

L10,22-

0010

June 6, 2001
Job #386704

Mr. Robert Cochran
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

RE: First Semi-Annual Event of May 4, 2001
Groundwater Monitoring & Sampling Report
Chevron Service Station #9-1356/State Facility ID: 7
1456 Northern Lights Boulevard
Anchorage, Alaska

Dear Mr. Cochran:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are presented in Table 1. A Potentiometric Map is included as Figure 1. Purge water was subsequently discharged.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets for this event are attached. The samples were analyzed by North Creek Analytical, Inc., an approved Alaska facility. Analytical results are presented in Tables 1 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are attached.

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist

- Figure 1: Potentiometric Map
- Figure 2: Concentration Map
- Table 1: Groundwater Monitoring Data and Analytical Results
- Table 2: Groundwater Analytical Results
- Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

cc: Alaska Department of Environmental Conservation, (via e-mail)
Mr. Roger Hoffmore, Secor International, 3017 Kilgore Road, Suite 100, Rancho Cordova, CA 95670

0011

TRANSMITTAL

June 15, 2001
G-R #: 386704

TO: Mr. Robert Cochran
Chevron Products Company
P.O. Box 6004
San Ramon, California 94583

CC: Mr. Roger Hoffmore
Secor International, Inc.
3017 Kilgore Road, Suite 100
Rancho Cordova, California 95670

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: **Chevron Service Station**
#9-1356/State Facility ID: 7
1456 Northern Lights Boulevard
Anchorage, Alaska

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	June 6, 2001	Groundwater Monitoring & Sampling Report First Semi-Annual - Event of May 4, 2001

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by **June 29, 2001**, this report will be distributed to the following:

cc: Ms. Linda Nuechterlein, Alaska Department of Environmental Conservation, Storage Tank Program, 555 Cordova
Anchorage, AK 99501

Enclosure



GETTLER-RYAN INC.

RECEIVED

JUL 06 2001

TRANSMITTAL

Dept. of Environmental Conservation
Underground Storage Tanks — FAP
June 15, 2001
G-R #: 386704

0000012

TO: Mr. Robert Cochran
Chevron Products Company
P.O. Box 6004
San Ramon, California 94583

CC: Mr. Roger Hoffmore
Secor International, Inc.
3017 Kilgore Road, Suite 100
Rancho Cordova, California 95670

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Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
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cc: Ms. Linda Nuechterlein, Alaska Department of Environmental Conservation, Storage Tank Program, 555 Cordova Anchorage, AK 99501

Enclosure

trans/9-4115-bc



GETTLER-RYAN Inc.

June 6, 2001
Job #386704

Mr. Robert Cochran
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

0000013

RE: First Semi-Annual Event of May 4, 2001
Groundwater Monitoring & Sampling Report
Chevron Service Station #9-1356/State Facility ID: 7
1456 Northern Lights Boulevard
Anchorage, Alaska

Dear Mr. Cochran:

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Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets for this event are attached. The samples were analyzed by North Creek Analytical, Inc., an approved Alaska facility. Analytical results are presented in Tables 1 and 2. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are attached.

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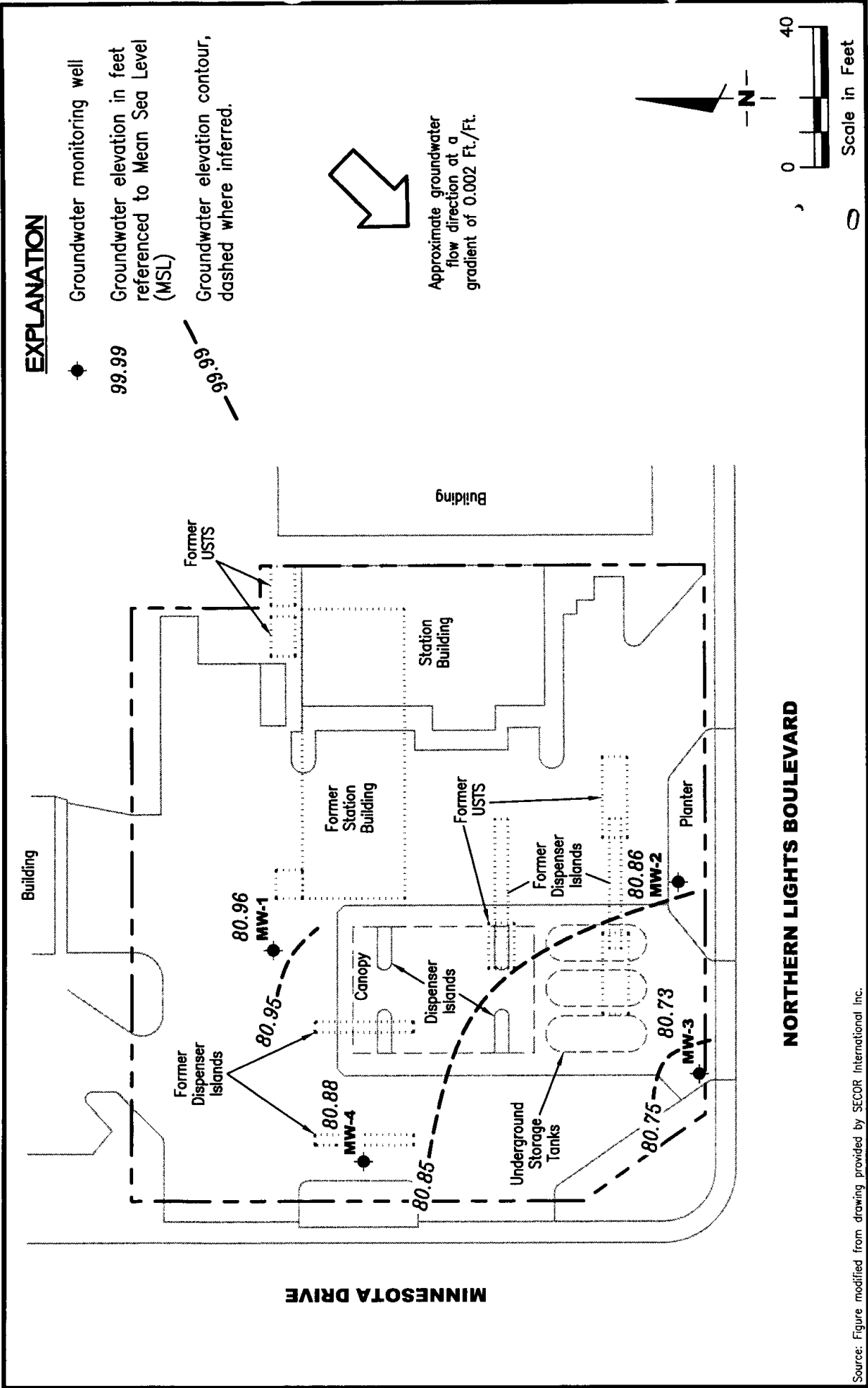
-FLR -

Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist

Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

cc: Alaska Department of Environmental Conservation, (via e-mail)
Mr. Roger Hoffmore, Secor International, 3017 Kilgore Road, Suite 100, Rancho Cordova, CA 95670



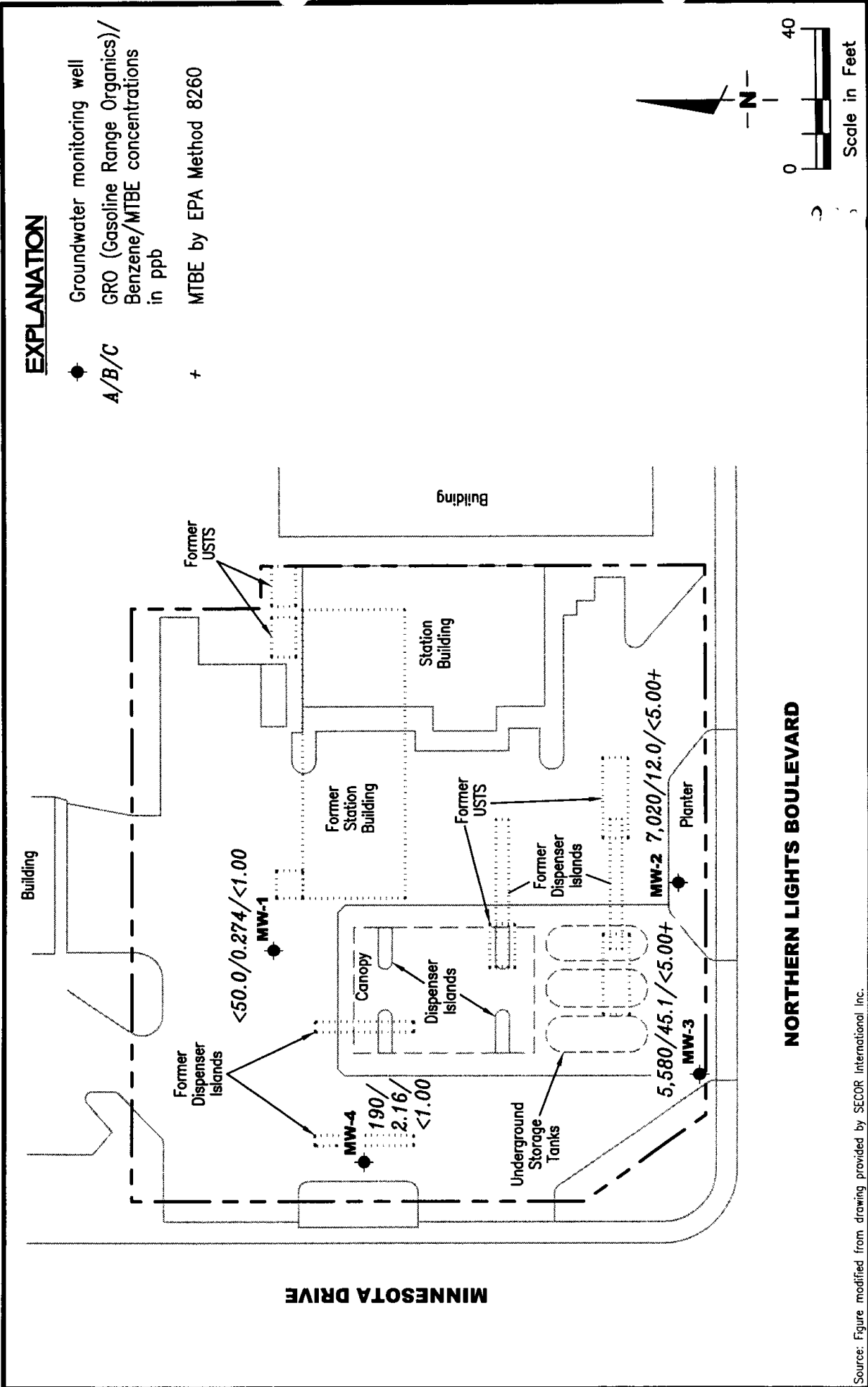
Source: Figure modified from drawing provided by SECOR International Inc.

GETTLER - RYAN INC.
 6747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
 Chevron Service Station #9-1356
 1456 Northern Lights Boulevard
 Anchorage, Alaska

JOB NUMBER: 386704
 REVIEWED BY: [Signature]
 DATE: May 4, 2001
 REVISED DATE: [Blank]

FILE NAME: P:\ENVIRO\CHEVRON\9-1356\001-9-1356.DWG | Layout Tab: POT2



Source: Figure modified from drawing provided by SECOR International Inc.

GETTLER - RYAN INC.
 8747 Sierra Ct., Suite J
 Dublin, CA 94568 (925) 551-7555

CONCENTRATION MAP
 Chevron Service Station #9-1356
 1456 Northern Lights Boulevard
 Anchorage, Alaska

REVIEWED BY: _____ DATE: May 4, 2001

REVISOR: _____ DATE: _____

JOB NUMBER: 386704

FILE NAME: P:\ENVIRO\CHEVRON\9-1356\001-9-1356.DWG | Layout: Tab: Con2

FIGURE 2

Table 1
Groundwater Monitoring and Analytical Results
Chevron Service Station #9-1356
1456 Northern Lights Boulevard
Anchorage, Alaska

