	69	100		
2				
3				
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
6 5/8			0	100	100		70	80

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
			2 sacks		

Section 5 PLUGGING RECORD

Name of Plugging Contractor License No.

Street and Number City State

Tons of Clay used Tons of Roughage used Type of roughage

Plugging method used Date Plugged 19

Plugging approved by:

Basin Supervisor

Cement Plugs were placed as follows:

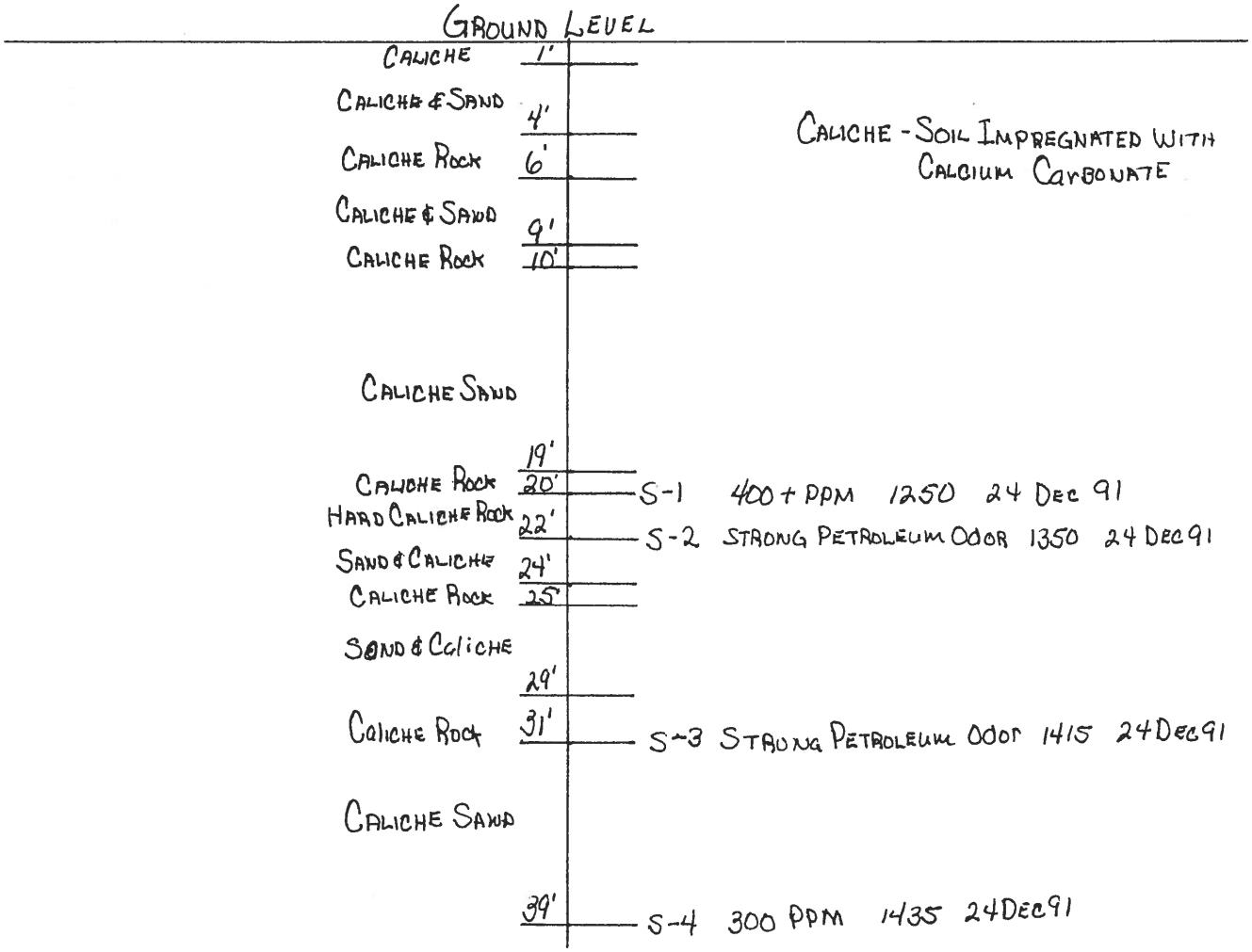
No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

