

3R - 135

**GENERAL
CORRESPONDENCE**

YEAR(S):

1994



DIVISION
 8 50

August 12, 1994

Mr. Bill Olson
 Hydrogeologist
 New Mexico Oil Conservation Division
 P.O. Box 2088
 Santa Fe, New Mexico 87504

RE: DJ Simmons: LV Hamner A1A
 Results of Groundwater Sampling: Dehy Pit Assessment
 Unit F, Sec. 21, T29N, R9W, NMPM
 San Juan County, New Mexico

Project No: 4-1095

This correspondence is a brief summary of the results of groundwater sampling at the above referenced DJ Simmons well location. The advancement of test holes and installation of drive points for the assessment of groundwater followed the proposed work plan outlined in On Site Technologies' letter dated July 12, 1994 to your office.

Field Exploration:

Between July 12 and July 14, 1994, five test holes were advanced by hand and portable power auger to depths of six to twelve feet around the subject dehydration pit. Test holes TH #1, TH#2, and TH#3 were advanced approximately one foot into siltstone/claystone bedrock. Minimal interstitial water was encountered during drilling, and the holes were left open to determine if significant groundwater was present at their locations. Two additional test holes were advanced in an ephemeral wash located south and east of the pit. TH #4 was abandoned due to gravel and cobbles at four feet. Wet sands were encountered in TH#5 at approximately eight feet just prior to auger refusal in gravels and cobble. Although no free water was encountered, a drive point (DP#2) was installed in TH#5 using 2" diameter steel casing with a 4' screen. The screened interval was filter packed with 10-20 mesh silica sand. Refer to the attached Vicinity Map, Site Sketch and Test Hole Logs for the approximate sampling points and summary of encountered soil conditions..

As the groundwater appeared to be perched above the shale/sandstone bedrock, the bedding strike and bed of the bedrock was estimated from outcrops west of the well location and along Largo Wash. Strike was North 35° West and dipping Northeast 8°.

On July 18, 1994, the test holes and drive points were checked for free water. Substantial water was measured in test holes #1-#3 and drive point DP #1. No water was observed in DP #2. Water levels were measured, samples collected for lab analysis, and relative elevation surveys.

Table 1
 ELEVATIONS & WATER LEVELS
 L.V. HAMNER A1A: DEHY PIT
 JULY 18, 1994

LOCATION	X	Y	ELEVATION	WATER LEVEL
WELL HEAD	0.00'	0.00'	100.00'	NA
TH #1	60.6'	-10.0'	99.22'	88.8'
TH#2	134.5'	47.3'	100.58'	91.3'
TH#3	168.9'	19.5'	99.91'	92.0'
DP#1	84.0'	-50.3'	93.76'	87.6'

NOTE: ELEVATIONS ARBITRARILY SET TO 100.00'.

FAX: (505) 327-1496 ▪ 24 HR. - (505) 327-7105 ▪ OFF.: (505) 325-8786

3005 NORTHRIDGE DRIVE ▪ SUITE F ▪ P. O. BOX 2606 ▪ FARMINGTON, NEW MEXICO 87499

SAMPLING & ANALYTICAL RESULTS:

On July 18, 1994, water samples were collected from TH#1, TH#2, TH#3 and DP#1 where sufficient water was present. Due to the poor recharge, sample points were not purged prior to sampling. Groundwater samples from all points were collected in duplicate, placed in 40 ml glass VOA vials, put on ice and delivered immediately to the laboratory for BTEX analysis. An additional sample from TH#3 was placed in a plastic one liter bottle for major anion/cation API Water Analysis.

Table 2 summarizes the analytical results from the groundwater samples for aromatic hydrocarbons [i.e. benzene, toluene, ethyl-benzene, and total xylenes(BTEX)]. Copies of the lab reports and QA/QC are attached.

Table 2
LAB RESULTS FOR AROMATIC HYDROCARBONS
GROUNDWATER SAMPLES
L.V. HAMNER A1A: DEHY PIT
JULY 18, 1994

LOCATION	BENZENE (ppb)	TOLUENE (ppb)	ETHYL- BENZENE (ppb)	TOTAL XYLENES (ppb)
TH #1	1.9	14.7	ND	0.9
TH#2	2.0	4.5	ND	ND
TH#3	1.4	2.5	ND	ND
DP#1	2098	3477	236	1870

NOTE: ppb: Parts per billions equivalent to ug/L.

The API Water Analysis from TH #3 indicated a TDS of 8266 ppm, pH of 7.7, and resistivity of 0.05 ohms-meters (@ 80° F).

