PACIFIC
ENVIRONMENTAL
GROUP, INC.

July 7, 1992
Project 305-79.01

Mr. Dan Kirk
Shell Oil Company
P.O. Box 5278
Concord, California 94520

Re: Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California
WIC No 204-5508-5504

Dear Mr. Kirk:

This letter was prepared by Pacific Environmental Group, Inc. (PACIFIC) for Shell Oil Company (Shell) for the site referenced above. The purpose of this letter is to provide an update on activities at the site, and to outline the next steps proposed by PACIFIC for the site.

PACIFIC reviewed available files at the Alameda County Health Care Services Agency (ACHCS) for the site located at 295 Hegenberger Road (adjacent to the Shell Service Station). Following the review, PACIFIC noted some concerns regarding the 295 Hegenberger Road site. The previous investigation on the property was mainly focused on delineating extent of waste oil impacted soil, and not on gasoline impacted soil. A small quantity of unleaded gasoline was apparently stored at the site. A monitoring well was installed by the waste oil tank at the site. Soil and groundwater analytical results for the 295 Hegenberger Road site are limited. There is concern that initiating remedial activities on the Shell site without additional data from the 295 Hegenberger Road site may adversely impact the Shell site.

PACIFIC is currently preparing a short report documenting the results of the soil excavation sampling that occurred at the site in late April and late May, 1992. This report will be submitted by July 15, 1992.

1601 Civic Center Drive, Suite 202, Santa Clara, California 95050 (408) 984-6536 FAX: (408) 243-3911
620 Contra Costa Boulevard, Suite 209, Pleasant Hill, California 94523 (510) 825-0855 FAX: (510) 825-0882

If you have any questions regarding the contents of this letter, please call.

Sincerely,

Pacific Environmental Group, Inc.

Michael Hurd
Project Geologist
RG 5319

Attachments: Historical Groundwater Contour Maps

cc: Mr. Barney Chan, Alameda County Health Care Services Agency
Mr. Rich Hiett, Regional Water Quality Control Board

PACIFIC has conducted an evaluation of groundwater flow directions at the site since 1989. Groundwater elevations at the site have generally exhibited a groundwater mound in the area of the tank complex, and commonly a groundwater high in Well MW-7. Available groundwater contour maps are presented in Attachment A. The groundwater high in the area of the tank complex causes a radial groundwater flow pattern in the eastern portion of the site. In the western and southern portion of the site, groundwater flow is southerly, consistent with the anticipated regional groundwater flow direction.

PACIFIC recommends sampling Monitoring Wells MW-2 through MW-5, and MW-7 through MW-9 for motor oil by EPA Method 8015 during the third quarter monitoring event, to further investigate the anomalous diesel concentrations noted in groundwater at the site.

PACIFIC and Shell also plan to obtain a right-of-entry agreement for 295 Hegenberger Road, and aim to obtain permission to survey the monitoring well to the same datum as the monitoring wells on the Shell Service station property, and to collect a groundwater sample from the well at the 295 Hegenberger Road site. The groundwater sample will be analyzed for total petroleum hydrocarbons calculated as gasoline (TPH-g), total petroleum hydrocarbons calculated as diesel (TPH-d), benzene, toluene, ethylbenzene, and xylene isomers (BTEX compounds), and total petroleum hydrocarbons calculated as motor oil (TPH-mo).

PACIFIC also plans to perform a Hydropunch investigation along Hegenberger Road to evaluate potential off-site hydrocarbons in groundwater and potential off-site sources, and to establish potential monitoring well locations for hydrocarbon plume delineation. PACIFIC will perform the investigation during the first week of September 1992. This will allow time for completion of encroachment on to Hegenberger Road.

Following interpretation of the Hydropunch data, and data obtained from the well on the 295 Hegenberger Road site, PACIFIC will evaluate remedial strategies.

N

CHANNEL

LEET DRIVE

TRUCK STORAGE AREA

LEGEND

MW-7 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

(1.83) GROUNDWATER ELEVATION IN FEET - MSL, 2-6-92

2.0 GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 2-6-92

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

MW-3 (1.53)

WASTE OIL TANK

STATION BUILDING

MW-5 (1.83)

MW-2 (1.28)

MW-8 (0.85)

UNDERGROUND FUEL STORAGE TANKS

CANOPY

PLANTER

MW-6 (2.06)

MW-10 (0.41)

MW-1 (1.70)

PARKING

PLANTER

MW-9 (1.71)

MW-4 (0.09)

MW-7 (2.39)

PRODUCT ISLANDS

1.5

2.0

?

0.5

1.0

1.5

2.0

?