WELL ID/ TOC* (ft)	DATE	DTW (ft.)	GWE (msl)	SPHT (ft.)	GRO (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1 95.30	07/03/99	15.61	79.69	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.0
	10/11/99	14.84	80.46	0.00	<50	<0.50	<0.50	<0.50	<0.50	<5.00
	05/19/00	13.64	81.66	0.00	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00
	09/28/00	12.80	82.50	0.00	<50.0	<0.200	<0.500	<0.500	<1.00	<1.00
	05/04/01	14.34	80.96	0.00	<50.0	0.274	<0.500	<0.500	<1.00	<1.00
MW-2 94.61	07/03/99	15.30	79.31	0.00	7,140	27	48	268	1,140	<100
	10/11/99	14.27	80.34	0.00/Sheen	20,400	<12	575	1,430	5,930	<125
	(D)	--	--	--	21,800	<12	629	1,560	6,500	<125
	05/19/00	12.92	81.69	0.00	8,840	25.9	12.4	<5.00	1,220	¹ <20.0/<2.00 ²
	09/28/00	11.97	82.64	0.00	4,520	<5.50	38.8	78.0	1,190	30.3/<20.0 ⁴
	05/04/01	13.75	80.86	0.00	7,020	12.0	42.9	469	1,400	45.2/<5.00²
MW-3 93.57	07/03/99	14.92	78.65	0.00	6,290	64	349	279	781	<20
	10/11/99	13.33	80.24	0.00	6,080	194	341	406	1,150	<25.0
	05/19/00	12.17	81.40	0.00	8,440	58.6	401	398	1,520	56.0 ³
	(D)	--	--	--	9,490	62.9	418	414	1,530	65.1
	09/28/00	11.35	82.22	0.00	5,360	21.7	171	476	896	35.0/<20.0 ⁴
	05/04/01	12.84	80.73	0.00	5,580	45.1	104	304	707	70.3/<5.00²
MW-4 94.66	07/03/99	15.01	79.65	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.0
	10/11/99	14.31	80.35	0.00	<50	<0.50	<0.50	<0.50	<0.50	<5.00
	05/19/00	13.22	81.44	0.00	867	32.3	133	16.2	110	<10.0
	09/28/00	12.45	82.21	0.00	<2,500	366	338	29.4	441	<50.0
	(D)	--	--	--	5,650	382	1,650	148	951	<100
	05/04/01	13.78	80.88	0.00	190	2.16	<0.500	36.0	25.6	<1.00

Table 1
Groundwater Monitoring Data and Analytical Results
 Chevron Service Station #9-1356
 1456 Northern Lights Boulevard
 Anchorage, Alaska

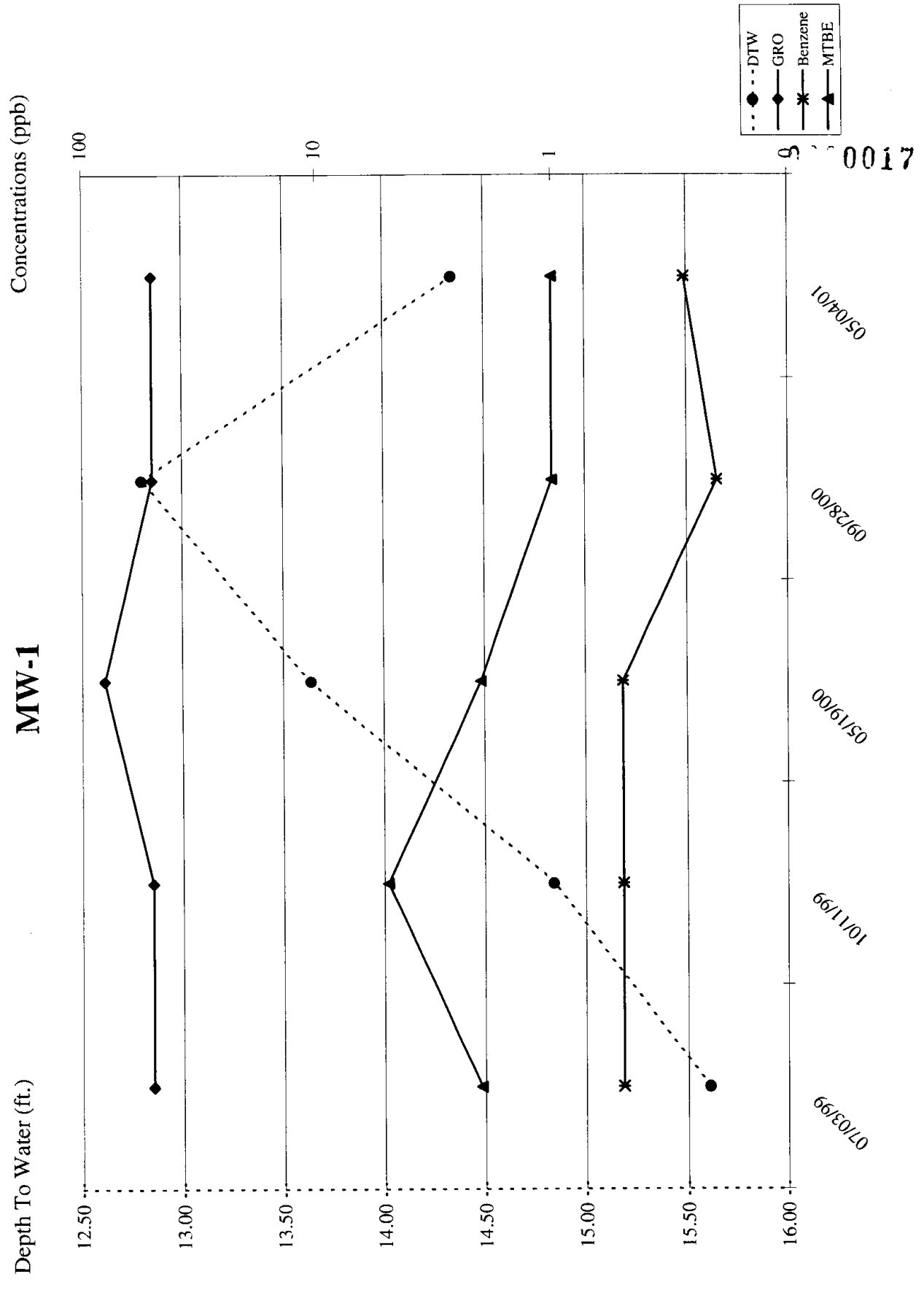


Table 1
Groundwater Monitoring Data and Analytical Results
 Chevron Service Station #9-1356
 1456 Northern Lights Boulevard
 Anchorage, Alaska

