ENCON INTERNATIONAL

Consulting Engineers & Scientists

ON-SITE INVESTIGATION REPORT

HALSELL'S SUPERMARKET
101 SCHOOL ROAD
HATCH, NM 87937

Prepared for:
Sharp Oil Company, Inc.
217 North Main
Anthony, NM 88021
and
Halsell's Supermarket
101 School Road
Hatch, NM 87937

PROJECT #258
August 7, 1992

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101 School Road
Hatch, New Mexico 87937

EXECUTIVE SUMMARY

PURPOSE

The purpose of this on-site investigation was to address a suspected gasoline release as requested in the New Mexico Environment Department (NMED) letter, dated September 16, 1991, to Sharp Oil Company Inc. Specifically, this report describes the actions taken to establish the extent of soil and groundwater contamination caused by a suspected gasoline release at Halsell's Supermarket in Hatch.

ACTIONS TAKEN

A total of four soil borings and three monitor wells were installed. The soil was screened using field instruments. A groundwater sampling event was conducted, and samples were collected and analyzed from the three monitor wells (MW-1 through MW-3). These samples were analyzed at the New Mexico State University Soil, Water and Plant Testing Laboratories. The soil borings and monitoring wells were installed exclusively within the property boundaries.

CONCLUSIONS

The vertical extent of soil contamination was from five feet below grade to the depth of the water table. Groundwater was encountered at an approximate depth of 7.5 feet. The horizontal extent of the soil contamination was not contained within the property and consequently the areal extent was not fully defined during the on-site investigation. It was confirmed that the groundwater was impacted and dissolved product was found in excess of the established standards in monitor well MW-1.

With the sub-surface information gathered to date, it was not possible to absolutely determine if the UST system removed from the property was the source of the off-site contamination, or if other possible sources of contamination were impacting this site. The installation of additional off-site soil borings and monitor wells are recommended.

This project has been coordinated with NMED personnel. Sharp Oil Company, Inc. and Halsell's Supermarket personnel have acted in good faith to address this gasoline release.

CHRONOLOGY OF EVENTS

Dates	Description of Events
11/29/90	Hydrocarbon contamination was discovered in the vicinity of the job site.
11/30/90	Soil contamination was found during installation of boreholes on Hall Street.
12/05/90	NMED requested a system test and site check on all UST's in the area, copies of inventory records for the last 2 years and a completed UST questionnaire.
12/11/90	Information regarding the representative of Halsell's Supermarket by Attorney Peter V. Domenici.
12/27/90	NMED requested information from EEC Environmental Inc.
01/04/91	UST questionnaire was sent to Halsell's Supermarket facility.
01/10/91	NMED requested a site check, inventory records for the last two years and return of a completed UST questionnaire from Sharp Oil Company, Inc.
01/18/91	Sharp Oil submitted the questionnaire and tank tests and inventory records to NMED.
01/23/91	A letter from Mr. Joseph G. Rochelle from Rudy Dickason, (Swan, Akin & Roth, P.A.) attorney, to Anthony Moreland requesting results of tests performed by the representative of Hilge Oil Company.
02/14/91	Sharp Oil received a letter from the NMED reminding them to perform the site check.
03/05/91	NMED granted Sharp Oil's request to substitute a site check for a site assessment.
03/20/91	New Mexico State Highway Dept. found some UST's while improving the road. The project was suspended for a year. NMED stated that all streets were contaminated.
07/26/91	A letter from Anthony Moreland to Doland R. Domenici, Attorneys, indicated that the vapor and soil analyses performed indicated the presence of contamination.
09/16/91	Letter from NMED confirming Petroleum Hydrocarbon Contamination.
11/25/91	An application for extension from Sharp Oil Company Inc. was submitted.
08/07/92	On-site investigation submitted to NMED by ENCON International.

ON-SITE INVESTIGATION REPORT
HALSELL'S SUPERMARKET
101 School Road
Hatch, New Mexico 87937

I. INTRODUCTION

ENCON was retained by the Sharp Oil Company, Inc. and Halsell's Supermarket to perform an on-site investigation at Halsell's Supermarket facility, located at 101 School Road in Hatch, NM. A copy of this report will be submitted to the New Mexico Environment Department (NMED). Specifically, this report addresses the actions taken to assess the extent of contamination from a limited underground release of gasoline at the site, and provides relevant background information.

II. OBJECTIVES

The objectives of this on-site investigation were: 1) to gather the vertical and horizontal soil contamination data, 2) to establish if the gasoline release had impacted the groundwater, 3) to identify the location of any adjacent underground utilities, and 4) to identify the surface water courses within a one-half mile radius of the site.

III. BACKGROUND INFORMATION

A. Site Location

The town of Hatch is located in Dona Ana County, in southern New Mexico. Hatch is situated approximately 39 miles north-northwest of the city of Las Cruces (refer to site location map in Appendix A). Direct access to Hatch is provided by State Highway 25. Access also is possible using State Highway 85 as well as State Routes 26 and 140.

The Halsell's Supermarket is located at the north-east corner of Hall and School Streets (refer to the facility location map in Appendix A).

B. Tank System

The tank system consisted of two 3,000-gallon steel tanks, connecting lines, and two dispensers. The facility dispensed regular and unleaded gasoline.

C. Hydrology

1. Soil Types. In this report, the civil engineering definition of soil is used, which describes soil as "any material that is unlithified and can be excavated without blasting". The soil classification system utilized is the Unified System adopted by the Corps of Engineers, U. S. Army. The soils encountered during drilling were alluvial soils composed of surface silty gravels, gravel-sand-silt mixtures (GM), alternating layers of silty sands, sand-silt mixtures (SM) and inorganic clays of high to medium plasticity (CH).

2. Surface Waters (refer to USGS Topographic Map).
   a. Rio Grande. The Halsell's Supermarket facility is located approximately one mile south of the Rio Grande River.
   b. Hatch Drain. This drain is located approximately two-thirds of a mile north of Halsell's Supermarket.
   c. Hatch Canal. This canal is located approximately one-third of a mile north of the Halsell's Supermarket property.
   d. Colorado Drain. This drain is located approximately 1,000 feet south of the Halsell's Supermarket property.

3. Groundwater. The near-surface groundwater table fluctuates between approximately seven and ten feet below grade. The quality of the water is not suitable for human consumption. Reportedly, this near-surface groundwater currently is not being used by the town. The depth to the potable groundwater is estimated to be approximately 120 to 140 feet below grade.

D. Underground Utilities

Water, sewer and underground electrical lines were identified within the property. The water line ran east-west near Hall Street. A sewer line ran north-south in the north-central portion of the property. The electrical lines ran east-west between the former gasoline dispensing island and the building. (refer to Appendix A).

E. Suspected Release

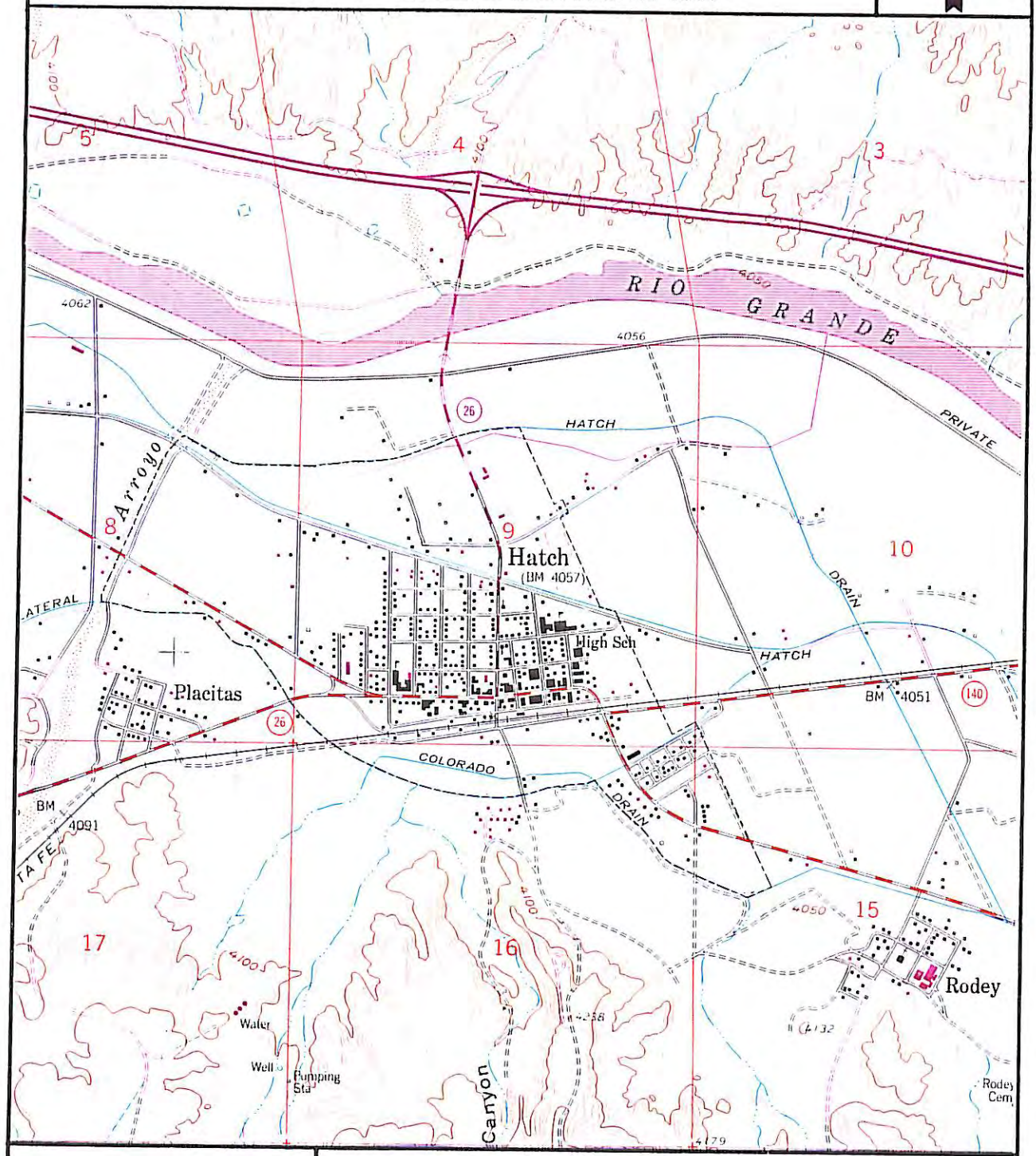
A petroleum product release was suspected to have occurred in the area before or during January 1991 when hydrocarbon odors were detected in a nearby street reconditioning project. Immediate actions were taken to locate the suspected source of release by the NMED.

