



P.O. BOX 248, 1186 LOWER RIVER ROAD, NW, CHARLESTON, TN 37310-0248  
(423) 336-4000 FAX: (423) 336-4183

January 12, 1999

Mr. James Craft  
Engineering Geologist  
New York State Department of Environmental Conservation  
Region 8 Office - Division of Hazardous Waste Remediation  
6274 East Avon - Lima Road  
Avon, New York 14414-9519

**Re: Olin Rochester RI/FS Quarterly Report No. 16  
Olin Chemicals (Site #628018a) 100 McKee Rd, Rochester, NY**

Dear Mr. Craft:

This is the sixteenth quarterly report of progress on the Olin Rochester RI/FS, covering the period from July 1, 1998 through September 30, 1998.

**Surface water and seep sampling:**

- Third quarter sampling at the Barge Canal was done at five locations: the original three locations near the groundwater plume, and at one upstream and one downstream location. The Quarry outfall and one nearby canal point were also sampled to monitor the chloropyridine input to the canal and its level of dilution near the input point. One Quarry seep point (QS4, the historically most contaminated location) was also sampled.
- The third quarter results did not indicate the presence of chloropyridines at the canal locations. The quarry seep contained 370 ug/l of chloropyridines, consistent with recent measurements. The quarry outfall contained a total of 12 ug/l chloropyridines indicating a continued decreasing level.
- Surface water and seep monitoring results are documented in **attachment 1**.

**groundwater monitoring:**

- Piezometric plots were developed for the third quarter, 1998. Note that actual measurements were made on October 2. Plots and piezometric data are included as ***attachment 2***.

Olin will continue to communicate progress and issues with NYSDEC. Please direct any questions to me at 423 / 336-4587.

Sincerely,



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Michael J. Bellotti  
Olin Corporation

Attachments

**List of Attachments:**

1] ABB report: *Third Quarter 1998 Surface Water and Quarry Seep Sampling Results*

2] *Piezometric Plots and supporting data: Third Quarter - 1998*

cc:

Mr. Joseph Ryan  
New York State Department of Environmental Conservation  
Division of Environmental Enforcement  
600 Delaware Avenue  
Buffalo, New York 14202-1073

Mr. Joseph White  
New York State Department of Environmental Conservation  
Division of Hazardous Waste Remediation  
50 Wolf Road  
Albany, New York 12203-1010

Mr. Steven Shost  
New York State Department of Health  
Bureau of Environmental Exposure Investigation  
2 University Place  
Albany, New York 12203

Mr. William Norman: Olin Rochester, NY  
Ms. Laura Tew: Olin Charleston, TN  
Ms. Monica L. Fries Esq.: Husch & Eppenberger, St. Louis, MO  
Mr. Thomas Eschner: ABB, Portland, ME



December 23, 1998

Mr. Michael Bellotti  
Olin Chemical Corporation  
P.O. Box 248, Lower River Road  
Charleston, TN 37310

**Subject: Olin Rochester Site - Third Quarter 1998  
Erie Barge Canal Water and Quarry Sampling Results**

Dear Mr. Bellotti:

Analytical results for the water samples collected during the third quarter of 1998 from the Erie Barge Canal (Canal) and the Dolomite Products Company quarry (quarry) are enclosed. Canal and quarry sampling are conducted as part of the on-going quarterly monitoring program for the Olin Rochester site. The sampling program, analytical procedure, data review findings, and validated data for the September 1998 sampling event are discussed below.

**Sampling**

Eight canal and quarry surface-water samples were collected by and submitted to Recra Environmental, Inc. (Recra) for selected pyridine analysis on September 22, 1998. The locations sampled during this quarter are listed below and are shown on the maps in Attachment 1.

<u>Canal Samples</u>	<u>Quarry Samples</u>
SW-1	QS-4 (Quarry Seep)
SW-2	QO-2 (Quarry Outfall)
SW-3	QO-2S1 (100 ft south of QO-2)
SW-6	
SW-12	

**Analytical Procedures and Data Review**

All water samples were analyzed by SW-846 Method 8270C protocols and reviewed in accordance with Analytical Services Protocols (ASP95) for the Olin suite of selected pyridines (pyridine, 2-chloropyridine, 3-chloropyridine, 4-chloropyridine, 2,6-dichloropyridine, and p-fluoroaniline). The reporting limit for the selected pyridines is 10 micrograms per liter (µg/L). With regard to the analytical protocols used, Recra inadvertently used SW-846 Method 8270C instead of ASP95 methodology. The change in analytical method is not believed to compromise the validity or accuracy of the results.

A preliminary review of the quality control sample results associated with the analytical results was performed for data quality assurance purposes. Sample results were reviewed for holding time

compliance; instrument calibration; surrogate standard recoveries; blank contamination; and matrix spike blank (MSB) and matrix spike/matrix spike duplicate (MS/MSD) accuracy and precision. The results of the data review are discussed in the quality control section of this letter. Overall, the data quality appears to be very good based on the information reviewed.

### Analytical Results

The results from the September 1998 canal and quarry monitoring event are presented in Attachment 2. Samples that were observed to contain one or more of the selected pyridines are summarized below; all results are expressed in µg/L.

<u>Sample ID</u>	<u>2,6-DCPYR</u>	<u>2-CPYR</u>
QO-2	3 J	9 J
QS-4	68	370

Notes: J = Estimated value below reporting limit, but greater than zero.  
CPYR = chloropyridine  
DCPYR = dichloropyridine

As has been seen in the past, selected pyridines were not detected in any of the canal monitoring locations sampled during September 1998. Results reported for the sample collected from the quarry seep (QS-4) continue to show elevated selected pyridine results relative to canal concentrations. Results observed for this quarter continue to show a decreasing trend in concentrations for the detected pyridines. Results reported for the quarry outfall (QO-2) were consistent with historical results, and chloropyridines were not detected 100 feet south of the outfall (QO-2S1).

