TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

FIGURES

PLATES

APPENDICES

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 SCOPE OF WORK

Victor Valley Community College (VVCC) retained Hydrologue, Inc. (HI) to conduct a Phase I Environmental Site Assessment (ESA) for an approximately 1-acre vacant property located within the campus boundary, north of Bear Valley Road and west of Mojave Fish Hatchery Road, in the City of Victorville, San Bernardino County, California (Site) (Figure 1). The Site is a portion of the 216-acre Assessor's Parcel Number 0482-022-06. The Site is presently vacant, undeveloped land within the campus boundary. The VVCC plans to build a gymnasium building at the Site. During the course of this investigation, HI made all appropriate due diligence inquiries into previous ownership and usage of the Site in accordance with the Superfund Authorization and Reorganization Amendments (SARA) 42 USC §9601 (35)(A) (also known as the "Innocent Landowner Defense").

This due diligence investigation was conducted generally following the American Society for Testing and Materials (ASTM) Standard E-1527-00 in order to evaluate the potential presence of known or suspected hazardous waste materials, which may adversely impact the Site environmental integrity within a radius of up to one mile of the Site. This report summarizes the existing known geologic, environmental, and subsurface hydrogeologic conditions on and adjacent to the Site, and provides preliminary conclusions relative to the Site environmental conditions. Specifically, a HI California professional geologist or registered environmental assessor performed or supervised the following tasks:

- Reviewed available published geologic and hydrogeologic data and reports with reference to general Site geology, soil, and groundwater conditions.

- Reviewed reasonably ascertainable federal, state, and local environmental regulatory agency databases; and personally contacted representatives of selected local agencies, in regard to emergency response records of known hazardous waste disposal sites and reported hazardous materials releases or handlers, on or within a one-half mile radius of the Site, and contacted the Victorville City Hall Departments in regard to various permits that these departments issue. In addition, HI contacted other agencies, i.e., California Regional Water Quality Control Board - Lahontan Region, Victorville, San Bernardino County Fire Department, California State Fire Marshal, Department of Toxic Substances Control, Southwest Gas Corporation, Mojave Desert Air Quality Management District, and the San Bernardino County Fire Department, Hazards Materials Division requesting to review their records for the Site for any pertinent information.

- Reviewed appropriate and readily accessible regulatory agency databases with reference to permitted underground storage tanks (USTs) and aboveground storage tanks (ASTs) located within a one-half mile radius of the Site, and determined the

status or disposition of any such tanks.

- Conducted a reconnaissance Site walkthrough to determine where visible signs of potential impact from hazardous materials exist. In addition, brief visual examinations, local reconnaissance and interviews of conditions and operations on adjacent properties were made at the Site.

- Prepared this comprehensive report containing pertinent information reviewed or obtained by HI during this due diligence investigation, with accompanying illustrations and appendices summarizing our findings, conclusions, and recommendations, regarding the potential for hazardous materials or wastes on or near the Site. This report represents the results of an appropriate due diligence investigation, intended to meet the requirements for qualification on the Innocent Landowner Defense, as defined under CERCLA and SARA {42 USC § 9601 (35) (A)}. In addition, the materials gathered for this report were prepared in accordance with and based on the objectives outlined in the American Society for Testing and Materials (ASTM) "Standard Practice for Environmental Site Assessments" Phase I Environmental Site Assessment Process, E-1527-00" (current edition) guidelines.

This investigation was conducted on behalf of the Client, Victor Valley Communtiy College. HI findings, conclusions and recommendations are subject to the Limitations described in Section 9.

2.0 EXISTING SITE CONDITIONS

2.1 SITE DESCRIPTION

The Site is comprised of an approximately 1-acre portion of APN 0482-022-06 located west of Mojave Fish Hatchery Road and south and east of East Campus Road on the campus of Victor Valley Community College (Figures 1 & 3). Based on the Planning Department-City of Victorville, the campus is zoned as PC (Public and Civic Center) and SP (Conservancy and Flood Plain). The legal description of the above mentioned APN is as follows:

> PTN E 1/2 SEC 35 AND PTN W 1/2 SEC 36 TP 5N R 4W DESC AS BEG AT SE COR SD SEC 35 TH W 1525 FT ALG SLI SD SEC 35 TH N 240.04 FT TO BEG OF A TANGENT CURVE CONCAVE TO W HAVING A RADIUS 500 FT TH NWLY 69.74 FT ALG ARC OF SD CURVE THROUGH A CENTRAL ANGLE 8 DEG 00 MIN O0 SECONDS W 701.33 FT TO BEG OF A TANGENT CURVE CONCAVE ELY WITH A RADIUS 500 FT TH NELY 165.81 FT ALG THE ARC OF SD CURVE THROUGH A CENTRAL ANGLE 19 DEG O0 MIN 00 SECONDS N 11 DEG 00 MIN O0 SECONDS E 97.96 FT TO BEG OF A TANGENT CURVE CONCAVE NWLY WITH A RADIUS 500 FT TH NELY 279.25 FT ALG THE ARC OF A CURVE THROUGH A CENTRAL ANGLE 32 DEG 00 MIN O0 SECONDS TH N 43 DEG 00 MIN 00 SECONDS E 100 FT TO BEG OF A CURVE CONCAVE WLYWITH A RADIUS 350 FT TH NWLY 545.03 FT ALG THE ARC OF SD CURVE THROUGH A CENTRAL ANGLE 89 DEG 13 MIN 20 SECONDS TO THE BEG OF A REVERSE CURVE CONCAVE ELY WITH A RADIUS 378.81 FT TH NELY 761.79 FT ALG THE ARC SD CURVE THROUGH A CENTRAL ANGLE 115 DEG 13 MIN 20 SECONDS TH N 69 DEG O0 MIN 00 SECONDS E 804.20 FT TH S 19 DEG 05 MIN 00 SECONDS E 746.00 FT TH N 70 DEG 55 MIN 00 SECONDS E 460 FT TH N 19 DEG 05 MIN 00 SECONDS W 385 FT TH N O1 DEG 06 MIN 03 SECONDS E 605.89 FT TH N 41 DEG 00 MIN 00 SECONDS E 446.78 FT TH S 83 DEG 10 MIN 00 SECONDS E 1414.55 FT TH S 0 DEG 05 MIN 36 SECONDS E 3571.87 FT TO THE S LI SD SEC 36 TH S 89 DEG 54 MIN 24 SECONDS W 1720 FT ALG SD S LI TO POB AND PTN JACARANDA AVE VAC EX CO ROADS

Please refer to Appendix A.

2.2 PRESENT SITE USAGE AND OWNER

The Site is currently vacant undeveloped land (Figures 4 & 5). According to Mr. Stephan Garcia, the Site is sometimes used for overflow parking during campus events. The Site is owned by VVCC.

2.3 PHYSICAL SITE LOCATION

According to the 2001 National Geographic Holdings United States Geological Survey topographic map, Hesperia Quadrangle (Figure 1 & 3), the Site is located in the southwest ¼ of the southwest ¼ of Section 36 of T5N, R4W, San Bernardino Meridian at approximately 117^0 15' 36.9" longitude, 34^0 28' 21.7" latitude, at an elevation of approximately 2,830 feet above mean sea level (MSL).

3.0 ENVIRONMENTAL SETTING

3.1 GEOLOGIC SETTING

According to the 1967, Department of Water Resources, Southern District, Mojave River Groundwater Basins Geology Map, the area of the Site is comprised of unconsolidated highly permeable River Deposits consisting of boulders, gravel, sand, and interbedded silt and clay, sandy clay, and gravelly clay. The Site is located in the Mojave Desert physiographic province of Southern California. The Mojave Desert is a broad interior region of isolated mountain ranges separated by wide desert plains. The Mojave Desert is roughly triangular shaped bounded by the Garlock fault on the north, the San Andreas Fault on the southwest, and the Colorado River on the east. The drainage is mostly closed with many playas. This Geomorphic Region is structurally defined by a prominent northwest-southeast fault trend and a secondary east-west fault trend sub-parallel to the Transverse Ranges. Locally, the Site lies within a wedge-shaped tectonic block in the south-central portion of the Mojave Desert, flanked by the Sierra Nevada Mountains to the northwest, the Radman and Cady Mountains to the northeast, the San Gabriel Mountains to the southwest, and the San Bernardino Mountains to the southeast. The local region is comprised predominantly of northward sloping alluvial fan deposits derived from the surrounding mountains, and recent deposits associated with the Mojave River. Regional elevations reach as high as 8,500 feet (near Crestline), where annual precipitation typically is more than 40 inches. In contrast, the terminus of the Mojave River at Soda Dry Lake (elevation 923 feet) south of Baker receives only 3 inches of precipitation annually. Elevation at the Site is at an elevation of approximately 2,830 feet MSL.

According to the USG Open-File Report 03-293, Preliminary Geologic Map of the San Bernardino 30 minute by 60 minute, the Site is underlain by young wash deposits QYW3 associated with the Mojave River located east of the Site.

According to the California Department of Conservation, Division of Mines and Geology Open-File Report 88-1 "Summary Report: Fault Evaluation Program, 1986-1987, Mojave Desert and Other Areas, the closest fault to the Site are splay of the Mirage Valley Fault, approximately under 10 miles to the northwest of the Site. This fault is a right-lateral strike-slip fault with unknown magnitude of displacement. The fault, located mainly on a pediment surface, offsets Mesozoic granitic bedrock and, locally, mid to late Pleistocene alluvium. Latest Pleistocene soils developed on pediment surface are not offset. The fault is generally poorly defined and lacks geomorphic evidence of latest Pleistocene to Holocene displacement.

The Site lies within the U.S. Geological Survey 7.5 Minute Hesperia Quadrangle. Based on a review of the State and County geologic hazard maps, no known faults traverse the Site and the property is not currently within an Alquist-Priolo (AP) Earthquake Fault Zone. The closest Alquist-Priolo Earthquake Fault Zone to the Site is the North Frontal Fault Zone, located approximately 6.5 miles southeast of the Site. A summary of faults significant to the Site and their distanced from the Site is presented in the following table:

Fault Zone	Distance from Site to AP Zone (Miles)	Distance from Site to Closest Fault Trace (Miles)	Direction From the Site
North Frontal Fault	6.3	6.5	Southeast
Cleghorn Fault	13	13.2	Southwest
Helendale Fault	11.7	11.9	Northeast
San Andreas Fault	17.8	18.0	Southwest

The closest known active fault to this Site forms the boundary between the Mojave Desert Geomorphic Province and the Transverse Ranges Geomorphic Province to the south. This extremely complex zone of left-lateral, thrust, and reverse faults, known as the North Frontal fault zone is coincident with the northern boundary of the San Bernardino Mountains. The North Frontal fault zone is located approximately 6.5 miles southeast of the Site.

The Mojave Desert is characterized by a few major northwest-trending strike-slip fault zones. Several of these fault zones were indicated by Jennings (1994) with evidence for Holocene fault displacement. Geomorphic evidence for Holocene fault displacement includes sag ponds, fresh fault scarps, or features in Holocene deposits such as offset drainages, linear scarps, shutter ridges, and faceted spurs. The Helendale fault is the closest of these faults and is located approximately 11.9 miles northeast of the Site. This fault is included within an Alquist-Priolo Earthquake Fault Zone designated by the State of California to include traces of suspected active faulting. The Old Woman Springs, Lockhart, Harper, and Camp Rock faults, located at greater distances from the Site, are also indicated by Jennings (1994) as having Holocene fault displacement. Surface rupture occurred on the southeastern end of the Camp Rock fault during the M 7.3 Landers earthquake of June 28, 1992.

The Cleghorn fault is a relatively short westerly-trending feature identified in the Cajon Pass area. This fault is located approximately 13.2 miles southwest of the Site and is classified as questionably Holocene in age (Jennings, 1994).

Two segments of the northwest-trending San Andreas fault are located approximately 18 miles southwest of the Site: the northwesterly, or Mojave segment, and the southeasterly, or San Bernardino Mountains segment. The Mojave segment of the San Andreas fault is coincident with the northeast margin of the San Gabriel Mountains. The toe of the mountain front in the San Bernardino area roughly demarcates the presently active trace of the San Bernardino mountains segment. Both segments are characterized by youthful fault scarps, vegetational lineaments, springs, and offset drainages.

The development of bedrock and the regional geomorphology (landforms) at the proximity of the Site have been significantly influenced by recent mountain building and valley forming events. The three principal orogenies include:

- Crustal compression of the Western U.S., that resulted in the deformation of existing rocks and development of new igneous intrusive and extrusive rocks now found in the Mojave Block and to the north along the Sierra Nevada Mountains (Mesozoic Era: 240 million years - 63 million years ago [my]). The rocks produced at this time form much of the basement complex exposed in the surrounding mountains and forming the present day sediment-filled basins.
- Crustal extension, which produced the Basin and Range Province of Nevada, Arizona, and eastern California (Tertiary Period: 63 my - 2 my). Many of the bedrock basins, including the one beneath the Site were formed as blocks of rocks dropped down along extensional faults.
- Coast Ranges development and uplift associated with major crustal shearing along the San Andreas Fault zone (Tertiary Period through present). Tectonic activity in the area today is dominated by lateral, strike-slip faulting along the San Andreas Fault and other related faults, described in the following sections.

Large granitic bodies were emplaced within older crustal rocks of the area during the Mesozoic Era when region-wide igneous intrusion and volcanism generated elevated mountainous terrain that was subsequently eroded during the Mesozoic Era. During the Tertiary Period, parts of the Mojave Block were elevated and eroded, while other low-lying portions were submerged. These submerged basins received sediments derived from nearby mountains and numerous volcanic sources. Erosion and transport of sediment during that time was accelerated by wetter climatic conditions that included torrential regional rainy periods.

The present geomorphology of the Mojave Block has been strongly influenced by Quaternary (2 my - present) fault activity. Regional crustal deformation along the San Andreas and Garlock fault zones resulted in uplifted mountain ranges, including the San Bernardino and San Gabriel Mountains. Alluvial aprons formed along the mountain fronts as uplifted ranges were eroded. Several basins were occupied by extensive pluvial lakes during the Late Pleistocene (approximately I my - 10,000 years). Many of the sub-basins within the Mojave Block and the ancestral Mojave River have their origins in the mid to late Pleistocene.

The soil conditions underlying the Site were explored by means of two exploratory borings, drilled to a maximum depth of 65 feet bgs. and four cone penetrometer test (CPT) soundings advanced to a maximum depth of 59 feet bgs. (Reference 1). Reference 1 includes a geological cross section and evaluation of the liquefaction potential of the Site.

Deposits encountered within the exploratory borings and the CPT soundings at the Site were composed of discontinuous layers or lenses of soils including poorly graded sands (SP), silty sands (SM), clayey sands (SC), sandy silts (ML), and sandy clays (CL). The soils encountered were generally in a medium stiff to stiff or a loose to medium dense state to approximately 27 feet in depth. Beyond that depth the soils encountered were in a very stiff to hard or a medium dense to dense state based on blow count data from the

exploratory borings. Geologic units encountered during the investigation were described as follows:

Qaf: fill, comprised mostly of sandy silts. This material surrounds the Site on all sides except the south but was not encountered within the proposed building area.

Qw: very young wash deposits. This unit is within and along the Mojave River currently channelized by levees, and includes areas between the levee and the old natural bank of the river.

Qyw: young wash deposits. Appear in this area as over bank deposits consisting of discontinuous layers or lenses of soils including sands, silty sands, clayey sands, sandy silts, and sandy clays. The entire Site is underlain by this unit, which extends to a depth of at least 65 feet as encountered within the exploratory borings.

The upper soils encountered at the Site are generally granular and considered to be non-critically expansive. Fill was not encountered in the exploratory borings utilized for the investigation. Bedrock was not encountered and refusal was not experienced within any of the exploratory borings or the CPT soundings. All of CHJ exploratory borings experienced slight caving upon removal of the augers

No active or potentially active faults are shown on or in the immediate vicinity of the Site on published geologic maps. No evidence for active faulting on or immediately adjacent to the Site was observed during the geologic field reconnaissance or on the aerial photographs reviewed (Reference 1).

According to Reference 1, based upon the depth to liquefiable soils, groundwater depth and the elevation of the bed of the Mojave River, it does not appear that the Site has a potential for liquefaction related lateral spread.

3.2 HYDROGEOLOGIC SETTING

Groundwater was encountered at depths of 21 to 28 feet within the exploratory borings and soundings utilized for CHJ's investigation.

According to Reference 1, Groundwater well data available on the internet from the U.S. Geological Survey (USGS) included levels that were significantly higher prior to 1948, including several measurements that were within 5 feet of the surface. However, these measurements were apparently of the piezometric head of a confined aquifer. More recent well data shows that the current groundwater level is significantly deeper than the historic high groundwater level. Based on the current groundwater practices in the upper Mojave River basin, groundwater depths are expected to be significantly deeper. Data from State Well Number 05N04W36N004, located less than approximately ¼ mile southeast of the Site, indicated a depth to groundwater of 28.6 feet bgs. in October 1961 as the highest water level recorded for this well. The data from State Well Number 05N04W36N001, located less than approximately ¼ mile east of the Site, indicated a depth to groundwater of approximately 19 feet in November 1953. Future groundwater is

not anticipated to rise above a depth of 15 feet bgs based on recent historic high measurements near the Site.

HI previously met with Mr. J. Cass of the California Regional Water Quality Control Board, Lahontan Region, Victorville Branch Office, who indicated that groundwater generally flows towards the east in the vicinity of the Site toward the Mojave River.

3.3 SURFACE WATER RESOURCES AND DRAINAGE

A man-made lake is situated approximately 600 feet west of the Site an elevation approximately 60-80 feet higher. The Mojave River flows in a northerly direction approximately 1,000 feet east of the Site at an elevation 10 to 20 feet lower. (Figures 10 – 13). Communities within the area include the town of Adelanto, the City of Victorville, Oro Grande, Silver Lakes, Apple Valley, and Hesperia.

Based on FEMA Flood Insurance Map No. 06071C6485F, the Site is within Flood Zone X, defined as area to be outside the 500-year flood plain (Appendix B).

4.0 LOCAL RECONNAISSANCE

A Site reconnaissance was conducted by HI Professional Geologist Robert Owoc, on October 10, 2005. The objective of the Site observation was to visually examine the Site for unusual features indicating potential environmental problems. Efforts were made to obtain information about the Site history, and identify visual signs and evidence of potential soil, surface water, and groundwater contamination resulting from past practices and land use.

The Site consists of relatively flat and level undeveloped land. Vegetation was minimal consisting of a stand of conifers along the northern portion of the Site and sparse seasonal weeds and grasses. Shallow tire ruts and tracks were observed throughout the Site. A concrete culvert runs under East Campus Road in the northwest portion of the Site. During HI's walk-through no visible evidence of the storage or disposal of hazardous wastes; evidence of hummocky topography; visible discoloration, stressed vegetation or dead or ill wildlife indicating potential previous hazardous waste spills; monitoring, supply and/or disposal wells; pesticide or herbicides storage or use; stained soil or pools of liquid; or unidentified storage containers was observed.

West of the Site is East Campus Road and a slope which ascends to a parking lot and campus structures at an elevation approximately 50 feet higher than the Site. East of the Site is Mojave Fish Hatchery Road, a parking lot and modular classrooms, and athletic fields. Apparent wells or irrigation structures were observed on the properties east of Mojave Fish Hatchery Road. The Mojave River is located approximately 1,000 feet east of the Site at an elevation approximately 10-20 feet lower than the Site. North of the Site is East Campus Road, a parking lot and a gymnasium. South of the Site is vacant land, Bear Valley Parkway, and a sand and gravel yard and nursery.

A brief observation of properties adjacent to the Site indicated no visible or olfactory evidence of any chemical or hazardous material spills, evidence of hummocky topography, ill or dead plants or wildlife, or any other indicators of waste dumping.

Selected photographs taken during the Site walkthrough are included as Plates 1-3.

4.1 ABOVEGROUND/UNDERGROUND STORAGE TANKS

No ASTs or USTs were observed at the Site during our Site walkthrough. No current or historical permits for ASTs or USTs related to the Site were found in the course of our research with various departments of the City of Victorville. The San Bernardino County Fire Department, Hazards Materials Division was contacted regarding above and underground fuel storage tanks for the subject property; they indicated that they transferred their responsibility to the Victorville Fire Department. The Victorville Fire Department indicated that they do not have any record for the Site (Appendix C). However, during the interview, Mr. Garcia indicated that the VVCC formerly operated a 6,000-gallon gasoline UST at the maintenance building. The tank was closed by removal

6-8 years ago and no indications of a release were noted. The VVCC currently operates two 350-gallon ASTs at the maintenance building.

The Mojave Air Quality Management District was contacted by HI regarding records for the Site. Barbara Weese of Mojave office indicated in writing that there were records (Permit to Operate) for the Campus (Appendix H).

OWNER/OPERATOR	EQUIPMENT LOCATION	DESCRIPTION
Victor Valley Community College (Site)	Victor Valley Community College (Site)	2 tanks of gasoline dispensing facility. Tank 1:500 gallon-87U Material Stored. Tank 2: 500 Gallon diesel.

4.2 TRANSFORMERS

No pad-mounted or pole-mounted transformers were observed at the Site. All transformers containing PCBs are required to be replaced with non-PCB transformers. Transformers are not generally classified as PCB-containing if they were produced after 1975. A survey of all the transformers in the Site vicinity was beyond the scope of this investigation.

4.3 PETROLEUM PRODUCTS AND HAZARDOUS MATERIALS

During the Site walkthrough, no motor, hydraulic, cutting or other industrial oils or hazardous materials were observed at the Site.

The San Bernardino County Fire Department, Hazards Materials Division was contacted regarding hazardous material storage at the Site; they indicated that they transferred their responsibility to the Victorville Fire Department. The Victorville Fire Department indicated that they do not have any record for the Site (Appendix C). During the interview, Mr. Garcia indicated that the VVCC science lab, health center, and maintenance buildings do generate small quantities of wastes that are drummed and stored at the maintenance building (located greater than 1,000 feet northeast of the Site) until properly disposed of. None of these facilities is located adjacent to the Site. Mr. Garcia also indicated the VVCC formerly operated a 6,000-gallon gasoline UST at the maintenance building. The tank was closed by removal 6-8 years ago and no indications of a release were noted. The VVCC currently operates two 350-gallon ASTs at the maintenance building.

The Mojave Air Quality Management District was contacted by HI regarding records for the Site. Barbara Weese of Mojave office indicated in writing that there were records (Permit to Operate) for the Campus (Appendix H).

OWNER/OPERATOR	EQUIPMENT LOCATION	DESCRIPTION
Victor Valley Community College (Site)	Victor Valley Community College (Site)	2 tanks of gasoline dispensing facility. Tank 1:500 gallon-87U Material Stored. Tank 2: 500 Gallon diesel.

4.4 CLARIFIERS AND SUMPS

During the site walkthrough there were no indications that any clarifiers or sumps exists at the Site. There were also no records found which would indicate the presence of either.

4.5 ASBESTOS CONTAINING MATERIAL (ACM)

Because there are no structures at the Site, the potential for existence of ACMs is considered nil. Testing for the presence of potential ACMs was beyond the scope of this investigation.

4.6 LEAD-BASED PAINT

Because there are no structures and no development is known to have occurred at the Site, the potential for the existence of lead-based paint on construction materials at the Site is considered nil. Testing for the presence of potential lead-based paint in on-Site soil was beyond the scope of this investigation.

Because the Site is not adjacent to any freeways, the potential for existence of lead-impacted shallow soil from vehicles emissions is considered nil.

4.7 CALIFORNIA STATE FIRE MARSHAL

HI contacted the California State Fire Marshal in Sacramento regarding any previously or currently existing oil pipelines at the Site. Lisa Dowdy from their office indicated in writing on October 17, 2005 that there are no pipelines under their jurisdiction at the Site (Appendix D).

4.8 INTERVIEWS

Mr. Stephen Garcia, Director of Facilities Construction and Contracts of VVCC was interviewed on October 10, 2005 regarding historical and current use and activities at the Site. Mr. Garcia has approximately 18 years experience at VVCC. According to Mr. Garcia the Site and remainder of the approximately 216-acre parcel was acquired from a rancher in the early 1960s for development of the college. He indicated that the lake in the central portion of campus was built by the rancher. The Site was never developed by VVCC, but was used for overflow parking at various events. Mr. Garcia indicated that adjacent structures included a gym to the north, modular classrooms to the east and a student activity center and student services buildings to the west, and no hazardous materials or hazardous wastes were used or stored on the Site or these adjacent buildings.

Mr. Garcia indicated that the VVCC science lab, health center, and maintenance buildings do generate small quantities of wastes that are drummed and stored at the maintenance building (located greater than 1,000 feet northeast of the Site) until properly disposed of. None of these facilities is located adjacent to the Site. Mr. Garcia also indicated the VVCC formerly operated a 6,000-gallon gasoline UST at the maintenance building. The tank was closed by removal 6-8 years ago and no indications of a release were noted. The VVCC currently operates two 350-gallon ASTs at the maintenance building.

On October 19, 2005 Mr. Garcia also indicated by telephone that there are no records regarding pesticide use for the Site.

5.0 HISTORICAL SITE USAGE

5.1 AERIAL PHOTOGRAPHY

A HI geologist reviewed the aerial photograph collection maintained at BBL Solana Beach, California (Appendix F). The following table summarizes our findings:

FIGURE NUMBER	DATE TAKEN	COMMENTS
AMS 178	7-02-54	The Site appears agricultural in use and under cultivation. Adjacent properties to the north, east, and south appear in similar condition. Properties to the west appear undeveloped or range land. Unimproved roads criss-cross the rangeland. A pond or reservoir is apparent in the vicinity to the northwest. A river valley is apparent in the vicinity to the east. Roads in similar configuration to Bear Valley road and Fish Hatchery Road are apparent.
VBZL 1-133	6-3-68	The Site and adjacent properties to the east and south appear similar to those observed in the 1954 aerial photograph. Development of the VVCC campus including several structures and a perimeter road is apparent north and west of the Site.
VCGN 6-80	7-6-69	Similar to the 1968 aerial photograph.
NA	8-5-75	The Site and adjacent properties to the east and south appear similar to those observed in the 1969 aerial photograph. Additional development of the VVCC campus is apparent north and west of the Site.
VEPU 2-46	9-30-78	Agricultural use is no longer apparent on the Site or adjacent properties. Remaining adjacent properties appear similar to those observed in the 1975 aerial photograph.
HAP 84 174-100	10-7-84	Similar to the 1978 aerial photograph.
NAPP 6855 38	5-29-94	The Site, adjacent properties, and properties in the vicinity of the Site appear similar to those observed during our reconnaissance in October 2005 except that the modular classrooms to the east were not observed in the aerial photograph.

Based on the aerial photographs observed, the Site does not appear to have been developed. Agricultural use is apparent from at least 1954 until 1975. The Site has been vacant land with natural vegetation since at least 1978 though 2004.

According to Reference 1, the earliest stereoscopic aerial photographs reviewed (1938) showed the Site to be to be unimproved with evidence of over bank deposits from the Mojave River. Later photographs (1953) showed the Site to be in use as agricultural fields. Abandonment of agricultural activities and the development of Victor Valley

Community College are visible on the 1974 aerial photographs. The area appeared unchanged on the 1983 aerial photographs. Development of East Campus Road is apparent on the 1994 aerial photographs. The area appeared unchanged on the 2005 aerial photographs.

5.2 HISTORICAL TOPOGRAPHIC MAPS

HI copied and reviewed historical topographic maps available for the Site for the years 1902 and 1942 from the California Institute of Technology Geology Library. A review of maps is below, and copies are included as Figures 19 - 21.

DATE	REVIEW COMMENTS
1902	No topographic features are indicated at the Site. With the exception of topographic lines and the Mojave River, no features are indicated on the topographic map adjacent to or in the vicinity of the Site.
1942	No topographic features are indicated at the Site. Roads in similar configuration to Bear Valley Road and Mojave Fish Hatchery Road are apparent on the topographic map adjacent to the Site.
1980	No topographic features are indicated at the Site. Roads in similar configuration to Bear Valley Road and Mojave Fish Hatchery Road are apparent on the topographic map adjacent to the Site.

Based on the above topographic maps reviewed, the Site and its vicinity were vacant in 1902, 1942 and 1980. No major grading occurred at the Site.

5.3 BUILDING PERMITS, APPLICATIONS, AND INSPECTION FORMS

HI contacted the Department of Building and Safety at the City of Victorville on October 11, 2005 to review building permits, applications and other related records for the Site. Personnel at the City of Victorville informed us that an address is needed to search for building records and no address is associated with the Site.

5.4 AIR QUALITY MANAGEMENT DISTRICT

The Mojave Air Quality Management District was contacted by HI regarding records for the Site. Barbara Weese of Mojave office indicated in writing that there were records (Permit to Operate) for the Campus, and for air emission facilities within ¼-mile of the Site (Appendix H).

OWNER/OPERATOR	EQUIPMENT LOCATION	DESCRIPTION
Victor Valley Community College (Site)	Victor Valley Community College (Site)	2 tanks of gasoline dispensing facility. Tank 1:500 gallon-87U Material Stored. Tank 2: 500 Gallon diesel.
CaSta Dept Fish and Game 12550 Jacaranda Victorville, CA 92392	CaSta Mojave River Hatchery 12550 Jacaranda Victorville, CA 92392	Pump-emergency, gasoline, well no. 4 consisting of 500 gallon above ground tank.
CaSta Dept Fish and Game 12550 Jacaranda Victorville, CA 92392	CaSta Mojave River Hatchery 12550 Jacaranda Victorville, CA 92392	Pump-emergency, gasoline, well no. 8 consisting of 500 gallon propane above ground tank
CaSta Dept Fish and Game 12550 Jacaranda Victorville, CA 92392	CaSta Mojave River Hatchery 12550 Jacaranda Victorville, CA 92392	Pump-emergency, gasoline, well no. 9 consisting of 500 gallon propane above ground tank
CaSta Dept Fish and Game 12550 Jacaranda Victorville, CA 92392	CaSta Mojave River Hatchery 12550 Jacaranda Victorville, CA 92392	Pump-emergency, diesel pump, well no. 10 consisting one Cummins, diesel fired internal combustion engine, Direct injected, inter cooled, producing 360 bhp with 6 cylinders at 2100 rpm while consuming of. This equipment powers a Pump
CaSta Dept Fish and Game 12550 Jacaranda Victorville, CA 92392	CaSta Mojave River Hatchery 12550 Jacaranda Victorville, CA 92392	2 tanks of gasoline dispensing facility. Tank 1: 1000 gallon-87U Material Stored. Tank 2: 1000 Gallon diesel.

The facilities listed above are not located on the Site.

5.5 REGIONAL WATER QUALITY CONTROL BOARD

HI contacted the California Regional Water Quality Control Board - Lahontan Region, Victorville Branch Office (RWQCB) regarding records for the Site. On 10/5/2005 Robin

Coale of the RWQCB indicated in writing that no records were found for the Site (Appendix I).

5.6 DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

The State of California Department of Conservation, Division of Oil, Gas and Geothermal Resources (D.O.G.), located in Cypress, California was contacted regarding the potential existence of oil and gas wells on or near the Site. According to the D.O.G. "Sheet K" map, there are no wells located at or within a one-mile radius of the Site. The closest well is "Albert Crooks-Island" No. 40-1330 located approximately 3 miles southeast of the Site and the status is abandoned-dry hole. The Munger Map Book, Oil and Gas Fields for California and Alaska, 39th Edition dated November 1997 was also consulted, and no oil or gas wells were found to be at or near the Site (Figure 16).

5.7 SANBORN MAPS

Fire insurance maps are large-scale maps that depict the commercial, industrial and residential sections of some twelve thousand cities and towns in the United States. These specialized maps were first prepared for the exclusive use of fire insurance companies and underwriters to provide accurate, current and detailed information about the buildings they were insuring. Information relied upon in place of personal examinations of property. Fire insurance maps show the size, shape and construction of dwellings, commercial buildings and factories, as well as indicate widths and names of streets, property boundaries, and house and block numbers. The primary benefit of reviewing fire insurance maps is to analyze historical land use of a subject property and its immediate area. In this review, special emphasis is given to the existence and location of fuel storage tanks, flammable or other potentially hazardous substances, as well as the nature of businesses located on site.

HI contacted BBL of Solana Beach California who indicated no Fire Insurance Maps are available for the area surrounding the Site. Lack of coverage of the Site indicates an area of little commercial development prior to 1950.

HI also consulted with the Official Sanborn Digital Flash Map www.sanborn.umi.com which indicated no such coverage area for the Site.

5.8 THE GAS COMPANY

HI contacted the Southwest Gas Corporation regarding gas service at the Site. Joseph Bryan (760.241.9321) of the Southern California Division of the Southwest Gas Company base indicated in writing that they have operation in the area. He also indicated that the Southwest Gas Corporation will provide the service to the Site. Currently, there are natural gas distribution lines in the street that will be extended to serve the proposed gymnasium. An 8" steel high pressure line exists on Bear Valley Road (Appendix J).

5.9 DEPARTMENT OF TOXIC SUBSTANCES CONTROL

HI contacted the Department of Toxic Substances Control's (DTSC) Cypress and Glendale offices regarding files or records for the Site. On 10/6/05 Ms. Julie Johnson, Regional Records Coordinator indicated in writing that they maintain no records for any of the current or historical addresses for the Site. The Glendale office has also responded in writing and indicated that no records were found for the Site (Appendix K).

6.0 REGULATORY AGENCY RESEARCH

The following environmental regulatory agency sources and databases have been searched for sites within a one-half to one-mile radius of the Site. HI makes no claims as to the completeness or accuracy of the referenced sources. Our review of these records can only be as current as their listings, and may not represent the entire sum of known potential hazardous waste, or contaminated sites. To ensure complete coverage of the subject property and surrounding area, sites may be included in the list if any doubt regarding their location exists due to discrepancies with maps, zip codes, addresses, or other information.

Appendix L includes a complete copy of the regulatory agency's database search report generated by BBL, for select agency databases only. The accuracy of the report results is constrained by the limits of care exercised by BBL and similar companies (Appendix L).

Table of Environmental Database & Listed Properties with Environmental Concern

Agency or Database – Type of Record	0-¼ Mile	¼-½ Mile	½-1 Mile
National Priority List (NPL)			0
CERCLIS			0
No Further Remedial Action Planned Sites (NFRAP)			0
Federal Facilities Hazardous Waste Compliance Docket (FedFac)			0
Emergency Response Notification System (ERNS)		1	
Site Enforcement Tracking System (SETS)			0
Hazardous Material Incident report System			1
Enforcement Docket System (DOCKET)/Consent Decree Tracking System (CDETS)		0	
Criminal Docket System (C-DOCKET)		0	
RCRA Violations and Enforcement Actions (CORRACTS)			0
Federal Enforcement Dockets			0
Annual Work Plan (previously the BEP)			0
CALSITES (previously ASPIS)			0
CALSITES- No Further Action			0
Hazardous Waste and Substance Site List (CORTESE)			0

Agency or Database – Type of Record	0-¼ Mile	¼-½ Mile	½-1 Mile
Regional Water Quality Control Board – Leaking Underground Storage Tank List (LUST)			**2**
Solid Waste Information System			0
Well Investigation Program			1
Drinking Water Program			7
Toxic Releases			0
Toxic Pits			0
Solid Waste Assessment Test-Regional			0
RCRA Registered Small and Large Generators of Hazardous Waste (RCRA-G)		1	
RCRA Treatment, Storage, and Disposal List (RCRA-D)			0
SARA Title III, section 313 (TRIS)		0	
Nuclear Regulatory Commission Licenses		0	
PCB Waste Handlers Database		0	
Permit Compliance System (PCS)		1	
AIRS Facility System (AFS)		0	
Section Seven Tracking System (SSTS)		0	
FIFRA/TRCA Tracking System/National Compliance Database (FTTS/NCDB)		0	
Federal Facilities Information System (FFIS)		0	
Chemicals in Commerce Information System (CICIS)		0	
FINDS EPA Facility Index System		0	
Hazardous Waste Information System (HWIS)		3	
Permitted Underground Storage Tanks (USTs)		4	

6.1 FEDERAL SOURCES

6.1.1 National Priority List

The National Priorities List (NPL) is the United States Environmental Protection Agency's (EPA) list of prioritized Superfund sites with significant risk to human health and the environment. These sites receive remedial funding under the Comprehensive Environmental Response, Conservation, and Liability Act (CERCLA).

No such site is listed within a one mile radius of the subject Site.

6.1.2 Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS)

The CERCLIS list is a compilation by the EPA of the sites, which the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances, pursuant to CERCLA.

The EPA sets priorities for cleanup using the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). The sites are rated according to a quantitative Hazard Ranking System which is based on the potential health risk through any of one or more possible pathways, including groundwater, air, surface water, direct contact, fire or explosion.

No such site is listed within a one mile radius of the subject Site.

6.1.3 No Further Remedial Action Planned Sites (NFRAP)

As of February 1995, CERCLIS sites designated 'No Further Remedial Action Planned' (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the site being placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.

EPA has removed these NFRAP sites from CERCLIS to lift unintended barriers to the redevelopment of these properties. This policy change is part of EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens promote economic redevelopment of unproductive urban sites.

No such site is listed within a one mile radius of the subject Site.

6.1.4 Federal Facilities Hazardous Waste Compliance Docket

As part of the CERCLA program, federal facilities with known or suspected environmental problems are listed on the Federal Facilities Hazardous Waste Compliance Docket, and are tracked separately to comply with a federal court order.

No such site is listed within a one mile radius of the subject Site.

6.1.5 Emergency Response Notification System (ERNS)

The ERNS is a national computer database used to store information on unauthorized releases of oil and hazardous substances. The program is a cooperative effort of the Environmental Protection Agency, the Department of Transportation Research and

Special Program Administration's John Volpe National Transportation System Center and the National Response Center.

There are primarily five Federal statutes that require release reporting: the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) section 103; the Superfund Amendments and Reauthorization Act (SARA) Title III

section 304; the Clean Water Act of 1972 (CWA) section 311 (b) (3); and the Hazardous Material Transportation Act of 1974, HMTA section 1808(b).

One location is listed within a one half mile radius of the subject Site. It is not the Site but it is within the Campus. Please refer to Appendix L for listing and additional information.

1. **Site:** VICTORY VALLEY COLLEGE
   Address: 18422 BEAR VALLEY RD
   City: VICTORVILLE
   Status: 9100030903 100 OTH of ANTIMONY TRICHLORIDE (GRAM
   VICTORY VALLEY COLLEGE
   18422 BEAR VALLEY
   UNITS: OTHER=GRAMS STUDENT FOUND SUBSTANCE & GOT ON HER HAND
   CLEANUP BY SAN BERNARDINO CODOH

6.1.6 HMIRS Hazardous Material Incident Report System

The Hazardous Material Report Incident Report Subsystem HMIRS of the Research and Special Programs Administration (RSPA) Hazardous Material Information System was established in 1971 to fulfill the requirements of the Federal hazardous material transportation law. Part 171 of Title 49, Code of Federal Regulations (49 CFR) contains the incident reporting requirements of carriers of hazardous materials. An unintentional release of hazardous materials meeting the criteria set forth in Section 171.16, 49 CFR, must be reported on DOT Form 5800.1. The data from the reports received are subsequently entered in the HAZMAT database.

One location is listed within a one half mile radius of the subject Site. It is not the Site. Please refer to Appendix L for listing and additional information.

1. **Site:** PROFLAME INC
   Address: BEAR VALLEY RD
   City: VICTORVILLE
   Status: id: 1998041106
   On 04/06/1998, an incident involving a cargo vehicle occurred. PETROLEUM GASES LIQUEFIED was released.
   One container (TANK TRK) failed due to vehicle overturn.

6.1.7 Site Enforcement Tracking System (SETS)

When expanding Superfund funds at a CERCLA Site, EPA must conduct a search to identify parties with potential financial responsibility for remediation of uncontrolled hazardous waste sites. EPA regional Superfund Waste Management Staff issued a notice letter to the potentially responsible party (PRP). The status field contains the EPA ID number and name of the site where the actual pollution occurred.

No such site is listed within a one mile radius of the subject Site.

6.1.8 Enforcement Docket System (DOCKET)/Consent Decree Tracking System (CDETS)

DOCKET tracks civil judicial cases against environmental polluters, while CDETS processes court settlements, called consent decrees.

No such site is listed within a one-half mile radius of the subject Site.

6.1.9 Criminal Docket System (C-DOCKET)

The Criminal Docket System is a comprehensive automated system for tracking criminal enforcement actions. C-DOCKET handles data for all environmental statutes and tracks enforcement actions from the initial stages of investigations through conclusions.

No such site is listed within a one-half mile radius of the subject Site.

6.1.10 RCRA Violations and Enforcement Actions (CORRACTS)

The Resource Conservation and Recovery Act of 1976 provides for "cradle to grave" regulation of hazardous wastes. RCRA requires regulation of hazardous waste generators, transporters, and storage/treatment/disposal sites. Evaluation to potential violations, ranging from manifest requirements to hazardous waste discharges, is typically conducted by the US EPA. This database is also known as Corrective Action Report (CORRACTS). This is the list of violators of RCRA. If enforcement is requires, it is typically delegated to a state agency.

No such site is listed within a one mile radius of the subject Site.

6.1.11 Federal Enforcement Dockets (FD)

The US EPA, office of Enforcement maintains a list of sites under enforcement by the US EPA.

No such site is listed within a one-mile radius of the subject Site.

6.2 CALIFORNIA STATE SOURCES

6.2.1 Annual Work Plan (previously the BEP)

The State of California Health and Safety Code, as amended by AB129, requires the California EPA to develop a site-specific expenditure plan (formerly the Bond Expenditure Plan) as the basis for the appropriation of funds through the California Hazardous Substance Cleanup Bond Act of 1984.

The EPA is also required to update this report annually and report any significant adjustments to the California State Legislature on an ongoing basis. The plan identifies California hazardous waste sites targeted for cleanup by responsible parties, and the California and Federal Environmental Protection Agencies over the next five years.

No such site is listed within a one mile radius of the subject Site.

6.2.2 CALSITES (previously ASPIS)

The historical Abandoned Site Survey Program identifies certain sites of potentially hazardous waste. These site determinations were generally not made via sampling and site characterization, but rather as a result of file searches and "drive-by" surveys. Some sites may have inspections with or without actual sampling. As a result, this list generally has a low level of reliability.

The information has been compiled into this database by California EPA's DTSC in accordance with Section 25396 of the California Health and Safety Code.

No such site is listed within a one mile radius of the subject Site.

6.2.3 CALSITES – No Further Action

This section includes the sites on the CALSITES list, which have been flagged for no further action by the DTSC in accordance with section 25359.6 of the California Health and Safety Code.

No such site is listed within a half mile radius of the subject Site.

6.2.4 Hazardous Waste and Substance Site List (CORTESE)

This database, referred to as the Hazardous Waste and Substances Sites, or the "CORTESE" List, is a consolidation of information from various sources. It was formerly maintained by the California State Environmental Affairs Agency, which has recently been incorporated into the California State Environmental Protection Agency (Cal-EPA). This document lists potential and confirmed hazardous waste or substances sites. This list was last updated by the State government in July 1992.

No such site is listed within a one mile radius of the subject Site.

6.2.5 Regional Water Quality Control Board – Leaking Underground Storage Tank List (LUST)

The Leaking Underground Storage Tanks (LUST) Information System is maintained by the State Water Resource Control Board pursuant to Section 25295 of the State of California Health and Safety Code. The list was reviewed for sites within a one-half mile radius of the Site.

Two such locations are located within a one mile radius of the subject Site. The sites are listed twice. The subject Site is not listed. Please refer to Appendix L for listing and additional information.

1. **Address:** 18525 BEAR VALLEY RD (ADJACENT TO SUBJECT SITE-SE of the Site)
   City: HESPERIA
   Map Loc: 3 - about 0.1 mile E. of the subject
   Status: 5R - Remediation Plan submitted.
   It was discovered during tank closure. Only the soil is impacted. The contaminated soil has been excavated and treated, e.g. landfarming. The case, 07100752, is managed by a Local agency.

Site: MOJAVE ROCK AND SAND
Address: 18525 BEAR VALLEY RD
City: HESPERIA
Map Loc: 3 - about 0.1 mile E. of the subject
Status: INACT -

2. **Site:** HARRIS TRANSPORTATION CO
Address: PO BOX 1100
City: VICTORVILLE
Status: INACT -

Site: HARRIS TRANSPORTATION CO
Address: PO BOX 1100
City: VICTORVILLE
Status: 3A - Prelim Site Assessment workplan submitted.
The case, 07100759, is managed by a Local agency.

6.2.6 Solid Waste Information System

As legislated under the Solid Waste Management and Resource Recovery Act of 1972, the California Waste Management Board maintains lists of certain facilities, i.e. "active" solid waste disposal sites, "inactive" or "closed" solid waste disposal sites and transfer facilities. This is also found in the SWIS category in the BBL report.

No such site is located within a one mile radius of the subject Site.

6.2.7 Drinking Water Program

The California Health and Safety Code section 116275-116300 stipulates that it is the intent of the Legislature to improve laws governing drinking water quality to improve upon the minimum requirement of the federal Safe Drinking Water Act Amendments of 1986, to establish primary drinking water standards that are at least as stringent as those established under the federal Safe Drinking Water Act, and to establish a program under this chapter that is more protective of public health than the minimum federal requirements.

In order to provide for the orderly and efficient delivery of safe drinking water the State Department of Health Services collects information on the quality of public drinking water wells under the California Drinking Water Program. The latest and maximum analysis of contaminants is reported in the environmental record search (only positive readings are included).

Seven such locations are located within a one-mile radius of the subject Site. Two of the locations are within the Campus. Please refer to Appendix L for listing and additional information.

1. Owner: SBDNO COUNTY SERVICE AREA 64/S
Well: WELL 04
WellNo: 05N/04W-35R02 S
Map Loc: 5 - about 0.15 mile NW of the subject
Status: AR - Active Raw (sampled before treatment)
WATER QUALITY:

	units	latest		maximum	MCL/RPHL	
SOURCE TEMPERATURE C	C	20 7/25/96	20	7/25/96		
COLOR	UNITS	1 3/14/ 1	1	3/14/ 1	15/-	
ODOR THRESHOLD @ 60 C	TON	1 3/14/ 1	1	3/14/ 1	3/-	
SPECIFIC CONDUCTANCE	US	165	3/14/ 1	210	6/19/89	2200/-
PH, FIELD		8.61	7/25/96	8.61	7/25/96	
PH, LABORATORY		8 3/14/ 1	8.79	1/22/98		
ALKALINITY (TOTAL) AS CACO3	MG/L	80 3/14/ 1	80	3/14/ 1		
BICARBONATE ALKALINITY	MG/L	80 3/14/ 1	98	6/19/89		
AMMONIA (NH3-N)	MG/L	.11 3/14/ 1	.11	3/14/ 1		
HARDNESS (TOTAL) AS CACO3	MG/L	20 3/14/ 1	38	10/5/92		
CALCIUM	MG/L	6.8 3/14/ 1	13.6	10/5/92		
MAGNESIUM	MG/L	.73 3/14/ 1	4.9	1/22/98		
SODIUM	MG/L	35.8	3/14/ 1	35.8	3/14/ 1	
POTASSIUM	MG/L	.9 3/14/ 1	2	1/22/98		
CHLORIDE	MG/L	12 3/14/ 1	12	3/14/ 1	600/-	
SULFATE	MG/L	8 3/14/ 1	14	6/19/89	600/-	
FLUORIDE (TEMP DEPENDENT)	MG/L	.33 3/14/ 1	.587	1/22/98	1.7/-	
ARSENIC	UG/L	13.4	1/22/98	13.4	1/22/98	50/-
CHROMIUM, HEXAVALENT	UG/L	1.6 8/10/ 1	2.9	2/7/ 1		
COPPER	UG/L	60 3/14/ 1	60	3/14/ 1	1000/-	
ZINC	UG/L	31 3/14/ 1	85	10/5/92		
GROSS ALPHA	PCI/L	1.5 7/16/98	4	6/19/89	15/-	
GROSS ALPHA COUNTING ERROR	PCI/L	.46 2/15/ 2	2	6/19/89		
BROMOFORM (THM)	UG/L	.7 9/22/89	.7	9/22/89	100/-	
DIBROMOCHLOROPROPANE (DBCP)	UG/L	.05 6/19/89	.05	6/19/89	.2/-	
TOTAL DISSOLVED SOLIDS	MG/L	120	3/14/ 1	170	6/19/89	1500/-
LANGELIER INDEX @ 60 C		.9 7/25/96	.9	7/25/96		
LANGELIER AT SOURCE TEMP		.15 7/6/00	1.17	1/9/94		
NITRATE (AS NO3)	MG/L	5.6 8/10/ 1	9.7	9/7/00	45/-	
TURBIDITY, LABORATORY	NTU	.22 3/14/ 1	.22	3/14/ 1	5/-	
TOTAL TRIHALOMETHANES	UG/L	.7 9/22/89	.7	9/22/89	100/-	
AGGRSSIVE INDEX (CORROSIVITY)		11.74	7/6/00	12.07	7/25/96	
NITRATE + NITRITE (AS N)	UG/L	1700	3/14/ 1	1700	3/14/ 1	
FLUORIDE	UG/L	330	3/14/ 1	330	3/14/ 1	2000/-

2. Owner: SBDNO COUNTY SERVICE AREA 64/S
Well: WELL 06
Well No:
Map Loc: 4 - about 0.13 mile NW of the subject
Status: AR - Active Raw (sampled before treatment)

WATER QUALITY:

	units	latest		maximum	MCL/RPHL	
SOURCE TEMPERATURE C	C	20 2/14/ 2	20	2/14/ 2		
COLOR	UNITS	1 3/14/ 1	1	3/14/ 1	15/-	
ODOR THRESHOLD @ 60 C	TON	1 2/14/ 2	1	2/14/ 2	3/-	
SPECIFIC CONDUCTANCE	US	180	2/14/ 2	200	3/27/92	2200/-
PH, FIELD		8.3 7/25/96	8.3	7/25/96		
PH, LABORATORY		8.1 2/14/ 2	8.6	3/27/92		
ALKALINITY (TOTAL) AS CACO3	MG/L	92 2/14/ 2	92	2/14/ 2		
BICARBONATE ALKALINITY	MG/L	110	2/14/ 2	110	2/14/ 2	
AMMONIA (NH3-N)	MG/L	.11 3/14/ 1	.11	3/14/ 1		
HARDNESS (TOTAL) AS CACO3	MG/L	56 2/14/ 2	56	2/14/ 2		
CALCIUM	MG/L	17 2/14/ 2	17	2/14/ 2		
MAGNESIUM	MG/L	8.4 2/14/ 2	8.4	2/14/ 2		
SODIUM	MG/L	13 2/14/ 2	27.9	3/27/92		
POTASSIUM	MG/L	1.1 3/14/ 1	1.2	1/22/98		
CHLORIDE	MG/L	7.6 2/14/ 2	12	3/14/ 1	600/-	
SULFATE	MG/L	10 2/14/ 2	14.2	3/27/92	600/-	
FLUORIDE (TEMP DEPENDENT)	MG/L	.3 2/14/ 2	.35	3/14/ 1	1.7/-	
ARSENIC	UG/L	2.5 5/9/95	2.5	5/9/95	50/-	
BARIUM	UG/L	30 3/14/ 1	30	3/14/ 1	1000/-	
CHROMIUM, HEXAVALENT	UG/L	2.4 8/10/ 1	2.7	2/7/ 1		
VANADIUM	UG/L	29 2/14/ 2	29	2/14/ 2		
GROSS ALPHA	PCI/L	1.3 10/18/94	2	4/18/90	15/-	
GROSS ALPHA COUNTING ERROR	PCI/L	.4 2/14/ 2	1.5	7/6/94		
TOTAL DISSOLVED SOLIDS	MG/L	110	2/14/ 2	135	3/14/ 1	1500/-
LANGELIER INDEX @ 60 C		.66 2/14/ 2	.66	2/14/ 2		
LANGELIER AT SOURCE TEMP		.04 2/14/ 2	.9	1/9/94		
NITRATE (AS NO3)	MG/L	2.3 2/14/ 2	7.1	3/14/ 1	45/-	
TURBIDITY, LABORATORY	NTU	.1 2/14/ 2	.2	3/14/ 1	5/-	

AGGRSSIVE INDEX (CORROSIVITY)		11.69	2/14/2	11.74	7/25/96	
NITRATE + NITRITE (AS N)	UG/L	520	2/14/2	1600	3/14/1	
FLUORIDE	UG/L	350	3/14/1	350	3/14/1	2000/-

6.2.8 Well Investigation Program

The Well Investigation Program (AB1803) identifies groundwater that is already contaminated and empowers the California Department of Health Services and local health officers to order ongoing monitoring programs. The focus of this program is to monitor and protect drinking water.

One such location is located within 0.31 miles west of the subject Site. The well is located within the Campus. Please refer to Appendix L for listing and additional information.

1. **Site:** **WELL dhs3**
   Address: **SAN BERNARDINO CO SERVICE AREA**
   City: **05N/04W-35R02 S**
   Map Loc: **8**
   Status: **0.70 ppb of TOTAL THMS (action level 100.0) was reported by DHS-AB21.**
   0.70 ppb of BROMOFORM (action level 100.0) was reported on 09/22/89 by DHS-AB21.
   0.050 ppb of DBCP (action level 0.2) was reported on 06/19/89 by DHS-AB21.

6.3 REGIONAL AND LOCAL REGULATORY SOURCES

6.3.1 Toxic Releases

The RWQCB and/or local City or County Departments of Health Services keep track of toxic releases into the environment. These lists are known as Unauthorized Releases, and include Non-Tank Releases, Toxics Lists, or similar types of compilations, depending on the local agency.

No such site is listed within a one-mile radius of the subject Site.

6.3.2 Toxic Pits

The California Toxic Pits Clean-Up Act of 1994 (Health and Safety Code, Section 25122.7) places strict limitation on the discharge of liquid hazardous wastes into surface impoundments, sumps, toxic ponds, pits, and lagoons. Respective State Regional Water Quality Control Boards (RWQCBs) are required to inspect all such surface impoundments annually.

No such site is listed within a one-mile radius of the subject Site.

6.3.3 Solid Waste Assessment Test-Regional

This program, established under the Calderon landfill legislation (§133273 of the Water Code), requires that solid waste disposal sites with more than 50,000 cubic yards of waste provide sufficient information to the Regional Water Quality Control board to determine

whether or not the site could have discharged hazardous substances having the potential to adversely impact the environment. This is known as the Waste Management Unit Database System (WMUDS), under the SWAT ® heading in the BBL report.

The Solid Waste Assessment Test (SWAT) program targets sites where hazardous waste has a potential risk of escaping from a landfill. Site facilities are ranked within each Water Board region on a scale of 1 to 15 according to priority.

Operators submit water quality tests to the Regional Water Quality Control Board, describing surface and groundwater quality and supply; and the geology within 1 mile of the Site. Air quality tests are submitted to the local Air Quality Management District or Air Pollution Control District.

This program is currently not funded and thus not updated.

No such site is listed within a one-mile radius of the subject Site.

6.3.4 Local Fire Department Records

The San Bernardino County Fire Department Hazardous Materials Division was contacted regarding records for the subject Site. The San Bernardino County Fire Department, Hazards Materials Division was contacted regarding above and underground fuel storage tanks for the subject property; they have indicated that they transferred their responsibility to the Victorville Fire Department. The Victorville Fire Department indicated that they do not have any record for the subject Site (Appendix M).

6.4 OPERATING PERMITS

Various agencies issue operation permits, or regulate the handling, movements, storage, and disposal of hazardous materials at facilities involved, and in turn, require mandatory reporting. The inclusion of such sites in this section does not imply that an environmental problem exists presently, or has existed in the past. The various agency sources referenced below have been researched within a one-half mile radius of the Site.

6.4.1 RCRA Registered Small and Large Generators of Hazardous Waste (RCRA-G)

Small Generators of Hazardous Waste are facilities, which generate less than 1000 kilograms per month (kg/mo) of non-acutely hazardous waste. Large Generators produce at least 1000 kg/mo of non-acutely hazardous waste, or at least 1 kg/mo of acutely hazardous waste.

One such location is located within a one-half mile radius of the subject Site. It is not the Site but located within the Campus. Please refer to Appendix L for listing and additional information.

1. **Site:** VICTOR VALLEY COMM COLLEGE
   Address: 18422 BEAR VALLEY RD
   City: VICTORVILLE

Map Loc: **1 - the subject site**
Status: **Permit id#: CAD982331886**

6.4.2 RCRA Treatment, Storage, and Disposal List (RCRA-D)

The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation of facilities that report generation, storage, transportation, treatment, or disposal of hazardous waste. RCRA-D lists facilities that treat, store, and/or dispose of hazardous waste.

No such site is listed within a one mile radius of the subject Site.

6.4.3 SARA Title III, section 313 (TRIS)

Title III of the Superfund Amendments and Reauthorization Act, Section 313, also known as Emergency Planning and Community Right-to-Know Act of 1986 requires owners or operators of facilities with more than 10 employees with Standard Industrial Classification (SIC) Codes 20 through 39 to report the manufacturing, processing or use of more than a threshold of certain chemical or chemical categories listed under section 313. This database is also known as Toxic Release Information System (TRIS).

No such site is listed within a one-half mile radius of the subject Site.

6.4.4 Nuclear Regulatory Commission Licenses

The Nuclear Regulatory Commission, Office of Nuclear Material Safety and Safeguards has been mandated (10 CFR Ch 1.42) to protect the public health and safety, the common defense and security, and the environment by licensing, inspection, and environmental impact assessment for all nuclear facilities and activities, and for the import and export of special nuclear material.

No such site is listed within a one-half mile radius of the subject Site.

6.4.5 PCB Waste Handlers Database

The U.S. Environmental Protection Agency tracks generators, transporters, commercial stores and/or brokers and disposers of PCB's in accordance with the Toxic Substance Control Act.

No such site is listed within a one-half mile radius of the subject Site.

6.4.6 Permit Compliance System (PCS)

PCS is a database, which contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS was developed by the U.S. EPA to meet the information needs of the NPDES program under the Clean Water Act. PCS tracks permit, compliance, and enforcement states of NPDES facilities.

One such location is listed within a half of mile radius of the subject Site. It is not the Site or within the campus and is located north of the college. Please refer to Appendix L for listing and additional information.

1.	**Site:**	**DEPT OF FISH AND GAME**
	Address:	**12550 JACARANDA AVE**
	City:	**VICTORVILLE**
	Map Loc:	**2 - about 0.08 mile NW of the subject**
	Status:	**Permit id#: CA0002265429**

6.4.7 AIRS Facility System (AFS)

AFS contains emissions and compliance data on air pollution point sources tracked by the U.S. EPA and state and local environmental regulatory agencies. There are seven "criteria pollutants" for which data must be reported to EPA and stored in AIRS: PM10

(Particulate matters less than 10 micron in size), carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, reactive volatile organic compounds (VOC), and ozone.

AFS replaces the former Compliance Data System (CDS), the National Emission Data System, and the Storage and Retrieval of Aeromatic Data.

No such site is listed within a one-half mile radius of the subject Site.

6.4.8 Section Seven Tracking System (SSTS)

SSTS evolved from the FIFRA and TSCA Enforcement System (FATES). SSTS tracks the registration of all pesticide producing establishments and tracks annually the types and amounts of pesticides, active ingredients, and devices that are produced, sold, or distributed each year.

No such site is listed within a one-half mile radius of the subject Site.

6.4.9 FIFRA/TSCA Tracking System/National Compliance Database (FTTS/NCDB)

NCDB supports implementation of the Federal Insecticide, Fungicide and Rodenticide Control Act (FIFRA) and the Toxic Substance Control Act (TSCA).

No such site is listed within a one-half mile radius of the subject Site.

6.4.10 Federal Facilities Information System (FFIS)

FFIS contains a list of all Treatment, Storage and Disposal Facilities (TSDs) owned and operated by federal agencies.

No such site is listed within a one-half mile radius of the subject Site.

6.4.11 Chemicals in Commerce Information System (CICIS).

CICIS contains an inventory of chemicals manufactured in commerce or imported for Toxic Substances Control Act regulated commercial purposes. CICIS allows EPA to

maintain a comprehensive listing of over 70,000 chemical substances that are manufactured or imported and are regulated under TSCA.

No such site is listed within a one-half mile radius of the subject Site.

6.4.12 FINDS EPA Facility Index System

The U.S. EPA maintains an index system of all facilities regulated or that have been assigned an identification number for other purposes.

Facilities that have been reported elsewhere in this report will not be included in the listing below.

No such site is listed within a one-half mile radius of the subject Site.

6.4.13 Hazardous Waste Information System (HWIS)

The Cal-EPA, Department of Toxic Substances Control (formerly State DOHS), maintains a database, which tracks the movement and disposal of hazardous waste. The data is used to support the Tanner legislation, AB 2948. This listing merely provides the EPA generator number, with no specific information regarding the types of materials and waste streams handled.

Three such locations are listed within a one-half mile radius of the subject Site. One is located on the Campus. Please refer to Appendix L for listing and additional information.

1. **Site:** VICTOR VALLEY COMMUNITY COLLEGE (within the Campus)
   Address: 18422 BEAR VALLEY RD
   City: VICTORVILLE
   Map Loc: 1 - the subject site
   Status: EPA ID#: CAD982331886

2. **Site:** MOJAVE RIVER FISH HATCHERY
   Address: 12550 JACARANDA AVE
   City: VICTORVILLE
   Map Loc: 2 - about .08 mile NW of the subject
   Status: EPA ID#: CAC000867448

3. **Site:** GEORGE AIR FORCE BASE
   Address: PO BOX 518
   City: GEORGE AFB
   Status: EPA ID#: CAL000000513

6.4.14 Permitted Underground Storage Tanks (USTs)

The CORTESE Bill (AB2013), enacted in 1983, required registration of all petroleum and hazardous chemical USTs with the State Regional Water Quality Control Board by July 1, 1994. Approximately 176,000 tanks and surface impoundments were registered between 1984 and 1987.