HEGENBERGER ROAD

SIDEWALK

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE

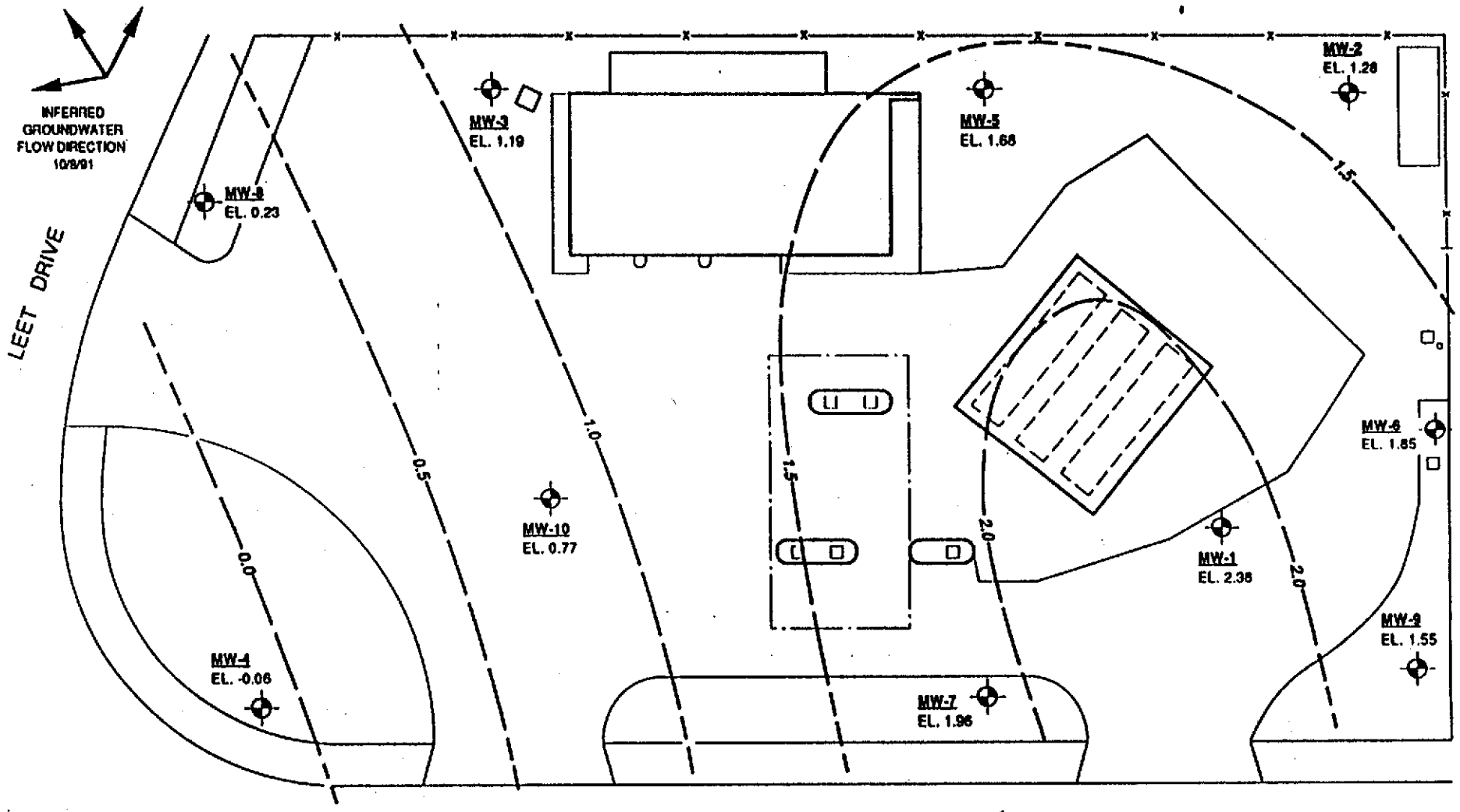
0 40 80 FEET

SHELL SERVICE STATION
285 Hegenberger Road at Leet Drive
Oakland, California

GROUNDWATER CONTOUR MAP

FIGURE: **2**

PROJECT: 305-79.01



LEGEND

GROUNDWATER CONTOUR (long dash where approximate, short dash where inferred)

MW-1 GROUNDWATER MONITORING WELL SHOWING GROUNDWATER ELEVATION

NOTES: Groundwater elevations in feet above mean sea level.

0 20 40 60

SCALE IN FEET

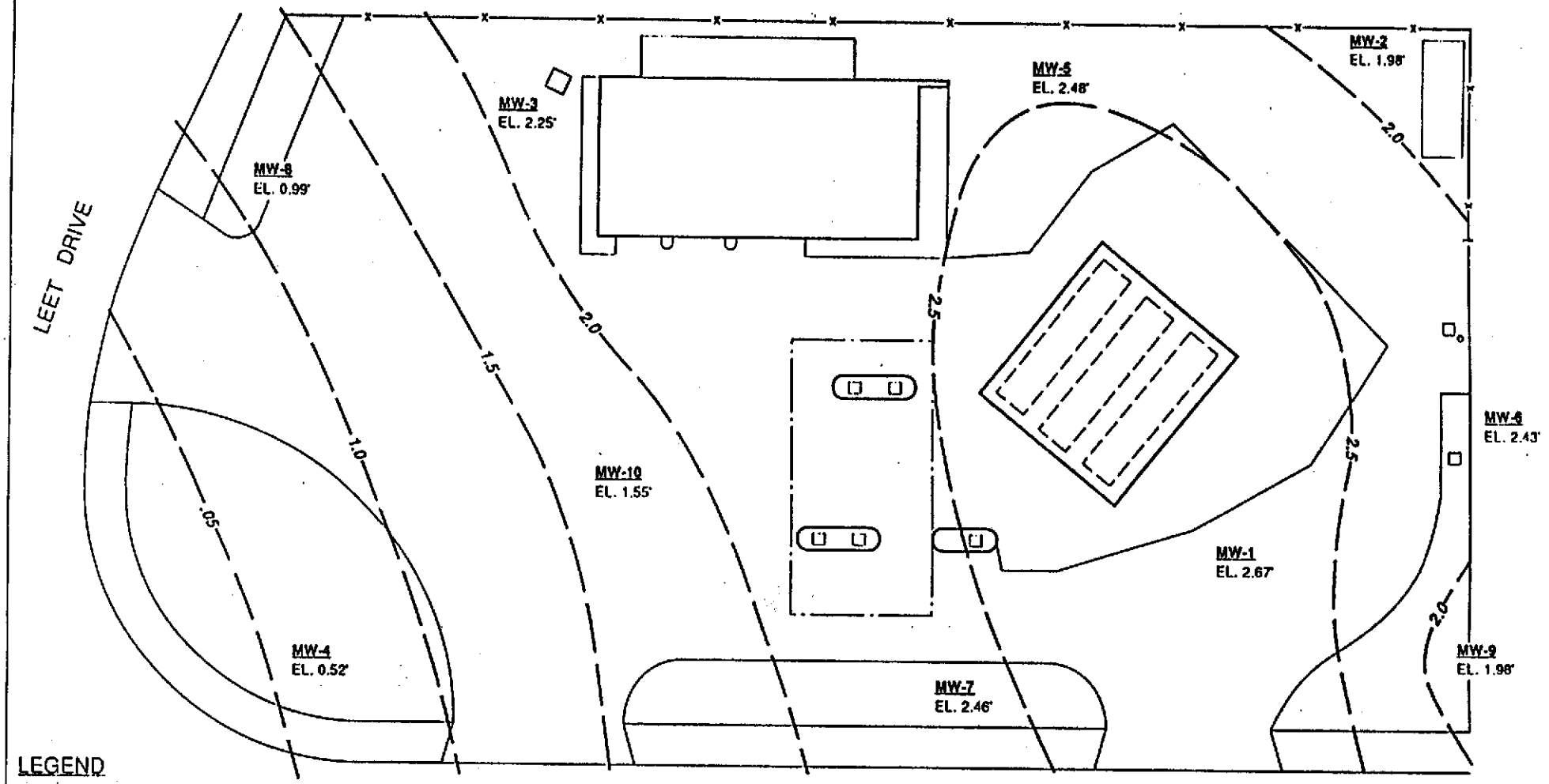
Base Map: Surveyed with Electronic Distance Meter by CEW, 1989.

GROUNDWATER CONTOUR MAP Q4/91

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-359-20
Prepared by	LOL
Date	11/12/91
Approved by	PAF
Drawing No.	3
WIC No.	204-5508-5504



LEGEND

GROUNDWATER CONTOUR (long dash where approximate, short dash where inferred)

MW-1 GROUNDWATER MONITORING WELL SHOWING GROUNDWATER ELEVATION

NOTES: 1. Groundwater elevations in feet above mean sea level.

2. Groundwater flow direction is not specified due to irregular response to tidal effects.

Base Map: Surveyed with Electronic Distance Meter by CEW, 1989.

