

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION (LOP)  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

REMEDIAL ACTION COMPLETION CERTIFICATION

StID 3946 - 921 98th Ave, Oakland, CA 94603  
(2-25,000 gallon diesel USTs removed in August 6, 1990)

March 6, 1997

Mr. Rod Trabert  
Fleischmann Yeast  
921 98th Ave  
Oakland, CA 94603

Dear Mr. Trabert:

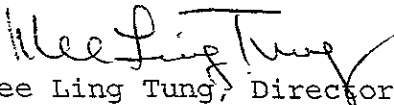
This letter confirms the completion of site investigation and remedial action for the underground storage tank(s) formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Section 2721(e) of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

  
Mee Ling Tung, Director

enclosure

cc: Chief, Division of Environmental Protection  
Kevin Graves, RWQCB  
Lori Casias, SWRCB (with attachment)  
Cheryl Gordon, UST Cleanup Fund  
files-ec (fleisch)

DEC 15 1996

QUALITY CONTROL BOARD CASE CLOSURE SUMMARY  
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: November 6, 1996

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Pkwy  
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700  
Responsible staff person: Eva Chu Title: Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: Fleischmann Nabisco Brand, Inc  
Site facility address: 921 98th Ave, Oakland, CA 94603  
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 3946  
URF filing date: 8/22/90 SWEEPS No: N/A

Responsible Parties: Addresses: Phone Numbers:

Rod Trabert 921 98th Ave 510/633-2245  
Fleischmann Yeast Oakland, CA 94603

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	25,000	Diesel #2	Removed	8/6/90
2	25,000	Diesel #6	Removed	8/6/90

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Leaking diesel #6 UST  
Site characterization complete? YES  
Date approved by oversight agency: 9/17/96  
Monitoring Wells installed? Yes Number: 5 (4 monitoring wells, 1 extraction well)  
Proper screened interval? Yes  
Highest GW depth below ground surface: 9.55' Lowest depth: 12.2'bgs in MW-2  
Flow direction: W, SW  
Most sensitive current use: Industrial  
Are drinking water wells affected? No Aquifer name: Unknown  
Is surface water affected? No Nearest affected SW name: NA  
Off-site beneficial use impacts (addresses/locations): None

Report(s) on file? YES Where is report(s) filed? Alameda County  
1131 Harbor Bay Pkwy  
Alameda, CA 94502

RECEIVED  
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PROTECTION  
DIVISION  
NOV 21 2 11 PM '96

**Treatment and Disposal of Affected Material:**

<u>Material</u>	<u>Amount</u> <u>(include units)</u>	<u>Action (Treatment</u> <u>or Disposal w/destination)</u>	<u>Date</u>
Tank Piping	2 USTs	Erickson, in Richmond	8/6/90
Free Product	133 gal.	Refinery Services, in Patterson, and Gibson Oil, in Redwood City	
Soil	~860 cy	GSX Services L.F. in Buttonwillow, CA	Sep 1990
Groundwater	10,000 gal.	Refinery Services	Sep 1990
	3 million gal.	Treated and used as make-up water cooling towers from June 1991 to June 1995.	

**Maximum Documented Contaminant Concentrations - - Before and After Cleanup**

<u>Contaminant</u>	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	<u>Before</u>	<u>After</u>	<u>Before</u>	<u>After<sup>1</sup></u>
TPH (Gas)	NA	NA	264	71
TPH (Diesel)	6,760	6,760	FP	3,900
Benzene	ND	ND	10	1.2
Toluene	0.08	0.08	10	ND
Ethylbenzene	0.07	0.07	10	ND
Xylenes	2.6	2.6	31	0.81
Oil & Grease	43,550	43,550	73ppm	34ppm
Other HVOCs			ND	
SVOCs			ND	

NOTE: 1 Dissolved phase from well MW-3

**IV. CLOSURE**


Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **Undetermined**  
 Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **Undetermined**  
 Does corrective action protect public health for current land use? **YES**  
 Site management requirements: **None**

Should corrective action be reviewed if land use changes? **YES**  
 Monitoring wells Decommissioned: **None, pending site closure**  
 Number Decommissioned: **0** Number Retained: **5**  
 List enforcement actions taken: **None**

List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Eva Chu Title: Haz Mat Specialist

Signature:  Date: 12/4/96

Reviewed by

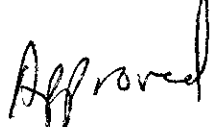
Name: Madhulla Logan Title: Haz Mat Specialist

Signature:  Date: 11/6/96

Name: Thomas Peacock Title: Supervisor

Signature:  Date: 12-4-96

VI. RWQCB NOTIFICATION

Date Submitted to RB: 12/5/96 RB Response: 

RWQCB Staff Name: Kevin Graves Title: AWRCE

Signature:  Date: 12/4/96

VII. ADDITIONAL COMMENTS, DATA, ETC.

Two 25,000 gallon USTs (one containing Diesel #2, one containing diesel #6) were in a common pit and were supported by four concrete saddles. When the diesel #6 UST failed a tank pressure test, it was decided to removed both USTs. Actual tank removal occurred on August 6, 1990.

At the time of the tank removal, groundwater was encountered at 13' below ground surface (bgs). Approximately three inches of floating product was present on top of the water. A sheet pile shoring system was installed along the northeast and northwest sides of the tank pit to protect the integrity of the railroad tracks. Visibly stained soil (~700 cy) below the tanks was removed to the extent possible (to a depth of 13' to 17' bgs, concurrently with dewatering). Six discrete soil samples (SS1 through SS6) were collected from the base and sidewalls of the tank pit at ~13' bgs. A "grab" groundwater sample was also collected.

Analytical results identified elevated levels of Total Petroleum Hydrocarbons as Diesel (TPHd) and Total Oil and Grease (TOG), and low to non-detectable levels of benzene, toluene, ethylbenzene, and xylenes (BTEX) in soil and groundwater. (See Figs 1, 2, and Table 1)

In September 1990 three groundwater monitoring wells (MW-1 through MW-3) and five soil borings (SB-1 through SB-5) were installed to delineate the extent of the contaminant plume in soil and groundwater. Soil samples taken around the perimeter of the excavation indicate that the 100 ppm TPHd isoconcentration boundary for the hydrocarbons in soil appears to be within

12' of the excavation. (See Fig 3, Table 2.) Further excavation was not possible without compromising the integrity of the railroad spur to the north, and Building 16 to the southwest. Elevated levels of hydrocarbons in groundwater were identified from well MW-3. It appeared the hydrocarbon plume was pooling in the tank field and possibly influenced by Building 16. (See Fig 3, Table 4)

In December 1990, when the excavation was backfilled, an extraction well EW-1 was installed within the former tank field, near Building 16. The pit bottom was filled with drain rocks (from 11 to 17' bgs) to facilitate groundwater extraction. (See Fig 4.) Monitoring well MW-4 and soil boring SB-6 were installed to further delineate the extent of groundwater contamination downgradient of the tank excavation, and soil contamination southeast of the tank pit, respectively. Boring SB-6 contained up to 1,700 ppm TPHd and low levels of total BTEX at 10' bgs. It was not possible to identify the 100 ppm TPH boundary in the southeast direction since the railroad tracks, Building 19, and storage tanks prohibited further soil borehole drilling. (See Fig 3, Table 3)

The groundwater extraction system consisted of a 3,000 gallon oil/water separator, four 55-gallon carbon adsorption canisters, and a 3,000 gallon filtrate tank. Filtrated water was pumped to cooling towers as makeup water. Continuous groundwater extraction began in February 1992 and was discontinued in June 1993 due to the discovery of D-NAPL in groundwater. Quarterly monitoring of onsite wells began in May 1992. Approximately three million gallons of water was extracted and treated from February 1992 to June 1993. However, groundwater extraction/treatment did not seem very effective in removing hydrocarbons since the original four carbon-canisters were only changed once.

In June 1993 well MW-3 and the extraction well were found to contain a dense, non-aqueous phase liquid (D-NAPL). The D-NAPL was analyzed and found not to contain volatile or semi-volatile compounds, was non-reactive, non-corrosive, and non-ignitable. The sample appeared to be highly viscous and resembled weathered No. 2 or No. 6 diesel fuel, with peaks eluting in the C10 to beyond C35 range, with a maximum near C28. D-NAPL was removed by vacuum pumping at two week intervals. A total of approximately 133 gallons of product was removed from June 1993 to March 1994, at which time the D-NAPL recovery rate decreased to below practical levels. D-NAPL recovery was discontinued in April 1994. There is currently approximately 4" to 6" of D-NAPL in well MW-3.

A review of the boring logs indicate that the site is underlain by a thin upper fill layer of sands and gravels. Clays and silts underlie the fill with silt concentrations increasing with depth. Sands were encountered beginning 15' to 20' bgs in wells MW-2 and MW-3. Groundwater was encountered at ~15' bgs in the wells during installation and stabilized at ~12' bgs, suggesting that the aquifer is confined, or semi-confined. Depth to water has ranged from 8.01' to 12.20' bgs. (See boring/well logs)

Soil contamination appears to be limited to a depth of 10' to 15' bgs, and the 100ppm TPHd isoconcentration boundary is within 12 lateral feet of the excavation.

Groundwater from well MW-3 continues to contain elevated levels of dissolved TPHd and TOG, as well as D-NAPL. However, only low levels of TPHg and BTEX have been identified. PNAs have not been detected in well MW-3. Low levels of TPHd and TPHg have been detected in well MW-2, located ~12' west of the former UST excavation. Wells MW-1 and MW-4 have not identified detectable concentrations of petroleum hydrocarbons.

D-NAPLs do not migrate with groundwater flow as dissolved and floating products do. Instead, they follow geologic contours, moving through the most permeable substrata. Since this site is underlain by clays and silts to 15' bgs, it is likely that D-NAPL will migrate towards the permeable backfill material (drain rocks) within the former tank excavation, from 11' to 17' bgs, rather than away from the drainage gallery. This appears to be the case since D-NAPL has not been identified in well MW-2.

