GW - 73

WORK PLANS

1993

WESTERN WATER CONSULTANTS, INC.

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CLOSURE PLAN FOR AN OIL/WATER SEPARATOR AND COLLECTION SUMP AT THE DOWELL SCHLUMBERGER INCORPORATED FACILITY HOBBS, NEW MEXICO

August 31, 1993

Submitted To:

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Submitted By:

Dowell Schlumberger Incorporated
300 Schlumberger Drive
Sugarland, TX 77478

Prepared By:

Western Water Consultants, Inc.
611 Skyline Road
Laramie, Wyoming 82070

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Sheridan, Wyoming 82801

Western Water Consultants, Inc.

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1.0 PURPOSE

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This closure plan is for removal of two oil/water separator tanks and a collection sump which were formerly operated as part of an acid neutralization system located at the Dowell Schlumberger Incorporated (Dowell) facility in Hobbs, New Mexico.

2.0 SITE DESCRIPTION

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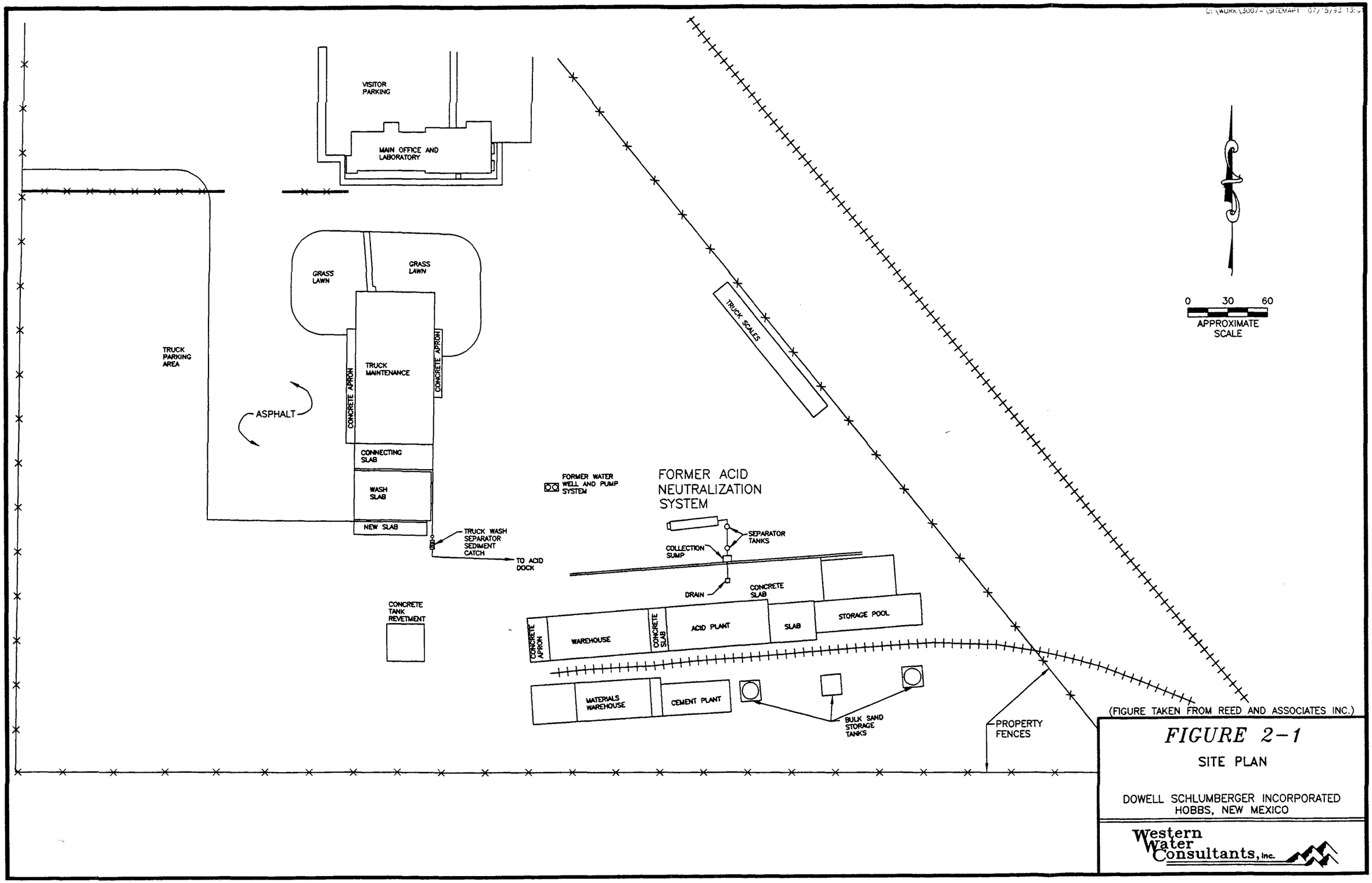
The Dowell facility is located at 1105 West Bender Boulevard in Hobbs, New Mexico. A site plan of the facility is shown on Figure 2-1.