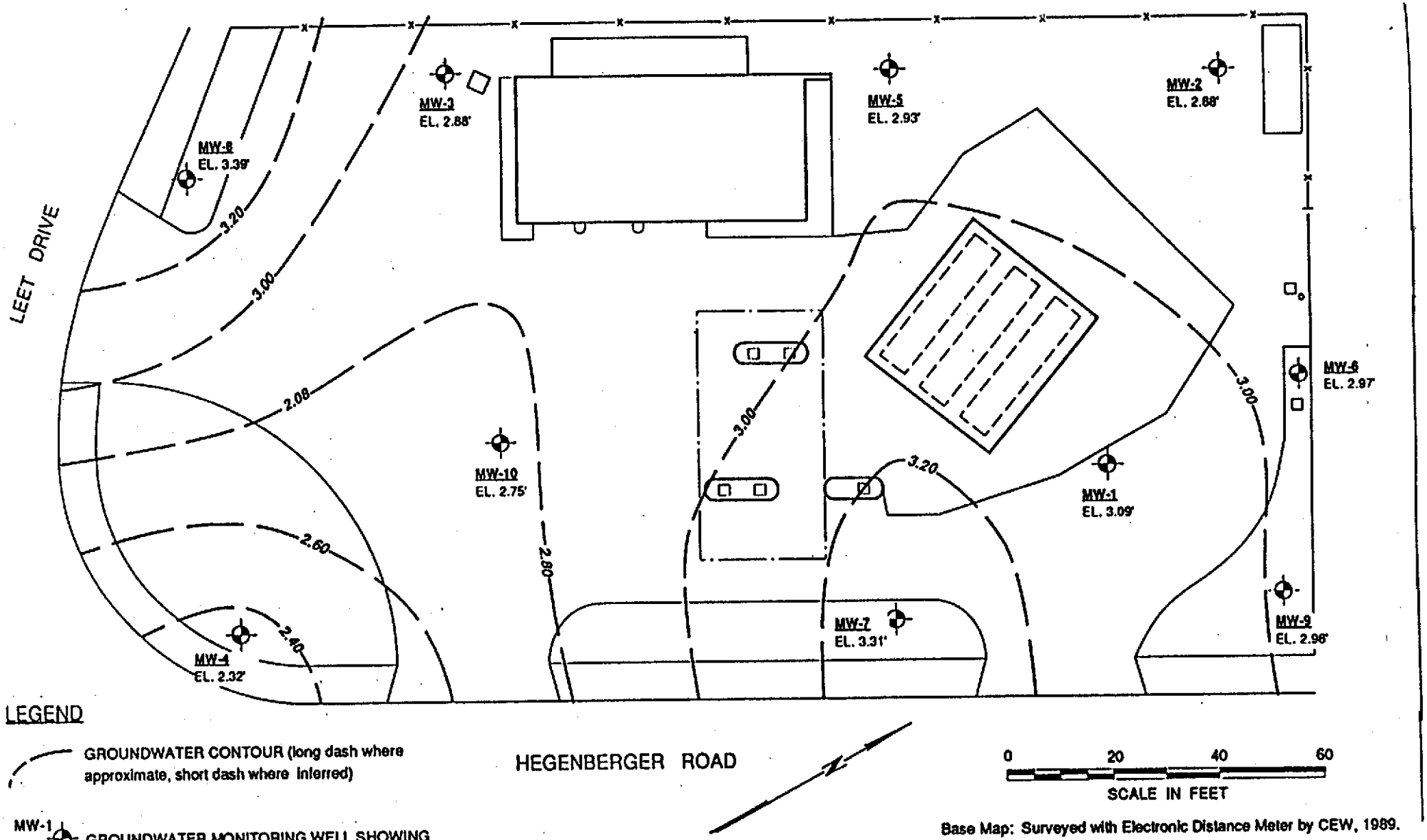
GROUNDWATER CONTOUR MAP Q3/91

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Prepared by	LOL
Approved by	CRC
WIC No.	204-5508-5504
Project No.	88-44-359-20
Date	6/28/91
Drawing No.	3

4, 5, 9



LEGEND

GROUNDWATER CONTOUR (long dash where approximate, short dash where inferred)

MW-1 GROUNDWATER MONITORING WELL SHOWING GROUNDWATER ELEVATION

NOTES: 1. Groundwater elevations in feet above mean sea level.

2. Groundwater flow direction is not specified due to irregular response to tidal effects.

Base Map: Surveyed with Electronic Distance Meter by CEW, 1989.