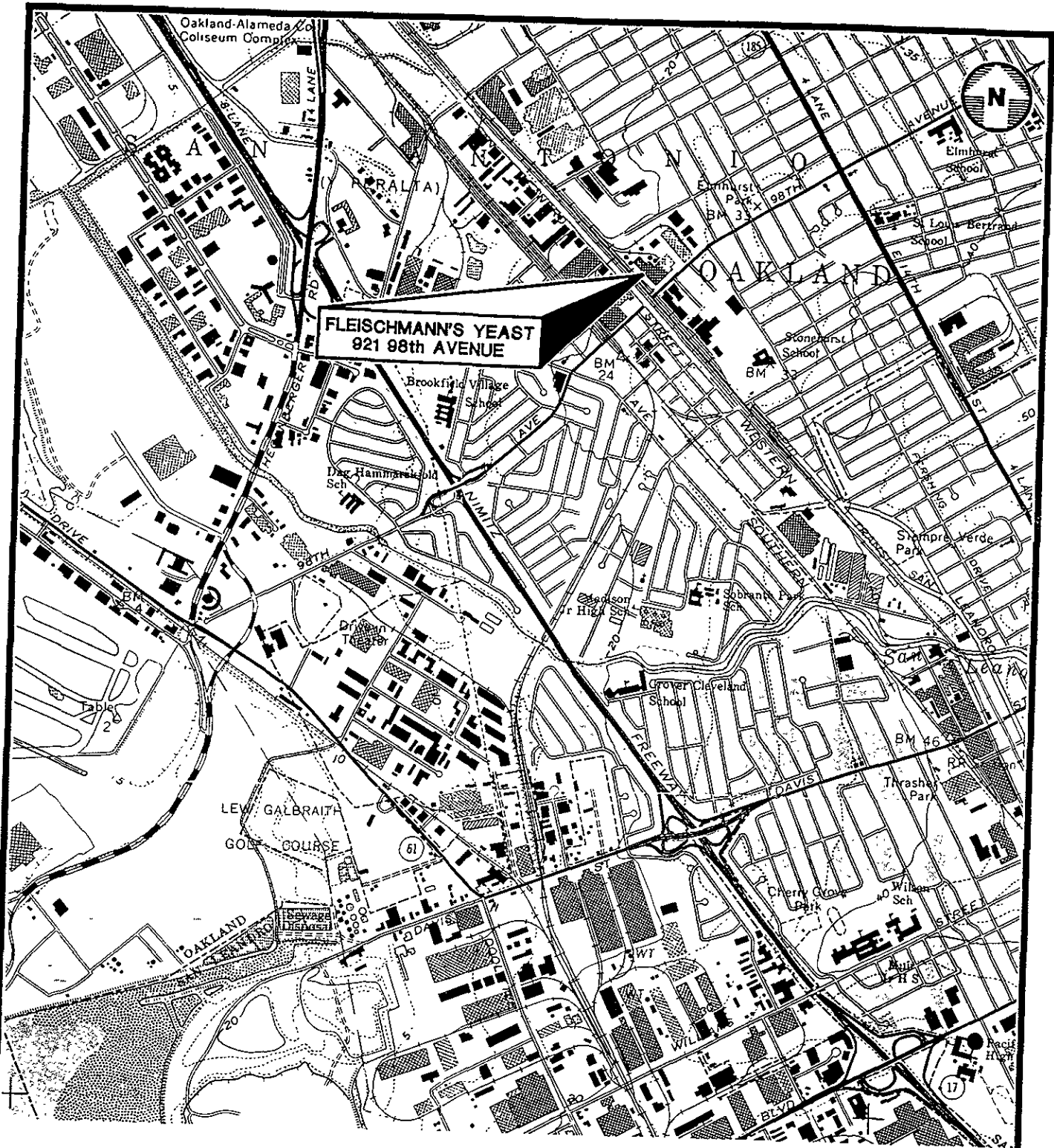
In summary, case closure is recommended because:

- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- the dissolved plume is not migrating;
- no water wells, surface water, or other sensitive receptors are likely to be impacted.

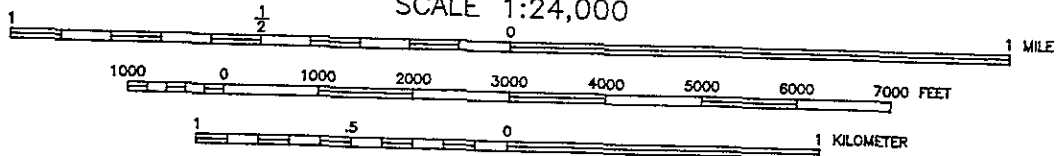
***There is a production well onsite ~420' south of the former tank excavation. Impact to this cross-gradient well is not likely; and,***

- ***the site presents no significant risk to human health or the environment, based on ASTMs RBCA Tier 1 Look-up Table.***

*Although residual TPHd is still in groundwater, the chemicals of concern, BTEX and PNAs, have not been detected at levels which would pose a risk to human health.*



SCALE 1:24,000



ADAPTED FROM U.S.G.S. SAN LEANDRO, CALIFORNIA 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAP, 1959, PHOTOREVISED 1980.



**Environmental  
Science &  
Engineering, Inc.**

4090 NELSON AVENUE, SUITE J  
CONCORD, CA 94520

DATE  
6/94

REVISED

CAD FILE  
52501001

LOCATION MAP

FLEISCHMANN'S YEAST  
921 98th AVENUE  
OAKLAND, CALIFORNIA

FIGURE NO.

1

PROJ. NO.

DRAWING NUMBER 142222-A2

CHECKED BY J. BERA 8-3-90 APPROVED BY

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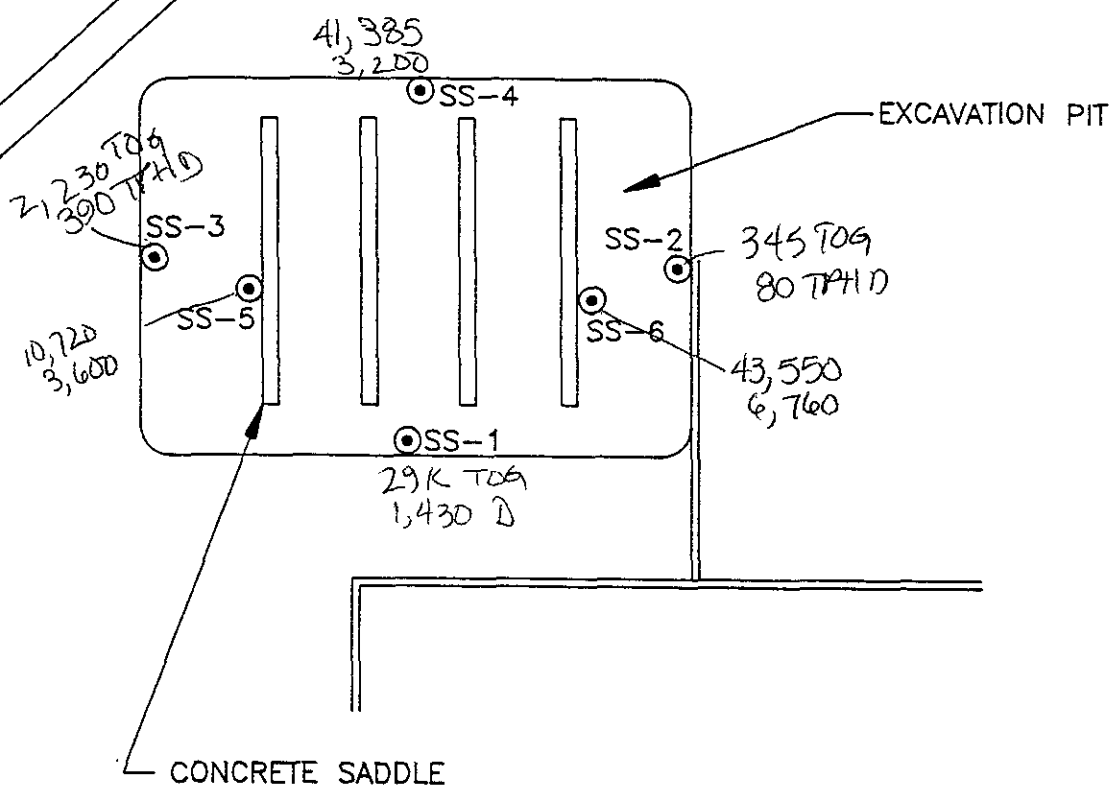
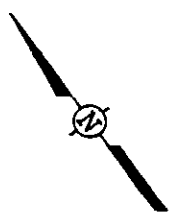
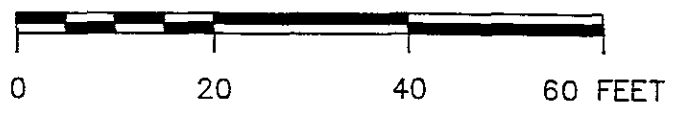


FIGURE 2

SOIL SAMPLE LOCATION MAP  
 PREPARED FOR  
 FLEISCHMANN'S YEAST  
 921 98th AVE  
 OAKLAND, CALIFORNIA 94603

APPROXIMATE SCALE



INTERNATIONAL  
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 CORPORATION