### Quality Control

As part of the September 1998 Canal and quarry surface-water sampling program, one matrix spike/matrix spike duplicate (MS/MSD) sample and a field blank sample were collected as quality control samples. Laboratory matrix spike blank (MSB) and field MS/MSD results indicated poor relative percent difference (greater than laboratory-specified limits) between recoveries for p-fluoroaniline. As a result, the p-fluoroaniline quantitation limit for SW-2 was estimated with a UJ. All other quality control results were acceptable.

### Conclusions

Results from the third quarter 1998 canal surface-water sampling program indicated chloropyridines were not present in surface-water locations monitored during September 1998, with the exception of

Mr. Bellotti  
December 23, 1998  
Page 3

**Harding Lawson Associates**

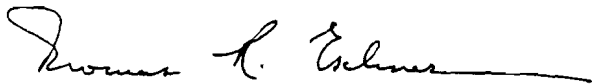
trace concentrations (reported above zero but below the reporting limit of 10 µg/L) in the quarry outfall for 2-chloropyridine and 2,6-dichloropyridine. Chemical results reported for the quarry seep sample indicate selected pyridine concentrations appear to be decreasing from concentrations reported previously.

The fourth quarter sampling event was conducted in November 1998.

If you have any questions or comments on the material described in this letter, please do not hesitate to contact me at (207) 828-3437.

Sincerely,

**Harding Lawson Associates**



Thomas R. Eschner, R.G.  
Associate Project Manager

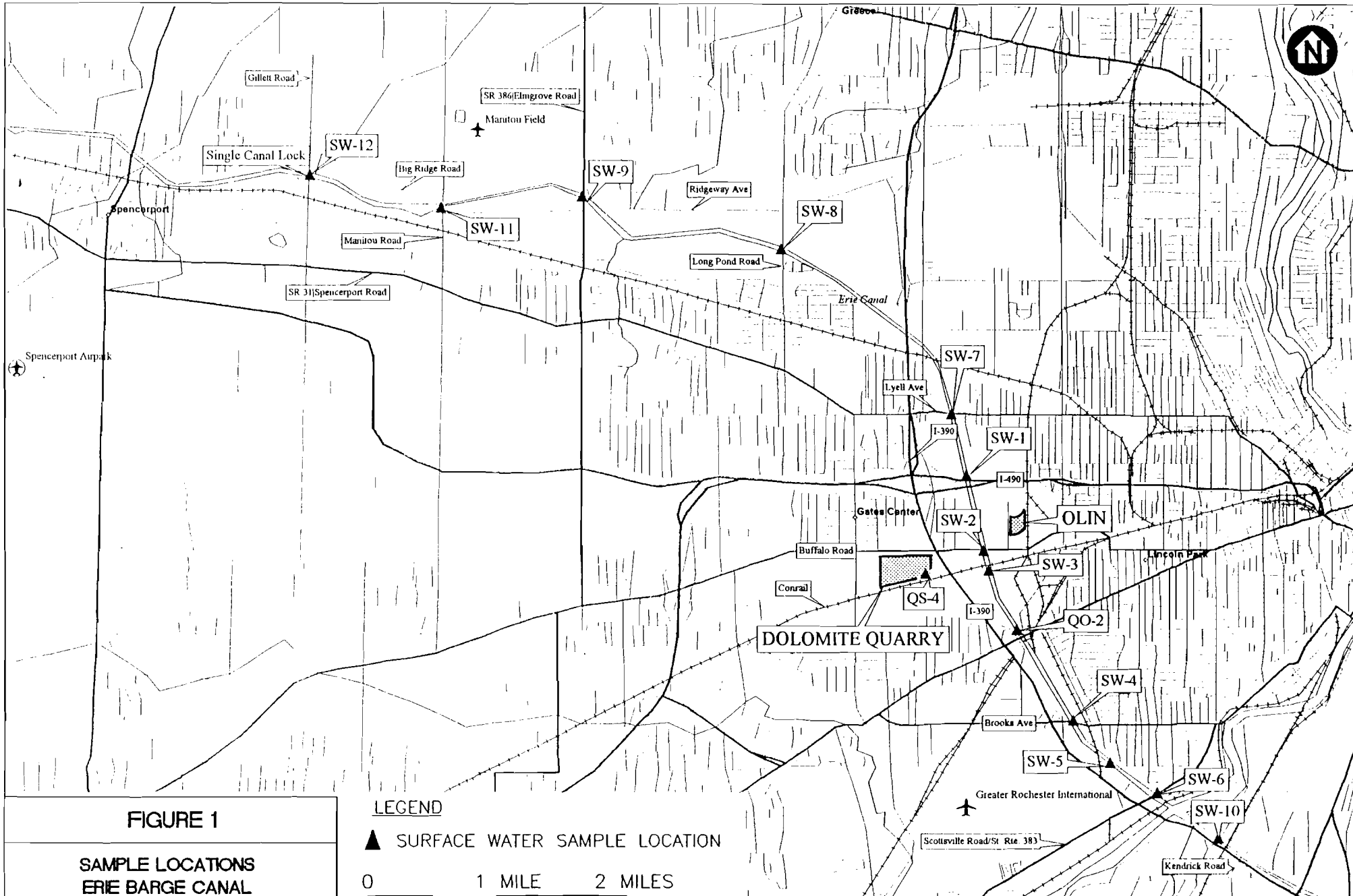
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Attachments: Sample Location Maps - Attachment 1  
Laboratory Data Summary Tables - Attachment 2  
Chain of Custody Forms - Attachment 3