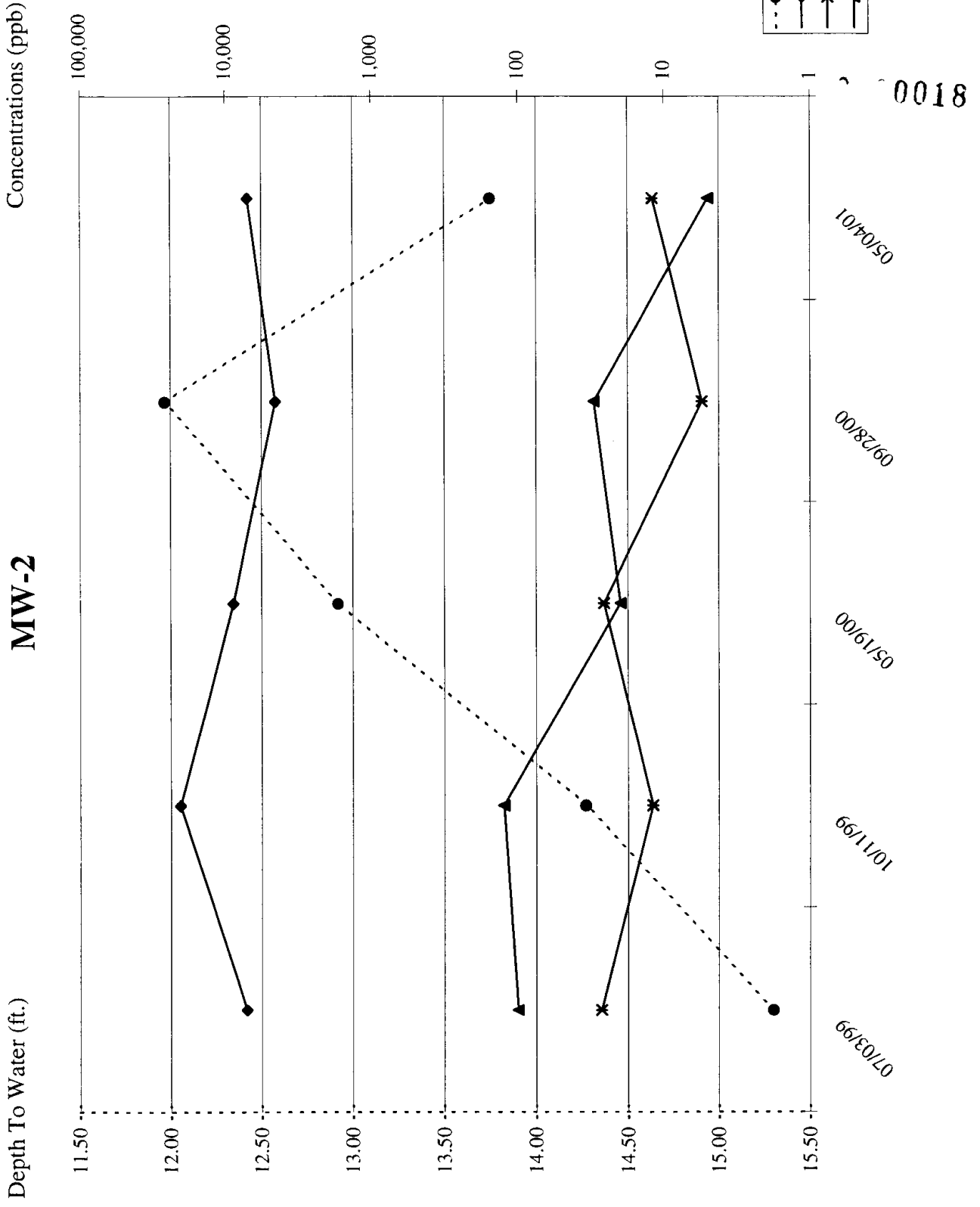


Table 1
Groundwater Monitoring Data and Analytical Results
 Chevron Service Station #9-1356
 1456 Northern Lights Boulevard
 Anchorage, Alaska