The Dowell facility provides services for area oil and gas production wells. Services include well cementing, acidizing/stimulating and formation fracturing. The facility consists of a main office building and laboratory, truck maintenance building and wash bay, aboveground storage tanks, dry chemicals warehouse, acid plant and several other warehouses.



(FIGURE TAKEN FROM REED AND ASSOCIATES INC.)

FIGURE 2-1

SITE PLAN

DOWELL SCHLUMBERGER INCORPORATED
HOBBS, NEW MEXICO

Western Water Consultants, Inc.

3.0 ACID NEUTRALIZATION SYSTEM

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The former acid neutralization system is located in the south central portion of the facility. The system is comprised of a former acid neutralization pit, which has been filled with concrete, two 1,000 gallon separator tanks, a concrete collection sump, and a drain (Figure 3-1).

The former neutralization system received spent acid heels following well stimulating services provided by Dowell. The system also received storm water and spills from the acid plant.

The collection sump and drain are the only components of the system still in use. When the sump becomes full, the contents are pumped into a 2,000 gallon holding tank where elementary neutralization occurs.

Use of the separator tanks within the neutralization system was discontinued in 1987.

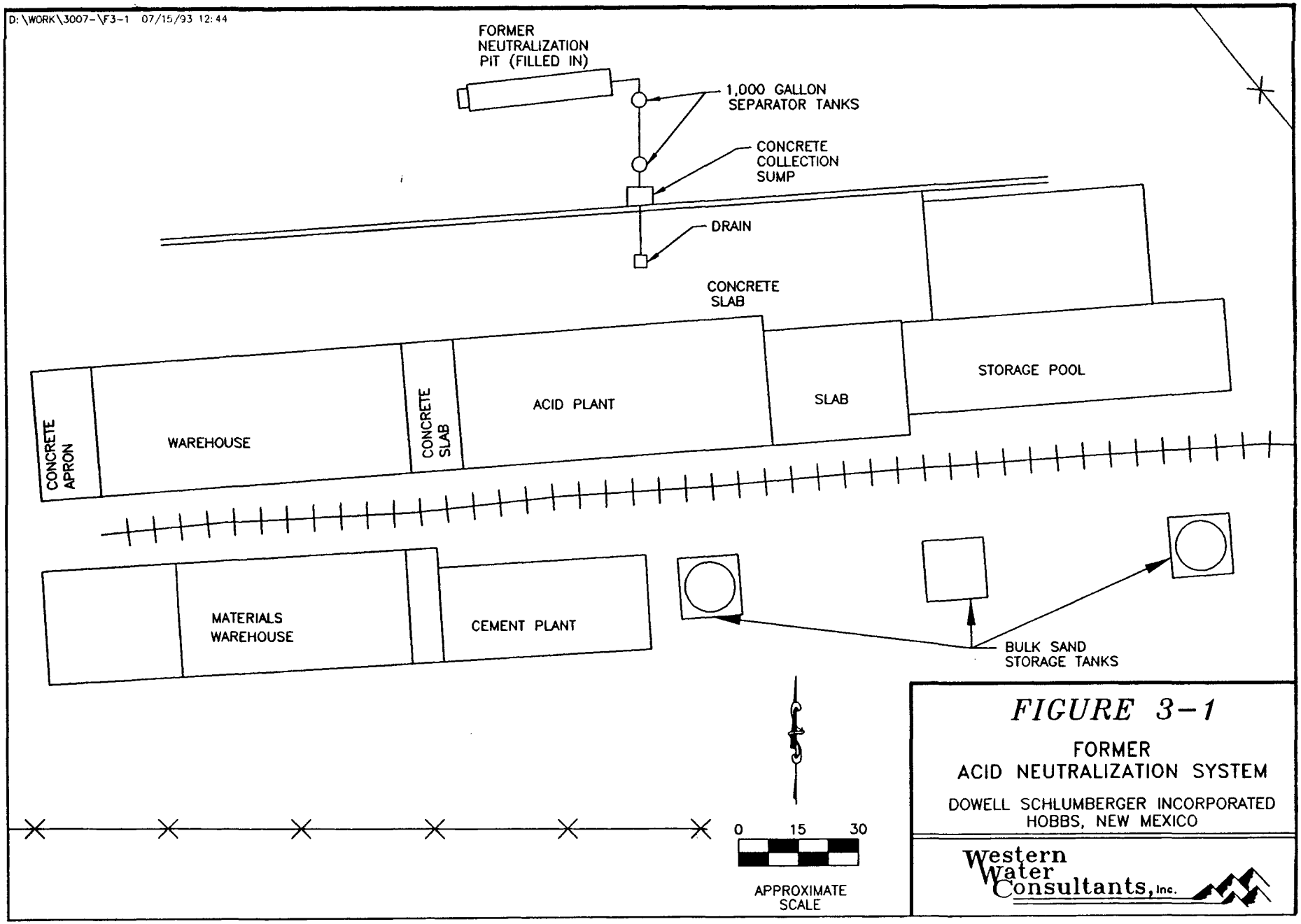

FIGURE 3-1

FORMER
ACID NEUTRALIZATION SYSTEM

DOWELL SCHLUMBERGER INCORPORATED
HOBBS, NEW MEXICO

Western Water Consultants, Inc.

4.0 PROPOSED CLOSURE ACTIVITIES

4.0 PROPOSED CLOSURE ACTIVITIES