cc: N. Breton  
J. Connolly  
file 10.1

**ATTACHMENT 1**  
**SAMPLE LOCATION MAPS**





**FIGURE 1**

**SAMPLE LOCATIONS  
ERIE BARGE CANAL**

**OLIN CHEMICALS  
ROCHESTER, N.Y.**

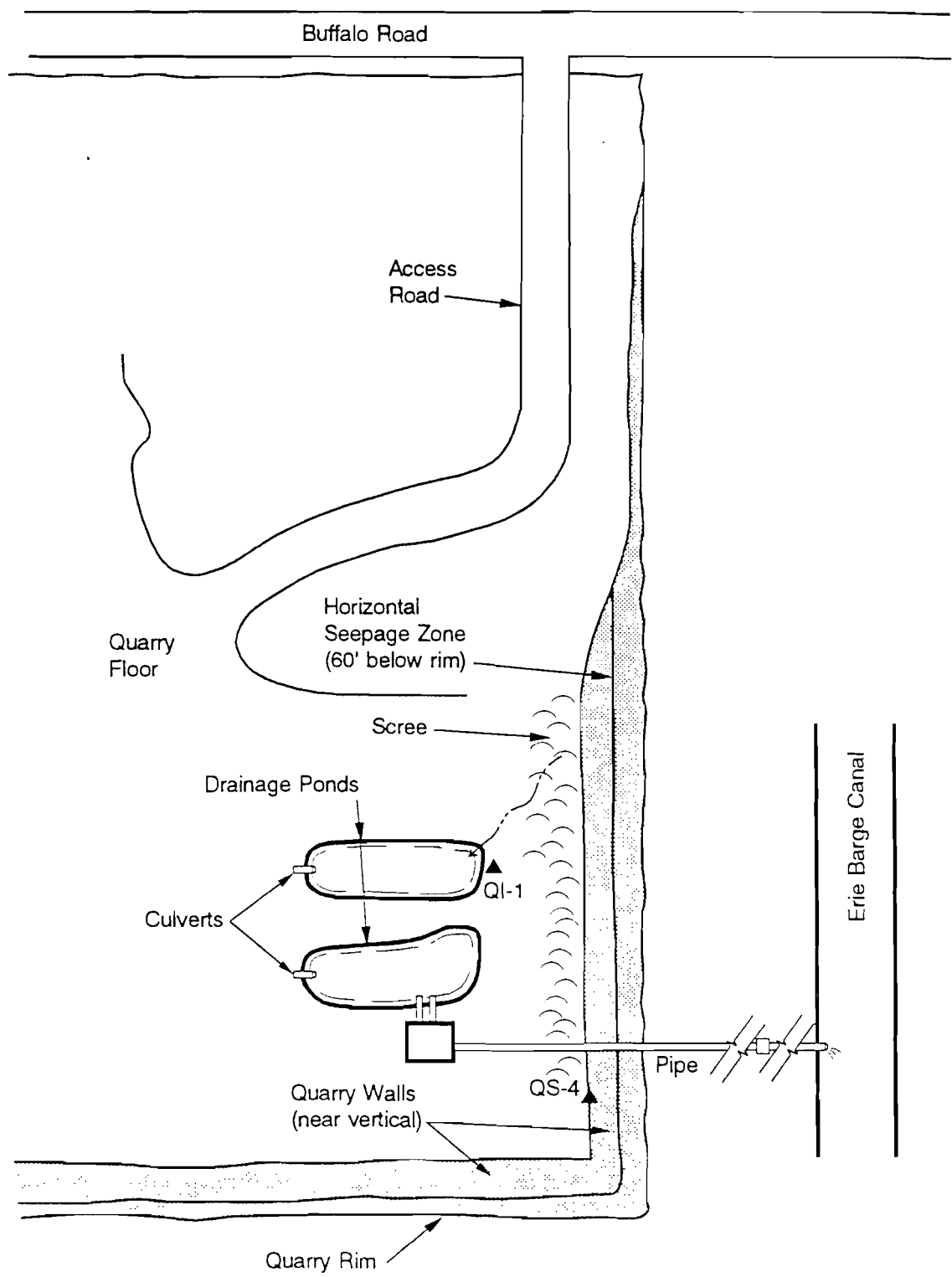
**LEGEND**

▲ SURFACE WATER SAMPLE LOCATION

0 1 MILE 2 MILES

SCALE: 1" = 1 MILE

SOURCE: DeLorme Mapping 1995



**Legend**

- QS-4 ▲ Seep Sample Location
- QI-1 ▲ Pond Inflow Sample Location

Not to Scale

**FIGURE 2**

**SAMPLE LOCATIONS  
DOLOMITE PRODUCTS  
QUARRY**

OLIN CHEMICALS  
PHASE II RI REPORT ADDENDUM  
ROCHESTER, NEW YORK

**ATTACHMENT 2**

**LABORATORY DATA SUMMARY TABLES**

Olin Chemicals  
 Rochester, NY  
 September 1998 Sampling Event

Selected Pyridine Analysis (ug/L)

LOCATION:	QO-2	QO-2S1	QS-4	RINSE BLANK	SW-1	SW-12	SW-2	SW-3	SW-3 FD	SW-4
SAMPLE DATE:	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98	09/22/98
SAMPLE TYPE:	FS	FS	FS	RB	FS	FS	FS	FS	FD	FS
ANALYSIS:	PQL									
SW-846 8270C (ug/L)										
2,6-Dichloropyridine	10	3. J	10. U	68.	10. U	10. U	10. U	10. U	10. U	10. U
2-Chloropyridine	10	9. J	10. U	370. D	10. U	10. U	10. U	10. U	10. U	10. U
3-Chloropyridine	10	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U
4-Chloropyridine	10	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U
p-Fluoroaniline	10	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U	10. U
Pyridine	10	10. U	10. U	10. U	10. U	10. U	10. UJ	10. U	10. U	10. U

Notes:

FS = Field Sample

FD = Field Duplicate

RB = Rinse Blank

U = Compound was analyzed, but not detected at or above the associated numerical value

J = Estimated Value

R = Rejected (unusable) Value

SW-846 8270C = "Test Methods for Evaluating Solid Waste", 1986 with updates

**ATTACHMENT 3**  
**CHAIN OF CUSTODY FORMS**

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# RECRA LABNET, a division of Recra Environmental, Inc.