Conclusions:

The following conclusions were drawn from this assessment effort and previous soil sampling:

- 1) In the area of the dehy pit the hydraulic gradient (groundwater slope) is 0.04 ft/ft and trends toward the southwest.
- 2) The groundwater appears to be in a relatively thin soil layer perched above a shale/sandstone bedrock. DP #1 is in an apparent low area where groundwater may be ponding, as indicated by a deeper water level and stagnant odor during sampling.
- 3) The dehy pit is the most probable source of the detected groundwater contamination. However, flow along the ephemeral stream near DP#1 may also be contributing as the stream drains an area with numerous oil and gas wells upgradient.
- 4) Groundwater contamination is believed to be limited to the immediate vicinity of DP#1.

As indicated in our original letter, discharge has been ceased and equipment moved from the dehy pit. Efforts have been made by D.J. Simmons(well operator) to determine if El Paso Natural Gas (EPNG) has schedule the subject pit for remediation. As of this writing, we have receive no comments from EPNG. Once pit remediation by EPNG is initiated, D.J. Simmons will cooperate with EPNG to address the groundwater contamination.

This completes our assessment for the dehy pit at the L.V. Hamner A1A well location. Once remediation of the contaminated soils and groundwater has been completed additional sampling of may be necessary to verify closure.

Please contact Myke Lane or Cindy Gray at (505) 325-5667 if you have any questions or need additional information. Thank you for your assistance with this matter.

Respectfully submitted,
ON SITE TECHNOLOGIES, Ltd.

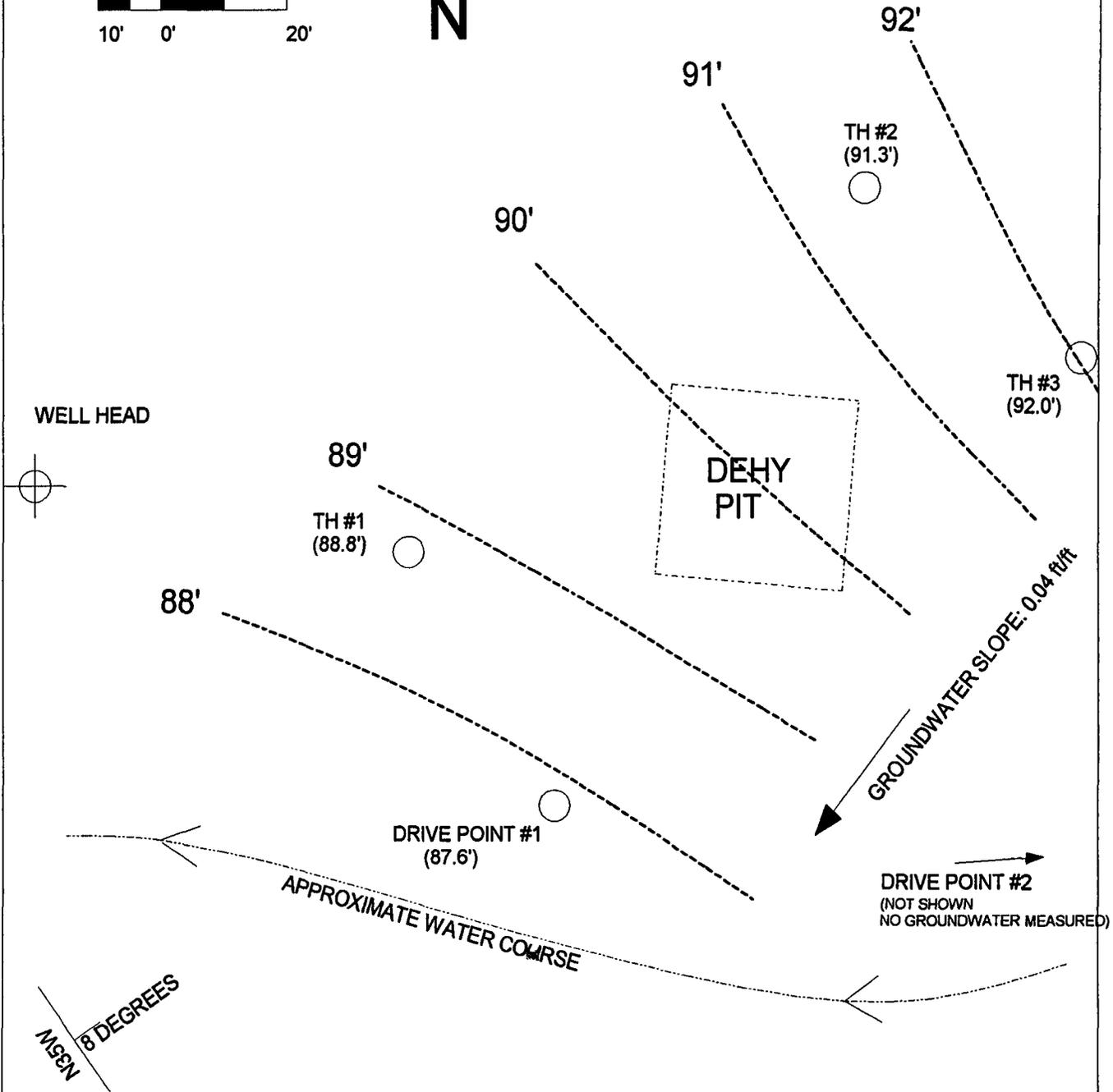
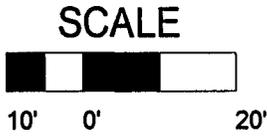


