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REPORTS

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Brown McCarroll & Oaks Hartline

Austin, Texas

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Monitor Well Installation and Sampling Draft Work Plan

Former Exxon Chemical Facility 2607/2609 West Marland Boulevard Hobbs, New Mexico

ENSR Consulting and Engineering

January 1994

Document Number 1009-006-105

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EXECUTIVE SUMMARY

The purpose of this Work Plan is to comply with the New Mexico Oil Conservation Division (OCD) request that Exxon Chemical Company install one monitor well adjacent to the former "Oil Pit Floor" at the former Exxon facility located at 2607/2609 West Marland Boulevard in Hobbs, New Mexico. The scope of work provides for the installation of one permanent monitoring well and collection and analysis of a groundwater sample to determine if the soil contamination has impacted the underlying groundwater. The results of the sampling will be submitted to the OCD in a separate technical report.

1.0 INTRODUCTION

1.1 Background

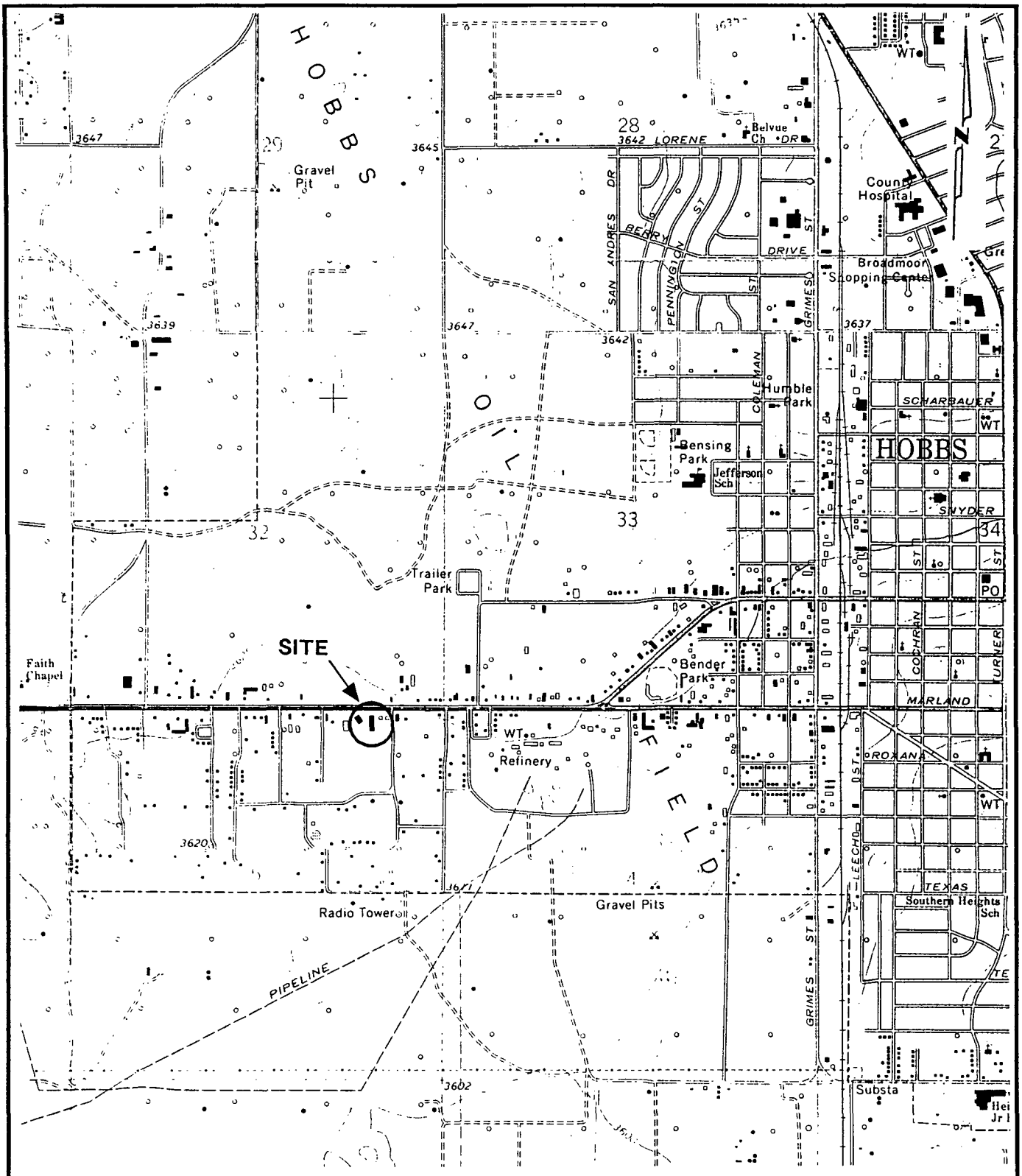
The site is located at 2607/2609 West Marland Boulevard in Hobbs, New Mexico and is currently owned and operated by Electro Support Systems, Inc. (ESS). A site location map is shown on Figure 1-1. ESS purchased the facility in 1991 from Sweatt Construction Company (Sweatt). Sweatt used the facility for office space, truck maintenance, and construction equipment storage. NL Industries, Inc. (NLI) leased the office suite at 2607 West Marland Boulevard intermittently from approximately 1980 to 1988. Exxon Chemical Company (Exxon) assumed the lease from NLI in 1987.