## CHAIN OF CUSTODY RECORD

PROJECT NO 5A5762					SITE NAME OUN / FI		NO OF CONTAINERS	ILAMBERT PYRIDINE (OLD)						REMARKS
SAMPLERS (SIGNATURE) <i>Jeff John</i>														
STATION NO	DATE	TIME	COMP	GRAB	STATION LOCATION									
1	9-22-98	1110		X	SW-1	2	2							
2		1225			SW-2	6	6						MS/MSD	
<del>3</del>					<del>SW-2</del>									
43		1125			SW-3	4	4						FIELD DUPLICATE	
54		1055			SW-6	2	2							
65		1023			SW-12	2	2							
76		1330			QO-2	2	2							
87		1340			QO-2.S1	2	2							
98		1315			QS-4	2	2							
109		1120			RINSE FIELD-BLANK JH	2	2						BAILER RINSE BLANK	
						24								

RELINQUISHED BY (SIGNATURE) <i>Jeff John</i>	DATE/TIME 9-22-98 1520	RECEIVED BY (SIGNATURE) <i>[Signature]</i>	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE/TIME	REMARKS	

Distribution: Original accompanies shipment copy to coordinator field files

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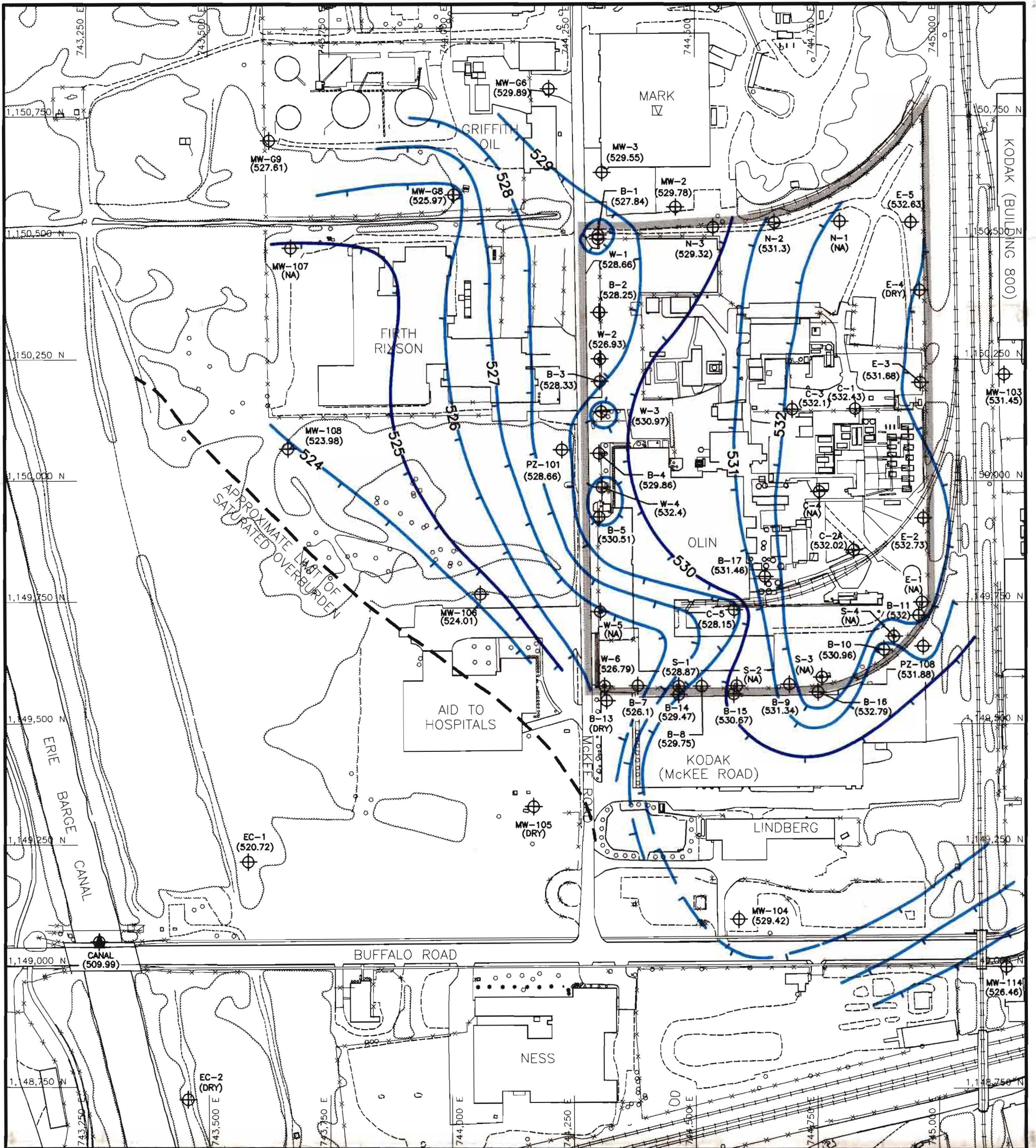
**Olin Rochester Piezometric Data  
Third Quarter - 1998**