FOR USE OF STATE ENGINEER ONLY

Date Received ✓

File No. L-5615 Use [illegible] Location No. 16.36.4.320

Drilling Log Boring Conducted 24 Dec 91



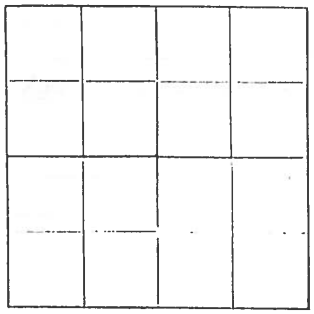
One Square = 1' Foot

Form WR-23 S "E ENGINEER OFFICE

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1



(Plat of 640 acres)

(A) Owner of well "Well No. 1"

Street and Number

City State New Mexico

Well was drilled under Permit No. L-1133 and is located in the ¼ ¼ ¼ of Section Twp. Rge. 36 E

(B) Drilling Contractor License No.

Street and Number

City State New Mexico

Drilling was commenced Oct. 20 19 53

Drilling was completed Oct. 29 19 53

Elevation at top of casing in feet above sea level Total depth of well 213

State whether well is shallow or artesian Depth to water upon completion 62

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1	80	110	30	Water Sand
2				
3				
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
13" OD	52	8	Gnd	213	213	Baker	62	210

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used

Section 5 PLUGGING RECORD

Name of Plugging Contractor License No.

Street and Number City State

Tons of Clay used Tons of Roughage used Type of roughage

Plugging method used Date Plugged 19

Plugging approved by:

Basin Supervisor

Cement Plugs were placed as follows:

No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

FOR USE OF STATE ENGINEER ONLY

Date Received [illegible] 1953

File No. L-1133 Use Domestic Location No. 16.36.10.11422

Form WR-23 AM 1 3 4 STATE ENGINEER OFFICE

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

(Plat of 640 acres)

(A) Owner of well .....

Street and Number O. L. Green

City 905 E. Tyler State .....

Well was drilled under Permit No. L-3626 and is located in the .... ¼ .... ¼ .... ¼ of Section .... Twp. .... Rge. ....

(B) Drilling Contractor Layton Drilling Company License No. WD-183

Street and Number Box 1021

City Lovington State New Mexico

Drilling was commenced August 1 19 57

Drilling was completed August 2 19 57

Elevation at top of casing in feet above sea level ..... Total depth of well 95 ft.

State whether well is shallow or artesian Shallow Depth to water upon completion 66 ft.

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1				
2	66	74	8	Water Sand
3	82	95	13	Quick Sand
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
6 5/8	13		80	95	8			

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
18	95	7	200 lbs.		Dry Mix

Section 5 PLUGGING RECORD

Name of Plugging Contractor ..... License No. .....

Street and Number ..... City ..... State .....

Tons of Clay used ..... Tons of Roughage used ..... Type of roughage .....

Plugging method used ..... Date Plugged ..... 19 ....

Plugging approved by:

Cement Plugs were placed as follows:

No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

..... Basin Supervisor

FOR USE OF STATE ENGINEER ONLY

Date Received 7-21-57

OFFICE OF STATE ENGINEER SUPERVISOR ROSWELL, NEW MEXICO

File No. L-3626 Use Dom Location No. 16.36.4.3220

16.36.4.3220

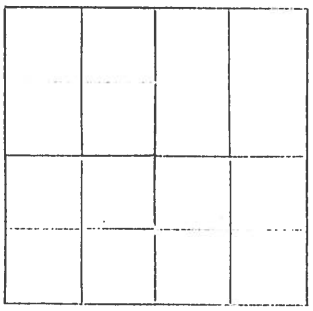
Form WWI-23 STATE ENGINEER OFFIC

FIELD ENGR. LOG

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1



(Plat of 640 acres)

(A) Owner of well [illegible]

Street and Number [illegible] 1206

City [illegible] State N. M.

Well was drilled under Permit No. L-5615 and is located in the [illegible] ¼ [illegible] ¼ ¼ of Section 1 Twp. 16 S Rge. 36 E

(B) Drilling Contractor [illegible] License No. WD-287

Street and Number 1121 [illegible]

City [illegible] State New Mexico

Drilling was commenced [illegible] 3 19 65

Drilling was completed [illegible] 19 19 65

Elevation at top of casing in feet above sea level [illegible] Total depth of well 100

State whether well is shallow or artesian [illegible] Depth to water upon completion 70

Section 2 PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation
1	69	100		
2				
3				
4				
5				

Section 3 RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth Top	Depth Bottom	Feet	Type Shoe	Perforations From	Perforations To
6 5/8			0	100	100		70	80

Section 4 RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
			2 sacks		

Section 5 PLUGGING RECORD

Name of Plugging Contractor License No.