Closure of the separator tanks and sump will be in accordance with Discharge Plan GW-73 which was approved by the New Mexico Oil Conservation Division (NMOCD) for the Dowell facility in Hobbs, New Mexico in October 1991.

4.1 Wastewater

Samples of the wastewater remaining in the system were collected by Western Water Consultants, Inc. (WWC) of Laramie, Wyoming on April 13, 1993. Samples OW-N and OW-S were analyzed for Toxicity Characteristics Leaching Procedure (TCLP) volatile organics and metals; total petroleum hydrocarbons (TPH) by modified method 8015; and for toxicity characteristics. The laboratory data reports from Cardinal Labs of Hobbs, New Mexico are contained in Appendix A. The wastewater was determined to be non-hazardous.

Wastewater in the system is known to exhibit low/acidic pH valves. Samples will be obtained at the time of closure, following neutralization to confirm a neutral pH has been obtained. Upon confirmation of a near neutral pH, wastewater in the system will be evacuated and disposed by I/W Inc. which operates a trucking service and the Loco Hills Disposal Facility near Artesia, New Mexico.

4.2 1,000 Gallon Separator Tanks and Sump Excavation

Once the wastewater has been removed, the tanks and concrete sump will be excavated and removed from the ground. The tanks and concrete will be cleaned onsite to remove debris adhering to them. Removed debris will be placed in a plastic lined temporary revetment

constructed adjacent to the tank excavation. This material will be characterized for disposal by laboratory analysis as stated in the following section. Once clean, the tanks will be salvaged as scrap. The concrete will be disposed as routine construction debris in the local landfill.