The site is approximately 2.15 acres in size and consists of a main building, a warehouse/assembly building, and a caliche-covered yard. A site plot plan is shown on Figure 1-2. The main building consists of two office suites, 2607 and 2609 West Marland Boulevard, and is located in the northern portion of the property. The main building is surrounded on the north and east by an asphalt parking lot. The warehouse/assembly building is located along the west side of the property behind the main building. This building as well as the main building are currently in use by the present owner, ESS.

During the period that Exxon leased the property, from March 1988 to August 1989, the facility was used for the storage and distribution of oil field treating chemicals. Exxon maintained seven 750-gallon aboveground storage tanks on the property for storage of oil field chemicals. The tanks were installed within a secondary containment system. Chemical product was also stored in drums. Typically, 250 drums of product were stored on pallets in the yard. No blending or processing of these chemicals occurred at the site.

1.2 Previous Investigations and Field Activities

On behalf of Exxon, ENSR Consulting and Engineering (ENSR), conducted a Phase I Preliminary Assessment in 1991 at the West Marland site. Assessment activities included site visits, interviews with personnel that worked at the facility, facility records review, and state agency or EPA files research. The results were presented in a June 1992 report entitled Phase I Preliminary Assessment, Exxon Chemical Company, 2607/2609 West Marland Boulevard, Hobbs, New Mexico.



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REFERENCE: U.S.G.S. Quadrangle Map for Hobbs West, New Mexico, Photorevised 1979.

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FIGURE 1-1
SITE LOCATION MAP
EXXON CHEMICAL COMPANY FACILITY
WEST MARLAND BOULEVARD
HOBBS, NEW MEXICO