Street and Number City State

Tons of Clay used Tons of Roughage used Type of roughage

Plugging method used Date Plugged 19

Plugging approved by:

Basin Supervisor

Cement Plugs were placed as follows:

No.	Depth of Plug From	Depth of Plug To	No. of Sacks Used

FOR USE OF STATE ENGINEER ONLY

Date Received ✓

File No. L-5615 Use [illegible] Location No. 16.36.4.320

SAMPLING TECHNIQUES

Testing laboratory provided clean decontaminated 250 millimeter glass jars with teflon lid liners.

Samples were taken with a split spoon sampler washed with soap and water and rinsed in clean water. Soil was removed from the split spoon sampler and placed into the sample jars with surgical gloves. Samples were immediately placed on ice.

Samples were later placed on ice in a thermal cooler and shipped via Greyhound Bus Lines to Lubbock Christian University Institute of Water Research.

LABORATORY PROTOCOL

EPA SW 846-3810 USING AUTOMATED HEAD SPACE; EPA SW 846-8020; EPA 418.1. BTEX SPIKE AND QC: Sample and Blank Spiked with 200 ppb EACH VOLATILE ORGANICS. TRPHC SPIKE AND QC: Sample spiked with 207,025 ppb TRPHC and Blank spiked with 82,810 ppb TRPHC.

SAFETY PLAN

Contaminated soil and the environment was monitored to insure that the contamination was not volatile or hazardous to employees health.

Employees were required to wear steel boots, hard hats, and safety glasses. They were not allowed to go into the excavation if the walls showed any indication of caving in. Soap and water was provided for washing purposes in the event that skin came in contact with contamination. Gloves were required.

All employees are trained in the operation of heavy equipment and all hazards of its operation, and the duties required of them.

REFERENCES

New Mexico Underground Storage Tank Regulations

Occupational Health and Safety Standards for General Industry: 29CFR - Part 1910

Petroleum Institute Technical Standards and Corrective Action Requirements for Owners/Operators of UST's

American Petroleum Institute, Removal & Disposal of used UST's

City of Lovington, New Mexico - Public Water Works Drilling Logs

New Mexico Bureau of Mines and Minerals Resources - Geological Highway map

Bureau of Economic Geology - University of Texas, Austin, TX, Cretaceous of Llano Estacado of Texas

Basics of Pump-and-Treat Groundwater Remediation Technology EPA - 600/8-90/003

Lubbock Christian University Institute of Water Research Laboratory Analytical Reports

This report was completed by:

Name: Ronald D. Awtrey, President

Name: Ronald M. Castleberry, Environmental Consultant

Firm: AEI Tank, Inc

Address: PO Box 929
Clovis, NM 88102

Telephone: (505) 762-3030

Date: February 28, 1992

PREPARERS REPRESENT THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE THE ABOVE STATEMENTS AND FACTS ARE TRUE AND CORRECT AND THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE NO MATERIAL FACTS HAVE BEEN SUPPRESSED OR MISSTATED.

Signed: Ronald Awtrey Date: 2/28/92

Signed: Ronald M Castleberry Date: 2/28/92

IF THE USER CONCLUDES, PURSUANT TO THE GUIDELINE PROVIDED WITHIN THIS REPORT, THAT FURTHER INQUIRY IS NEEDED THE USER SHOULD PROCEED TO THE NEXT LEVEL OF ASSESSMENT.

A.E.I. COMPANIES

January 30, 1992

Mr Jim Maddox
Maddox & Saunders
PO Box 5370
Hobbs, N.M. 88241

Re: Jack Walstad Oil Company, Inc
Lovington 66 Site (424 S. Main)

Dear Mr. Maddox

It is the considered opinion of AEI Tank, Inc., that we air drill at the above site, in an attempt to determine the vertical extent of hydrocarbon contamination.

We propose to drill to the vadose and phreatic zones, to establish the exact depth to groundwater. The approximated depth to groundwater in the Lovington area is 110 to 120 feet. The drilling location will be down-gradient from the lateral parameters of hydrocarbon contamination.

Should you have any questions or require any additional information, please feel free to contact me at any time.

Yours sincerely

Ronald Awtrey

Ronald D. Awtrey by lmw.

RDA/lmw

P.O. Box 929 • Humphrey Road • Clovis, NM 88102 • (505) 762-3030 • Fax: (505) 763-6762