WELL	ZONE	EASTING	NORTHING	REF. ELEV.	WATER LEVEL	WATER ELEV.	POST	DATE	OND CON.
B-1	Overburden	744301	1150506	537.48	9.64	527.84	(527.84)	02-Oct-98	
B-10	Overburden	744886	1149653	537.97	7.01	530.96	(530.96)	02-Oct-98	
B-11	Overburden	744958	1149723	536.00	4.00	532.00	(532)	02-Oct-98	
B-13	Overburden	744317	1149548	537.07			(DRY)	02-Oct-98	DRY AT 12.84 FT
B-14	Overburden	744465	1149561	537.95	8.48	529.47	(529.47)	02-Oct-98	
B-15	Overburden	744578	1149562	535.29	4.62	530.67	(530.67)	02-Oct-98	
B-16	Overburden	744751	1149566	536.21	3.42	532.79	(532.79)	02-Oct-98	
B-17	Overburden	744642	1149803	538.84	7.38	531.46	(531.46)	02-Oct-98	
B-2	Overburden	744303	1150347	538.91	10.66	528.25	(528.25)	02-Oct-98	
B-3	Overburden	744304	1150205	541.62	13.29	528.33	(528.33)	02-Oct-98	
B-4	Overburden	744302	1150056	542.87	13.01	529.86	(529.86)	02-Oct-98	
B-5	Overburden	744302	1149926	540.10	9.59	530.51	(530.51)	02-Oct-98	
B-7	Overburden	744381	1149579	540.68	14.58	526.10	(526.1)	02-Oct-98	
B-8	Overburden	744512	1149578	538.21	8.46	529.75	(529.75)	02-Oct-98	
B-9	Overburden	744692	1149582	537.67	6.33	531.34	(531.34)	02-Oct-98	
BR-1	Bedrock	744790	1150533	537.11	8.11	529.00	(529)	02-Oct-98	
BR-101	Bedrock	744667.01	1150160.39	540.65	8.90	531.75	(531.75)	02-Oct-98	
BR-102	Bedrock	744318.49	1150208.75	540.21	22.05	518.16	(518.16)	02-Oct-98	
BR-103	Bedrock	745135.04	1150224.7	533.19	3.65	529.54	(529.54)	02-Oct-98	
BR-104	Bedrock	744593.99	1149095.97	537.56	8.42	529.14	(529.14)	02-Oct-98	
BR-105	Bedrock	744174.6	1149326.99	536.90	23.64	513.26	(513.26)	02-Oct-98	
BR-105D	Deep Bedrock	744183.87	1149325.68	536.49	25.50	510.99	(510.99)	02-Oct-98	
BR-106	Bedrock	744046.17	1149764.09	535.74	23.94	511.80	(511.8)	02-Oct-98	
BR-107	Bedrock	743671.08	1150473.93	536.32			(NA)	02-Oct-98	AREA REGRADED-UNABLE TO LOCATE WELL
BR-108	Bedrock	743660.52	1150057.89	540.58	28.98	511.60	(511.6)	02-Oct-98	
BR-111	Bedrock	743206.54	1149839.08	540.42	29.15	511.27	(511.27)	02-Oct-98	
BR-111D	Deep Bedrock	743206.81	1149846.76	540.34	29.36	510.98	(510.98)	02-Oct-98	
BR-112A	Bedrock	743367.38	1149224.41	547.72	32.41	515.31	(515.31)	02-Oct-98	
BR-112D	Deep Bedrock	743357.43	1149253	547.91	36.76	511.15	(511.15)	02-Oct-98	
BR-113	Bedrock	743457.71	1148716.61	543.02	31.88	511.14	(511.14)	02-Oct-98	
BR-113D	Deep Bedrock	743458.97	1148704.29	542.93	31.76	511.17	(511.17)	02-Oct-98	
BR-114	Bedrock	745138.77	1148994.04	539.77	14.82	524.95	(524.95)	02-Oct-98	
BR-116	Bedrock	744009.16	1147280.72	545.38	29.26	516.12	(516.12)	02-Oct-98	
BR-116D	Deep Bedrock	744019.01	1147297.57	545.22	36.40	508.82	(508.82)	02-Oct-98	
BR-117	Bedrock	741024.65	1147585.02	547.61	37.09	510.52	(510.52)	02-Oct-98	
BR-117D	Deep Bedrock	741010.87	1147606.85	547.16	49.70	497.46	(497.46)	02-Oct-98	
BR-118	Bedrock	740953.73	1147306.56	547.79	38.32	509.47	(509.47)	02-Oct-98	
BR-118D	Deep Bedrock	740974.5	1147291.51	547.93	49.04	498.89	(498.89)	02-Oct-98	
BR-119D	Deep Bedrock	740851.35	1146669.93	567.06	65.62	501.44	(501.44)	02-Oct-98	
BR-120D	Deep Bedrock	740188.52	1146929.38	557.43	59.36	498.07	(498.07)	02-Oct-98	
BR-121D	Deep Bedrock	739994.56	1147353.28	554.79	58.82	495.97	(495.97)	02-Oct-98	
BR-122D	Deep Bedrock	742965.57	1148062.15	552.34	44.90	507.44	(507.44)	02-Oct-98	
BR-123D	Deep Bedrock	743551.83	1147218.89	553.62	45.85	507.77	(507.77)	02-Oct-98	
BR-124D	Deep Bedrock	744244.66	1146161.23	537.45	30.76	506.69	(506.69)	02-Oct-98	
BR-2	Bedrock	744818	1149860	538.97	11.89	527.08	(527.08)	02-Oct-98	
BR-2A	Bedrock	744828.14	1149853.14	540.36	8.29	532.07	(532.07)	02-Oct-98	
BR-2D	Deep Bedrock	744803	1149850	538.00			(NA)	02-Oct-98	OBSTRUCTION AT 33.80 FT (BAILER/ROPE?)
BR-3	Bedrock	744582	1149728	538.04	7.49	530.55	(530.55)	02-Oct-98	
BR-3D	Deep Bedrock	744595	1149728	537.00	78.19	458.81	(458.81)	02-Oct-98	
BR-4	Bedrock	744961	1149899	538.93	6.85	532.08	(532.08)	02-Oct-98	
BR-5	Bedrock	744962	1150215	536.30	5.60	530.70	(530.7)	02-Oct-98	
BR-5A	Bedrock	744954	1150217	536.35	3.12	533.23	(533.23)	02-Oct-98	
BR-6	Bedrock	744603	1149602	538.00	9.98	528.02	(528.02)	02-Oct-98	
BR-6A	Bedrock	744583.18	1149605.23	540.90	9.98	530.92	(530.92)	02-Oct-98	