Tank Tightness Tests were performed on the Halsell's Supermarket UST system on two occasions by Rio Valley Pump and Supply. The first tightness test was performed on March 8, 1990 and the second on December 1, 1990. Both tanks on these two separate occasions passed the tests.

Within the site, petroleum hydrocarbon contamination was observed on September 10, 1991. On September 16, 1991, NMED confirmed the presence of contamination within the tank cavity and indicated a suspected leak from the UST system.

USGS TOPOGRAPHIC MAP

HATCH, N. MEX. N3237.5-W10707.5/7.5 1959



SCALE: 1:24000

SOURCE: USGS

IV. PREVIOUS ACTIONS

Reportedly, the gasoline inventory records of the Halsell's Supermarket facility failed to indicate that a release had occurred. Recently, the tank and lines were inspected and a line leak was discovered and immediately repaired. The soil was screened visually and the observed, impacted portion excavated and disposed of properly. Subsequently, two 3,000 gallon steel tanks were removed. Prior to and during tank removal, the tank atmosphere and the excavation area were regularly monitored for possible flammable or combustible vapor concentrations. The above-mentioned activities were coordinated with NMED.

A. Soil Vapor Stations

Seven soil vapor stations previously were advanced in the parking lot of the Halsell's Supermarket facility (refer to Appendix A for the soil vapor station locations, SV-1 through SV-7). Soil vapor stations were advanced using the soil vapor probe, flights, associated tubing and sample collection bottles.

B. Groundwater Sampling

Three groundwater samples were collected from the following soil vapor stations: SV-1, SV-4 and SV-5. The laboratory results are discussed in the Groundwater Contamination Section.

V. PRESENT ACTIONS

The main activities performed by ENCON personnel were: 1) compilation of previous information, 2) drilling of soil borings and installation of monitoring wells, 3) sample collection and data interpretation, and 4) report writing.

A. Compilation of Previous Information

Information regarding previous actions was obtained from two main sources: Mr. Jeff Charles of Sharp Oil Company, Inc. and Ms. Rose Stickel of the NMED in Las Cruces.

B. Monitor Wells

Seven (7) soil borings were advanced within the southern and western portions of Halsell's Supermarket property. Three (3) soil borings were converted to monitor wells MW-1, MW-2 and MW-3. Monitor well MW-1 was installed in the vicinity of the suspected leak point. Monitor well MW-2 was installed in the south-east corner of the property at approximately 115 feet away from the suspected leak source . Finally, monitor well MW-3 was installed approximately 108 feet away from the suspected leak source (north-west corner of the property). The depth of the wells are approximately 20 feet, with the pvc casing diameter being two inches (refer to Appendix B for the well installation details).

VI. SOIL CONTAMINATION

A. Vertical Extent

Monitor well MW-1 was constructed in the vicinity of the suspected release, MW-2 in the south-east corner, and MW-3 in the north-west corner of the property.

Soil boring logs for monitor well MW-1 and boring B-1 indicated that the soil was impacted. Soil around the vicinity of MW-1 (former location of the UST system) was from clean backfill, MW-1 had black stained soils with a strong odor from a depth of four to five feet and continuing down to a depth of approximately six and one-half feet.

B. Horizontal Extent

The horizontal extent of soil contamination was defined toward the north and east, and not defined towards Hall (south) and School Streets (west), outside the property limits (refer Appendix D). Based on the information gathered and the available laboratory results, contaminated soil was encountered in soil vapor stations SV-4, SV-5 and SV-6, soil boring B-1 and monitor well MW-1. Within the property, the extent of contamination towards the north, along Hall Street, was estimated to be 30 feet (the limit lies between B-3 and SV-4). Towards the east, the extent was estimated to be about 50 feet.

C. Field Screening Methods

Field screening methods accepted by the NMED were used when advancing the soil borings. ENCON used a photoionization detector to screen the soils in the field when advancing the soil borings. The field instrument was properly calibrated before starting the hydrocarbon monitoring. Readings shown in the soil boring logs are headspace readings of Benzene Equivalent in ppm.

VII. GROUNDWATER CONTAMINATION

As mentioned above seven soil vapor stations were previously advanced and three groundwater samples were collected and analyzed (refer to Appendix C). Subsequently, ENCON installed monitor wells MW-1, MW-2 and MW-3. The top of the casings were surveyed with respect to the altitude of an established benchmark (floor of Halsell's Supermarket entrance). The casing altitudes and water table depths are reported in Appendix D. A groundwater gradient map was constructed and a local west-southwest groundwater flow direction was determined. Groundwater flow directions change according to the year, season and the pumping rate of nearby wells.

The horizontal extent of impacted groundwater based on the information obtained was estimated to be about 105 feet towards the north from the southwestern corner of the property intersection of Hall and School Streets. Towards the east, the extent was determined to be about 100 feet from the above-mentioned corner of the property. The extent towards the south (Hall Street) and west (School Street) was not defined (refer to Appendix D for Hydrocarbon Plume).

A. Groundwater Sampling

Groundwater samples from monitor wells MW-1, MW-2 and MW-3 were collected after well development (bailing of three volumes of water) on May 19, 1991. ENCON used ice immediately after collection to preserve the samples. Hydrochloric acid was also used as a preservative in one of the VOC vials.

B. Lab Results (ENCON Sampling Event)

The groundwater laboratory results of the sampling event preformed by ENCON are included in Appendix C. ENCON collected groundwater samples from the three monitor wells (MW-1 to MW-3).

The samples collected on June 3, 1992 were analyzed for 33 parameters (halogenated purgeables) by EPA method 601/602. Of all the parameters analyzed, only Benzene, Toluene, Ethylbenzene, Chlorobenzene, I,2-Dichlorobenzene, 1,3-Dichlorobenzene and 1,4-Dichlorobenzene were detected in monitor well MW-1, in excess of the limits established for groundwater in the New Mexico Water Quality Control Commission regulations. Xylenes were not detected in this well and 1,2-Dichloroethane was detected in concentrations below the standard limits in MW-1.

C. Dissolved Hydrocarbon Plume

The configuration of the dissolved hydrocarbon plume is shown in Appendix D. Maps with isoconcentration curves for the different parameters were not developed because the samples used to configure the dissolved plume were not collected on the same date, and because the analyses were performed by two different laboratories.

VIII. CONCLUSIONS

The estimated vertical extent of soil contamination began at about four (4) to five (5) feet and continued down to six and one-half feet, which is the approximate depth of the fluctuating water table. The horizontal extent of the soil contamination was restricted to the southwestern corner of the property. Soil contamination does not appear to have affected the soil beneath the building. The full extent of the hydrocarbon migration towards the west, south and southwest has not been determined.

Groundwater was impacted, as laboratory results show Benzene, Toluene and Ethylbenzene values exceeded the standard acceptable limits in monitor well MW-1. No free-phase hydrocarbons were encountered. Total Dissolved Solids (TDS) of groundwater varied between 1080 and 1096 mg/L.

Reportedly, the water table is relatively flat and seasonal fluctuations are common. The groundwater gradient map indicated a flow towards the west-southwest. The subsurface information gathered to date suggests that a leak from the UST system had occurred in the past. It was not possible to ascertain if hydrocarbons migrated outside the property towards the west, if sources located to the west or southwest of the property impacted the subject property, or if a combination of the two occurred.

This project has been coordinated with New Mexico Environment Department personnel. Sharp Oil Company Inc. personnel have acted in good faith to address this concern.

IX. RECOMMENDATIONS

ENCON recommends that three (3) to five (5) monitor wells be installed on the properties across Hall and School Streets in order that the extent of impacted soil and groundwater can be further defined in the south, west and south-west directions.

VIII. CERTIFICATION

I certify that I am familiar with the information provided in this report. The information was obtained in the following manner: by performing or directing the performance of the environmental activities, and as a result of communication with personnel of Sharp Oil Company Inc. as well as the New Mexico Environment Department, followed by documentary review.

Submitted By:

David Ang, REPA
Project Engineer

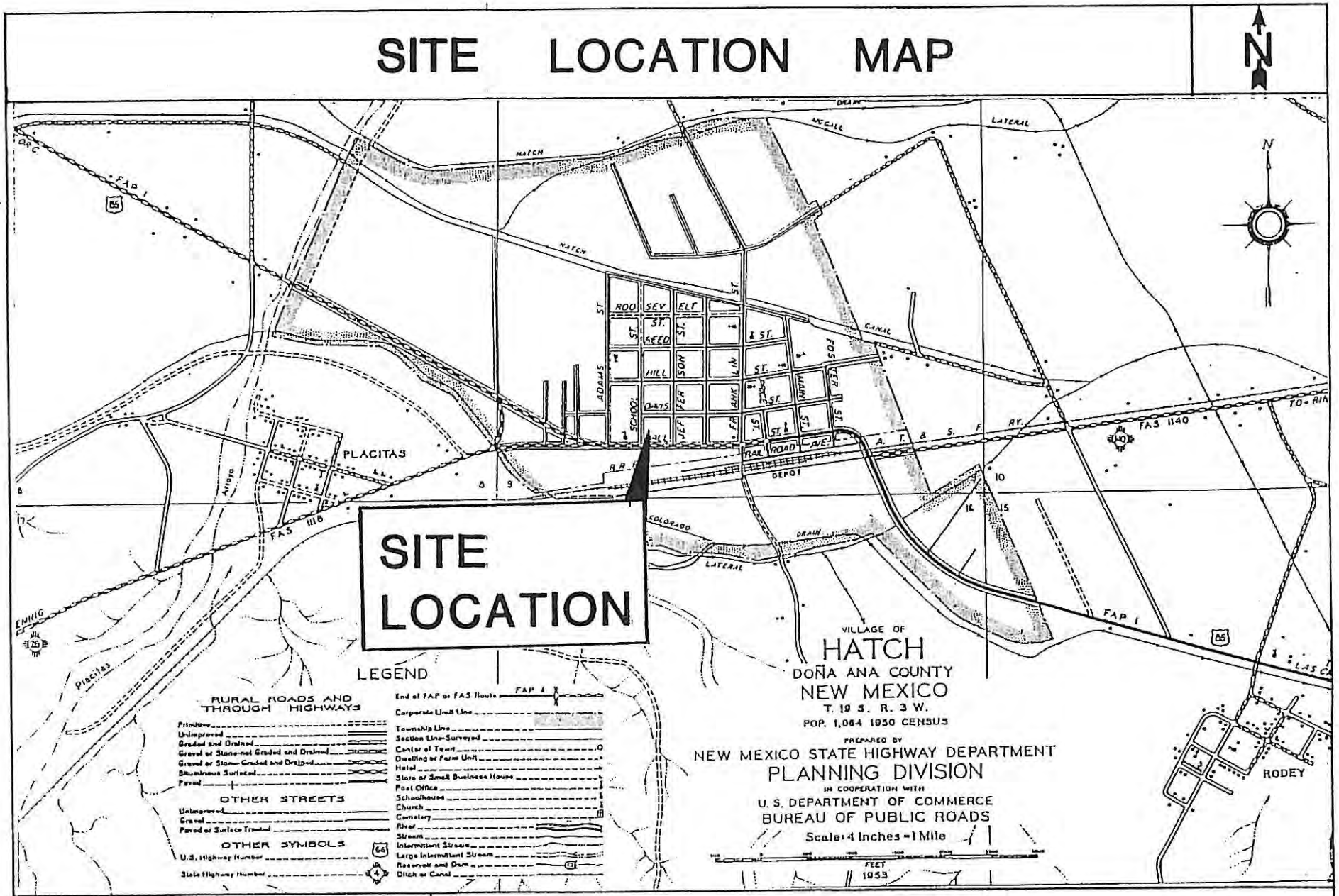
Approved By:

Ben Ponce, REPA
Project Manager

APPENDIX A

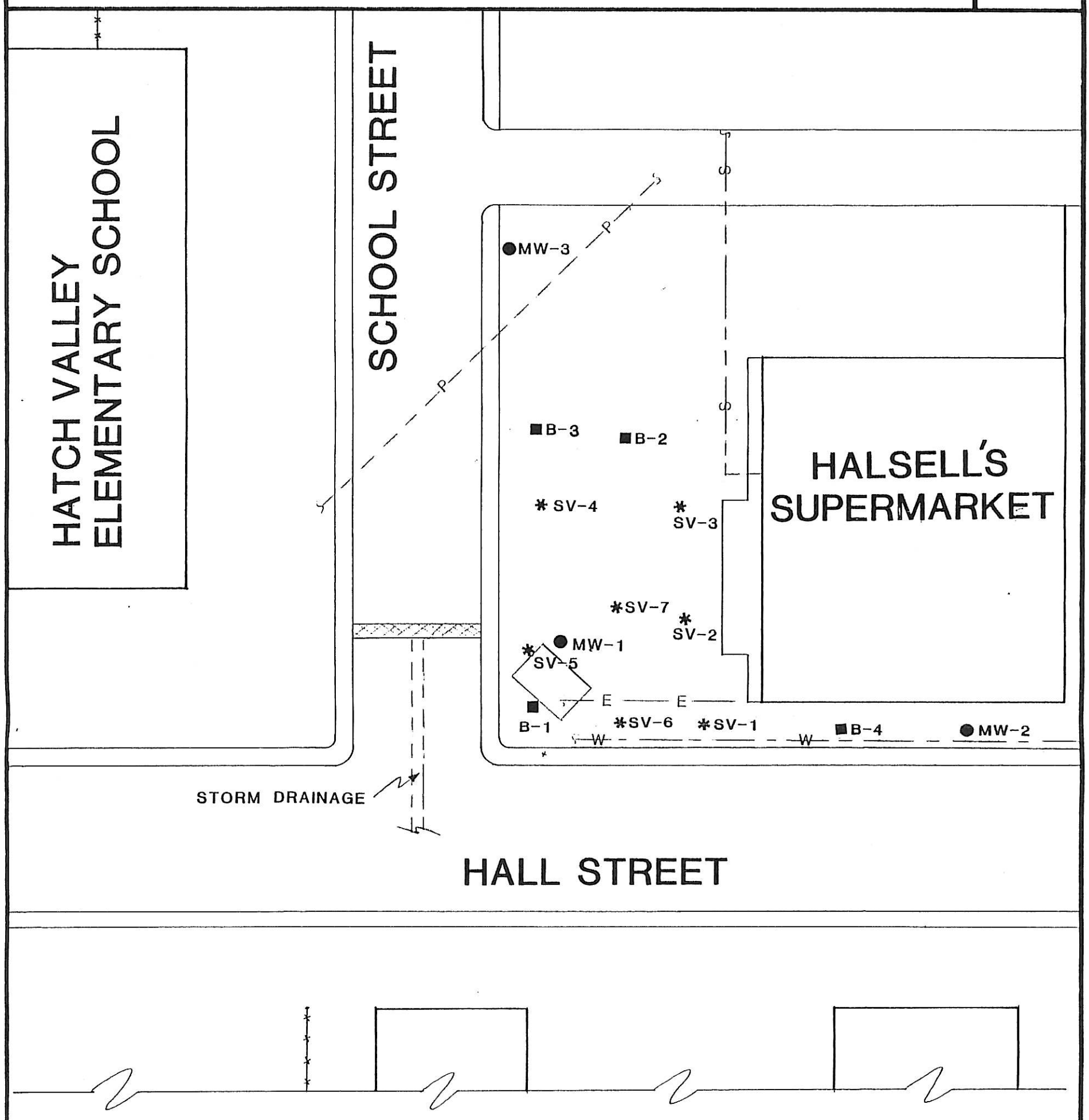
LOCATION MAPS

SITE LOCATION MAP



SOURCE: NEW MEXICO STATE HIGHWAY DEPARTMENT

FACILITY LOCATION MAP



LEGEND

--P--	OVERHEAD POWER LINE	* SV	SOIL VAPOR STATION
--S---	SEWER	● MW	MONITORING WELLS
--E--	UNDERGROUND CABLE	■ B	SOIL BORING
--W--	WATER LINE		

SCALE: 1":300'	SOURCE: ENCON INTERNATIONAL

SOIL BORING LOG

PROJECT NO: 258 DATE: 5/18/92

BORING NO: B - 1 LOCATION: Sharp/Hatch PAGE: 1 of 1

DEPTH (ft)	PROFILE SKETCH	ODOR (Y/N)	PID FIELD DATA (ppm)	LAB DATA TPH (ppm)	DESCRIPTION
0		N			0"-1" Asphalt
					1"-2' Clay with some gravel, dark brown
5	*	Y	20.4		
					2'-6' Clay, imbedded with fine to medium sandy clay,
10	*	Y	190		moist, black stained
					6'-6.5' Clayey fine sand with clay, black stained
15					
					6.5'-10' Clayey fine sand with some small pebbles, black stained
20					
25					
30					
35					
40					
45					
50					
55					
60					
65					

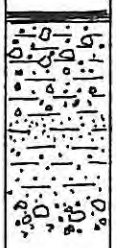
*FIELD MONITORING POINT

WATER TABLE: 7.5' COMPLETION DEPTH: 25'

SOIL BORING LOG

PROJECT NO: 258 DATE: 5/18/92

BORING NO: B - 2 LOCATION: Sharp/Hatch PAGE: 1 of 1

DEPTH (ft)	PROFILE SKETCH	ODOR (Y/N)	PID FIELD DATA (ppm)	LAB DATA TPH (ppm)	DESCRIPTION	
0		N			0'-1"	Asphalt
					1"-3'	Gravely sand with clay, moist, dark brown
5	*	Y	19.2		3'-5'	Clayey sand (fine to medium), dark brown
10	*	Y	18.2		5'-6'	Clayey fine sand and silt, dark brown
15					6'-6.5'	Fine sand with minor clay, dark brown
20					6.5'-8'	Clayey sand (fine to medium), moist, dark brown
25					8'-10'	Sand (coarse to medium) with fewer pebbles and silt, black stained
30						
35						
40						
45						
50						
55						
60						
65						

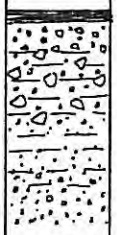
*FIELD MONITORING POINT

WATER TABLE: 8' COMPLETION DEPTH: 10'

SOIL BORING LOG

PROJECT NO: 258 DATE: 5/18/92

BORING NO: B - 3 LOCATION: Sharp/Hatch PAGE: 1 of 1

DEPTH (ft)	PROFILE SKETCH	ODOR (Y/N)	PID FIELD DATA (ppm)	LAB DATA TPH (ppm)	DESCRIPTION
0		N			0"-1" Asphalt
					1"-2' Very medium to coarse sand, brown
5	*	N	8.4		2'-5' Gravely clayey sand (medium),dark brown
10	*	Slight	7.0		5'-5.5' Fine sand, moist, dark brown
15					5.5'-6.5' Clay, dark brown
					6.5'-7' Fine sand, moist, dark brown
20					7'-8' Clayey sand (fine to medium), moist, dark brown
25					8'-10' Sand (fine to medium) with 2 inches of black stained sand at 10'
30					
35					
40					
45					
50					
55					
60					
65					

*FIELD MONITORING POINT

WATER TABLE: 8' COMPLETION DEPTH: 10'

SOIL BORING LOG

PROJECT NO: 258 DATE: 5/18/92

BORING NO: B - 4 LOCATION: Sharp/Hatch PAGE: 1 of 1

DEPTH (ft)	PROFILE SKETCH	ODOR (Y/N)	PID FIELD DATA (ppm)	LAB DATA TPH (ppm)	DESCRIPTION
0		N			0'-2' Coarse to medium sand with small pebbles, dark brown
5	*	N	9.6		2'-3.5' Clay, very plastic, dark brown
10	*	N	5.4		3.5'-10' Clayey fine sand with silt, dark brown
15					10'-25' Medium to fine silty sand with some medium pebbles, black stained
20					
25					
30					
35					
40					
45					
50					
55					
60					
65					

*FIELD MONITORING POINT

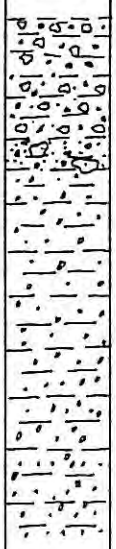
WATER TABLE: 7.5'

COMPLETION DEPTH: 25'