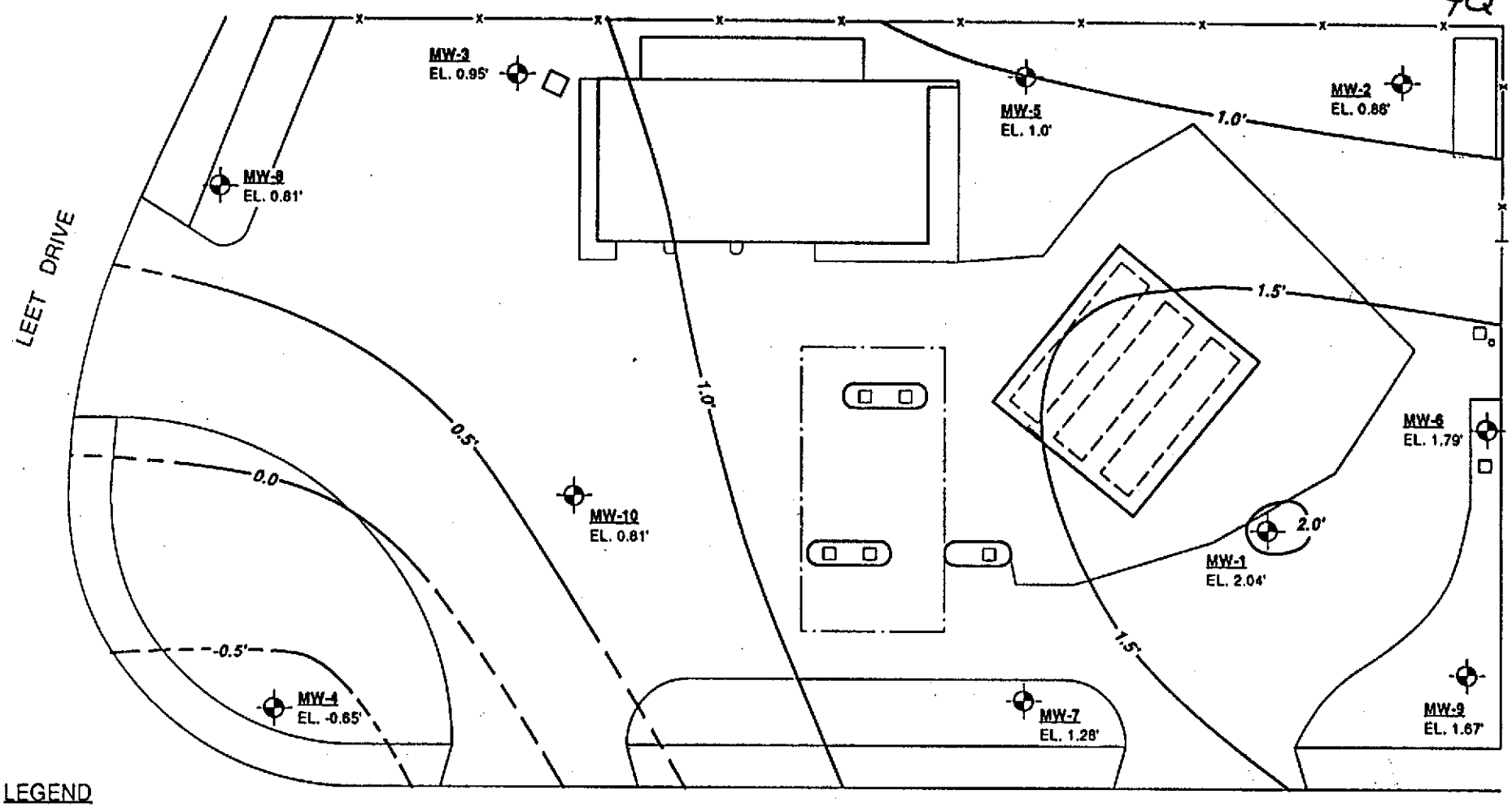
GROUNDWATER CONTOUR MAP Q2/91

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Prepared by	LQL
Approved by	CRC
WIC No.	204-5508-5504
Project No.	88-44-359-20
Date	6/26/91
Drawing No.	3

4Q '90



LEGEND

GROUNDWATER CONTOUR (long dash where approximate, short dash where inferred)

MW-1 GROUNDWATER MONITORING WELL SHOWING GROUNDWATER ELEVATION

NOTE: 1. GROUNDWATER ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL

2. GROUNDWAETR FLOW DIRECTION IS NOT SPECIFIED DUE TO IRREGULAR RESPONSE TO TIDAL EFFECTS

HEGENBERGER ROAD

0 20 40 60

SCALE IN FEET

Base Map: Surveyed with Electronic Distance Meter by CEW, 1989.

GROUNDWATER CONTOUR MAP Q4/90

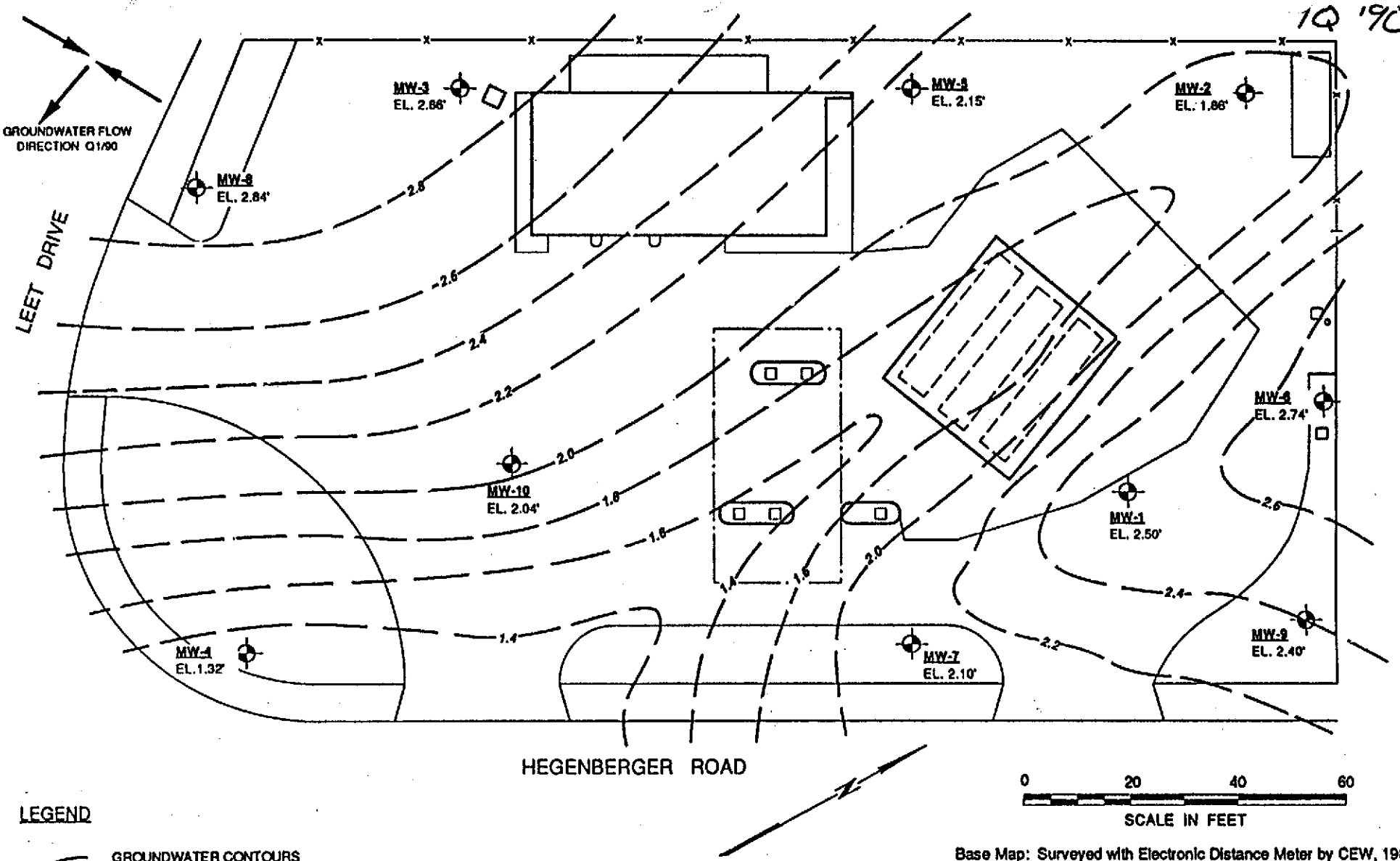
SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-359-20
Prepared by	LOL
Date	12/7/90
Checked by	GLS
Drawing No.	3
Approved by	CRC

4Q '90

1Q '90



LEGEND

GROUNDWATER CONTOURS (long dash where approximate, short dash where inferred)

MW-1 GROUNDWATER MONITORING WELL

NOTE: GROUNDWATER ELEVATIONS GIVEN IN FEET ABOVE MEAN SEA LEVEL

Base Map: Surveyed with Electronic Distance Meter by CEW, 1989.