Michael K. Lane, P.E.
Geological Engineer

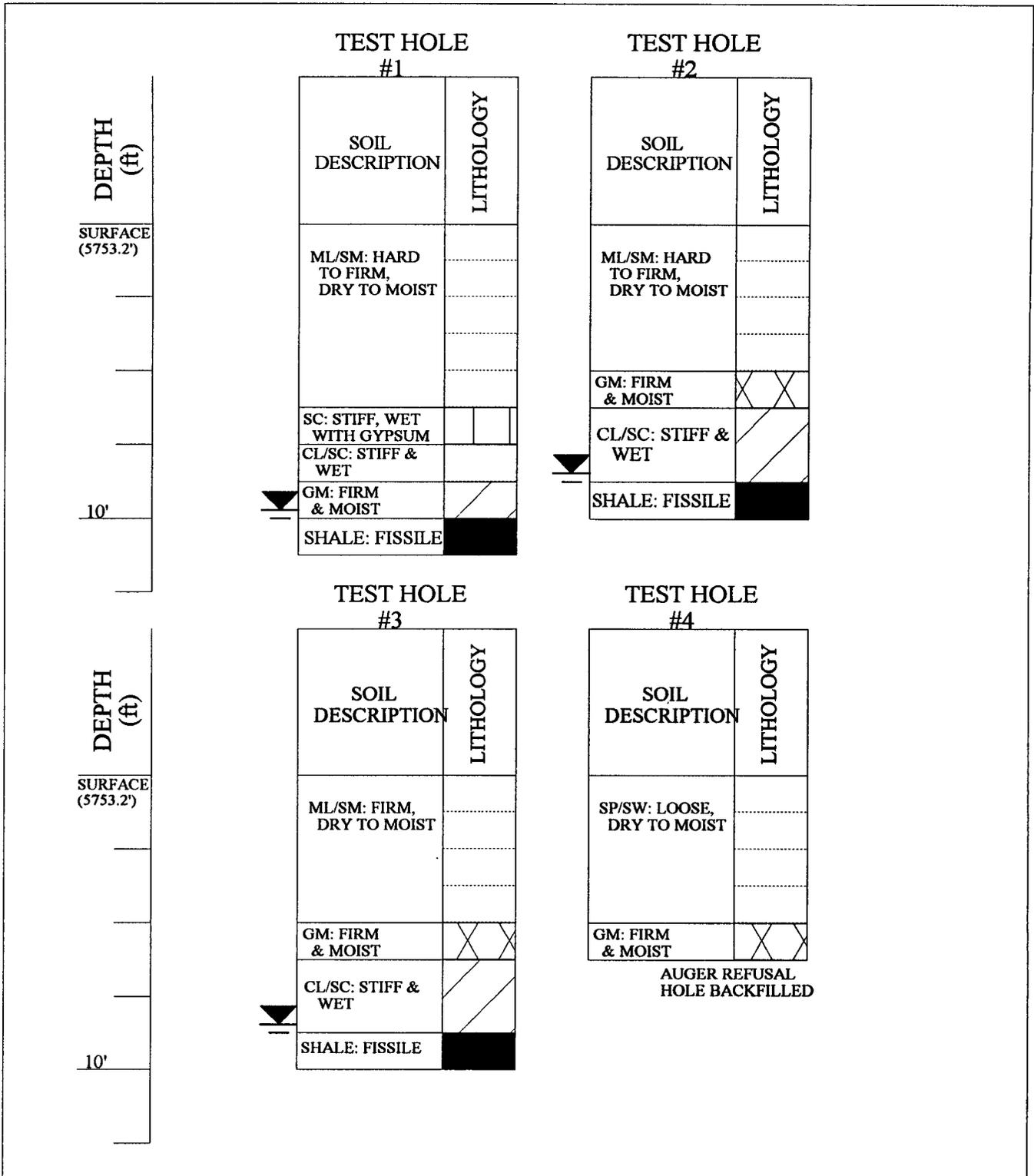
ATTACHMENTS: VICINITY MAP
SITE SKETCH
TEST HOLE LOGS (2/2)
LAB ANALYSES: BTEX (4/4) & API (1/1)
LAB QA/QC