SOIL BORING LOG

PROJECT NO: 258 DATE: 5/18/92

BORING NO: MW - 1 LOCATION: Sharp/Hatch PAGE: 1 of 1

DEPTH (ft)	PROFILE SKETCH	ODOR (Y/N)	PID FIELD DATA (ppm)	LAB DATA TPH (ppm)	DESCRIPTION
0		N			0'-2.5' Clayey sand with some medium size pebbles, black stained
5		Y			2.5'-6' Clayey sand (find to medium) with some fine to medium sized pebbles, dark brown
10	*	Y	61.2		6'-7.5' Clay and medium silty sand with scarce, large pebbles, dark brown
15	*	Y	16.8		7.5'-9' Clay, very plastic, dark brown
20	*	Y	40.8		9'-25' Medium to fine clayey sand, dark brown
25					
30					
35					
40					
45					
50					
55					
60					
65					

*FIELD MONITORING POINT

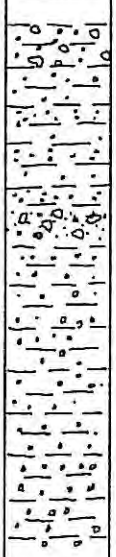
WATER TABLE: 7.5'

COMPLETION DEPTH: 25'

SOIL BORING LOG

PROJECT NO: 258 DATE: 5/18/92

BORING NO: MW - 2 LOCATION: Sharp/Hatch PAGE: 1 of 1

DEPTH (ft)	PROFILE SKETCH	ODOR (Y/N)	PID FIELD DATA (ppm)	LAB DATA TPH (ppm)	DESCRIPTION
0		N			0'-3' Medium clayey sand with some small pebbles, dark brown
5	*	N	8.4		3'-5' Clay, very plastic, brown
10	*	Slight	9.8		5'-9' Clayey fine sand, moist, interbedded with sandy clay, brown
15					9'-10' Medium silty sand with some small pebbles, black stained
20					10'-25' Medium to fine clayey sand, wet, brown
25	*	Y	15.2		
30					
35					
40					
45					
50					
55					
60					
65					

*FIELD MONITORING POINT

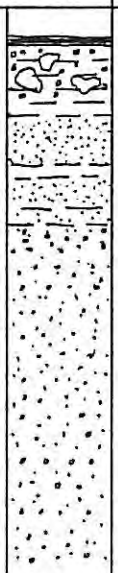
WATER TABLE: 7.5'

COMPLETION DEPTH: 25'

SOIL BORING LOG

PROJECT NO: 258 DATE: 5/18/92

BORING NO: MW - 3 LOCATION: Sharp/Hatch PAGE: 1 of 1

DEPTH (ft)	PROFILE SKETCH	ODOR (Y/N)	PID FIELD DATA (ppm)	LAB DATA TPH (ppm)	DESCRIPTION
0		N			0'-1" Asphalt
5	*	N	29.6		1"-3' Clayey sand (medium) with large pebbles, dark brown
10	*	N	8.6		3'-3.5' Clay, very plastic, yellow brown
15					3.5'-6' Very fine to fine sand with silt, yellow brown
20					6'-7' Clay, dark brown
25					7'-7.5' Very fine to fine sand with silt, yellow brown
30					7'-9' Clayey, fine sand, brown
35					9'-10' Medium sand, black stained
40					10'-25' Medium to fine sand with minor silt, black stained
45					
50					
55					
60					
65					

*FIELD MONITORING POINT

WATER TABLE: 8' COMPLETION DEPTH: 25'

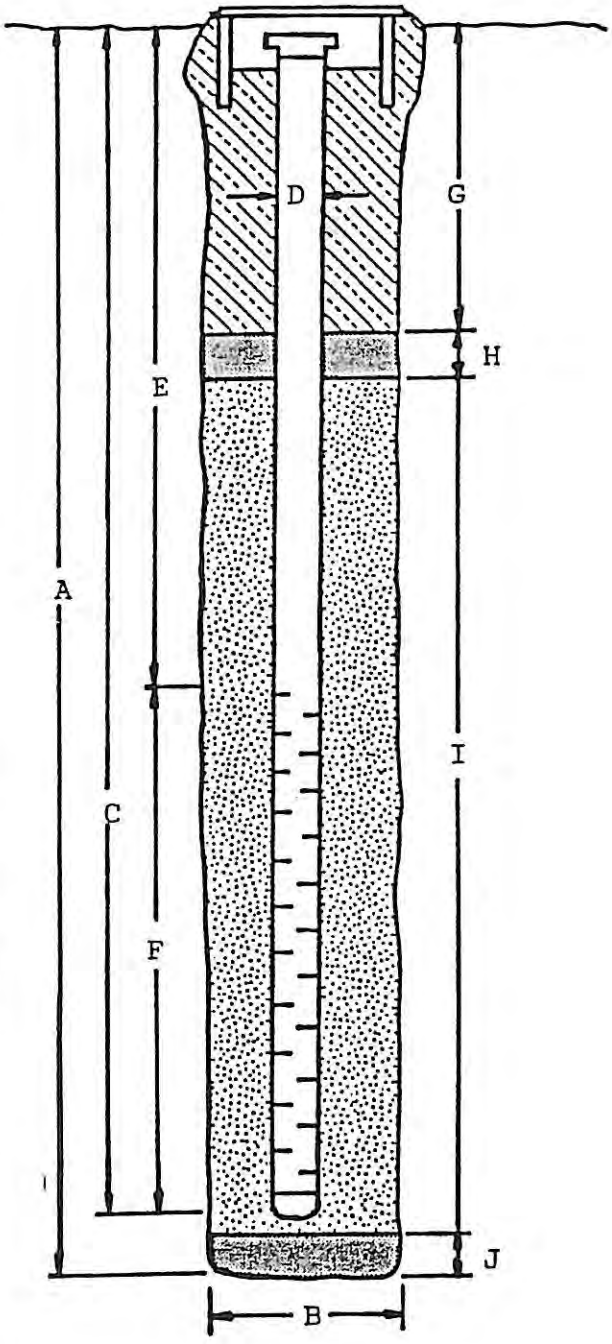
WELL DETAILS

PROJECT NAME: Halsell's Supermarket (Sharp Oil Co. Inc.) BORING/WELL NO. MW-1

PROJECT NUMBER: 258 CASING ELEVATION: 93.75

WELL PERMIT NO.: SURFACE ELEVATION:

G-5 Vault Box



A. Total Depth: 21 ft

B. Boring Diameter: 6 1/8 inches

Drilling method: Hollow Stem Auger

C. Casing Length: 20 ft

Material: 40 schedule PVC

D. Casing Diameter: 2 inches

E. Depth to Perforations: 5 ft

F. Perforated Length: 15 ft

Perforated Interval: 5 to 20 ft

Perforation Type: Slotted

Perforation Size: 0.010 inches

G. Surface Seal: 2 ft

Seal Material: Sackrete

H. Seal: 1 ft

Seal Material: Bentonite

I. Gravel Pack: 17 ft

Pack Material: Silica Sand

Size: 10-20

J. Bottom Seal: None

Seal Material: N/A

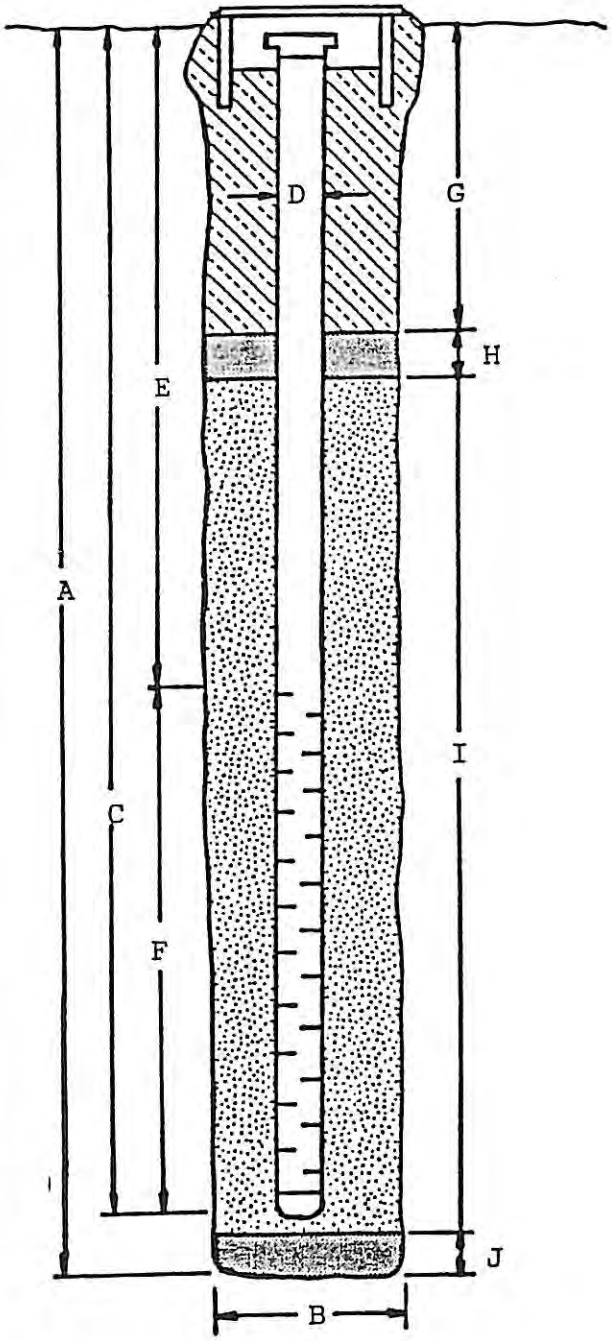
WELL DETAILS

PROJECT NAME: Halsell's Supermarket (Sharp Oil Co. Inc.) BORING/WELL NO. MW-2

PROJECT NUMBER: 258 CASING ELEVATION: 94.6

WELL PERMIT NO.: SURFACE ELEVATION:

G-5 Vault Box



A. Total Depth: 21 ft

B. Boring Diameter: 6 1/8 inches

Drilling method: Hollow Stem Auger

C. Casing Length: 20 ft

Material: 40 schedule PVC

D. Casing Diameter: 2 inches

E. Depth to Perforations: 5 ft

F. Perforated Length: 15 ft

Perforated Interval: 5 to 20 ft

Perforation Type: Slotted

Perforation Size: 0.010 inches

G. Surface Seal: 2 ft

Seal Material: Sackrete

H. Seal: 1 ft

Seal Material: Bentonite

I. Gravel Pack: 17 ft

Pack Material: Silica Sand

Size: 10-20

J. Bottom Seal: None

Seal Material: N/A

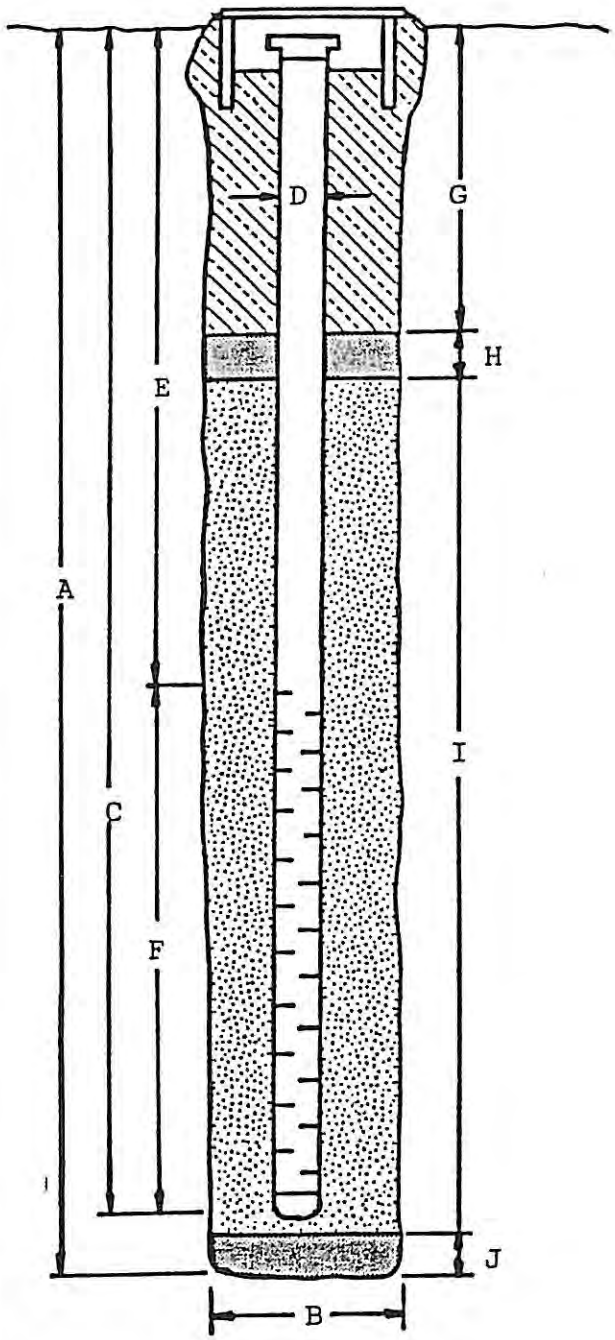
WELL DETAILS

PROJECT NAME: Halsell's Supermarket (Sharp Oil Co. Inc.) BORING/WELL NO. MW-3

PROJECT NUMBER: 258 CASING ELEVATION: 94.1

WELL PERMIT NO.: SURFACE ELEVATION:

G-5 Vault Box



A. Total Depth: 21 ft

B. Boring Diameter: 6 1/8 inches

Drilling method: Hollow Stem Auger

C. Casing Length: 20 ft

Material: 40 schedule PVC

D. Casing Diameter: 2 inches

E. Depth to Perforations: 5 ft

F. Perforated Length: 15 ft

Perforated Interval: 5 to 20 ft

Perforation Type: Slotted

Perforation Size: 0.010 inches

G. Surface Seal: 2 ft

Seal Material: Sackrete

H. Seal: 1 ft

Seal Material: Bentonite

I. Gravel Pack: 17 ft

Pack Material: Silica Sand

Size: 10-20

J. Bottom Seal: None

Seal Material: N/A

TABLE 1
GROUNDWATER LAB ANALYSIS
(Sampling Date: 6/3/92)

PURGEABLE HALOCARBONS, METHOD 601

Test Results (mg/L)				
Test Parameters	**MW-1**	**MW-2**	**MW-3**	**Standard**
1.2 - Dichloroethane	1.0	N.D.	N.D.	0.01 mg/L

PURGEABLE AROMATICS, METHOD 602

Test Results (mg/L)				
Test Parameter	**MW-1**	**MW-2**	**MW-3**	**Standards**
Benzene	863.1	5.5	0.1	0.01
Chlorobenzene	3.2	N.D	N.D.	---
1,2 -Dichlorobenzene	6.2	N.D.	N.D.	---
1,3 - Dichlorobenzene	6.3	N.D.	N.D.	---
1,4 - Dichlorobenzene	374.2	3.5	0.4	---
Ethylbenzene	1164.5	6.1	0.5	0.75
Toluene	4426.3	25.9	1.6	0.75
m, p-Xylenes	N.D.	10.2	1.0	---
o-Xylenes	N.D.	17.2	1.0	0.62
Total BTEX	**6453.9**	**64.9**	**4.2**	**---**

TABLE 1
GROUNDWATER LAB ANALYSIS
(Sampling Date: 6/3/92)

PURGEABLE HALOCARBONS, METHOD 601

Test Results (mg/L)				
Test Parameters	**MW-1**	**MW-2**	**MW-3**	**Standard**
1.2 - Dichloroethane	1.0	N.D.	N.D.	0.01 mg/L

PURGEABLE AROMATICS, METHOD 602

Test Results (mg/L)				
Test Parameter	**MW-1**	**MW-2**	**MW-3**	**Standards**
Benzene	863.1	5.5	0.1	0.01
Chlorobenzene	3.2	N.D	N.D.	---
1,2 -Dichlorobenzene	6.2	N.D.	N.D.	---
1,3 - Dichlorobenzene	6.3	N.D.	N.D.	---
1,4 - Dichlorobenzene	374.2	3.5	0.4	---
Ethylbenzene	1164.5	6.1	0.5	0.75
Toluene	4426.3	25.9	1.6	0.75
m, p-Xylenes	N.D.	10.2	1.0	---
o-Xylenes	N.D.	17.2	1.0	0.62
Total BTEX	**6453.9**	**64.9**	**4.2**	**---**

TABLE 2
GROUNDWATER LAB ANALYSIS
(Sampling Date: 6/3/92)

STANDARD WATER TESTS

Test Results				
Test Parameter	**Units**	**MW-1**	**MW-2**	**MW-3**
Electrical Conductivity	micromhrz/cm	1720	1620	1610
pH of Water	N.A.	7.04	7.44	7.71
Alkalinity as $CaCO_3$	mg/L	444	350	350
Total dissolved solids (TDS)	mg/L	1096	1064	1080
Sodium Absorption Ratio (SAR)	N.A.	4.61	4.84	4.06
Sodium for SAR	mg/L	9.55	9.71	8.63
Calcium for SAR	mg/L	6.51	6.34	7.05
Magnesium for SAR	mg/L	2.08	1.71	1.99
Carbonate	mg/L	N.D.	N.D.	N.D.
Bicarbonate	mg/L	8.88	7.01	7.0
Hardness as $CaCO_3$	mg/L	430	402	452

TABLE 3
GROUNDWATER LAB ANALYSIS
(Sampling Date: 6/3/92)

WATER ANALYSIS REPORT

Test Results				
Test Parameter	**Units**	**MW-1**	**MW-2**	**MW-3**
Total Soluble salts	umhos/cm	1719 (1100 ppm)	1625 (1040 ppm)	1611 (1031 ppm)
Total dissolved solids (TDS)	ppm	1096	1064	1080
pH	N.A.	7.04	7.44	7.71
Sodium Na	meq/l	9.55	9.71	8.63
Calcium, Ca	meq/l	6.51	6.34	7.05
Magnesium, Mg	meq/l	2.08	1.71	1.99
Carbonate, CO_3	meq/l	N.D.	N.D.	N.D.
Bicarbonate, HCO_3	meq/l	8.88	7.3	7
Hardness ($CaCO_3$ equivalent)	ppm = grains/gal.	430 = 25.1	403 = 25.5	452 =26.4
Sodium Absorption Ratio (SAR)	N.A.	4.61	4.84	4.06
Residual Sodium Carbonate (RSC)	N.A.	0.29	N.D.	N.D.

Client Code: ENCON
LAB I.D. AA01921

Sample Description: ENCON International-258-MW1-B

Collection Date: 06/03/92 Collection Time: 17:10
Submittal Date: 06/04/92 Submittal Time: 09:36
Sample Collector: DAVID

Multicomponent analysis: Purgeable Halocarbons, Method 601

Test Parameter	Test Result (µg/L)	Detection Limit (µg/L)
Bromodichloromethane	<0.1	0.1
Bromoform	<0.1	0.1
Bromomethane	<0.1	0.1
Carbon tetrachloride	<0.1	0.1
Chlorobenzene	<0.1	0.1
Chloroethane	<0.1	0.1
2-Chloroethylvinyl ether	<0.1	0.1
Chloroform	<0.1	0.1
Chloromethane	<0.1	0.1
Dibromochloromethane	<0.1	0.1
1,2-Dichlorobenzene	<0.1	0.1
1,3-Dichlorobenzene	<0.1	0.1
1,4-Dichlorobenzene	<0.1	0.1
Dichlorodifluoromethane	<0.1	0.1
1,1-Dichloroethane	<0.1	0.1
1,2-Dichloroethane	**1.0**	0.1
1,1-Dichloroethene	<0.1	0.1
trans-1,2-Dichloroethene	<0.1	0.1
1,2-Dichloropropane	<0.1	0.1
cis-1,3-Dichloropropene	<0.1	0.1
trans-1,3-Dichloropropene	<0.1	0.1
Methylene chloride	<0.1	0.1
1,1,2,2-Tetrachloroethane	<0.1	0.1
Tetrachloroethene	<0.1	0.1
1,1,1-Trichloroethane	<0.1	0.1
1,1,2-Trichloroethane	<0.1	0.1
Trichloroethene	<0.1	0.1
Trichlorofluoromethane	<0.1	0.1
Vinyl chloride	<0.1	0.1

Client Code: ENCON
LAB I.D. AA01922

Sample Description: ENCON International-258-MW2-B

Collection Date: 06/03/92 Collection Time: 16:55
Submittal Date: 06/04/92 Submittal Time: 09:36
Sample Collector: DAVID