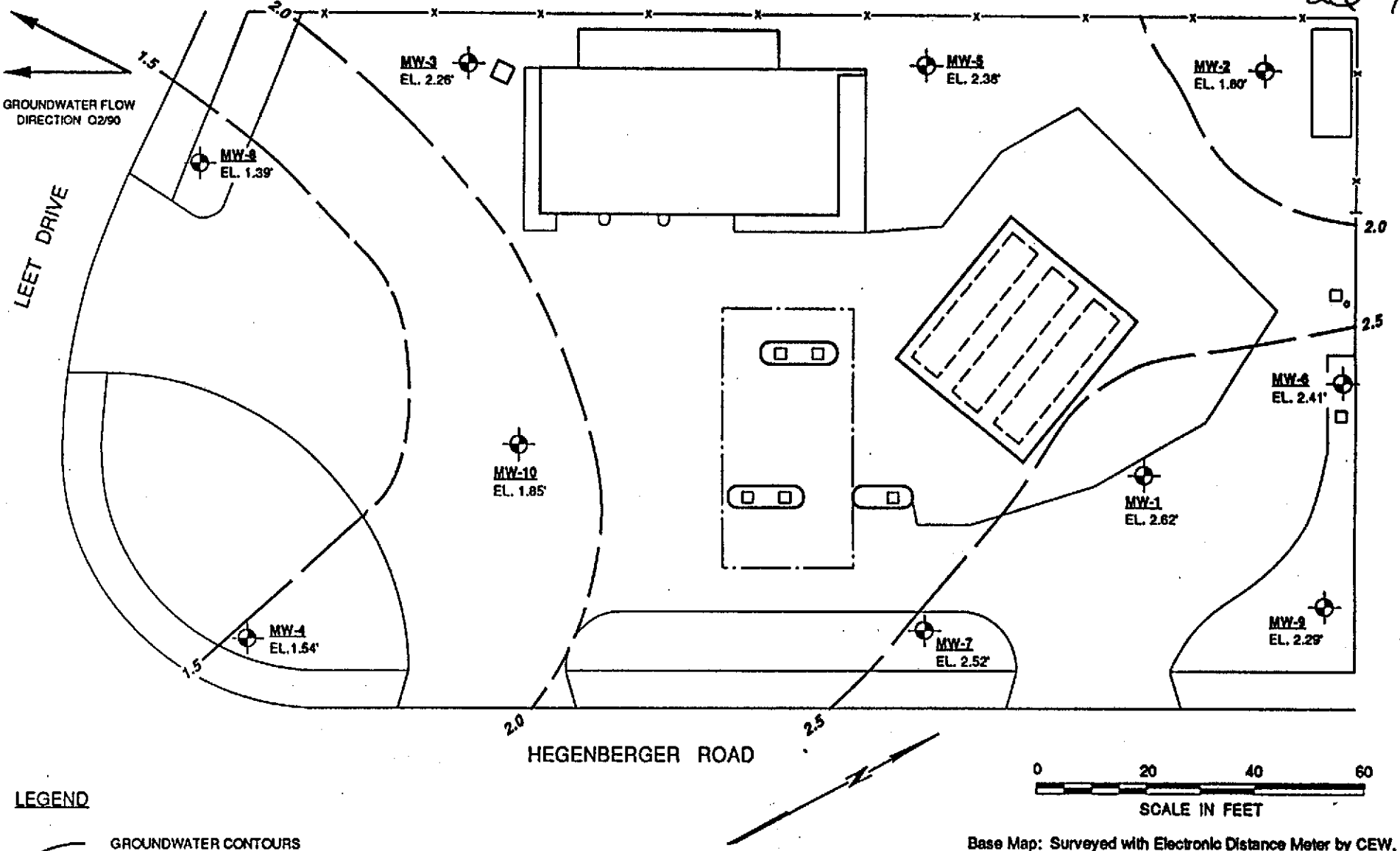
POTENTIOMETRIC MAP (Q1/90)

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-359-20
Prepared by	LQL
Date	3/28/90
Checked by	GLS
Drawing No.	4
Approved by	DWC

2Q '90



LEGEND

GROUNDWATER CONTOURS (long dash where approximate, short dash where inferred)

MW-1 GROUNDWATER MONITORING WELL

NOTE: GROUNDWATER ELEVATIONS GIVEN IN FEET ABOVE MEAN SEA LEVEL

Base Map: Surveyed with Electronic Distance Meter by CEW, 1989.

GROUNDWATER CONTOUR MAP (Q2/90)

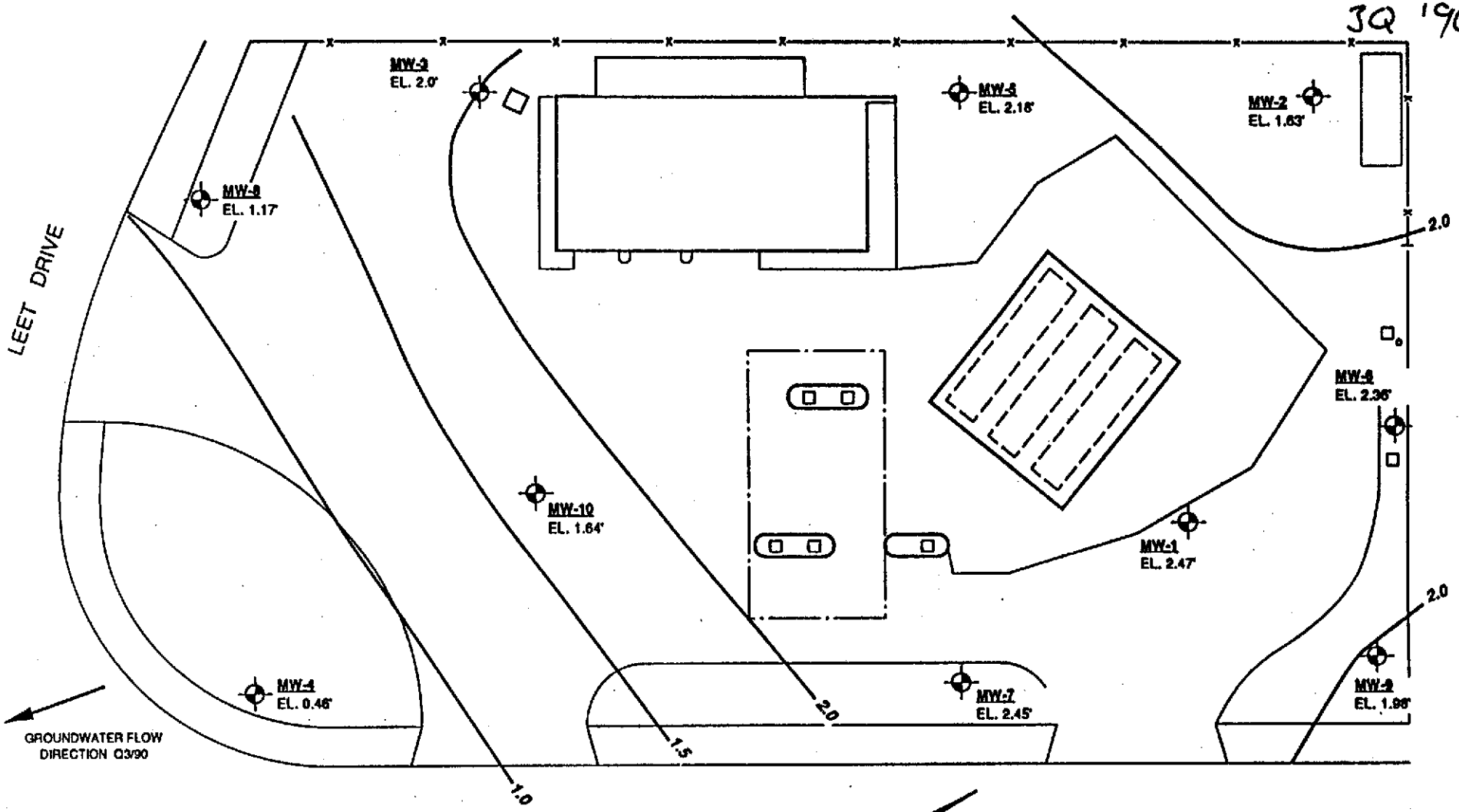
SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-359-20
Prepared by	LQL/DEN
Date	6/6/90
Checked by	RMB
Drawing No.	4
Approved by	CRC