Home and farm heating fuel tanks with capacities of 1100 gallons or less, in addition to "structures such as sumps, separators, storm drains, catch basins, oil field gathering lines, refinery pipelines, lagoons, evaporation ponds, well cellars, separation sumps, lined and unlined pits, lagoons are exempted from such regulations, except those defined as USTs under the Hazardous and Solid Waste Amendments to Federal RCRA legislation or those which may be regulated in order to protect water quality under the Porter-Cologne Water Quality Act or the State of California Hazardous Waste Control Law. BBL searched the database, provided by the California Water Resources Control Board, for permitted tanks.

Four such locations are listed within a half of mile radius of the subject Site. One of the location is within the Campus. Please refer to Appendix L for listing and additional information.

1. **Site:** CIRCLE K #7265
Address: BEAR VALLEY RD
City: HESPERIA
Status: 36-082- (19)

Site: CIRCLE K #7265
Address: BEAR VALLEY RD
City: HESPERIA
Status: 36-082- (192005)

Site: NEW AM PM FACILITY
Address: BEAR VALLEY RD
City: APPLE VALLEY
Status: 36006186206 (1995&98)

Site: APEX BULK COMMODITIES
Address: BEAR VALLEY RD
City: HESPERIA
Status: 36006226504 (1993)

Site: 7-ELEVEN STORE #2131/26388
Address: BEAR VALLEY RD
City: VICTORVILLE
Status: 00000064638 (1987)

Activity: GAS STATION
10000 gallon, double-walled, unlined, composite tank (unleaded), installed in 1985
10000 gallon, double-walled, unlined, composite tank (unleaded), installed in 1985
10000 gallon, double-walled, unlined, composite tank (unleaded), installed in 1985

2. **Site:** SONNY ARRINGDALE
Address: 18361 BEAR VALLEY RD
City: HESPERIA
Map Loc: 6 - about .17 mile W of the subject
Status: 36006641962 (1993&A2)

3. **Site:** VICTOR VALLEY COMMUNTITY COLLEGE (On the Campus)
Address: 18422 BEAR VALLEY RD
City: VICTORVILLE
Map Loc: 1 - the subject site
Status: 36-072-0000 (192005)

Site: VICTOR VALLEY COLLEGE
Address: 18422 BEAR VALLEY RD
City: VICTORVILLE
Map Loc: 1 - the subject site
Status: 1 (1999&A9)

Site: VICTOR VALLEY COLLEGE
Address: 18422 BEAR VALLEY RD
City: VICTORVILLE
Map Loc: 1 - the subject site
Status: 36000677103 (1995&A9)

4. **Site:** MOJAVE RIVER HATCHERY
Address: 12550 JACARANDA AVE
City: VICTORVILLE
Map Loc: 2 - about .08 mile NW of the subject
Status: 00000053157 (198798A)
Activity: TROUT HATCHERY
450 gallon, carbon steel tank (regular), installed in 1975
280 gallon, carbon steel tank (regular), installed in 1957
450 gallon, carbon steel tank (regular), installed in 1975
280 gallon, carbon steel tank (regular), installed in 1975
280 gallon, carbon steel tank (regular), installed in 1975
1000 gallon, carbon steel tank (regular)
280 gallon, carbon steel tank (regular), installed in 1957

6.5 COMPILATION OF LISTED PROPERTIES

The properties listed in Appendix A are a compilation of identified sites with known environmental concerns and operating permits in the vicinity of the Site.

7.0 SUMMARY/CONCLUSIONS

The following summarizes information obtained by HI during the performance of this Phase I Environmental Site Assessment:

- The Site (proposed gymnasium) is an approximately 1-acre vacant property located north of Bear Valley Road and west of Mojave Fish Hatchery Road, in the City of Victorville, San Bernardino County, California. The Site is a portion of the 216-acre Assessor's Parcel Number 0482-022-06. The Site consists of relatively flat and level undeveloped land. Vegetation was minimal consisting of a stand of conifers along the northern portion of the Site and sparse seasonal weeds and grasses. Shallow tire ruts and tracks were observed throughout the Site. A concrete culvert runs under East Campus Road in the northwest portion of the Site.

- Based on the information gathered for this report, the Site had been used for agriculture from at 1954 until 1975. The Site has been vacant land with natural vegetation since at least 1978 though 2004.

- Based on the aerial photographs observed, the Site does not appear to have been developed. Agricultural use is apparent from at least 1954 until 1975. The Site has been vacant land with natural vegetation since at least 1978 though 2004.

  According to Reference 1, the earliest stereoscopic aerial photographs reviewed (1938) showed the Site to be to be unimproved with evidence of over bank deposits from the Mojave River. Later photographs (1953) showed the Site to be in use as agricultural fields. Abandonment of agricultural activities and the development of Victor Valley Community College are visible on the 1974 aerial photographs. The area appeared unchanged on the 1983 aerial photographs. Development of East Campus Road is apparent on the 1994 aerial photographs. The area appeared unchanged on the 2005 aerial photographs.

- There was no Sanborn Fire Insurance Map coverage available for the Site.

- No ASTs or USTs were observed at the Site during our Site walkthrough. No current or historical permits for ASTs or USTs related to the Site were found in the course of our research with various departments of the City of Victorville. The San Bernardino County Fire Department, Hazards Materials Division was contacted regarding above and underground fuel storage tanks for the subject property; they indicated that they transferred their responsibility to the Victorville Fire Department. The Victorville Fire Department indicated that they do not have any record for the Site (Appendix C). However During interview Mr. Garcia indicated that the VVCC formerly operated a 6,000-gallon gasoline UST at the maintenance building. The tank was closed by removal 6-8 years ago and no indications of a release were noted. The VVCC currently operates two 350-gallon ASTs at the maintenance building (Appendix E).

- The Mojave Air Quality Management District was contacted by HI regarding records for the Site. Barbara Weese of Mojave office indicated in writing that there were records (Permit to Operate) for the Campus (Appendix H).

OWNER/OPERATOR	EQUIPMENT LOCATION	DESCRIPTION
Victor Valley Community College (Site)	Victor Valley Community College (Site)	2 tanks of gasoline dispensing facility. Tank 1:500 gallon-87U Material Stored. Tank 2: 500 Gallon diesel.

- According to the environmental record search, no air emission facilities are listed within a one-half mile radius of the Site, The Mojave Air Quality Management District was contacted by HI regarding records for the Site. Barbara Weese of Mojave office indicated in writing that there were records (Permit to Operate) for the Campus, and for air emission facilities within ¼-mile of the Site (Appendix H).

- According to DOG map and the Munger Map Book, there are no oil or gas wells located at the Site or within one-mile radius of the Site.

- During the Site walkthrough, no motor, hydraulic, cutting or other industrial oils or hazardous materials were observed at the Site.

  The San Bernardino County Fire Department, Hazards Materials Division was contacted regarding hazardous material storage at the subject Site; they indicated that they transferred their responsibility to the Victorville Fire Department. The Victorville Fire Department indicated that they do not have any record for the Site (Appendix C).

  During interview Mr. Garcia indicated that the VVCC science lab, health center, and maintenance buildings do generate small quantities of wastes that are drummed and stored at the maintenance building (located greater than 1,000 feet northeast of the Site) until properly disposed of. None of these facilities is located adjacent to the Site. Mr. Garcia also indicated the VVCC formerly operated a 6,000-gallon gasoline UST at the maintenance building. The tank was closed by removal 6-8 years ago and no indications of a release were noted. The VVCC currently operates two 350-gallon ASTs at the maintenance building (Appendix E).

  The Mojave Air Quality Management District was contacted by HI regarding records for the Site. Barbara Weese of Mojave office indicated in writing that there were records (Permit to Operate) for the Campus (Appendix H).

OWNER/OPERATOR	EQUIPMENT LOCATION	DESCRIPTION
Victor Valley Community College (Site)	Victor Valley Community College (Site)	2 tanks of gasoline dispensing facility. Tank 1:500 gallon-87U Material Stored. Tank 2: 500 Gallon diesel.

- According to Stephen Garcia, Director of Facilities Construction and Contracts of VVCC, the Site and remainder of the approximately 216-acre parcel was acquired from a rancher in the early 1960s for development of the college. He indicated that the lake in the central portion of campus was built by the rancher. The Site was never developed by VVCC, but was used for overflow parking at various events. Mr. Garcia indicated that adjacent structures included a gym to the north, modular classrooms to the east and a student activity center and student services buildings to the west, and no hazardous materials or hazardous wastes were used or stored on the site or these adjacent buildings. Mr. Garcia indicated that the VVCC science lab, health center, and maintenance buildings do generate small quantities of wastes that are drummed and stored at the maintenance building (located greater than 1,000 feet north of the Site) until properly disposed of. None of these facilities is located adjacent to the Site. Mr. Garcia also indicated the VVCC formerly operated a 6,000-gallon gasoline UST at the maintenance building. The tank was closed by removal 6-8 years ago and no indications of a release were noted. The VVCC currently operates two 350-gallon ASTs at the maintenance building. Mr. Garcia also indicated by phone on October 19, 2005 that there are no records regarding pesticide use for the proposed Gymnasium Site.

  During our brief walkthrough no visible or olfactory evidence of the storage or disposal of hazardous wastes; chemical or hazardous material spills; pesticide or herbicides storage or use; stained soil or pools of liquid; discoloration, stressed vegetation, or dead or ill wildlife; existing USTs or ASTs; monitoring, supply and/or disposal wells, or hummocky topography at the Site or adjacent to the Site.

- The Site is not listed in any of the searched regulatory databases. However the campus was listed in permitted underground storage tanks, Hazardous waste information Systems, Emergency response Notification System, Well investigation program and drinking water program.

- No releases of hazardous substances to the air, soil or groundwater were reported at the Site but a release in campus was reported in the Emergency response Notification System list.

- Four permitted UST facilities are reportedly located within a one-half mile radius of the Site. None is located at the Site but two of facilities are reportedly located within the campus.

- Two Leaking underground storage tanks are listed within one mile of the Site.

- Based on the fact that there are no structures at the Site, the potential for existence of ACM and LBP at the Site is considered nil. Because the Site is not adjacent to any freeways, the potential for existence of lead-impacted shallow soil from vehicle exhaust is also considered nil.

- The California State Fire Marshal has indicated that there are no oil pipelines under their jurisdiction at the Site.

8.0 RECOMMENDATIONS

Based on the historic agricultural use of the property from at least 1954 until 1975 Hydrologue recommends a program of soil sampling and analysis to assess the presence of chemically persistent agricultural chemicals. Soil sampling and analysis should generally conform to DTSC guidelines for assessment of former agricultural properties. Discrete soil samples should be collected and analyzed for organochlorine pesticides and CAM metals.

9.0 LIMITATIONS

This report is for the sole benefit and exclusive use of the client, and is based on available public information, interviews, and visual observation of the subject and adjacent properties and relies upon information that was supplied by others. Any reliance on this report, or any information contained therein, by any third party shall be at such party's sole risk. Further, the information can only be considered timely up to the dates the report was prepared, the maps were prepared and the Site observations were performed. Although Hydrologue, Inc. has attempted to confirm the supplied information, the accuracy of our findings is limited by inherent uncertainty in the accuracy of the information included in this report.

Actual verification of potential sources of contamination would normally require the implementation of extensive soils and/or groundwater investigation. The extent of such an investigation depends upon the buyer's and/or lender's respective assessment of the potential business risks involved, along with consideration of the various indemnification agreements, warranties, or representations that may exist between the parties to the transaction. Consequently, the buyer and/or seller should assess the risk and decide if they want to proceed with the recommendations included in this report or if they prefer, perform more extensive investigation.

The evaluations presented in this limited environmental assessment are based on information provided by the client's representative and site personnel, agency personnel, database search and observations made during the site reconnaissance. Hydrologue, Inc. warrants that the services performed were conducted in a competent and professional manner in accordance with sound consulting practices and procedures. Hydrologue, Inc. cannot warrant the actual Site conditions described in this report beyond matters amenable to visual observation within the limits of this assessment. This report is not to be construed as a guarantee or warranty as to the potential liabilities associated with environmental conditions or impacts at the Site.

10.0 REFERENCES

1. Federal Emergency Management Agency, March 18, 1996, Flood Insurance Rate Map, Panel No. 06071C6485F

2. Geotechnical Investigation, Auxilary Gymnasium, Victor Valley College Campus, Victor Ville, California, Report No. V05101-3 prepared by CHJ Incorporated, dated May 6, 2005

3. Jennings, C.W., 1994 Fault Activity Map of California and Adjacent Areas: California Division of Mines & Geology Geologic Data Map No. 6. Scale 1:750,000.

4. Morton, D.M., 1974 Generalized Geologic Map of Southwestern San Bernardino County, in Fife, D.L. and others, 1976 Geologic Hazards in Southwestern San Bernardino, California: California Division of Mines and Geology Special Report 113.

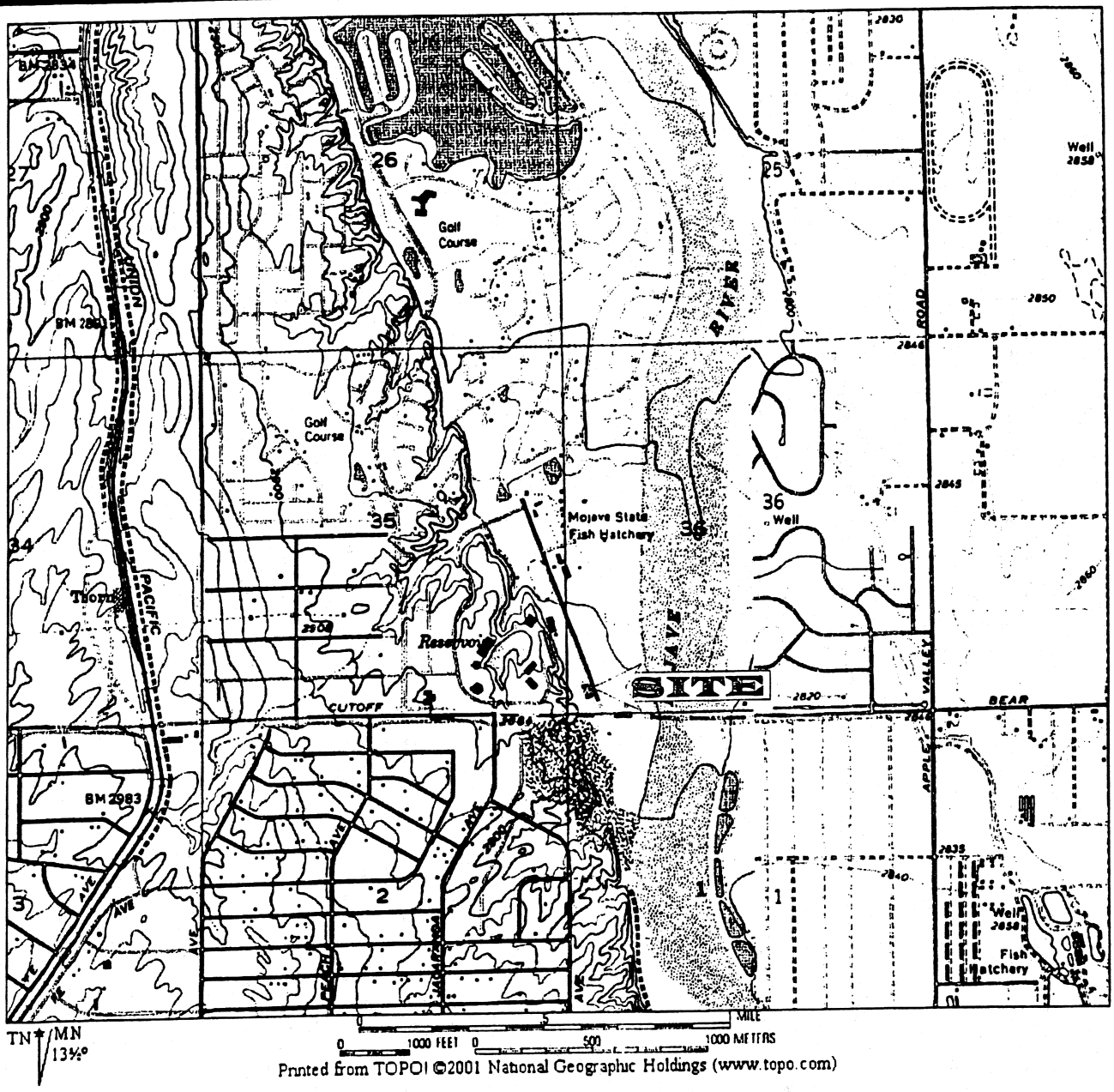
5. Morton, D.M., and Miller, F.K., 2003, Preliminary Geologic Map of the San Bernardino 30 Minute by 60 Minute Quadrangle, California, U.S. Geological Survey Open-File Report 03-293. Scale: 1:100,000. Risk Engineering, 2005, EZFRISK Computer Program, Version 7.01.

6. Ponti, D.J., and Burke, D.B., 1980, Map Showing Quaternary Geology of the Eastern Antelope Valley and Vicinity, California: U.S. Geological Survey Open File Report 80-1064, Scale 1:62500

7. San Bernardino County General Plan, 2004.

8. U.S. Geological Survey, 2005, Groundwater Data for the Nation, http://waterdata.usgs.gov/nwis/gw

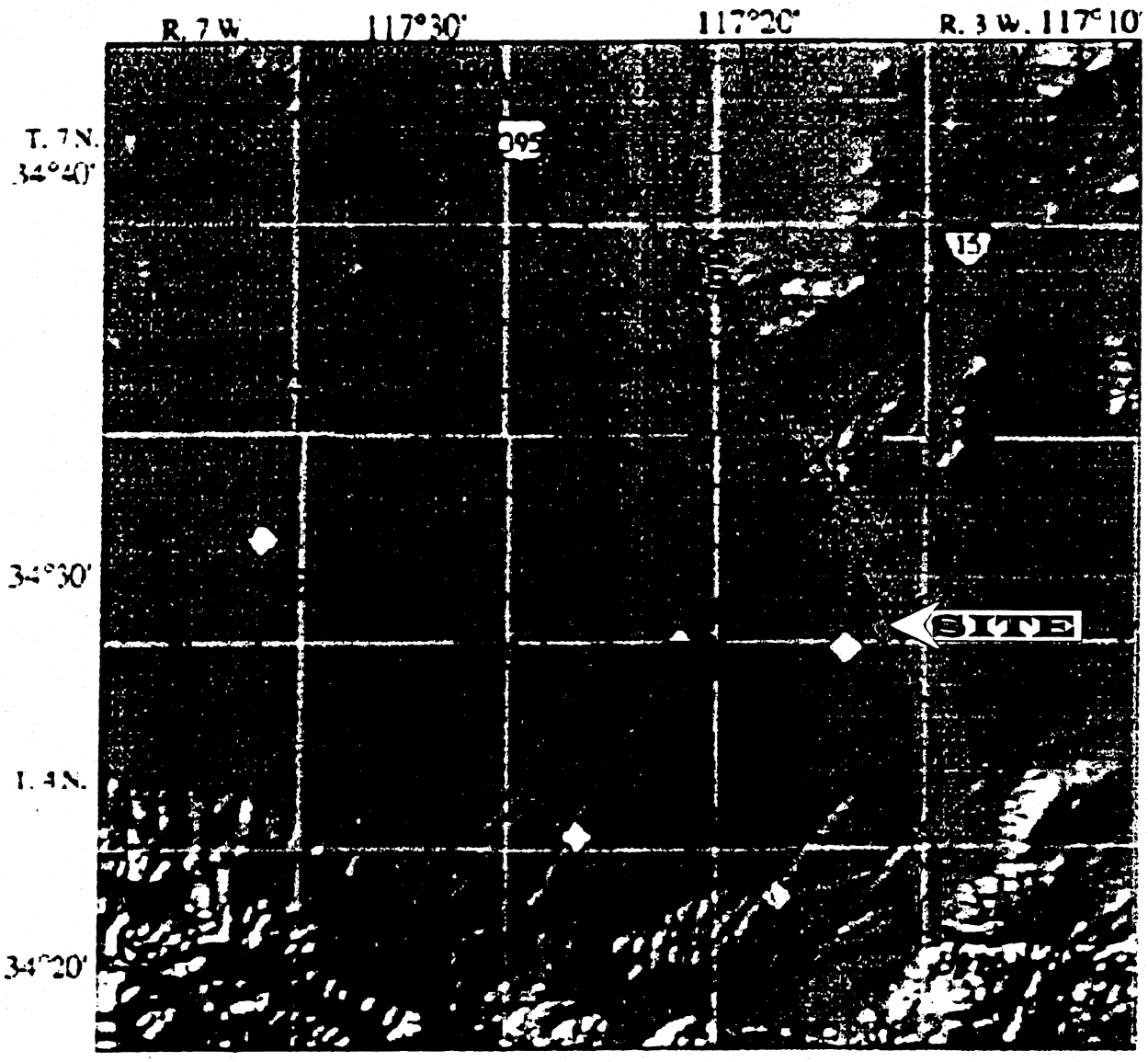
9. Ward, A.W., Dixon, G.L., and Jachens, R.C., 1993, Geologic Setting of the East Antelope Basin, with Emphasis on Fissuring on Rogers Lake Edwardss AFB, Mojave Desert, California: U.S. Geological Survey Open File Report 93-263, 9p.



Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

N

CLIENT	Victor Valley
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Site Location Map
FIGURE NUMBER	1
PROJECT	3214-00
DATE	10/4/05
hydrologue, inc. Consulting Engineers & Geologists	PHASE1:Victorville CC:figure.CDR



N

NOT TO SCALE

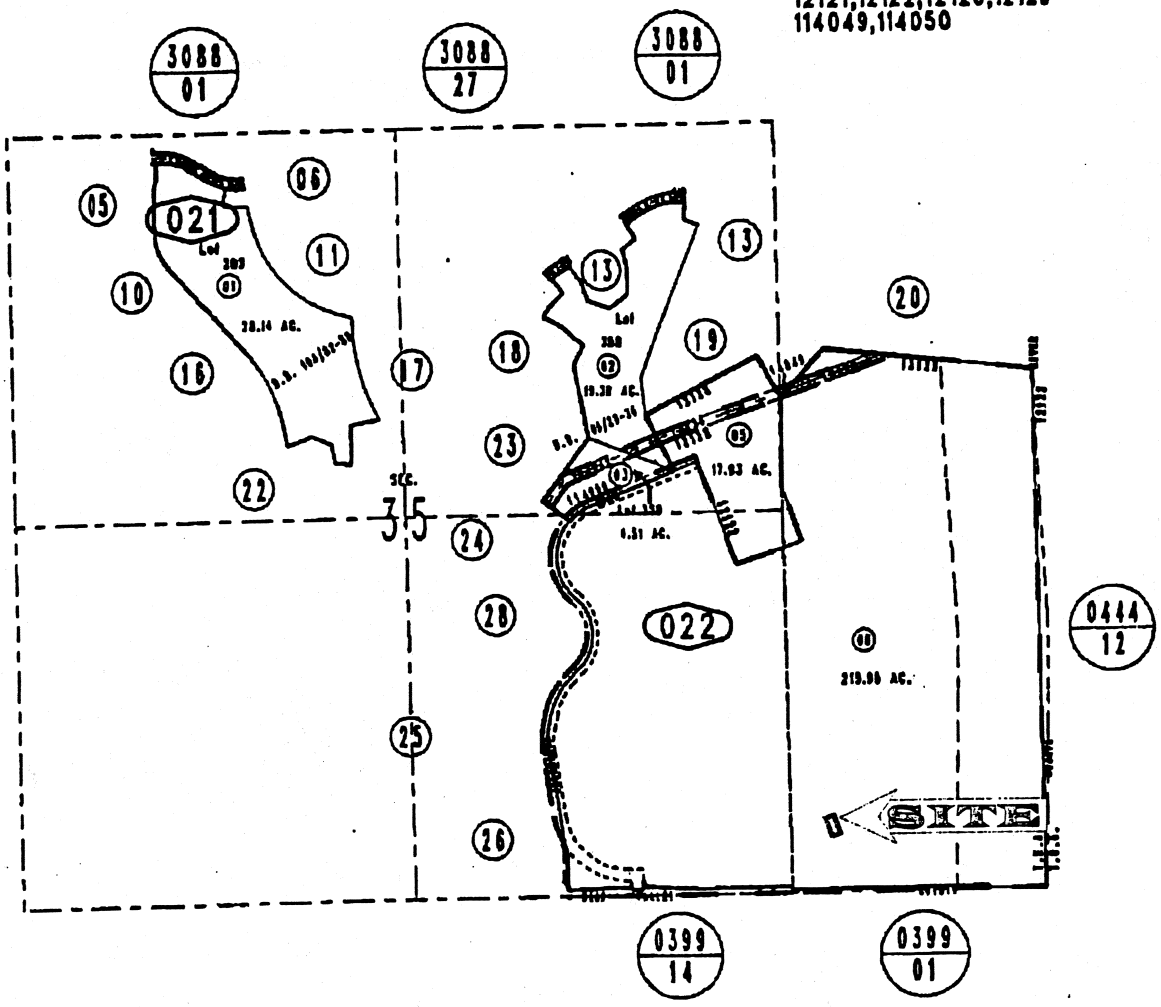
SOURCE: Tracks Along the Mojave: A Field Guide from Cajon Pass to The Calico Mountains and Coyote Lake, San Bernardino County Museum Association Quarterly, (Volume 46 (3) 1999

CLIENT	Victor Valley Community College	
LOCATION	18422 Bear Valley Road Victorville, CA 92392	
TITLE	Proximity Map	FIGURE NUMBER 2
PROJECT	3214-00	DATE 10/4/05
hydrologue, Inc. Consulting Engineers & Geologists		PHASE1:Victorville CC:figure.CDR

:'s 35 & 36, T.5N., R.4W., S.B.M.

City of Victorville
Victor Out
Tax Rate Area
12121,12122,12128,12129
114049,114050

0482-02



REVISED

N

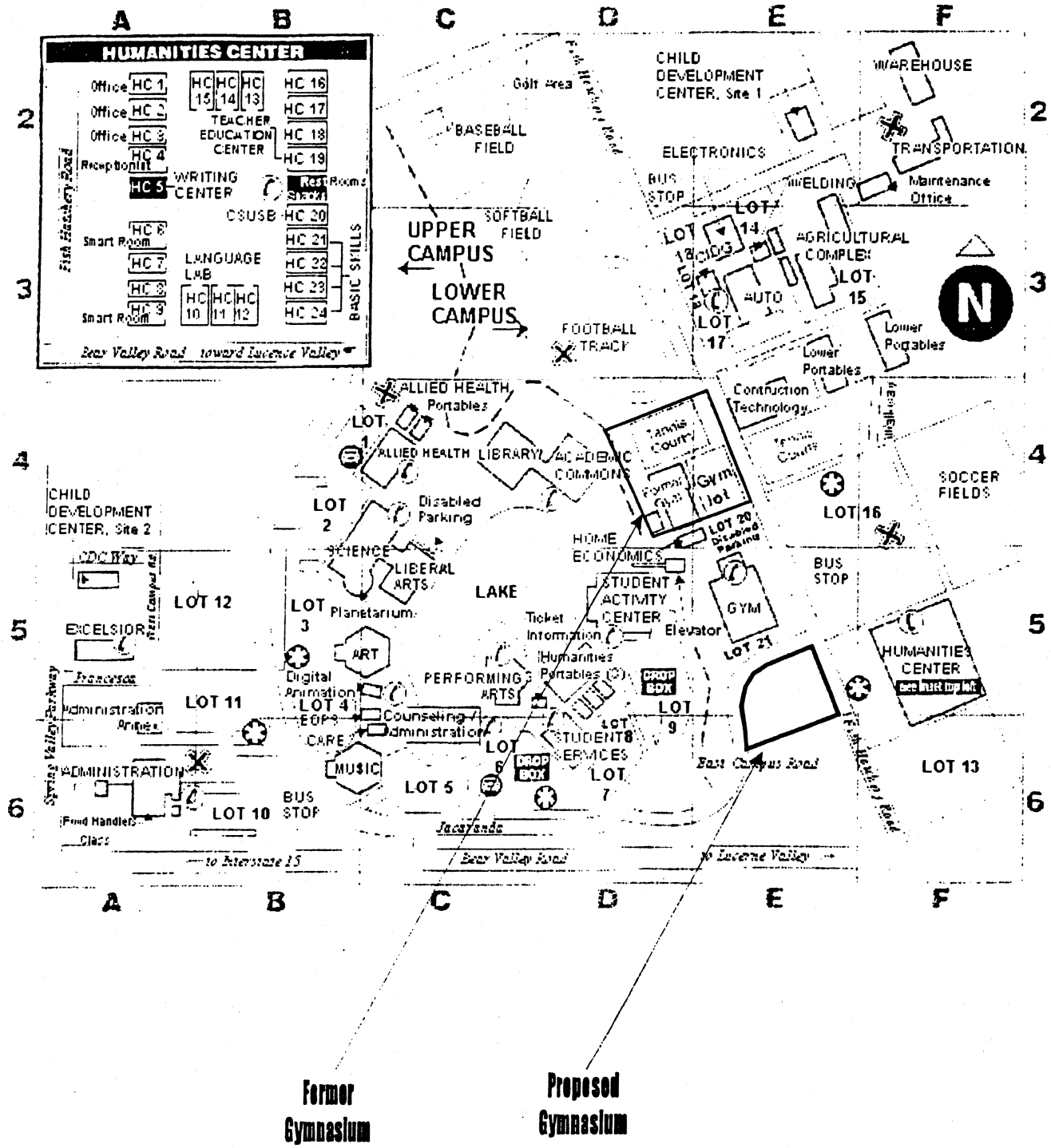
NOT TO SCALE

SOURCE: San Bernardino Assessor

CLIENT	Victor Valley Community College
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Parcel Map
FIGURE NUMBER	3
PROJECT	3214-00
DATE	10/4/05

hydrologue, Inc.
Consulting Engineers & Geologists

PHASE1:Victorville CC:figure.CDR

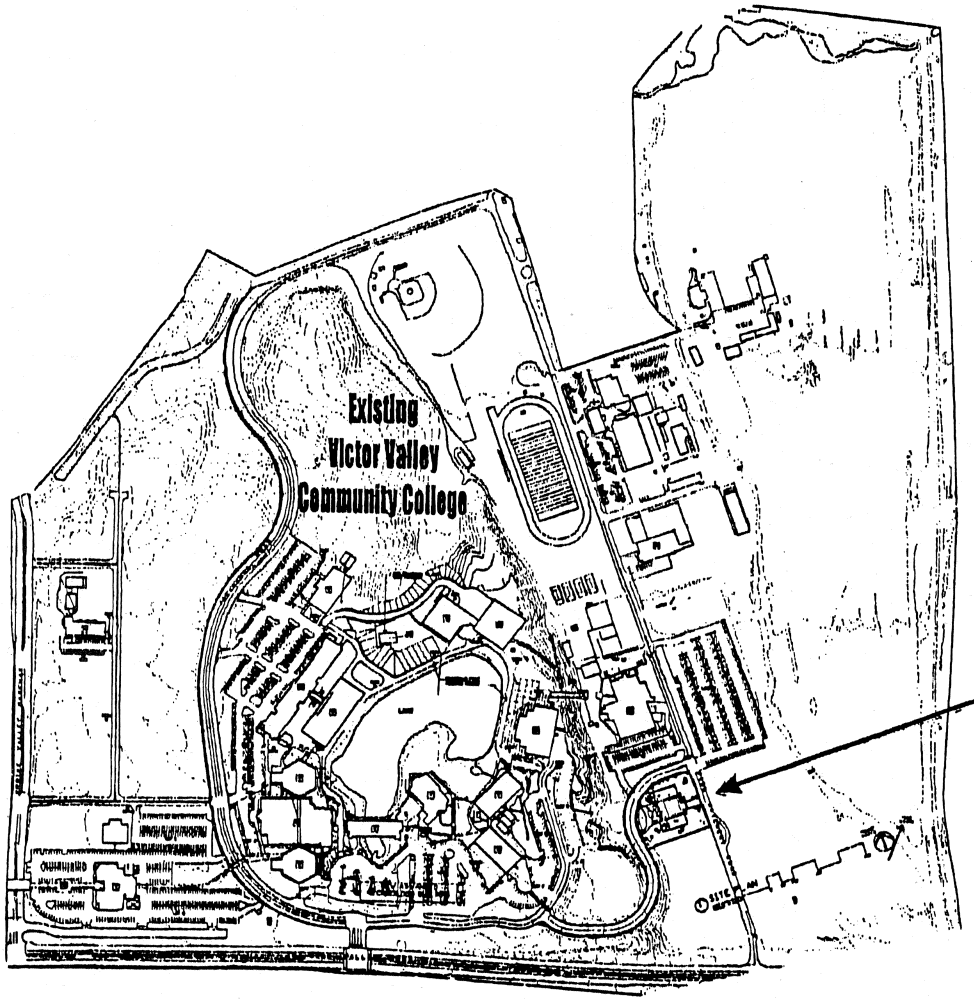


N

NOT TO SCALE

SOURCE:
Victor Valley Community College
Campus Map Website
http://www.vvc.edu/maps/index.htm

CLIENT	Victor Valley Community College	
LOCATION	18422 Bear Valley Road Victorville, CA 92392	
TITLE	Campus Map	FIGURE NUMBER 4
PROJECT	3214-00	DATE 10/4/05
hydrologue, inc. Consulting Engineers & Geologists		PHASE1:Victorville CC:figure.CDR



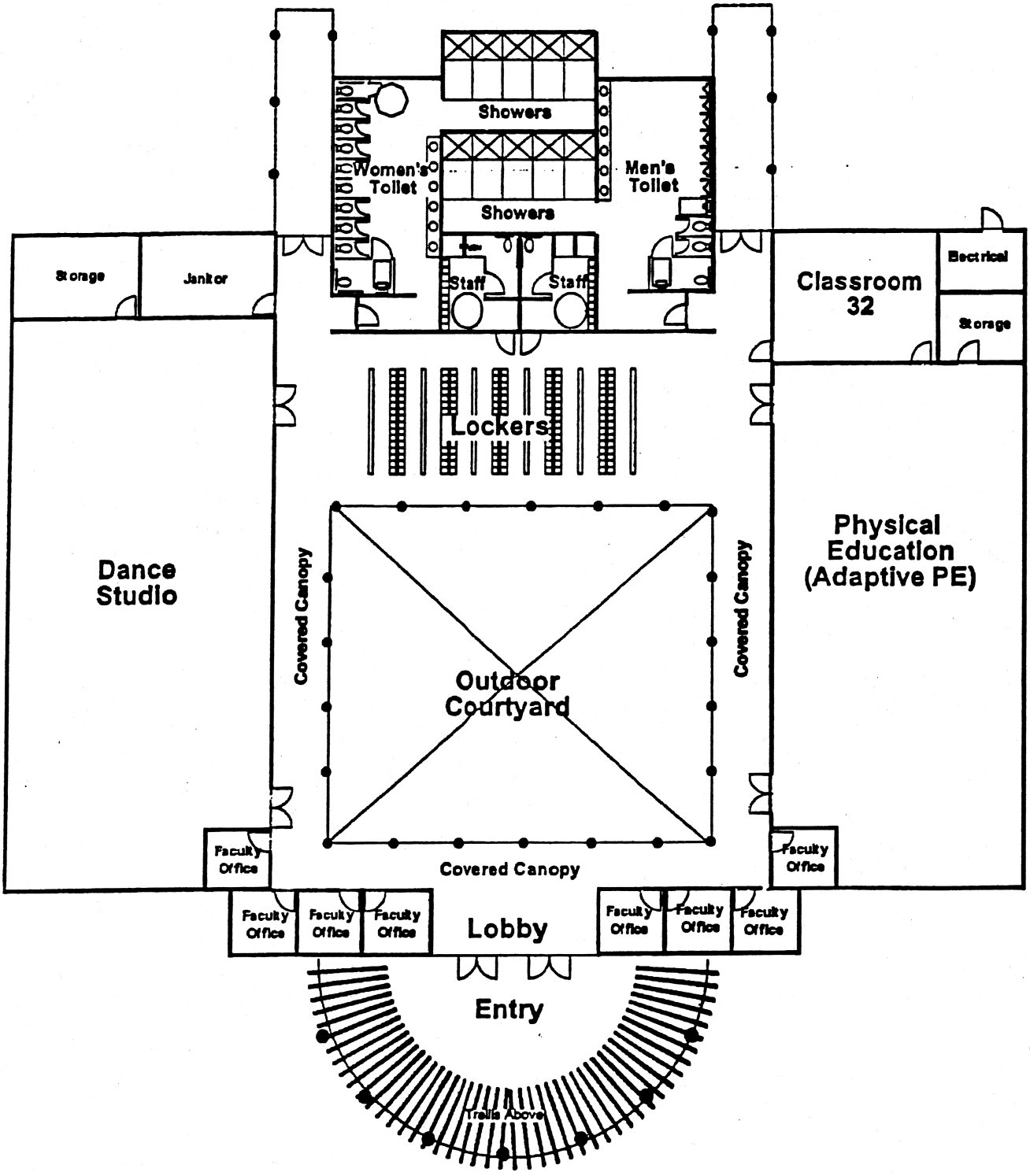
SOURCE: Site Plan of Geotechnical Investigation Report Auxiliary Gymnasium Victor Valley Community College by CHJ Inc, May 6 2005.

NOT TO SCALE

CLIENT	Victor Valley Community College
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Campus Map
FIGURE NUMBER	5
PROJECT	3214-00
DATE	10/4/05

hydrologue, Inc.
Consulting Engineers & Geologists

PHASE1:Victorville CC:figs.CDR



N

NOT TO SCALE

SOURCE: Seismic Upgrade of Gymnasium Victor Valley College Site Plan by Spenser and Hoskins, Assoc.

CLIENT	Victor Valley
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Proposed Building
FIGURE NUMBER	6
PROJECT	3214-00
DATE	10/4/05

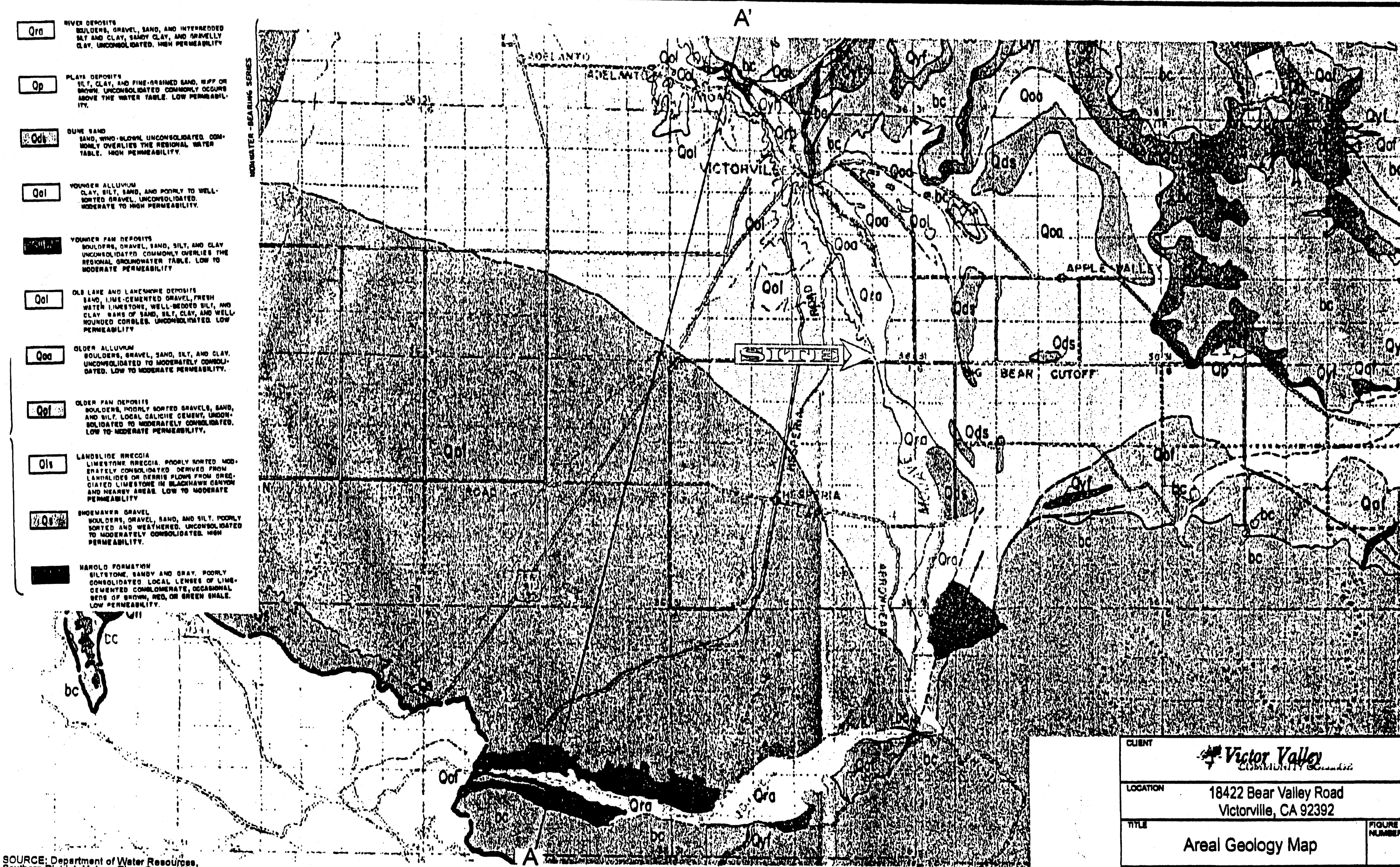
hydrologue, Inc.
Consulting Engineers & Geologists

PHASE1:Victorville CC:figure.CDR

SOURCE: Victor Valley Community College
Campus Map Website
http://www.vvc.edu/maps/index.htm

NOT TO SCALE

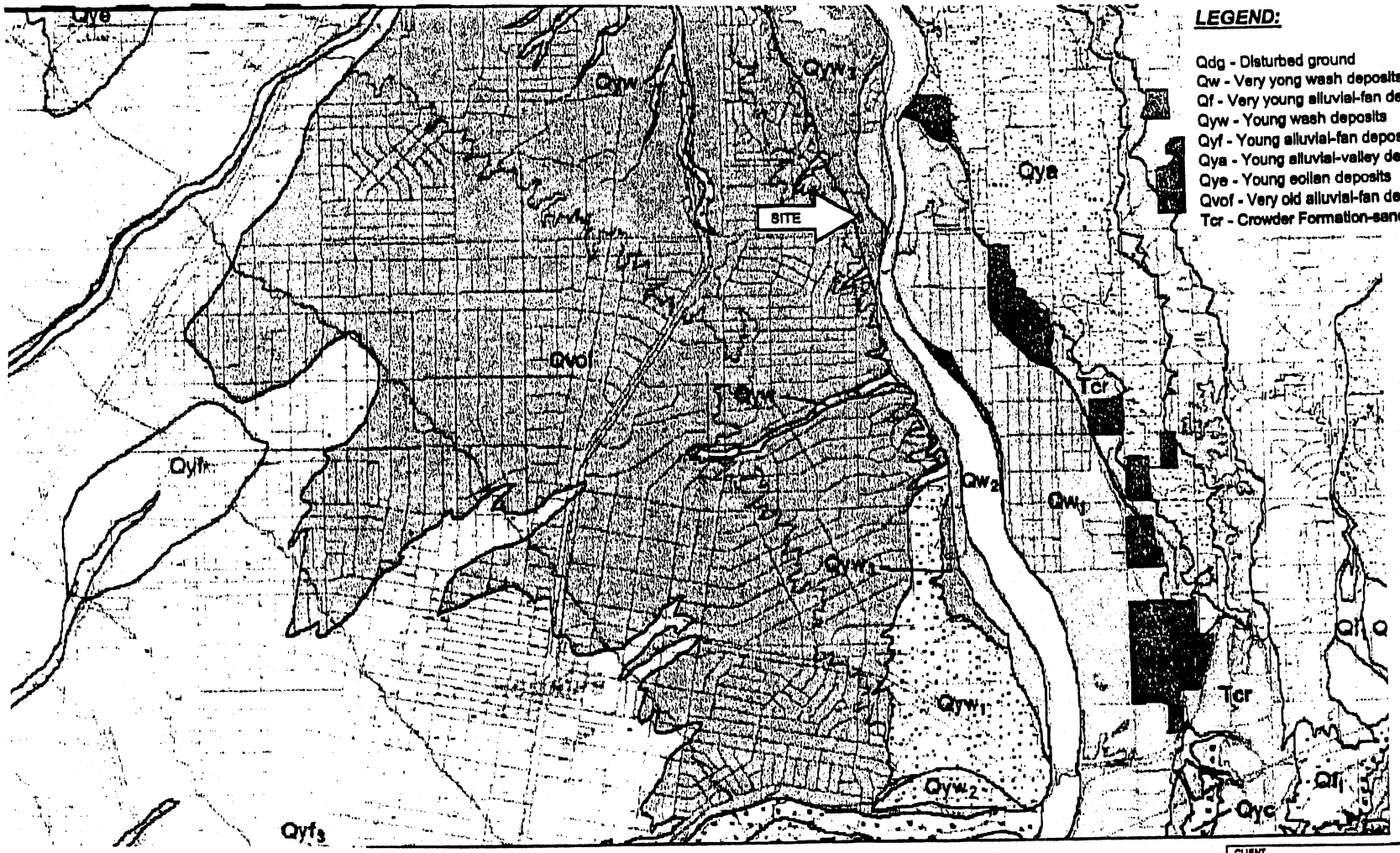
CLIENT	Victor Valley
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Campus Aerial Map
FIGURE NUMBER	7
PROJECT	3214-00
DATE	10/4/05
hydrologue, Inc.	PHASE1:Victorville CC:fig5.CDR



SOURCE: Department of Water Resources, Southern District, Mojave River Ground Water Basins Investigation, 1967

CLIENT	Victor Valley Community College
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Areal Geology Map
FIGURE NUMBER	8
PROJECT	3214-00
DATE	10/4/05

hydrologue, Inc.
Consulting Engineers & Geologists
PHASE1:Victorville CC:fgs.COR



LEGEND:

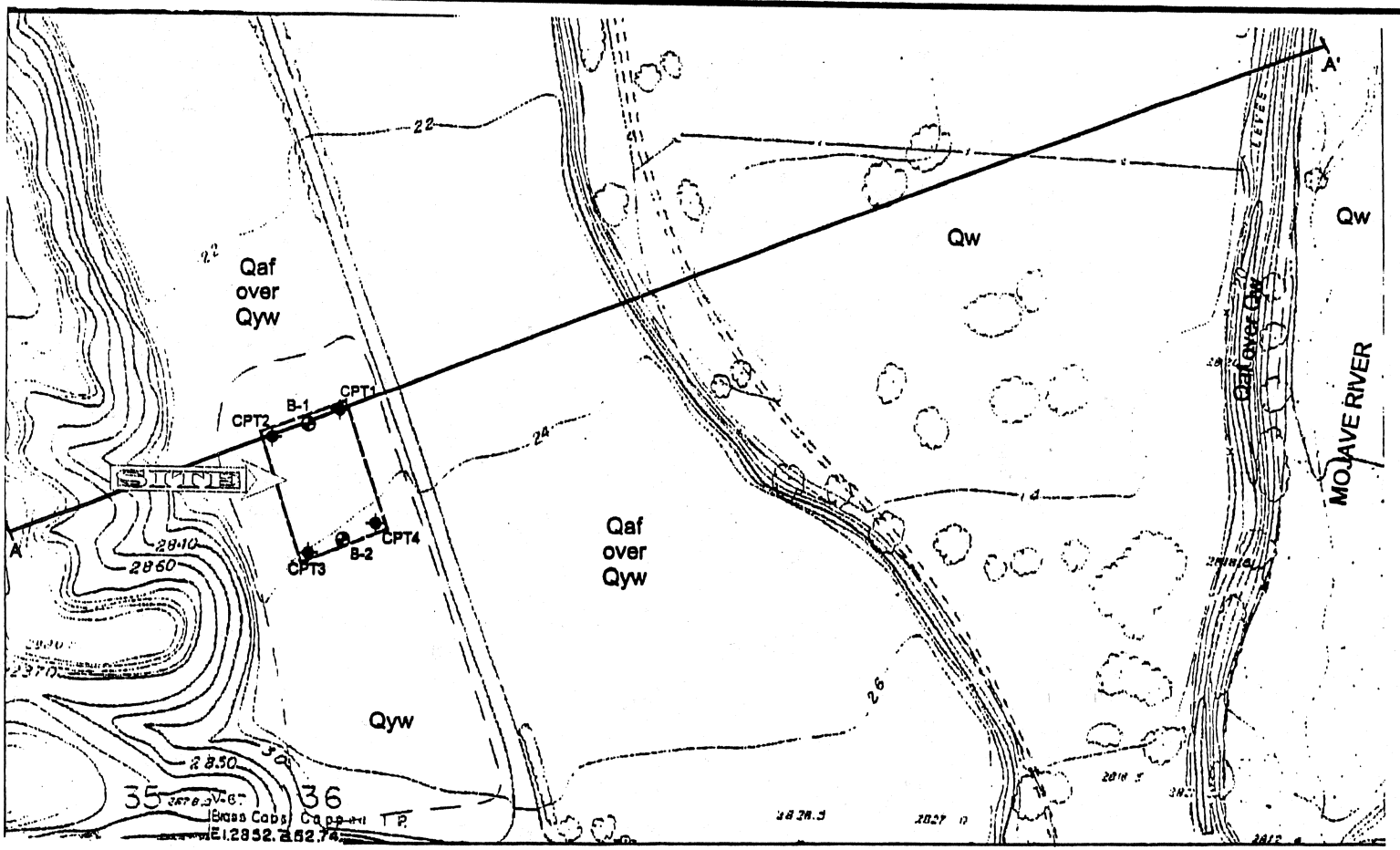
Qdg - Disturbed ground
Qw - Very yong wash deposits
Qf - Very young alluvial-fan deposits
Qyw - Young wash deposits
Qyf - Young alluvial-fan deposits
Qya - Young alluvial-valley deposits
Qye - Young eolian deposits
Qvof - Very old alluvial-fan deposits
Tcr - Crowder Formation-sandstone and conglomerate

SOURCE: Open File Report 03-293 USGS
Preliminary Geologic Map of the San Bernardino
30 minute by 60 minute

SCALE
0 62,500 feet

CLIENT	Victor Valley
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Areal Geology Map
FIGURE NUMBER	9
PROJECT	3214-00
DATE	10/4/05

hydrologue, inc.
Consulting Engineers & Geologists
PHASE1:Victorville CC:fig5.CDR



LEGEND:

Qaf - Artificial fill
Qw - Very young wash deposits
Qyw - Young wash deposits

B-2 — Exploratory Boring Locations

CPT4 — Cone Penetrometer Sounding Locations

— — — — Contact
dashed where approximately located

A — A' Geologic Cross Section

SOURCE: Site Plan of Geotechnical Investigation Report Auxiliary Gymnasium Victor Valley Community College by CHJ Inc. May 6 2005

SCALE
0 200 feet

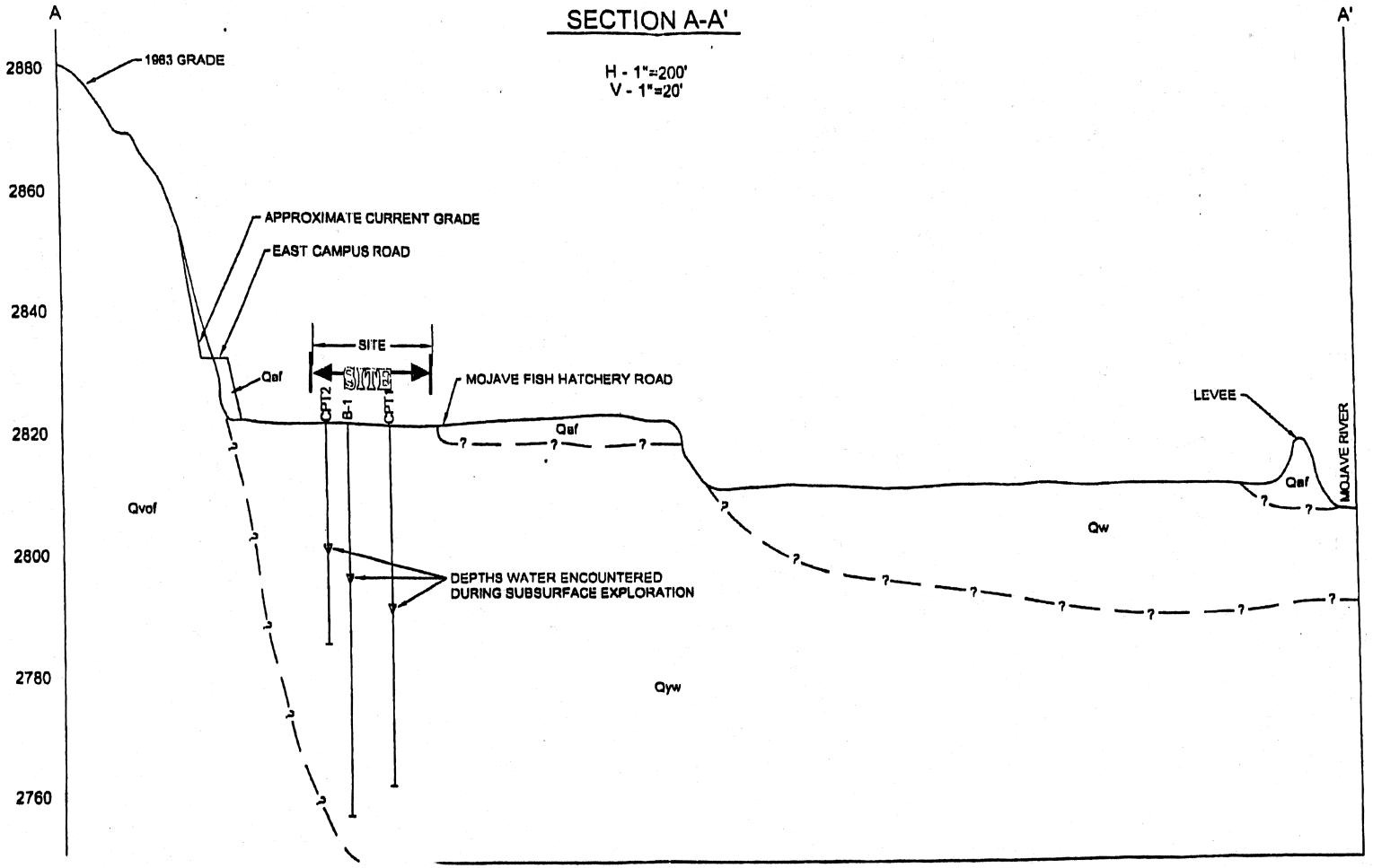
CLIENT	Victor Valley Community College
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Site Geologic Map
FIGURE NUMBER	10
PROJECT	3214-00
DATE	10/4/05

hydrologue, Inc.
Consulting Engineers & Geologists

PHASE I:\Victorville CC\figs.CDR

SECTION A-A'

H - 1"=200'
V - 1"=20'



SOURCE: Geologic Cross Section Figure of Geotechnical Investigation Report Auxiliary Gymnasium Victor Valley Community College by CHJ Inc, May 6 2005

CLIENT	Victor Valley Community College
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Site Geologic Cross Section
FIGURE NUMBER	11
PROJECT	3214-00
DATE	10/4/05

hydrologue, Inc.
Consulting Engineers & Geologists

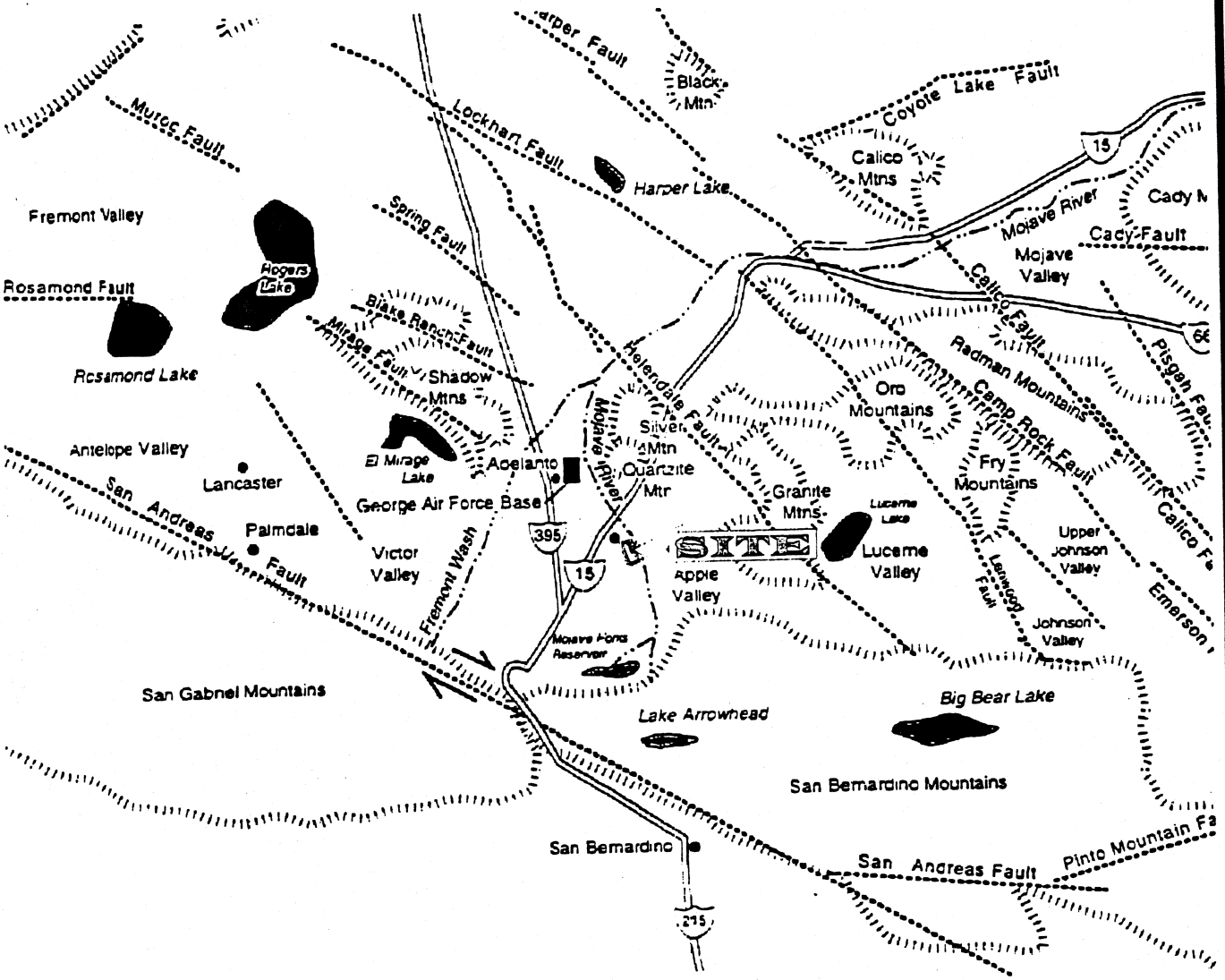
PHASE1:Victorville CC:fig5.CDR

SOURCE: Tracks Along the Mojave: A Field Guide from Cajon Pass to The Calico Mountains and Coyote Lake, San Bernardino County Museum Association Quarterly, (Volume 46 (3) 1999

N

NOT TO SCALE

CLIENT	Victor Valley COMMUNITY COLLEGE	
LOCATION	18422 Bear Valley Road Victorville, CA 92392	
TITLE	Regional Geology Features	FIGURE NUMBER 12
PROJECT	3214-00	DATE 10/4/05
hydrologue, Inc. Consulting Engineers & Geologists		PHASE1:Victorville CC:figure.CDR