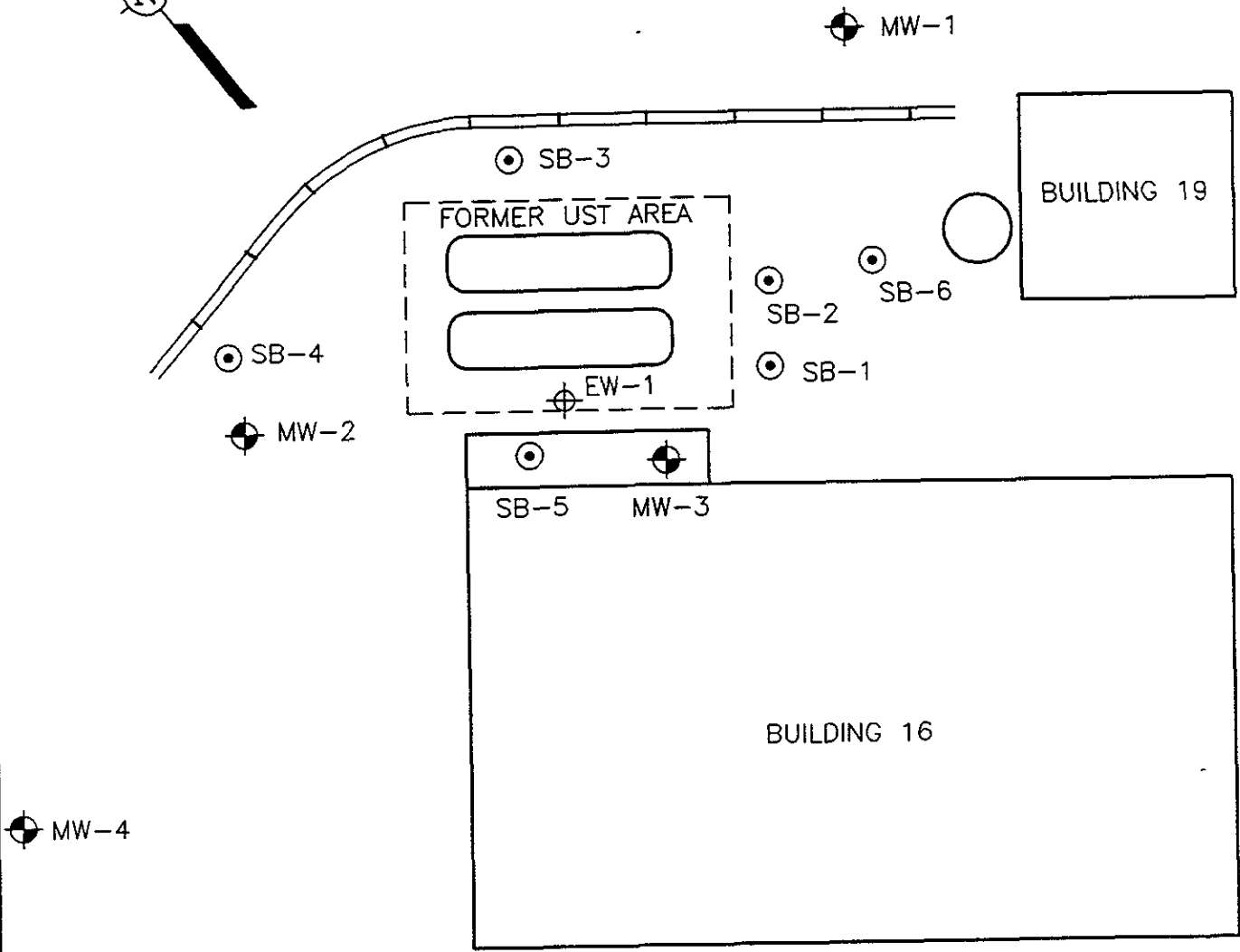
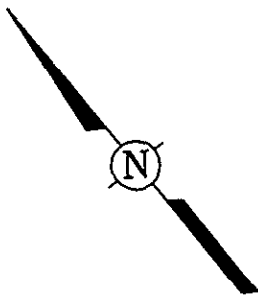
DRAWING NUMBER 762492-A17

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
APPROVED BY

T.R.S. 8/15/96

DRAWN BY



LEGEND

-  MONITORING WELL
-  SOIL BORING
-  EXTRACTION WELL

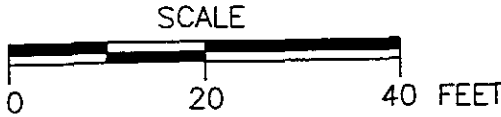
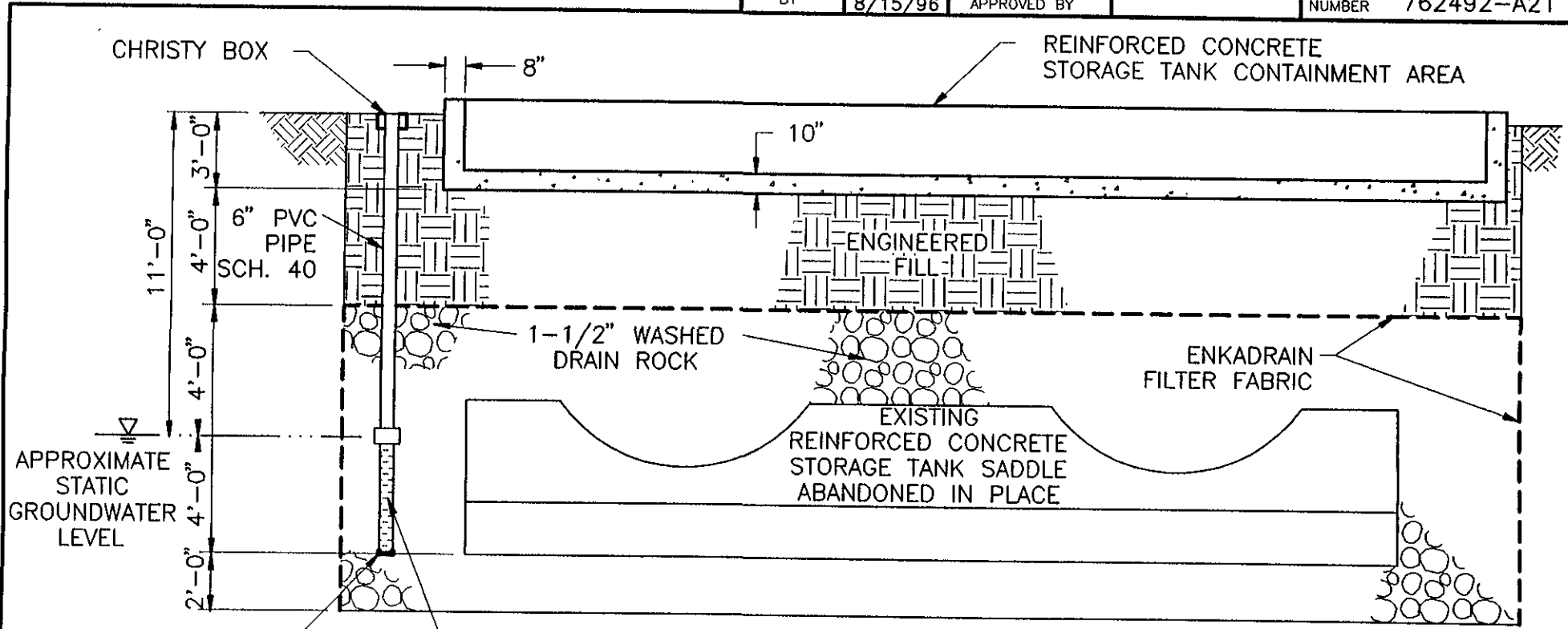
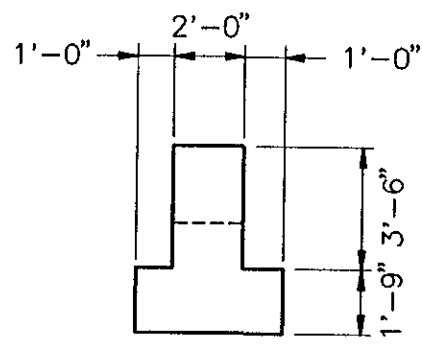


FIGURE 3  
SITE PLAN  
FLEISCHMANN'S YEAST  
921 98TH AVENUE  
OAKLAND, CALIFORNIA  
PREPARED FOR  
FLEISCHMANN'S YEAST  
OAKLAND, CALIFORNIA  
 INTERNATIONAL  
TECHNOLOGY  
CORPORATION



**SECTION**

SCALE: 3/16" = 1'-0"



**EXISTING SADDLE  
SIDE VIEW**

SCALE: 3/16" = 1'-0"

**FIGURE 4**

**GROUNDWATER RECOVERY SYSTEM**  
 FLEISCHMANN'S YEAST  
 921 98TH AVENUE  
 OAKLAND, CALIFORNIA

PREPARED FOR  
 FLEISCHMANN'S YEAST  
 OAKLAND, CALIFORNIA

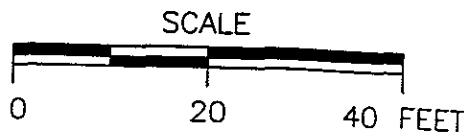
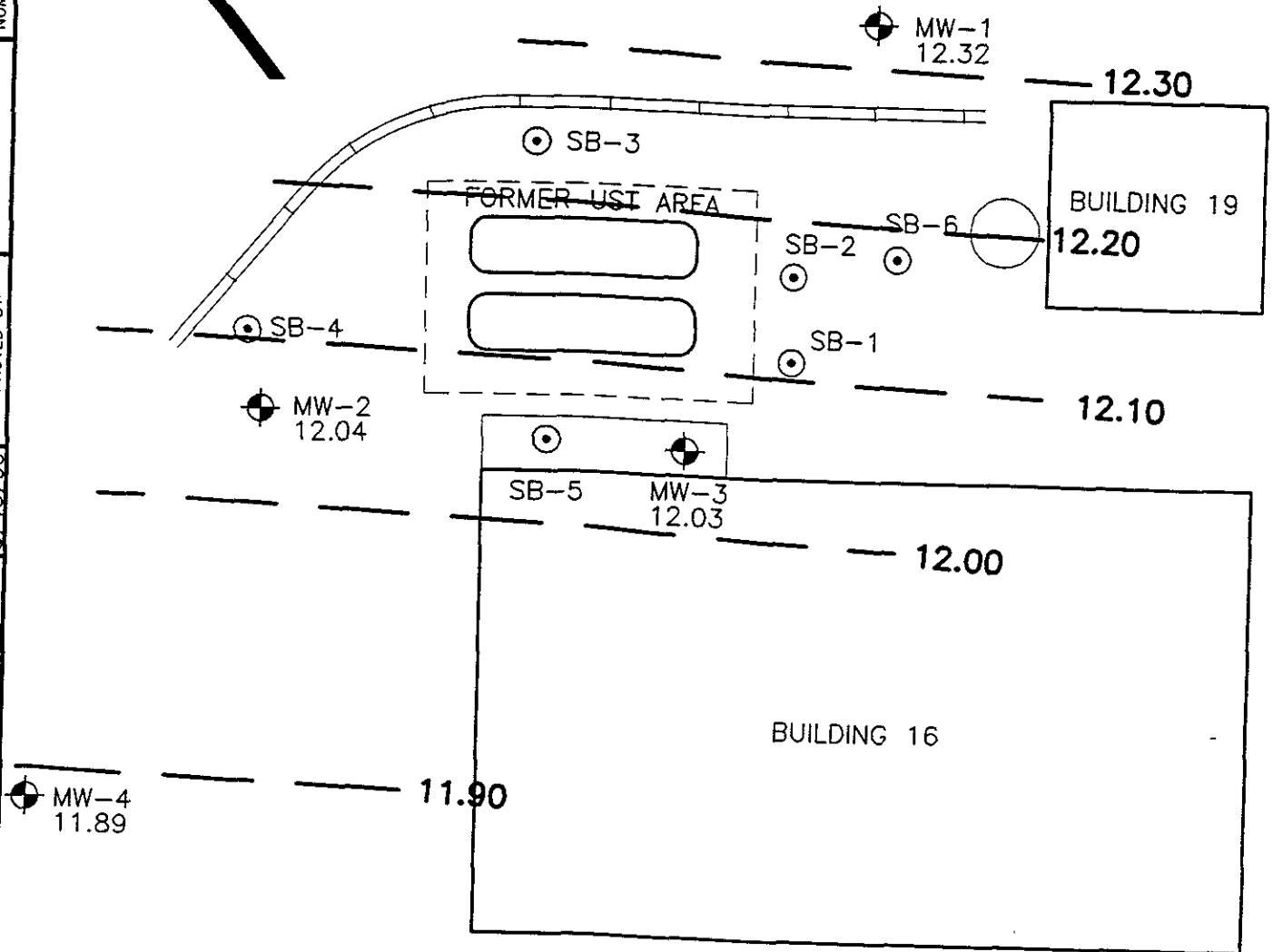
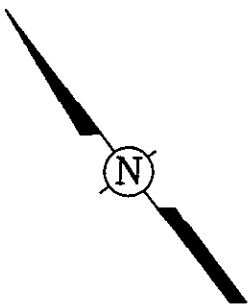