4.3 Surrounding and Subsoil Excavation

After removal of the separator tanks and sump from the ground, the soils underlying and surrounding the excavations will be field-screened by headspace analysis with a HNu photoionization detector (PID) and a Organic Vapor Analyzer (OVA) to detect possible contaminants in the soil.

If no contaminants are detected in the soil headspace from samples immediately beneath and surrounding the excavations, removal of the separator tanks and sump will be considered "clean closure". The tank excavation will be backfilled with clean fill, imported from off-site and replacement of the sump will commence.

If contaminants are detected in the soil headspace from the samples immediately beneath and/or surrounding the former tanks and sump, the soil will be removed. Removal activities will attempt to remove all contaminated soil but must be limited to 5 feet surrounding the initial excavation and no greater than 5 feet below the tank and sump bottoms due to the presence of nearby structures. Less materials will be removed if justified by field screening.

Excavated soils determined to be contaminated by field headspace analysis will be placed in a plastic lined temporary revetment adjacent to the excavation. One composite sample will be collected from the soil pile for laboratory analysis to determine appropriate disposal. The soil sample will be composited from five samples collected from random locations within the

interior of the pile. The composite sample will be analyzed for TCLP volatile organic compounds and metals; TPH by method 8015; and pH.

Effectiveness of excavation will be confirmed by laboratory analysis of a composite soil sample from the material left in-place. The sample will be collected from a minimum of five separate in-place locations in the excavation. The soil sample will be analyzed for TCLP volatile organic compounds and metals; TPH by method 8015, and pH. If no contaminants are detected, the site will be considered a "clean closure"

4.4 Reclamation

The separator tank excavation will be reclaimed to the surrounding surface by importing clean fill. The fill will be emplaced in 6-inch lifts and compacted. The reclaimed topographic surface will be sloped slightly away from the middle of the previous structure to 1) prevent surface water ponding on the site and 2) divert surface water off the closed site.

APPENDIX A

Laboratory Results

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TEXAS 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

FINAL ANALYSIS REPORT

Company: Western Water Consultants, Inc. Date: 5/05/93
Address: 611 Skyline Rd. Lab#: H1200
City, State: Laramie, WY 82070

Project Name: 3007.1
Project Location:
Sampled by: SG Date: 4/13/93 Time:
Analyzed by: MF Date: 4/26/93 Time:
Type of Samples: H20 Sample Condition: GIST Units: mg/l

Samp #	Field Code	TRPHC	BENZENE	TOLUENE	ETHYL BENZENE	PARA-XYLENE	META-XYLENE	ORTHO-XYLENE	MTBE
1	OW-N	19.0	***	***	***	***	***	***	***
2	OW-S	7.0	***	***	***	***	***	***	***
	QC Recovery	***	***	***	***	***	***	***	***
	QC Spike	***	***	***	***	***	***	***	***
	Accuracy	***	***	***	***	***	***	***	***
	Air Blank	***	***	***	***	***	***	***	***

Methods - EPA METHOD 8015 MOD

Michael R. Fowler

Date 5/5/93

Michael R. Fowler

WESTERN WATER CONSULTANTS, INC.
MAY 10 1993
LARAMIE, WY 82070

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TEXAS 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

TCLP ANALYSIS REPORT

Company: Western Water Consultants, Inc. Date: 5/05/93
Address: 611 Skyline Rd. Lab#: H1200-1
City, State: Laramie, WY 82070

Project Name: 3007.1
Project Location:
Sampled by: SG Date: 4/13/93
Type of Sample: Water Sample Condition: GIST

Sample ID: OW-N

TCLP INORGANICS (Leachate)

PARAMETER	RESULT	UNITS
Arsenic	<0.002	mg/L
Barium	<0.10	mg/L
Cadmium	<0.005	mg/L
Chromium	<0.05	mg/L
Lead	<0.10	mg/L
Mercury	<0.0002	mg/L
Selenium	<0.002	mg/L
Silver	<0.01	mg/L

TOXICITY CHARACTERISTICS

pH	0.76
Ignitability °F	134
Corrosivity	Yes (pH <2)
Reactivity-S	<5
Reactivity-CN	<0.01