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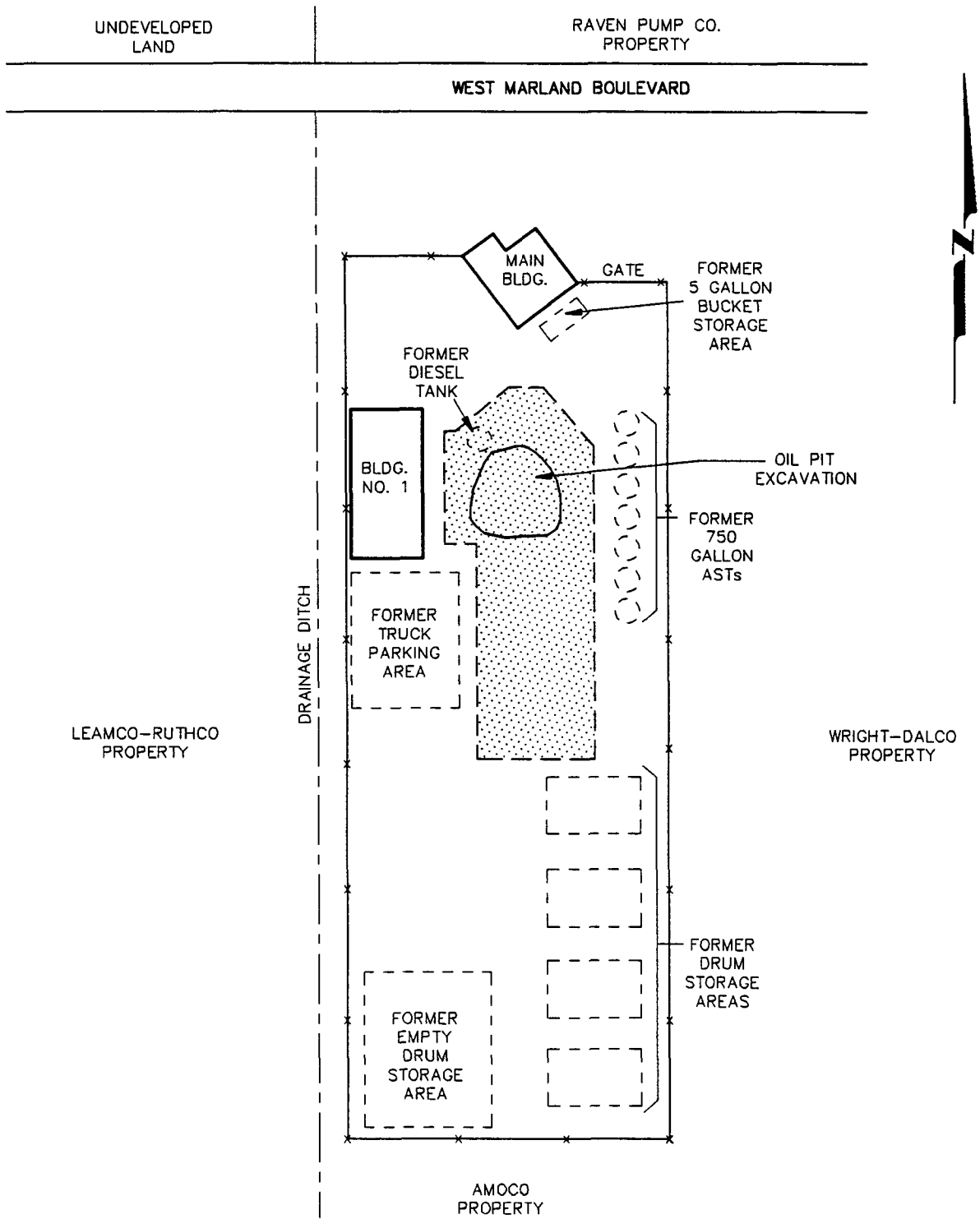

LEGEND

– PREVIOUSLY EXCAVATED AND BACKFILLED AREAS

NOT TO SCALE

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FIGURE 1–2
SITE PLOT PLAN
EXXON CHEMICAL COMPANY FACILITY
WEST MARLAND BOULEVARD
HOBBS, NEW MEXICO

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The Preliminary Assessment indicated areas of the facility yard that warranted additional investigation. As a result, ENSR conducted a Phase II Site Inspection at the site in January 1992. The findings were presented in a June 1992 report entitled Phase II Site Inspection, Former Exxon Chemical Company Facility, 2607/2609 West Marland Boulevard, Hobbs, New Mexico.

During Site Inspection activities, soil contamination was encountered in several areas within the facility yard. In July and August 1993, in accordance with a New Mexico Oil Conservation Division (OCD) approved Work Plan, a Phase III Removal Action was performed in order to remove the contaminated soil from the site. The results of the removal action are presented in ENSR's report entitled Phase III Removal Action Report, Former Exxon Chemical Company Facility, 2607/2609 West Marland, Hobbs, New Mexico.

During the removal activities one large rectangular shaped area measuring approximately 190 by 52 feet was excavated (Figure 1-2). The average depth of the excavation was three to four feet below ground surface. Laboratory analysis of the majority of the verification soil samples collected from the walls and floor of the excavation showed contamination at levels below OCD clean-up levels for total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and xylenes (BTEX).

However, heavily hydrocarbon-contaminated soil was encountered in the center of the excavation, directly south of a former aboveground diesel storage tank (Figure 1-2). The area is believed to have been a type of waste oil disposal pit or holding tank, and has been designated as the "Oil Pit". Laboratory analysis of soil samples collected from floor of the former Oil Pit area had concentrations of TPH and BTEX above OCD clean-up levels.

Based on the laboratory analysis data, excavation activities were continued in the Oil Pit area. Layers of fractured caliche were encountered at 9 to 10 feet below ground surface and hydrocarbon contamination was detected in the fractures. The caliche became very dense at approximately 18 feet below and further excavation was not practical. Therefore, with the approval of the OCD, some of the contaminated soil was left in place and the excavation was back filled with clean soil and compacted.

Waste characterization analysis of the excavated soil indicated that the soil was classified as non-hazardous for disposal purposes. Approximately 2,850 cubic yards of contaminated soil was transported to the Controlled Recovery, Inc. (CRI) disposal facility in Hobbs, New Mexico.