Multicomponent analysis: Purgeable Halocarbons, Method 601

Test Parameter	Test Result (µg/L)	Detection Limit (µg/L)
Bromodichloromethane	<0.1	0.1
Bromoform	<0.1	0.1
Bromomethane	<0.1	0.1
Carbon tetrachloride	<0.1	0.1
Chlorobenzene	<0.1	0.1
Chloroethane	<0.1	0.1
2-Chloroethylvinyl ether	<0.1	0.1
Chloroform	<0.1	0.1
Chloromethane	<0.1	0.1
Dibromochloromethane	<0.1	0.1
1,2-Dichlorobenzene	<0.1	0.1
1,3-Dichlorobenzene	<0.1	0.1
1,4-Dichlorobenzene	<0.1	0.1
Dichlorodifluoromethane	<0.1	0.1
1,1-Dichloroethane	<0.1	0.1
1,2-Dichloroethane	<0.1	0.1
1,1-Dichloroethene	<0.1	0.1
trans-1,2-Dichloroethene	<0.1	0.1
1,2-Dichloropropane	<0.1	0.1
cis-1,3-Dichloropropene	<0.1	0.1
trans-1,3-Dichloropropene	<0.1	0.1
Methylene chloride	<0.1	0.1
1,1,2,2-Tetrachloroethane	<0.1	0.1
Tetrachloroethene	<0.1	0.1
1,1,1-Trichloroethane	<0.1	0.1
1,1,2-Trichloroethane	<0.1	0.1
Trichloroethene	<0.1	0.1
Trichlorofluoromethane	<0.1	0.1
Vinyl chloride	<0.1	0.1

Client Code: ENCON
LAB I.D. AA01923

Sample Description: ENCON International-258-MW3-B

Collection Date: 06/03/92
Submittal Date: 06/04/92
Sample Collector: DAVID

Collection Time: 16:25
Submittal Time: 09:36

Multicomponent analysis: Purgeable Halocarbons, Method 601

Test Parameter	Test Result (µg/L)	Detection Limit (µg/L)
Bromodichloromethane	<0.1	0.1
Bromoform	<0.1	0.1
Bromomethane	<0.1	0.1
Carbon tetrachloride	<0.1	0.1
Chlorobenzene	<0.1	0.1
Chloroethane	<0.1	0.1
2-Chloroethylvinyl ether	<0.1	0.1
Chloroform	<0.1	0.1
Chloromethane	<0.1	0.1
Dibromochloromethane	<0.1	0.1
1,2-Dichlorobenzene	<0.1	0.1
1,3-Dichlorobenzene	<0.1	0.1
1,4-Dichlorobenzene	<0.1	0.1
Dichlorodifluoromethane	<0.1	0.1
1,1-Dichloroethane	<0.1	0.1
1,2-Dichloroethane	<0.1	0.1
1,1-Dichloroethene	<0.1	0.1
trans-1,2-Dichloroethene	<0.1	0.1
1,2-Dichloropropane	<0.1	0.1
cis-1,3-Dichloropropene	<0.1	0.1
trans-1,3-Dichloropropene	<0.1	0.1
Methylene chloride	<0.1	0.1
1,1,2,2-Tetrachloroethane	<0.1	0.1
Tetrachloroethene	<0.1	0.1
1,1,1-Trichloroethane	<0.1	0.1
1,1,2-Trichloroethane	<0.1	0.1
Trichloroethene	<0.1	0.1
Trichlorofluoromethane	<0.1	0.1
Vinyl chloride	<0.1	0.1

Client Code: ENCON
LAB I.D. AA01924

Sample Description: ENCON International-258-MW1-C

Collection Date: 06/03/92 Collection Time: 17:15
Submittal Date: 06/04/92 Submittal Time: 09:36
Sample Collector: DAVID

Multicomponent analysis: Purgeable Aromatics, Method 602

Test Parameter	Test Result (µg/L)	Detection Limit (µg/L)
Benzene	**863.1**	0.1
Chlorobenzene	**3.2**	0.1
1,2-Dichlorobenzene	**6.2**	0.1
1,3-Dichlorobenzene	**6.3**	0.1
1,4-Dichlorobenzene	**374.2**	0.1
Ethylbenzene	**1164.5**	0.1
Toluene	**4426.3**	0.1
m,p-Xylenes	<0.1	0.1
o-Xylenes	<0.1	0.1

Client Code: ENCON
LAB I.D. AA01925

Sample Description: ENCON International-258-MW2-C

Collection Date: 06/03/92 Collection Time: 17:00
Submittal Date: 06/04/92 Submittal Time: 09:36
Sample Collector: DAVID

Multicomponent analysis: Purgeable Aromatics, Method 602

Test Parameter	Test Result (µg/L)	Detection Limit (µg/L)
Benzene	**5.5**	0.1
Chlorobenzene	<0.1	0.1
1,2-Dichlorobenzene	<0.1	0.1
1,3-Dichlorobenzene	<0.1	0.1
1,4-Dichlorobenzene	**3.5**	0.1
Ethylbenzene	**6.1**	0.1
Toluene	**25.9**	0.1
m,p-Xylenes	**10.2**	0.1
o-Xylenes	**17.2**	0.1

Client Code: ENCON
LAB I.D. AA01926

Sample Description: ENCON International-258-MW3-C

Collection Date: 06/03/92 Collection Time: 16:30
Submittal Date: 06/04/92 Submittal Time: 09:36
Sample Collector: DAVID

Multicomponent analysis: Purgeable Aromatics, Method 602

Test Parameter	Test Result (µg/L)	Detection Limit (µg/L)
Benzene	**0.1**	0.1
Chlorobenzene	<0.1	0.1
1,2-Dichlorobenzene	<0.1	0.1
1,3-Dichlorobenzene	<0.1	0.1
1,4-Dichlorobenzene	**0.4**	0.1
Ethylbenzene	**0.5**	0.1
Toluene	**1.6**	0.1
m,p-Xylenes	**1.0**	0.1
o-Xylenes	**1.0**	0.1

Soil, Water, Air, & Plant Testing Lab
New Mexico State University
Agronomy & Horticulture Department
Box 30003, Department 3Q
Las Cruces, NM 88003-0003

July 1, 1992

Encon International
300 Thunderbird Drive
El Paso, TX 79912
915-833-3740

Dear Encon International:

Below are results of analysis of 3 samples received for examination on June 4, 1992:

Client Code: STD_WTR Sample Description: Encon International-258-MW1
LAB I.D. AA01918
Collection Date: 06/03/92 Collection Time: 17:05
Submittal Date: 06/04/92 Submittal Time: 09:30
Sample collector: DAVID

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Electrical Conductivity	micromhos/cm	1720	1
pH of water		7.04	
Alkalinity (as CaCO3)	mg/L	444.0	0.1
Total dissolved solids	mg/L	1096	1
Sodium Absorption Ratio (SAR)		4.61	0.01
Sodium for SAR	meq/L	9.55	0.01
Calcium for SAR	meq/L	6.51	0.01
Magnesium for SAR	meq/L	2.08	0.01
Carbonate	meq/L	0.00	0.01
Bicarbonate	meq/L	8.88	0.01
Hardness as CaCO3	mg/L	430	1

Client Code: STD_WTR Sample Description: Encon International-258-MW2
LAB I.D. AA01919
Collection Date: 06/03/92 Collection Time: 16:50
Submittal Date: 06/04/92 Submittal Time: 09:30
Sample collector: DAVID

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Electrical Conductivity	micromhos/cm	1620	1
pH of water		7.44	

Sample AA01919 (continued)

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Alkalinity (as CaCO3)	mg/L	350.0	0.1
Total dissolved solids	mg/L	1064	1
Sodium Absorption Ratio (SAR)		4.84	0.01
Sodium for SAR	meq/L	9.71	0.01
Calcium for SAR	meq/L	6.34	0.01
Magnesium for SAR	meq/L	1.71	0.01
Carbonate	meq/L	0.00	0.01
Bicarbonate	meq/L	7.00	0.01
Hardness as CaCO3	mg/L	402	1

Client Code: STD_WTR Sample Description: Encon International-258-MW3
LAB I.D. AA01920
Collection Date: 06/03/92 Collection Time: 16:20
Submittal Date: 06/04/92 Submittal Time: 09:30
Sample collector: DAVID

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
Electrical Conductivity	micromhos/cm	1610	1
pH of water		7.71	
Alkalinity (as CaCO3)	mg/L	350.0	0.1
Total dissolved solids	mg/L	1080	1
Sodium Absorption Ratio (SAR)		4.06	0.01
Sodium for SAR	meq/L	8.63	0.01
Calcium for SAR	meq/L	7.05	0.01
Magnesium for SAR	meq/L	1.99	0.01
Carbonate	meq/L	0.00	0.01
Bicarbonate	meq/L	7.00	0.01
Hardness as CaCO3	mg/L	452	1

Soil, Water, and Plant Testing Laboratory
Agronomy and Hort., Dept. 3Q
Box 30003 Las Cruces, NM 88003-0003

WATER ANALYSIS REPORT

Lab No. 1918 Your sample No. 258-MW1 County:
Encon International Date: 07-01-1992
300 Thunderbird Drive
El Paso, TX 79912

RESULTS

pH 7.04 TOTAL SOLUBLE SALTS: 1719 umhos/cm 1100 ppm
Total Dissolved Solids (TDS) 1096 ppm

meq/L				
Sodium	Calcium	Magnesium	Carbonate	Bicarbonte
Na	Ca	Mg	CO3	HCO3
9.55	6.51	2.08	0.00	8.88

Hardness(CaCO3 equivalent) 430 ppm = 25.1 grains/gal
Sodium Absorption Ratio(SAR) 4.61
Residual Sodium Carbonate(RSC) 0.29

Other analysis (mg/L):

REMARKS:

HOME USE RECOMMENDATIONS: Sodium up to 8.7 meq/L
Hardness up to 500 ppm
TDS up to 1000 ppm
Livestock Use: Satisfactory

IRRIGATION CLASSIFICATION

Your water is classified as follows:

USDA Classification system:

Salinity Hazard: Sodium Hazard:
High-Salinity-Water (C3) Medium-Sodium-Water (S2)

NMSU Classification system:

The system used by the University is based upon three classes of water, which take into account salinity and sodium hazard.

Class 2 water can be used satisfactorily for most crops if care is taken to prevent the accumulation of salt & sodium in the soil.