Michael R. Fowler

Date 5/5/93

Michael R. Fowler

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FINAL ANALYSIS REPORT

Company: Western Water Consultants, Inc. Date: 05/14/93
Address: 611 Skyline road Lab # H1200-1
City, State: Laramie, WY 82070

Project Name: 3007.1
Project Location:
Sampled by: SG Date: 04/13/93
Type of Sample: Water Sample Condition: GIST
Sample ID: OW-N

TCLP VOLATILES

PARAMETER	RESULT	UNITS
Benzene	<.835	mg/L
Carbon tetrachloride	<.835	mg/L
Chlorobenzene	<.835	mg/L
Chloroform	<.835	mg/L
1,2-Dichloroethane	<.835	mg/L
1,1-Dichloroethylene	<.835	mg/L
Methyl ethyl ketone	<8.350	mg/L
Tetrachloroethene	<.835	mg/L
Trichloroethene	<.835	mg/L
Vinyl chloride	<1.670	mg/L

METHOD: TCLP VOLATILES - EPA 1311

Michael R. Fowler

Date 6/1/93

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

TCLP ANALYSIS REPORT

Company: Western Water Consultants, Inc. Date: 5/05/93
Address: 611 Skyline Rd. Lab#: H1200-2
City, State: Laramie, WY 82070

Project Name: 3007.1
Project Location:
Sampled by: SG Date: 4/13/93
Type of Sample: Water Sample Condition: GIST

Sample ID: OW-S

TCLP INORGANICS (Leachate)

PARAMETER	RESULT	UNITS
Arsenic	<0.002	mg/L
Barium	<0.10	mg/L
Cadmium	<0.005	mg/L
Chromium	<0.05	mg/L
Lead	<0.10	mg/L
Mercury	<0.0002	mg/L
Selenium	<0.002	mg/L
Silver	<0.01	mg/L

TOXOCITY CHARACTERISTICS

pH	0.38
Ignitability	134
Corrosivity	Yes (pH <2)
Reactivity-S	32
Reactivity-CN	<0.01

Michael R. Fowler

Date 5/5/93

Michael R. Fowler

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PHONE (505) 393 2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

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TCLP VOLATILES

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Benzene	<.500	mg/L
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Methyl ethyl ketone	<5.000	mg/L
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Michael R. Fowler

Date 6/1/93

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CLOSURE PLAN FOR AN OIL/WATER SEPARATOR AND COLLECTION SUMP AT THE DOWELL SCHLUMBERGER INCORPORATED FACILITY HOBBS, NEW MEXICO

July 19, 1993

Submitted To:

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504

Submitted By:

Dowell Schlumberger Incorporated
300 Schlumberger Drive
Sugarland, TX 77478

Prepared By:

Western Water Consultants, Inc.
611 Skyline Road
Laramie, Wyoming 82070

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Casper, Wyoming 82601

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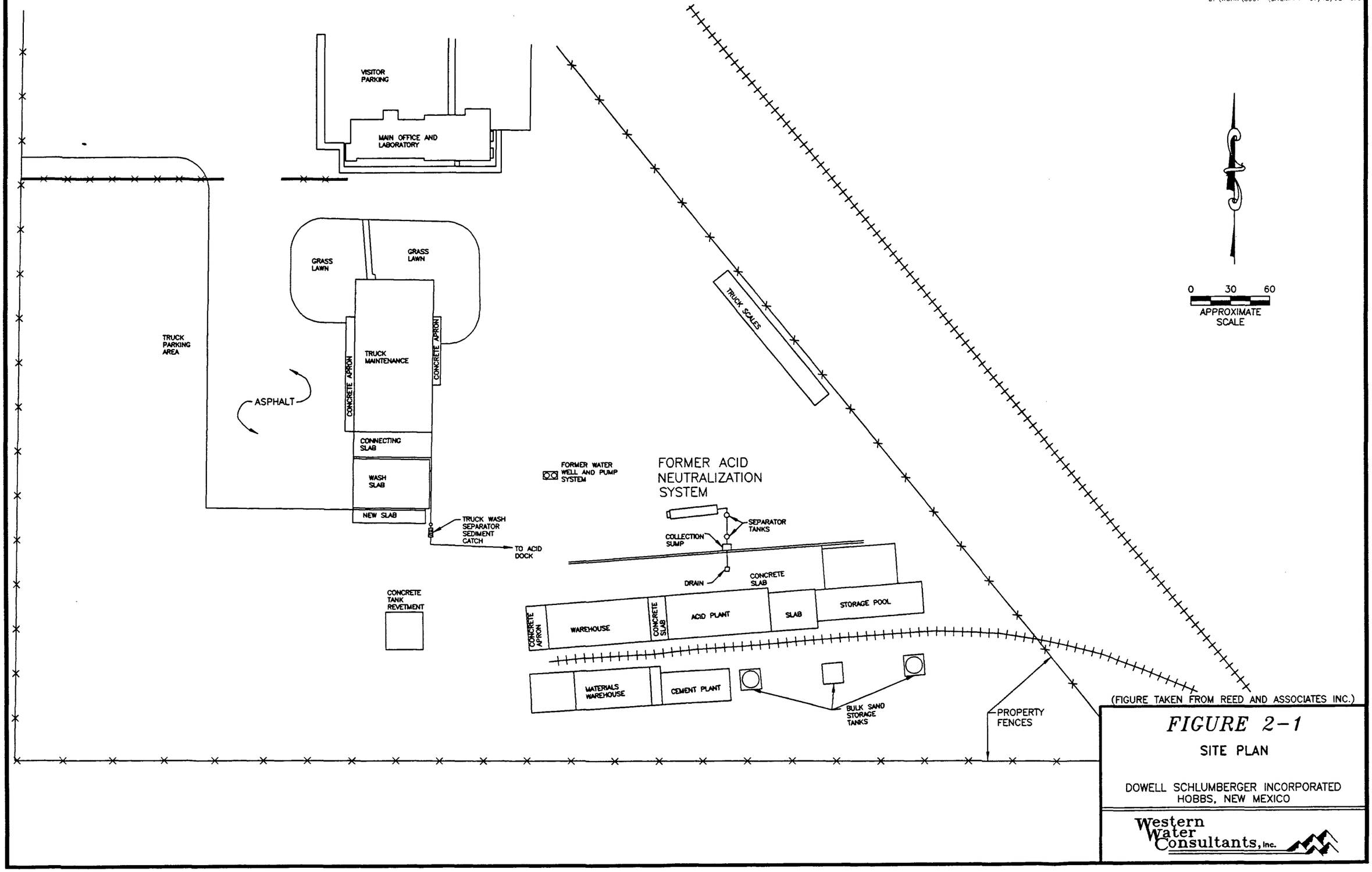

(FIGURE TAKEN FROM REED AND ASSOCIATES INC.)