LEGEND

------ FAULT

—··— RIVER

0 7.5 15

APPROXIMATE SCALE IN MILES

SOURCE: USGS, 1991

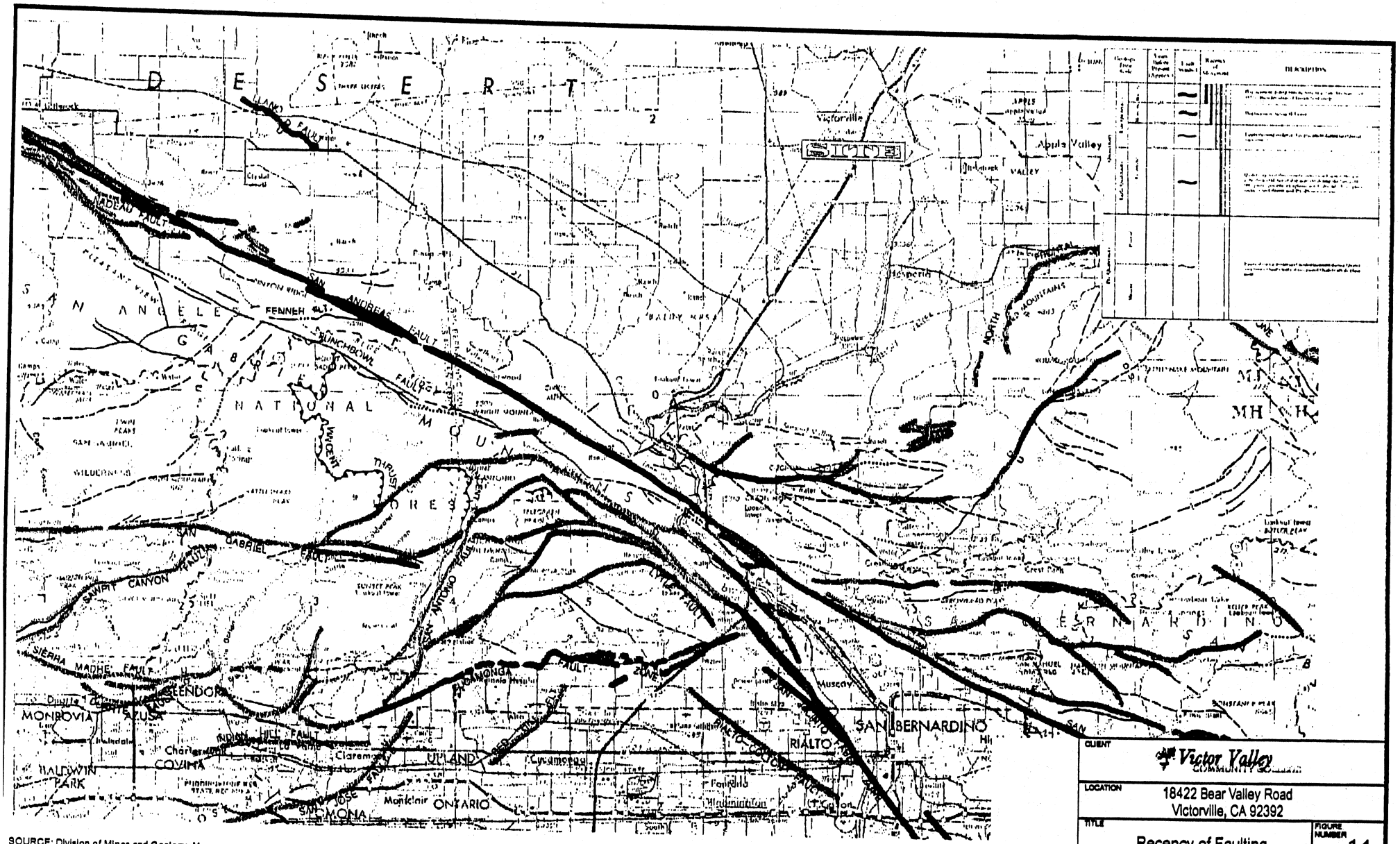
12/53.GE

REGIONAL PHYSIOGRAPHY

FIGURE 4-1

N

CLIENT	Victor Valley	
LOCATION	18422 Bear Valley Road Victorville, CA 92392	
TITLE	Regional Fault Map	FIGURE NUMBER 13
PROJECT	3214-00	DATE 10/4/05
hydrologue, inc. Consulting Engineers & Geologists		PHASE1:Victorville CC:figure.CDR



SOURCE: Division of Mines and Geology, Map Showing Recency of Faulting, San Bernardino Quadrangle, California, 1986

SCALE
0 250,000 feet

CLIENT: Victor Valley Community College

LOCATION: 18422 Bear Valley Road, Victorville, CA 92392

TITLE: Recency of Faulting

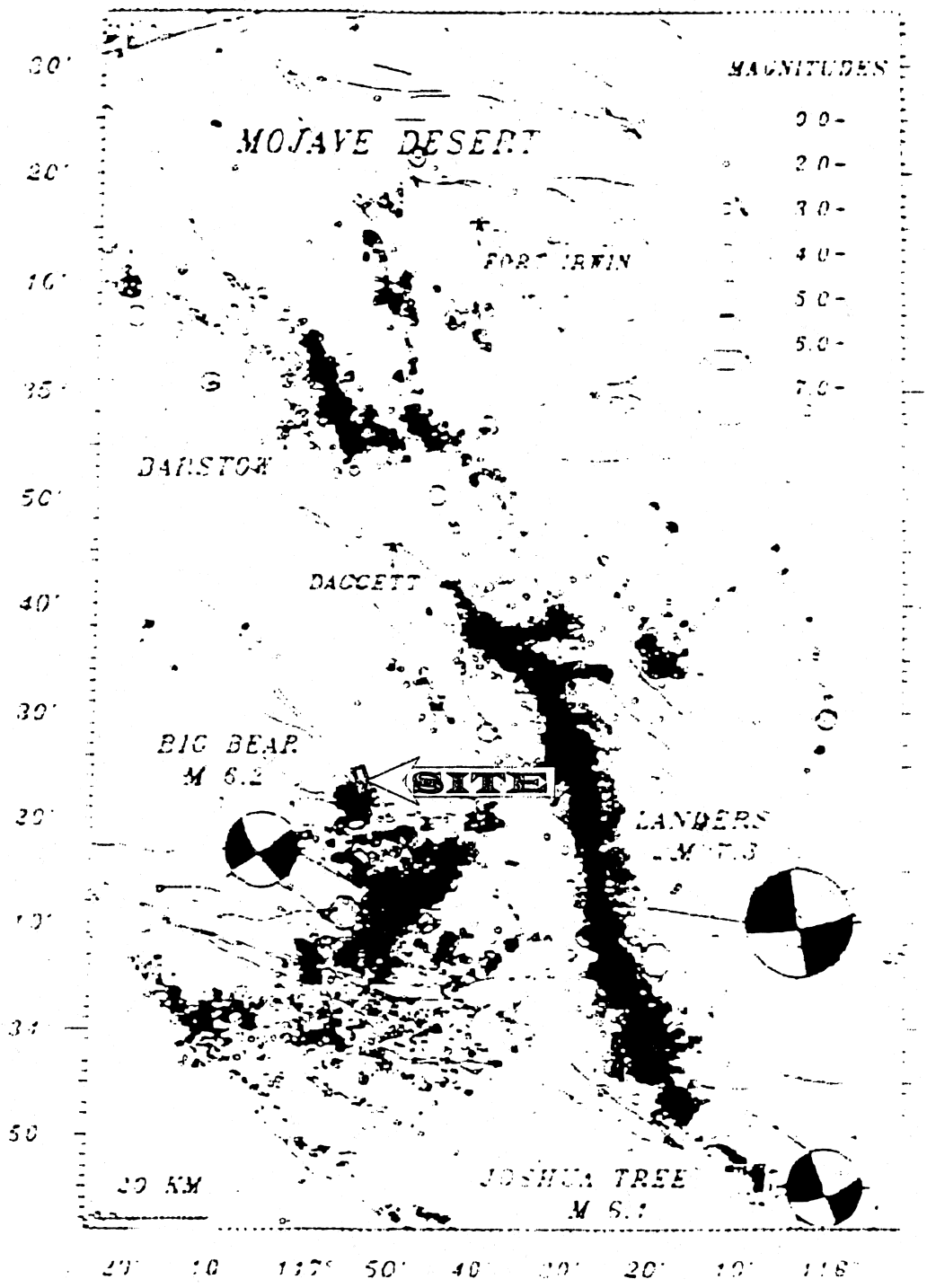
FIGURE NUMBER: 14

PROJECT: 3214-00

DATE: 10/4/05

hydrologue, Inc. Consulting Engineers & Geologists

PHASE1:Victorville CC:Rpt.CDR



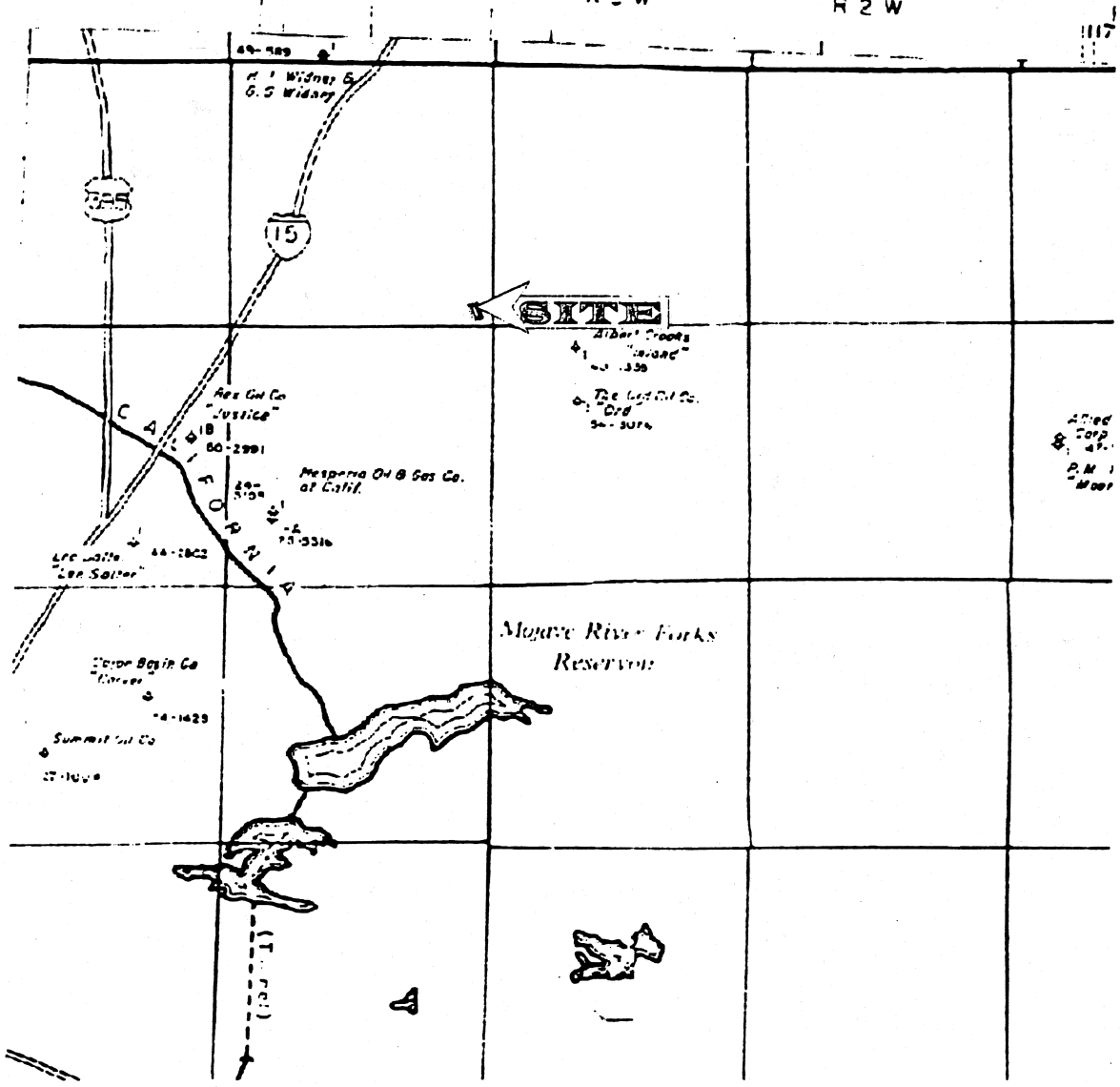
N

NOT TO SCALE

SOURCE: Off Limits in the Mojave Desert, San Bernardino County Museum Association Special Publication 94-1

CLIENT	Victor Valley
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Map of M_w6.1 Joshua Tree, M_w7.3 Landers & M_w6.2 Big Bear Aftershocks
FIGURE NUMBER	15
PROJECT	3214-00
DATE	10/4/05
hydrologue, inc. Consulting Engineers & Geologists	PHASE1:Victorville CC:figure.CDR

SHEET K REFERENCE MAP SERIES



Abandoned - dry hole
(showing year drilled, total depth, and geothermal well designation)

SCALE
0 24,000

N

CLIENT: Victor Valley Community College

LOCATION: 18422 Bear Valley Road
Victorville, CA 92392

TITLE: Oil & Gas Map

FIGURE NUMBER: 16

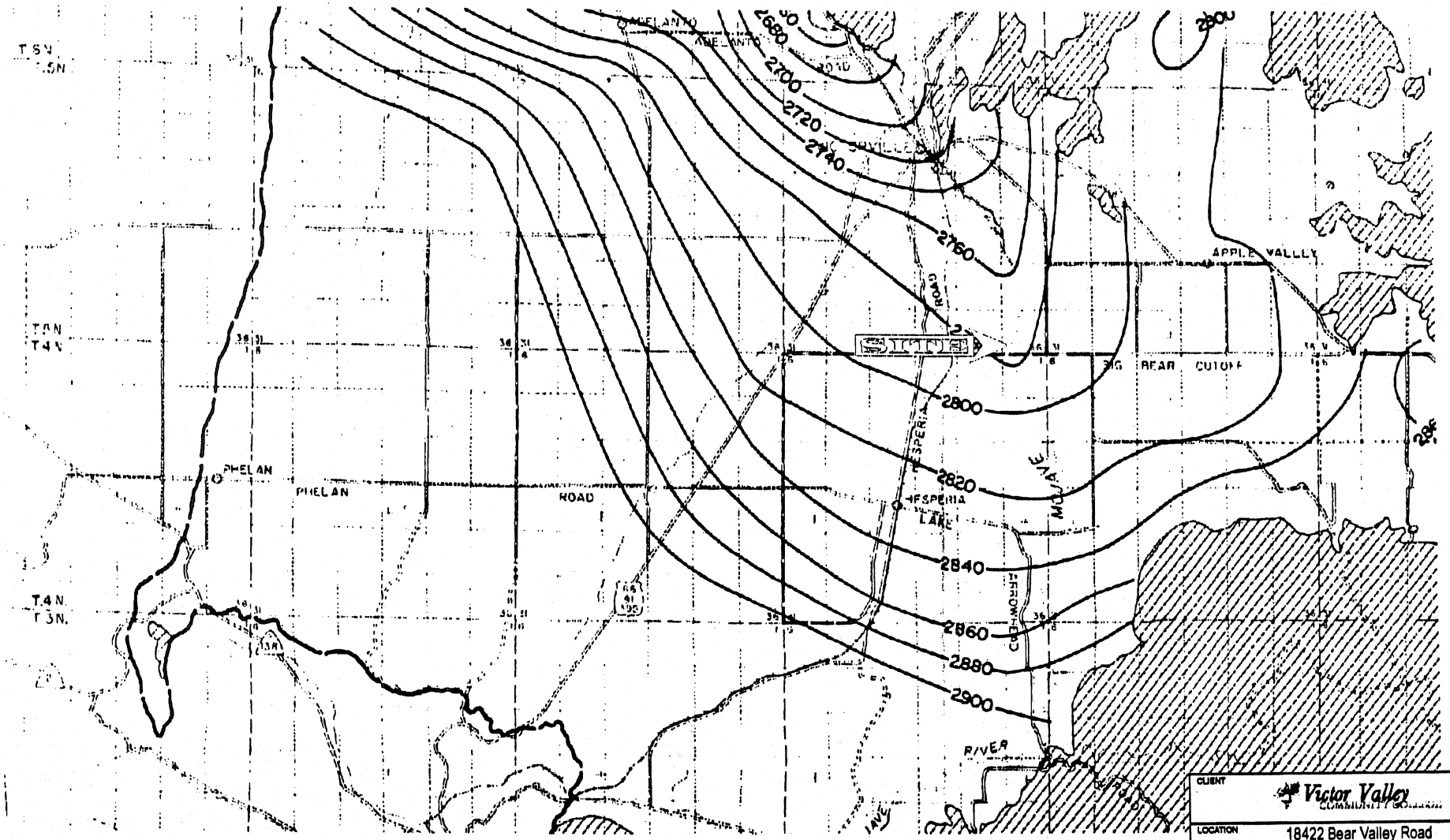
PROJECT: 3214-00

DATE: 10/4/05

hydrologue, Inc.
Consulting Engineers & Geologists

PHASE1:Victorville CC:figure.CDR

SOURCE: Map Sheet K
San Bernardino County
Division Oil, Gas and Geothermal



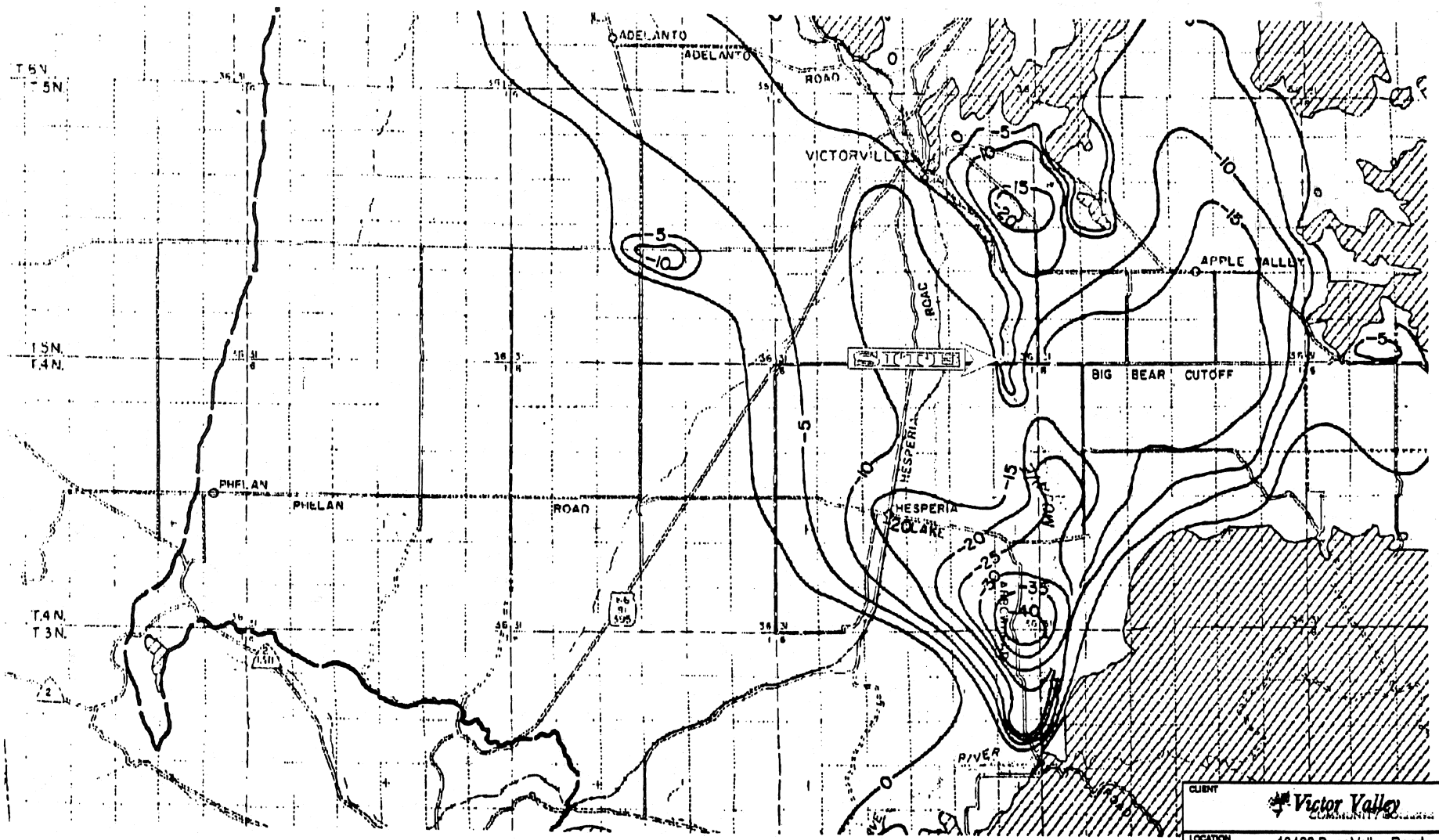
SOURCE: Department of Water Resources, Southern District, Mojave River Ground Water Basins Investigation, 1961

SCALE
0 2 miles

CLIENT	Victor Valley
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Deep Aquifer Groundwater LevelContours
FIGURE NUMBER	17
PROJECT	3214-00
DATE	10/4/05

hydrologue, Inc.
Consulting Engineers & Geologists

PHASE1:Victorville CC:fig5.CDR



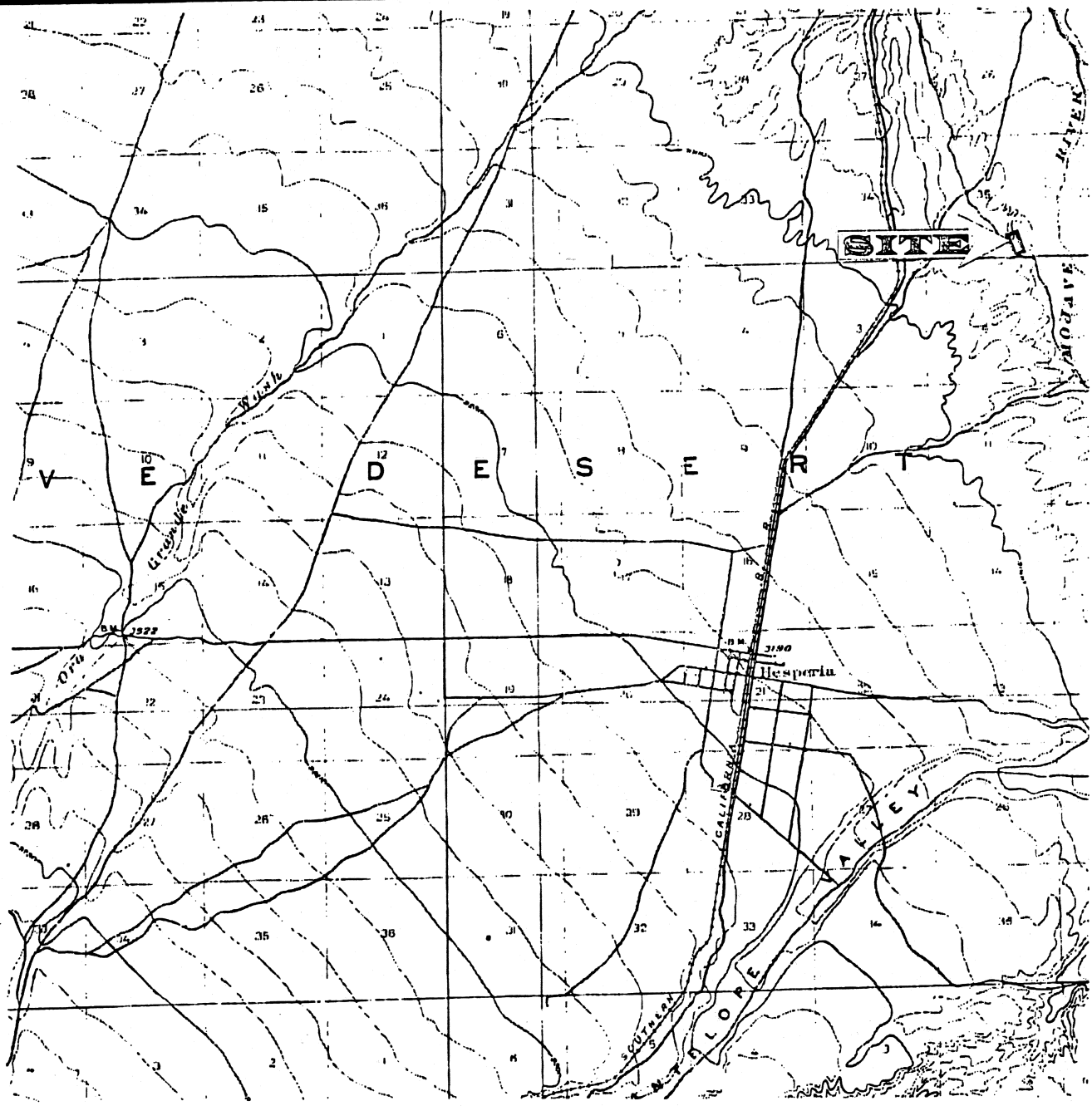
SOURCE: Department of Water Resources, Southern District, Mojave River Ground Water Basins Investigation, 1960-61

SCALE
0 2 miles

CLIENT	Victor Valley Community College
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Change in Deep Aquifer Groundwater Elevation
FIGURE NUMBER	18
PROJECT	3214-00
DATE	10/4/05

hydrologue, Inc.
Consulting Engineers & Geologists

PHASE1:Victorville CC:fig5.CDR

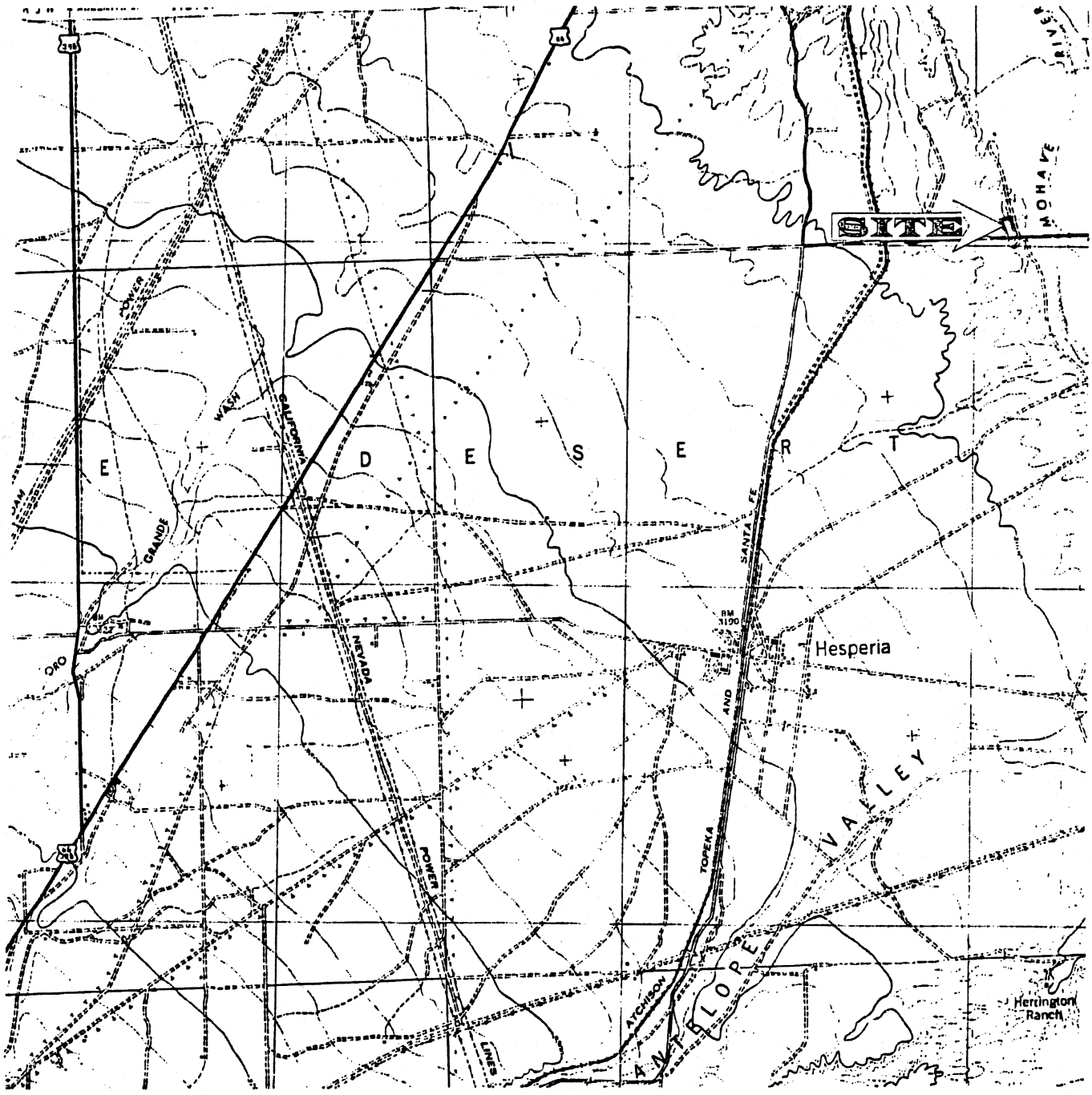


SOURCE: USGS Topographic Map
Hesperia Quadrangle, 1902

N

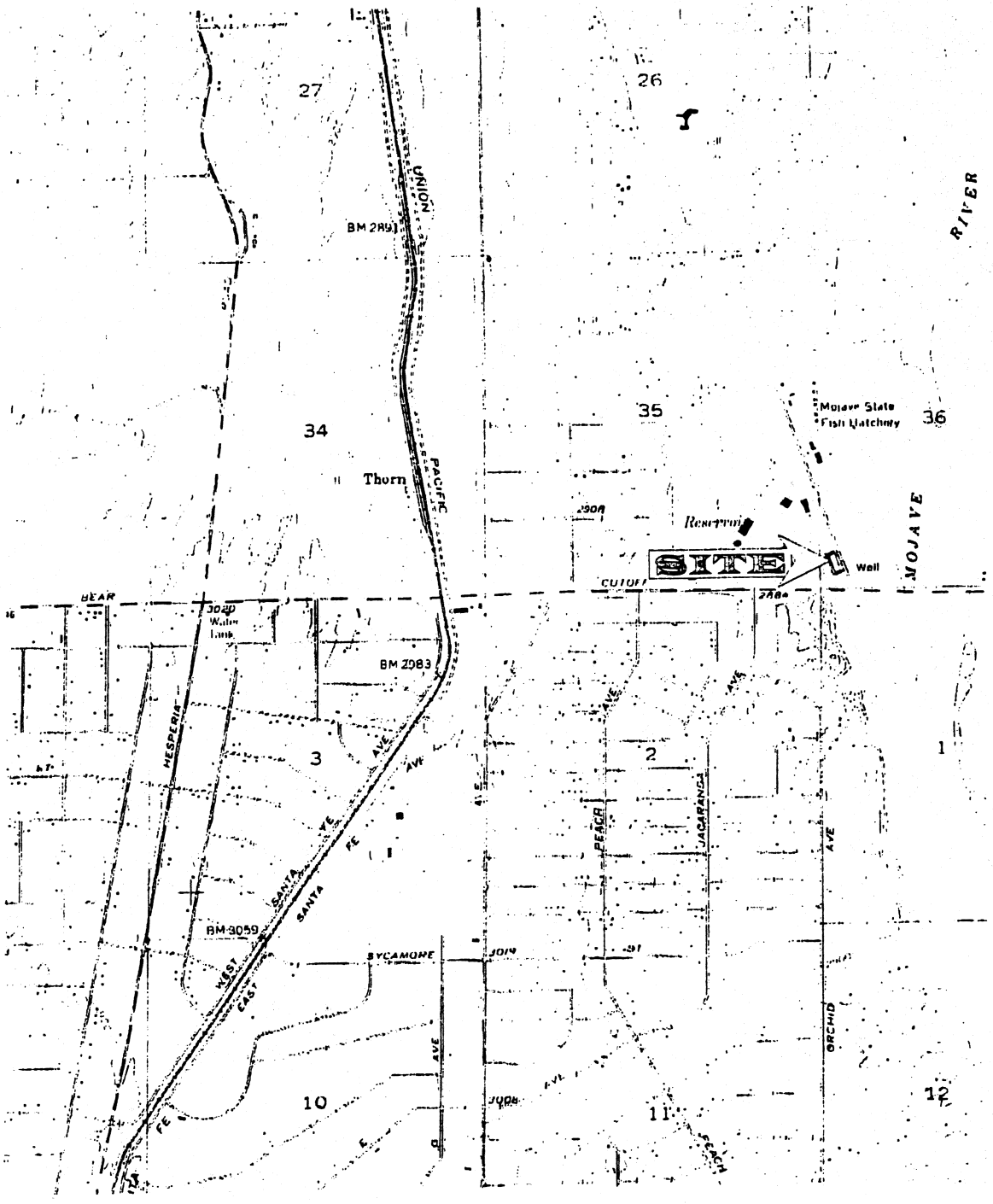
NOT TO SCALE

CLIENT	Victor Valley	
LOCATION	18422 Bear Valley Road Victorville, CA 92392	
TITLE	1902 Topographic Map	FIGURE NUMBER 19
PROJECT	3214-00	DATE 10/4/05
hydrologue, inc. Consulting Engineers & Geologists		PHASE1:Victorville CC:figure.CDR



SOURCE: USGS Topographic Map
Hesperia Quadrangle, 1942

CLIENT	Victor Valley	
LOCATION	18422 Bear Valley Road Victorville, CA 92392	
TITLE	1942 Topographic Map	FIGURE NUMBER 20
PROJECT	3214-00	DATE 10/4/05
hydrologue, inc. Consulting Engineers & Geologists		PHASE1:Victorville CC:figure.CDR



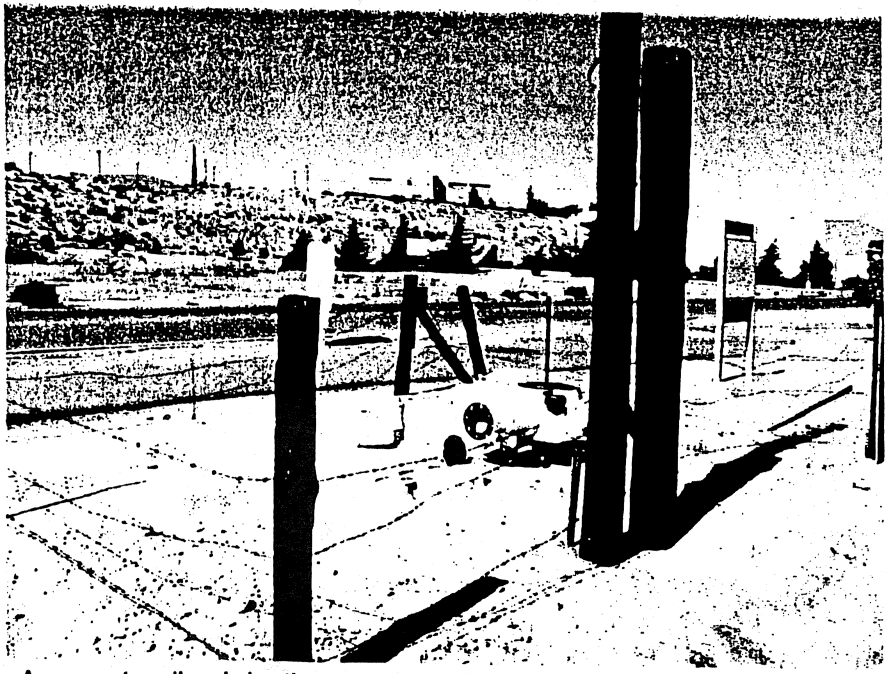
SCALE

0 2000 feet

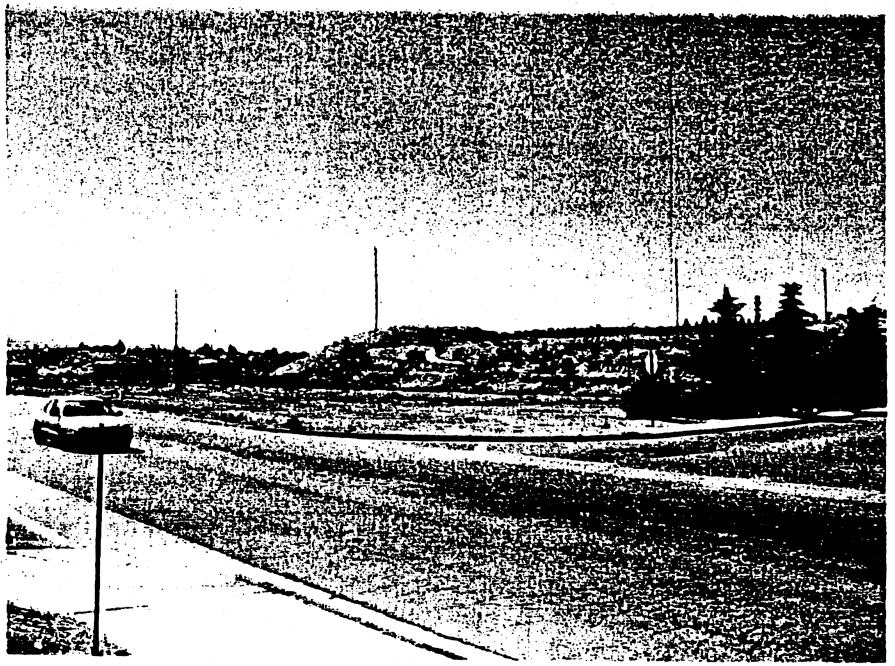
N

SOURCE: USGS Topographic Map
Hesperia Quadrangle, 1980

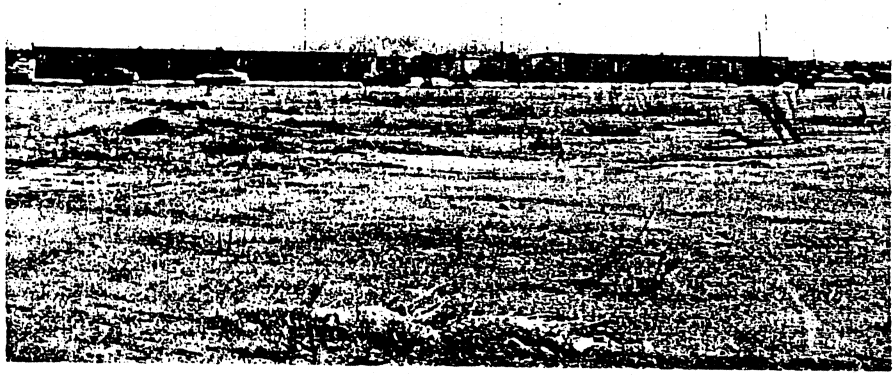
CLIENT	Victor Valley	
LOCATION	18422 Bear Valley Road Victorville, CA 92392	
TITLE	1980 Topographic Map	FIGURE NUMBER 21
PROJECT	3214-00	DATE 10/4/05
hydrologue, Inc. Consulting Engineers & Geologists		PHASE1:Victorville CC:figure.CDR



Apparent well or irrigation structure adjacent to the Site



The Site looking South



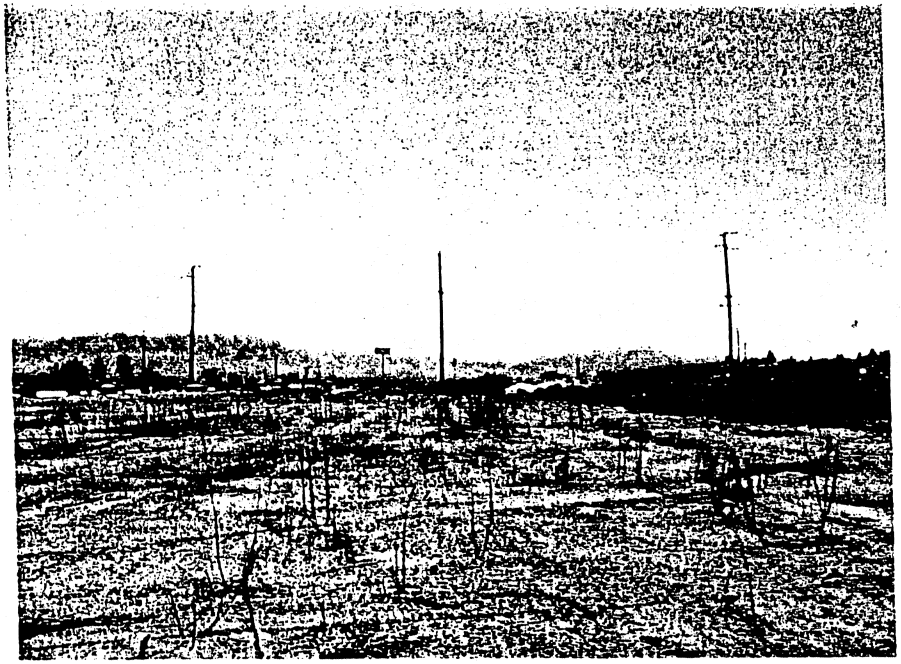
The Site , looking northeast, with modules classrooms in background

NO SCALE

CLIENT	Victor Valley Community College
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Site Photographs
PLATE NUMBER	1
PROJECT	3214-00

hydrologue, Inc.
Consulting Engineers & Geologists

PHASE1:Victorville CC\Photos



The Site looking south

Culvert under East Campus Road in northwest portion of the Site

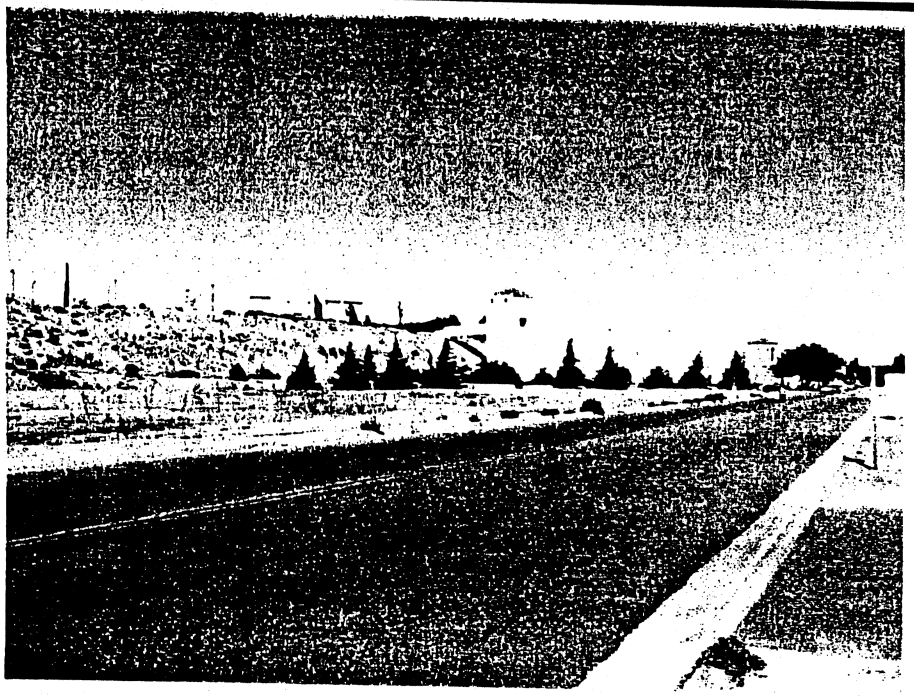
Sand and gravel yard in the vicinity of the Site to the South

NO SCALE

CLIENT	Victor Valley Community College
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Site Photographs
PLATE NUMBER	2
PROJECT	3214-00

hydrologue, Inc.
Consulting Engineers & Geologists

PHASE1:Victorville CC\Photos



Site looking northwest with existing gym, slope and student center in background

NO SCALE

CLIENT	Victor Valley Community College
LOCATION	18422 Bear Valley Road Victorville, CA 92392
TITLE	Site Photographs
PLATE NUMBER	3
PROJECT	3214-00

hydrologue, Inc.
Consulting Engineers & Geologists

PHASE1:Victorville CC\Photos

CITY OF
VICTORVILLE

760-955-5000
FAX 760-245-7243
email: vville@ci.victorville.ca.us
14343 Civic Drive
P.O. Box 5001
Victorville, California 92393-5001

October 10, 2005

Hydrologue, Inc.
Attn: Maria, Seyed Mortazavi, Principal
2793 East Foothill Blvd.
Pasadena, CA 91107-3400

RE: APN: 0482-022-06
18422 Bear Valley Road.
Victorville, California

The above-mentioned property referenced as Assessor's Parcel Number 0482-022-06, is currently zoned as P-C (Public and Civic) and F-P (Conservancy and Flood Plain). The Public and Civic zone is to provide land that is owned by a governmental agency and in some form of public use, including open space. In addition, the Conservancy and Flood Plain district is to provide for the protection of the public health, safety and general welfare in those areas of the city which under present conditions, are subject to periodic flooding and accompanying hazards and to conserve natural resources of benefit to the general public interest. Please feel free to contact me if you have any further questions regarding this parcel.

Sincerely,

Travis Clark
Assistant Planner

NETRonline

PROPERTY DETAIL REPORT

Prepared Exclusively for Maria Boon

Created: 10/18/2005 10:02:58 AM
Expires: 11/17/2005 10:02:58 AM

TARGET PROPERTY

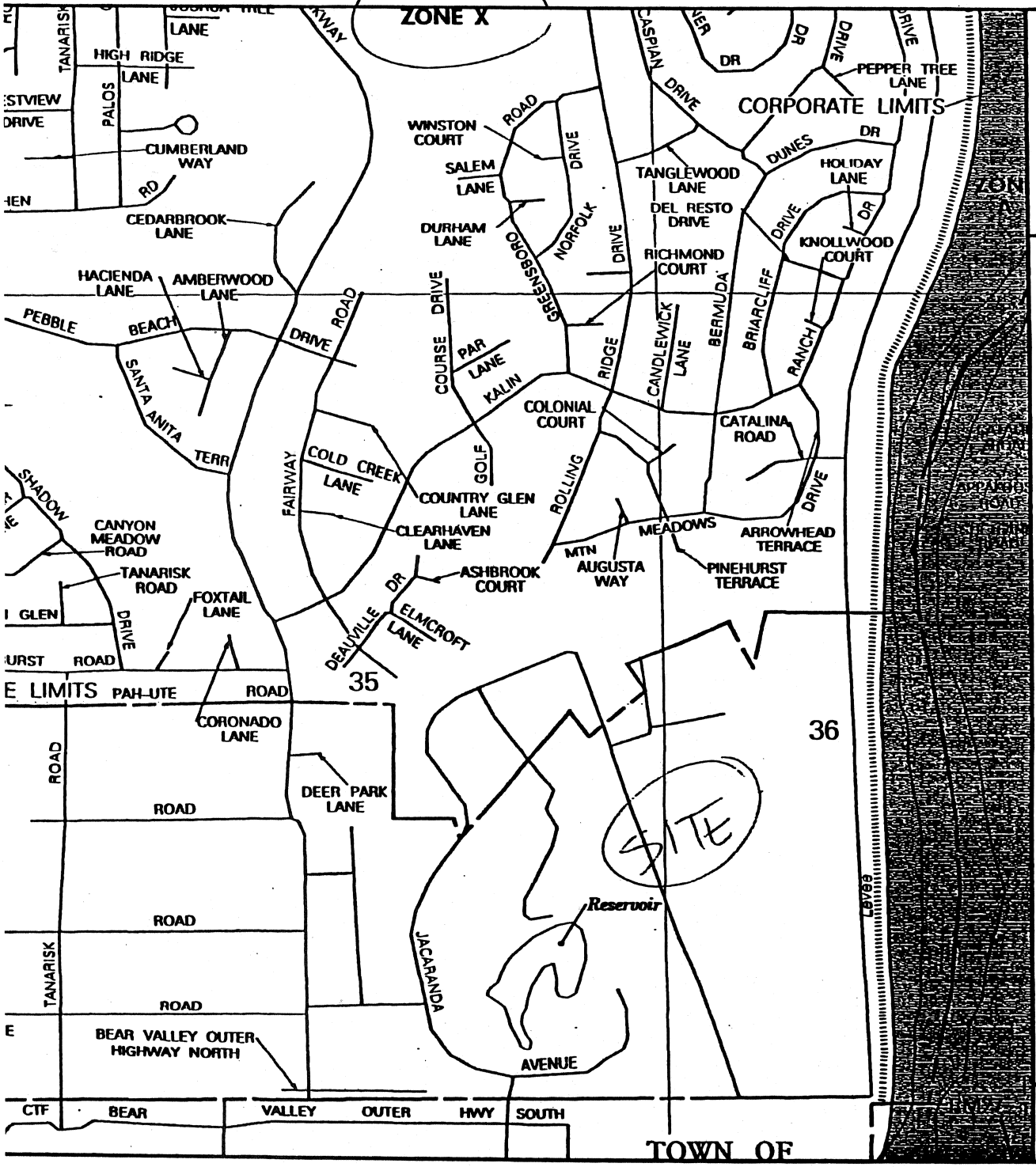
Site Address:	, CA
Mailing Address:	18422 BEAR VALLEY RD VICTORVILLE, CA 92395-5850
Primary Owner:	VICTOR VALLEY J C DIST OF SAN BDNO C
Secondary Owner:	
Legal Description:	PTN E 1/2 SEC 35 AND PTN W 1/2 SEC 36 TP 5N R 4W DESC AS BEG AT SE COR SD SEC 35TH W 1525
APN:	0482-022-06-0-000

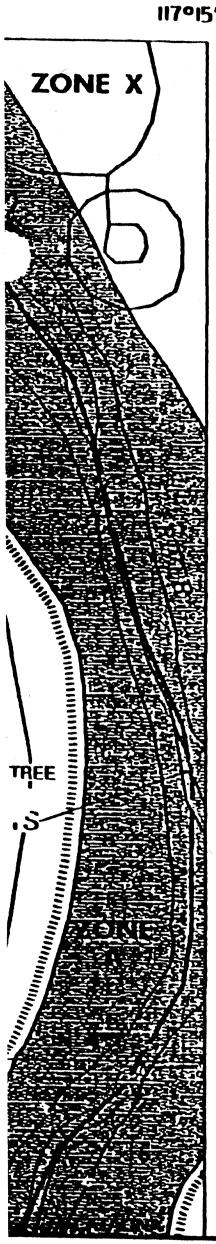
Use Code	VACANT MISCELLANEOUS	Lot Size:	
Number Of Units:		Fireplace:	
Square Feet:		Pool:	
Total Rooms:		Views:	
Bedrooms:		Year Built:	
Bathrooms:		Zoning:	
Parking Structure:		Housing Tract:	
Parking Spaces:		Census Tract:	0100.031

Transfer Date:	November 28, 1994	First Loan Amount:	
Transfer Amount:		First Loan Type:	
Document Number:	0000471247	Lender:	
Last Transaction:		Cost Per Sq. Ft.	
Last Document:			

Assessed Value:		Tax Amount:	
Land Value:		Tax Status:	Current
Improvement Value:		Owner Exemption:	
% Improvement:		Tax Rate Area:	12129

INVESTOR OF TITLE


ZONE X
CORPORATE LIMITS
APPROXIMATE SCALE IN FEET
1000 0 1000
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
SAN BERNARDINO COUNTY, CALIFORNIA AND INCORPORATED AREAS
PANEL 6485 OF 9400
(SEE MAP INDEX FOR PANELS NOT PRINTED)
CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX
APPLE VALLEY, TOWN OF 060752 6485 F
HESPERIA, CITY OF 060733 6485 F
SAN BERNARDINO COUNTY, UNINCORPORATED AREAS 060270 6485 F
VICTORVILLE, CITY OF 065068 6485 F
MAP NUMBER
06071C6485 F
EFFECTIVE DATE:
MARCH 18, 1996
Federal Emergency Management Agency
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov
HIGH RIDGE LANE
CUMBERLAND WAY
CEDARBROOK LANE
WINSTON COURT
SALEM LANE
DURHAM LANE
TANGLEWOOD LANE
DEL RESTO DRIVE
RICHMOND COURT
HOLIDAY LANE
KNOLLWOOD COURT
PEPPER TREE LANE
HACIENDA LANE
AMBERWOOD LANE
PEBBLE BEACH DRIVE
SANTA ANITA TERR
COURSE DRIVE
PAR LANE
KALIN
COLONIAL COURT
CANDLEWICK LANE
BERMUDA
BRIARCLIFF
RANCH
CATALINA ROAD
COLD CREEK LANE
COUNTRY GLEN LANE
CLEARHAVEN LANE
ASHBROOK COURT
MTN AUGUSTA WAY
MEADOWS
ARROWHEAD TERRACE
PINEHURST TERRACE
CANYON MEADOW ROAD
TANARISK ROAD
FOXTAIL LANE
ELMCROFT LANE
DEAUVILLE
CORONADO LANE
DEER PARK LANE
PAH-UTE ROAD
BEAR VALLEY OUTER HIGHWAY NORTH
JACARANDA AVENUE
Reservoir
SITE
Levee
35
36
TOWN OF
CTF BEAR VALLEY OUTER HWY SOUTH



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A No base flood elevations determined.

ZONE AE Base flood elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE A99 To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined.

ZONE V Coastal flood with velocity hazard (wave action); no base flood elevations determined.

ZONE VE Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

ZONE X Areas determined to be outside 500-year floodplain.

ZONE D Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

Identified 1983 | Identified 1990 | Otherwise Protected Areas

Coastal barrier areas are normally located within or adjacent to Special Flood Hazard Areas.

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations

APPROXIMATE SCALE IN FEET

1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

SAN BERNARDINO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 6485 OF 9400

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
APPLE VALLEY, TOWN OF	[illegible]	6485	F
HESPERIA, CITY OF	[illegible]	6485	F
SAN BERNARDINO COUNTY, UNINCORPORATED AREAS	[illegible]	6485	F
VICTORVILLE, CITY OF	[illegible]	6485	F

MAP NUMBER
06071C6485 F

EFFECTIVE DATE:
MARCH 18, 1996

Federal Emergency Management Agency

CITY OF
VICTORVILLE

HAZ-MAT SPECIALIST
VICTORVILLE FIRE DEPARTME
E-mail: gcoon@ci.victorville.

P.O.Box 5001 • Victorville, California 92393-5001
14343 Civic Drive • Victorville, California 92392-239
(760) 955-5229 • Fax: (760) 955-1098

REQUEST FOR ENVIRONMENTAL AUDIT RESEARCH

REQUESTED BY:

Company Name: Hazforce Inc.

Mailing Address: 2793 E. Foothill Blvd Pasadena

Contact Person: Sazeo Moazami Phone: (626) 585-0046

A request is hereby made for the Victorville Fire Department to research its records to determine whether there is any record of a release, spill, dumping, contamination, cleanup action, underground tank or aboveground storage of hazardous materials, substances, or wastes that may adversely affect public health or the environment at or within one half mile of the property listed below.

Signature Title Date

PROPERTY DESCRIPTION (A separate form must be completed for each parcel unless parcels are contiguous or part of the same project site):

Assessor's Parcel No.:

Site Address: 18422 Desert Flower Blvd Victorville

Legal Description: Victor Valley College

Owner of Record or
Occupant Company Name:

NOTE: Please attach a copy of a Thomas Bros. Guide map or other area map showing the subject property in respect to the surrounding area.

FIRE DEPARTMENT USE

X A review of records has been conducted and this department finds no record of any release, spill, dumping, contamination, cleanup action, underground tank or aboveground storage of hazardous materials substances, or wastes on the subject property that adversely affects either public health or the environment.

— A review of records has been conducted and this department finds a history of a hazardous materials activity pertaining to the subject property as follows:

Signature HAZ-MAT Title 10-10-05 Date

REVIEW FEE $
DATE RECEIVED
RECEIVED BY

Office of the State Fire Marshal

Pipeline Safety Division

P.O. Box 944246
Sacramento, CA 94244-2460

Request ID: 10122005SFM016

TO: HYDROLOGUE, INC
MARIA BOON
2793 E. FOOTHILL BOULEVARD
PASADENA, CA 91107

Phone: 626 585 9696
Fax: 626 585 0046

FROM: Lisa Dowdy
Phone: (916) 445-8477
Fax: (916) 445-8526

PIPELINE LOCATION REQUEST FOR:

18422 BEAR VALLEY ROAD
VICTORVILLE, CA 92392

SAN BERNARDINO Thomas Brothers Book
Page 4387, Grid A6

THERE ARE NO PIPELINES JURISDICTIONAL TO THE STATE FIRE MARSHAL IN THE AREA FOR WHICH YOU HAVE INQUIRED.