==========

***For additional information, obtain from your County Agent:

Guide A-116 'The NMSU Irrigation Water Classification System
Guide A-110 'Classification of Irrigation Waters

Soil, Water, and Plant Testing Laboratory
Agronomy and Hort., Dept. 3Q
Box 30003 Las Cruces, NM 88003-0003

WATER ANALYSIS REPORT

Lab No. 1919 Your sample No. 258-MW2 County:
Encon International Date: 07-01-1992
300 Thunderbird Drive
El Paso, TX 79912

RESULTS

pH 7.44 TOTAL SOLUBLE SALTS: 1625 umhos/cm 1040 ppm
Total Dissolved Solids (TDS) 1064 ppm

meq/L				
Sodium	Calcium	Magnesium	Carbonate	Bicarbonte
Na	Ca	Mg	CO3	HCO3
9.71	6.34	1.71	0.00	7.30

Hardness(CaCO3 equivalent) 403 ppm = 23.5 grains/gal
Sodium Absorption Ratio(SAR) 4.84
Residual Sodium Carbonate(RSC) 0.00

Other analysis (mg/L):

REMARKS:

HOME USE RECOMMENDATIONS: Sodium up to 8.7 meq/L
Hardness up to 500 ppm
TDS up to 1000 ppm
Livestock Use: Satisfactory

IRRIGATION CLASSIFICATION

Your water is classified as follows:

USDA Classification system:

Salinity Hazard: Sodium Hazard:
High-Salinity-Water (C3) Medium-Sodium-Water (S2)

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Class 2 water can be used satisfactorily for most crops if care is taken to prevent the accumulation of salt & sodium in the soil.

==========

***For additional information, obtain from your County Agent:

Guide A-116 'The NMSU Irrigation Water Classification System
Guide A-110 'Classification of Irrigation Waters

Soil, Water, and Plant Testing Laboratory
Agronomy and Hort., Dept. 3Q
Box 30003 Las Cruces, NM 88003-0003

WATER ANALYSIS REPORT

Lab No. 1920 Your sample No. 258-MW3 County:
Encon International Date: 07-01-1992
300 Thunderbird Drive
El Paso, TX 79912

RESULTS

pH 7.71 TOTAL SOLUBLE SALTS: 1611 umhos/cm 1031 ppm
Total Dissolved Solids (TDS) 1080 ppm

meq/L				
Sodium	Calcium	Magnesium	Carbonate	Bicarbonte
Na	Ca	Mg	CO3	HCO3
8.63	7.05	1.99	0.00	7.00

Hardness(CaCO3 equivalent) 452 ppm = 26.4 grains/gal
Sodium Absorption Ratio(SAR) 4.06
Residual Sodium Carbonate(RSC) 0.00

Other analysis (mg/L):

REMARKS:

HOME USE RECOMMENDATIONS: Sodium up to 8.7 meq/L
Hardness up to 500 ppm
TDS up to 1000 ppm
Livestock Use: Satisfactory

IRRIGATION CLASSIFICATION

Your water is classified as follows:

USDA Classification system:

Salinity Hazard: Sodium Hazard:
High-Salinity-Water (C3) Low-Sodium-Water (S1)

NMSU Classification system:

The system used by the University is based upon three classes of water, which take into account salinity and sodium hazard.

Class 2 water can be used satisfactorily for most crops if care is taken to prevent the accumulation of salt & sodium in the soil.

==========

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Guide A-116 'The NMSU Irrigation Water Classification System
Guide A-110 'Classification of Irrigation Waters

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To David	From Deborah
Co. Encon Int.	Co. Sol's Leach
Dept.	Phone # 505-646-4422
Fax # 915-581-2049	Fax # 505-646-6041

ENCON INTERNAT

Environmental Consulting Engineers

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

PROJECT NAME Sharp Hatch PROJECT NUMBER 258

PROJECT LOCATION New Mexico

PROJECT MANAGER Mr. Ben Pence SAMPLER SIGNATURE David

	SAMPLE ID	LAB # (LAB USE ONLY)	# CONTAINERS	VOLUME AMOUNT	MATRIX: WATER	SOIL	AIR	OTHER	METHOD PRESERVED: ICE	NONE	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX MTBE	STD. TPH (Water Analyses)	601/602 + Xylenes		
258	MW1-A		1	1Qt	✓				✓			6/3/92	5:05 pm		✓			
258	MW1-B		1	vial	✓				✓			"	5:10 pm			✓		
258	MW1-C		1	vial	✓				✓			"	5:15 pm			✓		
258	MW2-A		1	1Qt	✓				✓			"	4:50 pm		✓			
258	MW2-B		1	vial	✓				✓			"	4:55 pm			✓		
258	MW2-C		1	vial	✓				✓			"	5:00 pm			✓		
258	MW3-A		1	1Qt	✓				✓			"	4:20 pm		✓			
258	MW3-B		1	vial	✓				✓			"	4:25 pm			✓		
258	MW3-C		1	vial	✓				✓			"	4:30 pm			✓		

REMARKS: Please Fax Results (782) (915) 581-2049

RELINQUISHED BY: David	DATE 6/3/92	TIME	RECEIVED BY:
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
RELINQUISHED BY: Dellaraport	DATE 6-4-92	TIME 9:34	RECEIVED BY LABORATORY: Sol & Leach Lab

SOIL VAPOR SURVEY AND GROUNDWATER SAMPLING
CONDUCTED ON JUNE 11, 1991
AT HALSELL'S GROCERY IN HATCH

SAMPLE LOCATION	DEPTH	HNU/PID	FID	READING IN PPM
SV-1	3'	60	0	
	6'	0	220	
	9'-Groundwater encountered, strong hydrocarbon odors, sample taken ID#010824-A			
SV-2	3'	68	0	
	6'	50	70	
	9'	50	10	no groundwater
SV-3	3'	23	07	
	6'	15.6	5.6	
	9'	62	50	
SV-4	3'	200	380	
	6'	250	>1000	
	9'-Groundwater encountered, strong hydrocarbon odor, sample taken ID#010825-A			
SV-5	3'	180	>1000	
	6'	300	>1000	
	9'-Groundwater encountered, strong hydrocarbon odor, sample taken ID#010826-A			
SV-6	3'	90	50	
	6'	150	800	
	9'	110	60	no groundwater
SV-7	3'	70	70	
	6'	50	34	
	9'	162	>1000	no groundwater

Note: Soil vapor probes, flights, associated tubing and sample collection bottles were decontaminated with Liquinox soap, Ethanol, and de-ionized water after each sample location.

STATE OF NEW MEXICO
DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700
Albuquerque, NM 87196-4700
700 Camino de Salud, NE
[505]-841-2500
ORGANIC CHEMISTRY SECTION [505]-841-2570

July 10, 1991

Request
ID No. 010824

ANALYTICAL REPORT
SLD Accession No. OR-91-2102

Distribution
(__) User 55210
(■) Submitter 521
(▒) SLD Files

To: Tony Moreland
EID-UST Bureau/Remedial Action
1190 St. Francis Drive
Santa Fe, NM 87503

From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: **A water, purgeable sample submitted to this laboratory on June 17, 1991**

DEMOGRAPHIC DATA

COLLECTION
On: 11-Jun-91 *By:* Mor . . .
At: 11:50 hrs. *In/Near:* Hatch

LOCATION
Halsells Grocery SV-1

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen (754)

Parameter	Value	Note	MDL	Units
Halogenated Volatiles (42)	0.00	N	200.00	ppb
Benzene	567.30		200.00	ppb
Ethylbenzene	359.40		200.00	ppb
p- & m-Xylene	275.00		200.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments: 1201.7

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;
T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.

Evidentiary Seals: Not Sealed☐; Intact: No☐, Yes☒ & Broken By: Mary Eden Date: 6/20/91

Laboratory Remarks:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water Lab Sample ID: OR-91-2102
Sample wt/vol: 5.0 (g/mL) mL Lab File ID:
Level: (low/med) Low Date Received: 6/17/91
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 6/20/91
GPC Cleanup: (Y/N) No pH: Dilution Factor: 200
CONCENTRATION UNITS:
(ug/L or ug/Kg): ug/L

(Continued on page 2.)

STATE OF NEW MEXICO
DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700
Albuquerque, NM 87196-4700
700 Camino de Salud, NE
[505]-841-2500
ORGANIC CHEMISTRY SECTION [505]-841-2570

July 10, 1991

Request
ID No. 010825

ANALYTICAL REPORT
SLD Accession No. OR-91-2103

Distribution
(_) User 55210
(■) Submitter 521
(※) SLD Files

To: Tony Moreland
EID-UST Bureau/Remedial Action
1190 St. Francis Drive
Santa Fe, NM 87503

From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: **A water, purgeable sample submitted to this laboratory on June 17, 1991**

DEMOGRAPHIC DATA

COLLECTION
On: 11-Jun-91 *By:* Mor . . .
At: 16:05 hrs. *In/Near:* Hatch

LOCATION
Halsells Grocery SV-4

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen {754}

Parameter	Value	Note	MDL	Units
Halogenated Volatiles (42)	0.00	N	50.00	ppb
Benzene	1941.00		50.00	ppb
Toluene	2945.00		50.00	ppb
Ethylbenzene	559.30		50.00	ppb
p- & m-Xylene	1794.00		50.00	ppb
1,2-Dimethylbenzene	916.10		50.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:
MDL = Minimal Detectable Level.
A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified;
T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.
Evidentiary Seals: Not Sealed☐; Intact: No☐, Yes☒ & Broken By: Mary Ellen Date: 6/20/91

Laboratory Remarks:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water Lab Sample ID: OR-91-2103
Sample wt/vol: 5.0 (g/mL) mL Lab File ID:
Level: (low/med) Low Date Received: 6/17/91
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 6/20/91
GPC Cleanup: (Y/N) No pH: Dilution Factor: 50
CONCENTRATION UNITS:

(Continued on page 2.)

STATE OF NEW MEXICO
DEPARTMENT OF HEALTH
SCIENTIFIC LABORATORY DIVISION
P.O. Box 4700
Albuquerque, NM 87196-4700
700 Camino de Salud, NE
[505]-841-2500
ORGANIC CHEMISTRY SECTION [505]-841-2570

July 10, 1991

Request
ID No. 010826

ANALYTICAL REPORT
SLD Accession No. OR-91-2104

Distribution
(_) User 55210
(■) Submitter 521
(※) SLD Files

To: Tony Moreland
EID-UST Bureau/Remedial Action
1190 St. Francis Drive
Santa Fe, NM 87503

From: Organic Chemistry Section
Scientific Laboratory Div.
700 Camino de Salud, NE
Albuquerque, NM 87106

Re: **A water, purgeable sample submitted to this laboratory on June 17, 1991**

DEMOGRAPHIC DATA

COLLECTION
On: 11-Jun-91 *By:* Mor . . .
At: 18:00 hrs. *In/Near:* Hatch

LOCATION
Halsells Grocery SV-5

ANALYTICAL RESULTS: Aromatic & Halogenated Purgeable [EPA-601/2] Screen (754)

Parameter	Value	Note	MDL	Units
Halogenated Volatiles (42)	0.00	N	200.00	ppb
Benzene	1050.00		200.00	ppb
Toluene	3590.00		200.00	ppb
Ethylbenzene	1131.00		200.00	ppb
p- & m-Xylene	4042.00		200.00	ppb
1,2-Dimethylbenzene	~~2003.00~~ 4313		200.00	ppb

See Laboratory Remarks for Additional Information

Notations & Comments:

MDL = Minimal Detectable Level.