CC: Denny Foust, NMOCD Aztec
DJ Simmons
OSTL File

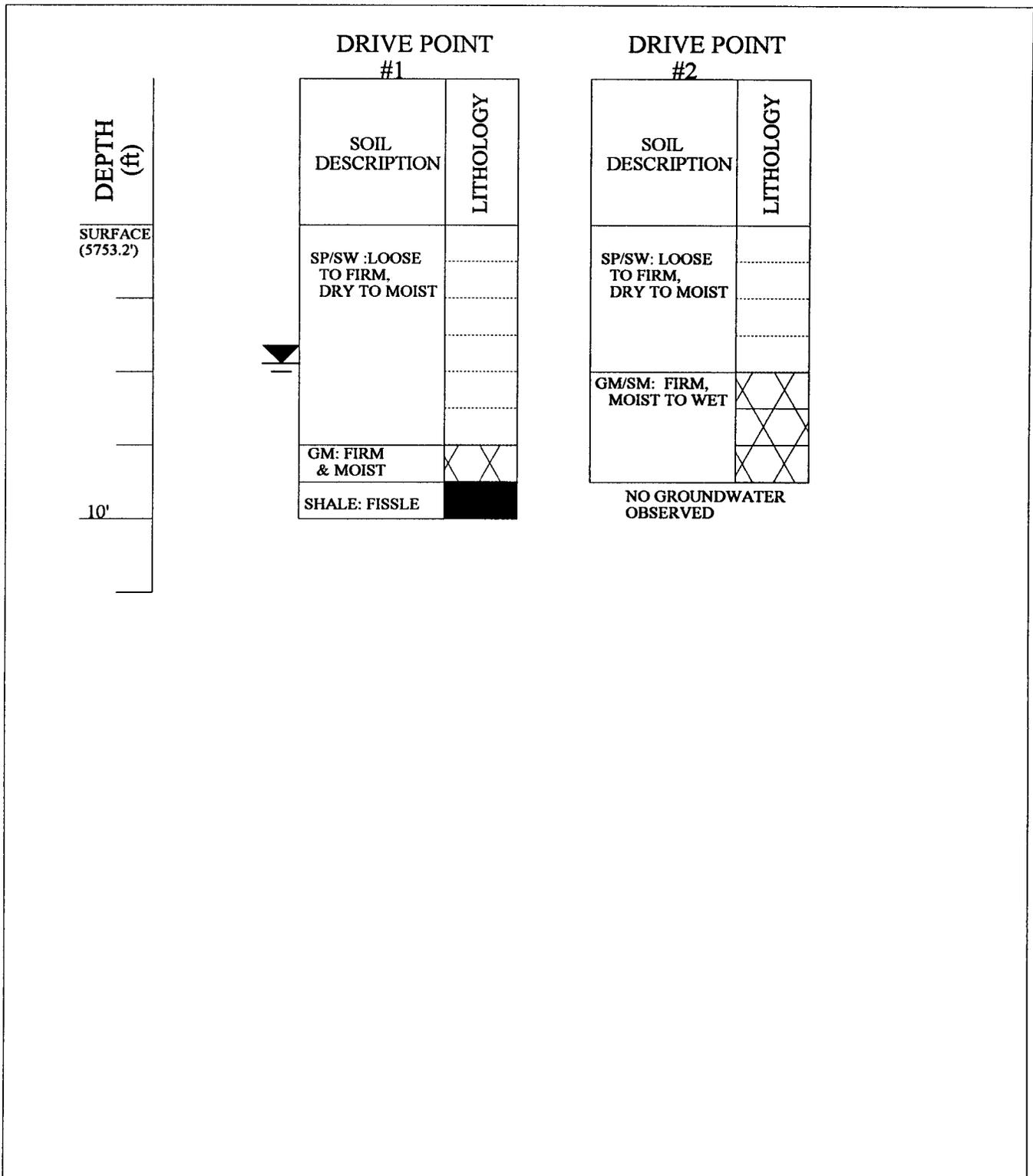
MKL/mkl
FILE: 41095RLT.LTR



D. J. SIMMONS L.V. HAMNER A1A: DEHY PIT ASSESSMENT Unit F, Sec. 21, T29N, R9W, NMPM SAN JUAN COUNTY, NEW MEXICO		SITE SKETCH		 ON SITE TECHNOLOGIES, LTD. P.O. BOX 2606, FARMINGTON, NM 87499 (505) 325-3667
PROJECT: GROUND WATER ASSESSMENT		DRWN: JULY 28, 1994		
PROJECT NO: 4-1095		DRWN BY: MKL		
SHEET: 1	FILE: 41095S1.CAD	REVISED: AUG. 9, 1994		