1.3 Purpose of Work Plan

Based on the results of the Removal Action activities, the OCD requested that Exxon install one monitor well adjacent to the Oil Pit excavation area to detect any potential impacts on underlying groundwater. The purpose of this work plan is to identify the location of the permanent monitor well and describe the well installation and sampling procedures that will be used. This information is provided in the following sections.

2.0 SCOPE OF WORK

Based on the results of previous investigative and removal activities performed at the former Exxon Facility located at 2607/2609 West Marland Boulevard, in Hobbs, New Mexico, the New Mexico Oil Conservation Division (OCD) has requested the installation of one monitor well directly adjacent to former Oil Pit excavation to determine whether there have been any potential impacts on underlying groundwater.

The proposed scope of work includes the following activities:

- Preparation of site Health and Safety Plan;
- Installation of one permanent monitor well;
- Groundwater sampling and analysis; and
- Preparation and submittal of a technical report.

The following sections outline the procedures for each of the activities listed above.

2.1 Site Health and Safety Plan

Prior to conducting the field activities, a site specific Health and Safety Plan (HASP) will be prepared by qualified ENSR personnel and will include the following:

- Purpose and Compliance Requirements,
- Facility Background,
- Scope of Work,
- Training Requirements,
- Medical Surveillance,
- Potential Hazards,
- Personal Protection Hazards,
- Hazard Control Procedures, and
- Emergency References and Action Plan.

The HASP will be reviewed by the ENSR Regional Health and Safety manager and the ENSR Project Manager and copies will be distributed to each member of the on-site field team. A signature page will be included in the plan which must be signed by each member of the field team prior to beginning on-site activities. Signing this sheet documents that the person has read and understands the requirements of the site specific HASP.

In addition, a copy of the HASP will be provided for any subcontractor who will be performing work at the site. The work will not begin until the subcontractors have returned a signed and dated signature page to ENSR.