- FOR NATURAL GAS PIPELINES PLEASE CONTACT YOUR LOCAL GAS COMPANY

- FOR OTHER TYPES OF PIPELINE PLEASE CONTACT THE DIVISION OF OIL AND GAS AT (714) 816-6847

- FOR PUBLIC UTILITIES PLEASE CONTACT THE PUBLIC UTILITIES COMMISSION AT (415) 703-2782

Lisa Dowdy
Research Analyst I
Office fo the State Fire Marshal

hydrologue, Inc
Consulting Engineers & Geologists
2793 East Foothill Boulevard
Pasadena, CA 91107

PRELIMINARY ASSESSMENT QUESTIONNAIRE

I) INTERVIEW INFORMATION

1) Name of person interviewed Steve Garcia
2) Name and title of interviewer Robert Cass, Sr. Project Manager
3) Location of interview Victor Valley CC office
4) Time/date of interview 10/10/2005 10:30AM
5) Address/phone number of person interviewed _____
6) Interviewee's years of experience with the location/Site 18 years

II) SITE LOCATION AND INSPECTION INFORMATION

1) Years of operation of Site
   a) Beginning year 1960 Advised by VVCC
   b) Ending year —
   c) Unknown —
2) Site drawing N/A
3) Historical photographs 1964 provided by client

III) WASTE INFORMATION

1) Product/waste handled/procedures for product/waste handling

a) Type of product/waste Vacant Site - N/A

* physical properties NA

i) State of matter (gas, liquid, etc) NA

ii) Corrosive, radioactive, flammable, volatile, reactive, incompatible, explosive, soluble, infectious, ignitable, toxic NA

* Chemical constituents NA

b) Amount

i) tons N/A

ii) cubic yards NA

iii) no of drums ~~NA~~ None Observed or reported

c) Handling device NA

d) Hazard to environment

i) air None observed or reported

ii) water None observed

iii) soil None Observed

2) Treatment, storage & disposal of waste

a) Amount None observed

b) Type —

3) Dispersal or discharge of waste

a) Amount None

b) Type —

4) Sources or generation points of waste

a) Amount None

b) Type —

IV) DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

1) Past spills, leaks, etc

a) Material leaked/spilled None reported or observed

b) Amount NA

c) Corrective measure undertaken NA

d) Agencies involved NA

e) Comments NA

2) Presence of asbestos None

3) Presence of Radon not tested

4) Type of soil on Site Silty Sand - See CHJ report

5) Condition of surface soil Dry

6) Presence of decay of vegetation None

7) Presence of soil darkening or obvious spills None

8) Presence of any characteristic odor None

9) Worker injury related to chemical/handling exposure in past

None reported

10) Illegal/unauthorized dumping None

11) Contamination of sewers, storm drains, etc None

12) Subsurface electrical vaults None

13) Incidents of fire/explosions None

V) PERMIT AND DESCRIPTIVE INFORMATION

1) Existing permits None

VI) WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

1) Depth to groundwater see CHJ report
2) Direction of water flow unk
3) Type of soil on Site see CHJ report
4) Presence of groundwater wells
   a) Type
      i) Monitoring wells None onsite
      ii) Drinking water wells None
      iii) Piezometric wells None
   b) Depth NA
   c) Condition of well NA
5) Presence of surface water Unk
6) Condition of groundwater Unk
7) Condition of surface water None
8) Condition of surface soil No Stains
9) Condition of ambient air No Odor

VII) SAMPLE AND FIELD INFORMATION

1) Past sampling on Site
   a) Date Geotechnical 5/6/2005
   b) Agency/party CHJ
   c) Reports refer to CHJ report 5/6/2005
   d) Findings " " " "

2) Presence of UST

a) Number None

b) Location NA

c) Product/waste storage NA

d) Age NA

e) Depth NA

f) Type of tanks and capacities NA

g) Evidence of leaks NA

3) Underground piping

a) Piping layout NA

b) Type of material NA

c) Age of piping NA

d) Type of piping NA

4) Excavation in past

a) Reasons for excavation None

b) Agencies involved NA

5) Equipment maintenance/monitoring NA

6) Cracks or fractures in surface of asphalt/concrete NA

7) Man-made borings or other vertical conduits Geotech investigation - borings not observed

8) Adjoining property use Victor Valley College facilities

9) Characteristics of land

10) Characteristics of aquifer Unk

VIII) OWNER INFORMATION

1) Previous ownership and history of property Farmer ranch land

IX) OPERATOR INFORMATION

1) Current operator and types of activities conducted Vacant occassional "overflow" parking

X) GENERATOR/TRANSPORTER INFORMATION

1) Records/other sources of information available on Site N/A

XI) PAST RESPONSE ACTIVITIES

1) Agencies involved in the past

a) Agency involved None

b) Point of contact NA

c) Date NA

d) Report of inspection NA

e) Other findings NA

f) Comments NA

2) Other parties/contractors NA

XII) ENFORCEMENT INFORMATION

1) Implementation of contingency, emergency plan None

XIII) OTHER INFORMATION

The "Site" is a part of a 216-acre VRCC campus. The campus has small quantities of wastes & ASTs but none used or stored on or adjacent to the "Site". No reported spills from those wastes or ASTs

Scale: 1 inch to 500 feet

Longitude: -117° 15' 34.9"
Latitude: 34° 28' 16.3"

UTM Easting: 476149 meters
UTM Northing: 3814239 meters
UTM Zone: NAD 11

County: SAN BERNARDINO

Project: VBZL 1-133
Quadrangle:
Date: 06/03/68
Film Type: Black & White

Source: U.S. Dept of Interior, Geological Survey

AERIAL PHOTOGRAPH OF THE VICINITY OF THE SUBJECT SITE LOCATED AT
18422 BEAR VALLEY RD, VICTORVILLE

Scale: 1 inch to 500 feet

Longitude: -117° 15' 34.9"
Latitude: 34° 28' 16.3"

UTM Easting: 476149 meters
UTM Northing: 3814239 meters
UTM Zone: NAD 11

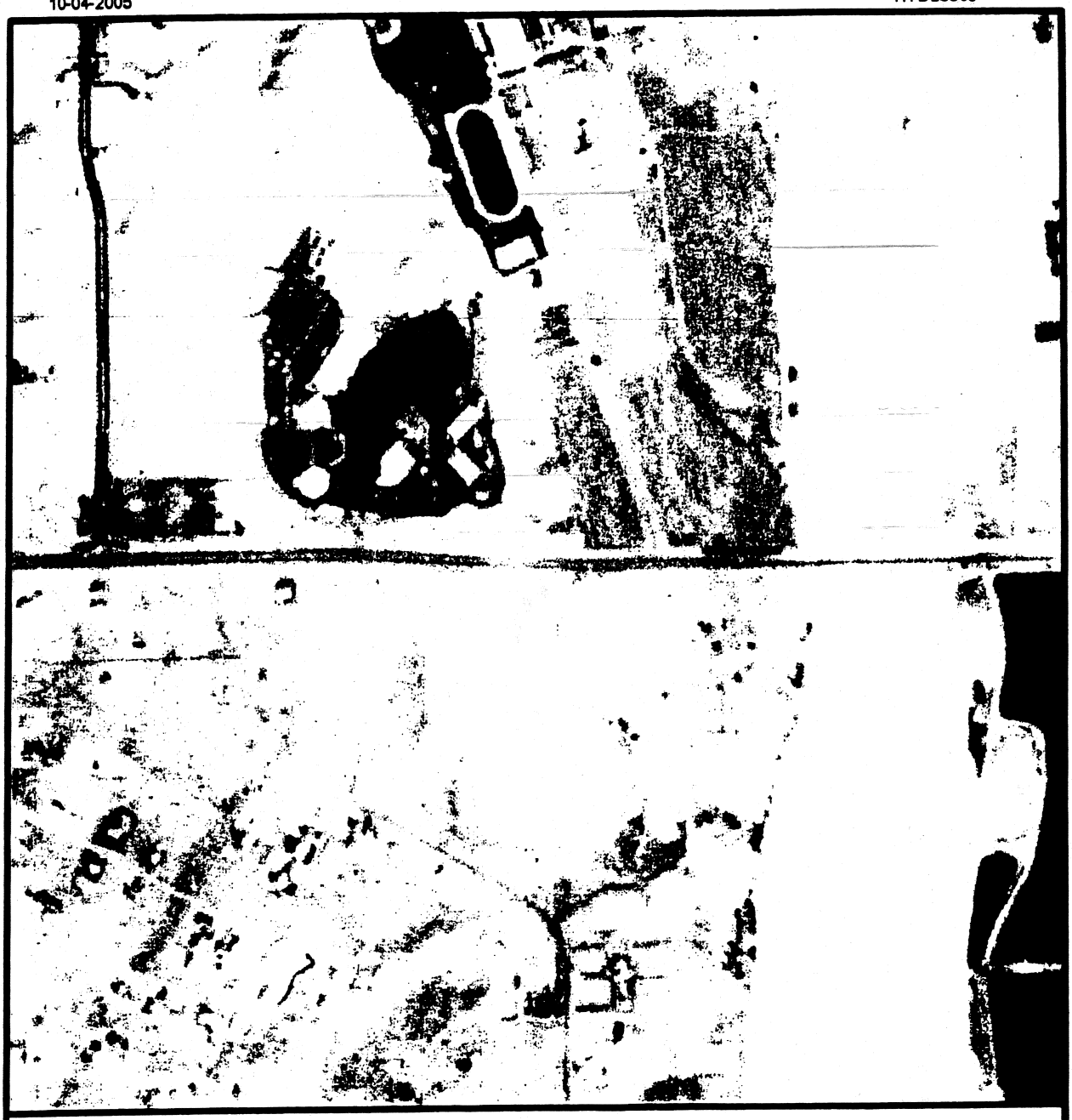
County: SAN BERNARDINO

Project: AMS 178
Quadrangle:
Date: 07/02/54
Film Type: Black & White

Source: U.S. Dept of Interior, Geological Survey

AERIAL PHOTOGRAPH OF THE VICINITY OF THE SUBJECT SITE LOCATED AT
18422 BEAR VALLEY RD, VICTORVILLE

10-04-2005 HYDL3509



Scale: 1 inch to 800 feet

Longitude: -117° 15' 34.9"
Latitude: 34° 28' 16.3"

UTM Easting: 476149 meters
UTM Northing: 3814239 meters
UTM Zone: NAD 11

County: SAN BERNARDINO

Project: HAP 84 174-100
Quadrangle:
Date: 10/07/84
Film Type: Black & White

Source: U.S. Dept of Interior, Geological Survey

AERIAL PHOTOGRAPH OF THE VICINITY OF THE SUBJECT SITE LOCATED AT
18422 BEAR VALLEY RD, VICTORVILLE

10-04-2005 HYDL3509

Scale: 1 inch to 800 feet

Longitude: -117° 15' 34.9"
Latitude: 34° 28' 16.3"

UTM Easting: 476149 meters
UTM Northing: 3814239 meters
UTM Zone: NAD 11

County: SAN BERNARDINO

Project: VEPU 2-46
Quadrangle:
Date: 09/30/78
Film Type: Black & White

Source: U.S. Dept of Interior, Geological Survey

AERIAL PHOTOGRAPH OF THE VICINITY OF THE SUBJECT SITE LOCATED AT
18422 BEAR VALLEY RD, VICTORVILLE

Scale: 1 inch to 500 feet

Longitude: -117° 15' 34.9"
Latitude: 34° 28' 16.3"

UTM Easting: 476149 meters
UTM Northing: 3814239 meters
UTM Zone: NAD 11

County: SAN BERNARDINO

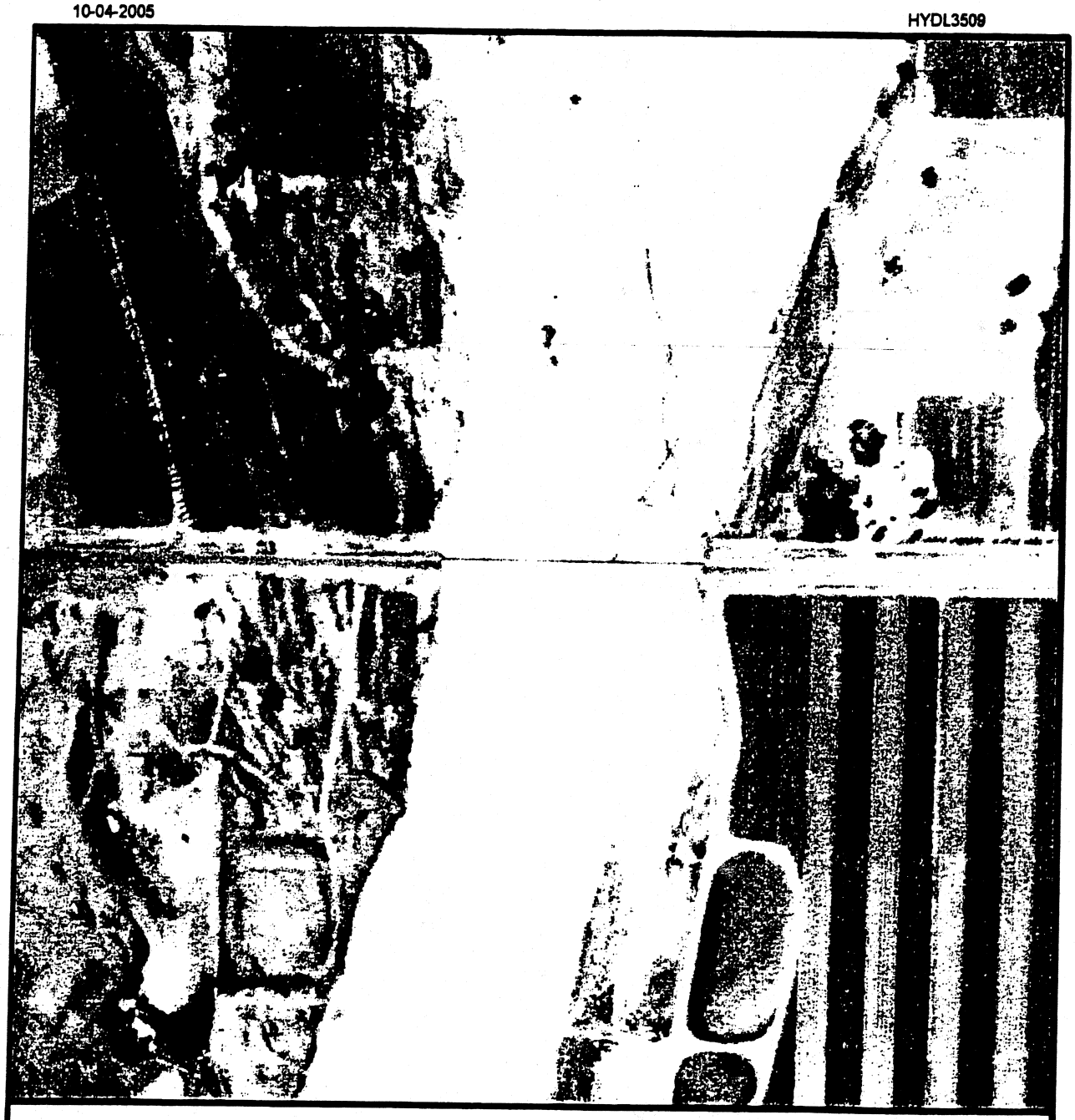
Project: 750021710376
Quadrangle:
Date: 08/05/75
Film Type: Black & White

Source: U.S. Dept of Interior, Geological Survey

AERIAL PHOTOGRAPH OF THE VICINITY OF THE SUBJECT SITE LOCATED AT
18422 BEAR VALLEY RD, VICTORVILLE

10-04-2005

HYDL3509



Longitude: -117° 15' 34.9"
Latitude: 34° 28' 16.3"

UTM Easting: 476149 meters
UTM Northing: 3814239 meters
UTM Zone: NAD 11

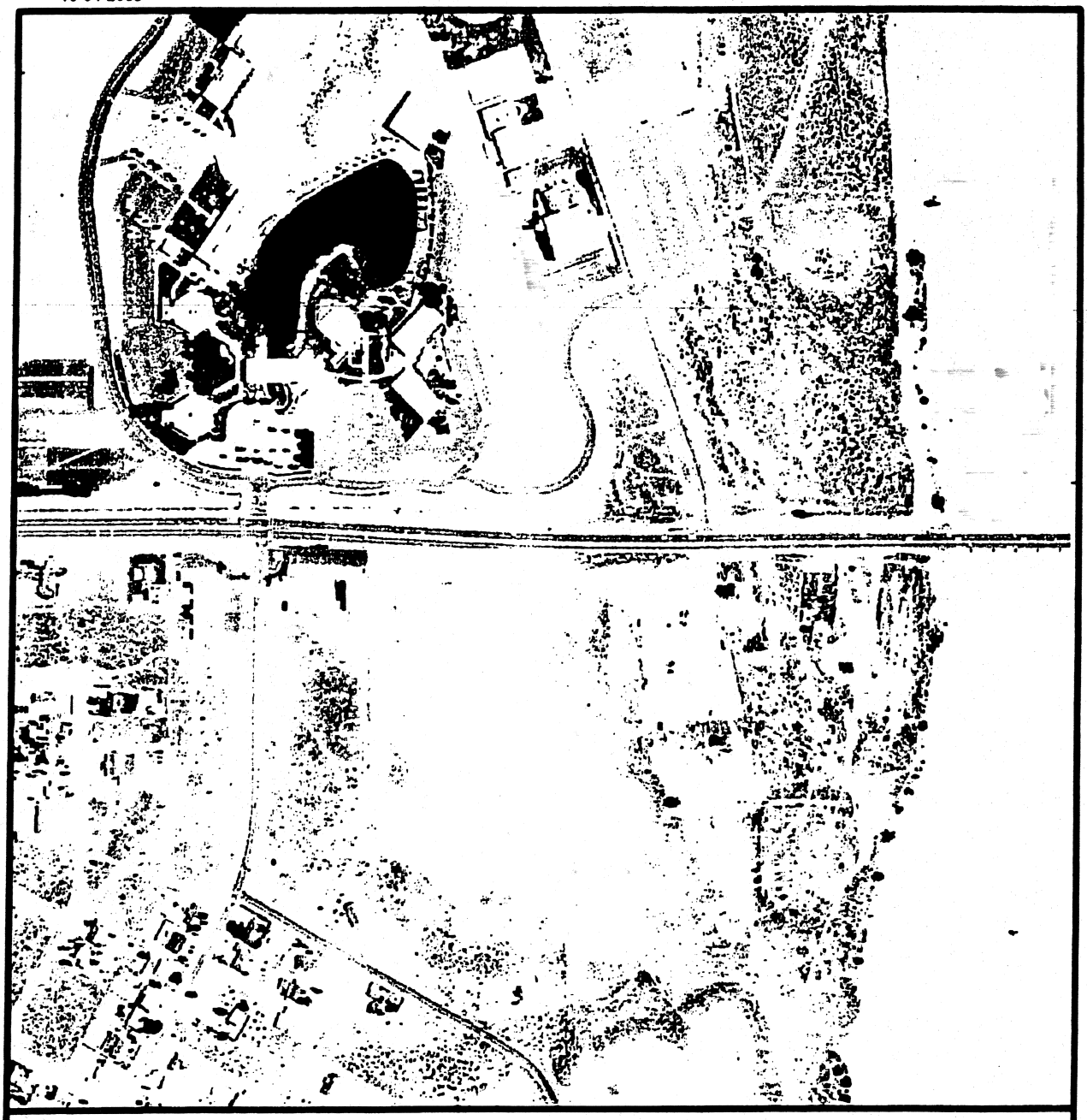
County: SAN BERNARDINO

Project: VCGN 6-80
Quadrangle:
Date: 07/06/69
Film Type: Black & White

Scale: 1 Inch to 500 feet

Source: U.S. Dept of Interior, Geological Survey

AERIAL PHOTOGRAPH OF THE VICINITY OF THE SUBJECT SITE LOCATED AT
18422 BEAR VALLEY RD, VICTORVILLE



Scale: 1 inch to 528 feet

UTM North is straight up

Longitude: -117° 15' 34.9"
Latitude: 34° 28' 16.3"

UTM Easting: 476149 meters
UTM Northing: 3814239 meters
UTM Zone: NAD 11

County: SAN BERNARDINO

Project:
Quadrangle:
Date: 5/29/1994
Film Type: Black & White

Source: U.S. Dept of Interior, Geological Survey

AERIAL PHOTOGRAPH OF THE VICINITY OF THE SUBJECT SITE LOCATED AT
18422 BEAR VALLEY RD, VICTORVILLE

10-04-2005

HYDL3509

Scale: 1 inch to 400 feet

UTM North is straight up

Longitude: -117° 15' 34.9"
Latitude: 34° 28' 16.3"

UTM Easting: 476149 meters
UTM Northing: 3814239 meters
UTM Zone: NAD 11

County: SAN BERNARDINO

Project: NAPP 6855 38
Quadrangle: HESPERIA NE
Date: 1994 05 29
Film Type: "BLACK AND WHITE FILM"

Source: U.S. Dept of Interior, Geological Survey

AERIAL PHOTOGRAPH OF THE VICINITY OF THE SUBJECT SITE LOCATED AT
18422 BEAR VALLEY RD, VICTORVILLE

HI contacted the Department of Building and Safety at the City of Victorville on October 11, 2005 to review building permits, applications and other related records for the Site. Personnel at the City of Victorville informed us that no records were found for the subject Site.

hydrologue, Inc
Consulting Engineers & Geologists

10/04/05

VIA FACSIMILE: 760-245-2022

Mojave Air Quality Management District
Barbara Weese
15428 Civic Drive, Suite 200
Victorville, CA 92392
Phone No.: 760-245-1803

Attn: AB 3205

RE: **PUBLIC RECORDS REQUEST**
Proposed New PE Building Site at
Victor Valley Community College
18422 Bear Valley Road
Victorville, San Bernardino County, California 92392
San Bernardino County Thomas Guide Page 4387 Page A-6

Dear Ms. Weese:

Hydrologue, Inc. (Hydrologue) is requesting that the Air Quality Management District (AQMD) review its files to determine whether any permits to operate or records are or were maintained within ¼-mile radius of the subject property (this is a school site). Hydrologue requests a response as soon as possible.

Please see the attached maps for exact site location.

Your assistance in this matter is greatly appreciated. This request is made pursuant to the California Public Records Act, Government Code §6230 et seq. Hydrologue will pay all fees for search, duplication and postage in accordance with the act and the regulations of your agency. However, please notify us prior to incurring any expenses in responding to this request.

Please call me right away at (626) 585-9696 if you have any questions or need additional information. Thank you.

Sincerely,
hydrologue, Inc.

Mario for
Seyed Mortazavi
Principal

2793 East Foothill Blvd • Pasadena, CA 91107-3400 • (626) 585-9696 • Fax (626) 585-0046

Mojave Desert AQMD
14306 Park Avenue, Victorville, CA 92392-2310 (760) 245-1661

PERMIT TO OPERATE

N008049

Operation under this permit must be conducted in compliance with all information included with the initial application,initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If copy is posted, original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: MAY 2006

OWNER OR OPERATOR (0457)
Victor ValleyCommunity College District
18422 Bear Valley Road
Victorville, CA 92392

EQUIPMENT LOCATION: (01127)
Victor Valley Community College District
18422 Bear Valley Road
Victorville, CA 92392

DESCRIPTION:
GASOLINE DISPENSING FACILITY (NON-RETAIL) consisting of:

A) Tanks - Number of Tanks 2

Tank No.	1	2
1. Material Stored	87U	Diesel
2. Volume Gallons	500	500
3. Above/UnderGrnd	A	A

B) Dispensing Equipment
1. Gasoline Dispensing Nozzle-Product Rating 1
2. Diesel Dispensing Nozzles 1
3. Phase II Vapor Recovery System: Balance

CONDITIONS:
1. The toll-free telephone number that must be posted is 1-800-635-4617.
2. The owner/operator (o/o) shall maintain a log of all inspections, repairs, and maintenance on equipment subject to Rule 461. Such logs or records shall be maintained at the facility for at least two (2) years and shall be available to the District upon request.
3. Any modifications or changes to the piping or control fittings of the vapor recovery system require prior approval from the District.
4. The o/o shall perform a leak check of this equipment, and its associated vapor control devices, according to CARB test method TP-201.3B upon completion of construction, and once annually thereafter. Testing ensures the System is vapor tight, and operating properly.
5. The o/o shall maintain and operate this equipment in compliance with CARB Executive Order G-70-194.

Fee Schedule: 5(a) Rating: 1.0 SIC: 8211 SCC: 40600601 Location/UTM(Km): 473E/3820N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

BY: Copy DATE: 5/19/2005
For: Charles L. Fryxell
Air Pollution Control Officer

Victor Valley Community College District
18422 Bear Valley Road
Victorville, CA 92392

Mojave Desert AQMD
14306 Park Avenue, Victorville, CA 92392-2310 (760) 245-1661

PERMIT TO OPERATE

E003659

Operation under this permit must be conducted in compliance with all information included with the initial application,initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If copy is posted, original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: APRIL 2006

OWNER OR OPERATOR (0960)
CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

EQUIPMENT LOCATION: (01347)
CaSta - Mojave River Hatchery
12550 Jacaranda Avenue
Victorville, CA 92392

DESCRIPTION:
PUMP - EMERGENCY, GASOLINE, WELL #4 consisting of:

Allis-Chalmers Buda, 893 cu.in., model No. 6MO-893, 120 bhp, serial No. 371981, 500 gallon above ground tank.

CONDITIONS:

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This unit shall be limited to use for emergency power (when commercially available power has been interrupted) and operated weekly as part of a testing program which does not exceed 60 minutes per week.
3. The o/o shall maintain a log which, as a minimum contains:
   a. Date and length of time the engine is operated;
   b. Annual operation in terms of total calendar year fuel use (in gallons) or hours;
4. The log shall be maintained current, on-site for a minimum of two years and provided to District personnel on request.

Fee Schedule: 7(g) Rating: 1.0 SIC: 9512 SCC: 99999999 Location/UTM(Km): 473E/3820N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

BY: Copy DATE: 4/11/2005
For: Charles L. Fryxell
Air Pollution Control Officer

CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

Mojave Desert AQMD
14306 Park Avenue, Victorville, CA 92392-2310 (760) 245-1661

PERMIT TO OPERATE

E003660

Operation under this permit must be conducted in compliance with all information included with the initial application,initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If copy is posted, original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: APRIL 2006

OWNER OR OPERATOR (0960)
CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

EQUIPMENT LOCATION: (01347)
CaSta - Mojave River Hatchery
12550 Jacaranda Avenue
Victorville, CA 92392

DESCRIPTION:
PUMP, EMERGENCY, WELL # 8 consisting of:

International, 549 cu.in., model No. UV-549, 150 bhp, serial No. V549151838, 500 gallon propane above ground tank.

CONDITIONS:
1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This unit shall be limited to use for emergency power (when commercially available power has been interrupted) and operated weekly as part of a testing program which does not exceed 60 minutes per week.
3. The o/o shall maintain a log which, as a minimum contains:
   a. Date and length of time the engine is operated.
   b. Annual operation in terms of total calendar year fuel use (in gallons) or hours.
4. The log shall be maintained current, on-site for a minimum of two years and provided to District personnel on request.

Fee Schedule: 7(g) Rating: 1.0 SIC: 9512 SCC: 99999999 Location/UTM(Km): 473E/3820N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

BY: Copy DATE: 4/11/2005
For: Charles L. Fryxell
Air Pollution Control Officer

CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

Mojave Desert AQMD
14306 Park Avenue, Victorville, CA 92392-2310 (760) 245-1661

PERMIT TO OPERATE

E003661

Operation under this permit must be conducted in compliance with all information included with the initial application,initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If copy is posted, original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: APRIL 2006

OWNER OR OPERATOR (0960)
CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

EQUIPMENT LOCATION: (01347)
CaSta - Mojave River Hatchery
12550 Jacaranda Avenue
Victorville, CA 92392

DESCRIPTION:
PUMP, EMERGENCY, WELL #9 consisting of:

International, 549 cu.in., model No. UV-549, 150 bhp, serial No. V549148230, 500 gallon propane above ground tank.

CONDITIONS:

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This unit shall be limited to use for emergency power (when commercially available power has been interrupted) and operated weekly as part of a testing program which does not exceed 60 minutes per week.
3. The o/o shall maintain a log which, as a minimum contains:
   a. Date and length of time the engine is operated.
   b. Annual operation in terms of total calendar year fuel use (in gallons) or hours.
4. The log shall be maintained current, on-site for a minimum of two years and provided to District personnel on request.

Fee Schedule: 7(g) Rating: 1.0 SIC: 9512 SCC: 99999999 Location/UTM(Km): 473E/3820N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

BY: Copy DATE: 4/11/2005
For: Charles L. Fryxell
Air Pollution Control Officer

CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

Mojave Desert AQMD
14306 Park Avenue, Victorville, CA 92392-2310 (760) 245-1661

PERMIT TO OPERATE

E005119

Operation under this permit must be conducted in compliance with all information included with the initial application,initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If copy is posted, original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: APRIL 2006

OWNER OR OPERATOR (0960)
CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

EQUIPMENT LOCATION: (01347)
CaSta - Mojave River Hatchery
12550 Jacaranda Avenue
Victorville, CA 92392

DESCRIPTION:
EMERGENCY DIESEL PUMP, WELL #10 consisting of:

One Cummins, Diesel fired internal combustion engine, Model No. NTA 855-C and Serial No. 43904, Direct Injected, Inter Cooled, producing 360 bhp with 6 cylinders at 2100 rpm while consuming a maximum of . This equipment powers a Pump.

CONDITIONS:

1. Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This unit shall be limited to use for emergency power (when commercially available power has been interrupted) and operated weekly as part of a testing program which does not exceed 60 minutes per week.
3. The owner/operator, (o/o), shall use only diesel fuel whose sulfur concentration is less than 0.05% on a weight per weight basis.
4. The o/o shall maintain a log which, as a minimum contains:
   a. Date and length of time the engine is operated.
   b. Sulfur content of the fuel. The o/o may use the supplier's furnished certification of sulfur content if the certifications are maintained as a part of the log.
5. The log shall be maintained current, on-site for a minimum of two years and provided to District personnel on request.

Fee Schedule: 7(g) Rating: 1.0 SIC: 9512 SCC: 99999999 Location/UTM(Km): 473E/3820N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

BY: Copy DATE: 4/11/2005
For: Charles L. Fryxell
Air Pollution Control Officer

CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

Mojave Desert AQMD
14306 Park Avenue, Victorville, CA 92392-2310 (760) 245-1661

PERMIT TO OPERATE

N003662

Operation under this permit must be conducted in compliance with all information included with the initial application,initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If copy is posted, original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: APRIL 2006

OWNER OR OPERATOR (0960)
CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

EQUIPMENT LOCATION: (01347)
CaSta - Mojave River Hatchery
12550 Jacaranda Avenue
Victorville, CA 92392

DESCRIPTION:
GASOLINE DISPENSING FACILITY (NON-RETAIL) consisting of:

A) Tanks - Number of Tanks 2

Tank No.	1A	1B
1. Material Stored	87U	Diesel
2. Volume Gallons	1,000	1,000
3. Above/UnderGrnd	A	A

B) Dispensing Equipment
1. Gasoline Dispensing Nozzle-Product Rating 1
2. Diesel Dispensing Nozzles 0
3. Phase II Vapor Recovery System: Balance

CONDITIONS:
1. The toll-free telephone number that must be posted is 1-800-635-4617.
2. The owner/operator (o/o) shall maintain a log of all inspections, repairs, and maintenance on equipment subject to Rule 461. Such logs or records shall be maintained at the facility for at least two (2) years and shall be available to the District upon request.
3. Any modifications or changes to the piping or control fittings of the vapor recovery system requires prior approval from the District.

Fee Schedule: 5(a) Rating: 2.0 SIC: 9512 SCC: 99999999 Location/UTM(Km): 473E/3820N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

CaSta Dept of Fish & Game
12550 Jacaranda
Victorville, CA 92392

BY: Copy DATE: 4/11/2005
For: Charles L. Fryxell
Air Pollution Control Officer

hydrologue, Inc

Consulting Engineers & Geologists

VIA FACSIMILE: 760-241-7308 10/04/05

Lahontan Regional Water Quality Control Board
ATTN: FILE REVIEW: Robin Coale
15428 Civic Drive Suite 100 Victorville, CA 92392
Phone No.: 760-241-6583

RE: **PUBLIC RECORDS REQUEST**
Proposed New PE Building Site at
Victor Valley Community College
18422 Bear Valley Road
Victorville, San Bernardino County, California 92392
San Bernardino County Thomas Guide Page 4387 Page A-6

To Whom It May Concern:

hydrologue, Inc. (Hydrologue) is requesting that the Regional Water Quality Control Board (RWQCB) review its files and determine whether any records for the above addresses are maintained. If records are maintained for the above addresses, Hydrologue would like to make an appointment to review the records. If no records are maintained by RWQCB for the above addresses, Hydrologue requests written confirmation that no records are maintained. **Hydrologue requests a representative from each RWQCB Unit to sign and date below, and state if records are maintained for the above addresses. Please fax this page back to Hydrologue at (626) 585-0046 when completed. Thank you.**

Your assistance in this matter is greatly appreciated. This request is made pursuant to the California Public Records Act, Government Code §6230 et seq. Hydrologue will pay all fees for search, duplication and postage in accordance with the act and the regulations of your agency. However, please notify us prior to incurring any expenses in responding to this request. Please call me at (626) 585-9696 if you have any questions or need additional information.

Sincerely,

Maria for

Seyed Mortazavi-Principal

RWQCB Unit	Records maintained for the above addresses?	Signature & Date
Underground Tank		No Files
Well Investigation		10/5/05
Site Clean Up		Robin Coale
Landfill		

Ron Olitsky
President

DIGALERT

UNDERGROUND
SERVICE ALERT
of Southern California
PO Box 77070
Corona, CA 92877-0102
951-808-8100
Fax 951-808-8101

October 6, 2005

Seyed Mortazavi
Hydrologue, Inc.
2793 East Foothill Boulevard
Pasadena, CA 91107

Utility Information: Proposed New P E Building Site
Victor Valley Community College

Dear Seyed:

Enclosed on the following sheets are the current members who have asked for notification in the area of your proposed project. Our members supply this information and while Underground Service Alert of Southern California strives to keep the data updated, this is the most recent information that has been provided.

Remember to call ***1-800-227-2600*** at least 2 full working days before your project begins to get the lines marked out.

If you have any questions, please contact me at 951-808-8100 ext 114.

Sincerely,

Polly Dunn
Assistant Administrative Assistant

DESIGN LOOKUP ON 10/06/05 08:19 AM
COUNTY: SAN BERNARDINO PLACE: VICTORVILLE
GRIDS: 4386J05 4386J06 4387A05 4387A06

AVR01
APPLE VLY RANCHOS WTR
JERRY BENDER
P O BOX 7005
APPLE VALLEY, CA 92307
(760)247-6484
JERRYB@AVRWATER.COM

HES01
HESPERIA WTR DIST
JOHN LEVEILLEE
15776 MAIN ST
HESPERIA, CA 92345
(760)947-1451

SBC64
SAN BERNARDINO CO AREA 64
SIR/MADAM
P O BOX 5004
VICTORVILLE, CA 923935004
(760)955-9885

USCE73
UTI FOR SC EDISON DISTRIBUTION
EDISON OPERATOR

(626)302-1212

VIC01
CITY OF VICTORVILLE
SEAN MCGLADE
14343 CIVIC DR
VICTORVILLE, CA 92392
(760)955-5157
SMCGLADE@CI.VICTORVILLE.CA.US

HDC01
HI-DESERT CABLEVISION
JOE BERTOLA
12490 BUSINESS CENTER DR #1
VICTORVILLE, CA 92392
(760)843-3054

MCISOCAL
MCI
SIR/MADAM
2400 N GLENVILLE
RICHARDSON, TX 75082
(972)729-6016
INVESTIGATIONS@MCI.COM

SWG18
SW GAS
CARLOS MANZO
P O BOX 1498
VICTORVILLE, CA 923921498
(760)951-4166
CARLOS.MANZO@SWGAS.COM

UVZVICT
UTI FOR VERIZON - VICTORVILLE

10182 I AVENUE SUITE F

(760)244-3800

SOUTHWEST GAS CORPORATION

October 5, 2005

Mr. Seyed Mortazavi
Hydrologue Engineers
2793 East Foothill
Pasadena, CA 91107-3400

Dear Mr. Mortazavi,

Re: Will Serve Natural Gas to Victor Valley College PE Building Project near the other buildings on Jacaranda & Bear Valley Roads, Victorville, CA.

Please be advised that natural gas is available to the above referenced project in accordance with our existing rules and regulations as filed with the California Public Utilities Commission. Presently, there are natural gas distribution facilities in the street that will be extended to serve your project and an 8" steel high pressure line on Bear Valley Road.

Prior to committing to the extension of our facilities, please provide me with the following plans when they are available:

Site Plans
Plumbing Plans (including btuh per appliance)
Street Improvement (if applicable)

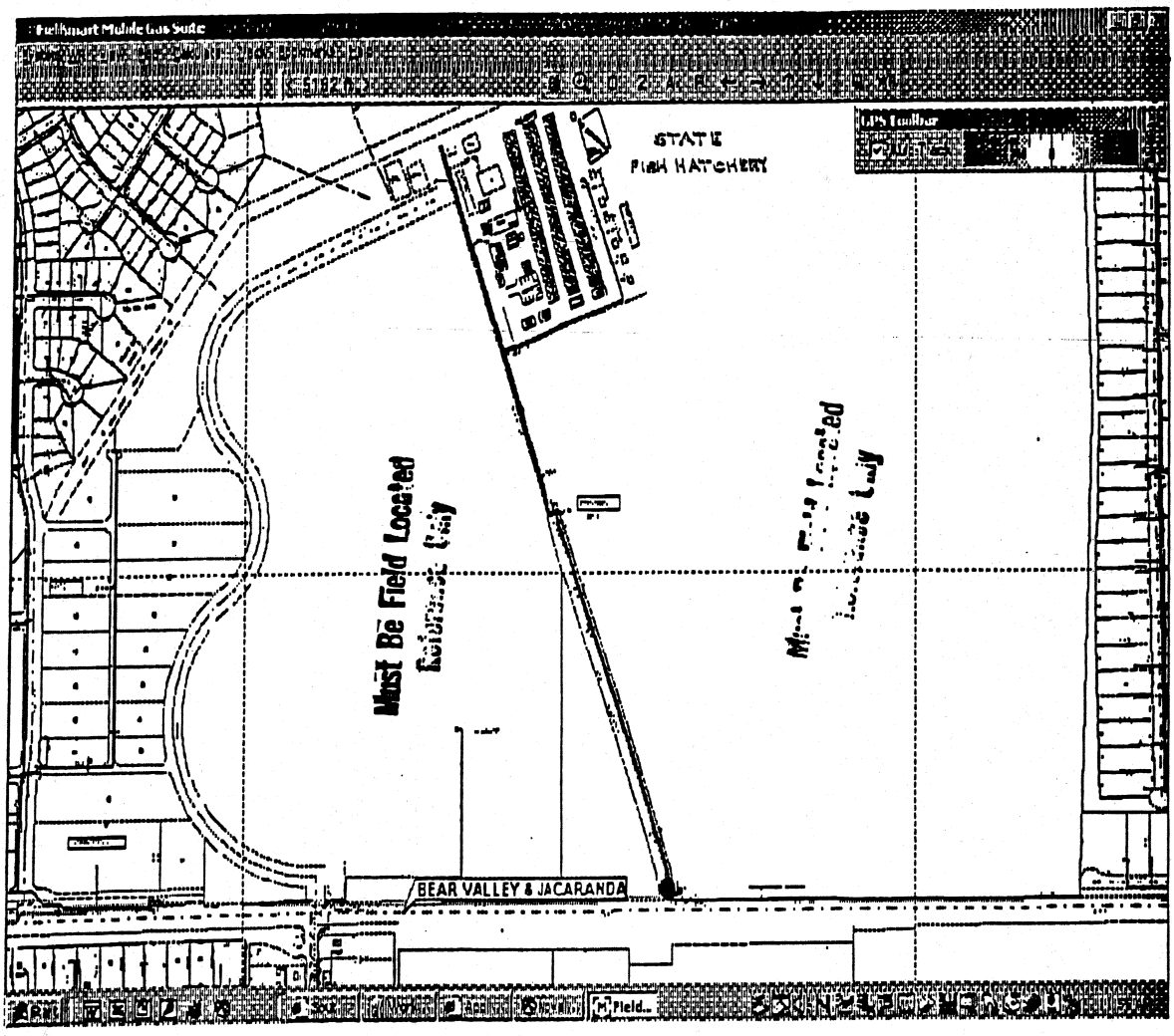
This will allow us to develop meter design drawings for the extension of our facilities. Preliminary estimates indicate no cost involved to provide 5 psi gas to this building.

I look forward to working with you. If you have any questions, do not hesitate to call me at (760) 951-4055, cell (760) 954-4796.

Sincerely,

Joseph A. Bryan
Senior Account Representative
Southern California Division

13471 Mariposa Road / Victorville, California 92392-5396
P.O. Box 1498 / Victorville, California 92393-1498 / (760) 241-9321
www.swgas.com



Victor Valley College Gas Lines must be field located. This map is for reference Only

an C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

Department of Toxic Substances Control

5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

October 06, 2005

Mr. Seyed Mortazavi, Principal
Hydrologue, Inc.
2793 East Foothill Boulevard
Pasadena, California 91107-3400

VICTOR VALLEY COMMUNITY COLLEGE, 18422 BEAR VALLEY ROAD,
VICTORVILLE, CALIFORNIA 92392
PR# 41040513

Dear Mr. Mortazavi :

The Department of Toxic Substances Control has received your letter to review records under the Public Records Act.

After a thorough review of our files we have found that no such records exist at this office pertaining to the site/facility referenced above.

If you have any questions or would like further information regarding your request, please contact or Regional Records Coordinators at (714) 484-5337.

Sincerely,

Julie Johnson
Regional Records Coordinator

ENVIRONMENTAL RECORD SEARCH

for the site

VICTOR VALLEY COMMUNITY COLLEGE

18422 BEAR VALLEY RD, VICTORVILLE CA

performed for

HYDROLOGUE

10-04-2005

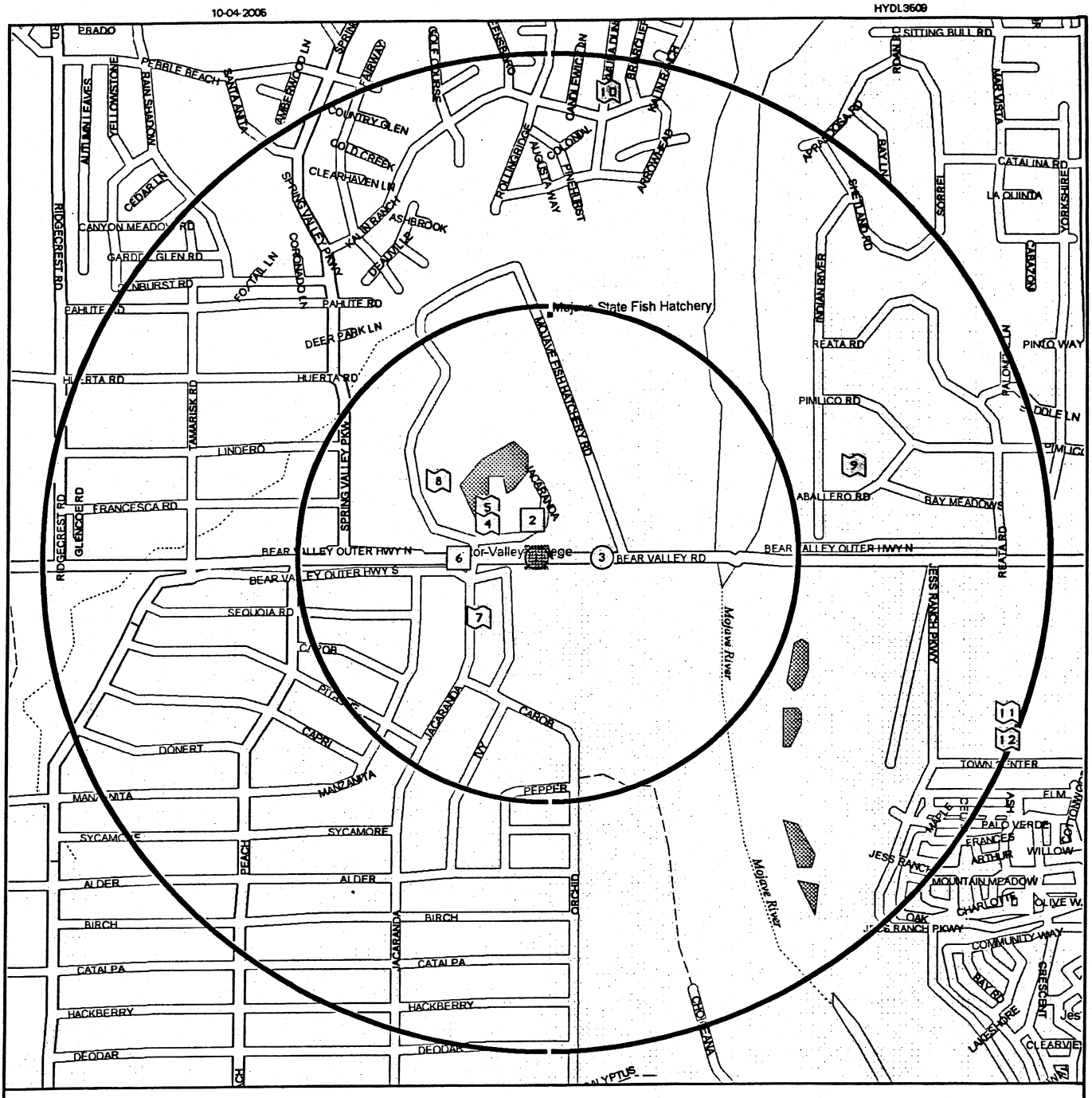
444 S CEDROS AVE, SUITE 200 SOLANA BEACH CA 92075 858 793-0641 www.bblenv.com

BBL
ENVIRONMENTAL INFORMATION

INTRODUCTION

This document, prepared on the request of HYDROLOGUE, reports the findings of BBL's investigation of environmental concerns in the vicinity of 18422 Bear Valley Rd, Victorville CA. It is divided in the following segments:

- **Map** - showing the location of the identified sites relative to the subject site. A total of 15 separate sites were identified.
- **Topographic** Map - showing the surrounding area of the subject site.
- **Summary** - listing the identified sites by street names.
- **Final Report** - describing the sources investigated and the resulting findings:



1.6 inches to 1/2 mile (the circles do not include any buffer zone)

- ⬡ ENVIRONMENTAL CONCERNS - HIGH PRIORITY
- ○ ENVIRONMENTAL CONCERNS
- ▢ ENVIRONMENTAL CONCERNS - WITH A 'NO FURTHER ACTION' STATUS'
- □ OPERATING PERMITS ONLY
- ⬠ WATER WELLS

APPROXIMATE LOCATION OF IDENTIFIED SITES IN THE VICINITY OF SUBJECT SITE
AT 18422 BEAR VALLEY RD, VICTORVILLE

1.	VICTOR VALLEY COMM COLLEGE	18422 BEAR VALLEY RD
2.	MOJAVE RIVER FISH HATCHERY	12550 JACARANDA AVE
3.	MOJAVE ROCK AND SAND	18525 BEAR VALLEY RD
4.	SBDNO COUNTY SERVICE AREA 64/S	WELL 06
5.	SBDNO COUNTY SERVICE AREA 64/S	WELL 04
6.	SONNY ARRINGDALE	18361 BEAR VALLEY RD
7.	SBDNO COUNTY SERVICE AREA 64/S	WELL 01
8.	WELL dhs3	SAN BERNARDINO CO SERVICE AREA
9.	SBDNO COUNTY SERVICE AREA 64/S	WELL 03
10.	SBDNO COUNTY SERVICE AREA 64/S	WELL 05
11.	JESS RANCH/	WELL AT BEAR VALLEY
12.	APPLE VALLEY RANCHOS WC/	MALL WELL

UNKNOWN LOCATIONS

CIRCLE K #7265	BEAR VALLEY RD
HARRIS TRANSPORTATION CO	PO BOX 1100
GEORGE AIR FORCE BASE	PO BOX 518

ENVIRONMENTAL RECORD SEARCH

SUMMARY

KNOWN ENVIRONMENTAL CONCERNS
VICTOR VALLEY COMMUNITY COLLE
18422 BEAR VALLEY RD, VICTORVILLE CA

Page: 1
Date: 10-04-2005
Job: HYDL3509

ADDRESS		CITY	LOCATION	SOURCE	STATUS	PAGE	MAP LOC	DIR
KNOWN ENVIRONMENTAL CONCERNS, WITHIN 1/4 MILE OF THE SUBJECT SITE								
18422	BEAR VALLEY RD	VICTORVILLE	VICTORY VALLEY COLLEGE	ERNS		2	1	
			VICTOR VALLEY COMM COLLEGE	RCRA		14		
			VICTOR VALLEY COMMUNTITY COLLE	UST	2005	18		
			VICTOR VALLEY COMMUNITY COLLEG	HWIS		16		
			VICTOR VALLEY COLLEGE	UST	99&A9	18		
			VICTOR VALLEY COLLEGE	UST	95&A9	18		
18525	BEAR VALLEY RD	HESPERIA	MOJAVE ROCK AND SAND	LUST	5R	7	3	E
			MOJAVE ROCK AND SAND	LUST	INACT	7		
	WELL 06		SBDNO COUNTY SERVICE AREA 64/S	WQ	AR	11	4	NW
	WELL 04	05N/04W-35R02 S	SBDNO COUNTY SERVICE AREA 64/S	WQ	AR	11	5	NW
	WELL 01	04N/04W-02A01 S	SBDNO COUNTY SERVICE AREA 64/S	WQ	AR	10	7	SW
	SAN BERNARDINO CO SERVICE AREA	05N/04W-35R02 S	WELL dhs3	WIP		8	8	NW
KNOWN ENVIRONMENTAL CONCERNS, WITHIN 1/2 - 3/4 MILE OF THE SUBJECT SITE								
	WELL 03	05N/04W-36K01 S	SBDNO COUNTY SERVICE AREA 64/S	WQ	AR	9	9	E
KNOWN ENVIRONMENTAL CONCERNS, WITHIN 3/4 - 1 MILE OF THE SUBJECT SITE								
	WELL 05	05N/04W-25N01 S	SBDNO COUNTY SERVICE AREA 64/S	WQ	AR	9	10	N
	WELL AT BEAR VALLEY	04N/04W-01A03 S	JESS RANCH/	WQ	AR	9	11	E
	MALL WELL	04N/04W-01A02 S	APPLE VALLEY RANCHOS WC/	WQ	AR	8	12	E
SITES WITH UNKNOWN OR NON-SPECIFIC LOCATION								
	BEAR VALLEY RD	VICTORVILLE	PROFLAME INC	HM		3		
	PO BOX 1100	VICTORVILLE	HARRIS TRANSPORTATION CO	LUST	INACT	7		
			HARRIS TRANSPORTATION CO	LUST	3A	7		

OPERATING PERMITS ONLY
VICTOR VALLEY COMMUNITY COLLE
18422 BEAR VALLEY RD, VICTORVILLE CA

Page: 1
Date: 10-04-2005
Job: HYDL3509

OPERATING PERMITS ONLY, WITHIN 1/4 MILE OF THE SUBJECT SITE

ADDRESS		CITY	LOCATION	SOURCE	STATUS	PAGE	MAP LOC	DIR
12550	JACARANDA AVE	VICTORVILLE	MOJAVE RIVER FISH HATCHERY	HWIS		16	2	NW
			MOJAVE RIVER HATCHERY	UST	8798A	18		
			DEPT OF FISH AND GAME	PCS		15		
18361	BEAR VALLEY RD	HESPERIA	SONNY ARRINGDALE	UST	93&A2	17	6	W

SITES WITH UNKNOWN OR NON-SPECIFIC LOCATION

	BEAR VALLEY RD	HESPERIA	CIRCLE K #7265	UST		17		
			CIRCLE K #7265	UST	2005	17		
			NEW AM PM FACILITY	UST	95&98	17		
			APEX BULK COMMODITIES	UST	93	17		
			7-ELEVEN STORE #2131/26388	UST	87	17		
	PO BOX 518	GEORGE AFB	GEORGE AIR FORCE BASE	HWIS		16		

REFERENCED SOURCES

Date: 10-04-2005
Job: HYDL3509

FEDERAL SOURCES

NPL NATIONAL PRIORITY LIST (09/15/04)
CERCLA CERCLIS (09/15/04)
NFRAP NFRAP (09/15/04)
FedFac FEDERAL FACILITIES (09/15/04)
ERNS EMERGENCY RESPONSE NOTIFICATION SYSTEM
HM HAZARDOUS MATERIAL INCIDENT REPORT SYSTEM (2003)
SETS SITE ENFORCEMENT TRACKING SYSTEM (10/12/03)
CDETS ENFORCEMENT DOCKET (DOCKET/CDETS) (09/04)
CD C-DOCKET (09/04)
RV RCRA VIOLATORS LIST (09/04)
TSD RCRA - TSD FACILITIES (09/04)

I	Incinerator	D	Land Disposal	T	Storage/Treatment

FD FEDERAL ENFORCEMENT DOCKETS

CALIFORNIA STATE SOURCES

AnnWrk ANNUAL WORK PLAN (10/27/03)

BKLG	Backlog	DLST	Delisted from the AWP	AWP	Active AWP site
REFRW	Referred to the RWQB	COM	Certified, maint mode	REFRC	Referred to RCRA
CERT	Certified after remediation				

CalSite CALSITES (10/27/03)
VC VOLUNTARY CLEANUP PROGRAM (10/27/03)
FE PROPERTIES NEEDING FURTHER EVALUATION (10/27/03)
RF REFERRED UNCONFIRMED PROPERTIES (10/27/03)
CS-nfa CALSITES - NO FURTHER ACTION (10/27/03)
CS CORTESE (10/03)
LUST LEAKING UNDERGROUND STORAGE TANKS (11/03)

0	No action	3B	Prel site assmnt underway	7	Remedial action underway
1	Leak being confirmed	5C	Pollution characterization	8	Post remedial action monitoring
3A	Site workplan submitted	5R	Remediation plan	9	Case closed

SWIS SOLID WASTE INFORMATION SYSTEM (11/03)
WIP WELL INVESTIGATION PROGRAM
WQ DRINKING WATER PROGRAM
SC SCHOOL PROPERTY EVALUATION PROGRAM (10/27/03)

REGIONAL SOURCES

NT TOXIC RELEASES
TP TOXIC PITS (01/03)
SR SOLID WASTE ASSESSMENT TEST - REGIONAL (01/03)

OPERATING PERMITS

RCRA RCRA GENERATORS (09/04)

L	Large Generator	T	Transporter	S	Small Generator

SARA SARA TITLE III,SECTION 313 (TRIS) (2003)
Nucl NUCLEAR REGULATORY COMMISSION LICENSEES (09/04)
PCB PCB WASTE HANDLERS DATABASE (09/04)
PCS PERMIT COMPLIANCE SYSTEM (PCS) (09/04)
AFS AIRS FACILITY SYSTEM (AFS) (09/04)
PE SECTION SEVEN TRACKING SYSTEM (09/04)
FIFRA FIFRA/TSCA TRACKING SYSTEM (09/04)
FIFS FEDERAL FACILITIES INFORMATION SYSTEM (FFIS) (09/04)
CICIS CHEMICALS IN COMMERCE INFORMATION SYSTEM (09/04)
FN FINDS EPA FACILITY INDEX SYSTEM (09/04)
HWIS HAZARDOUS WASTE INFORMATION SYSTEM (1984-2003)
UST UNDERGROUND STORAGE TANKS

ENVIRONMENTAL RECORD SEARCH

LISTED BY SOURCE

INTRODUCTION

BBL has used its best effort but makes no claims as to the completeness or accuracy of the referenced government sources or the completeness of the search. Our records are frequently updated but only as current as their publishing date and may not represent the entire field of known or potential hazardous waste or contaminated sites. To ensure complete coverage of the subject property and surrounding area, sites may be included in the list if there is any doubt as to the location because of discrepancies in map location, zip code, address, or other information in our sources. For additional information call 858 793-0641.

In accordance with ASTM E-1527-00, the following government sources have been searched for sites at the street address, unless otherwise stated, of the subject location.

FEDERAL SOURCES

NPL National Priority List

EPA has prioritized sites with significant risk to human health and the environment. These sites receive remedial funding under the Comprehensive Environmental Response Conservation and Liability Act (CERCLA).

No listings within 1 mile radius of the subject site.

CERCLIS Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS is a database used by the EPA to track activities conducted under the Comprehensive Environmental Response and Liability Act CERCLA (1980) and the amendment the Superfund Amendments and Reauthorization Act SARA (1986).

Sites to be included are identified primarily by the reporting requirements of hazardous substances Treatment, Storage and Disposal (TSD) facilities and releases larger than specific Reportable Quantities (RQ), established by EPA.

Using the National Oil and hazardous Substance Pollution Contingency Plan(National Contingency Plan) the EPA set priorities for cleanup.

The EPA rates National Contingency Plan sites according to a quantitative Hazard Ranking System (HRS) based on the potential health risk via any one or more pathways: groundwater, surface water, air, direct contact, and fire/explosion.

The EPA and state agencies seek to identify potentially responsible parties(PRP) and ultimately Responsible Parties (RP) who can be required to finance cleanup activities, either directly or through reimbursement of federal Superfund expenditures.

No listings within 1 mile radius of the subject site.

NFRAP No Further Remedial Action Planned sites (CERCLIS)

As of February 1995, CERCLIS sites designated 'No Further Remedial Action Planned' NFRAP have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the site being placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.

EPA has removed these NFRAP sites from CERCLIS to lift unintended barriers to the redevelopment of these properties. This policy change is part of EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens promote economic redevelopment of unproductive urban sites.

No listings within 1 mile radius of the subject site.

FEDFAC Federal Facilities

As part of the CERCLA program, federal facilities with known or suspected environmental problems, the Federal Facilities Hazardous Waste Compliance Docket is tracked separately to comply with a Federal Court order.

No listings within 1 mile radius of the subject site.

ERNS Emergency Response Notification System

The ERNS is a national computer database used to store information on unauthorized releases of oil and hazardous substances. The program is a cooperative effort of the Environmental Protection Agency, the Department of Transportation Research and Special Program Administration's John Volpe National Transportation System Center and the National Response Center.

There are primarily five Federal statutes that require release reporting the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) section 103; the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304; the Clean Water Act of 1972(CWA) section 311(b)(3); and the Hazardous Material Transportation Act of 1974(HMTA section 1808(b).

This list has been researched within half of a mile radius of the subject site.

Site: VICTORY VALLEY COLLEGE
Address: 18422 BEAR VALLEY RD
City: VICTORVILLE
Map Loc: 1 - the subject site
Status: 9100030903 100 OTH of ANTIMONY TRICHLORIDE (GRAM

VICTORY VALLEY COLLEGE 18422 BEAR VALLEY
UNITS: OTHER=GRAMS STUDENT FOUND SUBSTANCE & GOT ON HER HAND
CLEANUP BY SAN BERNARDINO CODOH

HMIRS Hazardous Material Incident Report System

The Hazardous Material Report Incident Report Subsystem HMIRS of the Research and Special Programs Administration (RSPA) Hazardous Material Information System was established in 1971 to fulfill the requirements of the Federal hazardous material transportation law. Part 171 of Title 49, Code of Federal Regulations (49 CFR) contains the incident reporting requirements of carriers of hazardous materials. An unintentional release of hazardous materials meeting the criteria set forth in Section 171.16, 49 CFR, must be

reported on DOT Form 5800.1. The data from the reports received are subsequently entered in the HAZMAT database.

This list has been researched within the street address of the subject site.

Site: PROFLAME INC
Address: BEAR VALLEY RD
City: VICTORVILLE
Status:

id: 1998041106

On 04/06/1998, an incident involving a cargo vehicle occured. PETROLEUM GASES LIQUEFIED was released.

One container (TANK TRK) failed due to vehicle overturn.

SETS Site Enforcement Tracking System (SETS)

When expanding Superfund monies at a CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) Site, EPA must conduct a search to identify parties with potential financial responsibility for remediation of uncontrolled hazardous waste sites. EPA regional Superfund Waste Management Staff issue a notice letter to the potentially responsible party (PRP). The status field contains the EPA ID number and name of the site where the actual pollution occurred.

No listings within 1 mile radius of the subject site.

DO Enforcement Docket System (DOCKET)/Consent Decree Tracking System (CDETS)

DOCKET tracks civil judicial cases against environmental polluters, while CDETS processes court settlements, called consent decrees.

No listings within half of a mile radius of the subject site.

CD Criminal Docket System (C-DOCKET)

The Criminal Docket System is a comprehensive automated system for tracking criminal enforcement actions. C-Docket handles data for all environmental statues and tracks enforcement actions from the initial stages of investigations through conclusion.

No listings within half of a mile radius of the subject site.

RCRA RCRA Violators List (CORRACTS)

The Resource Conservation and Recovery Act of 1976 provides for "cradle to grave" regulation of hazardous wastes. RCRA requires regulation of hazardous waste generators, transporters, and storage/treatment/disposal sites. Evaluation to potential violations, ranging from manifest requirements to hazardous waste discharges, is typically conducted by the US EPA. This database is also known as Corrective Action Report (CORRACTS)

If enforcement is required, it is typically delegated to a state agency.

No listings within 1 mile radius of the subject site.

RCRA-D Resource Conservation and Recovery Information System - Treatment, Storage & Disposal

The Environmental Protection Agency regulates the treatment, storage and disposal of hazardous material through the Resource Conservation and Recovery Act (RCRA). All hazardous waste TSD facilities are required to notify EPA of their existence by submitting the Federal Notification of Regulated Waste Activity Form (EPA Form 8700-12) or a state equivalent form as well as part A (EPA form 8700-23) and Part B of their Hazardous Waste Permit Application.

Status Codes:		
	I	Incinerator
	T	Storage/Treatment facility other than Incinerator
	D	Land Disposal Facility

No listings within 1 mile radius of the subject site.

FD Federal Enforcement Dockets

The US EPA, Office of Enforcement, maintains a list of sites under enforcement by the US EPA.

No listings within 1 mile radius of the subject site.

CALIFORNIA STATE SOURCES

AW Annual Work Plan (previously known as Bond Expenditure Plan)

The California Health and Safety code, as amended by AB 129, requires the California Environmental Protection Agency to develop a site-specific expenditure plan as the basis for an appropriation of California Hazardous Substance Cleanup Bond Act of 1984 funds.

The Agency is also required to update the report annually and report any significant adjustments to the Legislature on an ongoing basis. The plan identifies California hazardous waste sites targeted for cleanup by responsible parties, the California and the Federal Environmental Protection Agency over the next five years.

Status Codes:		
	BKLG	Backlog, Potential Annual Work Plan Site
	AWP	Active Annual Work Plan site
	COM	Certified, but still in Operation & Maintenance mode
	CERT	Certified after remediation
	DLST	Delisted from the AWP
	REFRC	Former AWP site referred to RCRA
	REFRW	Former AWP site referred to the Regional Water Quality Board

No listings within 1 mile radius of the subject site.

CALS CALSITES

The Site Mitigation and Brownfields Reuse Database (CALSITES) identifies certain potential hazardous waste sites. The identification of these sites were generally not made via sampling and site characterization, they were made as a result of file searches and windshield surveys. Some of the sites may have had a site inspection with sampling.

The information has been compiled into this database by the California Environmental Protection Agency, Department of Toxic Substance Control (DTSC) in accordance with Section 25359.6 of the California Health and Safety Code.

This database was previously known as The Abandoned Sites Program Information System ASPIS.

Status Codes:		
	PEARL	Preliminary Endangerment Assessment Required,Low priority
	PEARM	Preliminary Endangerment Assessment Required,Medium priority
	PEARH	Preliminary Endangerment Assessment Required,High priortiy
	SSR	Site Screening Required
	HRR	Hazard Ranking Required
	PRPR	Potential Responsible Party Search Required
	EPA	EPA is the lead agency
	RCRA	Mitigated under the RCRA permitting program
	RWQCB	Mitigated under the lead of the Regional Water Quality Boar
	CNTY	County lead
	OAL	Other Agency lead

No listings within 1 mile radius of the subject site.

VCP Voluntary Cleanup Program

This category contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have requested that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Status Codes:		
	VCP	Property with either confirmed or unconfirmed releases and project proponents have requested that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSCs costs.
	VCOMP - The scope of work in the VCP Agreement has been completed.	
	PEAP	Preliminary Endangerment Assessment in Progress.
	NFA	No Further Action Required
	VTERM	VCP agreement Terminated was terminated prior to the completion of the scope of work in the agreement.
	BZHW	Border Zone/Hazardous Waste Properties chapter 6.5 of the Health and Safety Code, commencing with section 25220.
	COM	Certified, but still in Operation & Maintenance mode
	CERT	Certified after remediation
	HWDLU	Hazardous Waste Disposal Land Use with a voluntary deed restrictions.
	NA	CalMortgage Properties. DTSC is conducting a Phase I Assessment

No listings within half of a mile radius of the subject site.

FE Properties Needing Further Evaluation

This category of The Site Mitigation and Brownfields Reuse Program Database (SMBRPD), contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process.

Status Codes:		
	PEAP	Preliminary Endangerment Assessment (PEA) in Progress
	PEAR	Preliminary Endangerment Assessment (PEA) is Required
	RR	Removal Action Required

No listings within half of a mile radius of the subject site.

REF Referred Unconfirmed Properties

This category of The Site Mitigation and Brownfields Reuse Program Database (SMBRPD), contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Status Codes:		
	REFRW	Referred to Regional Water Quality Control Board
	REFRC	Referred to DTSC's Hazardous Waste Program (RCRA).
	REFOA	Referred to other agencies.

No listings within half of a mile radius of the subject site.

CALS CALSITES - No Further Action

This section includes the sites on the Calsite list, which have been flagged for no further action by the California Environmental Protection Agency, Department of Toxic Substance Control (DTSC) in accordance with Section 25359.6 of the California Health and Safety Code.

Status Codes:		
	NFA	No Further Action for DTSC
	RED	Closed Case marked for removal from list

No listings within half of a mile radius of the subject site.

CORTESE State of California Office of Planning and Research

This database is a consolidation of information from various sources. It is maintained by the State Office of Planning and Research and lists potential and confirmed hazardous waste or substances sites.

Facilities that have been reported elsewhere in this report will not be included in the listing below.

Status Codes:		
	WRCBT	Tank leaks. Compiled by Water Resource Control Board
	DHS1	Abandoned hazardous waste site. Compiled by Toxic Substance Control Div. of DHS
	DHS2	Contaminated public water drinking wells serving less than 200 connections. Compiled by Env. Health Div. of DHS
	DHS3	Contaminated public water drinking wells serving more than 200 connections
	DHS5	Sites pursuant to section 25356 of the Health and Safety Code (see BEP)
	CWMB	Solid waste disposal sites with known migration of hazardous waste

No listings within 1 mile radius of the subject site.

LUST Leaking Underground Storage Tanks - California State

The Leaking Underground Storage Tanks Information System is maintained by the State Water Resource Board pursuant to Section 25295 of the Health and Safety Code.

Status Codes:		
	0	No action
	1	Leak being confirmed
	3A	Prel site assessment workplan submitted
	3B	Prel site assessment underway
	5C	Pollution characterization
	5R	Remediation plan
	7	Remedial action underway
	8	Post remedial action monitoring
	9	Case closed
	P	Case purged from agency list

This list has been researched within 1 mile radius of the subject site.

Site: MOJAVE ROCK AND SAND
Address: 18525 BEAR VALLEY RD
City: HESPERIA
Map Loc: 3 - about .1 mile E of the subject
Status: 5R - Remediation Plan submitted.

It was discovered during tank closure. Only the soil is impacted. The contaminated soil has been excavated and treated, e.g. landfarming. The case, 07100752, is managed by a Local agency.