**Olín Rochester Piezometric Data  
Third Quarter - 1998**

BR-7	Bedrock	744322	1149662	539 70	20 65	519 05	(519 05)	02-Oct-98
BR-7A	Bedrock	744327 98	1149658 77	539 26	30 38	508 88	(508 88)	02-Oct-98
BR-8	Bedrock	744325	1149928	540 00	9 20	530 80	(530 8)	02-Oct-98
BR-9	Bedrock	744318 63	1150210 4	539 31	30 08	509 23	(509 23)	02-Oct-98
C-1	Overburden	744828	1150148	539 05	6 62	532 43	(532 43)	02-Oct-98
C-2A	Overburden	744825	1149858	539 12	7 10	532 02	(532 02)	02-Oct-98
C-3	Overburden	744699	1150147	541 63	9 53	532 10	(532 1)	02-Oct-98
C-4	Overburden	744754	1149978	540 82			(NA)	02-Oct-98 LONGER EXISTS
C-5	Overburden	744579	1149734	536 35	8 20	528 15	(528 15)	02-Oct-98
CANAL	Bedrock	743273 65	1149049 08	544 79	34 80	509 99	(509 99)	02-Oct-98
E-1	Overburden	744965	1149750	534 32			(NA)	02-Oct-98 FLOODED
E-2	Overburden	744968	1149924	538 32	5 59	532 73	(532 73)	02-Oct-98
E-3	Overburden	744962	1150203	536 00	4 32	531 68	(531 68)	02-Oct-98
E-4	Overburden	744961	1150392	538 58			(DRY)	02-Oct-98 DRY AT 2 84 FT.
E-5	Overburden	744943	1150532	539 31	6 68	532 63	(532 63)	02-Oct-98
EC-1	Overburden	743581	1149215	539 99	19 27	520 72	(520 72)	02-Oct-98
EC-2	Overburden	743457	1148724 9	542 00			(DRY)	02-Oct-98 DRY AT 12 75 FT
MW-103	Overburden	745135 42	1150219 29	533 25	1 80	531 45	(531 45)	02-Oct-98
MW-104	Overburden	744588 18	1149096 45	537 54	8 12	529 42	(529 42)	02-Oct-98
MW-105	Overburden	744167 08	1149328 34	536 91			(DRY)	02-Oct-98 DRY AT 18 95 FT.
MW-106	Overburden	744058 26	1149766 85	535 44	11 43	524 01	(524 01)	02-Oct-98
MW-107	Overburden	743670 06	1150479 14	536 29			(NA)	02-Oct-98 AREA REGRADED UNABLE TO LOCATE WELL
MW-108	Overburden	743664 22	1150065 58	540 69	16 71	523 98	(523 98)	02-Oct-98
MW-114	Overburden	745139 13	1148999 32	539 69	13 23	526 46	(526 46)	02-Oct-98
MW-2	Overburden	744460 19	1150564 06	535 50	5 72	529 78	(529 78)	02-Oct-98
MW-3	Overburden	744309 06	1150635 55	535 89	6 34	529 55	(529 55)	02-Oct-98
MW-G6	Overburden	744200 58	1150806 6	534 65	4 76	529 89	(529 89)	02-Oct-98
MW-G8	Overburden	744005 21	1150589 41	534 25	8 28	525 97	(525 97)	02-Oct-98
MW-G9	Overburden	743626 16	1150700 55	536 60	8 99	527 61	(527 61)	02-Oct-98
N-1	Overburden	744797	1150534	537 06			(NA)	02-Oct-98 CASING BENT, BAILER LODGED
N-2	Overburden	744663	1150532	536 92	5 62	531 30	(531 3)	02-Oct-98
N-3	Overburden	744537	1150522	537 16	7 84	529 32	(529 32)	02-Oct-98
NESS-E	Bedrock	744349 2	1148802 75	540 31	25 20	515 11	(515 11)	02-Oct-98
NESS-W	Bedrock	743964 28	1148805 43	543 04	32 35	510 69	(510 69)	02-Oct-98
PZ-101	Overburden	744226 08	1150063 43	542 95	14 29	528 66	(528 66)	02-Oct-98
PZ-102	Bedrock	744225 66	1149951 16	540 89	17 39	523 50	(523 5)	02-Oct-98
PZ-103	Bedrock	744237 71	1149791 36	540 22	11 50	528 72	(528 72)	02-Oct-98
PZ-104	Bedrock	744318 3	1149460 33	537 21	16 34	520 87	(520 87)	02-Oct-98
PZ-105	Bedrock	744448 43	1149588 39	536 93	10 11	526 82	(526 82)	02-Oct-98
PZ-106	Bedrock	744800 61	1149711 4	537 21	6 95	530 26	(530 26)	02-Oct-98
PZ-107	Bedrock	744851 4	1149632 87	538 39	6 88	531 51	(531 51)	02-Oct-98
PZ-108	Overburden	744967	1149660	536 56	4 68	531 88	(531 88)	02-Oct-98
S-1	Overburden	744465	1149578	536 76	7 89	528 87	(528 87)	02-Oct-98
S-2	Overburden	744584	1149579	536 31			(NA)	02-Oct-98 FLOODED
S-3	Overburden	744759	1149597	536 40			(NA)	02-Oct-98 FLOODED
S-4	Overburden	744907	1149680	536 68			(NA)	02-Oct-98 FLOODED
W-1	Overburden	744301	1150498	536 98	8 32	528 66	(528 66)	02-Oct-98
W-2	Overburden	744304	1150251	539 53	12 60	526 93	(526 93)	02-Oct-98
W-3	Overburden	744307	1150142	541 91	10 94	530 97	(530 97)	02-Oct-98
W-4	Overburden	744308	1149987	540 35	7 95	532 40	(532 4)	02-Oct-98
W-5	Overburden	744304	1149730	537 69			(NA)	02-Oct-98 FLOODED
W-6	Overburden	744313	1149578	538 25	11 46	526 79	(526 79)	02-Oct-98