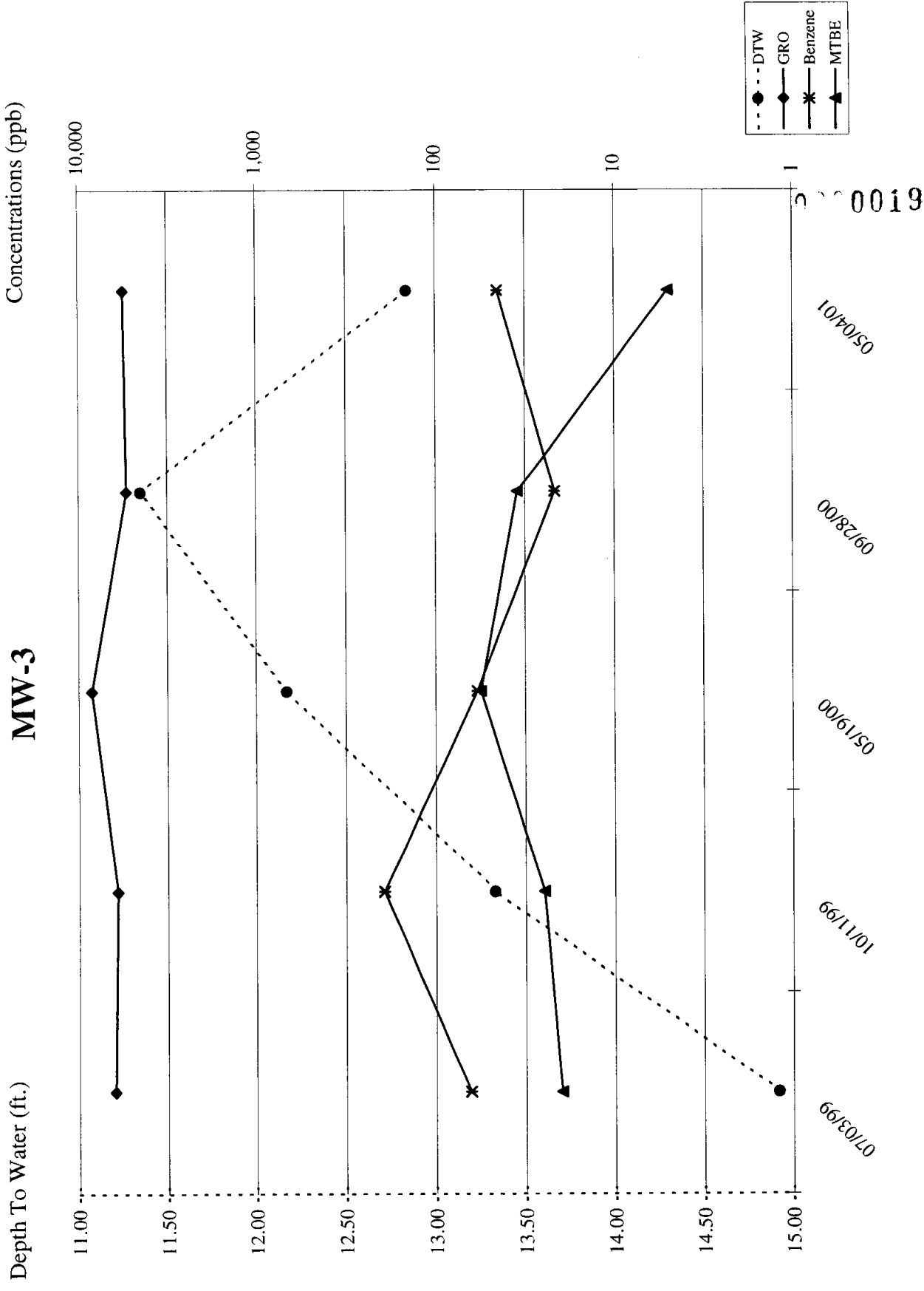


Table 1
Groundwater Monitoring Data and Analytical Results
 Chevron Service Station #9-1356
 1456 Northern Lights Boulevard
 Anchorage, Alaska

MW-4

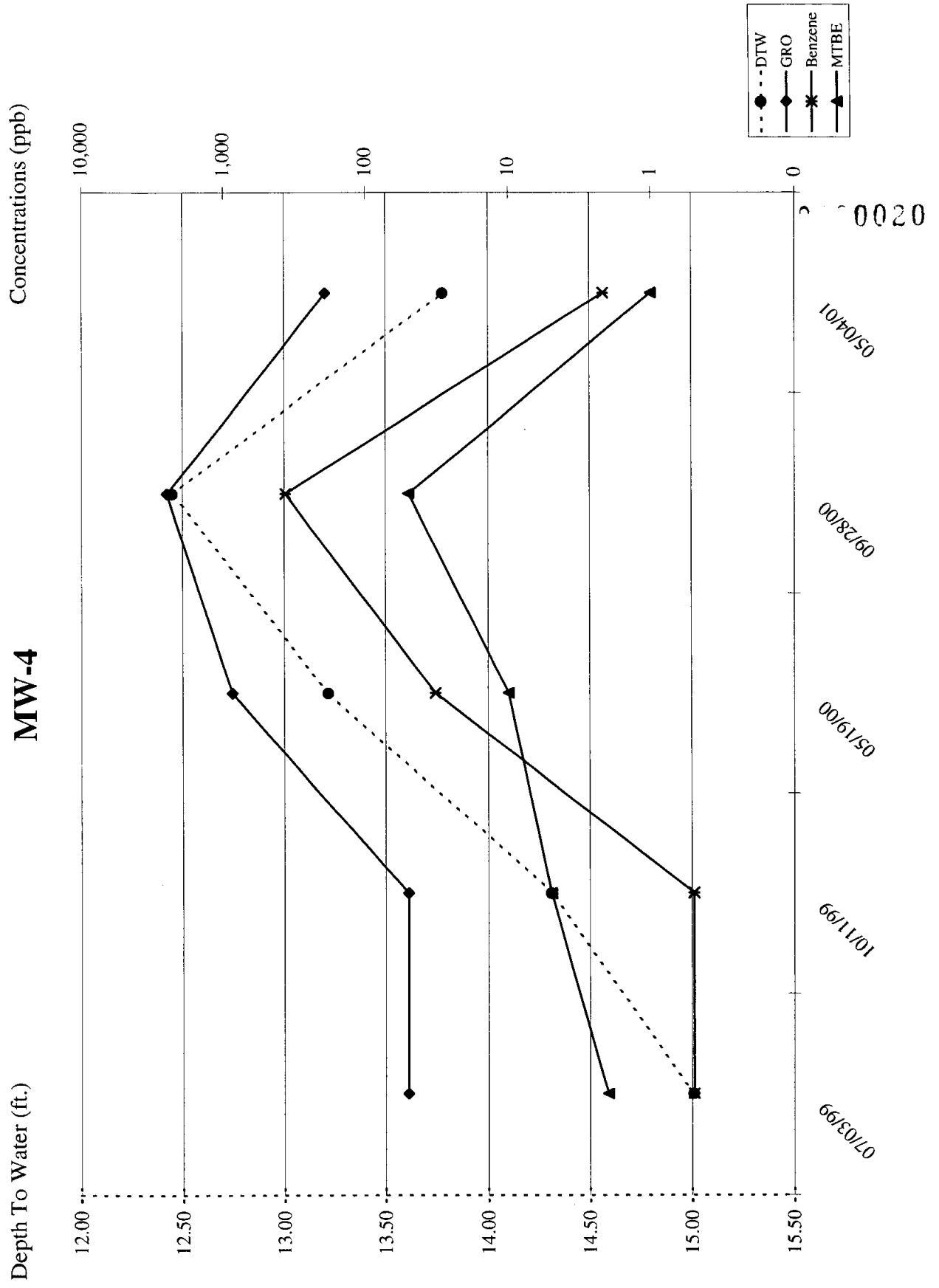


Table 1
Groundwater Monitoring and Analytical Results
 Chevron Service Station #9-1356
 1456 Northern Lights Boulevard
 Anchorage, Alaska

WELL ID/ TOC* (ft)	DATE	DTW (ft.)	GWE (msl)	SPHT (ft.)	GRO (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
Trip Blank										
TB-LB	10/11/99	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.00
	05/19/00	--	--	--	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00
	09/28/00	--	--	--	<50.0	<0.200	0.899	<0.500	<1.00	<1.00
	05/04/01	--	--	--	<50.0	--	--	--	--	--

0000021

Table 1
Groundwater Monitoring and Analytical Results
 Chevron Service Station #9-1356
 1456 Northern Lights Boulevard
 Anchorage, Alaska

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to October 11, 1999, were compiled from reports prepared by Secor International, Inc.

TOC = Top of Casing (ft.) = Feet
 DTW = Depth to Water
 GWE = Groundwater Elevation (msl) = Mean sea level
 SPHT = Separate Phase Hydrocarbon Thickness
 GRO = Gasoline Range Organics

* TOC elevations are referenced to msl.