Site: MOJAVE ROCK AND SAND
Address: 18525 BEAR VALLEY RD
City: HESPERIA
Map Loc: 3 - about .1 mile E of the subject
Status: INACT -

Site: HARRIS TRANSPORTATION CO
Address: PO BOX 1100
City: VICTORVILLE
Status: INACT -

Site: HARRIS TRANSPORTATION CO
Address: PO BOX 1100
City: VICTORVILLE
Status: 3A - Prelim Site Assessment workplan submitted.

The case, 07100759, is managed by a Local agency.

SWIS Solid Waste Information System

As legislated under the Solid Waste Management and Resource Recovery Act of 1972, the California Waste Management Board maintains lists of certain facilities, i.e. Active solid waste disposal sites, Inactive or Closed solid waste disposal sites and Transfer facilities.

No listings within 1 mile radius of the subject site.

WIP Well Investigation Program

The Well Investigation Program (AB1803) identifies groundwater that is already contaminated and empowers the California Department of Health Services and local health officers to order ongoing monitoring programs. The focus of this program is to monitor and protect drinking water.

This list has been researched within 1 mile radius of the subject site.

Site: WELL dhs3
Address: SAN BERNARDINO CO SERVICE AREA
City: 05N/04W-35R02 S
Map Loc: 8 - about .26 mile NW of the subject
Status:

0.70 ppb of TOTAL THMS (action level 100.0) was reported by DHS-AB21.
0.70 ppb of BROMOFORM (action level 100.0) was reported on 09/22/89 by DHS-AB21.
0.050 ppb of DBCP (action level 0.2) was reported on 06/19/89 by DHS-AB21.

WQ Drinking Water Program

The California Health and Safety Code section 116275-116300 stipulates that it is the intent of the Legislature to improve laws governing drinking water quality to improve upon the minimum requirements of the federal Safe Drinking Water Act Amendments of 1986, to establish primary drinking water standards that are at least as stringent as those established under the federal Safe Drinking Water Act, and to establish a program under this chapter that is more protective of public health than the minimum federal requirements.

In order to provide for the orderly and efficient delivery of safe drinking water the State Department of Health Services collect information on the quality of public drinking water wells under the California Drinking Program.

Below, the latest and maximum analysis of contaminants are reported (only positive reading are included). MCL is the Maximum Contaminant Level or enforceable drinking water standard. RPHL is the Recommended Public Health Level. Additional information is available upon request.

This list has been researched within 1 mile radius of the subject site.

Owner: APPLE VALLEY RANCHOS WC/
Well: MALL WELL
WellNo: 04N/04W-01A02 S
Map Loc: 12 - about .96 mile E of the subject
Status: AR - Active Raw (sampled before treatment)

WATER QUALITY:

		units	latest		maximum	MCL/RPHL
SOURCE TEMPERATURE C	C	20	3/20/95	20	3/20/95	
ODOR THRESHOLD @ 60 C	TON	1	9/15/99	1	9/15/99	3/-
SPECIFIC CONDUCTANCE	US	240	9/15/99	280	4/7/93	2200/-
PH, FIELD		7.4	3/20/95	7.4	3/20/95	
PH, LABORATORY		7.6	9/15/99	7.8	4/16/96	
ALKALINITY (TOTAL) AS CACO3	MG/L	73	9/15/99	96	4/7/93	
BICARBONATE ALKALINITY	MG/L	89	9/15/99	117.1	4/7/93	
CARBONATE ALKALINITY	MG/L	.23	9/15/99	.23	9/15/99	
NITRATE NITROGEN (NO3-N)	UG/L	2700	8/9/94	2700	8/9/94	
HARDNESS (TOTAL) AS CACO3	MG/L	88	9/15/99	98	4/7/93	
CALCIUM	MG/L	26.3	9/15/99	32	4/7/93	
MAGNESIUM	MG/L	5.5	9/15/99	5.5	9/15/99	
SODIUM	MG/L	14.5	9/15/99	16.5	4/7/93	
SODIUM ABSORPTION RATIO		.67	9/15/99	.67	9/15/99	
POTASSIUM	MG/L	1.5	9/15/99	1.5	9/15/99	
CHLORIDE	MG/L	14.8	9/15/99	14.8	9/15/99	600/-
SULFATE	MG/L	16.1	9/15/99	16.1	9/15/99	600/-
FLUORIDE (TEMP DEPENDENT)	MG/L	.23	9/15/99	.4	4/16/96	1.7/-
MANGANESE	UG/L	3.4	9/15/99	3.4	9/15/99	50/-

GROSS ALPHA	PCI/L	.6	5/15/95	2.3	10/1/92	15/-
GROSS ALPHA COUNTING ERROR	PCI/L	1.2	11/16/98	1.4	1/23/95	
BROMOFORM (THM)	UG/L	.6	7/16/ 1	.6	7/16/ 1	100/-
TOTAL DISSOLVED SOLIDS	MG/L	140	9/15/99	145.2	4/7/93	1500/-
LANGELIER INDEX @ 60 C		.5	9/15/99	.5	9/15/99	
LANGELIER AT SOURCE TEMP		.78	3/20/95	1.29	6/25/92	
HYDROXIDE ALKALINITY	MG/L	.007	9/15/99	.007	9/15/99	
NITRATE (AS NO3)	MG/L	6.7	7/16/ 1	10.8	4/7/93	45/-
CARBON DIOXIDE	UG/L	4.47	9/15/99	4.47	9/15/99	
TURBIDITY, LABORATORY	NTU	.3	9/15/99	.3	9/15/99	5/-
TOTAL TRIHALOMETHANES	UG/L	.6	7/16/ 1	.6	7/16/ 1	100/-
AGGRSSIVE INDEX (CORROSIVITY)		11.4	9/15/99	11.4	9/15/99	
URANIUM COUNTING ERROR	PCI/L	.7	11/16/98	.7	11/16/98	
NITRATE + NITRITE (AS N)	UG/L	2120	9/15/99	2700	8/9/94	

Owner: JESS RANCH/
Well: WELL AT BEAR VALLEY
WellNo: 04N/04W-01A03 S
Map Loc: 11 - about .9399999999999999 mile E of the subject
Status: AR - Active Raw (sampled before treatment)

Owner: SBDNO COUNTY SERVICE AREA 64/S
Well: WELL 05
WellNo: 05N/04W-25N01 S
Map Loc: 10 - about .9 mile N of the subject
Status: AR - Active Raw (sampled before treatment)

WATER QUALITY:

		units	latest		maximum	MCL/RPHL
SOURCE TEMPERATURE C	C	20	2/15/ 2	20	2/15/ 2	
COLOR	UNITS	1	3/14/ 1	10	5/14/87	15/-
ODOR THRESHOLD @ 60 C	TON	1	3/14/ 1	1	3/14/ 1	3/-
SPECIFIC CONDUCTANCE	US	150	3/14/ 1	250	6/19/89	2200/-
PH, FIELD		8	7/25/96	8	7/25/96	
PH, LABORATORY		7.6	2/15/ 2	8.02	2/4/98	
ALKALINITY (TOTAL) AS CACO3	MG/L	76	3/14/ 1	91	6/19/89	
BICARBONATE ALKALINITY	MG/L	76	3/14/ 1	111	6/19/89	
AMMONIA (NH3-N)	MG/L	.11	3/14/ 1	.11	3/14/ 1	
HARDNESS (TOTAL) AS CACO3	MG/L	76	3/14/ 1	98	6/19/89	
CALCIUM	MG/L	19.4	3/14/ 1	24.2	5/14/87	
MAGNESIUM	MG/L	2.76	3/14/ 1	12	6/19/89	
SODIUM	MG/L	13.8	3/14/ 1	17.7	5/9/95	
POTASSIUM	MG/L	1.27	3/14/ 1	1.8	5/14/87	
CHLORIDE	MG/L	8	3/14/ 1	8	3/14/ 1	600/-
SULFATE	MG/L	6	3/14/ 1	14	6/19/89	600/-
FLUORIDE (TEMP DEPENDENT)	MG/L	.29	3/14/ 1	.3	5/14/87	1.7/-
BARIUM	UG/L	17	3/14/ 1	17	3/14/ 1	1000/-
IRON	UG/L	32	3/14/ 1	2210	2/4/98	300/-
MANGANESE	UG/L	183	2/4/98	183	2/4/98	50/-
ZINC	UG/L	1360	2/4/98	1360	2/4/98	
GROSS ALPHA	PCI/L	1.3	7/16/98	4	9/22/89	15/-
GROSS ALPHA COUNTING ERROR	PCI/L	.44	2/15/ 2	3	6/19/89	
TOTAL DISSOLVED SOLIDS	MG/L	120	3/14/ 1	170	6/19/89	1500/-
LANGELIER INDEX @ 60 C		.21	2/15/ 2	.42	7/25/96	
LANGELIER AT SOURCE TEMP		.49	2/15/ 2	1.01	1/9/94	
NITRATE (AS NO3)	MG/L	3	8/10/ 1	13	6/19/89	45/-
TURBIDITY, LABORATORY	NTU	.2	3/14/ 1	3.9	5/14/87	5/-
AGGRSSIVE INDEX (CORROSIVITY)		11.25	2/15/ 2	11.59	7/25/96	
NITRATE + NITRITE (AS N)	UG/L	1700	3/14/ 1	1700	3/14/ 1	
FLUORIDE	UG/L	290	3/14/ 1	290	3/14/ 1	2000/-

Owner: SBDNO COUNTY SERVICE AREA 64/S
Well: WELL 03
WellNo: 05N/04W-36K01 S

Map Loc: 9 - about .61 mile E of the subject
Status: AR - Active Raw (sampled before treatment)

WATER QUALITY:

		units	latest		maximum	MCL/RPHL
SOURCE TEMPERATURE C	C	20	12/22/97	20	12/22/97	
COLOR	UNITS	1	3/14/ 1	1	3/14/ 1	15/-
ODOR THRESHOLD @ 60 C	TON	1	3/14/ 1	1	3/14/ 1	3/-
SPECIFIC CONDUCTANCE	US	260	3/14/ 1	360	6/19/89	2200/-
PH, FIELD		6.3	3/8/ 2	7.4	1/9/94	
PH, LABORATORY		6.3	3/18/ 2	7.7	5/9/95	
ALKALINITY (TOTAL) AS CACO3	MG/L	84	3/14/ 1	139	6/19/89	
BICARBONATE ALKALINITY	MG/L	84	3/14/ 1	170	6/19/89	
AMMONIA (NH3-N)	MG/L	.01	3/14/ 1	.01	3/14/ 1	
HARDNESS (TOTAL) AS CACO3	MG/L	120	3/14/ 1	144	6/19/89	
CALCIUM	MG/L	31.4	3/14/ 1	42	6/19/89	
MAGNESIUM	MG/L	6.92	3/14/ 1	9.3	6/19/89	
SODIUM	MG/L	16.9	3/14/ 1	19.9	5/9/95	
POTASSIUM	MG/L	1.74	3/14/ 1	1.74	3/14/ 1	
CHLORIDE	MG/L	24	3/14/ 1	24	3/14/ 1	600/-
SULFATE	MG/L	33	3/14/ 1	33	3/14/ 1	600/-
FLUORIDE (TEMP DEPENDENT)	MG/L	.56	3/14/ 1	.56	3/14/ 1	1.7/-
BARIUM	UG/L	36	3/14/ 1	36	3/14/ 1	1000/-
LEAD	UG/L	18	3/23/92	18	3/23/92	
GROSS ALPHA	PCI/L	.1	7/26/99	6	1/22/90	15/-
GROSS ALPHA COUNTING ERROR	PCI/L	1.01	7/26/99	3	6/19/89	
TOTAL DISSOLVED SOLIDS	MG/L	190	3/14/ 1	240	6/19/89	1500/-
LANGELIER INDEX @ 60 C		.04	1/9/94	.04	1/9/94	
LANGELIER AT SOURCE TEMP		.7	7/6/00	.81	1/9/94	
NITRATE (AS NO3)	MG/L	9.6	11/1/ 1	18	11/6/00	45/-
TURBIDITY, LABORATORY	NTU	.2	3/14/ 1	.8	5/9/95	5/-
AGGRSSIVE INDEX (CORROSIVITY)		11.38	7/6/00	11.38	7/6/00	
NITRATE + NITRITE (AS N)	UG/L	2500	3/14/ 1	2500	3/14/ 1	
FLUORIDE	UG/L	560	3/14/ 1	560	3/14/ 1	2000/-

Owner: SBDNO COUNTY SERVICE AREA 64/S
Well: WELL 01
WellNo: 04N/04W-02A01 S
Map Loc: 7 - about .18 mile SW of the subject
Status: AR - Active Raw (sampled before treatment)

WATER QUALITY:

		units	latest		maximum	MCL/RPHL
SOURCE TEMPERATURE C	C	20	12/22/97	20	12/22/97	
COLOR	UNITS	1	3/14/ 1	1	3/14/ 1	15/-
ODOR THRESHOLD @ 60 C	TON	1	3/14/ 1	1	3/14/ 1	3/-
SPECIFIC CONDUCTANCE	US	200	3/14/ 1	290	6/19/89	2200/-
PH, FIELD		7.84	12/22/97	7.84	12/22/97	
PH, LABORATORY		7.3	10/31/ 1	8.1	5/9/95	
ALKALINITY (TOTAL) AS CACO3	MG/L	92	3/14/ 1	110	6/19/89	
BICARBONATE ALKALINITY	MG/L	92	3/14/ 1	134	6/19/89	
AMMONIA (NH3-N)	MG/L	.13	3/14/ 1	.13	3/14/ 1	
HARDNESS (TOTAL) AS CACO3	MG/L	66	3/14/ 1	98	6/19/89	
CALCIUM	MG/L	22	3/14/ 1	37	6/19/89	
MAGNESIUM	MG/L	2.74	3/14/ 1	4.1	3/23/92	
SODIUM	MG/L	25.5	3/14/ 1	25.5	3/14/ 1	
POTASSIUM	MG/L	1.39	3/14/ 1	2.1	1/22/98	
CHLORIDE	MG/L	14	3/14/ 1	14	3/14/ 1	600/-
SULFATE	MG/L	10	3/14/ 1	17	6/19/89	600/-
FLUORIDE (TEMP DEPENDENT)	MG/L	.49	3/14/ 1	.49	3/14/ 1	1.7/-
ARSENIC	UG/L	3.3	1/22/98	3.3	1/22/98	50/-
BARIUM	UG/L	19	3/14/ 1	19	3/14/ 1	1000/-
CHROMIUM, HEXAVALENT	UG/L	1.1	8/10/ 1	1.4	2/7/ 1	
IRON	UG/L	185	3/23/92	343	6/19/89	300/-
ZINC	UG/L	55	3/23/92	55	3/23/92	
ALUMINUM	UG/L	100	6/19/89	100	6/19/89	1000/-

GROSS ALPHA	PCI/L	1.4	2/15/ 2	3	9/22/89	15/-
GROSS ALPHA COUNTING ERROR	PCI/L	.54	2/15/ 2	2	9/22/89	
TOTAL DISSOLVED SOLIDS	MG/L	150	3/14/ 1	150	3/14/ 1	1500/-
LANGELIER INDEX @ 60 C		.39	12/22/97	.39	12/22/97	
LANGELIER AT SOURCE TEMP		.4	7/6/00	.69	3/10/99	
NITRATE (AS NO3)	MG/L	3.8	8/10/ 1	9	3/14/ 1	45/-
TURBIDITY, LABORATORY	NTU	.27	3/14/ 1	.27	3/14/ 1	5/-
AGGRSSIVE INDEX (CORROSIVITY)		11.5	7/6/00	11.57	12/22/97	
NITRATE + NITRITE (AS N)	UG/L	2000	3/14/ 1	2000	3/14/ 1	
FLUORIDE	UG/L	490	3/14/ 1	490	3/14/ 1	2000/-

Owner: SBDNO COUNTY SERVICE AREA 64/S
Well: WELL 04
WellNo: 05N/04W-35R02 S
Map Loc: 5 - about .15 mile NW of the subject
Status: AR - Active Raw (sampled before treatment)

WATER QUALITY:

		units	latest		maximum	MCL/RPHL
SOURCE TEMPERATURE C	C	20	7/25/96	20	7/25/96	
COLOR	UNITS	1	3/14/ 1	1	3/14/ 1	15/-
ODOR THRESHOLD @ 60 C	TON	1	3/14/ 1	1	3/14/ 1	3/-
SPECIFIC CONDUCTANCE	US	165	3/14/ 1	210	6/19/89	2200/-
PH, FIELD		8.61	7/25/96	8.61	7/25/96	
PH, LABORATORY		8	3/14/ 1	8.79	1/22/98	
ALKALINITY (TOTAL) AS CACO3	MG/L	80	3/14/ 1	80	3/14/ 1	
BICARBONATE ALKALINITY	MG/L	80	3/14/ 1	98	6/19/89	
AMMONIA (NH3-N)	MG/L	.11	3/14/ 1	.11	3/14/ 1	
HARDNESS (TOTAL) AS CACO3	MG/L	20	3/14/ 1	38	10/5/92	
CALCIUM	MG/L	6.8	3/14/ 1	13.6	10/5/92	
MAGNESIUM	MG/L	.73	3/14/ 1	4.9	1/22/98	
SODIUM	MG/L	35.8	3/14/ 1	35.8	3/14/ 1	
POTASSIUM	MG/L	.9	3/14/ 1	2	1/22/98	
CHLORIDE	MG/L	12	3/14/ 1	12	3/14/ 1	600/-
SULFATE	MG/L	8	3/14/ 1	14	6/19/89	600/-
FLUORIDE (TEMP DEPENDENT)	MG/L	.33	3/14/ 1	.587	1/22/98	1.7/-
ARSENIC	UG/L	13.4	1/22/98	13.4	1/22/98	50/-
CHROMIUM, HEXAVALENT	UG/L	1.6	8/10/ 1	2.9	2/7/ 1	
COPPER	UG/L	60	3/14/ 1	60	3/14/ 1	1000/-
ZINC	UG/L	31	3/14/ 1	85	10/5/92	
GROSS ALPHA	PCI/L	1.5	7/16/98	4	6/19/89	15/-
GROSS ALPHA COUNTING ERROR	PCI/L	.46	2/15/ 2	2	6/19/89	
BROMOFORM (THM)	UG/L	.7	9/22/89	.7	9/22/89	100/-
DIBROMOCHLOROPROPANE (DBCP)	UG/L	.05	6/19/89	.05	6/19/89	.2/-
TOTAL DISSOLVED SOLIDS	MG/L	120	3/14/ 1	170	6/19/89	1500/-
LANGELIER INDEX @ 60 C		.9	7/25/96	.9	7/25/96	
LANGELIER AT SOURCE TEMP		.15	7/6/00	1.17	1/9/94	
NITRATE (AS NO3)	MG/L	5.6	8/10/ 1	9.7	9/7/00	45/-
TURBIDITY, LABORATORY	NTU	.22	3/14/ 1	.22	3/14/ 1	5/-
TOTAL TRIHALOMETHANES	UG/L	.7	9/22/89	.7	9/22/89	100/-
AGGRSSIVE INDEX (CORROSIVITY)		11.74	7/6/00	12.07	7/25/96	
NITRATE + NITRITE (AS N)	UG/L	1700	3/14/ 1	1700	3/14/ 1	
FLUORIDE	UG/L	330	3/14/ 1	330	3/14/ 1	2000/-

Owner: SBDNO COUNTY SERVICE AREA 64/S
Well: WELL 06
WellNo:
Map Loc: 4 - about .13 mile NW of the subject
Status: AR - Active Raw (sampled before treatment)

WATER QUALITY:

		units	latest		maximum	MCL/RPHL
SOURCE TEMPERATURE C	C	20	2/14/ 2	20	2/14/ 2	
COLOR	UNITS	1	3/14/ 1	1	3/14/ 1	15/-
ODOR THRESHOLD @ 60 C	TON	1	2/14/ 2	1	2/14/ 2	3/-

SPECIFIC CONDUCTANCE	US	180	2/14/ 2	200	3/27/92	2200/-
PH, FIELD		8.3	7/25/96	8.3	7/25/96	
PH, LABORATORY		8.1	2/14/ 2	8.6	3/27/92	
ALKALINITY (TOTAL) AS CACO3	MG/L	92	2/14/ 2	92	2/14/ 2	
BICARBONATE ALKALINITY	MG/L	110	2/14/ 2	110	2/14/ 2	
AMMONIA (NH3-N)	MG/L	.11	3/14/ 1	.11	3/14/ 1	
HARDNESS (TOTAL) AS CACO3	MG/L	56	2/14/ 2	56	2/14/ 2	
CALCIUM	MG/L	17	2/14/ 2	17	2/14/ 2	
MAGNESIUM	MG/L	8.4	2/14/ 2	8.4	2/14/ 2	
SODIUM	MG/L	13	2/14/ 2	27.9	3/27/92	
POTASSIUM	MG/L	1.1	3/14/ 1	1.2	1/22/98	
CHLORIDE	MG/L	7.6	2/14/ 2	12	3/14/ 1	600/-
SULFATE	MG/L	10	2/14/ 2	14.2	3/27/92	600/-
FLUORIDE (TEMP DEPENDENT)	MG/L	.3	2/14/ 2	.35	3/14/ 1	1.7/-
ARSENIC	UG/L	2.5	5/9/95	2.5	5/9/95	50/-
BARIUM	UG/L	30	3/14/ 1	30	3/14/ 1	1000/-
CHROMIUM, HEXAVALENT	UG/L	2.4	8/10/ 1	2.7	2/7/ 1	
VANADIUM	UG/L	29	2/14/ 2	29	2/14/ 2	
GROSS ALPHA	PCI/L	1.3	10/18/94	2	4/18/90	15/-
GROSS ALPHA COUNTING ERROR	PCI/L	.4	2/14/ 2	1.5	7/6/94	
TOTAL DISSOLVED SOLIDS	MG/L	110	2/14/ 2	135	3/14/ 1	1500/-
LANGELIER INDEX @ 60 C		.66	2/14/ 2	.66	2/14/ 2	
LANGELIER AT SOURCE TEMP		.04	2/14/ 2	.9	1/9/94	
NITRATE (AS NO3)	MG/L	2.3	2/14/ 2	7.1	3/14/ 1	45/-
TURBIDITY, LABORATORY	NTU	.1	2/14/ 2	.2	3/14/ 1	5/-
AGGRSSIVE INDEX (CORROSIVITY)		11.69	2/14/ 2	11.74	7/25/96	
NITRATE + NITRITE (AS N)	UG/L	520	2/14/ 2	1600	3/14/ 1	
FLUORIDE	UG/L	350	3/14/ 1	350	3/14/ 1	2000/-

SCH School Property Evaluation Program Properties

This category of The Site Mitigation and Brownfields Reuse Program Database (SMBRPD) contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Status Codes:	VCP	Active school property where DTSC has entered into a VCP Agreement.
	PEAR	Preliminary Endangerment Assessment (PEA) required.
	PEAP	Preliminary Endangerment Assessment (PEA) in Progress
	VCOMP	The scope of work in the VCP Agreement has been completed.
	NA	No Action - potential school property where a Phase I has been completed.
	NFA	The property does not pose a problem to the public health or the environment.
	CERT	The potential school property was previously identified as a confirmed release site and it has been subsequently certified by DTSC as having been remediated satisfactorily under DTSC oversight.

No listings within half of a mile radius of the subject site.

REGIONAL SOURCES

NT Toxic Releases

The California Regional Water Quality Control Boards or local Department of Health Services keeps track of toxic releases to the environment. These lists are known as Unauthorized Releases, Spill, Leaks, Investigations and Cleanups (SLIC), Non-Tank Releases, Toxics List or similar, depending on the local agency.

No listings within 1 mile radius of the subject site.

TPC Toxic Pits

The Toxic Pits Clean-Up Act (Katz Bill) places strict limitations on the discharge of liquid hazardous wastes into surface impoundment, toxic ponds, pits and lagoons. Regional Water Quality Control Boards are required to inspect all surface impoundment annually, in addition, every facility was required to file a Hydrogeological Assessment Report. Recent legislation allows the Department of Health Services to exempt facilities that closed on or before December 31, 1985, if a showing is made that no significant environmental risk remains (AB1046).

Special exemption provisions have been created for surface impoundment that receive mining wastes.

No listings within 1 mile radius of the subject site.

SWAT(R) Solid Waste Assessment Test - Regional

This program, provided for under the Calderon legislation (Section 13273 of the Water Code), requires that disposal sites with more than 50,000 cubic yards of waste provide sufficient information to the regional water quality control board to determine whether or not the site has discharged hazardous substances which will impact the environment.

Site operators are required to file Solid Waste Assessment Test reports on a staggered basis. Operators of the 150 highest ranking (Rank 1) sites were required to submit Solid Waste Assessment Tests by July 1, 1987, Rank 2 in 1988 and so on.

Operators submit water quality tests to the Regional Water Quality Control Board, describing surface and groundwater quality and supply; and the geology within 1 mile of the site. Air quality tests are submitted to the local Air Quality Management District or Air Pollution Control District.

This program is currently not funded and thus not updated.

Status Codes: Facilities or sites are ranked within each region on a scale 1-15 according to priority.

No listings within 1 mile radius of the subject site.

OPERATING PERMITS

Various agencies issue operating permits or regulate the handling, movements, storage and disposal of hazardous materials and require mandatory reporting. The inclusion in this section does not imply that an environmental problem exists presently or has in the past.

RCRA-G Resource Conservation and Recovery Information System - Generators

The Environmental Protection Agency regulates generators of hazardous material through the Resource Conservation and Recovery Act (RCRA). All hazardous waste generators are required to notify EPA of their existence by submitting the Federal Notification of Regulated Waste Activity Form (EPA Form 8700-12) or a

state equivalent form. The notification form provides basic identification information and specific waste activities.

Status Codes: L - Generators who generate at least 1000 kg/mo of non-acutely hazardous waste (or 1 kg/mo of acutely hazardous waste).
S - Generators who generate 100 kg/mo but less than 1000 kg/mo of non-acutely haz waste.
T - Transporter.

This list has been researched within half of a mile radius of the subject site.

Site: VICTOR VALLEY COMM COLLEGE
Address: 18422 BEAR VALLEY RD
City: VICTORVILLE
Map Loc: 1 - the subject site
Status:
Permit id#: CAD982331886

SARA SARA Title III,section 313 (TRIS)

Title III of the Superfund Amendments and Reauthorization Act,Section 313, also known as Emergency Planning and Community Right-to-Know Act of 1986 requires owners or operators of facilities with more than 10 employees and are listed under Standard Industrial Classification(SIC) Codes 20 through 39 to report the manufacturing, processing or use of more than a threshold of certain chemical or chemical categories listed under section 313. This data base is also known as Toxic Release Information System (TRIS).

Below summary information for the last five year period is reported grouping the releases into air, water, underground injection, land, public offsite treatment (potw) and transportation offsite.

No listings within half of a mile radius of the subject site.

NC Nuclear Regulatory Commission Licensees

The Nuclear Regulatory Commission, Office of Nuclear Material Safety and Safeguards has been mandated (10 CFR Ch 1.42) to protect the public health and safety, the common defense and security, and the environment by licensing, inspection, and environmental impact assessment for all nuclear facilities and activities, and for the import and export of special nuclear material.

No listings within half of a mile radius of the subject site.

PCB PCB Waste Handlers Database

The U.S. Environmental Protection Agency tracks generators, transporters, commercial stores and/or brokers and disposers of PCB's in accordance with the Toxic Substance Control Act.

No listings within half of a mile radius of the subject site.

PCS Permit Compliance System

PCS is a database which contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS was developed by The U.S. Environmental Protection Agency to meet the information

needs of the NPDES program under the Clean Water Act. PCS tracks permit, compliance, and enforcement states of NPDES facilities.

This list has been researched within half of a mile radius of the subject site.

Site: DEPT OF FISH AND GAME
Address: 12550 JACARANDA AVE
City: VICTORVILLE
Map Loc: 2 - about .08 mile NW of the subject
Status:
Permit id#: CA0002265429

AFS AIRS Facility System

AFS contains emissions and compliance data on air pollution point sources tracked by the U.S. EPA and state and local environmental regulatory agencies. There are seven "criteria pollutants" for which data must be reported to EPA and stored in AIRS: PM10 (particulate matters less than 10 microns in size), carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, reactive volatile organic compounds (VOC), and ozone.

AFS replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aeromatic Data (SAROAD).

No listings within half of a mile radius of the subject site.

PE Section Seven Tracking System (SSTS)

SSTS evolved from the FIFRA and TSCA Enforcement System (FATES). SSTS tracks the registration of all pesticide producing establishments and tracks annually the types and amounts of pesticides, active ingredients, and devices that are produced, sold or distributed each year.

No listings within half of a mile radius of the subject site.

FIFRA FIFRA/TSCA Tracking System/ National Compliance Database (FTTS/NCDB)

NCDB supports implementation of the Federal Insecticide, Fungicide and Rodenticide Control Act (FIFRA) and the Toxic Substance Control Act (TSCA).

No listings within half of a mile radius of the subject site.

FFIS Federal Facilities Information System (FFIS)

Federal Facilities Information System (FFIS) contains a list of all Treatment Storage and Disposal Facilities (TSDs) owned and operated by federal agencies.

No listings within half of a mile radius of the subject site.

CICIS Chemicals in Commerce Information System (CICIS)

Chemicals in Commerce Information System contains an inventory of chemicals manufactured in commerce or imported for Toxic Substances Control Act regulated commercial purposes. CICIS allows EPA to maintain a

comprehensive listing of over 70,000 chemical substances that are manufactured or imported and are regulated under TSCA.

No listings within half of a mile radius of the subject site.

FINDS FINDS EPA Facility Index System

The U.S. Environmental Protection Agency maintains an index system of all facilities which are regulated or have been assigned an identification number for other purposes.

Facilities that have been reported elsewhere in this report will not be included in the listing below.

No listings within half of a mile radius of the subject site.

HWIS Hazardous Waste Information System

The Department of Toxic Substance Control, California Environmental Protection Agency, maintains a a data base keeping track of the movement and disposal of hazardous waste. The data is used to support the Tanner legislation, AB 2948.

Status Codes: EPA Facility Permit Number
CAL - State permanent number
CAC - State provisional or emergency number
CAH - State prov or perm number for household hazardous waste collections
CAI - State permanent number for exotic pest detection
CAS - State permanent number issued by county for emergency response
CAE - State prov number for hazardous waste removal caused by natural disasters
CAX - State permanent or provisional number issued prior to 1987. No longer used.
CLU - State permanent number issued by county for clandestine lab cleanup
CAR - Federal permanent number
CA - Federal permanent number
CAD - Federal permanent or provisional number. State provisional before 1988.
CAT - Federal permanent number
CAP - Federal provisional or emergency number

This list has been researched within half of a mile radius of the subject site.

Site: VICTOR VALLEY COMMUNITY COLLEG
Address: 18422 BEAR VALLEY RD
City: VICTORVILLE
Map Loc: 1 - the subject site
Status: EPA ID#: CAD982331886

Site: MOJAVE RIVER FISH HATCHERY
Address: 12550 JACARANDA AVE
City: VICTORVILLE
Map Loc: 2 - about .08 mile NW of the subject
Status: EPA ID#: CAC000867448

Site: GEORGE AIR FORCE BASE
Address: PO BOX 518
City: GEORGE AFB

Status: EPA ID#: CAL000000513

UST Permitted Underground Storage Tanks - State Water Quality Control Board

The Corteses Bill (AB2013), enacted in 1983, required registration of all underground storage tanks (UST) with the State Water Quality Control Board by July 1, 1984. About 176,000 tanks and surface impounds were registered between 1984 and 1987. An amendment (AB 1413) was passed in 1987, effectively removing the State Board from the registration process starting January 1, 1988. The data reflects the information collected by the state between 1984 and 1987 as well as recent time and includes all tanks and surface impounds in use or closed after 1974.

Home and farm heating fuel tanks with capacities of 1,100 gallons or less and "structures such as sumps, separators, storm drains, catch basins, oil field gathering lines, refinery pipelines, lagoons, evaporation ponds, well cellars, separation sumps, lined and unlined pits, sumps and lagoons" except those defined as UST under HSWA or may be regulated to protect water quality under the Porter-Cologne Water Quality Control Act are excluded.

This list has been researched within half of a mile radius of the subject site.

Site: CIRCLE K #7265
Address: BEAR VALLEY RD
City: HESPERIA
Status: 36-082- (19)

Site: CIRCLE K #7265
Address: BEAR VALLEY RD
City: HESPERIA
Status: 36-082- (192005)

Site: NEW AM PM FACILITY
Address: BEAR VALLEY RD
City: APPLE VALLEY
Status: 36006186206 (1995&98)

Site: APEX BULK COMMODITIES
Address: BEAR VALLEY RD
City: HESPERIA
Status: 36006226504 (1993)

Site: 7-ELEVEN STORE #2131/26388
Address: BEAR VALLEY RD
City: VICTORVILLE
Status: 00000064638 (1987)

Activity: GAS STATION
10000 gallon, double-walled, unlined, composite tank (unleaded), installed in 1985
10000 gallon, double-walled, unlined, composite tank (unleaded), installed in 1985
10000 gallon, double-walled, unlined, composite tank (unleaded), installed in 1985

Site: SONNY ARRINGDALE

Address: 18361 BEAR VALLEY RD
City: HESPERIA
Map Loc: 6 - about .17 mile W of the subject
Status: 36006641962 (1993&A2)

Site: VICTOR VALLEY COMMUNTITY COLLE
Address: 18422 BEAR VALLEY RD
City: VICTORVILLE
Map Loc: 1 - the subject site
Status: 36-072-0000 (192005)

Site: VICTOR VALLEY COLLEGE
Address: 18422 BEAR VALLEY RD
City: VICTORVILLE
Map Loc: 1 - the subject site
Status: 1 (1999&A9)

Site: VICTOR VALLEY COLLEGE
Address: 18422 BEAR VALLEY RD
City: VICTORVILLE
Map Loc: 1 - the subject site
Status: 36000677103 (1995&A9)

Site: MOJAVE RIVER HATCHERY
Address: 12550 JACARANDA AVE
City: VICTORVILLE
Map Loc: 2 - about .08 mile NW of the subject
Status: 00000053157 (198798A)

Activity: TROUT HATCHERY
450 gallon, carbon steel tank (regular), installed in 1975
280 gallon, carbon steel tank (regular), installed in 1957
450 gallon, carbon steel tank (regular), installed in 1975
280 gallon, carbon steel tank (regular), installed in 1975
280 gallon, carbon steel tank (regular), installed in 1975
1000 gallon, carbon steel tank (regular)
280 gallon, carbon steel tank (regular), installed in 1957

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**********************
*                    *
*    E Q F A U L T   *
*                    *
*    Version 3.00    *
*                    *
**********************
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DETERMINISTIC ESTIMATION OF
PEAK ACCELERATION FROM DIGITIZED FAULTS

JOB NUMBER: 3214-00

DATE: 10-25-2005

JOB NAME: Victor valley CC

CALCULATION NAME: Test Run Analysis

FAULT-DATA-FILE NAME: CDMGFLTE.DAT

SITE COORDINATES:
SITE LATITUDE: 34.4727
SITE LONGITUDE: 117.2603

SEARCH RADIUS: 100 mi

ATTENUATION RELATION: 5) Boore et al. (1997) Horiz. - SOIL (310)
UNCERTAINTY (M=Median, S=Sigma): S Number of Sigmas: 1.0
DISTANCE MEASURE: cd_2drp
SCOND: 0
Basement Depth: 5.00 km Campbell SSR: Campbell SHR:
COMPUTE PEAK HORIZONTAL ACCELERATION

FAULT-DATA FILE USED: CDMGFLTE.DAT

MINIMUM DEPTH VALUE (km): 0.0

EQFAULT SUMMARY

DETERMINISTIC SITE PARAMETERS

ABBREVIATED FAULT NAME	APPROXIMATE DISTANCE mi (km)	ESTIMATED MAX. EARTHQUAKE EVENT		
		MAXIMUM EARTHQUAKE MAG. (Mw)	PEAK SITE ACCEL. g	EST. SITE INTENSITY MOD.MERC.
NORTH FRONTAL FAULT ZONE (West)	6.5(10.5)	7.2	0.717	XI
HELENDALE - S. LOCKHARDT	11.9(19.1)	7.3	0.416	X
CLEGHORN	13.2(21.3)	6.5	0.252	IX
SAN ANDREAS - Whole M-1a	18.0(28.9)	8.0	0.444	X
SAN ANDREAS - San Bernardino M-1	18.0(28.9)	7.5	0.341	IX
SAN ANDREAS - SB-Coach. M-1b-2	18.0(28.9)	7.7	0.379	X
SAN ANDREAS - SB-Coach. M-2b	18.0(28.9)	7.7	0.379	X
SAN ANDREAS - Cho-Moj M-1b-1	18.5(29.8)	7.8	0.390	X
SAN ANDREAS - 1857 Rupture M-2a	18.5(29.8)	7.8	0.390	X
SAN ANDREAS - Mojave M-1c-3	18.5(29.8)	7.4	0.316	IX
CUCAMONGA	18.8(30.2)	6.9	0.293	IX
SAN JACINTO-SAN BERNARDINO	21.1(34.0)	6.7	0.198	VIII
LENWOOD-LOCKHART-OLD WOMAN SPRGS	26.7(43.0)	7.5	0.252	IX
NORTH FRONTAL FAULT ZONE (East)	27.8(44.8)	6.7	0.195	VIII
SIERRA MADRE	29.6(47.7)	7.2	0.242	IX
SAN JACINTO-SAN JACINTO VALLEY	31.6(50.8)	6.9	0.162	VIII
LANDERS	31.7(51.0)	7.3	0.199	VIII
JOHNSON VALLEY (Northern)	32.6(52.4)	6.7	0.142	VIII
GRAVEL HILLS - HARPER LAKE	33.4(53.8)	7.1	0.172	VIII
SAN JOSE	34.7(55.9)	6.4	0.141	VIII
CLAMSHELL-SAWPIT	37.0(59.6)	6.5	0.141	VIII
CALICO - HIDALGO	39.8(64.0)	7.3	0.167	VIII
BLACKWATER	40.6(65.3)	7.1	0.148	VIII
CHINO-CENTRAL AVE. (Elsinore)	41.1(66.1)	6.7	0.145	VIII
EMERSON So. - COPPER MTN.	41.2(66.3)	7.0	0.139	VIII
PINTO MOUNTAIN	42.2(67.9)	7.2	0.152	VIII
PUENTE HILLS BLIND THRUST	43.6(70.2)	7.1	0.171	VIII
WHITTIER	45.4(73.0)	6.8	0.116	VII
RAYMOND	46.2(74.4)	6.5	0.119	VII
ELSINORE (GLEN IVY)	47.8(77.0)	6.8	0.111	VII
VERDUGO	49.3(79.4)	6.9	0.139	VIII
PISGAH-BULLION MTN.-MESQUITE LK	50.1(80.7)	7.3	0.140	VIII
BURNT MTN.	54.1(87.0)	6.5	0.087	VII
SAN JACINTO-ANZA	54.2(87.3)	7.2	0.125	VII
UPPER ELYSIAN PARK BLIND THRUST	54.3(87.4)	6.4	0.100	VII
EUREKA PEAK	54.9(88.4)	6.4	0.081	VII
ELSINORE (TEMECULA)	57.5(92.6)	6.8	0.097	VII
SAN ANDREAS - Coachella M-1c-5	59.0(94.9)	7.2	0.117	VII
SIERRA MADRE (San Fernando)	59.0(95.0)	6.7	0.109	VII
SAN GABRIEL	59.1(95.1)	7.2	0.117	VII

DETERMINISTIC SITE PARAMETERS

ABBREVIATED FAULT NAME	APPROXIMATE DISTANCE mi (km)	ESTIMATED MAX. EARTHQUAKE EVENT: MAXIMUM EARTHQUAKE MAG. (Mw)	ESTIMATED MAX. EARTHQUAKE EVENT: PEAK SITE ACCEL. g	ESTIMATED MAX. EARTHQUAKE EVENT: EST. SITE INTENSITY MOD.MERC.
HOLLYWOOD	59.6(95.9)	6.4	0.093	VII
SAN JOAQUIN HILLS	63.0(101.4)	6.6	0.099	VII
NORTHRIDGE (E. Oak Ridge)	66.7(107.4)	7.0	0.116	VII
NEWPORT-INGLEWOOD (L.A.Basin)	68.8(110.7)	7.1	0.098	VII
GARLOCK (West)	69.1(111.2)	7.3	0.109	VII
SANTA SUSANA	69.8(112.4)	6.7	0.096	VII
GARLOCK (East)	70.5(113.5)	7.5	0.119	VII
NEWPORT-INGLEWOOD (Offshore)	71.4(114.9)	7.1	0.096	VII
SANTA MONICA	71.5(115.1)	6.6	0.089	VII
SAN ANDREAS - Carrizo M-1c-2	72.8(117.2)	7.4	0.110	VII
HOLSER	73.4(118.2)	6.5	0.083	VII
PALOS VERDES	76.2(122.6)	7.3	0.101	VII
ELSINORE (JULIAN)	77.0(123.9)	7.1	0.090	VII
MALIBU COAST	77.6(124.9)	6.7	0.088	VII
TANK CANYON	80.8(130.0)	6.4	0.073	VII
PANAMINT VALLEY	81.3(130.8)	7.4	0.101	VII
OWL LAKE	81.3(130.9)	6.5	0.063	VI
LITTLE LAKE	81.6(131.3)	6.9	0.078	VII
SIMI-SANTA ROSA	81.7(131.5)	7.0	0.099	VII
So. SIERRA NEVADA	81.8(131.6)	7.3	0.116	VII
SAN JACINTO-COYOTE CREEK	82.2(132.3)	6.6	0.066	VI
OAK RIDGE (Onshore)	83.4(134.3)	7.0	0.098	VII
SAN CAYETANO	85.6(137.7)	7.0	0.096	VII
WHITE WOLF	87.4(140.7)	7.3	0.111	VII
ANACAPA-DUME	88.4(142.2)	7.5	0.122	VII
CORONADO BANK	91.5(147.2)	7.6	0.103	VII
DEATH VALLEY (South)	92.3(148.6)	7.1	0.078	VII
SANTA YNEZ (East)	93.5(150.5)	7.1	0.078	VII
ROSE CANYON	93.8(150.9)	7.2	0.082	VII
PLEITO THRUST	95.1(153.1)	7.0	0.088	VII
EARTHQUAKE VALLEY	97.2(156.5)	6.5	0.055	VI

-END OF SEARCH- 71 FAULTS FOUND WITHIN THE SPECIFIED SEARCH RADIUS.

THE NORTH FRONTAL FAULT ZONE (West) FAULT IS CLOSEST TO THE SITE.
IT IS ABOUT 6.5 MILES (10.5 km) AWAY.

LARGEST MAXIMUM-EARTHQUAKE SITE ACCELERATION: 0.7174 g

Dr. Seyed M. Mortazavi

Principal

Education

- Ph.D., Tectonophysics (Geology)
- Ph.D., Civil Engineering (Geotechnical)
- M.S., Civil Engineering

Registrations & Certifications

- Professional Geologist, California
- Certified Engineering Geologist, California
- Certified Hydrogeologist, California
- Registered Geotechnical Engineer, California
- Registered Civil Engineer, California
- Registered Environmental Assessor I & II, California

Summary of Experience

Dr. Mortazavi has accumulated over 35 years of experience in the field of environmental engineering and geology, including the investigation, design, and construction of environmental, hydrogeological, geological, engineering geology, geotechnical, and civil engineering works.

Dr. Mortazavi founded hydrologue, Inc. in 1992; as the principal of hydrologue, his primary technical responsibility has been the management of over $15 million dollars worth of projects and litigation support services for public agencies and several Fortune 500 corporations. Dr. Mortazavi has co-authored more than 500 written reports and scientific publications and has made numerous presentations worldwide to technical groups and to trade organizations.

Dr. Mortazavi has organized and managed a wide variety of environmental projects, supervised and performed environmental assessments including soil gas survey (including methane gas) and hazard mitigation and performed site characterizations and hydrogeological assessments for sites impacted by hazardous wastes. He has also prepared numerous remedial investigations, feasibility studies, remedial action plans, removal action workplan and risk assessment reports for contaminated soil and groundwater, treatability studies for bioremediation and soil stabilization, environmental audits, proposals and cost estimates, engineering geology, and soil engineering reports for residential, commercial, and industrial developments.

Dr. Seyed M. Mortazavi
Principal

He designed and supervised construction of the following remedial systems: vapor extraction, bioventing, vacuum enhanced recovery, air sparging, pump and treat, in-situ and ex-situ bioremediation, control and treatment systems for hazardous waste emission, and landfills and repositories. Dr. Mortazavi has evaluated manufacturers' bids and specifications, and has participated in the selection of manufacturers and contractors; he has interacted with and has worked closely with numerous government agencies, many of which are listed on the following page. Additionally, Dr. Mortazavi has also served as Expert Witness and Technical Advisor to legal counsel for industries, for professional firms.

Internationally known as an expert in numerical computer modeling, Dr. Mortazavi has consulted on numerous numerical and analytical projects and has used finite difference and finite element methods to investigate heterogeneous environments in simulating complex fate and transport of contaminants.

Selected Representative Projects

Throughout his years of project experience, Dr. Mortazavi has:

- **Provided extensive environmental and civil engineering consulting services for multiple sites throughout Los Angeles County subject to methane gas migration from potential sources of methane gas such as oil fields and landfills. These projects included site investigation, soil gas plume delineation, remediation and designing installation criteria for soil gas mitigation. Many of the investigated sites were located adjacent to existing or former landfills or active or abandoned oil fields with on-site oil/gas seepage. Experience includes extensive investigative methane work and mitigation at school sites, and residential and commercial sites located within the Los Angeles Department of Building and Safety (LADBS) outlined Methane and Methane Buffer Zone Boundaries.**

Dr. Seyed M. Mortazavi
Principal

- **Project Director for Preliminary Endangerment Assessments (PEA's). The PEA's were performed in accordance with DTSC approved Work Plans and included soil matrix investigations, soil gas surveys and Human Health and Screening Evaluations.**

  Directed a PEA investigation for the Fullerton Joint Union High School District at Fullerton Union High School that included the sampling of soil gas at 19 locations utilizing a biased sampling procedure over the portion of the Site impacted by VOCs and methane gas. Soil gas sampling and analysis was conducted in accordance with the Regional Water Quality Control Board, Los Angeles Region (LARWQCB) Well Investigation Program (WIP) Guidelines and DTSC Advisory- Active Soil Gas Investigations, dated January 28, 2003.

  Supervised the investigation of a site located on a glass recycling facility and former landfill in Cudahy using shallow soil gas sampling techniques.

  Currently is managing an on-going Sulphur Spring Unified School District- Golden Valley Ranch School Site Preliminary Endangerment Assessment (PEA) under the oversight of DTSC- which includes 25 soil gas sampling locations at multiple depths due to the close proximity of three abandoned oil wells. Soil gas sampling is to be conducted to depths ranging between 5 and 103 feet below ground surface.

  Currently is managing an on-going Preliminary Endangerment Assessment (PEA) under the oversight of DTSC for Wilshire Towers located at the southeast corner of Wilshire Boulevard and Hoover Street in the City of Los Angeles. Crude oil is seeping from the surface and elevated levels of methane gas up to 25,000 ppm were detected at 5 feet bgs. The Site is located adjacent to the Los Angeles Oil field. Soil gas

sampling was conducted at 25 locations. Soil sampling was conducted at the same locations to a maximum of 25 feet bgs. It is proposed to construct two 35 story residential towers at the Site and Hydrologue is contracted to design the methane mitigation system.

Currently is managing an on-going project at 2950 West 6th Street in the City of Los Angeles located between Virgil and Commonwealth (a City Block) in the city of Los Angeles. The Site is located adjacent to several oil wells. A soil gas survey was performed at the Site to investigate the methane gas impact. The Site will be developed as a shopping center with several movie theaters. Hydrologue is contracted to design a methane mitigation system for the Site.

- Provided broad technical engineering consulting services for a major DOD Contractor at several of its facilities located throughout southern California. Many of these sites were impacted with multiple on-site and off-site sources for HVOCs, including PCE, TCE, 1,1,1-TCA, DCE, PCBs, Methylene Chloride, Carbon Tetrachloride, etc. He performed numerous remediation investigations, conducted risk assessments, designed and supervised treatability studies for the cleanup of the vadose zone and groundwater impacted with heavy metals, cutting oil, jet fuel and chlorinated hydrocarbons (HVOCs), PCBs, etc.

- Provided broad environmental consulting services for a major department store located adjacent to a major aerospace company; during this project, he performed a remedial investigation, analyzed data collected during this and previous investigations, designed a remedial system for the cleanup of the groundwater and vadose zone, and developed an extensive technical foundation for the defense team against the claim made by the aerospace company.

- Provided litigation support services for a major oil company in a CERCLA case. He analyzed data and clearly showed that the defect inherent in the construction of the fiberglass tanks

Robert Owoc, PG

Senior Project Manager

Education

- B.S., Geologic Engineering, Michigan Technological University, 1985.

Registrations & Certifications

- Professional Geologist, California
- SARA (OSHA 1910.120) Hazardous Waste Site Operations Training, 40 hours

Summary of Experience

Mr. Owoc has more than 15 years of experience conducting Phase I and Phase II environmental site and soil and groundwater remedial investigations and remedial actions throughout Southern California and the United States. Mr. Owoc serves as Project Manager for both PEA Investigations as well as Geotechnical Investigations for commercial, industrial, and residential projects.

Selected Representative Projects

The following are some of the projects for which Mr. Owoc has been responsible:

- Performed Phase I and Phase II environmental site assessments at commercial, industrial, and future school properties. Provided technical review of leaking UST site investigation reports and quarterly groundwater monitoring reports prepared by staff scientists.

- Performed soil and groundwater assessments in Los Angeles, Ventura, San Bernardino, and San Diego counties. Assessments included preparing detailed workplans, obtaining permits, coordinating onsite activities with facility managers, drilling soil borings and installing monitoring wells, disposing of generated wastes, and preparing site assessment reports.

- Managed environmental investigations for soil containing organochlorine pesticides at former agricultural properties using DTSC and local regulatory agency guidelines. Utilized statistical analyses to assess human health risk and waste profile. Worked with San Diego RWQCB and DEH to develop soil reuse criteria protective of future residents and the environment.

- Conducted investigations for lead in the soil at proposed educational park. Assessed soil prior to reuse or offsite disposal using Title 22 and RCRA standards. Performed health risk

assessment to minimize volume of soil requiring offsite disposal and worked with Voluntary Assistance Program to ensure regulatory approval of the design and implementation of remedial activities at the site.

- Provided oversight of three-month burn dump site remedial action involving excavation and disposal of approximately 36,000 tons of burn ash material as a non-RCRA waste. Performed waste profiling, managed field and analytical laboratory testing, surveying of removal areas and sample locations, and air monitoring.

- Managed program to close underground storage tanks at more than 50 sites in Michigan, Iowa, Wisconsin, Minnesota, Indiana, Illinois and Ohio. Filed regulatory notices and reports, compiled laboratory analytical data and tracked waste disposal.

- Provided onsite supervision of a hazardous waste characterization program involving waste liquid sampling, compatibility testing, and disposal of solid and liquid wastes with emphasis on RCRA compliance.

- Prepared conceptual designs and cost estimates for soil and ground water remediation projects in support of real estate transactions. Estimates allowed environmental escrow funds to be set aside for cleanup after the sale was completed.

Victor Valley
COMMUNITY COLLEGE

ENVIRONMENTAL ASSESSMENT & INITIAL STUDY REPORT

Proposed New Auxiliary Gymnasium Project

Geotechnical Investigation

Attachment 4

C·M·J·

GEOTECHNICAL INVESTIGATION
AUXILIARY GYMNASIUM
VICTOR VALLEY COLLEGE CAMPUS
VICTORVILLE, CALIFORNIA
PREPARED FOR
VICTOR VALLEY COLLEGE
JOB NO. V05101-3

C•H•J• INCORPORATED

P.O. Box 231, Colton, CA 92324-0231 • 1355 E. Cooley Dr., Colton, CA 92324-3954 • Phone (909) 824-7210 • Fax (909) 824-7209

May 6, 2005

Victor Valley College
Maintenance and Operations Department
18422 Bear Valley Road
Victorville, California 92392-9699
Attention: Mr. Steve Garcia

Job No. V05101-3

Dear Mr. Garcia:

Attached herewith is the Geotechnical Investigation report prepared for the proposed Auxiliary Gymnasium to be located on the campus of Victor Valley College, Victorville, California.

This report was based upon a scope of services generally outlined in our proposal letter, dated January 28, 2005, and other written and verbal communications.

We appreciate this opportunity to provide geotechnical services for this project. If you have questions or comments concerning this report, please contact this firm at your convenience.

Respectfully submitted,
C.H.J., INCORPORATED

Ben Williams, P.G.
Senior Staff Geologist

BW/RJJ:bjr

Distribution: Victor Valley College (6)

C·H·J·

TABLE OF CONTENTS

C·H·J·

TABLE OF APPENDICES

C·M·J·

GEOTECHNICAL INVESTIGATION
AUXILIARY GYMNASIUM
VICTOR VALLEY COLLEGE CAMPUS
VICTORVILLE, CALIFORNIA
PREPARED FOR
VICTOR VALLEY COLLEGE
JOB NO. V05101-3

INTRODUCTION

During April and May of 2005, this firm performed a geotechnical investigation for the proposed 14,687± square foot auxiliary gymnasium, to be located southwest of Mojave Fish Hatchery Road and East Campus Road on the campus of Victor Valley College, Victorville, California. The purpose of the investigation was to explore and evaluate the geotechnical conditions at the subject site, and to provide appropriate geotechnical recommendations for design and construction of the proposed structure.

This geotechnical investigation report was prepared for submittal to the Division of the State Architect (DSA) and is intended to serve as the site-specific geotechnical, engineering geology, and seismic report required for public schools by Title 24 of the California Code of Regulations for the proposed structure. Also, this report is intended to address the requirements of the latest verison of the California Geological Survey's Note 48 (January 1, 2004) and supporting documents.

To orient our investigation, a Building Layout Plan, prepared by Spencer/Hoskins Associates, Architecture & Planning, undated, was furnished for our use. The Building Layout Plan (Plan) included the configuration of the proposed 14,687± square foot auxiliary gymnasium. The proposed location of the structure was indicated to us by a representative of Victor Valley College. The approximate location of the proposed structure is shown on the attached Index Map (Enclosure "A-1").

The results of our investigation, together with our conclusions and recommendations, are presented in this report.

SCOPE OF SERVICES

The scope of services provided during this geotechnical investigation included the following:

- Review of published and unpublished literature and maps
- Review and analysis of stereoscopic aerial photographs flown in 1938, 1953, 1974, 1983, 1994, and 2005
- Placement of four cone penetration test soundings and two exploratory borings on the site

- Logging and sampling of the exploratory borings for testing and evaluation
- Laboratory testing on selected samples
- Engineering geologic evaluation of geologic hazards
- Construction of a geological cross section
- An evaluation of the liquefaction potential of the site
- Quantitative static settlement and dynamic (seismic and liquefaction) settlement calculations
- Evaluation of the geotechnical data to develop site-specific recommendations for site preparation and grading, foundation design, and mitigation of potential geotechnical constraints

PROJECT CONSIDERATIONS

Information furnished this office indicates that the subject site will be developed with a single-story, 14,687-square feet structure of reinforced masonry and steel construction, utilizing spread footings and slab-on-grade type foundations. Light to moderate foundation loads are normally associated with such structures.

The project grading plan was not available at the time of our investigation. However, the general topography of the site and observation of nearby development indicate that the proposed improvements should entail minimal grading with cuts and fills of less than 3 feet in height anticipated. Within this report we are recommending remedial grading which will increase the fill thickness beneath the structure. The final grading plan should be reviewed by the geotechnical engineer.

SITE DESCRIPTION

The subject site is located southwest of Mojave Fish Hatchery Road and East Campus Road on the campus of Victor Valley College (See Enclosure "A-1"). The site is bounded on the east by Fish Hatchery Road, on the north and west by East Campus Road and on the south by a vacant parcel. The decimal latitude and longitude of the site are 34.474° north and 117.259° west, respectively.

At the time of our investigation the site consisted of a near level and near planar lot. West of the site is a slope which ascends to East Campus Road. The Mojave River is located approximately 1,300 feet east of the subject site, and at an elevation approximately 14 feet lower than the site.

Vegetation was minimal consisting of seasonal weeds and grasses. It is anticipated that minor grading may have been performed to contour the site, although no evidence of grading was encountered during the course of our investigation.

As part of this investigation, stereoscopic aerial photographs of the site and surrounding area were reviewed. The earliest photographs reviewed (1938) showed the site to be to be unimproved with evidence of overbank deposits from the Mojave River. Later photographs (1953) showed the site to be in use as agricultural fields. Abandonment of agricultural activities and the development of Victor Valley College are visible on the 1974 aerial photographs. The area appeared unchanged on the 1983 aerial photographs. Development of East Campus Road is apparent on the 1994 aerial photographs. The area appeared unchanged on the 2005 aerial photographs.

No other surface features pertinent to this investigation were noted.

FIELD INVESTIGATION

The soil conditions underlying the subject site were explored by means of two exploratory borings, drilled to a maximum depth of 65 feet below the existing ground surface (bgs) and four cone penetrometer test (cpt) soundings advanced to a maximum depth of 59 feet bgs. The borings were drilled utilizing a truck-mounted CME 55 drill rig equipped with an automatic hammer for soil sampling. The approximate locations of our exploratory borings and CPT soundings are indicated on the attached geologic map (Enclosure "A-2").

Continuous logs of the subsurface conditions, as encountered within the exploratory borings, were recorded at the time of drilling by a staff geologist from this firm. Relatively undisturbed samples were obtained by driving a split-spoon ring sampler (a California sampler) ahead of the borings at selected levels. After the required seating of the sampler, the number of hammer blows required to advance the sampler a total of 12 inches was converted to equivalent standard penetration test (SPT) data and recorded on the boring logs. The number is the equivalent SPT-N value, and has been corrected for sampler size (California sampler vs. SPT sampler and hammer efficiency). Undisturbed, as well as bulk samples of typical soil types obtained were returned to the laboratory in sealed containers for testing and evaluation.

The CPT retrieves data continuously with depth, detecting minor stratigraphical changes by measuring resistance to penetration on the tip and on the sleeve. The CPT soundings were logged with a continuous computer readout during the advancement of the cone.

Our exploratory boring logs, together with our equivalent SPT data, are presented in Appendix "B". The stratification lines presented on the boring logs represent approximate boundaries between soil types, which may include gradual transitions. The CPT soundings are also presented in Appendix "B".

LABORATORY INVESTIGATION

Included in our laboratory testing program were field moisture content determinations on all samples returned to the laboratory and field dry densities on all undisturbed ring samples. The results are included on the boring logs. Sieve analyses and hydrometer testing were performed on selected soils as an aid to classification. Optimum moisture content - maximum dry density relationships were established for typical soil types in order to evaluate the relative compaction characteristics of the subsoils. Direct shear tests were performed on selected remolded samples in order to provide shear strength parameters for bearing capacity and earth pressure evaluations. A selected sample of material was delivered to M. J. Schiff & Associates, Inc. for soil corrosivity testing.

The laboratory test results are presented in Appendix "C".

SITE GEOLOGY AND SUBSURFACE SOIL CONDITIONS

The site is located within the Mojave Desert Geomorphic Province. The Mojave desert is bounded on the southwest by the San Andreas fault and the Transverse Ranges and on the northeast by the Garlock fault. The Mojave desert is an ancient feature formed in response to the inception of movement on the San Andreas and Garlock faults. The region is characterized by broad alluviated basins that are burying the previously mountainous topography.

The site is located on young wash deposits associated with the Mojave River located east of the site (Morton and Miller, 2003). As encountered within our exploratory borings and the CPT soundings, the young wash deposits at the site were composed of discontinuous layers or lenses of soils including poorly graded sands (SP), silty sands (SM), clayey sands (SC), sandy silts (ML), and sandy clays (CL). The soils encountered were generally in a medium stiff to stiff or a loose to medium dense state to approximately 27 feet in depth. Beyond that depth the soils encountered were in a very stiff to hard or a medium dense to dense state based on blowcount data from our exploratory borings. Geologic mapping of the site and adjacent areas was conducted as part of this investigation (Enclosure "A-2"). a discussion of geologic units present at the areas mapped follows.

Qaf: fill, comprised mostly of sandy silts. This material surrounds the site on all sides except the south

Qw: very young wash deposits. This unit is within and along the Mojave River currently channelized by levees, and includes areas between the levee and the old natural bank of the river.

Qyw: young wash deposits. Appear in this area as overbank deposits consisting of discontinuous layers or lenses of soils including sands, silty sands, clayey sands, sandy silts, and sandy clays. The entire site is underlain by this unit, which extends to a depth of at least 65 feet as encountered within the exploratory borings.

The results of the corrosivity testing are discussed in detail within the section titled CORROSIVITY TESTING.

Geological Cross Section A-A' was constructed from the terrace above the site to the west through the north end of the site and down to the Mojave River to the east (Enclosure "D-1").

Groundwater was encountered at depths of 21 to 28 feet within the exploratory borings and soundings utilized for this investigation.

The upper soils encountered at the site are generally granular and considered to be non-critically expansive.

Bedrock was not encountered and refusal was not experienced within any of the exploratory borings or the CPT soundings.

All of our exploratory borings experienced slight caving upon removal of the augers.

Fill was not encountered in the exploratory borings utilized for the investigation. However, it should be anticipated that some fill and disturbed soil will be encountered during site grading operations.

A more detailed description of the subsurface soil conditions encountered is presented on the attached boring logs and CPT soundings (Appendix "B").

FAULTING

The site does not lie within or immediately adjacent to an Alquist-Priolo Earthquake Fault Zone, designated by the State of California to include traces of suspected active faulting. No active or potentially active faults are shown on or in the immediate vicinity of the site on published geologic maps. No evidence for active faulting on or immediately adjacent to the site was observed during the geologic field reconnaissance or on the aerial photographs reviewed.