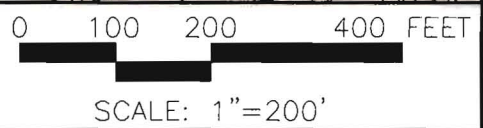




LEGEND

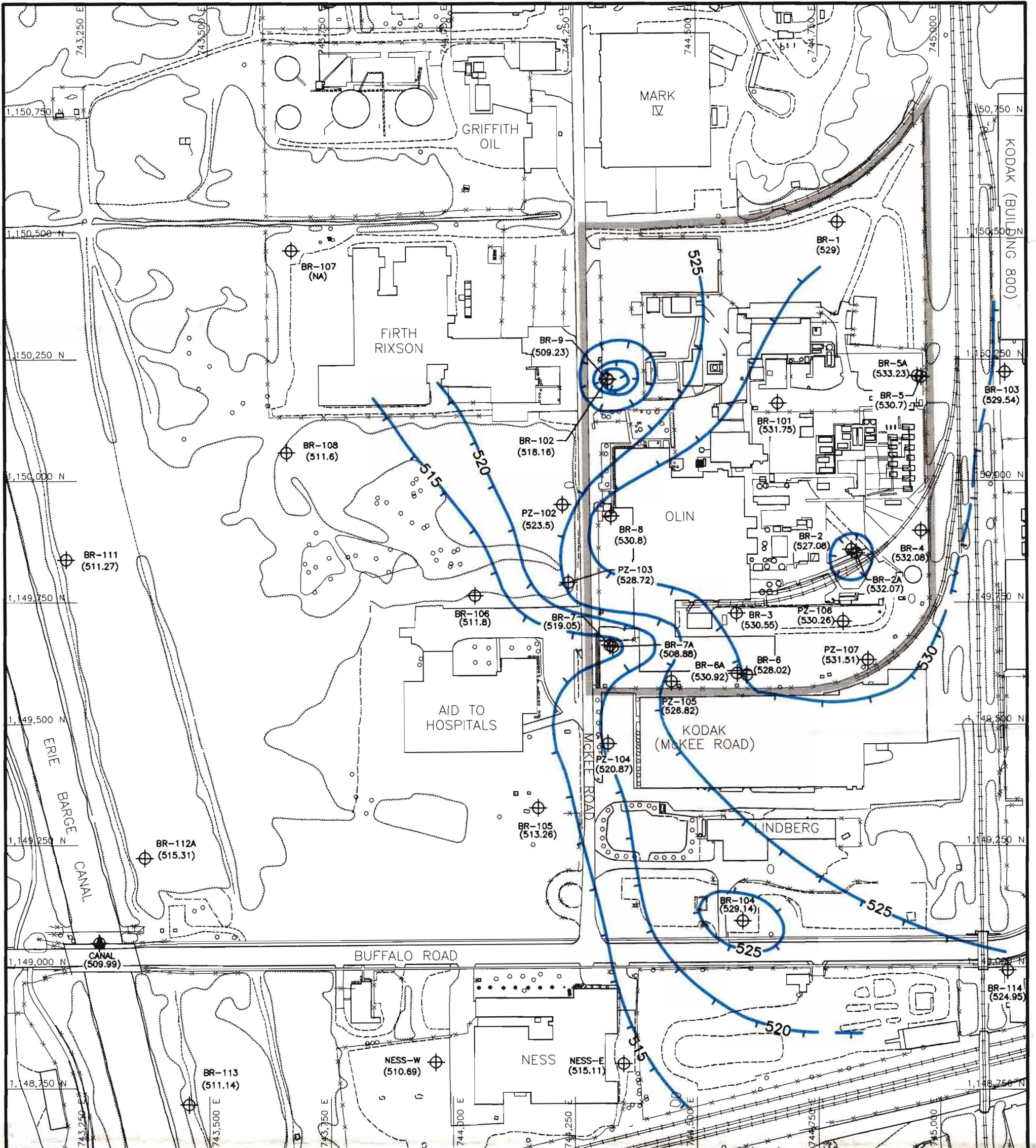
- OUTLINE OF OLIN PROPERTY BOUNDARY
- OVERBURDEN GROUNDWATER ELEVATION CONTOUR (MSL)
- INTERPRETED OVERBURDEN GROUNDWATER FLOW DIRECTION
- PIEZOMETRIC ELEVATION AT WELL OR PIEZOMETER (MSL)
- PIEZOMETRIC ELEVATION AT SURFACE WATER MEASUREMENT POINT

NOTE:  
 1. WATER LEVELS MEASURED ON OCTOBER 2, 1998  
 2. CONTOUR INTERVALS VARY.



OCTOBER 1998  
 OVERBURDEN GROUNDWATER  
 INTERPRETED PIEZOMETRIC  
 CONTOURS

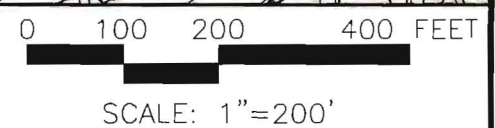
OLIN CHEMICALS  
 ROCHESTER, N.Y.