1 Laboratory report indicates analyte was not confirmed.

2 MTBE by EPA Method 8260.

3 Laboratory report indicates tentative analyte did not confirm by GC/MS.

4 Laboratory report indicates MTBE by EPA Method 8260 sample was out of hold time at the time of receipt. Therefore, results are inconclusive and may represent false negatives or positives.

NOTE:

In order to plot data in the charts, all NDs have been assigned an arbitrary number consistent with the detection limit for each constituent analyzed. Please refer to table for specific results/detection limits.

, 0022

Table 2
Groundwater Analytical Results
 Chevron Service Station #9-1356
 1456 Northern Lights Boulevard
 Anchorage, Alaska

WELL ID	DATE	CHLOROFORM (ppb)	1,2,4-BIMETHYL BENZENE (ppb)	1,3,5-BIMETHYL BENZENE (ppb)	NAPHTHALENE (ppb)	N-PROPYL- BENZENE (ppb)	ISOPROPYL- BENZENE (ppb)
MW-1	07/03/99	8.36	<2.0	<1.0	<2.0	<1.0	<1.0
MW-2	07/03/99	<50	1,030	331	105	100	<50
MW-3	07/03/99	<10	374	121	71.8	54.8	18.0
MW-4	07/03/99	8.8	<2.0	<1.0	<2.0	<1.0	<1.0

EXPLANATIONS:

Groundwater laboratory analytical results were compiled from reports prepared by Secor International, Inc.
 (ppb) = Parts per billion

0023

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

0024

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with an interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize. Purge water is subsequently discharged to the ground surface at the site.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used for all samples. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4NC for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

0025

Chevron Facility # SS#9-1356
 Address: 1456 Northern Lights Blvd
 City: Anchorage, Alaska

Job#: 386704
 Date: 5-4-01
 Sampler: BWN

Well ID MW-1
 Well Diameter 2 in.
 Total Depth 28.0 ft.
 Depth to Water 14.34 ft.

Well Condition: OK
 Hydrocarbon Thickness: Ø FT. Amount Bailed (product/water): Ø (gal.)
 Volume Factor (VF) 2" = 0.17 3" = 0.38 4" = 0.66
 6" = 1.50 12" = 5.80

13.66 X VF 1.17 = 2.3 X 3 (case volume) = Estimated Purge Volume: 7 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 13:45
 Sampling Time: 14:10
 Purging Flow Rate: _____ gpm.
 Did well de-water? no

Weather Conditions: SNOW
 Water Color: brown Odor: no
 Sediment Description: _____
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>13:52</u>	<u>2.3</u>	<u>7.11</u>	<u>178</u>	<u>3.9</u>			
<u>13:59</u>	<u>4.6</u>	<u>7.06</u>	<u>172</u>	<u>3.8</u>			
<u>14:06</u>	<u>7</u>	<u>7.03</u>	<u>171</u>	<u>3.8</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-1</u>	<u>3 x 40m/VOA</u>	<u>Y</u>	<u>HCL</u>	<u>NCA</u>	<u>GRO/BTEX/MTBE</u>

COMMENTS: _____

WELL MONITORING/SAMPLING FIELD DATA SHEET

0026

Chevron Facility # SS#9-1356
 Address: 1456 Northern Lights Blvd
 City: Anchorage, Alaska

Job#: 386704
 Date: 5-4-01
 Sampler: BWN

Well ID: MW-2 Well Condition: ok

Well Diameter: 2 in. Hydrocarbon Thickness: Ø FT. Amount Bailed (product/water): Ø (gal.)

Total Depth: 25.0 ft.

Depth to Water: 13.75 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

11.25 X VF .17 = 1.9 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 12:00 Weather Conditions: cloudy
 Sampling Time: 12:25 Water Color: gray Odor: slight
 Purging Flow Rate: _____ gpm. Sediment Description: _____
 Did well de-water? no If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:06</u>	<u>2</u>	<u>7.28</u>	<u>240</u>	<u>3.7</u>			
<u>12:12</u>	<u>4</u>	<u>7.20</u>	<u>233</u>	<u>3.5</u>			
<u>12:18</u>	<u>6</u>	<u>7.16</u>	<u>226</u>	<u>3.4</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-2</u>	<u>3 x 40m/VOA</u>	<u>Y</u>	<u>HCL</u>	<u>NCA</u>	<u>GRO/BTEX/MTBE</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**



Chevron Facility # SS#9-1356
 Address: 1456 Northern Lights Blvd
 City: Anchorage, Alaska

Job#: 386704
 Date: 5-4-01
 Sampler: BWN

Well ID MW-3
 Well Diameter 2 in.
 Total Depth 25.0 ft.
 Depth to Water 12.84 ft.
12.16

Well Condition: OK
 Hydrocarbon Thickness: Ø FT.
 Amount Bailed (product/water): Ø (gal.)

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

12.16 X VF .17 = 2 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 12:35
 Sampling Time: 13:00
 Purging Flow Rate: _____ gpm.
 Did well de-water? NO

Weather Conditions: cloudy
 Water Color: gray Odor: slight
 Sediment Description: _____
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>12:41</u>	<u>2</u>	<u>7.22</u>	<u>298</u>	<u>3.4</u>			
<u>12:47</u>	<u>4</u>	<u>7.16</u>	<u>294</u>	<u>3.2</u>			
<u>12:53</u>	<u>6</u>	<u>7.09</u>	<u>281</u>	<u>3.1</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-3</u>	<u>3 x 40m/VOA</u>	<u>Y</u>	<u>HCL</u>	<u>NCA</u>	<u>GRO/BTEX/MTBE</u>

COMMENTS: _____

**WELL MONITORING/SAMPLING
FIELD DATA SHEET**

0028

Chevron Facility # SS#9-1356
 Address: 1456 Northern Lights Blvd
 City: Anchorage, Alaska

Job#: 386704
 Date: 5-4-01
 Sampler: BWN

Well ID: MW-4
 Well Diameter: 2 in.
 Total Depth: 25.0 ft.
 Depth to Water: 13.78 ft.