A = Approximate Value; N = None Detected above Detection Limit; P = Compound Present, but not quantified; T = Trace (<Detection Limit); U = Compound Identity Not Confirmed.

Evidentiary Seals: Not Sealed☐; Intact: No☐, Yes☒ & Broken By: [signature] Date: 6/20/91

Laboratory Remarks:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NM SCIENTIFIC LABORATORY DIVISION Contract: N/A
Lab Code: N/A Case No.: N/A SAS No.: N/A SDG No.: N/A
Matrix: (soil/water) Water Lab Sample ID: OR-91-2104
Sample wt/vol: 5.0 (g/mL) mL Lab File ID:
Level: (low/med) Low Date Received: 6/17/91
% Moisture: not dec. N/A dec. N/A Date Extracted: N/A
Extraction: (SepF/Cont/Sonc) N/A Date Analyzed: 6/20/91
GPC Cleanup: (Y/N) No pH: Dilution Factor: 200
CONCENTRATION UNITS:

(Continued on page 2.)

SOIL CONTAMINATION

N

HATCH VALLEY ELEMENTARY SCHOOL

SCHOOL STREET

HALSELL'S SUPERMARKET

94.37 m

3.15 in

MW-3

B-3

B-2

SV-4

SV-3

SV-7

SV-2

MW-1

SV-5

B-1

SV-6

SV-1

B-4

MW-2

STORM DRAINAGE

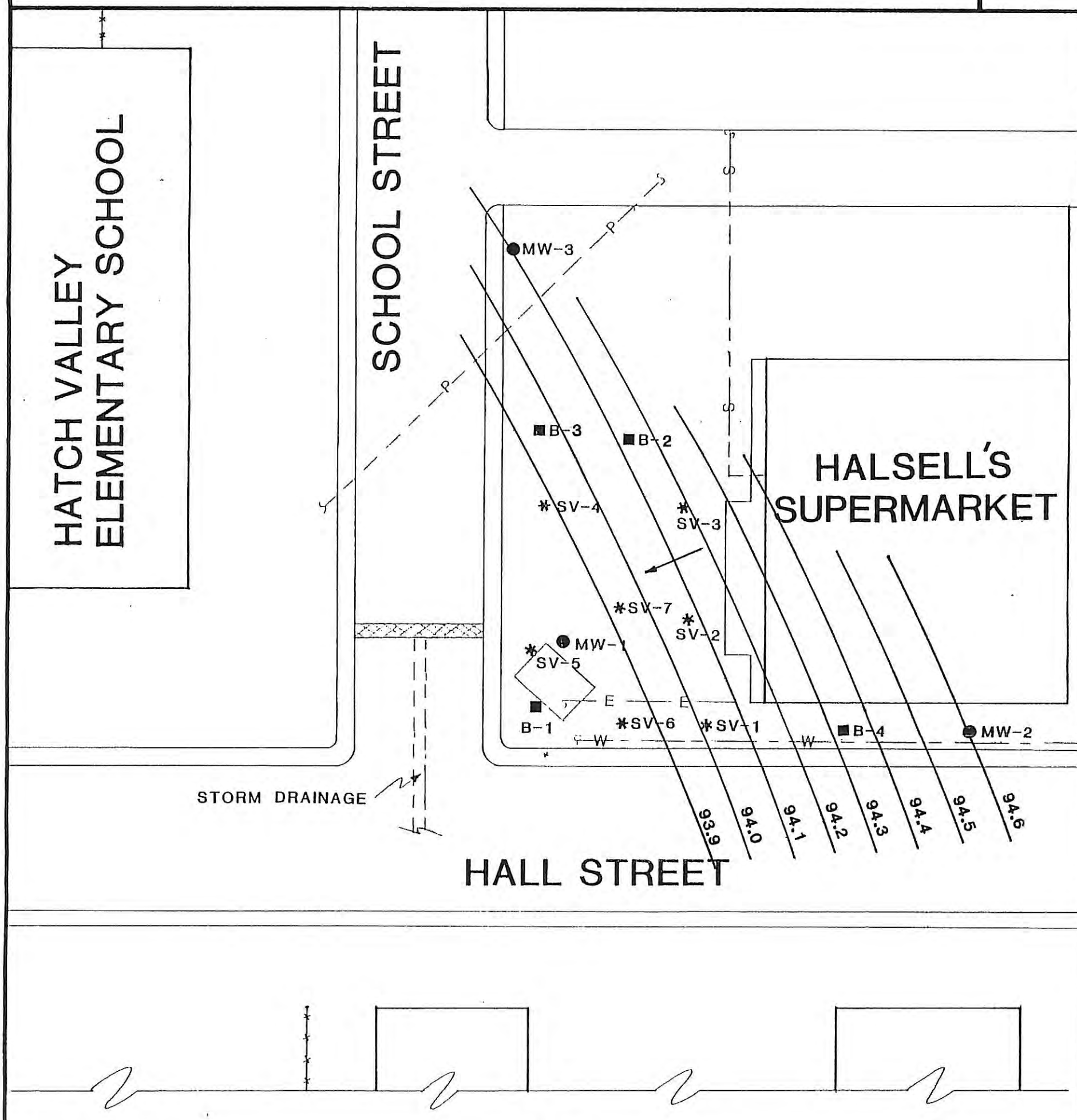
HALL STREET

LEGEND

-P-	OVERHEAD POWER LINE	* SV	SOIL VAPOR STATION
-S-	SEWER	● MW	MONITORING WELLS
-E-	UNDERGROUND CABLE	■ B	SOIL BORING
-W-	WATER LINE		

SCALE: 1":300'	SOURCE: ENCON INTERNATIONAL

GROUNDWATER GRADIENT MAP



LEGEND

-P-	OVERHEAD POWER LINE	* SV	SOIL VAPOR STATION
-S-	SEWER	● MW	MONITORING WELLS
-E-	UNDERGROUND CABLE	■ B	SOIL BORING
-W-	WATER LINE		

SCALE: 1":300'	SOURCE: ENCON INTERNATIONAL

HYDROCARBON PLUME

N

HATCH VALLEY ELEMENTARY SCHOOL

SCHOOL STREET

HALSELL'S SUPERMARKET

MW-3

B-3

B-2

SV-4

MW-1

SV-5

B-1

SV-1

B-4

MW-2

STORM DRAINAGE

HALL STREET

LEGEND

-P-	OVERHEAD POWER LINE	* SV	SOIL VAPOR STATION
-S-	SEWER	● MW	MONITORING WELLS
-E-	UNDERGROUND CABLE	■ B	SOIL BORING
-W-	WATER LINE		

SCALE: 1":300'	SOURCE: ENCON INTERNATIONAL

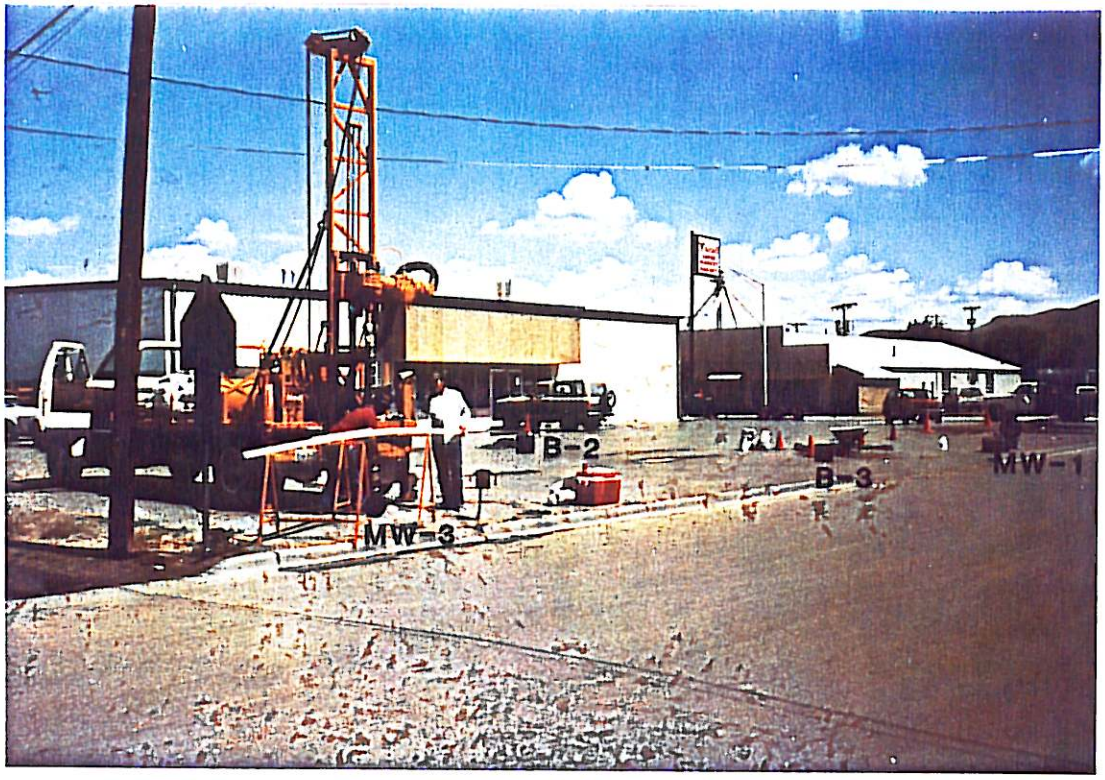
PHOTOGRAPH DESCRIPTIONS

Photograph 1: General view of Halsell's Supermarket along School Street - notice monitoring well MW-3 and soil borings B-2 and B-3. (Taken by David Ang on 6/17/92, looking south-east.)

Photograph 2: View of monitoring wells MW-1 and MW-3, and soil borings B-2 and B-3. (Taken by David Ang on 6/17/92, looking north-east.)

Photograph 3: General view of Halsell's Supermarket and Hall Street on the right - notice monitoring well MW-2 and soil borings B-4 and B-1. (Taken by David Ang on 6/17/92, looking east.)

Photograph 4: View of monitoring well MW-2 along Hall Street. (Taken by David Ang on 6/17/92, looking north.)



Photograph 1

Photograph 2

Photograph 3

Photograph 4