2Q'90

3Q '90



LEGEND

GROUNDWATER CONTOUR (long dash where approximate, short dash where inferred)

MW-1 GROUNDWATER MONITORING WELL SHOWING GROUNDWATER ELEVATION

NOTE: GROUNDWATER ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL

0 20 40 60

SCALE IN FEET

Base Map: Surveyed with Electronic Distance Meter by CEW, 1989.

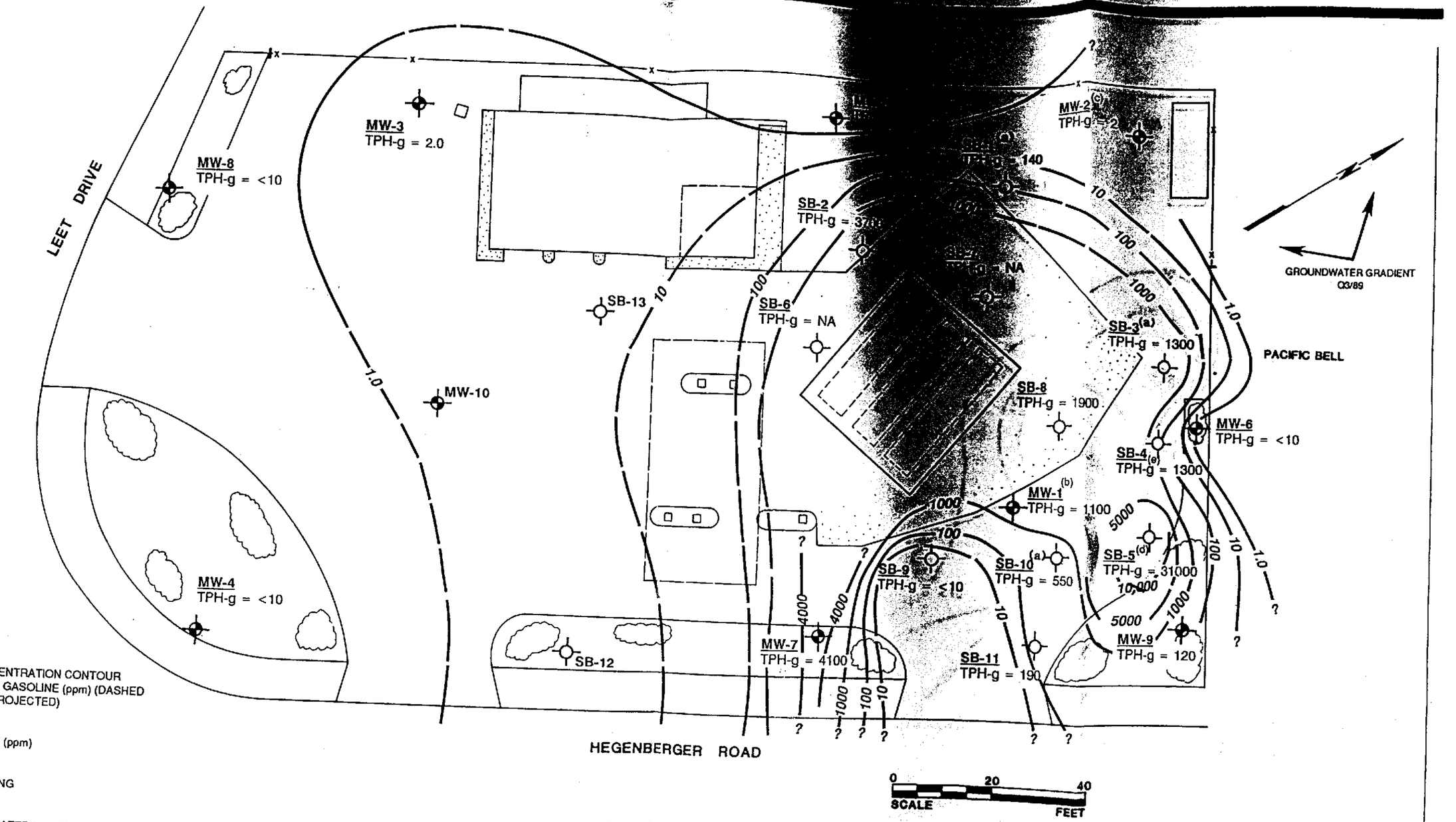
GROUNDWATER CONTOUR MAP Q3/90

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-359-20
Prepared by	DEN
Date	9/24/90
Checked by	GLS
Drawing No.	5
Approved by	CRC

3Q '90



LEGEND

ISOCONCENTRATION CONTOUR SHOWING GASOLINE (ppm) (DASHED WHERE PROJECTED)

TPH-g = GASOLINE (ppm)

SB-1 SOIL BORING

MW-1 GROUNDWATER MONITORING WELL

NOTES:
(a) SAMPLE TAKEN AT -4' BGS
(b) SAMPLE TAKEN AT -5.5' BGS
(c) SAMPLE TAKEN AT -6' BGS
(d) SAMPLE TAKEN AT -2' BGS
(e) SAMPLE TAKEN AT -2', -4' BGS