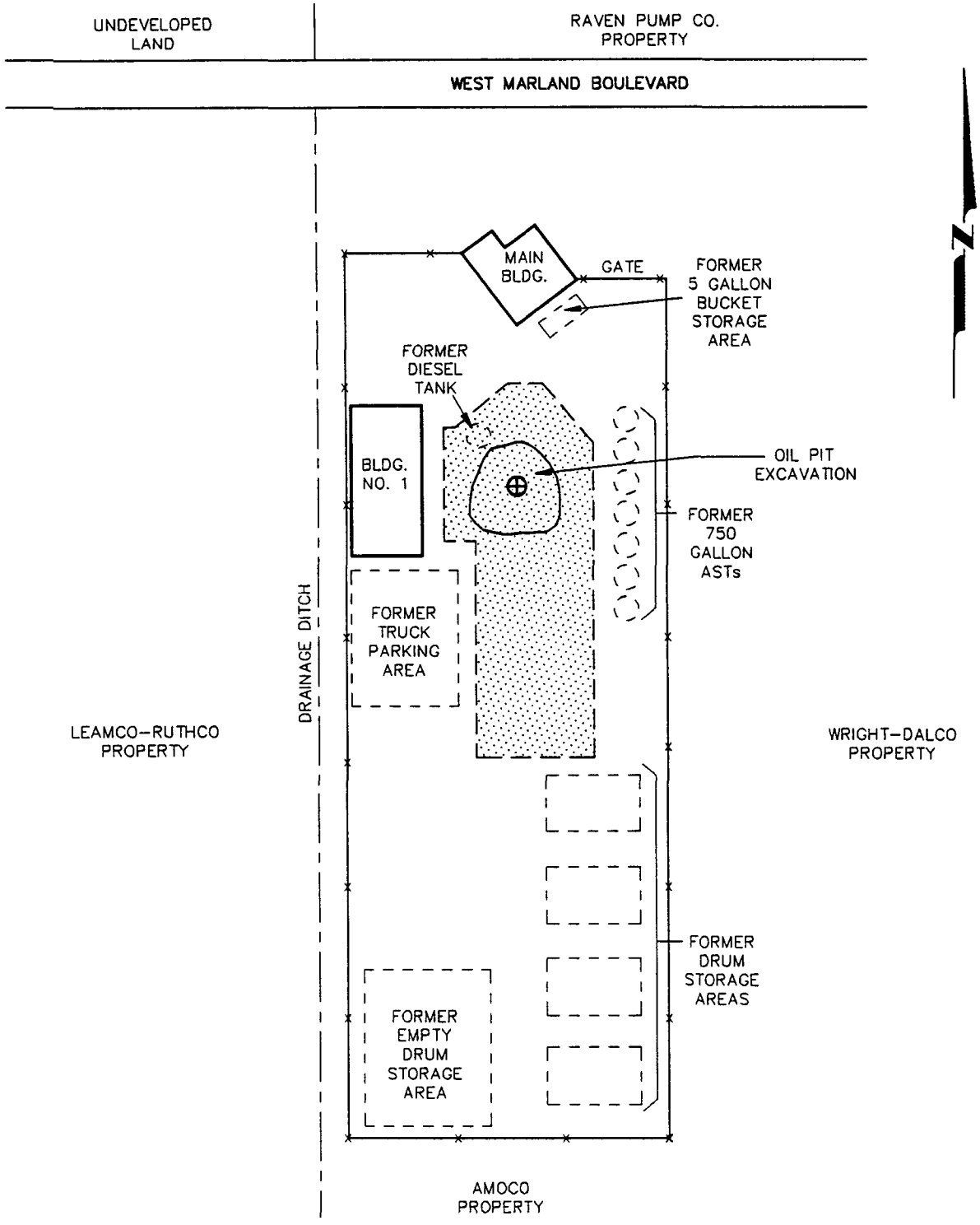
2.2 Monitor Well Installation

On behalf of Exxon, ENSR will supervise the installation of one monitor well at the previous location of Oil Pit (Figure 2-1). The monitor well will be installed using a truck mounted drilling rig. Due to the pervasive occurrence of consolidated rock at the site, the first 60 to 80 feet will be drilled using the air rotary method. Once the unconsolidated sand unit is encountered, the drilling method will be switched to hollow stem auger. The borehole will be logged by inspecting the cuttings brought to the surface by the auger. Soil samples will not be collected during the drilling of the monitor well.

Based on previous subsurface investigations performed at the site and discussions with the OCD and local well drillers, the shallow groundwater is expected to be encountered at approximately 90 to 110 feet below ground surface. Therefore, the maximum depth of the monitor well will be approximately 120 to 130 feet below ground surface.

Following drilling activities, 2-inch diameter PVC casing and well screen (0.010-inch slot size) will be placed into the boring. The screened interval will span the upper 15 feet of the uppermost water-bearing unit encountered during drilling. A high quartz content sand will be placed as filter pack in the annular space to approximately 2 feet above the screened interval. A 2 foot bentonite seal will be placed above the filter pack and a small amount of water will be added to hydrate the seal. The remaining annular space will be filled with a cement/bentonite grout mixture.

The well will be completed at approximately 2 feet above ground surface with an outer protective casing fitted with a locking cap. The inner well casing will also be secured with a casing cap. The generalized monitor well construction is shown on Figure 2-2.



LEGEND

- PREVIOUSLY EXCAVATED AND BACKFILLED AREAS
- ⊕ – PROPOSED MONITOR WELL

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FIGURE 2-1
PROPOSED MONITOR WELL LOCATION
EXXON CHEMICAL COMPANY FACILITY
WEST MARLAND BOULEVARD
HOBBS, NEW MEXICO