D. J. SIMMONS L.V. HAMNER A1A: DEHY PIT ASSESSMENT Unit F, Sec. 21, T29N, R9W, NMPM SAN JUAN COUNTY, NEW MEXICO		<h2>TEST HOLE LOGS</h2>	 ON SITE TECHNOLOGIES, LTD. P.O. BOX 2606, FARMINGTON, NM 87499 (505) 325-5667
PROJECT: GROUND WATER ASSESSMENT	DRWN: JULY 28, 1994		
PROJECT NO: 4-1095	DRWN BY: MKL		
SHEET: 2	FILE: 41095S2.CAD		



D. J. SIMMONS
 L.V. HAMNER A1A: DEHY PIT ASSESSMENT
 Unit F, Sec. 21, T29N, R9W, NMPM
 SAN JUAN COUNTY, NEW MEXICO

PROJECT: GROUND WATER ASSESSMENT

PROJECT NO: 4-1095

SHEET: 3

TEST HOLE LOGS

DRWN: JULY 28, 1994

DRWN BY: MKL

REVISED:

ON SITE TECHNOLOGIES, LTD.

P.O. BOX 2606, FARMINGTON, NM 87499
 (505) 325-5667



ON SITE TECHNOLOGIES, LTD.

AROMATIC VOLATILE ORGANICS

Attn: *Michael K. Lane*
Company: *On Site Technologies, Inc.*
Address: *657 W. Maple*
City, State: *Farmington, NM 87401*

Date: *7/19/94*
Lab ID: *1665*
Sample ID: *2017*
Job No. *2-1000*

Project Name: *D. J. Simmons*
Project Location: *DP #1 L V Hammer AIA*
Sampled by: *MKL* Date: *7/18/94*
Analyzed by: *DLA* Date: *7/19/94*
Sample Matrix: *Liquid*

Time: *12:00*

Aromatic Volatile Organics

Component	**Measured Concentration ug/L
<i>Benzene</i>	<i>2,098</i>
<i>Toluene</i>	<i>3,477</i>
<i>Ethylbenzene</i>	<i>236</i>
<i>m,p-Xylene</i>	<i>1,393</i>
<i>o-Xylene</i>	<i>477</i>
TOTAL	7,681 ug/L

ND - Not Detectable

*** - Method Detection Limit, 2 ug/L*

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by
Gas Chromatography*

Approved by: *[Signature]*

Date: *7/22/94*



ON SITE TECHNOLOGIES, LTD.

AROMATIC VOLATILE ORGANICS

Attn: *Michael K. Lane*
Company: *On Site Technologies, Inc.*
Address: *657 W. Maple*
City, State: *Farmington, NM 87401*

Date: *7/19/94*
Lab ID: *1665*
Sample ID: *2018*
Job No. *2-1000*

Project Name: *D. J. Simmons*
Project Location: *TH #1 L V Hammer AIA*
Sampled by: *MKL* Date: *7/18/94* Time: *11:25*
Analyzed by: *DLA* Date: *7/19/94*
Sample Matrix: *Liquid*

Aromatic Volatile Organics

<i>Component</i>	<i>**Measured Concentration ug/L</i>
<i>Benzene</i>	<i>1.9</i>
<i>Toluene</i>	<i>14.7</i>
<i>Ethylbenzene</i>	<i>ND</i>
<i>m,p-Xylene</i>	<i>ND</i>
<i>o-Xylene</i>	<i>0.9</i>
<i>TOTAL</i>	<i>17.4 ug/L</i>

ND - Not Detectable
*** - Method Detection Limit, 2 ug/L*

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: *[Signature]*
Date: *7/22/94*



ON SITE TECHNOLOGIES, LTD.