The closest known active fault to this site forms the boundary between the Mojave Desert Geomorphic Province and the Transverse Ranges Geomorphic Province to the south. This extremely complex zone of left-lateral, thrust, and reverse faults, known as the North Frontal fault zone, is coincident with the northern boundary of the San Bernardino Mountains. The North Frontal fault zone is located approximately 5 miles southeast of the site.

The Mojave Desert is characterized by a few major northwest-trending strike-slip fault zones. Several of these fault zones were indicated by Jennings (1994) with evidence for Holocene fault displacement. Geomorphic evidence for Holocene fault displacement includes sag ponds, fresh fault scarps, or features in Holocene deposits such as offset drainages, linear scarps, shutter ridges, and faceted spurs. The Helendale fault is the closest of these faults and is located approximately 11 miles northeast of the site. This fault is included within an Alquist-Priolo Earthquake Fault Zone designated by the State of California to include traces of suspected active faulting. The Old Woman Springs, Lockhart, Harper, and Camp Rock faults, located at greater distances from the site, are also indicated by Jennings (1994) as having Holocene fault displacement. Surface rupture occurred on the southeastern end of the Camp Rock fault during the M 7.3 Landers earthquake of June 28, 1992.

The Cleghorn fault is a relatively short westerly-trending feature identified in the Cajon Pass area. This fault is located approximately 13 miles southwest of the site and is classified as questionably Holocene in age (Jennings, 1994).

Two segments of the northwest-trending San Andreas fault are located approximately 17 1/2 miles southwest of the site: the northwesterly, or Mojave segment, and the southeasterly, or San Bernardino Mountains segment. The Mojave segment of the San Andreas fault is coincident with the northeast margin of the San Gabriel Mountains. The toe of the mountain front in the San Bernardino area roughly demarcates the presently active trace of the San Bernardino mountains segment. Both segments are characterized by youthful fault scarps, vegetational lineaments, springs, and offset drainages. The Working Group on California Earthquake Probabilities (1995) tentatively assigned a 28 percent (±13 percent) probability to a major earthquake occurring on the San Bernardino Mountains segment of the San Andreas fault between 1994 and 2024. The corresponding probability for the Mojave segment is 26 percent (±11 percent).

The Glen Helen branch of the San Jacinto fault is located approximately 19 miles south of the site (Dutcher and Garrett, 1963; Morton, 1974; Morton and Matti, 1991). The San Jacinto fault zone is a system of northwest-trending, right-lateral, strike-slip faults. More large historic earthquakes have

occurred on the San Jacinto fault than any other fault in Southern California (Working Group on California Earthquake Probabilities, 1988). Based on the data of Matti and others (1992), the San Bernardino Valley segment of the San Jacinto fault may be accommodating much of the motion between the Pacific Plate and the North American Plate in this area. Matti and others (1992) suggest this motion is transferred to the San Andreas fault in the Cajon Pass region by "stepping over" to parallel fault strands which include the Glen Helen fault. The Working Group on California Earthquake Probabilities (1995) tentatively assigned a 37 percent (±17 percent) probability of a major earthquake on the San Bernardino Valley segment of the San Jacinto fault for the 30 year interval from 1994 to 2024.

The only seismic hazard mapped near the site by the San Bernardino General Plan is the North Frontal fault zone located approximately 5 miles southeast of the site.

A map of regional faults, showing a 100-km radius around the site, is included as Enclosure "A-5".

HISTORICAL EARTHQUAKES

A map of recorded earthquake epicenters is included as Enclosure "A-4" (Epi Software, 2000). This map includes the Cal Tech database for earthquakes with magnitudes of 4.0 or greater from 1977 through 2005.

The North Frontal fault zone has no historical record of large earthquakes but is seismically active, with many M_L 4+ earthquakes having been recorded in the complex area of the intersection with the Helendale fault (Bryant, 1986).

No large historical earthquakes have occurred on the San Bernardino Mountains segment of the San Andreas fault (Working Group on California Earthquake Probabilities, 1988), although Jacoby and others (1987) suggest one of two major earthquakes in 1812 may have occurred on this segment. Surface rupture occurred on the Mojave segment of the San Andreas fault in the great M 8+ 1857 Fort Tejon earthquake. The Coachella Valley segment of the San Andreas fault was responsible for the 1948 Richter magnitude 6.5 earthquake in the Desert Hot Springs area and for the 1986 Richter magnitude 5.6 earthquake in the North Palm Springs area.

The September 12, 1970 M 5.4 Lytle Creek earthquake occurred on the Glen Helen branch of the San Jacinto fault (Cramer and Harrington, 1980). The Working Group on California Earthquake Probabilities (1988) lists seven M_L 6.0 or greater earthquakes that have occurred on the San Jacinto fault

since 1899, although they acknowledge that several of these earlier episodes may have occurred on other nearby faults. Two of these earthquakes took place in the San Bernardino Valley. A M_L 6.5 event in 1899 near Lytle Creek and a M_L 6.2 event in 1923 near Loma Linda may have occurred on the San Jacinto fault. However, Fife and others (1976) and Matti and Carson (1991) suggest that the 1923 event took place on an unnamed fault parallel to and east of the San Jacinto fault.

No significant historical earthquakes have been specifically attributed to the Cleghorn fault, the North Frontal fault zone, or the Helendale fault.

SEISMIC ANALYSIS

The precise relationship between magnitude and recurrence interval of large earthquakes for a given fault is not known due to the relatively short time span of recorded seismic activity. As a result, a number of assumptions must be made to quantify the ground shaking hazard at a particular site. Seismic hazard evaluations can be conducted from both a probabilistic and a deterministic standpoint. The primary difference between the seismic hazard evaluation methods is that the probabilistic method includes the contribution of hazard from all specified seismic sources at all distances, while the deterministic approach considers only the selected, generally worst-case scenario on the seismic source estimated to pose the greatest hazard to the site. In addition, the probabilistic approach accounts for uncertainties at each step in the analysis and in the final result. The seismic hazard to the site was estimated with the probabilistic method during this investigation.

PROBABILISTIC HAZARD ANALYSIS:

The probabilistic analysis of seismic hazard is a statistical analysis of seismicity of all known regional faults and seismic sources attenuated to a particular geographic location. The results of a probabilistic seismic hazard analysis (PSHA) are presented as the annual probability of exceedance of a given strong motion parameter for a particular exposure time (Johnson and others, 1992).

For this report, the seismic hazard analysis computer program EZFRISK, version 7.01 (Risk Engineering, 2005) was used to analyze the location of the site under the criteria for a "soil" site type with an average shear wave velocity of 270 m/s in the upper 30 meters (100 feet). The estimated value for the peak ground acceleration (PGA) was calculated as the average of the accelerations computed using the attenuation relations of Boore et al. (1997), Sadigh et al. (1997), and Abrahamson and Silva (1997) in relation to seismogenic faults within a 93-mile (150-km) radius of the site. The EZFRISK program considers seismicity from mappable seismogenic faults and background sources (those

earthquakes not associated with a mapped fault source) and assumes that the occurrence rate of earthquakes on a fault is proportional to the estimated slip rate of that fault. Potential earthquake magnitudes are correlated to expected seismic sources and the resultant maximum ground acceleration at the site is computed.

Based on the site-specific PSHA performed for the site, the estimated peak horizontal ground acceleration of 0.41g has a 10 percent probability of exceedance in 50 years (statistical return period of 475 years). This corresponds to the Design Basis Earthquake as defined in the 2001 CBC. A peak horizontal ground acceleration of 0.50g has a 10 percent probability of exceedance in 100 years (statistical return period of 949 years). This corresponds to the Upper Bound Earthquake (UBE) as defined in the 2001 CBC.

SEISMIC ZONE:

The site is included within Seismic Zone 4 according to the 2001 California Building Code (CBC). A Seismic Zone Factor "Z" of 0.40 is assigned to Seismic Zone 4.

SOIL PROFILE TYPE:

Based on review of equivalent SPT blow counts from the exploratory borings and CPT soundings, and shear wave velocity data available online from the Southern California Earthquake Data Center (downloaded April 26, 2005), the appropriate classification for this site is soil profile type S_D, stiff soil.

NEAR-SOURCE EFFECTS:

The seismic hazard to the site is dominated by the western section of the North Frontal fault zone at a distance of approximately 5 miles (8 km) southwest of the site. The western section of the North Frontal fault zone is classified as a Type "B" fault by the California Geological Survey (Cao and others, 2003). The applicable near-source acceleration factor N_A, as defined in the 2001 CBC, is 1.00, and the near-source velocity factor N_V is 1.08. The corresponding seismic coefficients for acceleration and velocity are $C_a = 0.44$ and $C_V = 0.69$.

GROUNDWATER AND LIQUEFACTION

Available groundwater data was reviewed in order to provide an estimate of the historical groundwater levels for the site. Groundwater was encountered in the exploratory borings at depths of 24 and 27.5 feet, and at 21 to 25.3 feet in the (CPT) soundings.

Extrapolation of groundwater contour mapping shows a depth to groundwater of between 0 and 50 feet below the ground surface (bgs) during 1990 (Sub Surface Surveys Inc., 1990), and at 23 feet bgs in 1998 (Smith and Pimentel, 2000).

Groundwater well data available on the internet from the U.S. Geological Survey (USGS) was downloaded and reviewed on April 25, 2005. The well data below represents the more recent groundwater depths. The well data from these sources included levels that were significantly higher prior to 1948, including several measurements that were within 5 feet of the surface. However, these measurements were apparently of the piezometric head of a confined aquifer. The highest groundwater depths do not accurately reflect the depth to the top of the aquifer, and were not utilized in determination of minimum groundwater depths for liquefaction calculations as part of this investigation. More recent well data shows that the current groundwater level is significantly deeper than the historic high groundwater level. Based on the current groundwater practices in the upper Mojave River basin, groundwater depths are expected to be significantly deeper. The discussion below reflects the current condition.

The data from State Well Number 05N04W36N004, located less than approximately 1/4 mile southeast of the site, indicated a depth to groundwater of 28.6 feet bgs in October 1961 as the highest water level recorded for this well. The data from State Well Number 05N04W36N001, located less than approximately 1/4 mile east of the site, indicated a depth to groundwater of approximately 19 feet in November 1953. Future groundwater is not anticipated to rise above a depth of 15 feet bgs based on recent historic high measurements near the site.

Liquefaction is a process in which strong ground shaking causes saturated soils to lose their strength and behave as a fluid (Matti and Carson, 1991). Ground failure associated with liquefaction can result in severe damage to structures. The geologic conditions for increased susceptibility to liquefaction are: 1) shallow groundwater (less than 50 feet in depth); 2) presence of unconsolidated sandy alluvium, typically Holocene in age; and 3) strong ground shaking. All three of these conditions must be present for liquefaction to occur, and all three of these conditions exist on the site.

Liquefaction typically occurs when relatively loose to medium dense granular soils below the water table are subject to strong ground motion. If a saturated sandy soil is subjected to vibration, it tends to compact and decrease in volume. The tendency to decrease in volume results in an increase in pore water pressure. If the pore water pressure builds up to the point at which it is equal to the overburden pressure, the effective stress becomes zero and the soil loses its strength and develops a liquefied state (Seed and Idriss, 1982).

Due to the presence of shallow groundwater, the liquefaction potential of the site has been evaluated using the procedure described by Seed and Idriss (1982) and Seed and others (1985), and as recently modified by the National Center for Earthquake Engineering Research (Youd and Idriss, 2001).

The method of evaluating liquefaction potential consists of comparing the cyclic stress ratio (CSR) developed in the soil by the earthquake motion to the cyclic stress ratio or cyclic resistance ratio (CRR) that will cause liquefaction of the soil for a given number of cycles. In the simplified procedure, the CSR developed in the soil is calculated from a formula that incorporates ground surface acceleration, total and effective stresses in the soil at different depths (which in turn are related to the location of the groundwater table), non-rigidity of the soil column, and a number a simplifying assumptions.

The CSR that will cause liquefaction is related to the relative density of the soil, expressed in terms of SPT blowcounts (N_{60}), normalized for an effective overburden pressure of 1 ton per square foot $(N_1)_{60}$. A projected future depth to groundwater of 15 feet bgs at the site was utilized to calculate the liquefaction potential in the area. A peak horizontal ground acceleration of 0.50g and an earthquake magnitude of 7.2 were also utilized as input into the liquefaction analysis program ALISE (Yi, 2002).

The boring logs and CPT soundings were examined in detail. CPT sounding CPT-1 was selected as the representative soil profile. The liquefaction potential has been evaluated for that sounding using the above mentioned projected future depth of groundwater. Due to the granular nature of soils between the depths of 37 and 45 feet, as well as the relative density of those soils as indicated by the SPT blowcounts (N_{60}) experienced at that interval, our calculations indicated that these soils have a significant potential for liquefaction. The remaining soils do not have a potential for liquefaction because of their relative density as indicated by the SPT blowcounts or because of their clay content. Detailed results are included in Appendix "E".

Based upon the depth to liquefiable soils, groundwater depth and the elevation of the bed of the Mojave River, it does not appear that the site has a potential for liquefaction-related lateral spread.

FLOODING AND EROSION

No evidence of recent significant flooding at the site was observed during the geologic field reconnaissance or on the later aerial photographs reviewed. The 1938 aerial photographs show evidence of overbank flow from the Mojave River crossing the site; however this is prior to the development of the levee along the west side of the river.

East-flowing drainages adjacent to and west of the site are visible on the aerial photographs reviewed. These drainages apparently served to drain the terrace above the river basin west of the site. Recent development of the East Campus Road in this area has removed evidence of the previous existence of these drainages. The upper terrace area has also been mostly developed with campus facilities. It is assumed that these improvements provide drainage such that their water shed does not cross the subject site.

The site is located in an area mapped (06071C6485F) by the Federal Emergency Management Agency (FEMA, 1996). FEMA has designated the area of the site as Zone X, areas determined to be outside the 500 year flood plain. The nearby zones designated by FEMA are Zone A, a 100 year flood area located approximately 1,200 feet east of the site. The site is not located in the flood prone areas outlined by the San Bernardino County General Plan (2004). The Mojave River is located approximately 1,300 feet east of the site. The elevation of the site is approximately 14 feet above the stream bed elevation at its closest point to the site, and significant flooding is not anticipated.

The site is located within an area identified by the San Bernardino County General Plan (2004) as having a potential for inundation, due to dam failure. Therefore, seismically-induced flooding is a potential hazard to the site.

SETTLEMENT

FOUNDATION LOADING:

Calculations were performed utilizing Schmertmann's method to estimate potential settlements due to foundation loading. We performed calculations for both the existing soil conditions and for the anticipated remedial fills. Equivalent modulus of elasticities of 1,000,000 psf, 275,000 psf and 400,000 psf were utilized to model the recommended 15 feet of compacted fill beneath footings, the existing upper native soils and the underlying native soils, respectively. Our calculations indicated settlement on the order of 0.10 to 0.25 inches (depending on loading) for the structure on recompacted fill and 0.48 to 0.86 inches for the structure founded on existing native soils. The calculations were based on square footing configurations representing 2,100 psf and the maximum 3,500 psf allowable foundation pressures, respectively.

FLUID WITHDRAWAL:

Conditions conducive to subsidence due to fluid withdrawal do not appear to be present at this site.

SEISMIC SETTLEMENT:

Due to the loose to medium dense state of the upper native soils and the potential for liquefaction, the potential seismic settlement of the site was evaluated by the method proposed by Tokimatsu and Seed (1987) and Pradel (1998). The results are included in Appendix "D". The results indicated that potential seismic settlement on the order of 1.5 inches associated with an earthquake magnitude with 10 percent probability of exceedance in 100 years (statistical return period of 949 years), should be anticipated. Due to the relatively uniform alluvial deposits underlying the site, it is also anticipated that differential settlement will not exceed one-half of the total seismic settlement.

The majority of the anticipated settlement would be due to soil consolidation within the upper 15 feet. In order to minimize the potential settlement and provide mitigation of possible liquefaction related anomalies, we are providing recommendations for removal of these loose soils and replacement as properly compacted fill. Provided the upper soils are removed and replaced as recommended in this report, our calculations indicate that settlement resulting from a major seismic event should not exceed 1/2 inch.

CONCLUSIONS

On the basis of our research, field and laboratory investigations, it is the opinion of this firm that the proposed improvements are feasible from a geotechnical standpoint, provided the recommendations contained in this report are implemented during planning, grading and construction.

No evidence of active faulting on or immediately adjacent to the site was observed during the geologic field reconnaissance or on the aerial photographs reviewed. The site is not included within seismically hazardous areas designated by San Bernardino County General Plan (2004).

Moderate to severe seismic shaking of the site can be expected during the lifetime of the proposed structures. The site is subject to the near-source effects of strong motion as defined in the 2001 CBC.

Groundwater was encountered within the exploratory borings and soundings at depths of 21to 28 feet. The upper soils to a depth of 37 feet, and soils below a depth of 45 feet, do not have a significant liquefaction potential. However, the potential for liquefaction of soils between the depths of 37 and 45 feet is considered to be significant in the area of the site.

No evidence was found of flooding at the site since the development of the levee along the west side of the Mojave River. No significant drainages are currently present on the site or in the immediate vicinity.

The site is located within an area identified by the San Bernardino County General Plan (2004) as having a potential for inundation due to dam failure. Therefore, seismically-induced flooding is a potential hazard to the site.

The site is not located in a coastal area; therefore, tsunamis are not a potential hazard.

Evidence for landsliding on or immediately adjacent to the site was not observed during the geologic reconnaissance or on the aerial photographs reviewed. Slope stability hazards are not anticipated.

Based upon our field investigation and test data, it is our opinion that the upper native soils beneath the existing fills will not, in their present condition, provide uniform or adequate support for the proposed gymnasium. Our density testing and equivalent SPT data indicated variable in-situ conditions of the surficial soils, ranging from loose to medium dense states. Removal of any existing utilities may further disturb the near surface soils. These conditions may cause unacceptable differential and/or overall settlement upon application of the anticipated foundation loads. Site clearing can be expected to further aggravate the settlement-prone conditions.

The on-site soils encountered generally consist of sands, silty sands, clayey sands, sandy silts, and sandy clays to the maximum depths attained. The soils are in generally in loose to medium dense states to a depth of approximately 15 feet. Beyond that depth the soils are in stiff to hard (cohesive soils) or medium dense to dense states (non-cohesive soils) to the maximum depth attained. Our calculations indicate a liquefaction potential for soils between 37 and 45 feet in depth.

Seismic settlement analysis indicated a potential seismic settlement on the order of 1.5 inches associated with an earthquake with 10 percent probability of exceedance in 100 years (statistical return period of 949 years). The settlement differential is expected to be half of the maximum seismic settlement.

Because of the degree of potential seismic and static settlement resulting from the loose to medium dense state of the upper soils, it will be necessary to remove the upper 15 feet of existing soils in the building pad and other structural areas and the upper 36 inches of soils in non-structural areas. The removal should include the soils within the building area and up to 15 feet beyond, measured from the outer foundation line at the bottom of the excavation. In order to minimize settlement associated with compacted fill we are recommending that all fill at the site be compacted to a minimum of 95 percent relative compaction (ASTM D 1557). The project engineering geologist should be present to observe and approve all removal excavation bottoms prior to refilling.

Although foundation depths are not known at this time, it is anticipated that the removal of the upper loose to medium dense soils will provide a compacted fill mat beneath foundations. If foundations extend to depths where the grading does not provide the minimum recommended compacted fill mat, additional subexcavation and recompaction will need to be performed. A compacted fill mat will provide a dense, uniform, high-strength soil layer to distribute the foundation loads over the underlying soils. In addition, construction of a compacted fill mat should ensure removal and recompaction, or densification of any disturbed soils.

Conventional spread foundations, either individual spread footings and/or continuous wall footings, may be utilized in conjunction with a compacted fill mat.

The upper on-site soils are generally granular and are considered to be non-critically expansive.

Construction of the proposed improvements appears to be feasible from geotechnical and geotechnical standpoints, without adversely affecting the adjacent properties or existing on-site improvements to remain.

Conditions conducive to subsidence due to fluid withdrawal do not appear to be present at this site.

RECOMMENDATIONS

SEISMIC DESIGN CONSIDERATIONS:

Severe seismic shaking of the site can be expected during the lifetime of the proposed structures. Therefore, the proposed structures should be designed, constructed, and maintained accordingly.

The site is subject to the near-source effects of strong motion. The applicable near-source acceleration factor N_A, as defined in the 2001 CBC, is 1.00, and the near-source velocity factor N_V is 1.08. The corresponding seismic coefficients for acceleration and velocity are $C_a = 0.44$ and $C_V = 0.69$.

The site is classified as type S_D, stiff soil profile, according to the 2001 CBC.

GENERAL SITE GRADING:

It is imperative that no clearing and/or grading operations be performed without the presence of a representative of the geotechnical engineer. An on-site pre-job meeting with you, the District, the contractor, and the geotechnical engineer/engineering geologist should occur prior to all grading-related operations. Operations undertaken at the site without the geotechnical engineer present may result in [illegible] from the final compaction report for the project.

Grading of the subject site should be performed, at a minimum, in accordance with these recommendations and with applicable portions of CBC. The following recommendations are presented for your assistance in establishing proper grading criteria.

INITIAL SITE PREPARATION:

All areas to be graded should be stripped of significant vegetation and other deleterious materials. These materials should be removed from the site for disposal. Any existing utility lines should be traced, removed, and rerouted from the structure areas.

All existing uncontrolled fills encountered during construction within proposed structure areas should be completely removed, cleaned of significant deleterious materials, and may be reused as compacted fill.

A removal of at least the upper 15 feet of existing soils within the building pad are, and 36 inches within pavement or other non-structural areas to be graded, should be conducted in order to help identify subsurface obstructions, undocumented fills, and disturbed, loose soils. The engineering geologist should be present to observe and approve the open removal excavation prior to scarification and refilling in order to verify the presence of competent native material and to identify any deeper areas of fill and any areas of deeper porous, potentially collapsible soils that extend below that zone. All such unsuitable material's conditions should be removed at that time.

Cavities created by removal of subsurface obstructions such as structures and utility lines should be thoroughly cleaned of loose soil, organic matter, and other deleterious materials, shaped to provide access for construction equipment, and backfilled as recommended for site fill.

PREPARATION OF FILL AREAS:

Prior to placing fill and after the observed and approved mandatory removal operation, the surfaces of all areas to receive fill should be scarified to a depth of 12 inches or more. The scarified soils should be brought to near optimum moisture content and recompacted to a minimum relative compaction of 95 percent in accordance with ASTM D 1557-00.

PREPARATION OF FOOTING AREAS:

The footings of the auxiliary gymnasium should rest upon at least 36 inches of properly compacted fill material. It is anticipated that the compacted fill mat will be constructed by virtue of the mandatory building pad removals and subsequent replacement. If areas exist where the required thickness of compacted fill is not accomplished by the remedial removals and site rough grading, the footing areas [illegible] to a depth of 36 inches or more below the proposed footing base grade, with

the subexcavation extending at least 15 feet beyond the footing lines, measured from the outer footing line at the bottom of the excavation. The bottom of this excavation should then be scarified to a depth of at least 12 inches, brought to near optimum moisture content, and recompacted to a minimum of 95 percent relative compaction in accordance with ASTM D 1557-00 prior to refilling the excavation to grade as properly compacted fill.

COMPACTED FILLS:

The on-site soils should provide adequate quality fill material provided they are free from organic matter and other deleterious materials. Unless approved by the geotechnical engineer, rock or similar irreducible material with a maximum dimension greater than 3 inches should not be buried or placed in fills. At such time that the final project Grading Plan is approved, the geotechnical engineer should review the plan to determine suitable rock disposal areas.

Import fill should be inorganic, non-expansive granular soils free from rocks or lumps greater than 3 inches in maximum dimension. Sources for import fill should be observed and approved by the geotechnical engineer prior to their use.

Fill should be spread in near-horizontal layers, approximately 12 inches in thickness. Thicker lifts may be approved by the geotechnical engineer if testing indicates that the grading procedures are adequate to achieve the required compaction. Each lift shall be spread evenly, thoroughly mixed during spreading to attain uniformity of the material and moisture in each layer, brought to between optimum moisture content and 3 percent above, and compacted to a minimum relative compaction of 95 percent in accordance with ASTM D 1557-00.

Based upon the relative compaction of the native soils determined during this investigation and the relative compaction anticipated for compacted fill soils, we estimate a compaction shrinkage on the order of 5 to 10 percent. Therefore, 1.05 to 1.10 cubic yards of in-place soil material would be necessary to yield 1 cubic yard of properly compacted fill material. In addition, we would anticipate subsidence of approximately 0.1 foot. These values are exclusive of losses due to stripping, or the removal of subsurface obstructions, if encountered, and may vary due to differing conditions within the project boundaries and the limitations of this investigation.

Values presented for shrinkage and subsidence are estimates only. Final grades should be adjusted, and/or contingency plans to import or export material should be made to accommodate possible variations in actual quantities during site grading.

FOUNDATION DESIGN:

If the site is prepared as recommended, the proposed structure may be safely founded on conventional spread foundations, either individual spread footings and/or continuous wall footings, bearing on a minimum of 36 inches of compacted soil. Footings should be a minimum of 12 inches wide and should be established at a minimum depth of 18 inches below lowest adjacent final subgrade level. For the minimum width and depth, footings may be designed for a maximum allowable foundation pressure of 2,100 pounds per square foot (psf) for dead plus live loads. This allowable bearing pressure may be increased by 350 psf for each additional foot of width and by 800 psf for each additional foot of depth to a maximum allowable foundation pressure of 3,500 psf for dead plus live loads. These bearing values may be increased by one-third for wind or seismic loading.

For footings thus designed and constructed, we would anticipate a maximum settlement due to foundation loading of less than 1/2 inch. Differential settlement between similarly loaded adjacent footings is expected to be approximately half the total settlement not exceeding 1/2 inch in a span of 40 feet.

LATERAL LOADING:

Resistance to lateral loads will be provided by passive earth pressure and base friction. For footings bearing against compacted fill, passive earth pressure may be considered to be developed at a rate of 400 psf per foot of depth. Base friction may be computed at 0.40 times the normal load. Base friction and passive earth pressure may be combined without reduction.

For preliminary retaining wall design purposes, a lateral active earth pressure developed at a rate of 35 psf per foot of depth may be utilized for unrestrained conditions. A lateral at rest earth pressure developed at a rate of 55 psf per foot of depth should be utilized for restrained conditions These values should be verified prior to construction when the backfill materials and conditions have been determined and are applicable only to level, properly drained backfill with no additional surcharge loadings.

Foundation concrete should be placed in neat excavations with vertical sides, or the concrete should be formed and the excavations properly backfilled as recommended for site fill.

SLABS-ON-GRADE:

To provide adequate support, concrete slabs-on-grade should bear on a minimum of 18 inches of compacted soil.

The final pad surfaces should be rolled to provide smooth, dense surfaces upon which to place the

Slabs to receive moisture-sensitive coverings should be provided with a moisture vapor barrier. This barrier may consist of an impermeable membrane. Two inches of sand over the membrane should help to reduce punctures and aid in obtaining a satisfactory concrete cure. The sand should be moistened just prior to placing of concrete.

EXPANSIVE SOILS:

Since the upper materials encountered during this investigation were granular and considered to be non-critically expansive, specialized construction procedures to specifically resist expansive soil forces are not anticipated at this time. Requirements for reinforcing steel to satisfy structural criteria are not affected by this recommendation. Additional evaluation of soils for expansion potential should be conducted by the geotechnical engineer during the grading operation.

CORROSIVITY TESTING:

Selected samples of material were delivered to M. J. Schiff & Associates, Inc. for soil corrosivity tests. Laboratory testing consisted of pH, resistivity, and major soluble salts commonly found in soils. The results of the laboratory tests performed by M. J. Schiff & Associates, Inc. are enclosed.
These tests have been performed in order to screen the site for potentially corrosive soils. Values obtained from the testing indicate that soils are considered mildly corrosive at as-received conditions, and moderately to mildly corrosive at saturated moisture conditions to ferrous metals at the site.

Results of the soluble sulfate testing indicate a "negligible" anticipated exposure to sulfate attack, as indicated on the enclosed test results. Based upon the criteria from Table 4.3.4. of the American Concrete Institute (ACI) Manual of Concrete Practice (2000), no special measures, such as specific cement types, water-cement ratios, etc., will be needed for this "negligible" exposure to sulfate attack.

Soluble chloride content of soil was not at levels high enough to be of concern with respect to corrosion of reinforcing steel. The results should be considered in combination with the soluble chloride content of the hardened concrete in determining the effect of chloride on the corrosion of reinforcing steel.

C.H.J., Incorporated does not practice corrosion engineering. If further information concerning the corrosion characteristics, or interpretation of the results submitted herein, are required, then a competent corrosion engineer could be consulted.

CONSTRUCTION OBSERVATION:

All grading operations, including site clearing and stripping, should be observed by a representative of the geotechnical engineer. The presence of the geotechnical engineer's field representative will be

for the purpose of providing observation and field testing, and will not include any supervising or directing of the actual work of the contractor, his employees, or agents. Neither the presence of the geotechnical engineer's field representative nor the observations and testing by the geotechnical engineer shall excuse the contractor in any way for defects discovered in his work. It is understood that the geotechnical engineer will not be responsible for job or site safety on this project, which will be the sole responsibility of the contractor.

LIMITATIONS

C.H.J., Incorporated has striven to perform our services within the limits prescribed by our client, and in a manner consistent with the usual thoroughness and competence of reputable geotechnical engineers and engineering geologists practicing under similar circumstances. No other representation, express or implied, and no warranty or guarantee is included or intended by virtue of the services performed or reports, opinion, documents, or otherwise supplied.

This report reflects the testing conducted on the site as the site existed during the investigation, which is the subject of this report. However, changes in the conditions of a property can occur with the passage of time, due to natural processes or the works of man on this or adjacent properties. Changes in applicable or appropriate standards may also occur whether as a result of legislation, application, or the broadening of knowledge. Therefore, this report is indicative of only those conditions tested at the time of the subject investigation, and the findings of this report may be invalidated fully or partially by changes outside of the control of C.H.J., Incorporated. This report is therefore subject to review and should not be relied upon after a period of one year.

The conclusions and recommendations in this report are based upon observations performed and data collected at separate locations, and interpolation between these locations, carried out for the project and the scope of services described. It is assumed and expected that the conditions between locations observed and/or sampled are similar to those encountered at the individual locations where observation and sampling was performed. However, conditions between these locations may vary significantly. Should conditions be encountered in the field, by the client or any firm performing services for the client or the client's assign, that appear different than those described herein, this firm should be contacted immediately in order that we might evaluate their effect.

If this report or portions thereof are provided to contractors or included in specifications, it should be understood by all parties that they are provided for information only and should be used as such.

The report and its contents resulting from this investigation are not intended or represented to be suitable for reuse on extensions or modifications of the project, or for use on any other project.

CLOSURE

We appreciate this opportunity to be of service and trust this report provides the information desired at this time. Should questions arise, please do not hesitate to contact this office.

Respectfully submitted,
C.H.J., INCORPORATED

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C·M·J·

APPENDIX "A"

GEOTECHNICAL MAPS

INDEX MAP

FOR: VICTOR VALLEY COLLEGE

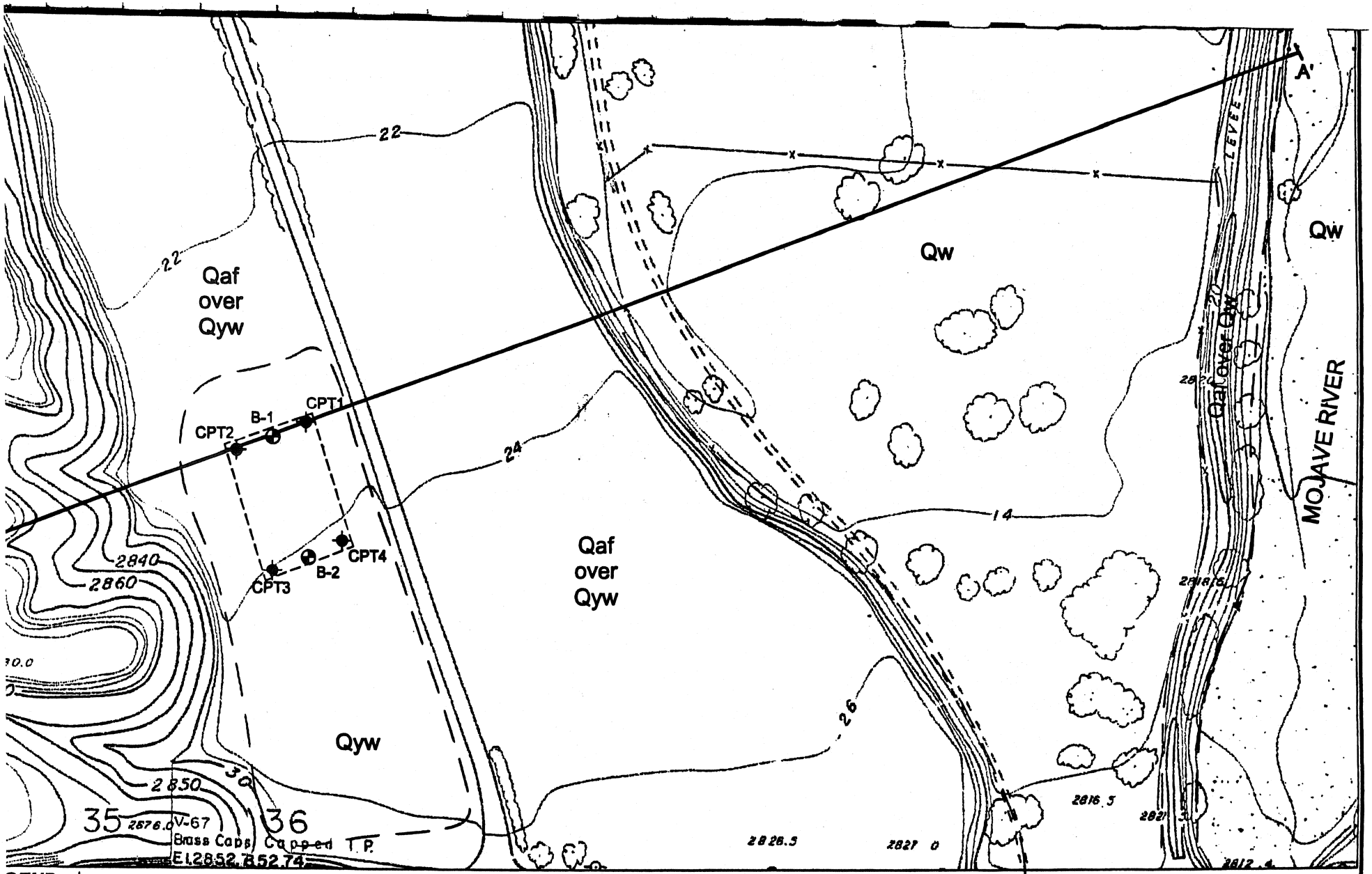
DATE:

PROPOSED AUXILIARY GYMNASIUM
VICTOR VALLEY COLLEGE

ENCLOSURE "A-1"

JOB NUMBER

-N-



LEGEND:

- Artificial fill
- Very young wash deposits
- Young wash deposits

Contact
dashed where approximately located

— Exporatory Boring Locations

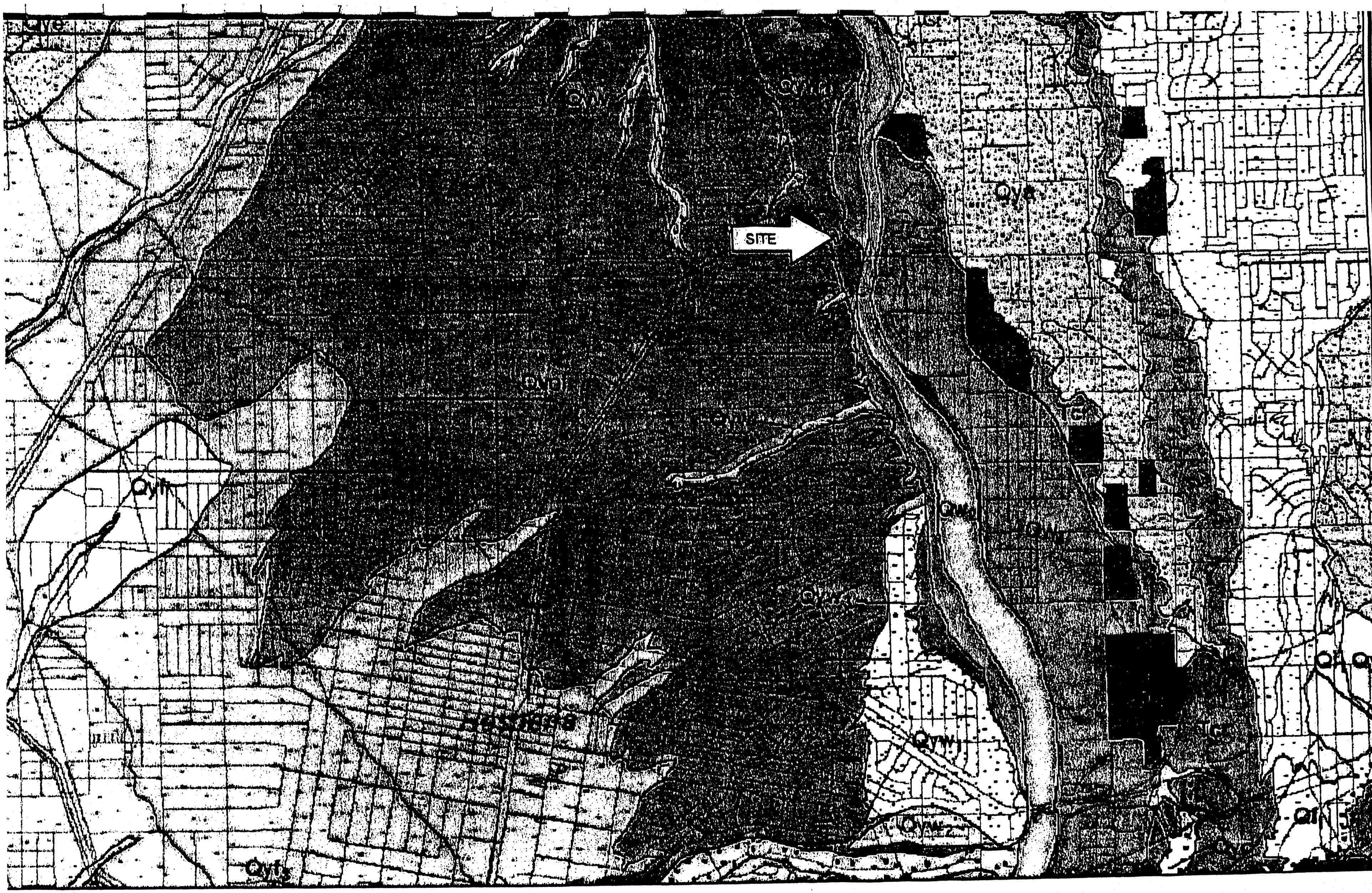
— Cone Penetrometer Sounding Locations

A — A'
Geologic Cross Section

-N-

GEOLOGIC MAP		
FOR: VICTOR VALLEY COLLEGE	PROPOSED AUXILIARY GYMNASIUM VICTOR VALLEY COLLEGE VICTORVILLE, CALIFORNIA	ENCLOSURE "A-2"
DATE: MAY 2005		JOB NUMBER V05101-3

4



GEND:

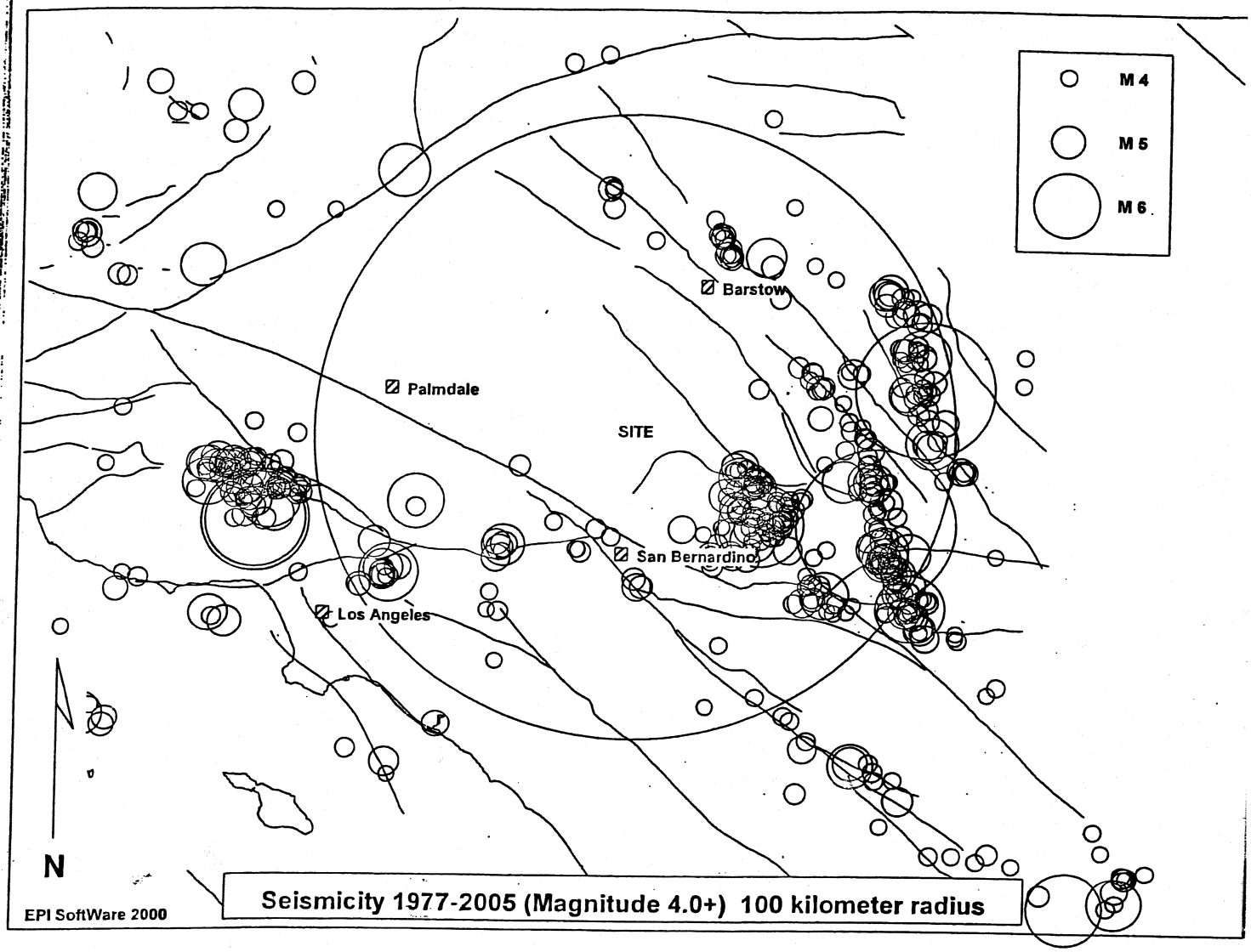
- Disturbed ground
- Very yong wash deposits
- Very young alluvial-fan deposits
- Young wash deposits
- Young alluvial-fan deposits
- Young alluvial-valley deposits
- Young eolian deposits
- Very old alluvial-fan deposits

——— Contact

-N-

GEOLOGIC INDEX MAP		
FOR: VICTOR VALLEY COLLEGE	PROPOSED AUXILIARY GYMNASIUM VICTOR VALLEY COLLEGE VICTORVILLE, CALIFORNIA	ENCLOSURE "A-3"
DATE: MAY 2005		JOB NUMBER V05101-3

C.H.J. INCORPORATED



SITE LOCATION: 34.47274 LAT. -117.25899 LONG.

MINIMUM LOCATION QUALITY: C

TOTAL # OF EVENTS ON PLOT: 493

TOTAL # OF EVENTS WITHIN SEARCH RADIUS: 313

MAGNITUDE DISTRIBUTION OF SEARCH RADIUS EVENTS:

4.0- 4.9 : 279
5.0- 5.9 : 31
6.0- 6.9 : 1
7.0- 7.9 : 2
8.0- 8.9 : 0

0 50 100
KILOMETERS

CLOSEST EVENT: 4.7 ON FRIDAY, DECEMBER 04, 1992 LOCATED APPROX. 33 KILOMETERS EAST OF THE SITE

LARGEST 5 EVENTS:

7.3 ON SUNDAY, JUNE 28, 1992 LOCATED APPROX. 81 KILOMETERS SOUTHEAST OF THE SITE
7.1 ON SATURDAY, OCTOBER 16, 1999 LOCATED APPROX. 91 KILOMETERS EAST OF THE SITE
6.4 ON SUNDAY, JUNE 28, 1992 LOCATED APPROX. 49 KILOMETERS SOUTHEAST OF THE SITE
5.9 ON THURSDAY, OCTOBER 01, 1987 LOCATED APPROX. 88 KILOMETERS SOUTHWEST OF THE SITE
5.8 ON SATURDAY, OCTOBER 16, 1999 LOCATED APPROX. 92 KILOMETERS EAST OF THE SITE

EARTHQUAKE EPICENTER MAP

FOR: VICTOR VALLEY COLLEGE

PROPOSED AUXILIARY GYMNASIUM

ENCLOSURE

C·M·J·

APPENDIX "B"

EXPLORATORY LOGS

C·M·J·

Enclosure "B" (1of2)
Job No.V05101-3

KEY TO LOGS

LEGEND OF LAB/FIELD TESTS:

Bulk	Indicates Disturbed or Bulk Sample
Cor.	Chemical/Corrosivity Tests
Dist.	Indicates Disturbed Sample
DS	Direct Shear Test (ASTM D 3080)
MDC	Maximum Density Optimum Moisture Determination (ASTM D 1557)
N.R.	Indicates No Recovery of Sample
Ring	Indicates Undisturbed Ring Sample. Undisturbed Ring Samples are obtained with a "California Sampler" (3.25" O.D. and 2.42" I.D.) driven with a 140-pound weight falling 30 inches. The blows per foot are converted to equivalent SPT values.
SA	Sieve Analysis (ASTM C 136)
SPT	Indicates Standard Penetration Test. The SPT N-value is the number of blows required to drive an SPT sampler 12 inches using a 140-pound weight falling 30 inches. The SPT sampler is 2" O.D. and 1 3/8" I.D.

ENGINEERING PROPERTIES FROM SPT BLOWS

Relationship of Penetration Resistance to Relative Density for Cohesionless Soils*
(After Mitchell and Katti, 1981)

Number of SPT Blows (N_{60})	Descriptive Relative Density	Approximate Relative Density (%)
<4	Very Loose	0-15
4-10	Loose	15-35
10-30	Medium Dense	35-65
30-50	Dense	65-85
>50	Very Dense	85-100

* At an effective overburden pressure of 1 ton per square foot (100 kPa)

Approximate Values of Undrained Shear Strength for Cohesive Soils
(Terzaghi and Peck, 1967)

No. of SPT Blows (N_{60})	Soil Consistency	Approximate Undrained Shear Strength (psf)
<2	Very Soft	Less Than 250
2-4	Soft	250-500
4-8	Medium Stiff	500-1000
8-15	Stiff	1000-2000
15-30	Very Stiff	2000-4000
>30	Hard	More Than 4000

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
RSE NED LS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
LN 50% RIAL IS THAN NO. E SIZE	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND-SILT MIXTURES
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES
IE NED LS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS.
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
AN 50% RIAL IS THAN SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

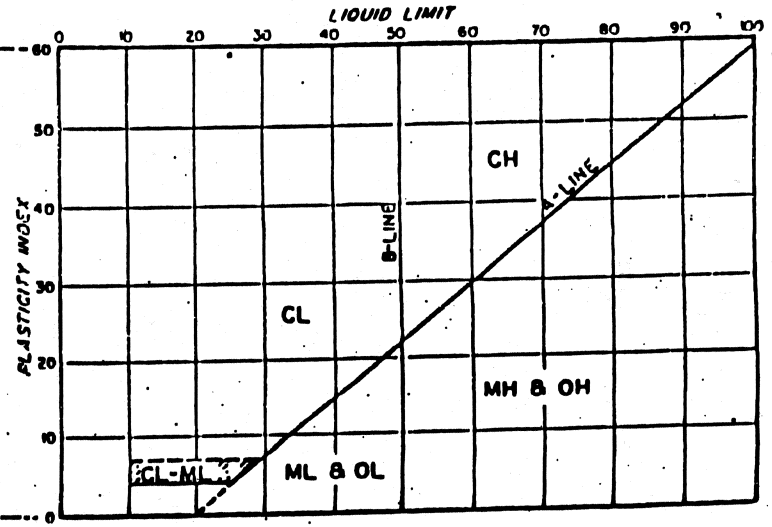
FOR LABORATORY CLASSIFICATION OF FINE-GRAINED SOILS

GRADATION CHART

MATERIAL SIZE		PARTICLE SIZE			
		LOWER LIMIT		UPPER LIMIT	
		MILLIMETERS	SIEVE SIZE	MILLIMETERS	SIEVE SIZE
SAND	FINE	.074	#200 ±	0.42	#40 ±
	MEDIUM	0.42	#40 ±	2.00	#10 ±
	COARSE	2.00	#10 ±	4.76	#4 ±
GRAVEL	FINE	4.76	#4 ±	19.1	3/4" ●
	COARSE	19.1	3/4" ●	76.2	3" ●
COBBLES		76.2	3"	304.8	12"
BOULDERS		304.8	12	914.4	36"

± US STANDARD ● CLEAR SQUARE OPENINGS

PLASTICITY CHART



UNIFIED SOIL CLASSIFICATION SYSTEM

C·M·J· INCORPORATED

Enclosure "B" (2of2)
Job No. V0510I-3

EXPLORATORY BORING NO. 1A

Date Drilled: 4/13/05 | Client: Victor Valley College

Equipment: CME 55 Drill Rig | Driving Weight / Drop: 140 lbs/30 in

Surface Elevation(ft): N/A | Logged by: J.R. | Measured Depth to Water(ft): 24.0

DEPTH (ft)	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
	(SM) Silty Sand, fine with medium, olive gray	Qyw				5.3		Cor, DS, MDS, SA Ring
					8	15.3	97	
	(SP) Sand, fine to medium, light brown					3.6		
5	(SM) Silty Sand, fine to medium with coarse, light brown				8	4.4 5.1	109	DS, MDC, SA Ring
10					12	3.6	102	Ring
	(SM) Silty Sand, fine with medium and clay, olive gray					29.0		
15	(SM) Silty Sand, fine to medium, olive brown				66	33.8 8.3	83	Ring
20	(CL) Sandy Clay, fine with silt, gray				8	34.2 26.4	96	Ring, Hyd
	(SM) Silty Sand, fine with medium and clay, olive gray					25.0		
25	(CL) Sandy Clay, fine with medium and silt, gray	▼ Groundwater				26.6		
					8	34.1	86	Ring, Hyd
	(SP) Sand, fine to medium with coarse, light brown					18.0		
30					29	11.7	119	Ring
	(SC) Clayey Sand, fine to medium with silt, gray							26.6
35					23	16.3	113	Ring
	(SP-SM) Sand, fine to medium with silt, light brown					11.1		
40					46	14.4	119	Ring
	(CL) Sandy Clay, fine, dark gray					48.1		
45					30/6"	N.R.	N.R.	Ring
50					9	43.9	77	Ring
	(SM) Silty Sand, fine with medium and clay, dark gray					30.4		Hyd
	(SP) Sandy, fine to medium with coarse and silt, light gray					13.6		
55					22	14.4	116	Ring
	(SP) Sand, fine to medium with coarse and gravel to 1 1/2", light brown					13.0		
60					28	N.R.	N.R.	Ring
65					54/10"	8.2	131	Ring
	END OF BORING							
70	NO REFUSAL, NO BEDROCK, NO FILL SLIGHT CAVING, GROUNDWATER AT 24.0'							

BORING_LOG_75_FT_V05101-3.GPJ CHJ.GDT 5/11/05

C·M·J·

NEW GYMNASIUM
VICTORVILLE, CALIFORNIA

Job No. V05101-3

Enclosure B-1

EXPLORATORY BORING NO. 2A

Date Drilled: 4/13/05

Client: Victor Valley College

Equipment: CME 55 Drill Rig

Driving Weight / Drop: 140 lbs/30 in

Surface Elevation(ft): N/A

Logged by: J.R.