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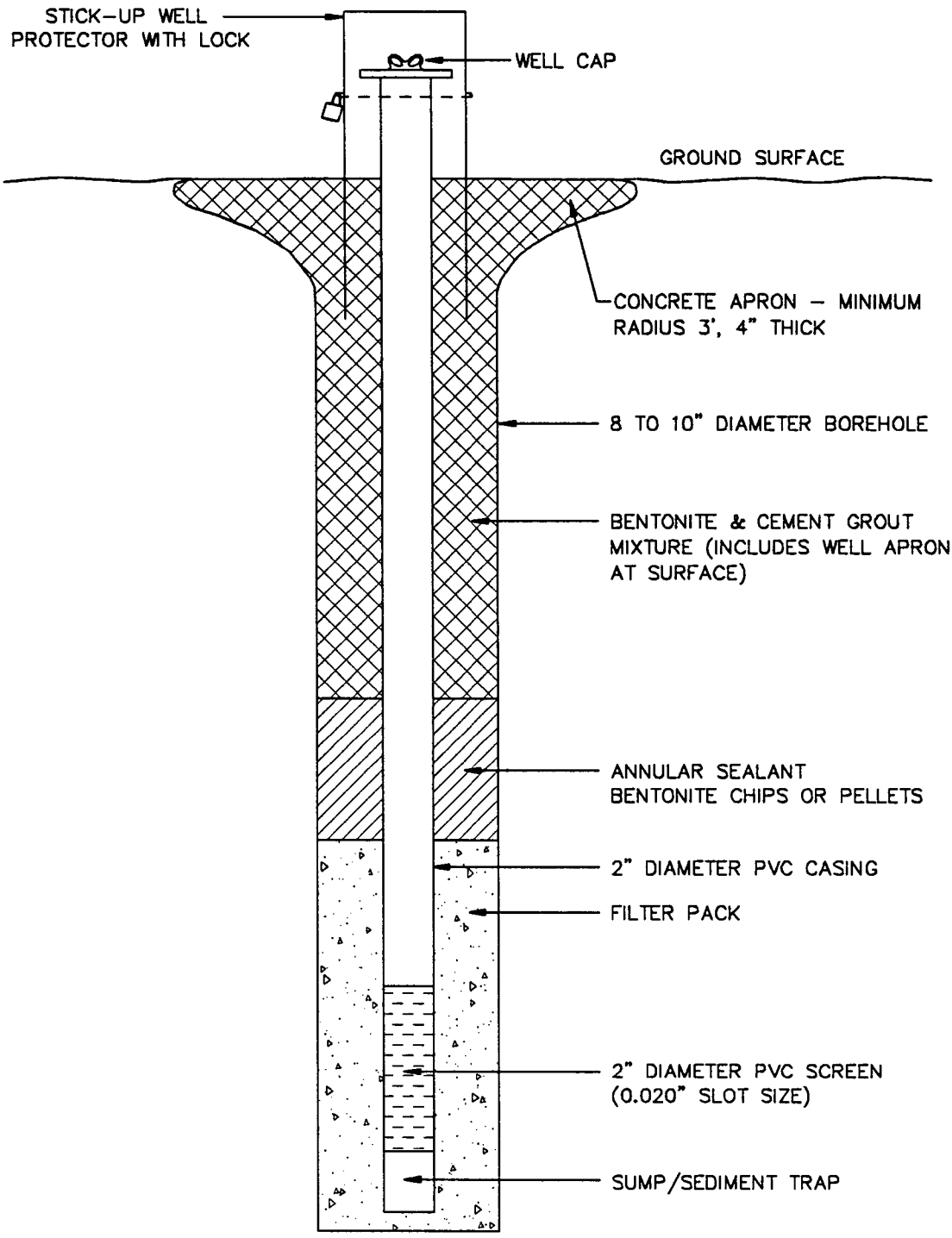

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FIGURE 2-2
GENERALIZED MONITOR WELL DESIGN
EXXON CHEMICAL COMPANY FACILITY
WEST MARLAND BOULEVARD
HOBBS, NEW MEXICO

DRAWN BY: SG/SH	DATE: 1-21-94	PROJECT NUMBER:
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The soil cuttings removed from the borings will be containerized in 55-gallon drums. A composite soil sample will be collected and analyzed for Total Petroleum Hydrocarbons (TPH). The cuttings will then be disposed of appropriately.

The drill rigs used for the monitor well installation will arrive at the site in clean condition with decontaminated augers. Any additional equipment that may come into contact with the groundwater during the field activities will be decontaminated prior to use at the site.

2.3 Well Development, Sampling and Analysis

Following well installation, the monitor well will be developed until the pH and specific conductivity stabilize for three consecutive well volumes and the well is free of residual sediment left from drilling activities. At least 12 hours after well development, a groundwater sample will be collected using a new disposable bailer and new nylon cord. Sampling personnel will wear new plastic gloves during sampling activities. The groundwater will be poured directly from the bailer into appropriate sample containers, preserved as necessary, labeled, packaged and transported to an analytical laboratory along with completed chain-of-custody documentation. The sample will be analyzed for:

- Volatile Organic Compounds - U.S. EPA Method 8240
- Semivolatile Organic Compounds - U.S. EPA Method 8270
- Total RCRA Metals - U.S. EPA Method 6000, and
- Total Petroleum Hydrocarbons (TPH) - U.S. EPA Method 8015.

For quality assurance and control, a trip blank will be submitted for the same analysis.

2.4 Technical Report

Upon completion of the outlined monitor well installation and sampling, a technical report will be submitted to the OCD. At a minimum the report will include the following:

- Descriptions of methods used and observations made while installing and sampling the monitor well;
- Figures showing the well construction and location; and
- The complete laboratory report with a summary of the analytical results.