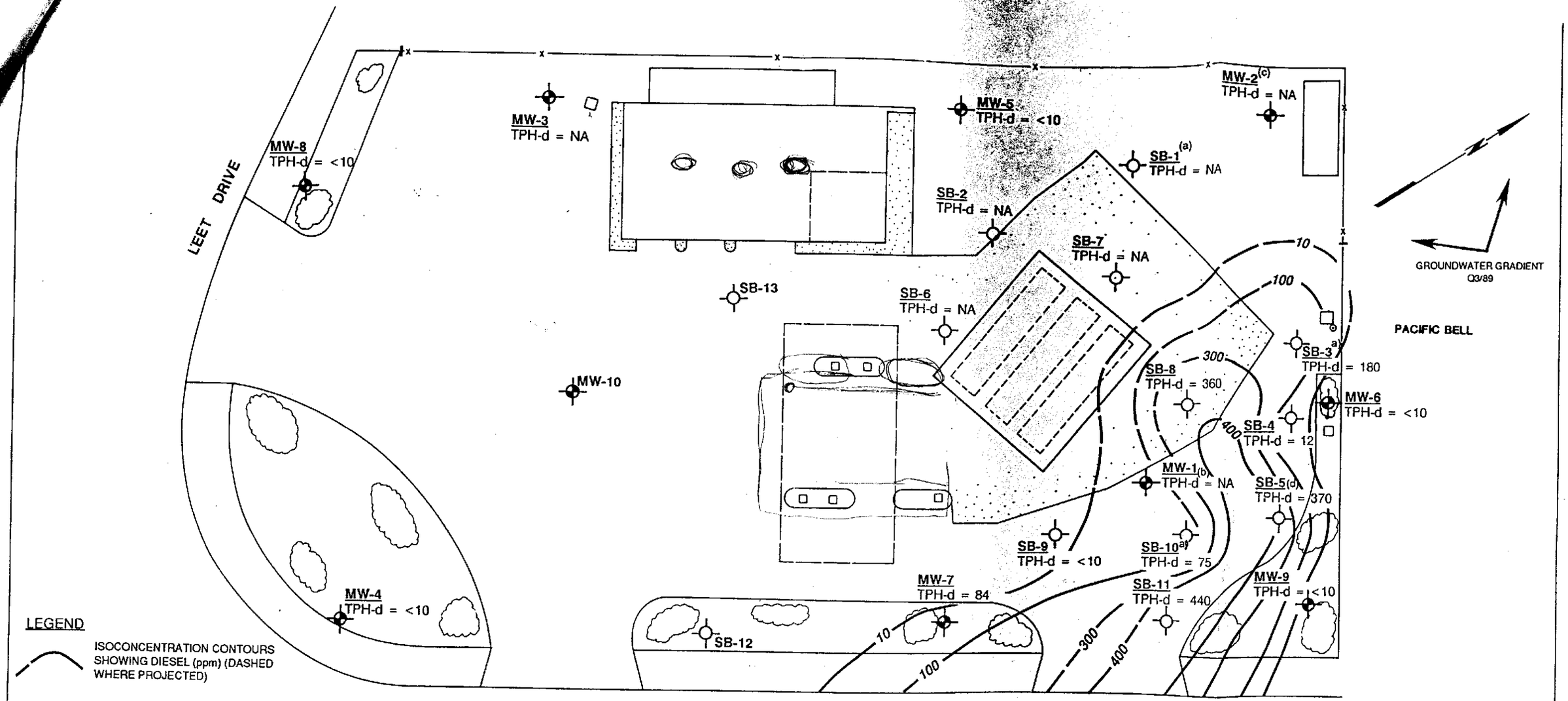
Base Map: Surveyed with EDM, Converse 1989.

PLAN: SOIL TPH-g AT 5' BGS Q4/89

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental Consultants California

Scale	AS SHOWN
Date	9/14/89
Prepared By	MLL
Checked By	RMB
Approved By	
Project No.	88-44-359-01
Drawing No.	5



LEGEND

ISOCONCENTRATION CONTOURS SHOWING DIESEL (ppm) (DASHED WHERE PROJECTED)

TPH-d = DIESEL (ppm)

SB-1 SOIL BORING

MW-1 GROUNDWATER MONITORING WELL

NOTES:
(a) SAMPLE TAKEN AT -4' BGS
(b) SAMPLE TAKEN AT -5.5' BGS
(c) SAMPLE TAKEN AT -6' BGS
(d) SAMPLE TAKEN AT -2' BGS
(e) SAMPLE TAKEN AT -2', -4' BGS

Base Map: Surveyed with EDM, Converse 1989.

possibly in capillary fringe.