REFERENCE:  
 MIKE BARBARO PROCESS PIPING  
 1207 LAMSON RD.  
 CASTRO VALLEY, CALIFORNIA 94546  
 (510) 582-5651

DRAWING NUMBER 762492-A18

CHECKED BY: I.R.S. 8/15/96 APPROVED BY:

DRAWN BY:



LEGEND

MONITORING WELL

SOIL BORING

11.89 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

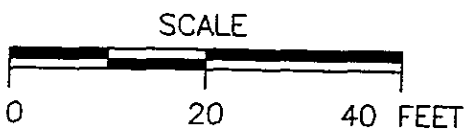
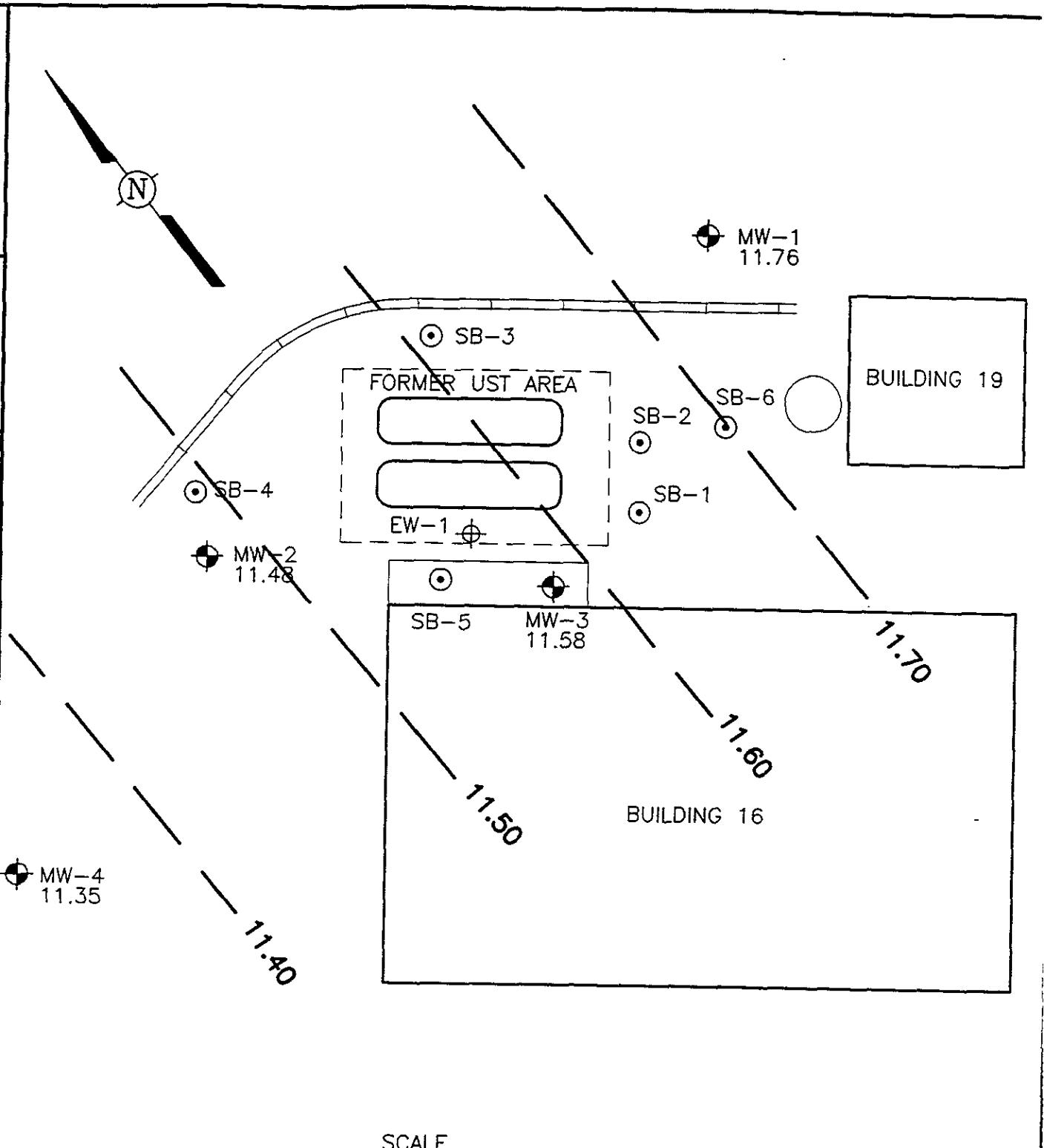
FIGURE 85  
GROUNDWATER GRADIENT MAP  
JULY 11, 1995  
FLEISCHMANN'S YEAST  
921 98TH AVENUE  
OAKLAND, CALIFORNIA

PREPARED FOR  
FLEISCHMANN'S YEAST  
OAKLAND, CALIFORNIA  
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CHECKED BY T.R.S. 8/15/96  
APPROVED BY

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LEGEND

- MONITORING WELL
- SOIL BORING
- EXTRACTION WELL

11.35 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

FIGURE 36  
GROUNDWATER GRADIENT MAP  
OCTOBER 19, 1995  
FLEISCHMANN'S YEAST  
921 98TH AVENUE  
OAKLAND, CALIFORNIA  
PREPARED FOR  
FLEISCHMANN'S YEAST  
OAKLAND, CALIFORNIA  
 INTERNATIONAL TECHNOLOGY CORPORATION

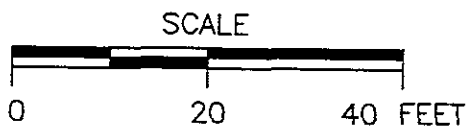
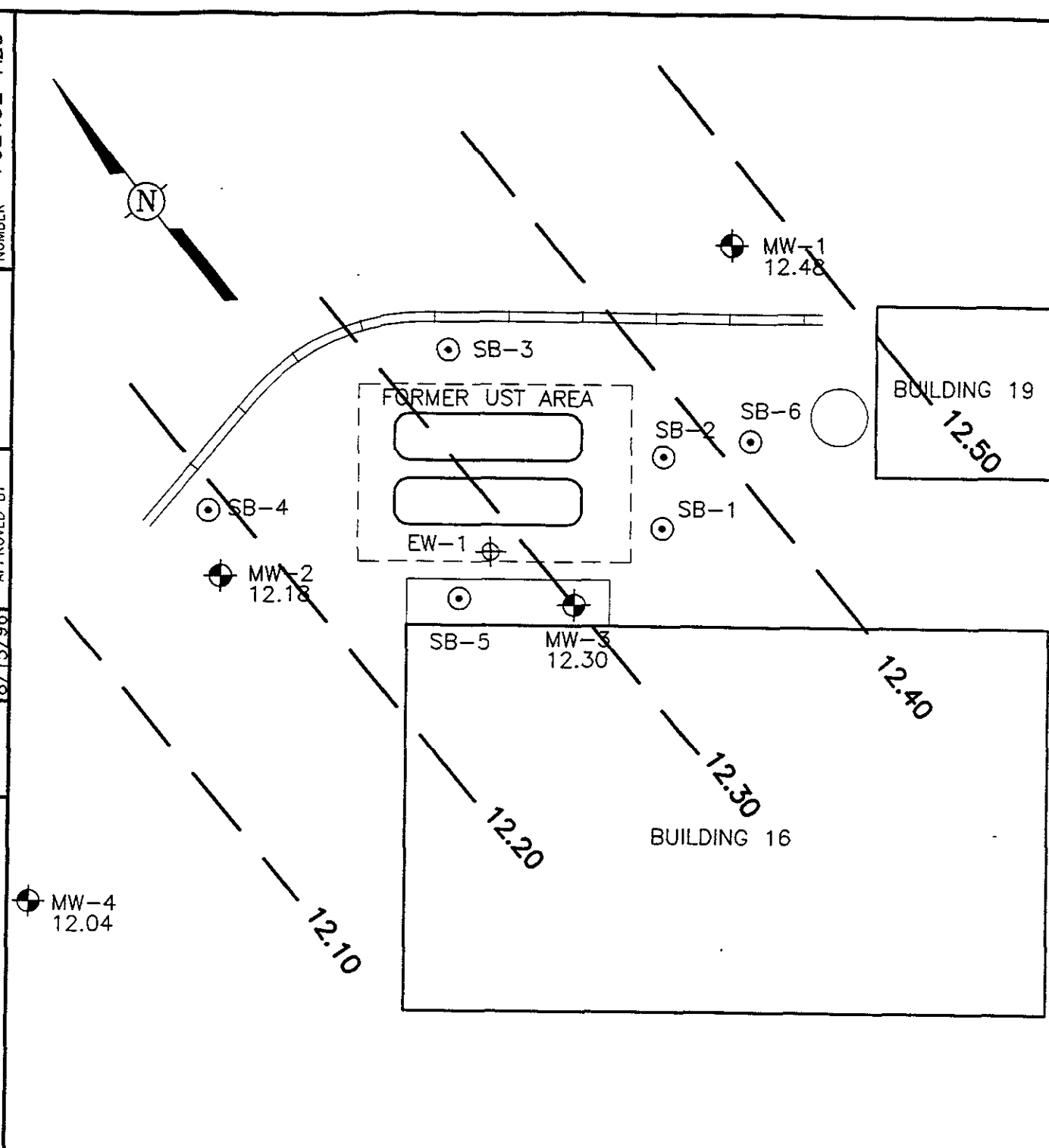
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APPROVED BY