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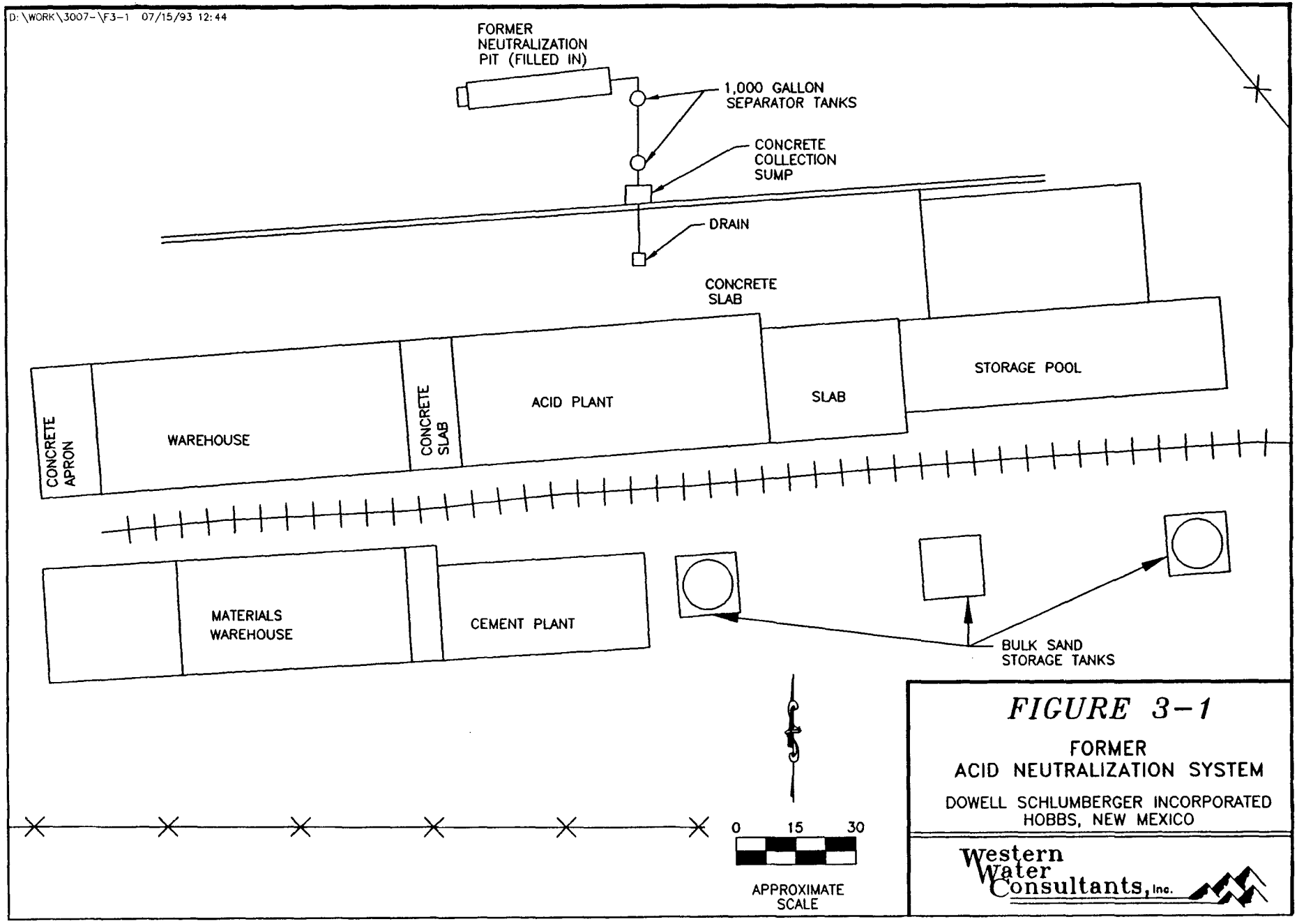

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ACID NEUTRALIZATION SYSTEM

DOWELL SCHLUMBERGER INCORPORATED
HOBBS, NEW MEXICO

Western Water Consultants, Inc.

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Wastewater in the system will be evacuated and disposed by Petro-Thermo Corporation which operates a trucking service and disposal well in the Hobbs vicinity. Petro-Thermo Corporation operates a permitted NMOCD Class I injection well and routinely accepts acid heels from the Dowell facility.

4.2 1,000 Gallon Separator Tanks and Sump Excavation

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FINAL ANALYSIS REPORT

Company: Western Water Consultants, Inc. Date: 5/05/93
Address: 611 Skyline Rd. Lab#: H1200
City, State: Laramie, WY 82070

Project Name: 3007.1
Project Location:
Sampled by: SG Date: 4/13/93 Time:
Analyzed by: MF Date: 4/26/93 Time:
Type of Samples: H20 Sample Condition: GIST Units: mg/l

Samp #	Field Code	TRPHC	BENZENE	TOLUENE	ETHYL BENZENE	PARA-XYLENE	META-XYLENE	ORTHO-XYLENE	MTBE
1	OW-N	19.0	***	***	***	***	***	***	***
2	OW-S	7.0	***	***	***	***	***	***	***
	QC Recovery	***	***	***	***	***	***	***	***
	QC Spike	***	***	***	***	***	***	***	***
	Accuracy	***	***	***	***	***	***	***	***
	Air Blank	***	***	***	***	***	***	***	***