AROMATIC VOLATILE ORGANICS

Attn: *Michael K. Lane*
Company: *On Site Technologies, Inc.*
Address: *657 W. Maple*
City, State: *Farmington, NM 87401*

Date: *7/19/94*
Lab ID: *1665*
Sample ID: *2019*
Job No. *2-1000*

Project Name: *D. J. Simmons*
Project Location: *TH #2 L V Hammer AIA*
Sampled by: *MKL* Date: *7/18/94* Time: *11:20*
Analyzed by: *DLA* Date: *7/19/94*
Sample Matrix: *Liquid*

Aromatic Volatile Organics

<i>Component</i>	<i>**Measured Concentration ug/L</i>
<i>Benzene</i>	<i>2.0</i>
<i>Toluene</i>	<i>4.5</i>
<i>Ethylbenzene</i>	<i>ND</i>
<i>m,p-Xylene</i>	<i>ND</i>
<i>o-Xylene</i>	<i>ND</i>
<i>TOTAL</i>	<i>6.5 ug/L</i>

ND - Not Detectable
*** - Method Detection Limit, 2 ug/L*

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: *Da [Signature]*
Date: *7/22/94*



**ON SITE
TECHNOLOGIES, LTD.**

AROMATIC VOLATILE ORGANICS

Attn: *Michael K. Lane*
 Company: *On Site Technologies, Inc.*
 Address: *657 W. Maple*
 City, State: *Farmington, NM 87401*

Date: *7/19/94*
 Lab ID: *1665*
 Sample ID: *2020*
 Job No. *2-1000*

Project Name: *D. J. Simmons*
 Project Location: *TH #3 L V Hammer AIA*
 Sampled by: *MKL* Date: *7/18/94* Time: *11:15*
 Analyzed by: *DLA* Date: *7/19/94*
 Sample Matrix: *Liquid*

Aromatic Volatile Organics

Component	**Measured Concentration ug/L
<i>Benzene</i>	<i>1.4</i>
<i>Toluene</i>	<i>2.5</i>
<i>Ethylbenzene</i>	<i>ND</i>
<i>m,p-Xylene</i>	<i>ND</i>
<i>o-Xylene</i>	<i>ND</i>
TOTAL	3.9 ug/L

ND - Not Detectable
 ** - Method Detection Limit, 2 ug/L

**Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by
 Gas Chromatography**

Approved by: *[Signature]*
 Date: *7/22/94*



API Water Analysis

Attn: *Michael K. Lane*
 Company: *On Site Technologies*
 Address: *657 W Maple St.*
 City, State: *Farmington, NM 87401*

Date: *7/22/94*
 Lab ID: *1665*
 Sample ID: *2020*
 Job No.: *2-1000*

Project Name: *D. J. Simmons*
 Project Location: *TH #3 L V Hamner A1A*
 Sampled by: *MKL* Date: *7/18/94* Time: *11:15*
 Analyzed by: *DLA* Date: *7/22/94*

API RP-45 Laboratory Analysis

DISSOLVED SOLIDS			OTHER PROPERTIES	
CATIONS			pH	7.70
Sodium	Na	3135 mg/L	Specific Gravity 60/60 F	1.0169
Calcium	Ca	371.0 mg/L	Resistivity (ohm-meters) @ 60 F	0.05
Magnesium	Mg	34.0 mg/L	Total Hardness as CaCO3 ppm	1066
Potassium	K	60.5 mg/L		
ANIONS			Comments:	
Chloride	Cl	89.4 mg/L	*ND: Not Detectable - Positive/Negative **NT: Not Analyzed	
Sulfate	SO4	4280 mg/L		
Carbonate	CO3	0 mg/L		
Bicarbonate	HCO3	296 mg/L		
Hydroxide	OH	0 mg/L		
Total Dissolved Solids				
		8266 mg/L		
Iron	Fe (total)	0.5 mg/L		
Sulfide	H2S	NT mg/L		

Approved by: *[Signature]*
 Date: *7/22/94*

ON SITE TECHNOLOGIES, LTD.

QUALITY ASSURANCE REPORT for EPA Method 8020

Date Analyzed: 7/19/94

Internal QC No.: 0222-STD
Surrogate QC No.: 0223-STD
Reference Standard QC No.: 0300-STD

Method Blank

Analytes in Blank	Amount
Average Amount of All Analytes In Blank	< 1 ppb

Calibration Check

Calibration Standards	Units of Measure	*True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20	19	5	15%
Toluene	ppb	20	18	11	15%
Ethylbenzene	ppb	20	18	11	15%
m,p-Xylene	ppb	40	35	13	15%
o-Xylene	ppb	20	18	11	15%