T.R.S. 8/15/96

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- LEGEND
- MONITORING WELL
  - SOIL BORING
  - EXTRACTION WELL
- 12.10 GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

FIGURE 87  
 GROUNDWATER GRADIENT MAP  
 JANUARY 10, 1996  
 FLEISCHMANN'S YEAST  
 921 98TH AVENUE  
 OAKLAND, CALIFORNIA  
 PREPARED FOR  
 FLEISCHMANN'S YEAST  
 OAKLAND, CALIFORNIA

**IT** INTERNATIONAL TECHNOLOGY CORPORATION

**TABLE 1**  
**Summary of Soil and Groundwater Analytical Results**

Concentration (ppm)

<u>Sample Number</u>	<u>Oil &amp; Grease</u>	<u>TPH (as Diesel)</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylene</u>
SS1	29,000	1,430	ND <sub>0.03</sub>	0.08	ND <sub>0.03</sub>	ND <sub>0.06</sub>
SS2	345	80	ND <sub>0.03</sub>	ND <sub>0.03</sub>	ND <sub>0.03</sub>	ND <sub>0.06</sub>
SS3	2,230	390	ND <sub>0.03</sub>	ND <sub>0.03</sub>	ND <sub>0.03</sub>	ND <sub>0.06</sub>
SS4	41,385	3,200	ND <sub>0.03</sub>	ND <sub>0.03</sub>	0.04	2.6
SS5	10,720	3,600	ND <sub>0.03</sub>	0.06	0.03	0.5
SS6	43,550	6,760	ND <sub>0.03</sub>	ND <sub>0.03</sub>	0.07	0.5
*	17,825	4,700	ND <sub>0.15</sub>	ND <sub>0.15</sub>	ND <sub>0.15</sub>	ND <sub>0.3</sub>
B-1	NA	30	0.022	0.022	0.015	0.048

ND<sub>x</sub> - not detected at x limit of detection

NA - not analyzed

\* - composite of samples CS1 to CS8

**TABLE 2**  
**SOIL SAMPLE ANALYTICAL RESULTS**

Sample ID	Date Collected	Sample Depth (ft)	Total BTEX (ppm)	TPH-D (ppm)	Oil and Grease (ppm)	TRPH (ppm)
SS1	08/06/90	13	0.08	1,430	29,000	NA
SS2	08/06/90	13	ND	80	345	NA
SS3	08/06/90	13	ND	390	2,230	NA
SS4	08/06/90	13	2.64	3,200	41,385	NA
SS5	08/06/90	13	0.53	3,600	10,720	NA
SS6	08/06/90	13	0.57	6,760	43,550	NA
CS	08/06/90	13	ND	4,700	17,825	NA
MW2	09/14/90	15	ND	ND	ND	ND
MW3	09/14/90	15	ND	ND	ND	ND
SB1	09/13/90	15	ND	ND	ND	ND
SB2	09/13/90	10	0.072	1,000	140	730
SB3	09/13/90	15	ND	5	ND	ND
SB4	09/13/90	15	ND	3.4	ND	ND
SB5	09/14/90	15	0.033	110	ND	80
SB6	12/17/90	10	0.25	1,700	NA	1,200
SB6	12/17/90	15	ND	14	NA	ND

Notes:

ND = not detected at the method detection limit

NA = not analyzed

**TABLE 3  
HISTORICAL GROUNDWATER ELEVATION DATA**

Well I.D.	Date	Datum (ft AMSL)	Depth of Groundwater (ft)	Groundwater Elevation (ft AMSL)	NAPL Thickness (inches)
MW-1	11/30/92	22.92	12.11	10.81	NM
	03/03/93		9.41	13.51	NM
	06/02/93		10.74	12.18	NM
	08/31/93		11.44	11.48	NM
	11/30/93		10.66	12.26	NM
	03/02/94		9.61	13.31	NM
	06/07/94		11.09	11.83	0
	04/14/95		9.72	13.20	0
	07/11/95		10.60	12.32	0
	10/19/95		11.16	11.76	0
	01/10/96		10.44	12.48	0
	06/12/96		10.36	12.56	0
MW-2	11/30/92	22.76	12.20	10.56	NM
	03/03/93		9.55	13.21	NM
	06/02/93		10.86	11.90	NM
	08/31/93		11.56	11.20	NM
	11/30/93		10.70	12.06	NM
	03/02/94		9.72	13.04	NM
	06/07/94		11.20	11.56	0
	04/14/95		9.89	12.97	0
	07/11/95		10.72	12.04	0
	10/19/95		11.28	11.48	0
	01/10/96		10.58	12.18	0
	06/12/96		10.50	12.26	0
MW-3	11/30/92	22.26	11.62	10.64	NM
	03/03/93		9.15	13.11	NM
	06/02/93		8.01	14.25	NM
	08/31/93		NM	—	NM
	11/30/93		10.07	12.19	NM
	03/02/94		9.17	13.09	NM
	06/07/94		11.15	11.11	6
	04/14/95		9.29	12.99	NM
	07/11/95		10.23	12.03	5
	10/19/95		10.68	11.58	3.6
	01/10/96		9.96	12.30	4
	06/12/96		9.90	12.36	4
MW-4	11/30/92	21.71	11.26	10.45	NM
	03/03/93		8.61	13.10	NM
	06/02/93		9.87	11.84	NM
	08/31/93		10.66	11.05	NM
	11/30/93		9.78	11.93	NM
	03/02/94		8.85	12.86	NM
	06/07/94		10.25	11.46	0
	04/14/95		9.01	12.70	0
	07/11/95		9.82	11.89	0
	10/19/95		10.36	11.35	0
	01/10/96		9.67	12.04	0
	06/12/96		9.59	12.12	0

Notes:

ft = feet

ft AMSL = feet above mean sea level

NM = not measured

NAPL = Non-aqueous phase liquid



**TABLE 4**  
**ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**

Sample I.D.	Date Sampled	TPH-G (ppb)	TPH-D (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	Oil & Grease (ppm)
B-1	08/12/90	NAN	30,000	22	22	15	48	NAN
MW-1	09/26/90	<50	51	<0.5	<0.5	<0.5	<0.5	NAN
	11/30/92	<50	<50	<0.5	<0.5	<0.5	<0.5	0.03
	03/03/93	<50	<50	5.0 <sup>1</sup>	5.0 <sup>1</sup>	5.0 <sup>1</sup>	5.0 <sup>1</sup>	<0.01
	06/02/93	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.01
	08/31/93	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0
	11/30/93	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	03/02/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	06/07/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	04/14/95	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0
	07/11/95	NA	NA	NA	NA	NA	NA	NA
10/19/95	NA	NA	NA	NA	NA	NA	NA	
MW-2	09/26/90	<50	89	<0.5	<0.5	<0.5	<0.5	NAN
	11/30/92	100	<50	12 <sup>1</sup>	12 <sup>1</sup>	12 <sup>1</sup>	12 <sup>1</sup>	0.03
	03/03/93	<50	<50	12.4 <sup>1</sup>	12.4 <sup>1</sup>	12.4 <sup>1</sup>	12.4 <sup>1</sup>	<0.01
	06/02/93	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.01
	08/31/93	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0
	11/30/93	60	460	<0.5	<0.5	<0.5	<0.5	<5.0
	03/02/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	06/07/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	04/14/95	<50	110	<0.5	<0.5	<0.5	<0.5	<1.0
	07/11/95	NA	NA	NA	NA	NA	NA	NA
10/19/95	81	77	<0.5	<0.5	<0.5	<0.5	<1.0	
06/12/96	<50	86	<0.5	<0.5	<0.5	<0.5	<5.0	

**TABLE 4**  
**ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**

(CONTINUED)

Sample I.D.	Date Sampled	TPH-G (ppb)	TPH-D (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	Oil & Grease (ppm)
MW-3	09/26/90	200	1,900	19.4 <sup>1</sup>	19.4 <sup>1</sup>	19.4 <sup>1</sup>	19.4 <sup>1</sup>	NAN
	11/30/92	<50	290	8.9 <sup>1</sup>	8.9 <sup>1</sup>	8.9 <sup>1</sup>	8.9 <sup>1</sup>	0.17
	03/03/93	NS	NS	NS	NS	NS	NS	NS
	06/02/93	NS	NS	NS	NS	NS	NS	NS
	08/31/93	NS	NS	NS	NS	NS	NS	NS
	11/30/93	<50	19,000	2.9 <sup>1</sup>	2.9 <sup>1</sup>	2.9 <sup>1</sup>	2.9 <sup>1</sup>	36
	03/02/94	260	1,300	330 <sup>1</sup>	330 <sup>1</sup>	330 <sup>1</sup>	330 <sup>1</sup>	23
	06/07/94	2,300	4,500	<0.5	0.8	1.8	16	15
	04/14/95	120	1300	0.88	<0.5	<0.5	1.6	45
	07/11/95	190	3,200	0.91	0.51	<0.5	2.4	68
	10/19/95	1700	67,000	0.85	0.52	1.1	4.0	73
	01/10/96	130	19,000	0.56	<0.5	<0.5	0.84	12
	06/12/96	71	3,900	1.2	<0.5	<0.5	0.81	<5.0
	06/12/96	NAN	38,000	NAN	NAN	NAN	NAN	34
	MW-4	11/30/92	<50	<50	<0.5	<0.5	<0.5	<0.5
03/03/93		<50	<50	6.0 <sup>1</sup>	6.0 <sup>1</sup>	6.0 <sup>1</sup>	6.0 <sup>1</sup>	<0.01
06/02/93		350	<50	<0.5	<0.5	<0.5	<0.5	<0.01
08/31/93		<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0
11/30/93		<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
03/02/94		<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
06/07/94		<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/14/95		<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0
07/11/95		NA	NA	NA	NA	NA	NA	NA
10/19/95		NA	NA	NA	NA	NA	NA	NA