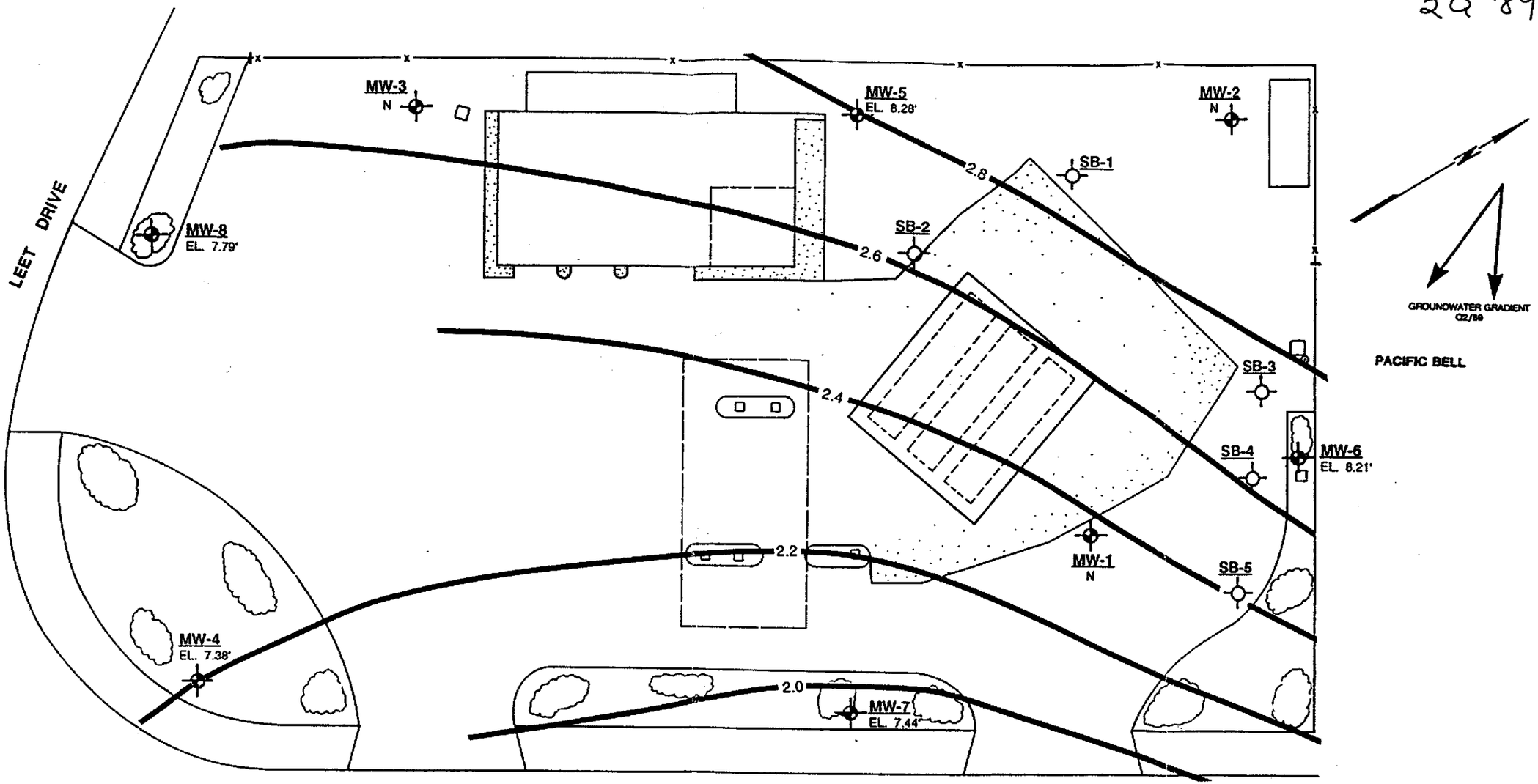
PLAN: SOIL TPH-d AT 5' BGS Q4/89

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental Consultants California

Scale	AS SHOWN
Date	9/14/89
Prepared By	MLL
Checked By	RMB
Approved By	DWC
Project No.	88-44-359-01
Drawing No.	6

2Q '89



LEGEND

SB-1 — SOIL BORING

MW-1 — GROUNDWATER MONITORING WELL

NOTES: ELEVATION OF WATER TABLE IN FEET ABOVE MEAN SEA LEVEL.

N = NOT AVAILABLE. SUBJECT TO RESURVEY.

Base Map: Surveyed with EDM, Converse 1989.

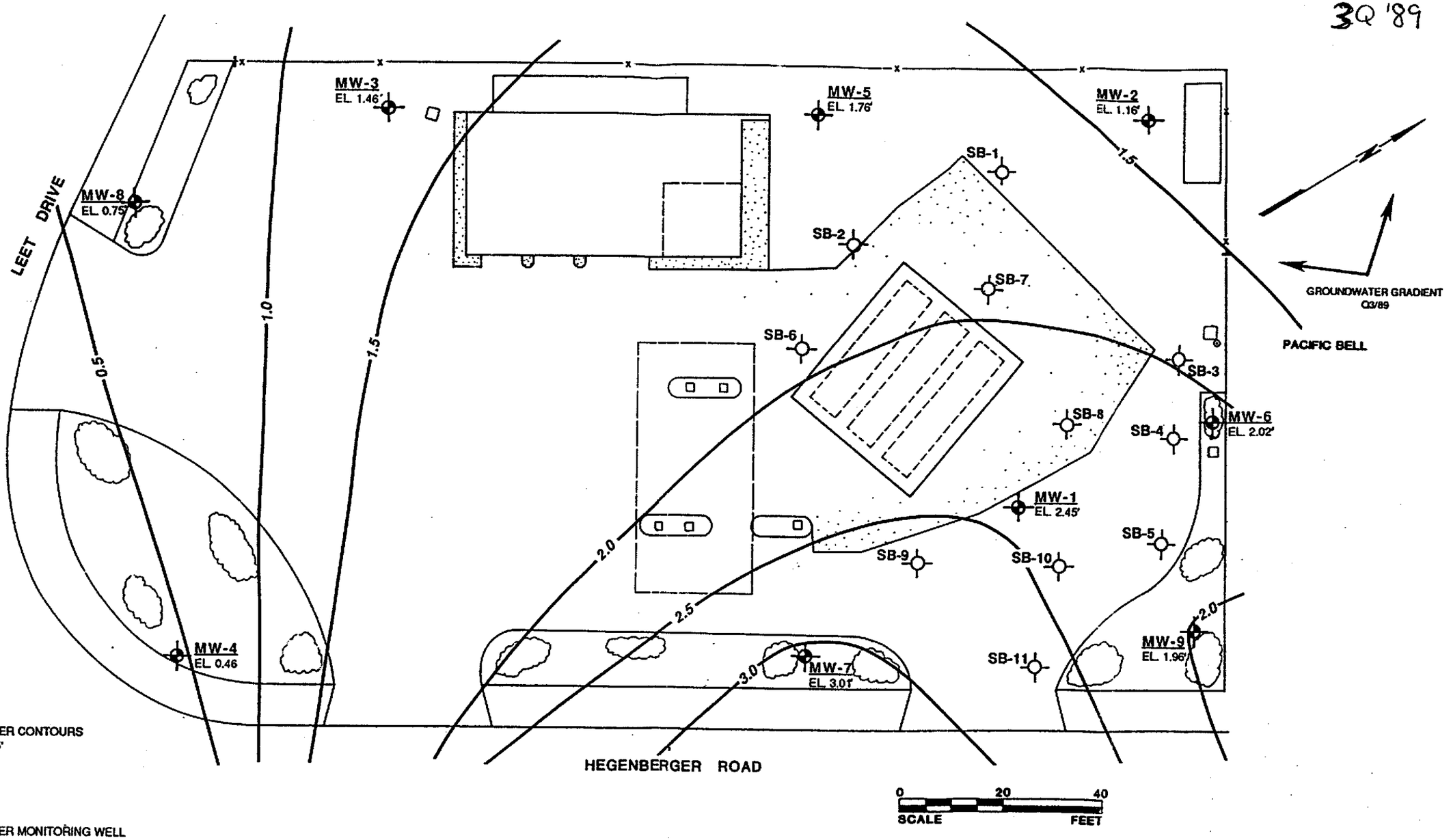
GROUNDWATER GRADIENT Q2/89

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental Consultants California

Scale	AS SHOWN
Date	6/23/89
Prepared By	KGC/CRB
Checked By	RMB
Approved By	DWC
Project No.	88-44-359-01
Drawing No.	9

3Q '89



LEGEND

GROUNDWATER CONTOURS INTERVAL 0.5'

SB-1 SOIL BORING

MW-1 GROUNDWATER MONITORING WELL

NOTES: WATER TABLE ELEVATIONS ARE IN FEET ABOVE MSL.

Base Map: Surveyed with EDM, Converse 1989.

GROUNDWATER GRADIENT Q3/89

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental Consultants California

Scale	AS SHOWN
Date	9/11/89
Prepared By	KGC/CRB
Checked By	RMB
Approved By	
Project No.	88-44-359-01
Drawing No.	10