Well Condition: ok

Hydrocarbon Thickness:	Amount Bailed (product/water):		
Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

11.22 x VF 0.17 = 1.9 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

Purge Equipment: Disposable Bailer
 Bailer
 Stack
 Suction
 Grundfos
 Other: _____

Sampling Equipment: Disposable Bailer
 Bailer
 Pressure Bailer
 Grab Sample
 Other: _____

Starting Time: 13:10
 Sampling Time: 13:35
 Purging Flow Rate: _____ gpm.
 Did well de-water? no

Weather Conditions: cloudy
 Water Color: brown Odor: no
 Sediment Description: _____
 If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity μ mhos/cm	Temperature $^{\circ}$ C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
<u>13:16</u>	<u>2</u>	<u>7.21</u>	<u>171</u>	<u>4.4</u>			
<u>13:22</u>	<u>4</u>	<u>7.16</u>	<u>170</u>	<u>4.0</u>			
<u>13:28</u>	<u>6</u>	<u>7.09</u>	<u>165</u>	<u>3.9</u>			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>3 x 40m/VOA</u>	<u>Y</u>	<u>HCL</u>	<u>NCA</u>	<u>GRO/BTEX/MTBE</u>

COMMENTS: _____



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
 425.420.9200 fax 425.420.9210
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
 509.924.9200 fax 509.924.9290
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
 503.906.9200 fax 503.906.9210
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
 541.383.9310 fax 541.382.7588

0030

Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron SS #9-1356 Project Number: 386704 Project Manager: Deanna Harding	Reported: 05/21/01 14:36
-----------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-LB	B1E0177-01	Water	05/04/01 12:00	05/07/01 09:00
MW1	B1E0177-02	Water	05/04/01 14:10	05/07/01 09:00
MW2	B1E0177-03	Water	05/04/01 12:25	05/07/01 09:00
MW3	B1E0177-04	Water	05/04/01 13:00	05/07/01 09:00
MW4	B1E0177-05	Water	05/04/01 13:35	05/07/01 09:00

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0031

Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron SS #9-1356 Project Number: 386704 Project Manager: Deanna Harding	Reported: 05/21/01 14:36
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Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TB-LB (B1E0177-01) Water Sampled: 05/04/01 12:00 Received: 05/07/01 09:00									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	1E11022	05/11/01	05/11/01	AK 101	
Surrogate: 4-BFB (FID)	91.2 %	60-120			"	"	"	"	

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0032

Gettler-Ryan Inc. - Dublin
 6747 Sierra Court Suite G
 Dublin CA, 94568

Project: Chevron SS #9-1356
 Project Number: 386704
 Project Manager: Deanna Harding

Reported:
 05/21/01 14:36

Gasoline Hydrocarbons (n-Hexane to <n-Decane) and BTEX by AK101
North Creek Analytical - Bothell

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
MW1 (B1E0177-02) Water Sampled: 05/04/01 14:10 Received: 05/07/01 09:00									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	1E11022	05/11/01	05/11/01	AK 101	
Benzene	0.274	0.200	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	91.2 %	60-120			"	"	"	"	
Surrogate: 4-BFB (PID)	101 %	60-120			"	"	"	"	
MW2 (B1E0177-03) Water Sampled: 05/04/01 12:25 Received: 05/07/01 09:00									
Gasoline Range Hydrocarbons	7020	1000	ug/l	20	1E11022	05/11/01	05/11/01	AK 101	
Benzene	12.0	4.00	"	"	"	"	"	"	
Toluene	42.9	10.0	"	"	"	"	"	"	
Ethylbenzene	469	10.0	"	"	"	"	"	"	
Xylenes (total)	1400	20.0	"	"	"	"	"	"	
Methyl tert-butyl ether	45.2	20.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	97.3 %	60-120			"	"	"	"	
Surrogate: 4-BFB (PID)	105 %	60-120			"	"	"	"	
MW3 (B1E0177-04) Water Sampled: 05/04/01 13:00 Received: 05/07/01 09:00									
Gasoline Range Hydrocarbons	5580	500	ug/l	10	1E11022	05/11/01	05/11/01	AK 101	
Benzene	45.1	2.00	"	"	"	"	"	"	
Toluene	104	5.00	"	"	"	"	"	"	
Ethylbenzene	304	5.00	"	"	"	"	"	"	
Xylenes (total)	707	10.0	"	"	"	"	"	"	
Methyl tert-butyl ether	70.3	10.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	104 %	60-120			"	"	"	"	
Surrogate: 4-BFB (PID)	104 %	60-120			"	"	"	"	

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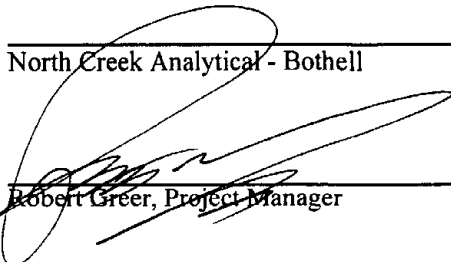
0033

Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron SS #9-1356 Project Number: 386704 Project Manager: Deanna Harding	Reported: 05/21/01 14:36
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Gasoline Hydrocarbons (n-Hexane to <n-Decane) and BTEX by AK101
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW4 (B1E0177-05) Water Sampled: 05/04/01 13:35 Received: 05/07/01 09:00									
Gasoline Range Hydrocarbons	190	50.0	ug/l	1	1E11022	05/11/01	05/11/01	AK 101	
Benzene	2.16	0.200	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	36.0	0.500	"	"	"	"	"	"	
Xylenes (total)	25.6	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
<i>Surrogate: 4-BFB (FID)</i>	<i>100 %</i>	<i>60-120</i>			"	"	"	"	
<i>Surrogate: 4-BFB (PID)</i>	<i>106 %</i>	<i>60-120</i>			"	"	"	"	

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**MTBE Confirmation by EPA Method 8260B
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (B1E0177-03) Water Sampled: 05/04/01 12:25 Received: 05/07/01 09:00									
Methyl tert-butyl ether	ND	5.00	ug/l	1	1E15016	05/15/01	05/15/01	EPA 8260B	
Surrogate: 1,2-DCA-d4	99.0 %	73-137			"	"	"	"	
Surrogate: Toluene-d8	101 %	75-124			"	"	"	"	
Surrogate: 4-BFB	92.0 %	77-120			"	"	"	"	
MW3 (B1E0177-04) Water Sampled: 05/04/01 13:00 Received: 05/07/01 09:00									
Methyl tert-butyl ether	ND	5.00	ug/l	1	1E15016	05/15/01	05/15/01	EPA 8260B	
Surrogate: 1,2-DCA-d4	100 %	73-137			"	"	"	"	
Surrogate: Toluene-d8	103 %	75-124			"	"	"	"	
Surrogate: 4-BFB	92.5 %	77-120			"	"	"	"	