Notes:

< = less than listed detection limits

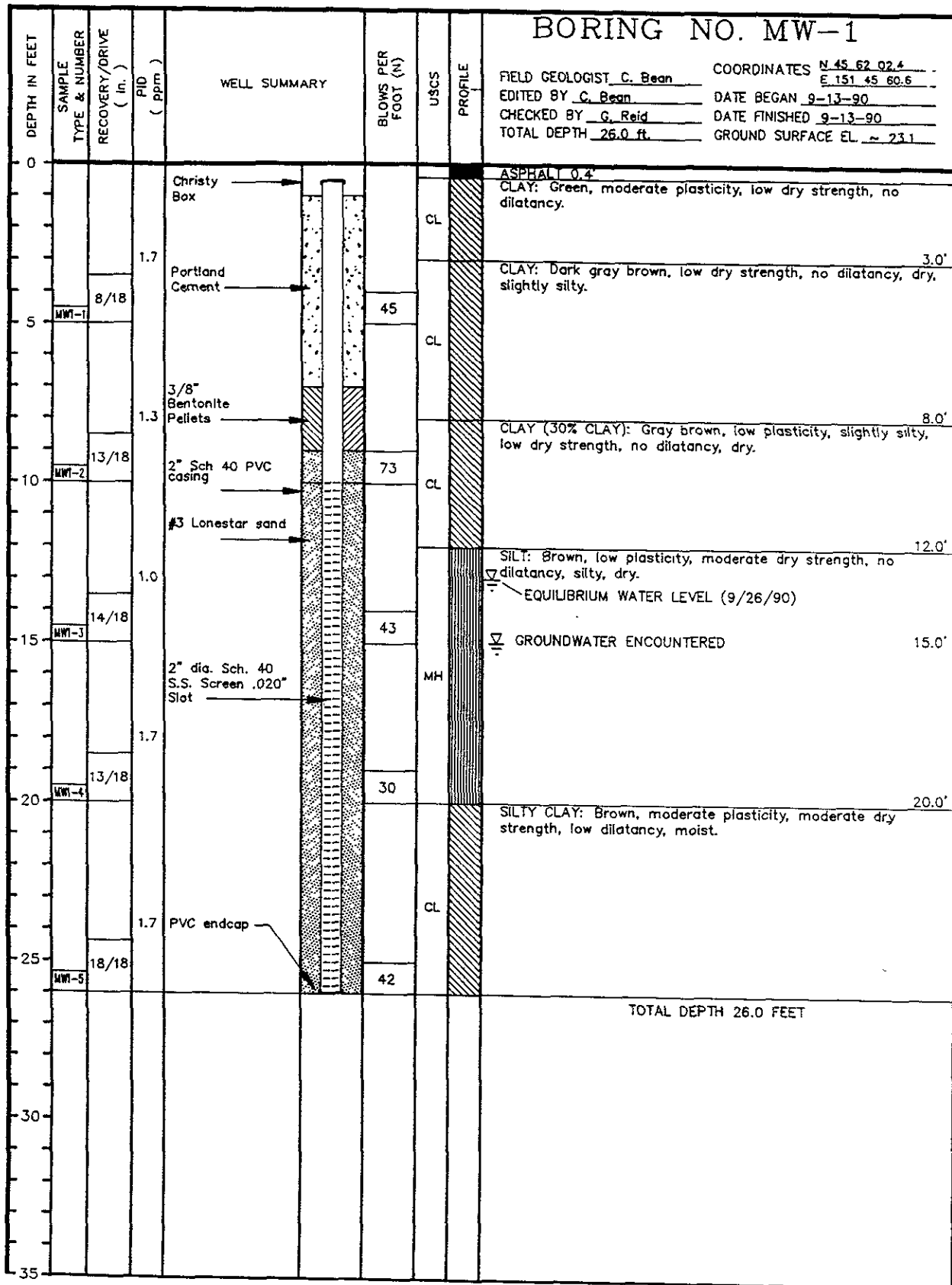
<sup>1</sup> = result is a total BTEX for this sampling event

NS = not sampled due to presence of heavy viscous petroleum product at bottom of well

NA = no sample collected due to revised sampling plan

NAN = not analyzed

06/07/94 samples were collected by Environmental Science Engineering, Inc.



DRILLING CO.: Kvilhaug Well Drilling and Pump Co., Inc.  
 DRILL METHOD: Hollow Stem Auger, Mobile B-61  
 SAMPLING METHOD: Split Spoon Sampler

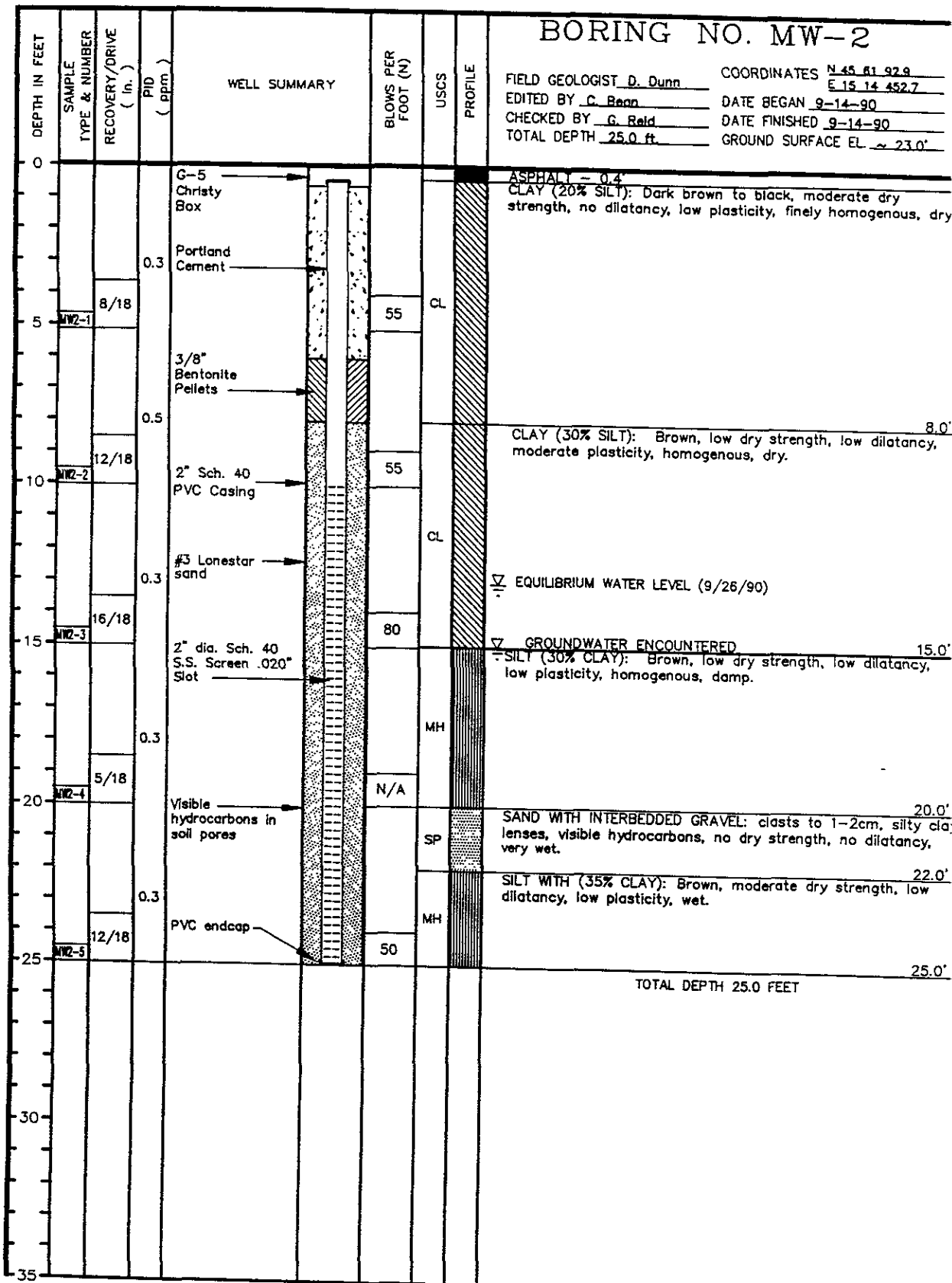
PAGE 1 OF 1

PROJECT NO.: 142222.3  
 CLIENT: Fleischman's Yeast  
 LOCATION: 921 98th Street  
 Oakland, CA

SEE LEGEND FOR LOGS AND TEST PITS  
 FOR EXPLANATION OF SYMBOLS AND TERMS

FY-MW-1(\*FY2)