Spike Results

Analyte	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	99	104	(39-150)	3	20%
Toluene	100	99	(46-148)	1	20%
Ethylbenzene	100	105	(32-160)	3	20%
m,p-Xylene	102	103	(35-145)	1	20%
o-Xylene	101	98	(35-145)	2	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	S3 Percent Recovered
Limits	(70-130)		
2019-1665	103		

S1: Fluorobenzene



State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
 Santa Fe, New Mexico 87505

STATE OF
 NEW MEXICO
 OR
 CONSERVATION
 DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

<input checked="" type="checkbox"/> Telephone	<input type="checkbox"/> Personal	Time 1600 hrs	Date 8/8/94
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<u>Originating Party</u>	<u>Other Parties</u>
Bill Olson - Envir. Bureau	Mike Lane - Onsite Technology 325-5667

Subject
 D.J. Simmons - LV Hammer AIA

Discussion

- Questions about G.W. investigation
- PAH's analyzed for (No)
 - Prior approval of 7/14/94 work plan (Denny verbally said it was OK)
 - report submission (see below)

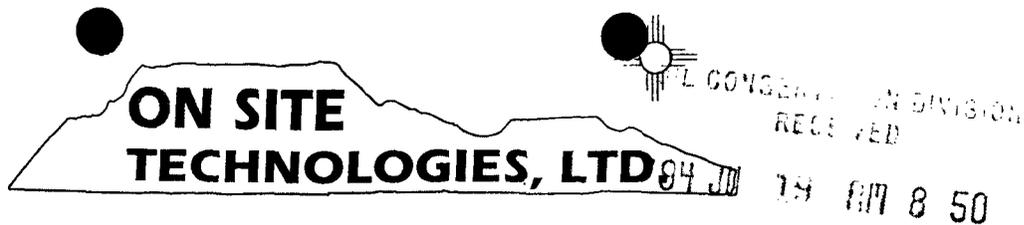
Onsite completed work on site but extent not completed

Told him G.W. contamination required to be reported to Envir. Bureau Chief
 same also applies to work plans and approvals regarding G.W.

Conclusions or Agreements

Report on recent work - will be submitted by 1-2 weeks
 Will report G.W. & submit work plans, reports to Envir. Bureau Chief
 with copies to District office

<u>distribution</u>	Signed <i>Bill Olson</i>
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July 12, 1994

Mr. Denny Foust
 Deputy Oil & Gas Inspector
 New Mexico Oil Conservation Division
 Aztec, New Mexico 87410

RE: DJ Simmons: LV Hamner A1A
 Dehydrator Pit Assessment
 Unit F, Sec. 21, T29N, R9W, NMPM
 San Juan County, New Mexico

This correspondence is to verify our conversation on July 11, 1994 regarding the above referenced DJ Simmons well location. During the assessment of the dehydrator pit on this location highly contaminated soils were identified (refer to the attached field notes). Due to relatively shallow groundwater, a temporary drive point was placed approximately 35 feet southwest of the pit to assess the groundwater quality. Lab tests of the groundwater for aromatic hydrocarbons (i.e. BTEX) indicate contamination (refer to the attached lab report).

Discharge to the dehydrator pit has ceased for some time and the equipment has been removed. Ownership of the pit and resulting contamination has not been resolved between the operator and El Paso Natural Gas (EPNG) at the present time.

Due to the well location's proximity to Largo Canyon and other ephemeral drainages, the site specific groundwater direction is not yet well understood. In addition, several other wells are in the same general area and the source of the groundwater contamination has not been definitively determined.

EPNG has been contacted to determine if the subject dehydrator pit is scheduled for remediation, but at the present time we have received no answer.

On behalf of DJ Simmons, On Site Technologies is scheduled to install two additional temporary drive points. Drive points will be constructed of 2" diameter steel casing with a 4' to 6' screen. An effort will be made to place the screen interval midway over the groundwater table. All three drive points will be purged by removing a minimum of three well volumes. Water levels will be measured relative to the top of casing, and relative elevations established by engineering survey. The following sampling and testing protocol will be implemented:

	MEASUREMENTS & TESTING
ALL POINTS	WATER LEVEL, pH, Conductivity, Temperature, BTEX (EPA Method 8020)
POINT #1	API WATER ANALYSIS (MAJOR CAT/ANIONS & TDS)

Following the sampling all drive points will be removed and borings plugged with bentonite rich grout.

Results of the groundwater assessment will be forwarded to your office following completion of the sampling and lab testing. Please contact Myke Lane or Cindy Gray at (505) 325-5667 if you have any questions or need additional information. Thank you for your assistance with this matter.

Respectfully submitted,
ON SITE TECHNOLOGIES, Ltd.