Measured Depth to Water(ft): 27.5

DEPTH (ft)	GRAPHIC LOG	VISUAL CLASSIFICATION	REMARKS	SAMPLES DRIVE	SAMPLES BULK	BLOWS/FOOT (Equiv. SPT)	FIELD MOISTURE (%)	DRY UNIT WT. (pcf)	LAB/FIELD TESTS
		(SM) Silty Sand, fine to medium, gray	Qyw				4.8		
						7	3.4	104	Ring
5		(SP) Sand, fine to medium with silt, light brown					3.6		
						7	4.5	113	Ring
		(SP) Sand, fine to coarse, light brown					3.3		
10		(SM) Silty Sand, fine with medium and clay, olive brown					28.2		
						5	19.3	89	Ring
		(CL) Sandy Clay, fine with silt, dark gray					29.0		
15							17.6		
		(SM) Silty Sand, fine with medium, olive brown				7	22.7	86	Ring
		(CL) Sandy Clay, fine with silt, olive gray					48.1		
20							8.1		
		(SM) Silty Sand, fine to medium, gray				8	23.0	96	Ring
		(SM) Silty Sand, fine with medium, olive gray					23.1		
25							13.6		
		(SP-SM) Sand, fine to medium with coarse and silt, gray	▼ Groundwater			15	15.0	111	Ring
30						38	15.3	102	Ring
							10.9		
35		(SP) Sand, fine to medium, light brown				40	17.8	109	Ring
40						68	10.5	104	Ring
							21.2		
45		(SP) Sand, fine to medium with coarse, light brown				10	13.6	122	Ring
							13.6		
50		(SM) Silty Sand, fine to medium with coarse, gravel to 1 1/2", and clay, gray brown				21	11.7	124	Ring
55									
						34	N.R.	N.R.	Ring
60									
		END OF BORING							
65		NO REFUSAL, NO BEDROCK, NO FILL SLIGHT CAVING, GROUNDWATER AT 27.5'							
70									

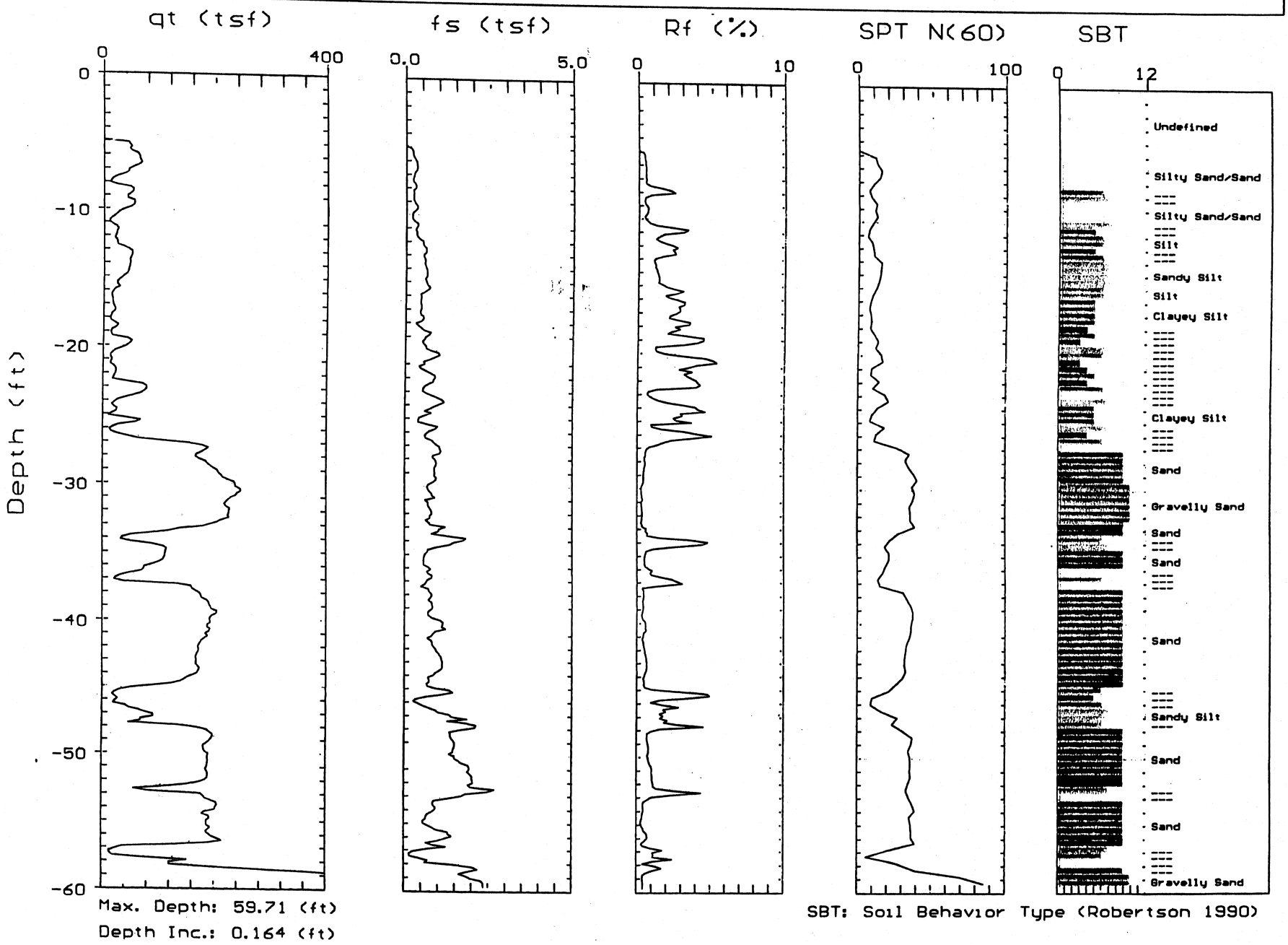
BORING LOG_75_FT V05101-3.GPJ CHJ.GDT 5/11/05

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-1

Engineer: B.WILLIAMS
Date: 03:21:05 08:28

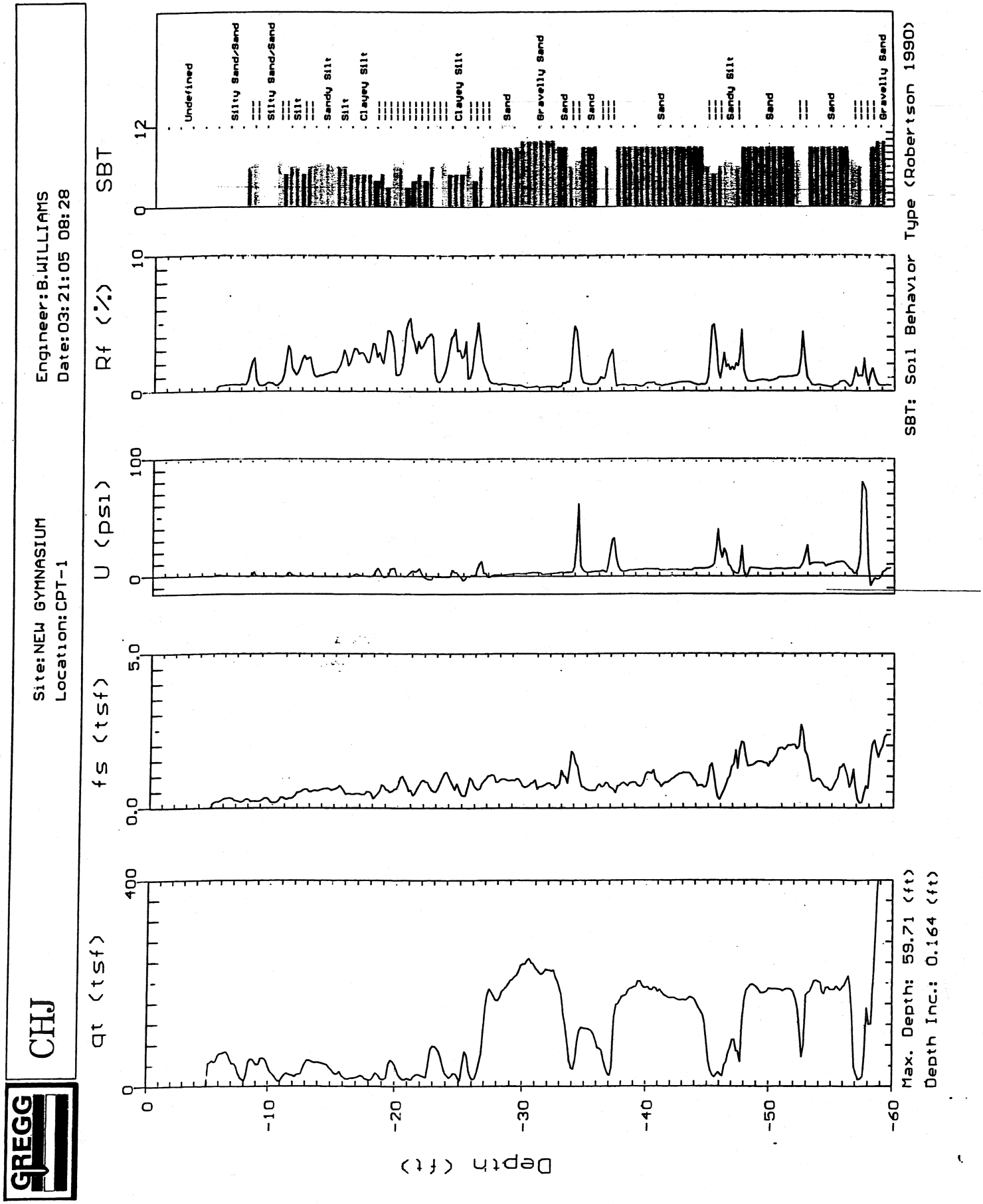


Max. Depth: 59.71 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

"B-3"
Job No. V05101-3

"B-3a"
Job No. V05101-3

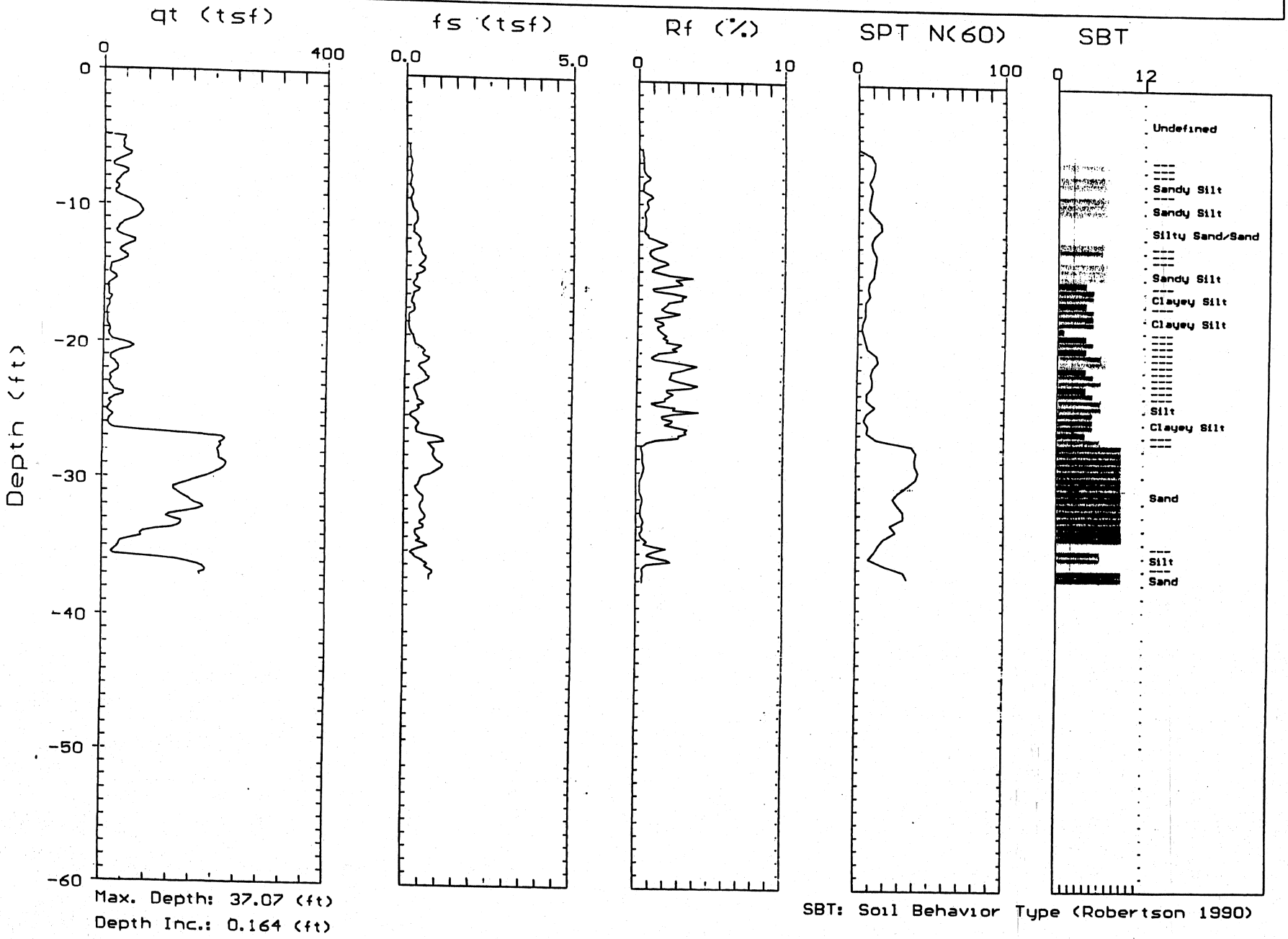


GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-2

Engineer: B.WILLIAMS
Date: 03:21:05 09:20



Max. Depth: 37.07 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

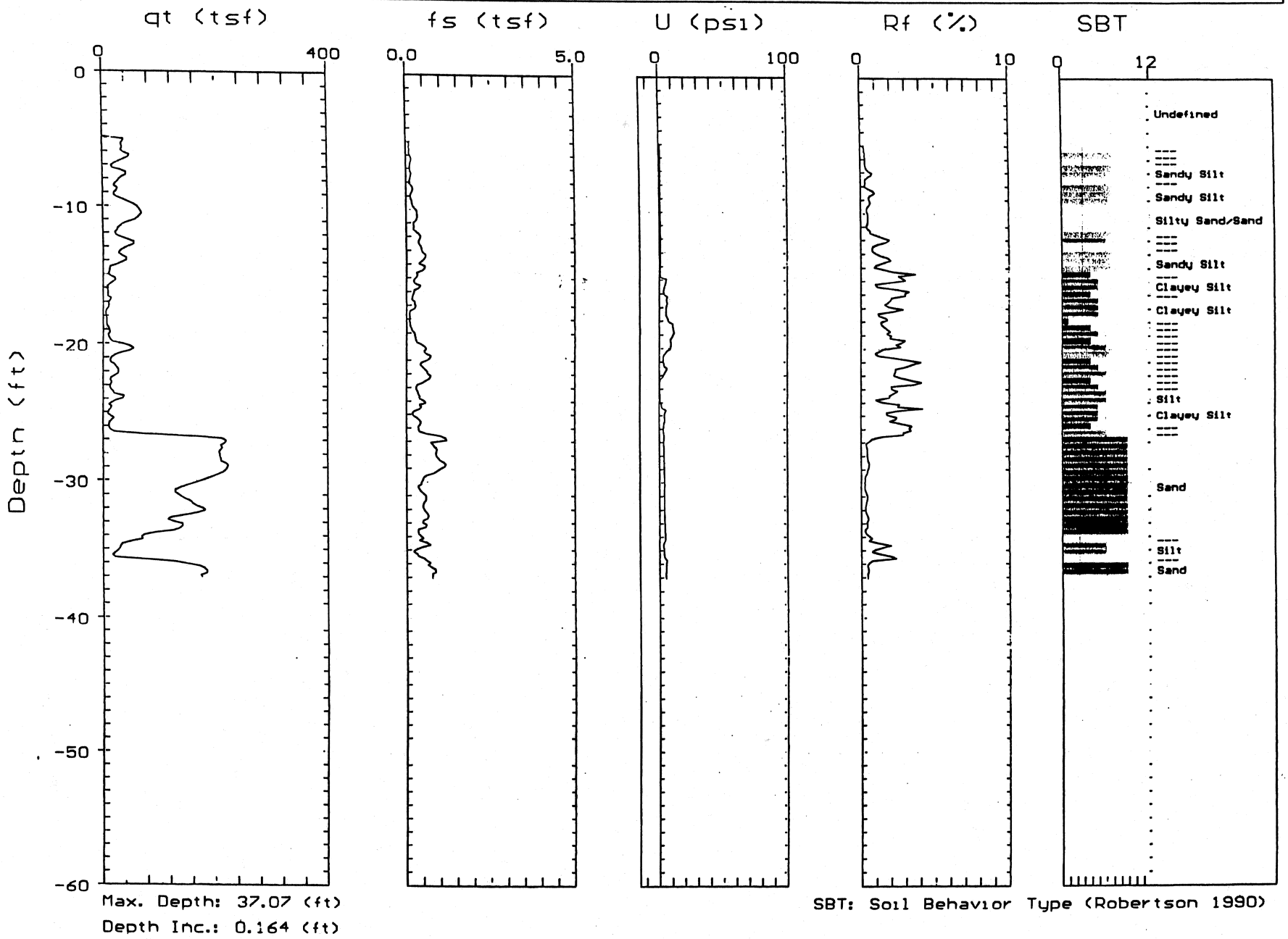
"B-4"
Job No. V05101-3

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-2

Engineer: B.WILLIAMS
Date: 03:21:05 09:20



Max. Depth: 37.07 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

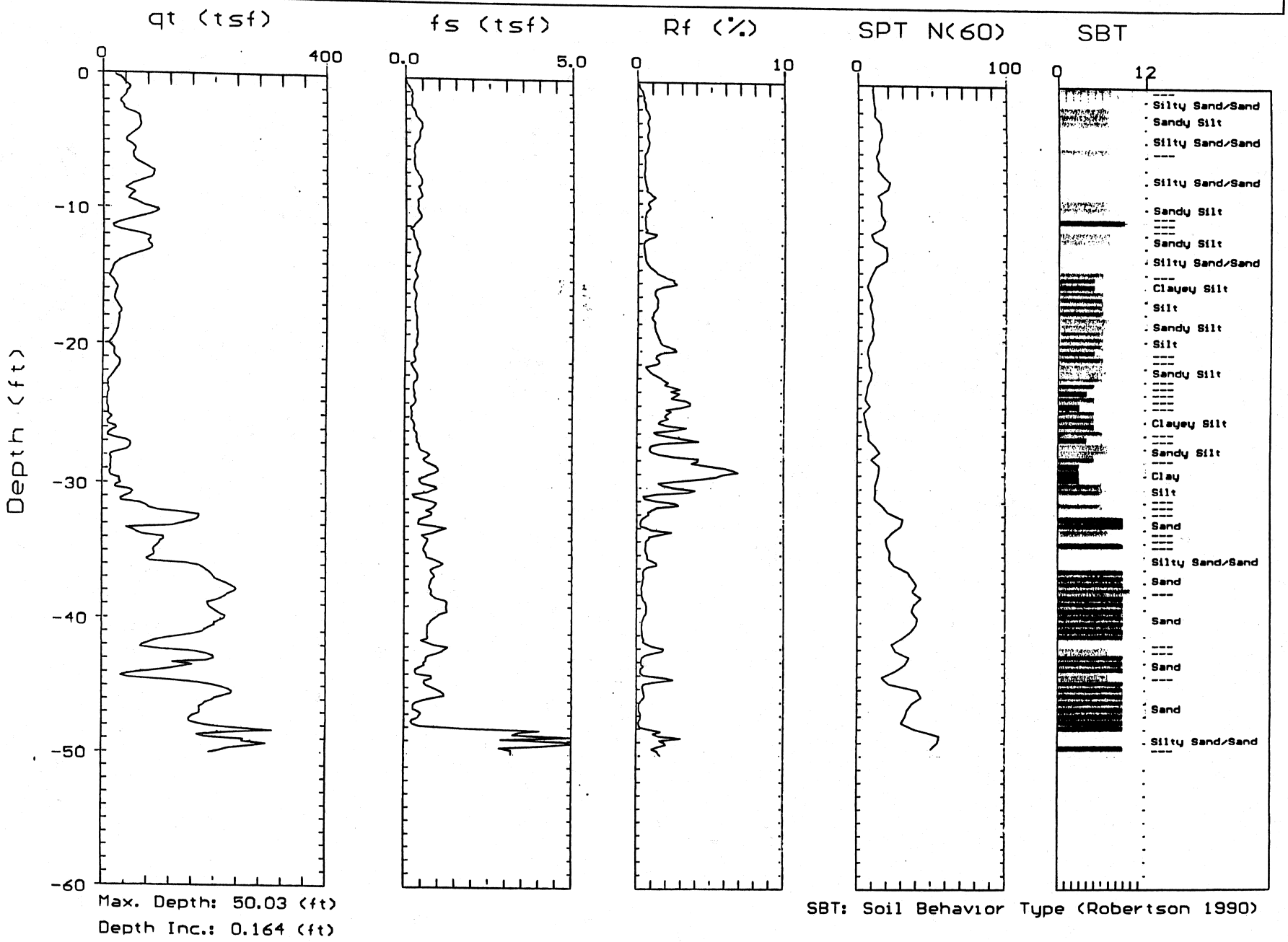
"B-4a"
Job No. V05101-3

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-3

Engineer: B.WILLIAMS
Date: 03:21:05 09:45

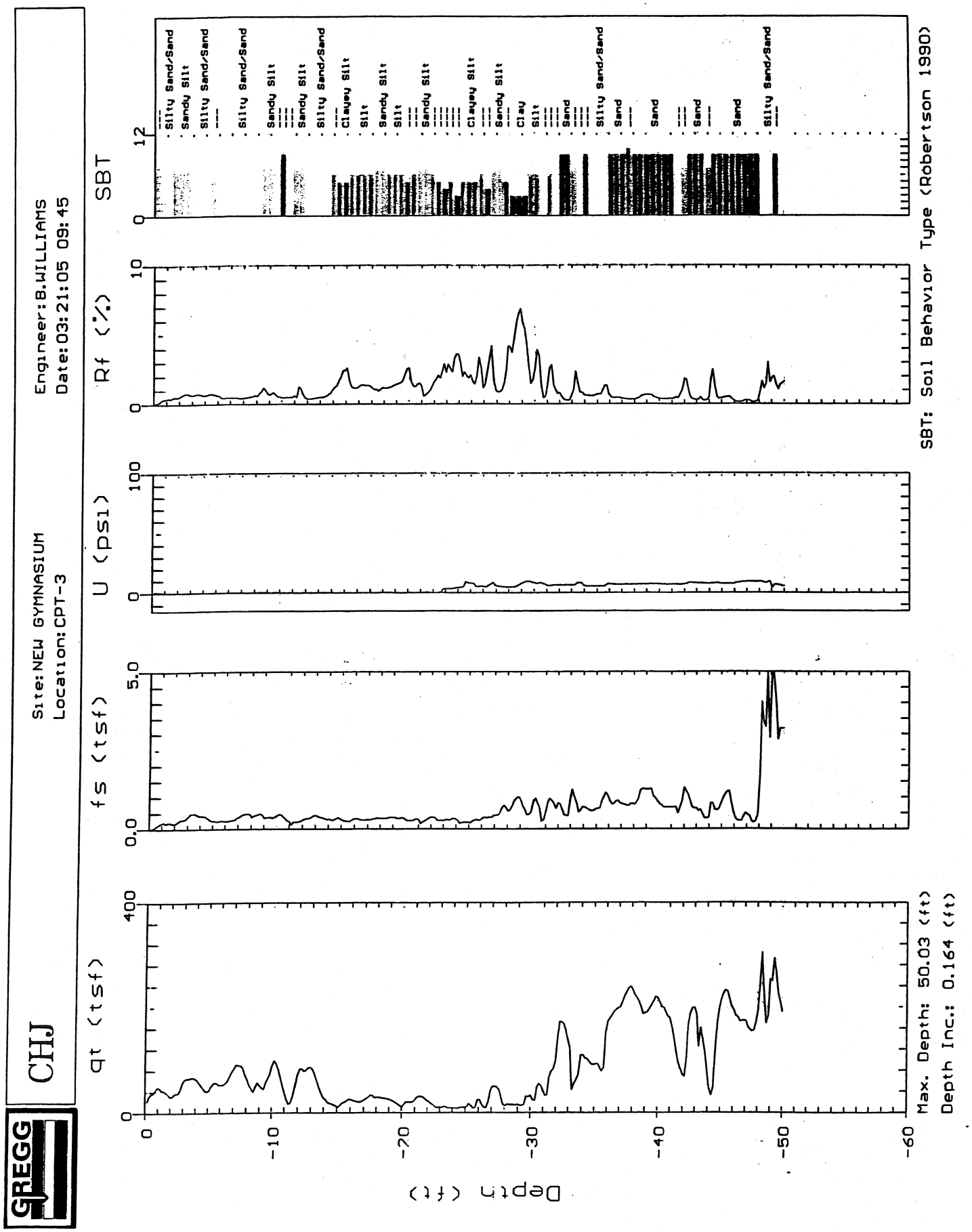


Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

"B-5"
Job No. V05101-3

"B-5a"
Job No. V05101-3

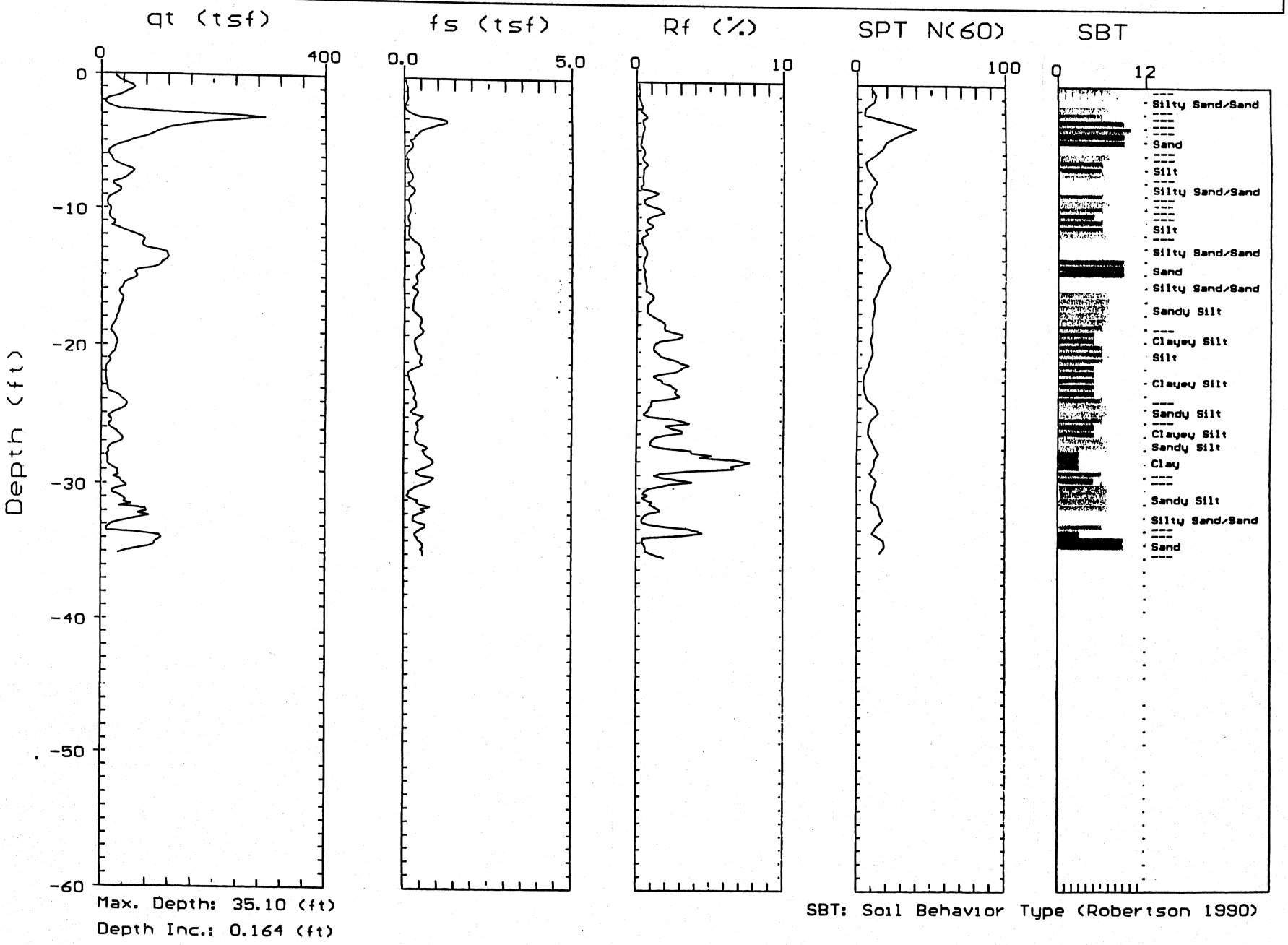


GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-4

Engineer: B.WILLIAMS
Date: 03:21:05 10:19



Max. Depth: 35.10 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

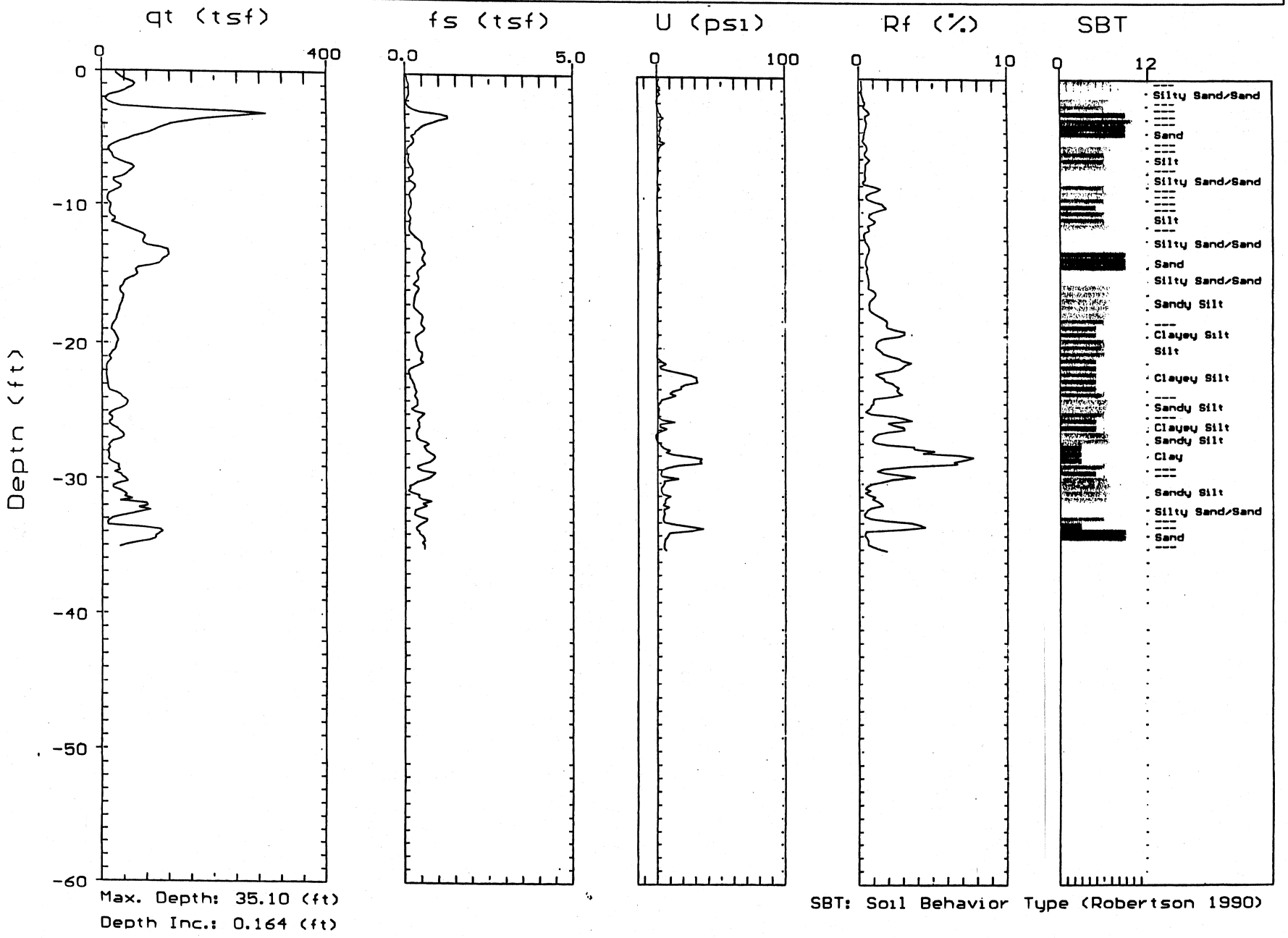
"B-6"
Job No. V0510I-3

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-4

Engineer: B.WILLIAMS
Date: 03:21:05 10:19



Max. Depth: 35.10 (ft)
Depth Inc.: 0.164 (ft)

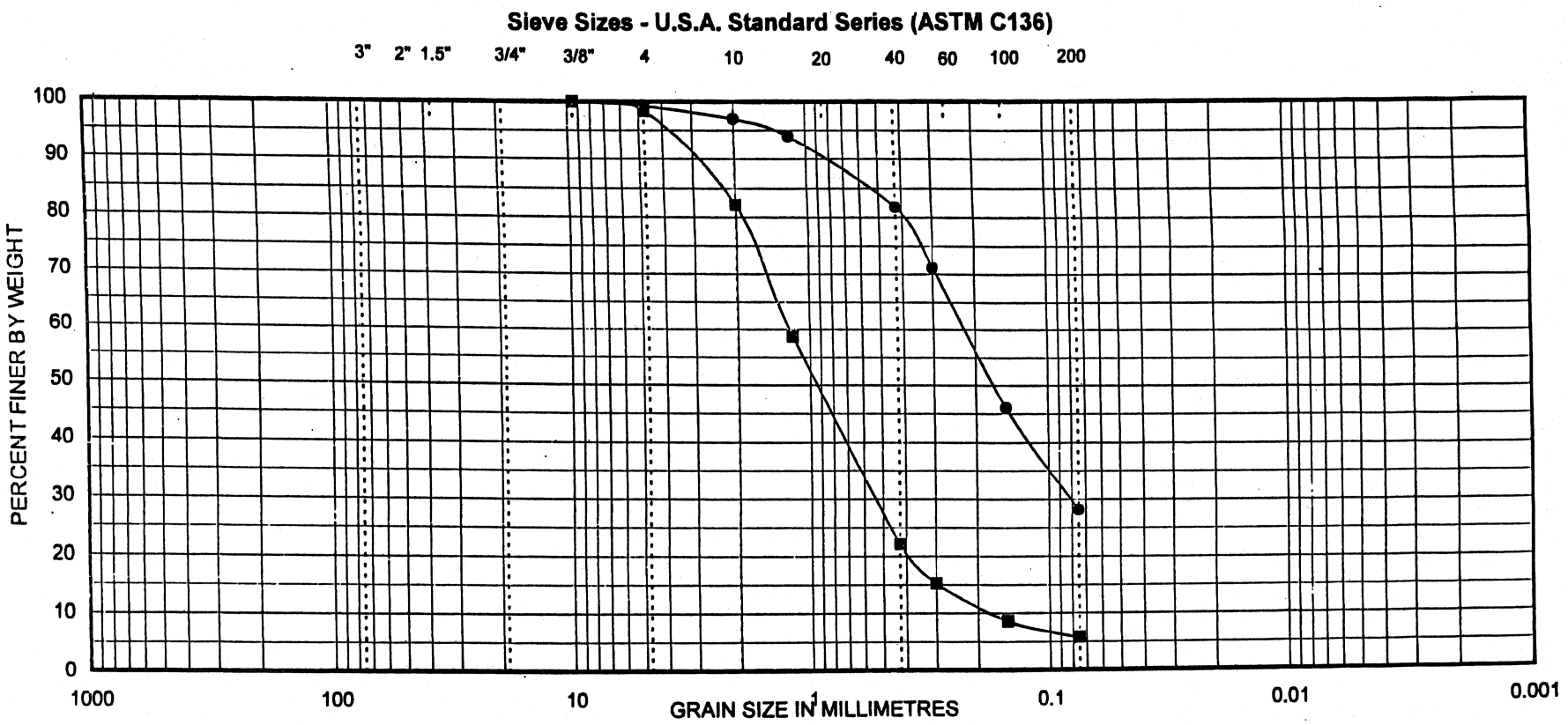
SBT: Soil Behavior Type (Robertson 1990)

"B-6a"
Job No. V05101-3

C·M·J·

APPENDIX "C"

LABORATORY TESTING



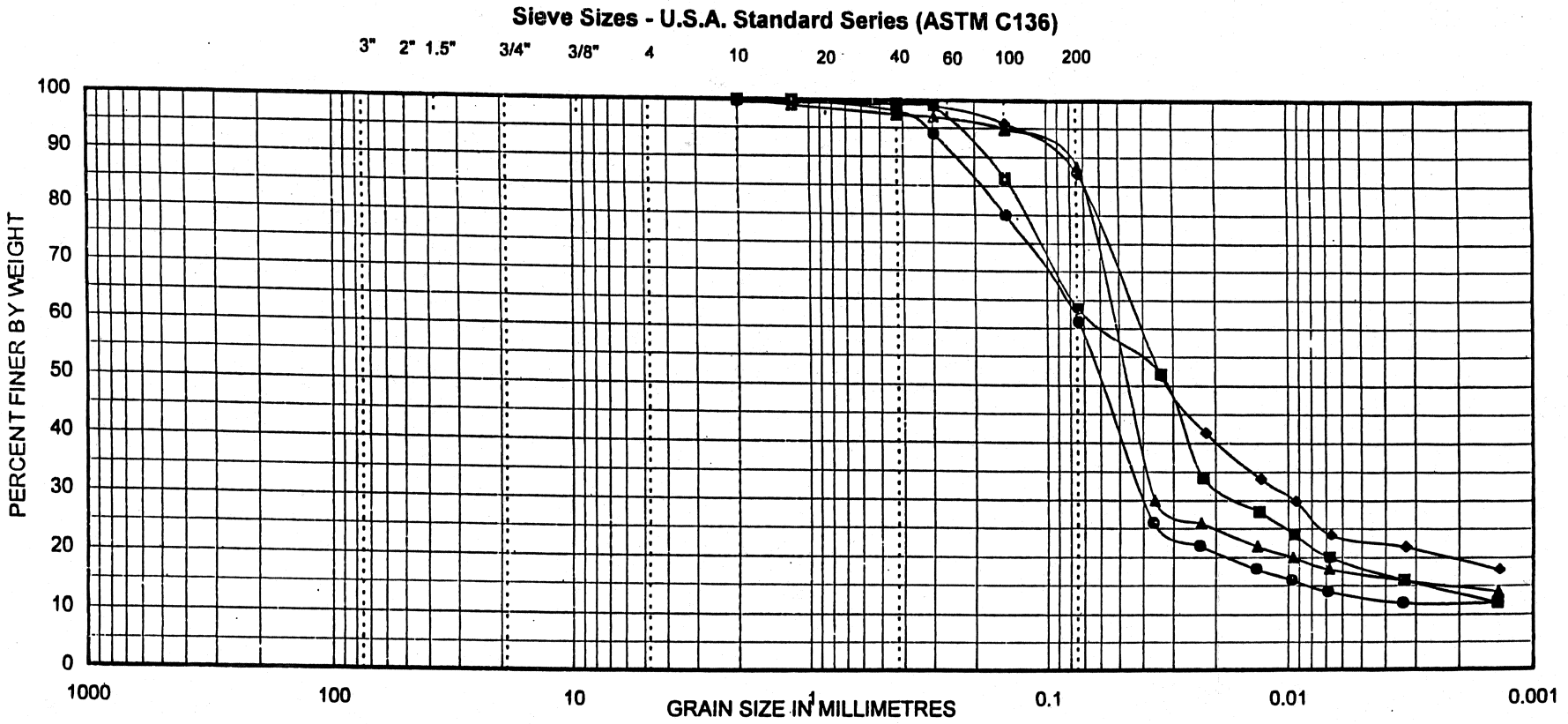
Cobbles & Boulders	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

Symbol	Boring	Depth (ft)	Classification	D_{10} (mm)	D_{30} (mm)	D_{50} (mm)	D_{60} (mm)	C_u	C_c
●	1A	0.0	(SM) Silty Sand, fine to medium		0.081	0.167	0.220		
■	1C	5.0	(SW) Sand, fine to coarse	0.175	0.529	0.924	1.213	6.95	1.32

C • M • J • INCORPORATED

GRADATION CURVES

Project:	Victor Valley College Auxillary Gymnasium		
Location:	Victorville, CA		
Job Number:	V05101-3	Enclosure:	C-1



Cobbles & Boulders	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

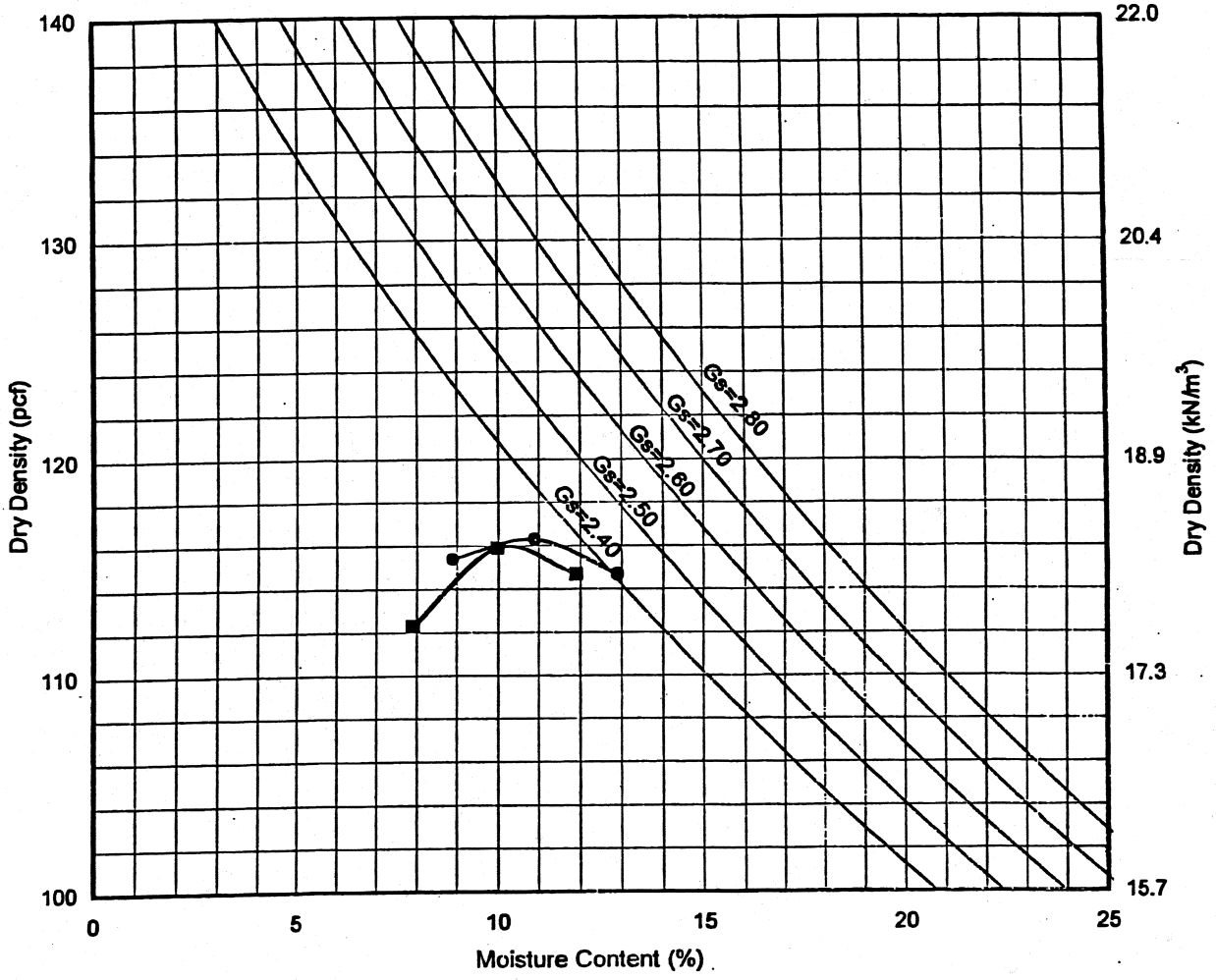
Symbol	Boring	Depth (ft)	Classification	D_{10} (mm)	D_{30} (mm)	D_{50} (mm)	D_{60} (mm)	C_u	C_c
●	1*4	15.5	(ML) Sandy Silt, fine		0.039	0.059	0.072		
■	1*5	20.5	(ML) Sandy Silt, fine		0.016	0.032	0.058		
▲	1*6	25.5	(ML) Silt, with fine sand		0.036	0.046	0.052		
◆	1*11	50.5	(ML) Silt, with fine sand		0.009	0.031	0.040		

C • H • J • INCORPORATED

GRADATION CURVES

Project:	Victor Valley College Auxillary Gymnasium		
Location:	Victorville, CA		
Job Number:	V05101-3	Enclosure:	C-2

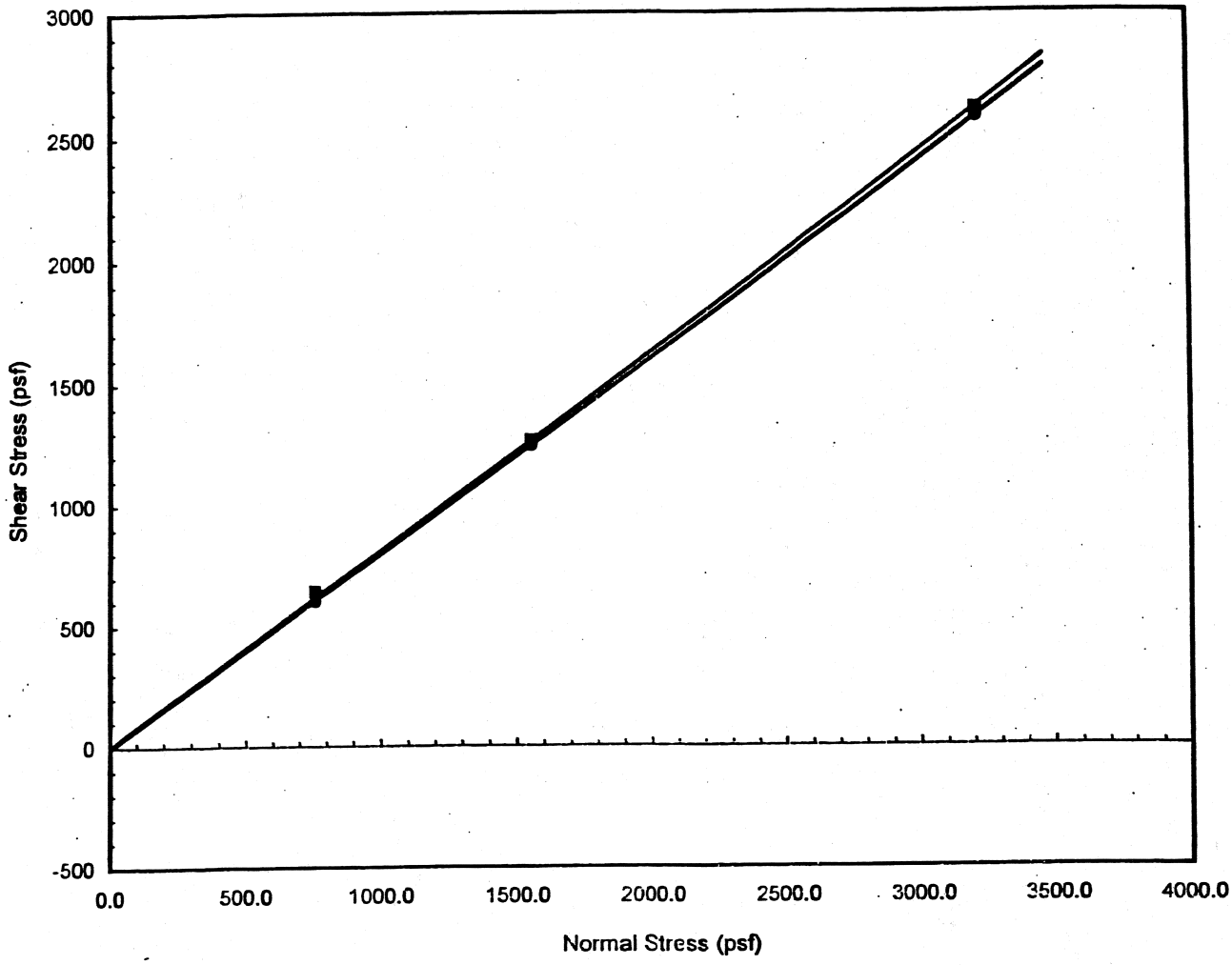
Maximum Density Optimum Moisture Determination Test (ASTM 1557)



Boring #		Depth(ft)	Soil/Sample Type	γ_{max} (pcf)	w_{opt} (%)
●	1	0	(SM) Silty sand, fine to medium	117.0	12.0
■	1	5	(SW-SM) Sand, fine to coarse with silt	116.5	11.0

MOISTURE DENSITY TEST			
Project:	Auxiliary Gymnasium		
Location:	SWC of East Campus Dr. & Fish Hatchery Rd.		
Job No.:	V05101-3	Enclosure:	C-3

Direct Shear Test (ASTM D 3080)



	Boring #	Depth(ft)	Soil/Sample Type	γ_d (pcf)	MC(%)	C (psf)	φ(°)
●	1	0	(SM) Silty Sand, fine to medium	97	5.3	-5	39
■	1	5	(SW-SM) Silty Sand, fine to coarse with silt	109	4.4	0	39

DIRECT SHEAR TEST			
Project:	Auxiliary Gymnasium		
Location:	Southwest of East Campus Dr. & Fish Hatchery Rd.		
Job No.:	V05101-3	Enclosure:	C-4

C • M • J • INCORPORATED

C·M·J·

APPENDIX "D"

GEOTECHNICAL CROSS SECTIONS

C·H·J·

APPENDIX "E"

SEISMIC DATA

Enclosure "E-1"
Job No. V05101-3

FAULT TABLE			
Abbreviated Fault Name	Closest Distance (km)	Fault Area (cm2)[1]	Maximum Magnitude[1]
NORTH FRONTAL FAULT ZONE (Western)	7.8	9.18×10^{12}	7.2
HELENDALE - S. LOCKHARDT	17.7	1.26×10^{13}	7.3
CLEGHORN	20.9	3.25×10^{12}	6.5
SAN ANDREAS - San Bernardino	28.2	1.85×10^{13}	7.5
SAN ANDREAS - Mojave	30.8	1.24×10^{13}	7.4
SAN JACINTO-SAN BERNARDINO	30.8	5.40×10^{12}	6.7
CUCAMONGA	34.2	5.04×10^{12}	6.9
LENWOOD-LOCKHART-OLD WOMAN SPRGS	42.9	1.89×10^{13}	7.5
NORTH FRONTAL FAULT ZONE (Eastern)	44.7	4.86×10^{12}	6.7
SAN JACINTO-SAN JACINTO VALLEY	50.7	7.74×10^{12}	6.9
LANDERS	50.9	1.08×10^{13}	7.3
JOHNSON VALLEY (Northern)	52.2	4.55×10^{12}	6.7
GRAVEL HILLS - HARPER LAKE	53.7	8.45×10^{12}	7.1
SIERRA MADRE	53.9	1.03×10^{13}	7.2
SAN JOSE	56.2	2.60×10^{12}	6.4
CLAMSHELL-SAWPIT	59.8	2.88×10^{12}	6.5
CALICO - HIDALGO	63.9	1.24×10^{13}	7.3
BLACKWATER	65.2	7.80×10^{12}	7.1
EMERSON So. - COPPER MTN.	65.3	7.02×10^{12}	7.0
CHINO-CENTRAL AVE. (Elsinore)	66.2	4.76×10^{12}	6.7
PINTO MOUNTAIN	67.9	9.62×10^{12}	7.2
PUENTE HILLS	71.6	8.63×10^{12}	7.1
WHITTIER	74.6	5.70×10^{12}	6.8
RAYMOND	75.3	2.99×10^{12}	6.5
ELSINORE-GLEN IVY	77.1	5.40×10^{12}	6.8
PISGAH-BULLION MTN.-MESQUITE LK	80.5	1.57×10^{13}	7.3
VERDUGO	80.9	5.22×10^{12}	6.9
BURNT MTN.	87.0	2.73×10^{12}	6.5
SAN JACINTO-ANZA	87.4	1.64×10^{13}	7.2
EUREKA PEAK	88.4	2.47×10^{12}	6.4
ELYSIAN PARK	88.6	5.10×10^{12}	6.7
ELSINORE-TEMECULA	92.6	6.45×10^{12}	6.8
SAN ANDREAS - Coachella	94.9	1.15×10^{13}	7.2
SAN GABRIEL	95.3	9.36×10^{12}	7.2
HOLLYWOOD	97.0	2.38×10^{12}	6.4
SIERRA MADRE (San Fernando)	97.4	3.24×10^{12}	7.3

[1] Cao and others 2003

LIQUEFACTION AND SEISMIC SETTLEMENT OF SANDS

Project	Auxiliary Gymnasium		
Location	SWC East Campus Dr. & Fish Hatchery Road		
Job Number	V05101-3	Boring No.	CPT-1
Date	5/5/2005	Enclosure	D-1

Anticipated Magnitude	7.2	Boring G.W.(ft)	24
Maximum Acceleration	0.50	Project G.W.(ft)	15

Correction factors

C_r = Depth correction factor — Method of Depth correction:
- (•) Seed & Idriss Method (1982)
- ( ) Liao & Whiteman Method

C_e = Hammer energy ratio (ER) correction factor	1.0	Help
C_b = Borehole diameter correction factor	1.0	Help
C_r = Rod stick up length (length above ground surface), (ft)	3	Help
C_s = Correction factor for samplers with or without liners	1.0	Help

Clear | Run | Help

Layer No.	Depth (ft)	Classification	Field Blow Count N	Unit Weight (pcf)	Fine Content (%)	Friction Angle (°)	
1	10.0	SM	9	120	28	32.0	
2	15.0	ML	15	120	75	30.0	
3	24.0	CL	11	125	75	30.0	
4	28.0	CL	11	125	75	30.0	
5	33.0	SP	38	125	4	36.0	
6	37.0	CL	18	125	75	30.0	
7	45.0	SP	33	125	4	36.0	
8	50.0	ML	36	125	75	30.0	

SEISMIC SETTLEMENT IN SANDS

Project:	Auxiliary Gymnasium		
Job Number:	V05101-3	Boring No.	CPT -1

Location:	SWC East Campus Dr. & Fish Hatchery Road		
Date:	5-May-2005	Enclosure:	D-1

DRY SAND SETTLEMENT

Anticipated Magnitude	7.2

Maximum Acceleration	0.5

Boring GW (ft)	24

Project GW (ft)	15

C_N=Depth correction factor — Seed & Idriss (1982) method

C_E=Hammer energy ratio (ER) correction factor — 1

C_B=Borehole diameter correction factor — 1

C_R=Rod stick up length (length above ground surface) (ft) — 3

C_S=Correction factor for samplers with or without liners — 1.00

$$(N_1)_{60} = C_N \cdot C_E \cdot C_B \cdot C_R \cdot C_S \cdot N$$

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Friction Angle	Ground Water	σ_{v0}	σ_m'	C_N	$(N_1)_{60}$	Maximum Shear Modulus	Shear Stress	Shear Strain	Volumetric Strain	Settle-ment	Cumulative Settlement
	(ft)	N	(pcf)	(%)	ϕ(°)		(tsf)	(tsf)			G_{max}(tsf)	τ_{av} (tsf)	γ (%)	ε_{NC} (%)	(in)	(in)
1	10.0	9	120	28	32		0.29	0.18	1.48	16	483.0	0.092	0.080	0.096	0.24	1.52
2	15.0	15	120	75	30		0.74	0.49	1.14	26	925.9	0.233	0.059	0.040	0.05	1.28
3	24.0	11	125	75	30	P. GW	1.17	0.78	0.93	45		0.363			0.00	1.23
4	28.0	11	125	75	30	B. GW	1.57	1.01	0.81	45		0.479			0.00	1.23
5	33.0	38	125	4	36	B. GW	1.85	1.01	0.77	29		0.553			0.05	1.23
6	37.0	18	125	75	30	B. GW	2.13	1.20	0.73	45		0.618			0.00	1.18
7	45.0	33	125	4	36	B. GW	2.51	1.21	0.69	23		0.687			1.18	1.18
8	50.0	36	125	75	30	B. GW	2.92	1.46	0.65	40		0.737			0.00	0.00
														Total settlement (in)	1.52	

"E-2b"
Job No. V05101-3

SEISMIC SETTLEMENT IN SANDS

Project:	Auxiliary Gymnasium		
Job Number:	V05101-3	Boring No.	CPT -1

Location:	SWC East Campus Dr. & Fish Hatchery Road		
Date:	5-May-2005	Enclosure:	D-2f

DRY AND SATURATED SAND SETTLEMENT

Anticipated Magnitude	7.2

Maximum Acceleration	0.5

Project Ground Water (ft)	15

C_N=Depth correction factor — Seed & Idriss (1982) method

C_E=Hammer energy ratio (ER) correction factor — 1

C_B=Borehole diameter correction factor — 1.00

C_R=Rod stick up length (length above ground surface) (ft) — 3

C_S=Correction factor for samplers with or without liners — 1.00

$$(N_1)_{60} = C_N \cdot C_E \cdot C_B \cdot C_R \cdot C_S \cdot N$$

Layer No.	Depth	Field Blow Count	Unit Weight	Fine Content	Ground Water	Pore Pressure	σ_{v0}	σ_{v0}'	C_N	$(N_1)_{60}$	τ_{av}/σ_{v0}'	Volumetric Strain	Settle-ment	Cumulative Settlement
	(ft)	N	(pcf)	(%)		(tsf)	(tsf)	(tsf)				ε_{NC} (%)	(in)	(in)
1	10	9	120	28		0.00	0.29	0.29	1.48	16	0.291		0.24	1.52
2	15	15	120	75		0.00	0.74	0.74	1.14	26	0.287		0.05	1.28
3	24	11	125	75	P. GW	0.00	1.17	1.17	0.93	45	0.282	0.000	0.00	1.23
4	28	11	125	75	B. GW	0.05	1.57	1.52	0.81	45	0.286	0.000	0.00	1.23
5	33	38	125	4	B. GW	0.20	1.85	1.66	0.77	29	0.302	0.108	0.05	1.23
6	37	18	125	75	B. GW	0.34	2.13	1.80	0.73	45	0.311	0.000	0.00	1.18
7	45	33	125	4	B. GW	0.52	2.51	1.99	0.69	23	0.31293	1.22663	1.18	1.18
8	50	36	125	75	B. GW	0.73	2.92	2.19	0.65	40	0.30484	0	0.00	0.00
											Total settlement (in		1.52	

"E-2c"
Job No. V05101-3

LIQUEFACTION ANALYSIS

Project:	Auxiliary Gymnasium		
Job Number:	V05101-3	Boring No.	CPT -1

Location:	SWC East Campus Dr. & Fish Hatchery Road		
Date:	5-May-2005	Enclosure:	D-1c

0.2 0.4

Anticipated Magnitude	7.2

Maximum Acceleration	0.5

Boring GW (ft)	24

Project GW (ft)	15

C_N=Depth correction factor — Seed & Idriss (1982) method

C_E=Hammer energy ratio (ER) correction factor 1.00

C_B=Borehole diameter correction factor 1.00

C_R=Rod stick up length (length above ground surface) 3

C_S=Correction factor for samplers with or without liners 1.00

MSF_{Lower} = 1.10

MSF_{Upper} = 1.14

$$(N_1)_{60} = C_N \cdot C_E \cdot C_B \cdot C_R \cdot C_S \cdot N$$

$$FS = (CRR_{7.5}/CRS) \cdot MSF \cdot K_\sigma$$

Layer No.	Depth (ft)	Field Blow Count, N	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$	
1	0.25	9		0.015	0.015	1.700	18	1.000	0.325	0.188	3.402	Above GW	Above GW			
1	0.75	9		0.045	0.045	1.700	18	1.000	0.325	0.188	2.470	Above GW	Above GW			
1	1.25	9		0.075	0.075	1.700	18	0.998	0.325	0.188	2.128	Above GW	Above GW			
1	1.75	9		0.105	0.105	1.686	18	0.997	0.324	0.186	1.927	Above GW	Above GW			
1	2.25	9		0.135	0.135	1.648	17	0.996	0.324	0.183	1.786	Above GW	Above GW			
1	2.75	9		0.165	0.165	1.612	17	0.995	0.323	0.180	1.681	Above GW	Above GW			
1	3.25	9		0.195	0.195	1.577	17	0.994	0.323	0.177	1.598	Above GW	Above GW			
1	3.75	9		0.225	0.225	1.544	16	0.993	0.323	0.175	1.530	Above GW	Above GW			
1	4.25	9		0.255	0.255	1.512	16	0.991	0.322	0.172	1.474	Above GW	Above GW			
1	4.75	9		0.285	0.285	1.481	16	0.990	0.322	0.170	1.425	Above GW	Above GW			
1	5.25	9		0.315	0.315	1.452	16	0.989	0.321	0.167	1.383	Above GW	Above GW			
1	5.75	9		0.345	0.345	1.424	16	0.988	0.321	0.165	1.346	Above GW	Above GW			
1	6.25	9		0.375	0.375	1.397	15	0.987	0.321	0.163	1.313	Above GW	Above GW			
1	6.75	9		0.405	0.405	1.371	15	0.986	0.320	0.161	1.284	Above GW	Above GW			
1	7.25	9		0.435	0.435	1.346	15	0.985	0.320	0.159	1.257	Above GW	Above GW			
1	7.75	9		0.465	0.465	1.321	15	0.983	0.320	0.157	1.233	Above GW	Above GW			
1	8.25	9		0.495	0.495	1.298	15	0.982	0.319	0.155	1.211	Above GW	Above GW			

"E-2d"
Job No. V05101-3

Layer No.	Depth (ft)	Field Blow Count, N	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$	
1	8.75	9		0.525	0.525	1.275	14	0.981	0.319	0.154	1.191	Above GW	Above GW			
1	9.25	9		0.555	0.555	1.254	14	0.980	0.319	0.152	1.172	Above GW	Above GW			
1	9.75	9		0.585	0.585	1.232	14	0.979	0.318	0.151	1.155	Above GW	Above GW			
2	10.25	15		0.615	0.615	1.212	26	0.978	0.318	0.314	1.136	Above GW	Above GW			
2	10.75	15		0.645	0.645	1.192	26	0.977	0.318	0.314	1.122	Above GW	Above GW			
2	11.25	15		0.675	0.675	1.173	26	0.976	0.317	0.313	1.109	Above GW	Above GW			
2	11.75	15		0.705	0.705	1.155	26	0.975	0.317	0.312	1.096	Above GW	Above GW			
2	12.25	15		0.735	0.735	1.137	26	0.974	0.317	0.311	1.084	Above GW	Above GW			
2	12.75	15		0.765	0.765	1.120	26	0.973	0.316	0.310	1.073	Above GW	Above GW			
2	13.25	15		0.795	0.795	1.103	26	0.972	0.316	0.308	1.063	Above GW	Above GW			
2	13.75	15		0.825	0.825	1.086	26	0.971	0.315	0.306	1.053	Above GW	Above GW			
2	14.25	15		0.855	0.855	1.071	26	0.970	0.315	0.304	1.043	Above GW	Above GW			
2	14.75	15		0.885	0.885	1.055	26	0.969	0.315	0.302	1.033	Above GW	Above GW			
3	15.25	11	P. GW	0.916	0.916	1.040	45	0.967	0.314		0.914	NonLiq	NonLiq			
3	15.75	11	P. GW	0.947	0.947	1.025	45	0.966	0.314		0.946	NonLiq	NonLiq			
3	16.25	11	P. GW	0.978	0.976	1.010	45	0.965	0.314		0.978	NonLiq	NonLiq			
3	16.75	11	P. GW	1.009	1.009	0.996	45	0.964	0.313		1.010	NonLiq	NonLiq			
3	17.25	11	P. GW	1.041	1.041	0.982	45	0.963	0.313		1.041	NonLiq	NonLiq			
3	17.75	11	P. GW	1.072	1.072	0.968	45	0.962	0.313		1.073	NonLiq	NonLiq			
3	18.25	11	P. GW	1.103	1.103	0.955	45	0.961	0.312		1.105	NonLiq	NonLiq			
3	18.75	11	P. GW	1.134	1.134	0.942	45	0.959	0.312		1.136	NonLiq	NonLiq			
3	19.25	11	P. GW	1.166	1.166	0.930	45	0.958	0.311		1.168	NonLiq	NonLiq			
3	19.75	11	P. GW	1.197	1.197	0.918	45	0.957	0.311		1.200	NonLiq	NonLiq			
3	20.25	11	P. GW	1.228	1.228	0.906	45	0.956	0.311		1.232	NonLiq	NonLiq			
3	20.75	11	P. GW	1.259	1.259	0.895	45	0.954	0.310		1.263	NonLiq	NonLiq			
3	21.25	11	P. GW	1.291	1.291	0.883	45	0.953	0.310		1.295	NonLiq	NonLiq			
3	21.75	11	P. GW	1.322	1.322	0.872	45	0.951	0.309		1.327	NonLiq	NonLiq			
3	22.25	11	P. GW	1.353	1.353	0.862	45	0.950	0.309		1.359	NonLiq	NonLiq			
3	22.75	11	P. GW	1.384	1.384	0.851	45	0.948	0.308		1.391	NonLiq	NonLiq			
3	23.25	11	P. GW	1.416	1.416	0.841	45	0.947	0.308		1.423	NonLiq	NonLiq			
3	23.75	11	P. GW	1.447	1.447	0.831	45	0.945	0.307		1.454	NonLiq	NonLiq			
4	24.25	11	B. GW	1.478	1.470	0.824	45	0.944	0.308		1.478	NonLiq	NonLiq			
4	24.75	11	B. GW	1.509	1.486	0.819	45	0.942	0.311		1.494	NonLiq	NonLiq			

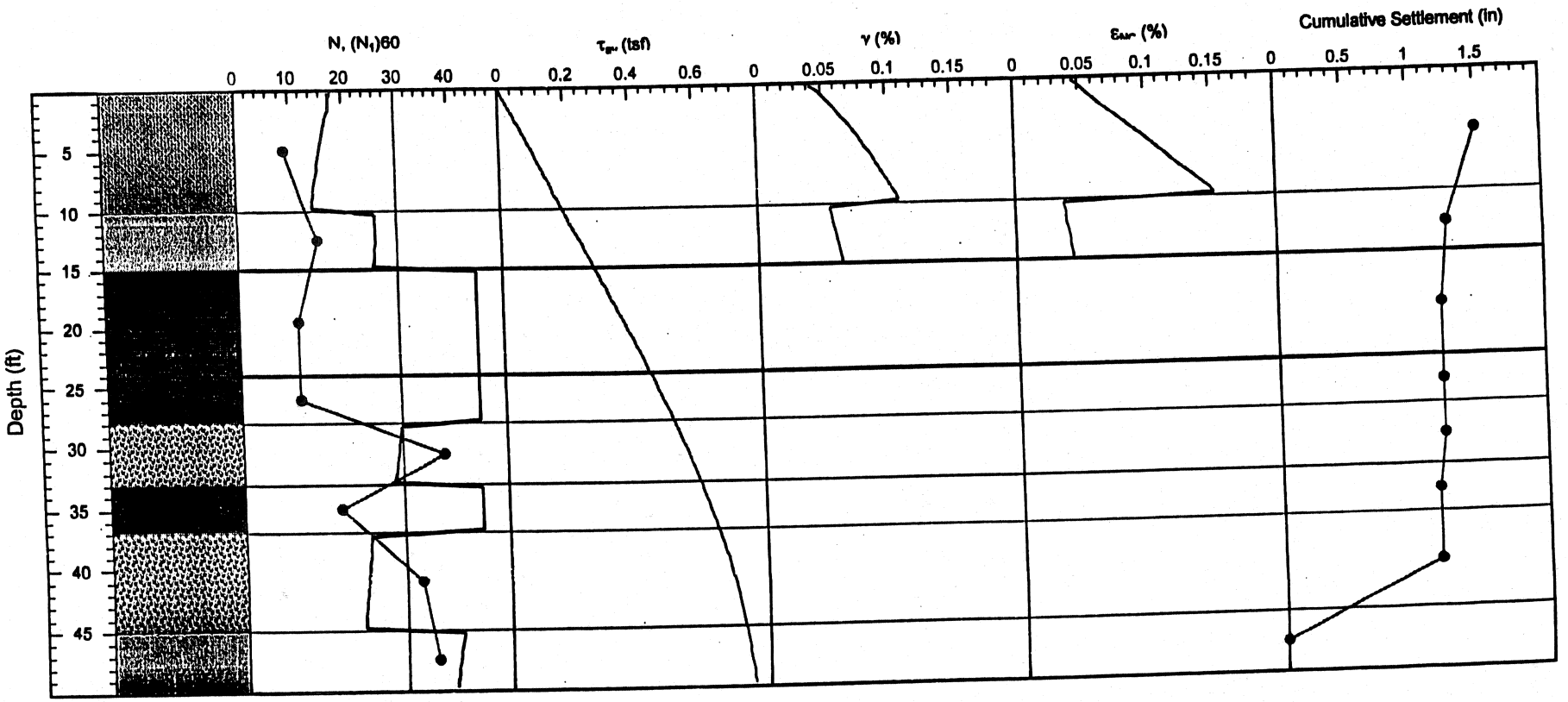
"E-2e"
Job No. V05101-3

Layer No.	Depth (ft)	Field Blow Count, N	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$	
4	25.25	11	B. GW	1.541	1.502	0.814	45	0.940	0.313		1.510	NonLiq	NonLiq			
4	25.75	11	B. GW	1.572	1.517	0.810	45	0.938	0.316		1.526	NonLiq	NonLiq			
4	26.25	11	B. GW	1.603	1.533	0.805	45	0.936	0.318		1.542	NonLiq	NonLiq			
4	26.75	11	B. GW	1.634	1.549	0.800	45	0.934	0.320		1.558	NonLiq	NonLiq			
4	27.25	11	B. GW	1.666	1.564	0.796	45	0.932	0.323		1.574	NonLiq	NonLiq			
4	27.75	11	B. GW	1.697	1.580	0.791	45	0.930	0.325		1.590	NonLiq	NonLiq			
5	28.25	38	B. GW	1.728	1.596	0.787	30	0.928	0.327	0.461	0.921	1.44	1.48	1	1	
5	28.75	38	B. GW	1.759	1.611	0.783	30	0.925	0.328	0.450	0.917	1.39	1.43	1	1	
5	29.25	38	B. GW	1.791	1.627	0.778	30	0.923	0.330	0.440	0.913	1.35	1.39	1	1	
5	29.75	38	B. GW	1.822	1.642	0.774	29	0.921	0.332	0.431	0.910	1.31	1.35	1	1	
5	30.25	38	B. GW	1.853	1.658	0.770	29	0.918	0.333	0.423	0.906	1.27	1.31	1	1	
5	30.75	38	B. GW	1.884	1.674	0.766	29	0.915	0.335	0.415	0.902	1.23	1.27	1	1	
5	31.25	38	B. GW	1.916	1.689	0.761	29	0.913	0.336	0.407	0.899	1.20	1.24	1	1	
5	31.75	38	B. GW	1.947	1.705	0.757	29	0.910	0.338	0.400	0.895	1.17	1.21	1	1	
5	32.25	38	B. GW	1.978	1.721	0.753	29	0.907	0.339	0.393	0.892	1.14	1.18	1	1	
5	32.75	38	B. GW	2.009	1.736	0.749	28	0.904	0.340	0.387	0.888	1.12	1.15	1	1	
6	33.25	18	B. GW	2.041	1.752	0.745	45	0.901	0.341		1.766	NonLiq	NonLiq			
6	33.75	18	B. GW	2.072	1.768	0.741	45	0.897	0.342		1.782	NonLiq	NonLiq			
6	34.25	18	B. GW	2.103	1.783	0.737	45	0.894	0.343		1.798	NonLiq	NonLiq			
6	34.75	18	B. GW	2.134	1.799	0.734	45	0.891	0.343		1.814	NonLiq	NonLiq			
6	35.25	18	B. GW	2.166	1.815	0.730	45	0.887	0.344		1.830	NonLiq	NonLiq			
6	35.75	18	B. GW	2.197	1.830	0.726	45	0.883	0.345		1.846	NonLiq	NonLiq			
6	36.25	18	B. GW	2.228	1.846	0.722	45	0.880	0.345		1.862	NonLiq	NonLiq			
6	36.75	18	B. GW	2.259	1.862	0.719	45	0.876	0.346		1.878	NonLiq	NonLiq			
7	37.25	33	B. GW	2.291	1.877	0.715	24	0.872	0.346	0.266	0.834	0.71	0.73	1	1	
7	37.75	33	B. GW	2.322	1.893	0.711	23	0.868	0.346	0.265	0.832	0.70	0.72	1	1	
7	38.25	33	B. GW	2.353	1.909	0.708	23	0.864	0.346	0.263	0.829	0.69	0.72	1	1	
7	38.75	33	B. GW	2.384	1.924	0.704	23	0.860	0.346	0.261	0.827	0.69	0.71	1	1	
7	39.25	33	B. GW	2.416	1.940	0.701	23	0.855	0.346	0.259	0.825	0.68	0.70	1	1	
7	39.75	33	B. GW	2.447	1.955	0.697	23	0.851	0.346	0.257	0.822	0.67	0.70	1	1	
7	40.25	33	B. GW	2.478	1.971	0.694	23	0.847	0.346	0.255	0.820	0.67	0.69	1	1	
7	40.75	33	B. GW	2.509	1.987	0.690	23	0.842	0.346	0.254	0.818	0.66	0.68	2/3	1	
7	41.25	33	B. GW	2.541	2.002	0.687	23	0.837	0.345	0.252	0.816	0.66	0.68	2/3	1	