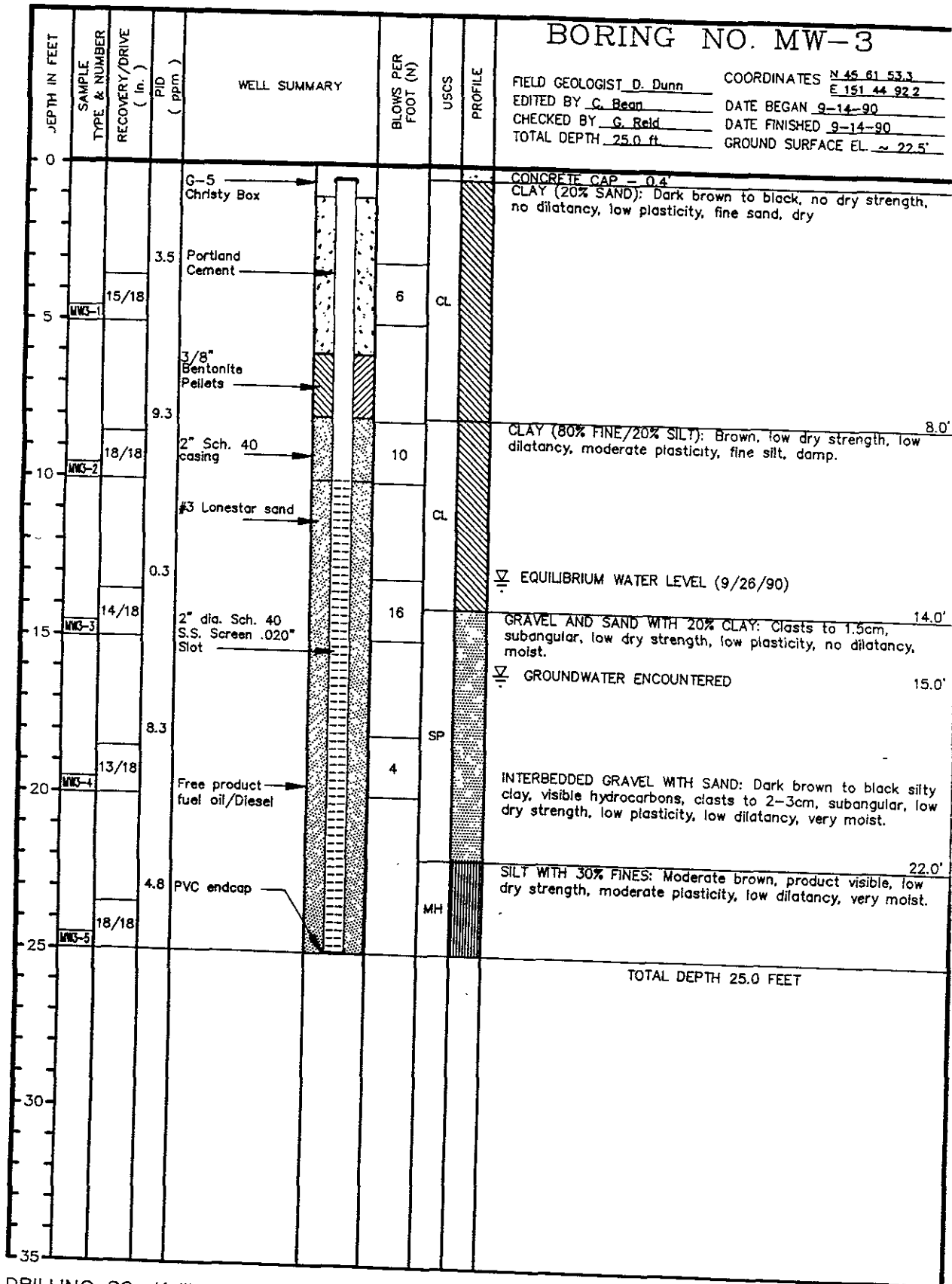




DRILLING CO.: Kvilhaug Well Drilling and Pump Co., Inc.  
 DRILL METHOD: Hollow Stem Auger, Mobile B-61  
 SAMPLING METHOD: Split Spoon Sampler  
 PROJECT NO.: 142222.3  
 CLIENT: Fleischman's Yeast  
 LOCATION: 921 98th Street  
 Oakland, CA  
 FY-MW-2(+FY2)

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS





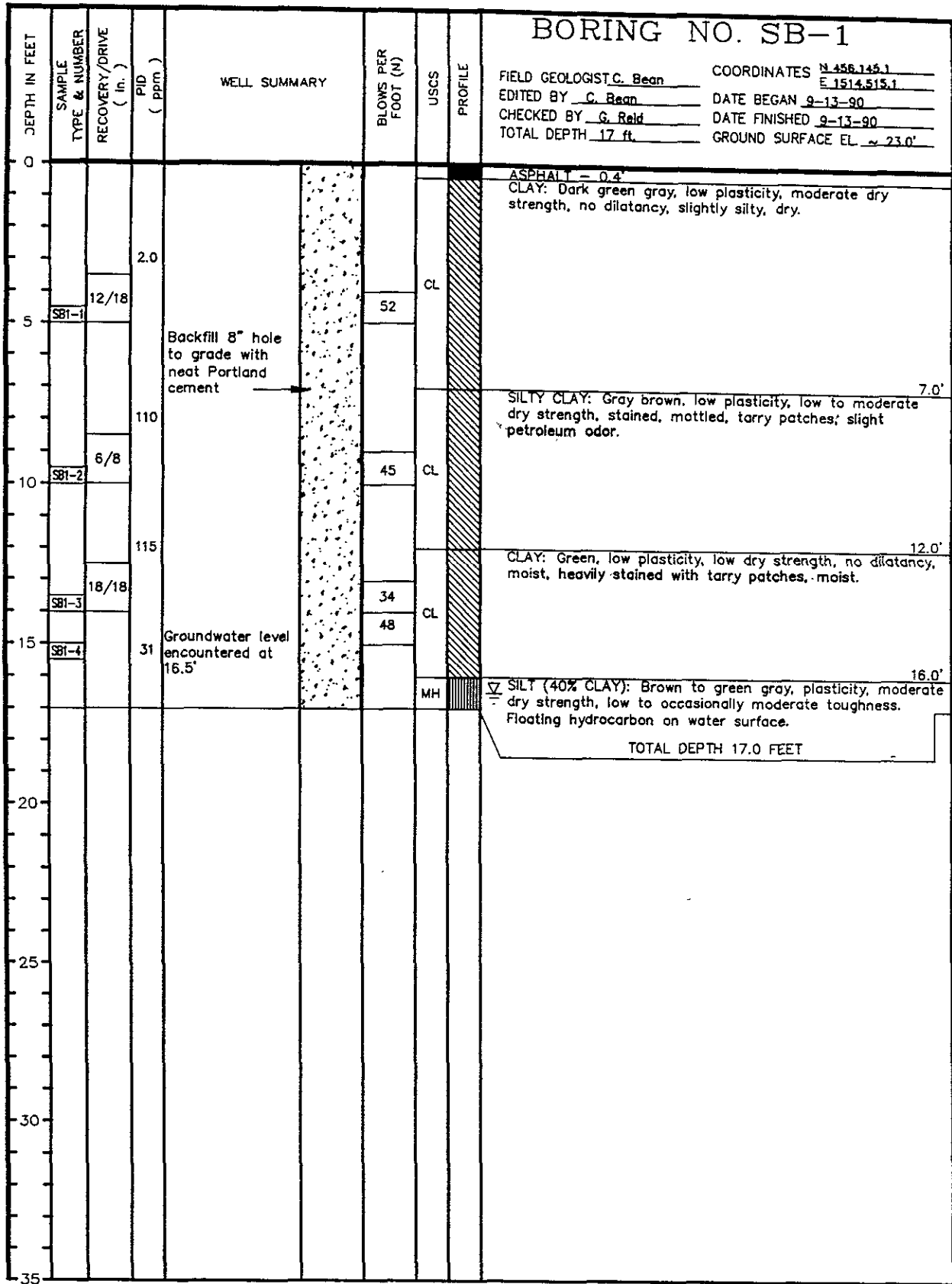
DRILLING CO.: Kvilhaug Well Drilling and Pump Co., Inc.  
 DRILL METHOD: Hollow Stem Auger, Mobile B-24  
 SAMPLING METHOD: Split Spoon Sampler

PROJECT NO.: 142222.3  
 CLIENT: Fleischman's Yeast  
 LOCATION: 921 98th Street  
 Oakland, CA

SEE LEGEND FOR LOGS AND TEST PITS  
 FOR EXPLANATION OF SYMBOLS AND TERMS

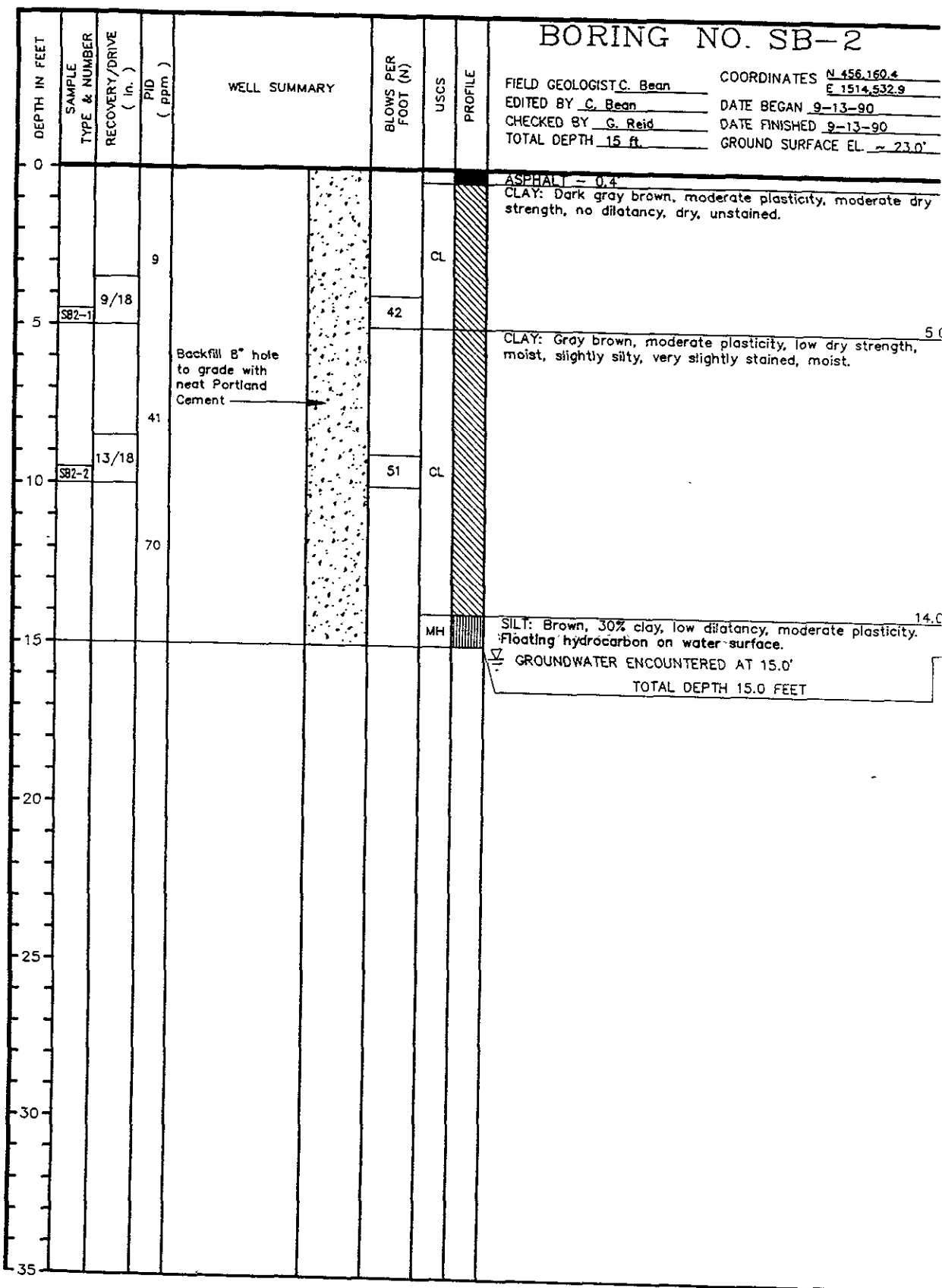
FY-MW-3(4FY2)