LEGEND

- OUTLINE OF OLIN PROPERTY BOUNDARY
- BEDROCK GROUNDWATER ELEVATION CONTOUR (MSL)
- INTERPRETED GROUNDWATER FLOW DIRECTION (SHALLOW BEDROCK SYSTEM)
- PIEZOMETRIC ELEVATION AT WELL OR PIEZOMETER (MSL)  
(518.16)
- PIEZOMETRIC ELEVATION AT SURFACE WATER MEASUREMENT POINT

NOTE:  
1. WATER LEVELS MEASURED ON OCTOBER 2, 1998.



OCTOBER 1998  
BEDROCK GROUNDWATER  
INTERPRETED PIEZOMETRIC  
CONTOURS

OLIN CHEMICALS  
ROCHESTER, N.Y.

**LEGEND**



OLIN PROPERTY

500 BEDROCK GROUNDWATER ELEVATION CONTOUR (MSL)

BR-1140 BEDROCK WELL ('D' DESIGNATES DEEP WELL)

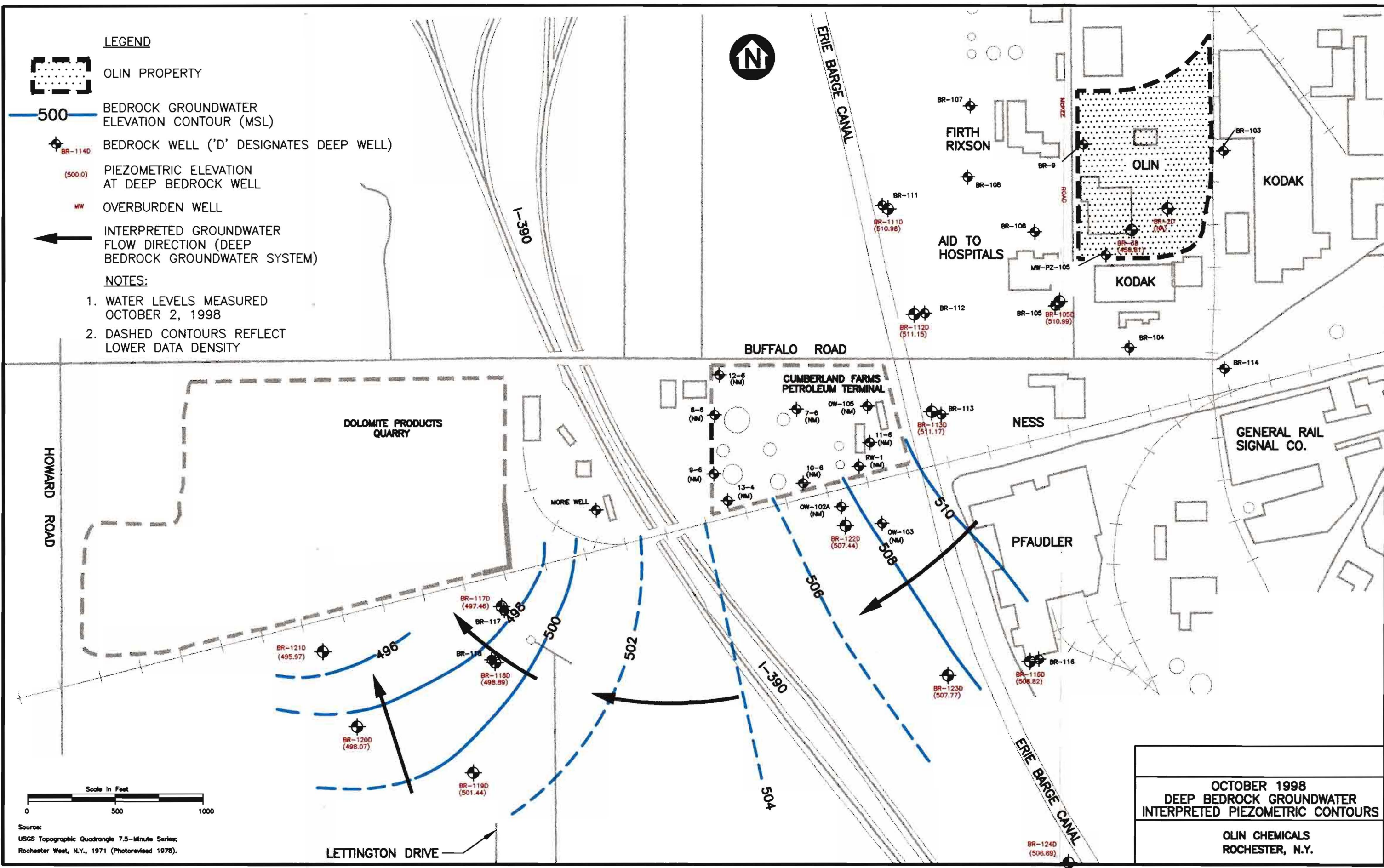
(500.0) PIEZOMETRIC ELEVATION AT DEEP BEDROCK WELL

MW OVERBURDEN WELL

← INTERPRETED GROUNDWATER FLOW DIRECTION (DEEP BEDROCK GROUNDWATER SYSTEM)

**NOTES:**

1. WATER LEVELS MEASURED OCTOBER 2, 1998
2. DASHED CONTOURS REFLECT LOWER DATA DENSITY



Source:  
USGS Topographic Quadrangle 7.5-Minute Series;  
Rochester West, N.Y., 1971 (Photorevised 1978).

OCTOBER 1998  
DEEP BEDROCK GROUNDWATER  
INTERPRETED PIEZOMETRIC CONTOURS

OLIN CHEMICALS  
ROCHESTER, N.Y.