Methods - EPA METHOD 8015 MOD

Michael R. Fowler

Michael R. Fowler

Date 5/5/93

WESTERN WATER CONSULTANTS, INC.
MAY 10 1993
LARAMIE, WY 82070

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TEXAS 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

TCLP ANALYSIS REPORT

Company: Western Water Consultants, Inc. Date: 5/05/93
Address: 611 Skyline Rd. Lab#: H1200-1
City, State: Laramie, WY 82070

Project Name: 3007.1
Project Location:
Sampled by: SG Date: 4/13/93
Type of Sample: Water Sample Condition: GIST

Sample ID: OW-N

TCLP INORGANICS (Leachate)

PARAMETER	RESULT	UNITS
Arsenic	<0.002	mg/L
Barium	<0.10	mg/L
Cadmium	<0.005	mg/L
Chromium	<0.05	mg/L
Lead	<0.10	mg/L
Mercury	<0.0002	mg/L
Selenium	<0.002	mg/L
Silver	<0.01	mg/L

TOXICITY CHARACTERISTICS

pH	0.76
Ignitability °F	134
Corrosivity	Yes (pH <2)
Reactivity-S	<5
Reactivity-CN	<0.01

Michael R. Fowler

Michael R. Fowler

Date 5/5/93

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Project Name: 3007.1
Project Location:
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Type of Sample: Water Sample Condition: GIST
Sample ID: OW-N

TCLP VOLATILES

PARAMETER	RESULT	UNITS
Benzene	<.835	mg/L
Carbon tetrachloride	<.835	mg/L
Chlorobenzene	<.835	mg/L
Chloroform	<.835	mg/L
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1,1-Dichloroethylene	<.835	mg/L
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Tetrachloroethene	<.835	mg/L
Trichloroethene	<.835	mg/L
Vinyl chloride	<1.670	mg/L

METHOD: TCLP VOLATILES - EPA 1311

Michael R. Fowler

Date 6/1/93

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

TCLP ANALYSIS REPORT

Company: Western Water Consultants, Inc. Date: 5/05/93
Address: 611 Skyline Rd. Lab#: H1200-2
City, State: Laramie, WY 82070

Project Name: 3007.1
Project Location:
Sampled by: SG Date: 4/13/93
Type of Sample: Water Sample Condition: GIST

Sample ID: OW-S

TCLP INORGANICS (Leachate)

PARAMETER	RESULT	UNITS
Arsenic	<0.002	mg/L
Barium	<0.10	mg/L
Cadmium	<0.005	mg/L
Chromium	<0.05	mg/L
Lead	<0.10	mg/L
Mercury	<0.0002	mg/L
Selenium	<0.002	mg/L
Silver	<0.01	mg/L

TOXOCITY CHARACTERISTICS

pH	0.38
Ignitability	134
Corrosivity	Yes (pH <2)
Reactivity-S	32
Reactivity-CN	<0.01

Michael R. Fowler

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Company: Western Water Consultants, Inc. Date: 05/14/93
Address: 611 Skyline road Lab # H1200-2
City, State: Laramie, WY 82070

Project Name: 3007.1
Project Location:
Sampled by: SG Date: 04/13/93
Type of Sample: Water Sample Condition: GIST
Sample ID: OW-S

TCLP VOLATILES

PARAMETER	RESULT	UNITS
Benzene	<.500	mg/L
Carbon tetrachloride	<.500	mg/L
Chlorobenzene	<.500	mg/L
Chloroform	<.500	mg/L
1,2-Dichloroethane	<.500	mg/L
1,1-Dichloroethylene	<.500	mg/L
Methyl ethyl ketone	<5.000	mg/L
Tetrachloroethene	<.500	mg/L
Trichloroethene	<.500	mg/L
Vinyl chloride	<1.000	mg/L

METHOD: TCLP VOLATILES - EPA 1311

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