Michael K. Lane, P.E.
Geological Engineer

ATTACHMENTS: Field Notes: LV HAMNER A1A (5/19/94)
Lab Report: Aromatic Volatile Organics (6/9/94)

CC: Bill Olson, NMOCD Santa Fe
DJ Simmons
OSTL File

MKL/mkl
FILE: 41095NTC.LTR



AROMATIC VOLATILE ORGANICS

Attn: *Cindy Gray*
Company: *On Site Technologies, Ltd.*
Address: *657 W. Maple*
City, State: *Farmington, NM 87401*

Date: *6/9/94*
Lab ID: *1652*
Sample ID: *1584*
Job No. *2-1000*

Project Name: *D. J. Simmons*
Project Location: *Water Sample D. J. Simmons Well*
Sampled by: *JL* Date: *6/8/94* Time:
Analyzed by: *DLA* Date: *6/9/94*
Sample Matrix: *Liquid*

Aromatic Volatile Organics

Component	**Measured Concentration ug/L
<i>Benzene</i>	<i>2,400</i>
<i>Toluene</i>	<i>3,832</i>
<i>Ethylbenzene</i>	<i>233</i>
<i>m,p-Xylene</i>	<i>1,362</i>
<i>o-Xylene</i>	<i>455</i>
TOTAL	8,282 ug/L

ND - Not Detectable

*** - Method Detection Limit, 2 ug/L*

**Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by
Gas Chromatography**

Approved by: *[Signature]*

Date: *6/9/94*

ON SITE TECHNOLOGIES, L.P.

TEST HOLE LOG and FIELD TESTING RESULTS

PROJECT: DJ Simmons JOB # 4-1095 DATE: 5/19/94

SITE LOCATION: LV Hammer AIA CLIENT: D.J. Simmons

SAMPLER: Jon Little

METHOD: _____

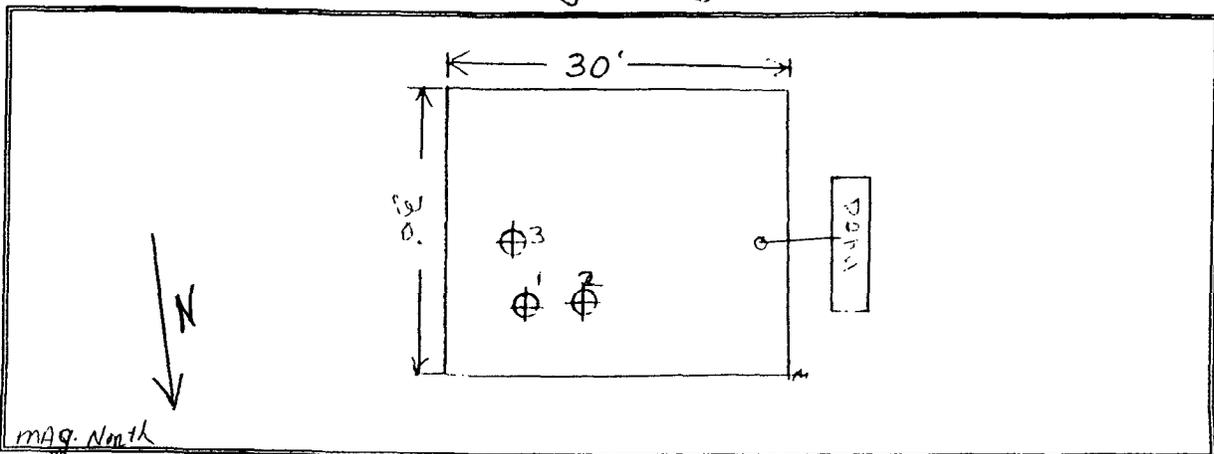
TEST HOLE #: 1, 2, 3 LAB SAMPLE IDS _____

Composite TPH = 729/APM

DEPTH	SOIL TYPE	P.I.D. FIELD SCREENING	TPH EPA 418.1	OTHER REMARKS
3	clay silty to silty clay	↑	N/A	free product setting on pit 11' FEL 8' FNL
3	"	2500 APM ↓	N/A	13' FEL 8' FNL
3	"	↓	N/A	9' FEL 9' FNL
6'	"	2500	N/A	FEL 8' FNL
9'	blk sand	2500		@ 9 foot sample is very wet.
12'				sample to wet will not stay in sample tube

SITE SKETCH

WEATHER: sunny & windy APPROX. TEMP. 80°F



(505) 325-8786

FAX (505) 327-1496

3005 NORTHRIDGE DRIVE, SUITE F P.O. BOX 2606 FARMINGTON, NEW MEXICO 87499