DRILLING CO.: Kvilhaug Well Drilling & Pump Company, Inc.  
 DRILL METHOD: Hollow Stem Auger, Mobile B-61  
 SAMPLING METHOD: Split Spoon Sampler  
 PROJECT NO.: 142222.3  
 CLIENT: Fleischmann's Yeast  
 LOCATION: 921 98th Street  
 Oakland, California

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS

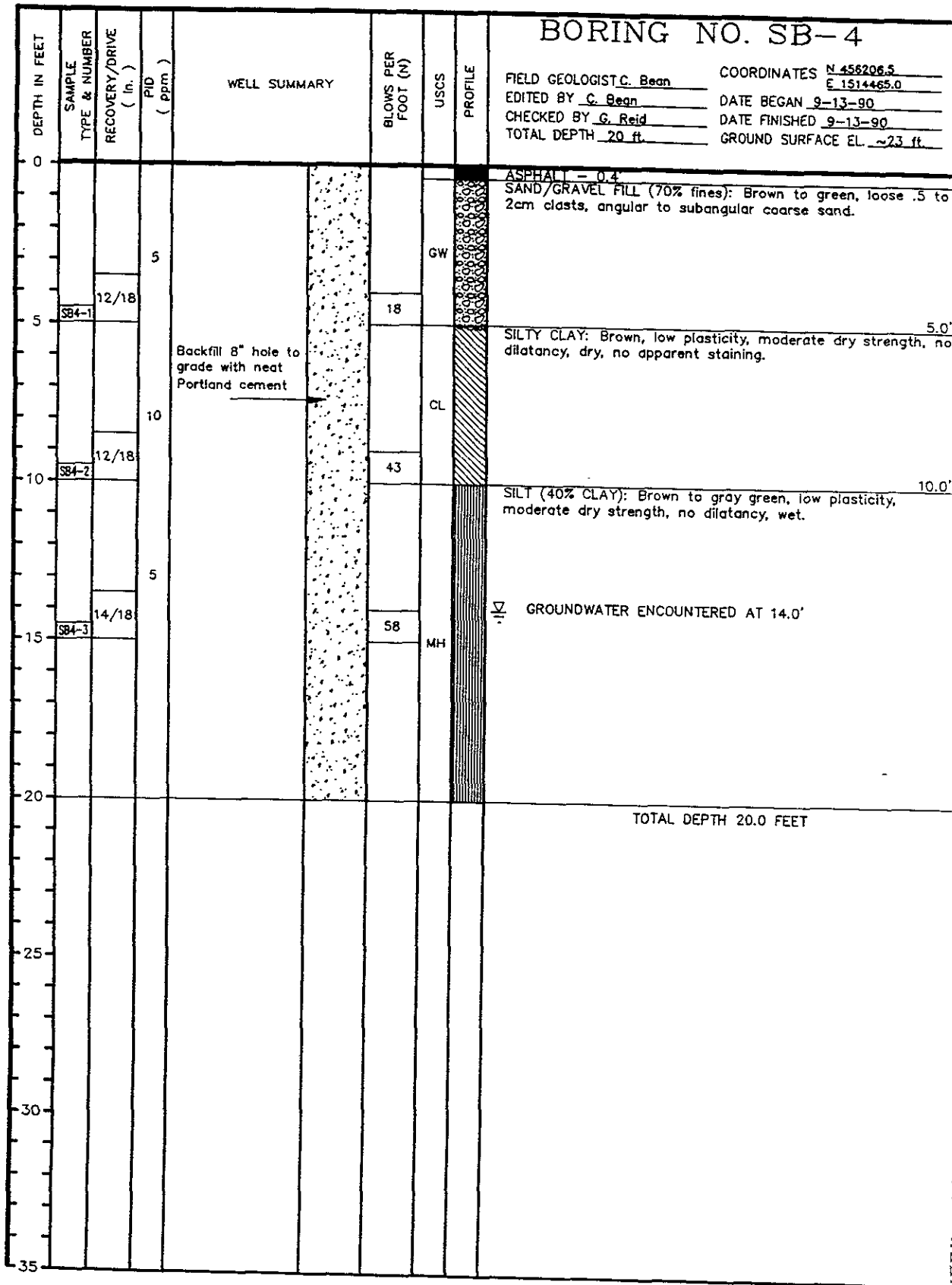


DRILLING CO.: Kvilhaug Well Drilling & Pump Co., Inc.  
 DRILL METHOD: Hollow Stem Auger, Mobile B-61  
 SAMPLING METHOD: Split Spoon Sampler  
 PROJECT NO.: 142222.3  
 CLIENT: Fleischmann's Yeast  
 LOCATION: 921 98th Street  
 Oakland, California  
 FY-SB-2(\*FY2)

PAGE 1 OF

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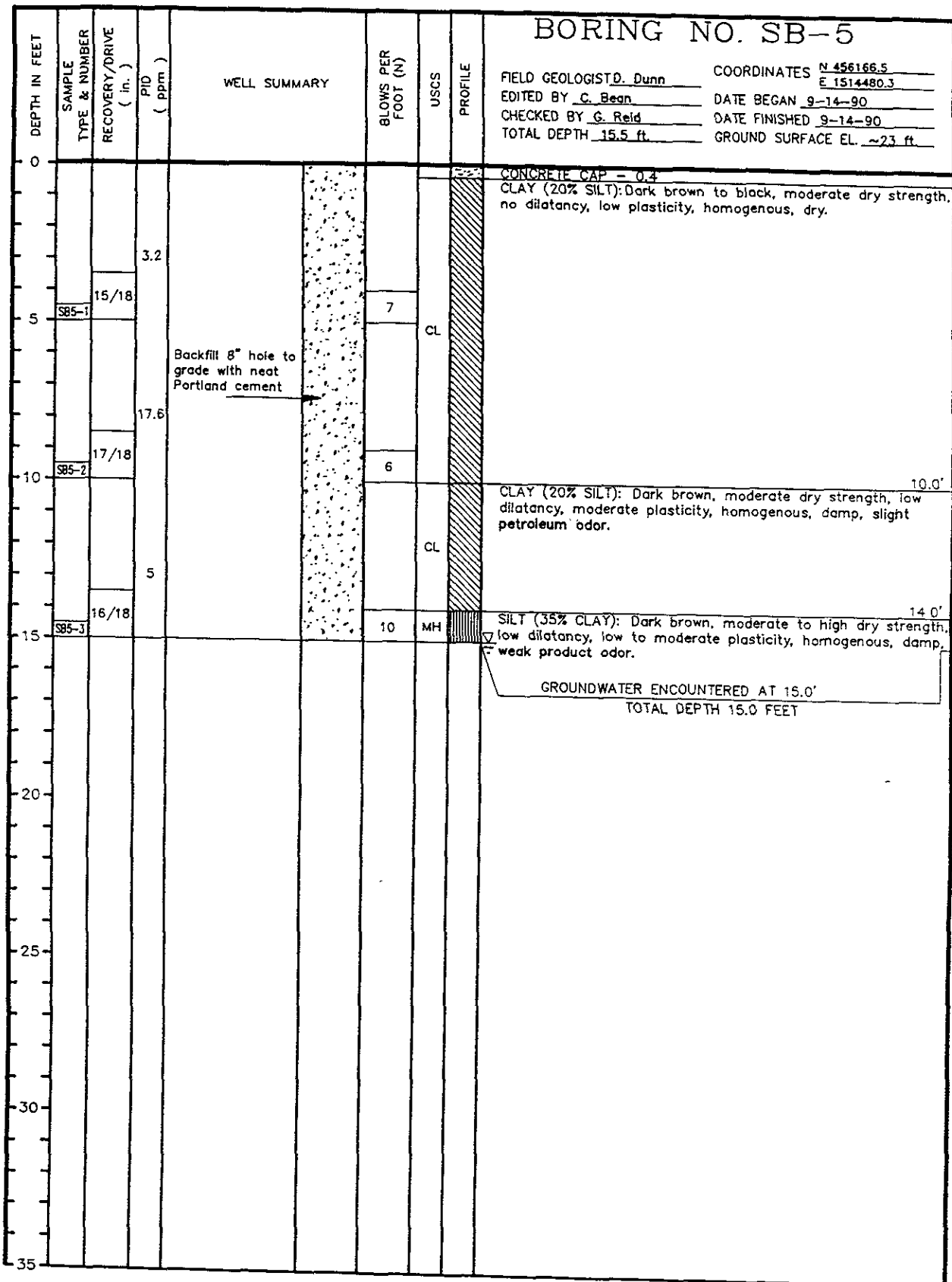


DRILLING CO.: Kvilhaug Well Drilling & Pump Co., Inc.  
 DRILL METHOD: Hollow Stem Auger, Mobile B-61  
 SAMPLING METHOD: Split Spoon Sampler  
 PROJECT NO.: 142222.3  
 CLIENT: Fleischmann's Yeast  
 LOCATION: 921 98th Street  
 Oakland, California  
 FY-SB-4(\*FY2)

SEE LEGEND FOR LOGS AND TEST PITS FOR EXPLANATION OF SYMBOLS AND TERMS







DRILLING CO.: Kvilhaug Well Drilling & Pump Co., Inc.  
 DRILL METHOD: Hollow Stem Auger, Mobile B-24  
 SAMPLING METHOD: Split Spoon Sampler  
 PROJECT NO.: 142222.3  
 CLIENT: Fleischmann's Yeast  
 LOCATION: 921 98th Street  
 Oakland, California  
 FY-SB-5(+FY2)

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FOR EXPLANATION OF SYMBOLS AND TERMS