North Creek Analytical - Bothell

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron SS #9-1356 Project Number: 386704 Project Manager: Deanna Harding	Reported: 05/21/01 14:36
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**Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101 - Quality Control
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1E11022: Prepared 05/11/01 Using EPA 5030B (P/T)									
Blank (1E11022-BLK1)									
Gasoline Range Hydrocarbons	ND	50.0	ug/l						
Surrogate: 4-BFB (FID)	42.4		"	48.0		88.3	60-120		
Blank (1E11022-BLK2)									
Gasoline Range Hydrocarbons	ND	50.0	ug/l						
Surrogate: 4-BFB (FID)	43.1		"	48.0		89.8	60-120		
LCS (1E11022-BS1)									
Gasoline Range Hydrocarbons	521	50.0	ug/l	500		104	60-120		
Surrogate: 4-BFB (FID)	44.6		"	48.0		92.9	60-120		
LCS (1E11022-BS2)									
Gasoline Range Hydrocarbons	528	50.0	ug/l	500		106	60-120		
Surrogate: 4-BFB (FID)	44.8		"	48.0		93.3	60-120		
Duplicate (1E11022-DUP1) Source: B1E0177-02									
Gasoline Range Hydrocarbons	ND	50.0	ug/l		ND			20	
Surrogate: 4-BFB (FID)	41.7		"	48.0		86.9	60-120		
Duplicate (1E11022-DUP2) Source: B1E0296-04									
Gasoline Range Hydrocarbons	ND	50.0	ug/l		ND			20	
Surrogate: 4-BFB (FID)	44.0		"	48.0		91.7	60-120		

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Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron SS #9-1356 Project Number: 386704 Project Manager: Deanna Harding	Reported: 05/21/01 14:36
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**Gasoline Hydrocarbons (n-Hexane to <n-Decane) and BTEX by AK101 - Quality Control
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1E11022: Prepared 05/11/01 Using EPA 5030B (P/T)

Blank (1E11022-BLK1)

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.200	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	1.00	"							
Surrogate: 4-BFB (FID)	42.4		"	48.0		88.3	60-120			
Surrogate: 4-BFB (PID)	48.5		"	48.0		101	60-120			

Blank (1E11022-BLK2)

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.200	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	1.00	"							
Surrogate: 4-BFB (FID)	43.1		"	48.0		89.8	60-120			
Surrogate: 4-BFB (PID)	49.0		"	48.0		102	60-120			

LCS (1E11022-BS1)

Gasoline Range Hydrocarbons	521	50.0	ug/l	500		104	60-120			
Surrogate: 4-BFB (FID)	44.6		"	48.0		92.9	60-120			

LCS (1E11022-BS2)

Gasoline Range Hydrocarbons	528	50.0	ug/l	500		106	60-120			
Surrogate: 4-BFB (FID)	44.8		"	48.0		93.3	60-120			

Source: B1E0177-02

Duplicate (1E11022-DUP1)

Gasoline Range Hydrocarbons	ND	50.0	ug/l		ND				20	
Surrogate: 4-BFB (FID)	41.7		"	48.0		86.9	60-120			

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**Gasoline Hydrocarbons (n-Hexane to <n-Decane) and BTEX by AK101 - Quality Control
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1E11022: Prepared 05/11/01 Using EPA 5030B (P/T)

Duplicate (1E11022-DUP2)

Source: B1E0296-04

Gasoline Range Hydrocarbons	ND	50.0	ug/l		ND				20	
Surrogate: 4-BFB (FID)	44.0		"	48.0		91.7	60-120			

Matrix Spike (1E11022-MS1)

Source: B1E0296-06

Benzene	9.82	0.200	ug/l	10.0	0.252	95.7	60-120			
Toluene	10.1	0.500	"	10.0	ND	99.9	60-120			
Ethylbenzene	10.4	0.500	"	10.0	ND	103	60-120			
Xylenes (total)	31.0	1.00	"	30.0	ND	103	60-120			
Methyl tert-butyl ether	10.0	1.00	"	10.0	ND	100	60-120			
Surrogate: 4-BFB (PID)	48.8		"	48.0		102	60-120			

Matrix Spike Dup (1E11022-MSD1)

Source: B1E0296-06

Benzene	10.3	0.200	ug/l	10.0	0.252	100	60-120	4.77	20	
Toluene	10.5	0.500	"	10.0	ND	104	60-120	3.88	20	
Ethylbenzene	10.8	0.500	"	10.0	ND	107	60-120	3.77	20	
Xylenes (total)	32.2	1.00	"	30.0	ND	107	60-120	3.80	20	
Methyl tert-butyl ether	10.8	1.00	"	10.0	ND	108	60-120	7.69	20	
Surrogate: 4-BFB (PID)	50.0		"	48.0		104	60-120			

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0038

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MTBE Confirmation by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1E15016: Prepared 05/15/01 Using EPA 5030B [P/T]

Blank (1E15016-BLK1)

Methyl tert-butyl ether	ND	5.00	ug/l							
Surrogate: 1,2-DCA-d4	18.9		"	20.1		94.0	73-137			
Surrogate: Toluene-d8	20.2		"	20.1		100	75-124			
Surrogate: 4-BFB	18.7		"	20.1		93.0	77-120			

LCS (1E15016-BS1)

Methyl tert-butyl ether	11.8	5.00	ug/l	10.0		118	70-130			
Surrogate: 1,2-DCA-d4	20.1		"	20.1		100	73-137			
Surrogate: Toluene-d8	20.2		"	20.1		100	75-124			
Surrogate: 4-BFB	18.9		"	20.1		94.0	77-120			

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0039

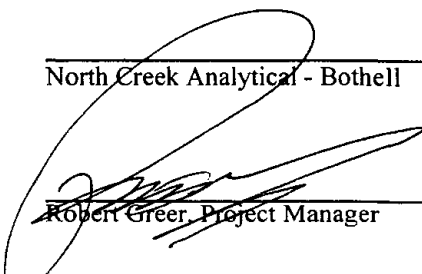
Gettler-Ryan Inc. - Dublin 6747 Sierra Court Suite G Dublin CA, 94568	Project: Chevron SS #9-1356 Project Number: 386704 Project Manager: Deanna Harding	Reported: 05/21/01 14:36
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Notes and Definitions

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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