"E-2f"
Job No. V05101-3

Layer No.	Depth (ft)	Field Blow Count, N	Ground Water	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	$(N_1)_{60}$	r_d	CSR	$CRR_{7.5}$	K_σ	$(FS)_{Lower}$	$(FS)_{Upper}$	$(D_E)_{Lower}$	$(D_E)_{Upper}$	
7	41.75	33	B. GW	2.572	2.018	0.684	23	0.833	0.345	0.250	0.814	0.65	0.67	2/3	1	
7	42.25	33	B. GW	2.603	2.034	0.680	22	0.828	0.344	0.249	0.811	0.65	0.67	2/3	2/3	
7	42.75	33	B. GW	2.634	2.049	0.677	22	0.823	0.344	0.247	0.809	0.64	0.66	2/3	2/3	
7	43.25	33	B. GW	2.666	2.065	0.674	22	0.818	0.343	0.245	0.807	0.64	0.66	2/3	2/3	
7	43.75	33	B. GW	2.697	2.081	0.671	22	0.814	0.343	0.244	0.805	0.63	0.65	2/3	2/3	
7	44.25	33	B. GW	2.728	2.096	0.667	22	0.809	0.342	0.242	0.803	0.63	0.65	2/3	2/3	
7	44.75	33	B. GW	2.759	2.112	0.664	22	0.804	0.341	0.241	0.801	0.62	0.64	2/3	2/3	
8	45.25	36	B. GW	2.791	2.128	0.661	41	0.799	0.340		1.437	NonLiq	NonLiq			
8	45.75	36	B. GW	2.822	2.143	0.658	41	0.794	0.340		1.424	NonLiq	NonLiq			
8	46.25	36	B. GW	2.853	2.159	0.655	40	0.788	0.339		1.411	NonLiq	NonLiq			
8	46.75	36	B. GW	2.884	2.175	0.652	40	0.783	0.338		1.398	NonLiq	NonLiq			
8	47.25	36	B. GW	2.916	2.190	0.649	40	0.778	0.337		1.386	NonLiq	NonLiq			
8	47.75	36	B. GW	2.947	2.206	0.646	40	0.773	0.336		1.373	NonLiq	NonLiq			
8	48.25	36	B. GW	2.978	2.222	0.643	40	0.768	0.335		1.361	NonLiq	NonLiq			
8	48.75	36	B. GW	3.009	2.237	0.640	40	0.763	0.334		1.349	NonLiq	NonLiq			
8	49.25	36	B. GW	3.041	2.253	0.637	39	0.758	0.332		1.337	NonLiq	NonLiq			
8	49.75	36	B. GW	3.072	2.268	0.634	39	0.753	0.331		1.326	NonLiq	NonLiq			

"E-2g"
Job No. V05101-3



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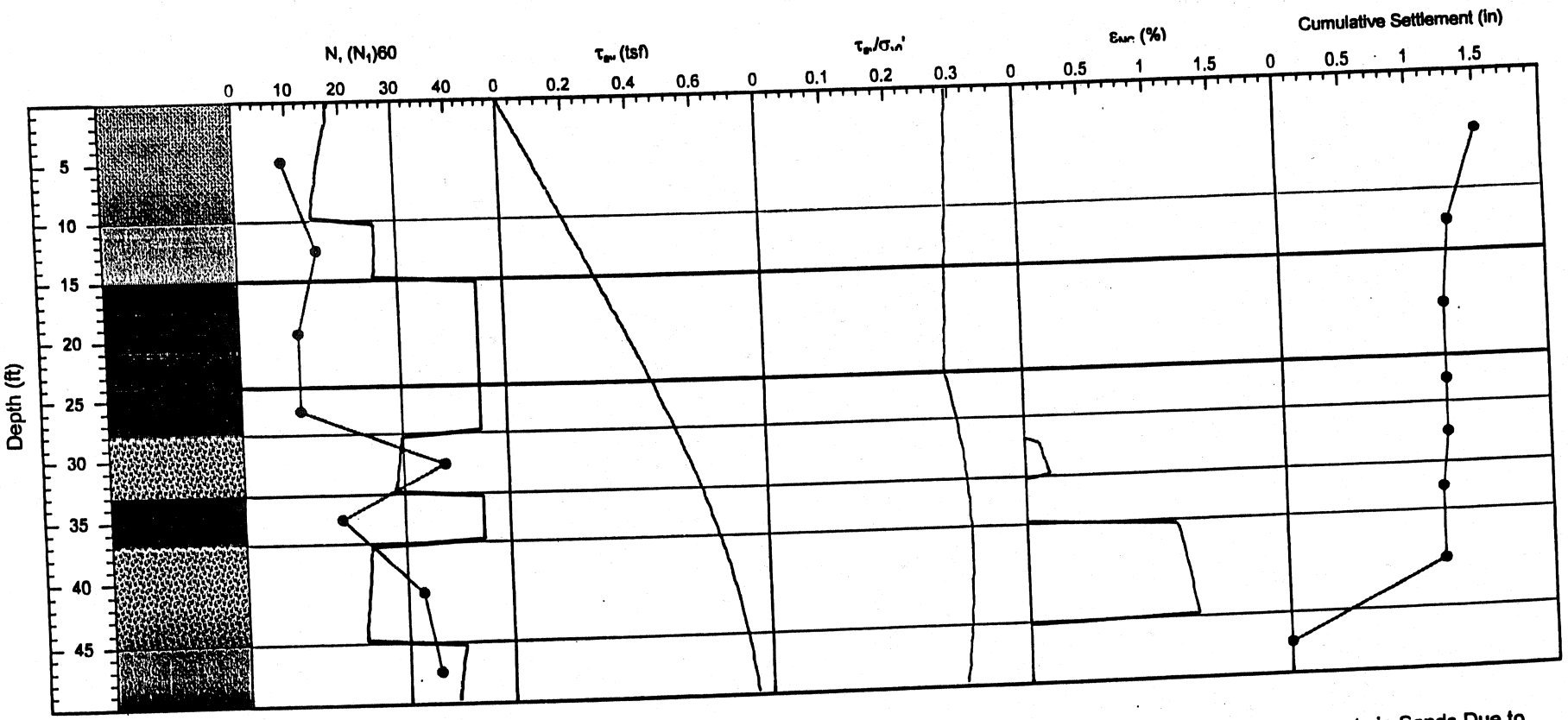
SCEC (1999), "Recommended Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Liquefaction Hazards In

C•M•J• INCORPORATED

SETTLEMENT-DEPTH RELATIONSHIPS OF DRY SAND

Project:	Auxiliary Gymnasium				
Location	SWC East Campus Dr. & Fish Hatchery Road				
Job Number	V05101-3	Boring No.:	CPT -1	Enclosure:	B-1

"E-2h"
Job No. V05101-3



GW, GP, GM, GC

SW-SP

SW-SM, SW-SC, SP-SM, SP-SC

SM, SC, SC-SM

ML

CL

Legend of N value

N

$(N_1)_{60}$

Tokimatsu, K. and Seed, H. B. (1987), "Evaluation of Settlements in Sands Due to Earthquake Shaking", Journal of Geotechnical Engineering, Vol 113, No. 8

Pradel, D. (1998), "Procedure to Evaluate Earthquake-Induced Settlement in Dry Sand Soils", Journal of Geotechnical and Geoenvironmental Engineering, Vol 124, No. 4.

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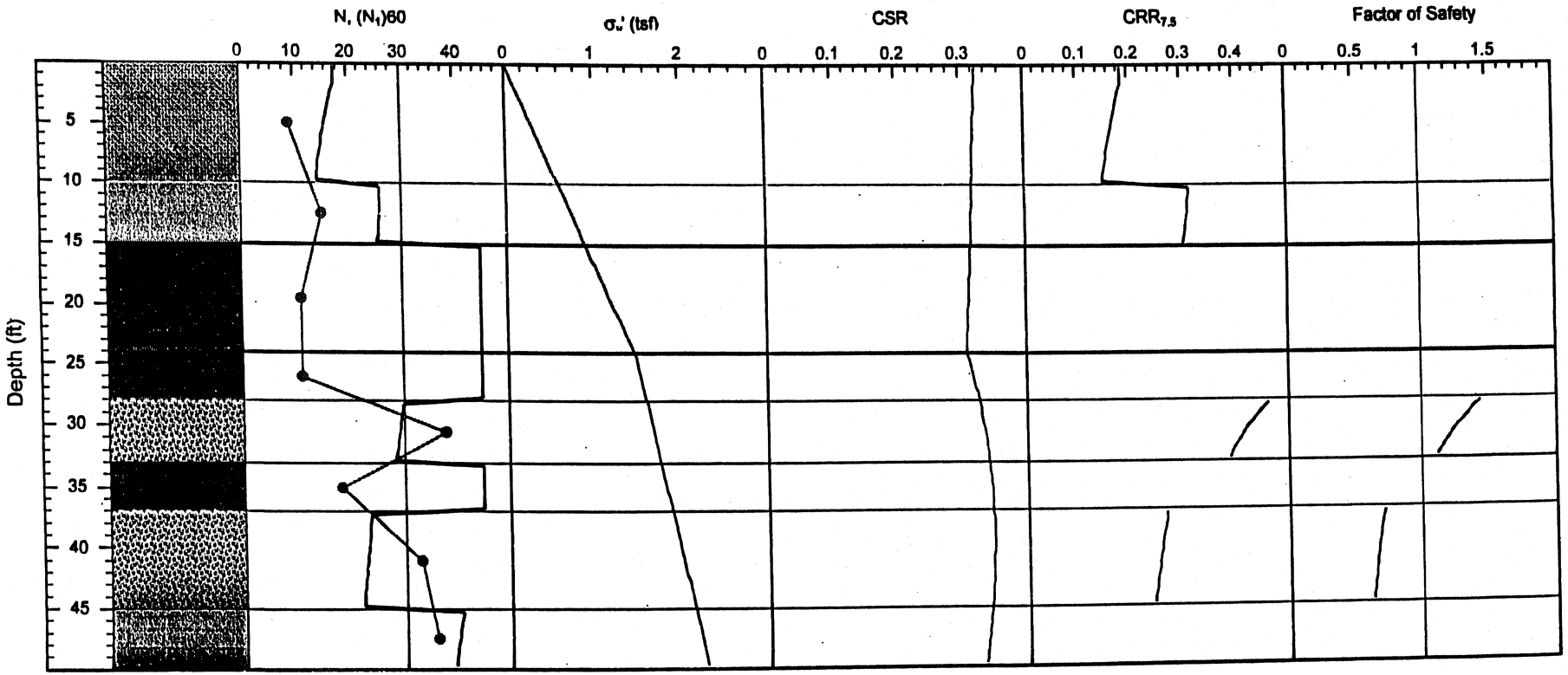
SETTLEMENT-DEPTH RELATIONSHIPS OF SATURATED SAND

Project:	Auxiliary Gymnasium				
Location	SWC East Campus Dr. & Fish Hatchery Road				
Job Number	V05101-3	Boring No.:	CPT -1	Enclosure:	B-2

"E-21"
Job No. V05101-3



GW, GP, GM, GC
SW-SP
SW-SM, SW-SC, SP-SM, SP-SC
SM, SC, SC-SM
ML
CL

Legend of N value

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C • H • J • INCORPORATED

LIQUEFACTION ANALYSIS

Project:	Auxiliary Gymnasium				
Location	SWC East Campus Dr. & Fish Hatchery Road				
Job Number	V05101-3	Boring No.:	CPT -1	Enclosure:	A-1

"E-2j"
Job No. V05101-3

GREGG DRILLING AND TESTING, INC.
GREGG IN SITU, INC.
ENVIRONMENTAL AND GEOTECHNICAL INVESTIGATION SERVICES

March 22, 2005

CHJ
Attn: Ben Williams
1335 E. Cooley Dr
Colton, California 92324

Subject: CPT Site Investigation
New Gymnasium - Victor Valley College
Victorville, California
GREGG Project Number: 05-067SH

Dear Mr. Williams:

The following report presents the results of GREGG IN SITU's Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	☒
2	Pore Pressure Dissipation Tests	(PPD)	☒
3	Seismic Cone Penetration Tests	(SCPTU)	☐
4	Resistivity Cone Penetration Tests	(RCPTU)	☐
5	UVIF Cone Penetration Tests	(UVIFCPTU)	☐
6	Groundwater Sampling	(GWS)	☐
7	Soil Sampling	(SS)	☐
8	Vapor Sampling	(VS)	☐
9	Vane Shear Testing	(VST)	☐
10	SPT Energy Calibration	(SPTE)	☐

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (562) 427-6899.

Sincerely,
GREGG IN SITU, Inc.

Brian Savela
Operations Manager

Cone Penetration Test Sounding Summary

-Table 1-

CPT Sounding Identification	Date	Termination Depth (Feet)	Depth of Groundwater Samples (ft)	Depth of Soil Samples (ft)	Depth of Pore Pressure Dissipation Tests (ft)
CPT-01	3/21/05	59	-	-	31.2
CPT-02	3/21/05	37	-	-	-
CPT-03	3/21/05	50	-	-	-
CPT-04	3/21/05	35	-	-	-

Cone Penetration Testing Procedure (CPT)

Gregg In Situ, Inc. carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*. The soundings were conducted using a 20 ton capacity cone with a tip area of 15 cm^2 and a friction sleeve area of 225 cm^2. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.85.

The cone takes measurements of cone bearing (q_c), sleeve friction (f_s) and dynamic pore water pressure (u_2) at 5-cm intervals during penetration to provide a nearly continuous hydrogeologic log. CPT data reduction and interpretation is performed in real time facilitating on-site decision making. The above mentioned parameters are stored on disk for further analysis and reference. All CPT soundings are performed in accordance with revised (2002) ASTM standards (D 5778-95).

The cone also contains a porous filter element located directly behind the cone tip (u_2), *Figure CPT*. It consists of porous plastic and is 5.0mm thick. The filter element is used to obtain dynamic pore pressure as the cone is advanced as well as Pore Pressure Dissipation Tests (PPDT's) during appropriate pauses in penetration. It should be noted that prior to penetration, the element is fully saturated with silicon oil under vacuum pressure to ensure accurate and fast dissipation.

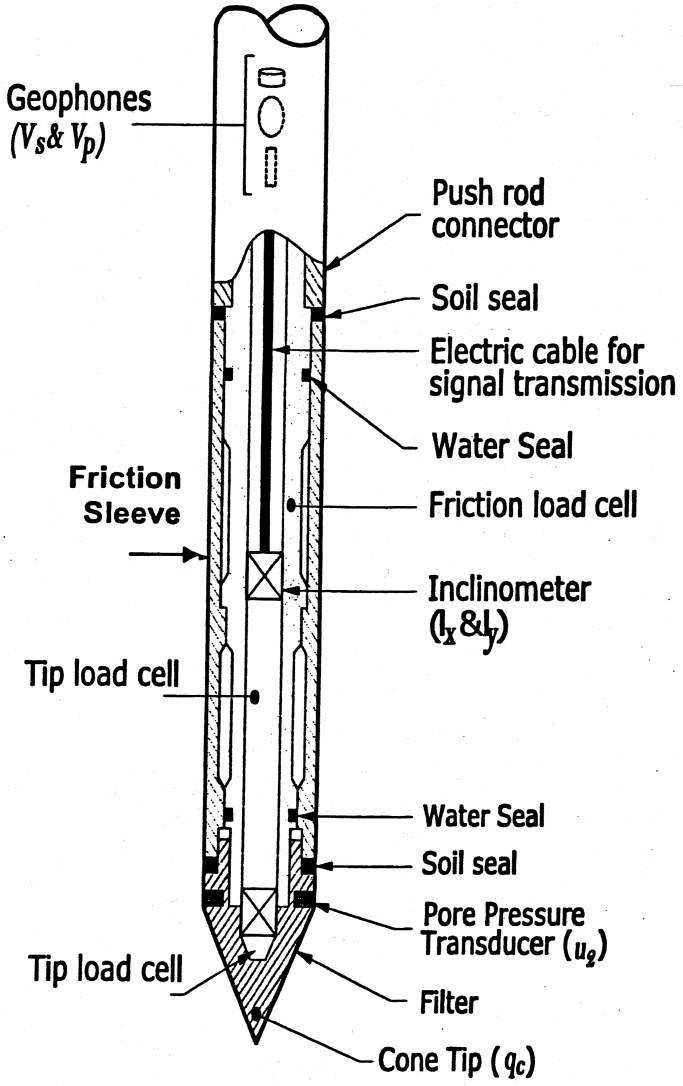

Figure CPT

When the soundings are complete, the test holes are grouted using a Gregg In Situ support rig. The grouting procedure consists of pushing a hollow CPT rod with a "knock out" plug to the termination depth of the test hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.

Cone Penetration Test Data & Interpretation

Soil behavior type and stratigraphic interpretation is based on relationships between cone bearing (q_c), sleeve friction (f_s), and pore water pressure (u_2). The friction ratio (R_f) is a calculated parameter defined by $100f_s/q_c$ and is used to infer soil behavior type. Generally:

Cohesive soils (clays)

- High friction ratio (R_f) due to small cone bearing (q_c)
- Generate large excess pore water pressures (u_2)

Cohesionless soils (sands)

- Low friction ratio (R_f) due to large cone bearing (q_c)
- Generate very little excess pore water pressures (u_2)

A complete set of baseline readings are taken prior to and at the completion of each sounding to determine temperature shifts and any zero load offsets. Corrections for temperature shifts and zero load offsets can be extremely important, especially when the recorded loads are relatively small. In sandy soils, however, these corrections are generally negligible.

The cone penetration test data collected from your site is presented in graphical form in Appendix CPT. The data includes CPT logs of measured soil parameters, computer calculations of interpreted soil behavior types (SBT), and additional geotechnical parameters. A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Soil interpretation for this project was conducted using recent correlations developed by Robertson et al, 1990, *Figure SBT*. Note that it is not always possible to clearly identify a soil type based solely on q_c, f_s, and u_2. In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the soil behavior type.

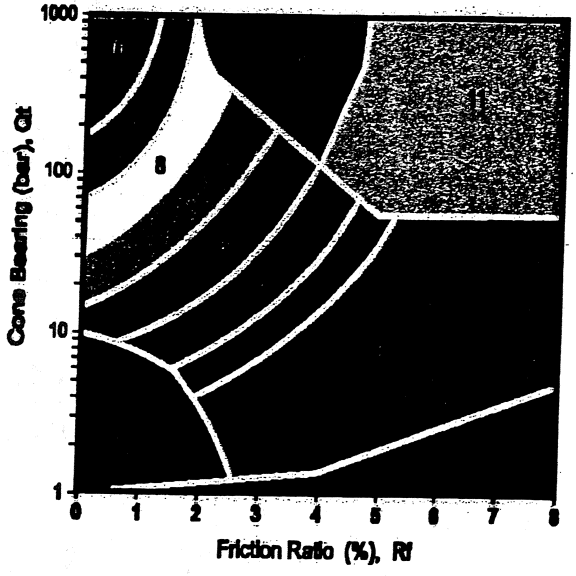

Figure SBT

ZONE	Qt/N	SBT
1	2	Sensitive, fine grained
2	1	Organic materials
3	1	Clay
4	1.5	Silty clay to clay
5	2	Clayey silt to silty clay
6	2.5	Sandy silt to clayey silt
7	3	Silty sand to sandy silt
8	4	Sand to silty sand
9	5	Sand
10	6	Gravely sand to sand
11	1	Very stiff fine grained*
12	2	Sand to clayey sand*

*over consolidated or cemented

Pore Pressure Dissipation Tests (PPDT)

Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals measured hydrostatic water pressures and determined the approximate depth of the ground water table. A PPDT is conducted when the cone is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (u) with time is measured behind the tip of the cone and recorded by a computer system.

Pore pressure dissipation data can be interpreted to provide estimates of:

- Equilibrium piezometric pressure
- Phreatic Surface
- In situ horizontal coefficient of consolidation (c_h)
- In situ horizontal coefficient of permability (k_h)

In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until such time as there is no variation in pore pressure with time, *Figure PPDT*. This time is commonly referred to as t_{100}, the point at which 100% of the excess pore pressure has dissipated.

A complete reference on pore pressure dissipation tests is presented by Robertson et al. 1991.

A summary of the pore pressure dissipation tests is summarized in Table 1. Pore pressure dissipation data is presented in graphical form in Appendix PPDT.

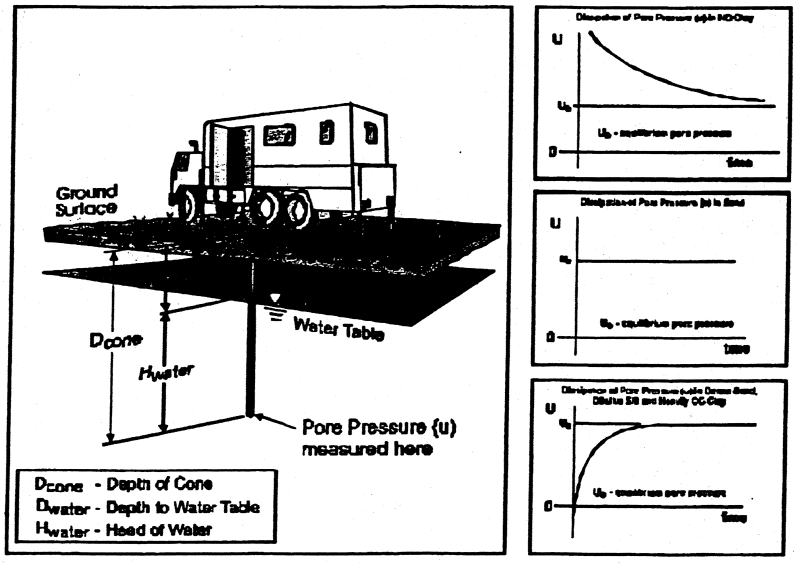

Figure PPDT

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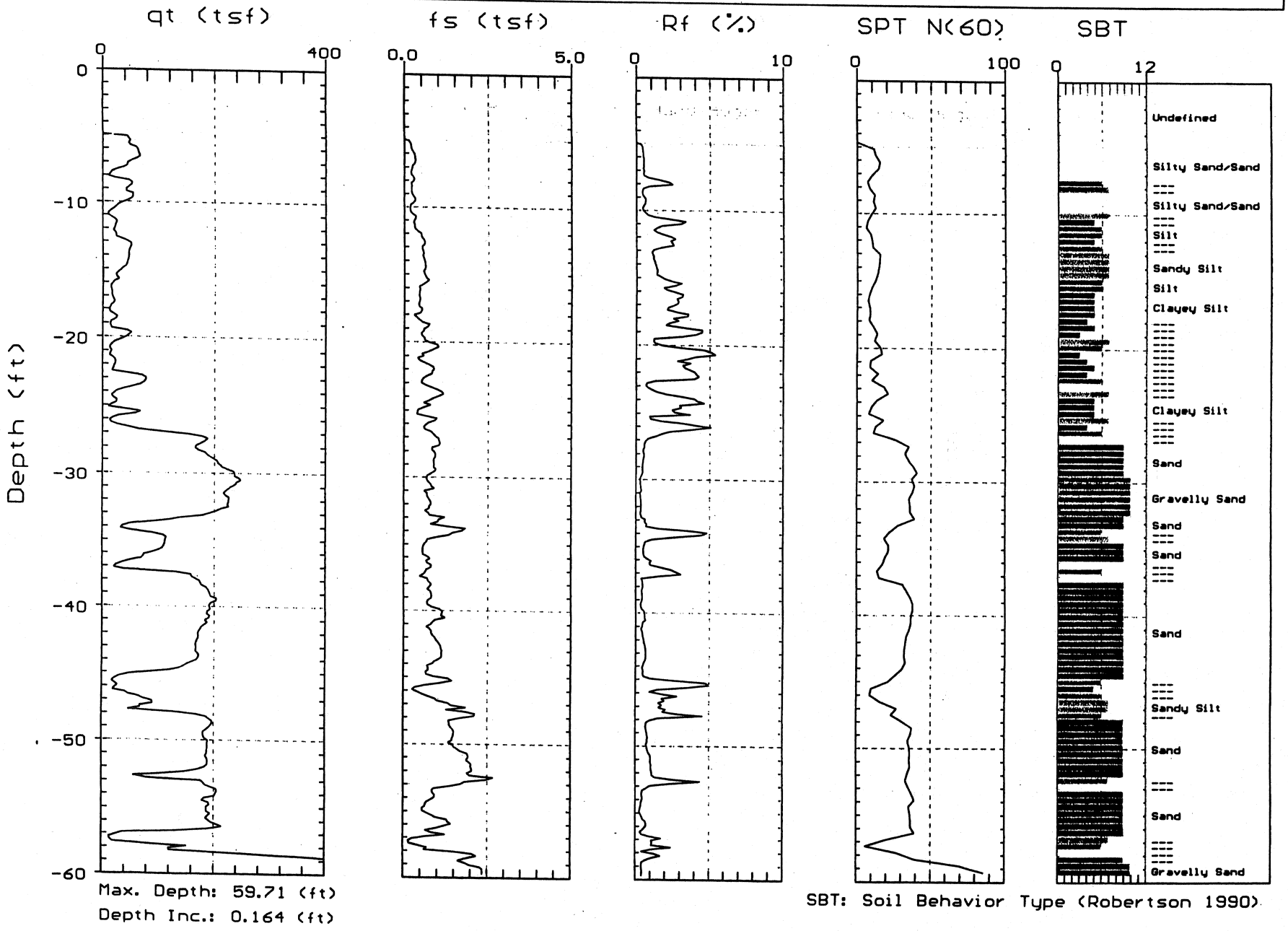
Copies of ASTM Standards are available through www.astm.org

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-1

Engineer: B.WILLIAMS
Date: 03:21:05 08:28



Max. Depth: 59.71 (ft)
Depth Inc.: 0.164 (ft)

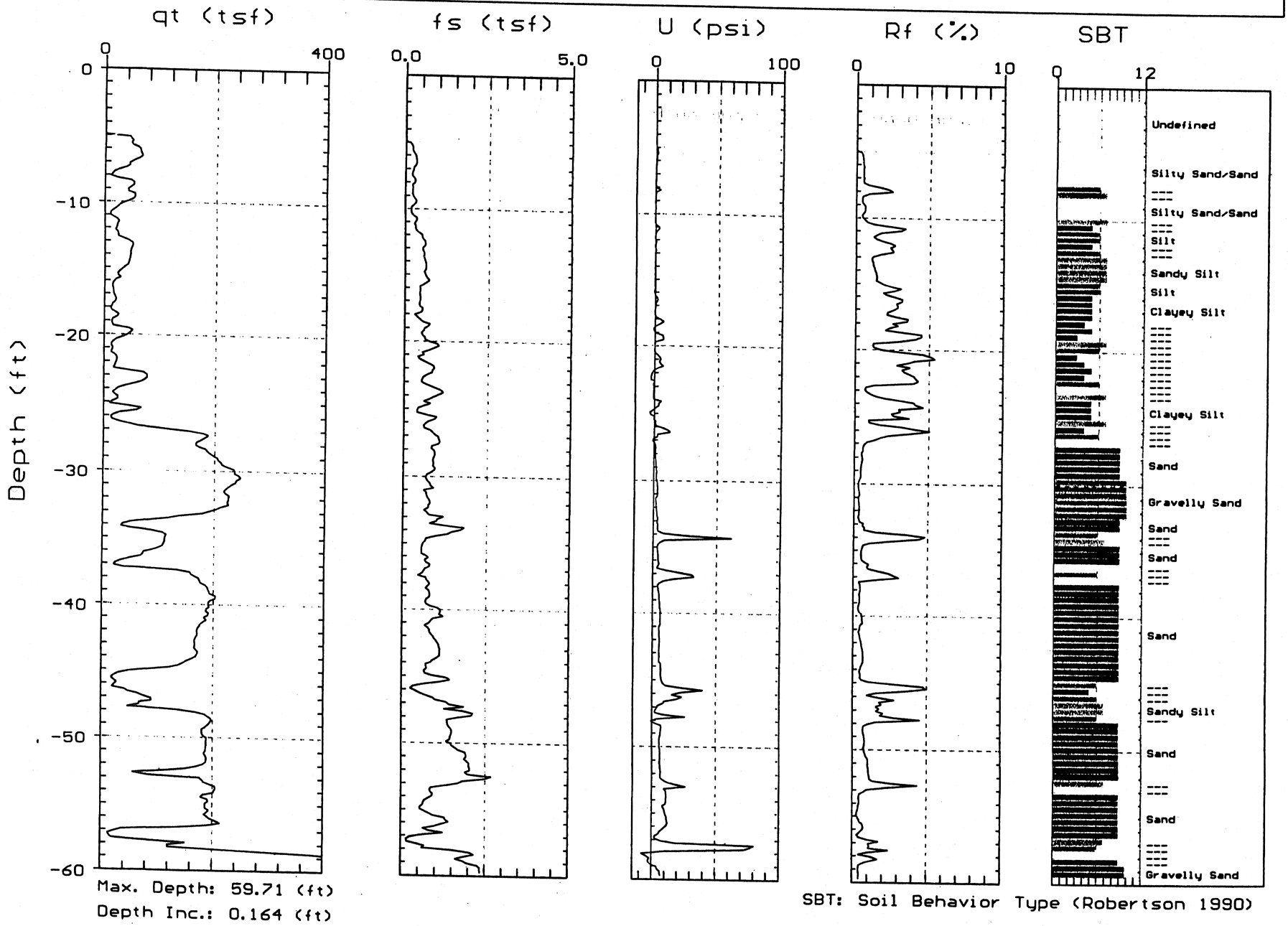
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-1

Engineer: B.WILLIAMS
Date: 03:21:05 08:28



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Depth Inc.: 0.164 (ft)

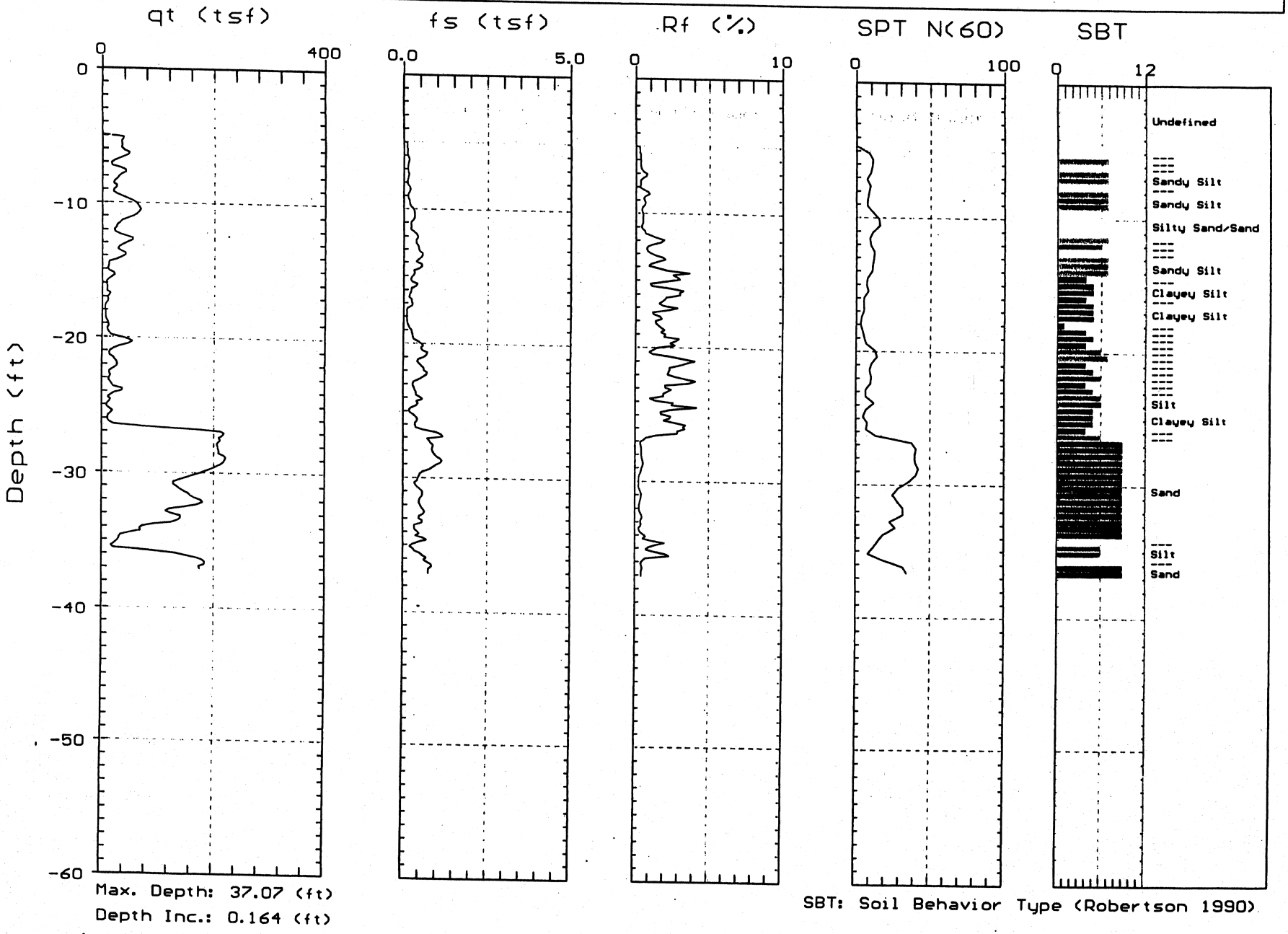
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-2

Engineer: B.WILLIAMS
Date: 03:21:05 09:20

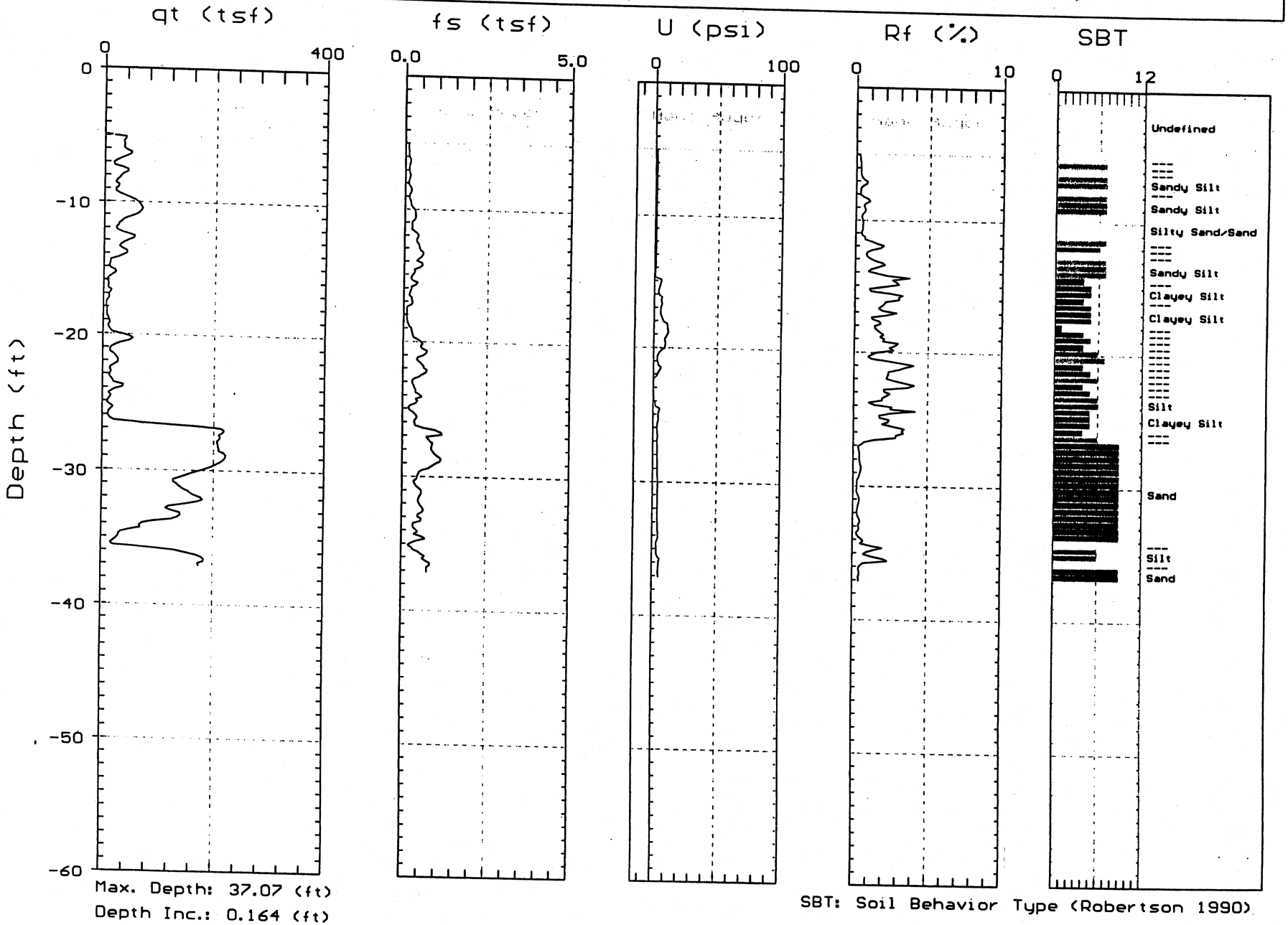


GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-2

Engineer: B.WILLIAMS
Date: 03:21:05 09:20



Max. Depth: 37.07 (ft)
Depth Inc.: 0.164 (ft)

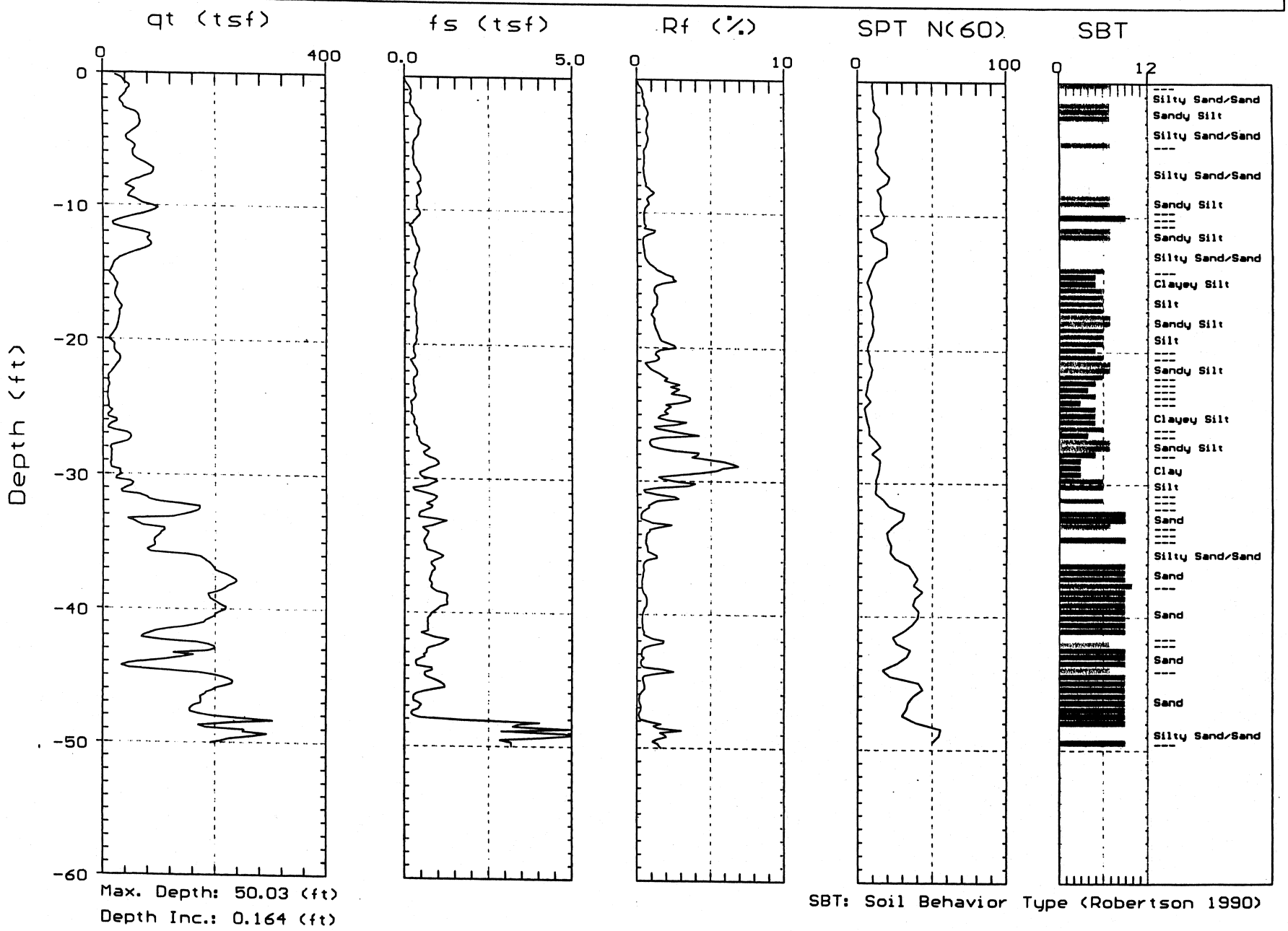
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-3

Engineer: B.WILLIAMS
Date: 03:21:05 09:45



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

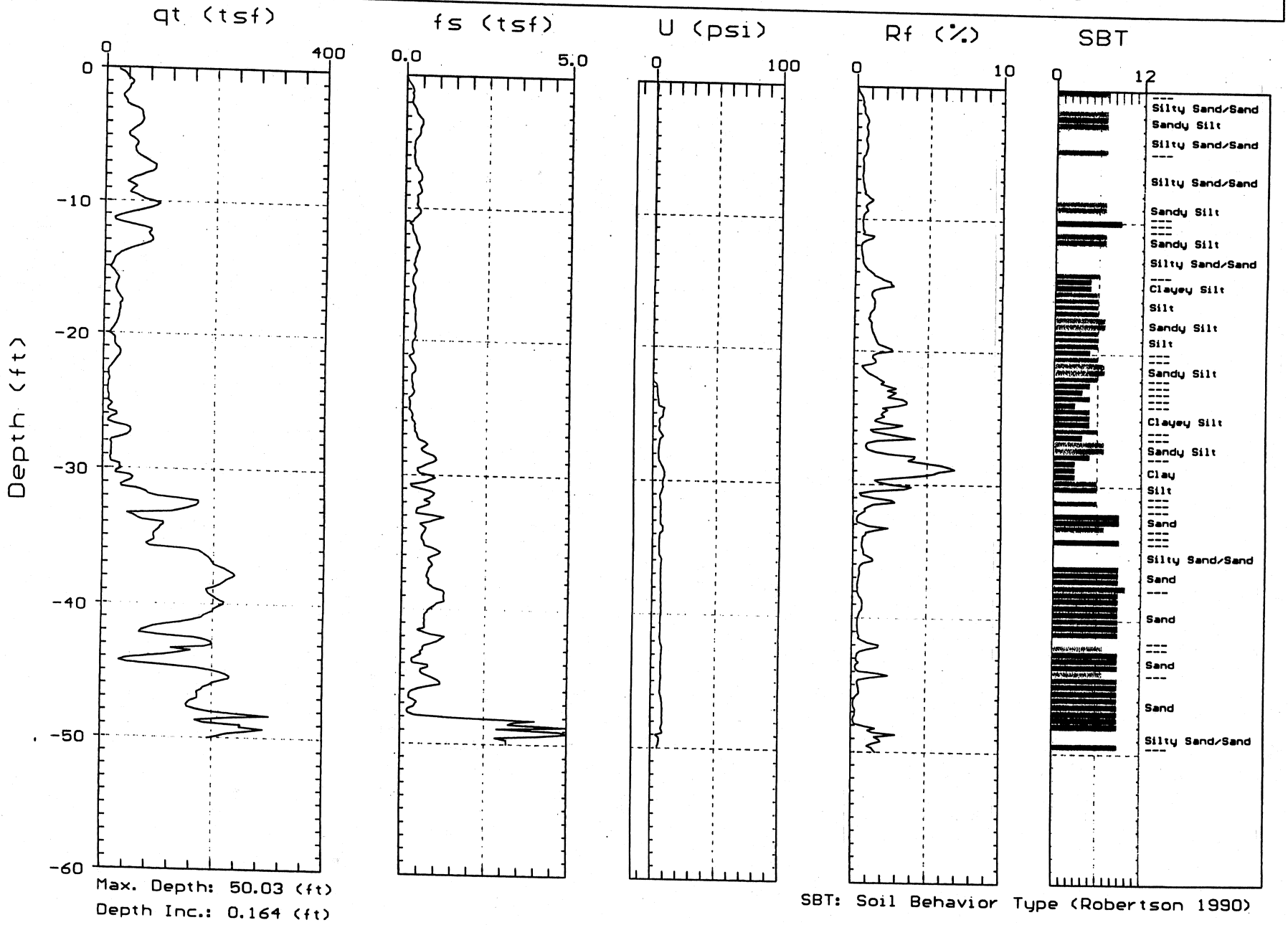
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-3

Engineer: B.WILLIAMS
Date: 03:21:05 09:45



Max. Depth: 50.03 (ft)
Depth Inc.: 0.164 (ft)

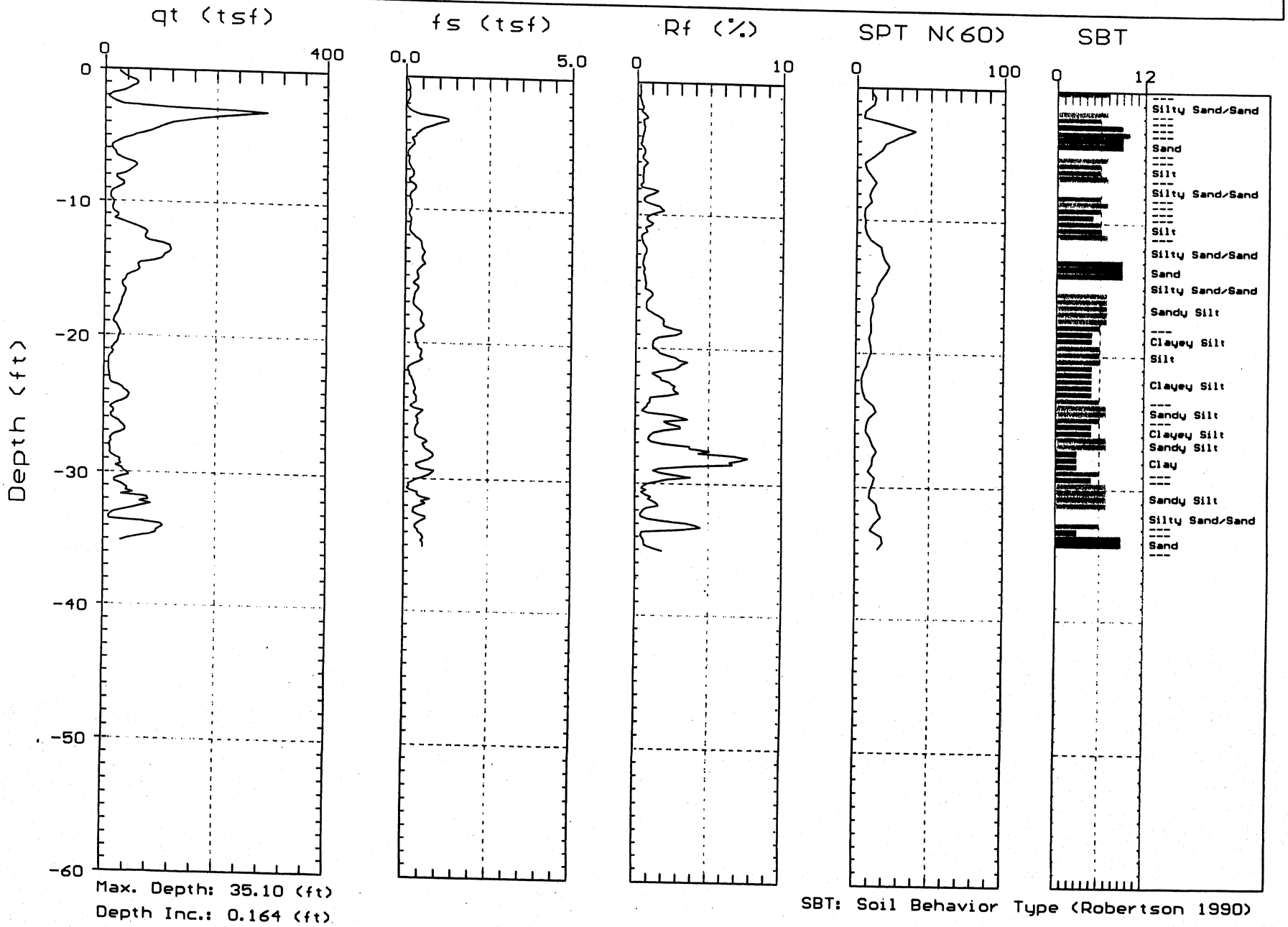
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-4

Engineer: B.WILLIAMS
Date: 03:21:05 10:19



Max. Depth: 35.10 (ft)
Depth Inc.: 0.164 (ft)

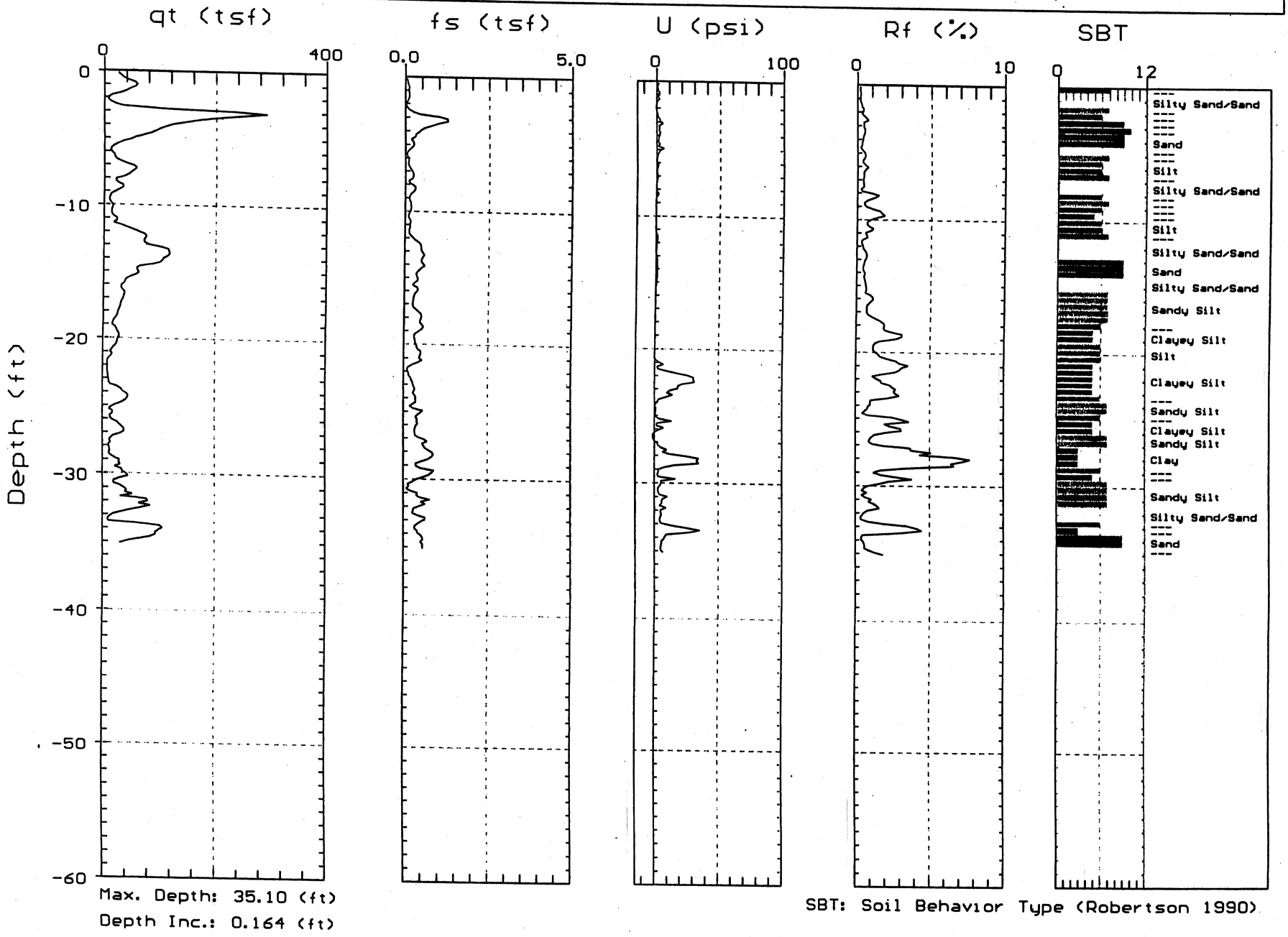
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CHJ

Site: NEW GYMNASIUM
Location: CPT-4

Engineer: B.WILLIAMS
Date: 03:21:05 10:19



Max. Depth: 35.10 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

HUMAN RESOURCES JANUARY 24, 2006

TOPIC: REVISION TO MANAGEMENT SALARY SCHEDULE

TO THE BOARD OF TRUSTEES:

Approval is requested to revise the management salary schedule to reflect the placement of the new executive dean position at Range 49.

Fiscal Impact: None

RECOMMENDATION:

It is recommended that the board approve the revision in the management salary schedule to include the executive dean at Range 49.

REFERENCE FOR AGENDA: NO

Signed W. Sanchez
Director of Human Resources

TRANSMITTED TO THE BOARD WITH A FAVORABLE RECOMMENDATION.

Signed R Soman
Superintendent/President

ACTION TAKEN BY THE BOARD:

MOTION_____

SECOND_____ Ayes___ Noes___

INFORMATION ONLY_____

HUMAN RESOURCES JANUARY 24, 2006

TOPIC: CLASSIFIED RESIGNATION

TO THE BOARD OF TRUSTEES:

The following classified resignations have been received and accepted by the superintendent/president per Board Policy 7350:

1. Melissa Lanceta, classified special, Bookstore assistant, effective January 5, 2006.

RECOMMENDATION:

The resignation listed above is included in the agenda for the board's information.

REFERENCE FOR AGENDA: No Signed W. Schmidt
Director of Human Resources

TRANSMITTED TO THE BOARD WITH A FAVORABLE RECOMMENDATION.

Signed _____
Superintendent/President

ACTION TAKEN BY THE BOARD:

MOTION_____

SECOND_____ Ayes___ Noes___

INFORMATION ONLY____X_____

STUDENT SERVICES

JANUARY 24, 2006

TOPIC: MIS ORGANIZATIONAL CHANGE

TO THE SUPERINTENDENT/PRESIDENT:

Campus technology functions and operations on the campus are vast, complex, and highly interrelated. Currently, the Management Information Systems (MIS) department and the Information Technology (IT) department report to separate Vice Presidents. Currently, the IT department reports to the Vice President, Administrative Services and the MIS department reports to the Vice President, Student Services. Both of these departments provide mission critical services for all campus wide technology-related concerns. IT is responsible for campus wide technology infrastructure (computer hardware; campus networks; email; internet connectivity; etc.). MIS is responsible for administrative information systems (student information systems – Datatel and legacy systems; San Bernardino County Schools information systems – purchasing, budget, payroll; college web site; etc.). In an effort to provide improved communication, collaboration, productivity, and efficiency, the MIS department will be transferred organizationally to report under the Vice President, Administrative Services. This change will provide that all technology-related concerns are housed organizationally in one functional area. This change will be effective February 1, 2006.

RECOMMENDATION:

This item is for information only.

REFERENCE FOR AGENDA: YES

Signed: _____
Vice President, Student Services

TRANSMITTED TO THE BOARD WITH A FAVORABLE RECOMMENDATION:

Signed: _____
Superintendent/President

ACTION TAKEN BY THE BOARD:

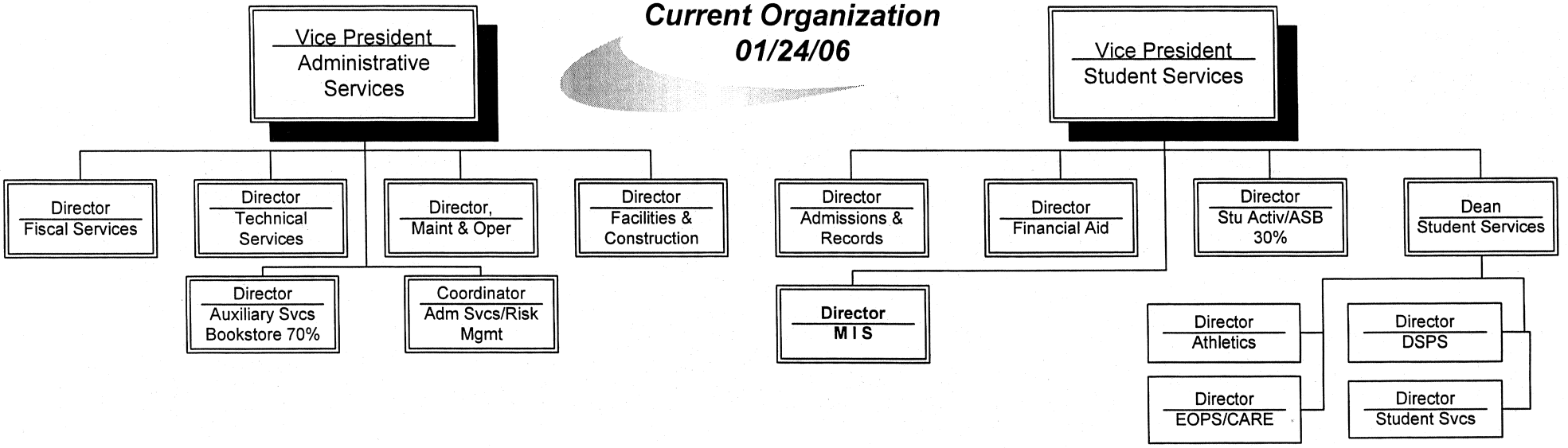
MOTION_____

SECOND_____

Ayes ____ Noes ____

INFORMATION ONLY _X_

Victor Valley College
Current Organization
01/24/06



Victor Valley College
Proposed Organization
02/01/06